HISTORIC BUILDING RECORDING OF THE NORTH REGENT'S CANAL WALL FROM ST PANCRAS LOCK TO THE CTRL RAILWAY BRIDGE, KING'S CROSS CENTRAL, LONDON BOROUGH OF CAMDEN

PCA

PCA REPORT NO. R11577

NOVEMBER 2013

PRE-CONSTRUCT ARCHAEOLOGY

Historic Building Recording of the North Regent's Canal Wall from St Pancras Lock to the CTRL Railway Bridge, King's Cross Central, London Borough of Camden

Site Code: KXDO7

Central National Grid Reference: TQ 29892 83665

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DOCUMENT VERIFICATION

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HISTORIC BUILDING RECORDING

Quality Control

Pre-Construct Archaeology Limited	
Project Number	K2994
Report Number	R11577

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1 NON-TECHNICAL SUMMARY

1.1 Pre-Construct Archaeology Limited was commissioned by King's Cross Central General Partner Limited (representing the original applicants for the King's Cross Central scheme) to undertake building recording of the Regent's Canal wall between St Pancras Lock and the CTRL Railway Bridge within King's Cross Central, London, NW1, centred on Ordnance Survey National Grid Reference TQ 29892 83665. This report follows on from an earlier programme of survey works carried out on the Regent's Canal walls from Maiden Lane Bridge in the east, to St Pancras Lock in the west by Pre-Construct Archaeology. The Regent's Canal walls are not listed buildings but they lie within the Regent's Canal Conservation Area.

1.2 Building recording was carried out in December 2012 and February 2013 prior to demolition. The survey work included (where possible) both sides of the canal wall (north-east and south-west), and was completed in accordance with the standards specified by an English Heritage Level 4 survey. The work formed part of a wider programme of archaeological and building recording, which was undertaken in conjunction with the 'King's Cross Central' redevelopment scheme.

1.3 The canal was first built *c.*1820. The north canal wall on the north side of the towpath was built in 1850 when the King's Cross Goods Yard was constructed by the Great Northern Railway. The stretch of wall between St Pancras Lock and the CTRL Bridge represented a continuation of the canal wall built in 1850, and incorporated a series of large tie-bar plates providing lateral retention at the base of the canal wall, plus a series of 20th century rebuilding events and many localised repairs. The scar of the original lock-keeper's cottage of 1820 was also recorded in this wall.

1.4 The survey also recorded a number of rebuilding events to the main canal wall that occurred during and after the Second World War. A long stretch of the wall was rebuilt in machine-made yellow stock brickwork between 1942 and 1951, possibly in association with the construction of a messroom for staff of the Inwards Goods Department based at the Western Goods Shed. In 1943 authorisation was granted for the construction of a new messroom to replace an earlier building destroyed by enemy action. It is possible that this new building was the 'Mess Room' first shown on maps and plans of 1951. The structure was built in Fletton brickwork against and on part of the north canal wall that had been rebuilt in yellow stock brickwork. Some of the rebuilding works were associated with the removal of the possible carriage sidings alongside the Midland Railway main line into St Pancras Station, whilst evidence was also observed of 21st century demolition and construction works associated with the rebuilding of the CTRL bridge crossing.

2 INTRODUCTION AND PLANNING BACKGROUND

2.1 Pre-Construct Archaeology Limited was commissioned by King's Cross Central General Partner Limited (representing the original applicants for the King's Cross Central scheme) to undertake building recording of the Regent's Canal wall from St Pancras Lock to the CTRL (Channel Tunnel Rail Link) bridge at King's Cross Central, London, NW1, centred on Ordnance Survey National Grid Reference TQ 29892 83665 (**Figures 1** and **2**). The canal wall is not a listed building but it lies within the Regent's Canal Conservation Area.

2.2 The wall is part of a complex of historic buildings and structures located in the vicinity of King's Cross Station and St Pancras Stations. A major redevelopment scheme has been proposed for this area, which is referred to in the planning applications as 'King's Cross Central'. Outline Planning Permission (2004/2307/P) for the scheme was granted in December 2006, subject to certain conditions. Planning Condition 55 of the Planning Permission states:

"No works shall take place in relation to each phase of the Development... until the applicant, their agent or successors in title has secured the implementation of a programme [of] assessment, recording and historical analysis, which considers building structure, architectural detail and archaeological evidence. This shall be undertaken in accordance with a written scheme of investigation submitted by the applicant and approved by the local planning authority."

2.3 The development involves the demolition of this section of the Regent's Canal wall. Condition 3 of the Conservation Area Consent for the demolition of Various Unlisted Buildings and Structures within King's Cross Central (land between Euston Road, St Pancras Station, Midland Main Line, the new Channel Tunnel Rail Link, York Way and King's Cross Station) (2004/2320/C) includes essentially the same requirement as Condition 55 of the Outline Planning permission, namely:

"No works authorised by this consent shall take place until the applicant has implemented a programme of building recording and analysis of the following structures by a person or body approved by the local planning authority. This programme shall be in accordance with a written scheme which has been submitted by the applicant and approved in writing by the local planning authority."

2.4 This consent schedules 17 various buildings and structures, of which 7 are required by the Consent to be recorded. The latter includes the Regent's Canal Walls, located alongside the canal at various locations to the north and south sides.

2.5 The recording was carried out in December 2012 and February 2013. It was undertaken in accordance with a Specification written by International Heritage Conservation and Management (IHCM, 2007) and a Written Scheme of Investigation (Rose-Deacon, 2007). IHCM was the Historic Buildings Consultant to the Employer for this work, King's Cross Central General Partner Limited. Both documents were approved in advance of the work by the London Borough of Camden. The building recording was carried out in accordance with that defined by Level 4 of English Heritage 2006 *Understanding Historic Buildings: A guide to good recording practice*. It forms part of a wider programme of archaeological and building recording, which is being carried out in connection with the 'King's Cross Central' redevelopment scheme.

3 METHOD

3.1 Objectives

3.1.1 The objectives of the building recording and analysis as set out in the Specification (IHCM, 2007) were:

- To meet the requirements of Planning Condition 55 of the Outline Planning Permission (2004/2307/P) in relation to the demolition of these buildings and structures.
- To meet the requirements of Condition 3 of the Conservation Area Consent (2004/2320/C) in relation to the demolition of these buildings and structures.
- A general heritage-driven survey and documentation of these buildings and structures, with drawings, photographs and written accounts. This undertaking was to provide 'factual' baseline data and also record the 'as-found' character.
- Identification of original elements and features, related to the various functioning of these buildings and structures.
- Identification of modifications that may have affected their authenticity.
- Documentation of the condition of heritage elements.
- Documentation to assist in the identification of elements and artefacts to be salvaged.
- Provision of information supporting and defining objectives for any necessary future documentation.

3.2 Documentary Research

3.2.1 Archival research was carried out at the Camden Local Studies and Archive Centre at Holborn Library, The National Archives (TNA) at Kew and the Network Rail Records Group in York (NRRG). Historic maps and documents, minutes and papers of the railway and canal companies and contemporary newspaper and magazine articles were consulted. The results of this research are presented in Chapter 4 of this report.

3.3 On-Site Recording

3.3.1 The recording of the wall on the north side of the Regent's Canal from St Pancras Lock to the CTRL Railway Bridge was undertaken at English Heritage Level 4, as outlined in *Understanding Historic Buildings: A Guide to Good Recording Practice* (English Heritage 2006), and comprised written description; scale drawings including elevations, cross-sections and architectural details; and photography. The wall was recorded in December 2012 and February 2013.

3.4 Measured Survey

3.4.1 A survey plan showing the wall on the north side of the Regent's Canal from St Pancras Lock to the CTRL Railway Bridge was provided by the Client (**Figure 16**). Hand measured drawings were produced of the elevations of the canal wall, as were the cross-sections (**Figures 17** and **18**).

3.5 Photographic Survey

3.5.1 A photographic survey of the wall was undertaken which included its setting, elevations and selected architectural features. They were recorded in 35mm black and white film and with high quality digital images. A selection of photographs is presented within this report (**Plates 2** to **22**). Archive stable photographic prints form part of the archive. A register of all photographs taken on site is included in the archive.

3.6 Brick Fabric Analysis

3.6.1 Although no samples of bricks were taken, a fabric analysis of extant bricks used in the fabric of the Regent's Canal Walls was undertaken. The bricks were analysed using the system of ceramic building material classification used in archaeological work in Greater London. Each fabric number (e.g. fabric 3032 and 3034) specifies the composition, form, approximate method of manufacture and date range of the material. The results of the brick analysis are included in the report. Examples of the fabrics can be found in the archives of the Museum of London and Pre-Construct Archaeology Limited.

3.7 Project Archive

3.7.1 The archive, which includes the report, drawings and photographs produced during the building recording, will be lodged with the London Archaeological Archive and Research Centre (LAARC) in due course. Copies of the report will be lodged with the London Borough of Camden Planning Department.

3.8 Guidance

3.8.1 All works were undertaken in accordance with standards set out in:

- Association of Local Government Archaeological Officers (1997) *Analysis and Recording for the Conservation and Control of Works to Historic Buildings*
- British Archaeologists and Developers Liaison Group (1986) *Code of Practice*
- British Standards Institution (1998) *Guide to the Principles of the Conservation of Historic Buildings (BS 7913)*
- Clark, K 2001 *Informed Conservation: Understanding Historic Buildings and their Landscapes for Conservation*, English Heritage
- English Heritage Greater London Archaeological Advisory Service (2009) *Standards for Archaeological Work*. External Consultation Draft
- English Heritage (2000) *The Presentation of Historic Building Survey in CAD*
- English Heritage (2006) Understanding Historic Buildings: a guide to good recording practice
- IfA (1996, revised 2001 and 2008) *Standards and guidance for the archaeological investigation and recording of standing buildings or structures*

4 HISTORICAL BACKGROUND

4.1 The construction of the Regent's Canal at St Pancras, 1817-1820

4.1.1 The earliest plans to build a canal connecting the east London docks and the Grand Junction Canal terminus at Paddington were mooted in 1802 (Faulkner, 1990: 41). Although that scheme failed to attract much interest from potential investors, eight years later a barge owner named Thomas Homer proposed to build a canal from Paddington across London to join the Limehouse Cut, a navigable channel built and maintained by the Trustees of the Navigation of the River Lea. Homer's co-sponsor, the architect John Nash, sought patronage for the scheme from the banker Sir Thomas Bernard and the Prince of Wales, who became Prince Regent the following year (*ibid*: 43). A Bill seeking authorisation for the scheme was introduced into Parliament that summer, which after a difficult passage through the Commons received Royal Assent the following July.

4.1.2 The proprietors of the Regent's Canal held their first meeting in August 1812, at which Nash's assistant John Morgan was appointed Engineer, Architect and Land Surveyor to the project, while Homer was appointed Superintendent (TNA RAIL 860/1: 5). Following the ceremonial commencement of works in October, construction started in earnest that December, when the excavation of the Maida Hill tunnel began.

4.1.3 By the end of 1814 the canal was almost complete to Hampstead Road, the company having spent almost £180,000 on the works to that date (Faulkner, 1990: 44; TNA RAIL 860/1: 42). With the total cost of construction estimated to be nearly £250,000 the company set out to raise a further £45,900 by subscription. Although the subscription had been raised by the following June, the company's precarious finances were further depleted by Homer, who absconded that April after having misappropriated funds (TNA RAIL 860/1: 50). The financial crisis was further exacerbated by the expenditure of substantial sums on an unsuccessful hydro-pneumatic canal lift designed by Major-General Sir William Congreve (Faulkner, 1990: 44; TNA RAIL 860/1: 55). By the end of March 1816 the company had come to realise that Congreve's lock had been little more than an 'expensive experiment', although money continued to be wasted on it for at least another year (TNA RAIL 860/1: 97-98).

4.1.4 The company encountered a further obstacle to progress in the form of Mr William Agar, whose 'pertinacious opposition' to the construction of the canal through his estate at St Pancras resulted in lengthy litigation (*ibid*: 103). Agar had purchased the lease of the manor of St Pancras in 1810 and objected to every route that the company proposed the canal should take across his land (*ibid*: 106, 175; Lovell and Marcham, 1938: 60-62). Despite numerous attempts at mediation, the ensuing stalemate had yet to be resolved by the end of 1816, when the company's deteriorating finances forced it to apply for a loan from the Government (TNA RAIL 860/1: 174-181).

4.1.5 Although the company's initial application for assistance was rejected, at the beginning of December 1817 the Commissioners for the Issue of Exchequer Bills relented and decided to grant a loan to the canal proprietors subject to the condition that construction resumed immediately in order to provide work for the 'labouring poor' at a time of rising unemployment following the end of the Napoleonic Wars (TNA RAIL 860/1: 212). The company duly complied and negotiations with Agar resumed. In addition the company invited tenders for the excavation of the canal, the supply of bricks and the construction of bridges.

4.1.6 The following May the parties reached agreement on the course of the canal through Agar's estate (TNA RAIL 860/14: 91). At the end of the month the company paid Agar £15,750 for land and compensation, while possession was granted the following month (*ibid*: 105). The lines of the new roads were laid out that August, while excavations and bridge-building proceeded throughout the autumn. Contracts for the

brickwork of the new bridges (including Somers Bridge) on Agar's land were awarded to Richardson and Want (*ibid*: 196, 217), while William Harkom was paid a total of £417 for providing ballast for both these bridges and the Maiden Lane Bridge (TNA RAIL 860/16: 38, 52, 82). A contract to cast and install pipes to carry the public water supply across the bridges was awarded to another contractor in November 1820 (TNA RAIL 860/18: 195).

4.1.7 In December 1818 the Committee reported that the 'heaviest part of the Excavation through Mr Agar's land is done and the several bridges to be erected on that line are far advanced in their execution' (TNA RAIL 860/1: 233). Other works in the vicinity approaching completion that month included the Horsfall Basin and Maiden Lane Bridge. Six months later the Committee reported that in addition to the completion of canal wharves at Maiden Lane, 'a considerable extent' of the banks of the canal behind St Pancras Church had also been laid out for wharves (*ibid*: 252). Construction of the canal wharves, towing paths and bridges had largely been completed by the summer of 1819.

4.1.8 The double mitre lock at St Pancras was also built on land purchased from William Agar. In March 1820 the General Committee of the canal company was informed that workmen engaged in the construction of the western compartment of the lock had been obstructed by Agar, who demanded that the west bank of the canal at that point should be "stopped off" (TNA RAIL 860/18: 28, 47-48). Wearily, the owners of the canal sought legal advice, not only regarding Agar's latest stunt, but also about a wharf wall that their tormentor had recently built on company land near the lock (*ibid*: 32). Canal company minutes dating from the early 1830s suggest that Agar's wharf was located "at the back of St Pancras Old Church", in the vicinity of the later St Pancras Basin (TNA RAIL 860/3: 67). The legal action that ensued was not resolved for another five years, forcing the closure of the western compartment of the lock to traffic until March 1825.

4.1.9 Having completed the locks along the route of the canal, attention turned to the provision of accommodation for the company's toll collectors and lock keepers. In April 1820 John Morgan submitted designs of the houses that the company proposed to erect at these locations to a meeting of the General Committee of the Board (TNA RAIL 860/18: 43). Although the document presented to the committee has not survived, it appears that Morgan intended to build a variety of different designs. Approval was granted for Morgan's proposal, and he was instructed to make arrangements for the construction of the new buildings "as early as possible" (*ibid*).

4.1.10 A contract to construct the St Pancras lock house worth £102 was awarded to the builder Francis Read in June 1820 (Faulkner, 1990: 48). A photograph of the lock taken in 1911 showed that the cottage was a single-storey structure, surmounted by a large shallow roof that also covered a veranda at the front of the property (**Plate 1**). The presence of at least two tall chimneys suggests that the building was heated. The photograph also showed what appeared to be a toll booth at the southern end of the cottage, adjacent to the southernmost lock gate. It is likely that the complex also included facilities for watering and resting the horses that drew the canal barges. The lock house is first shown on the 1849 plan (**Figure 4**).

4.1.11 At the same time, keepers were appointed to man the original eleven locks on the canal; unfortunately the company's records did not specify which one was appointed to live and work at St Pancras (TNA RAIL 860/18: 43).

4.1.12 Despite the fact that William Agar continued to institute proceedings against the company for a further twelve years, the canal finally opened to through traffic at the beginning of August 1820 (Faulkner, 1990: 48).

4.2 The development of Agar Town after 1840

4.2.1 Following William Agar's death in 1840, his widow sold off small plots of the southern part of his estate on short-term leases to poor labourers, in order that the latter might build their own houses. The unforeseen result of this decision was the rapid and

wholly uncoordinated development of a slum called Agar Town, which grew up on both sides of the canal in a strip of land between the Old Church and the gasworks. Lacking both sanitation and drainage, Agar Town quickly became a byword for all that was wrong with contemporary urban development. So unpleasant were conditions within its boundaries that the slum also blighted the neighbouring settlement of Somers Town, the fortunes of which were already in decline (Stamp, 1990: 24-25). Contemporary writers described the conditions in which residents were obliged to live, assailed from one side by the clouds of 'mephitic vapours' that belched from the chimneys of the gasworks and from the 'rheumatic dampness' that rose up from the canal on the other (Walford, 1878: 368).

4.2.2 The freehold of the land upon which the settlement rose remained in the possession of the Ecclesiastical Commissioners, which explains the choice of deceptively picturesque names given to the streets of Agar Town. On the east bank of the canal just north of Pancras Lock were Winchester Street, Durham Street and Salisbury Crescent, all of which were named after provincial cathedral cities (**Figure 6**). In a contribution to Charles Dickens' magazine *Household Words*, a visitor to the area from Manchester who was seeking accommodation in the capital, described the latter street as comprising "several wretched hovels, ranged in a slight curve that formed some excuse for the name. The doors were blocked up with mud, heaps of ashes, oyster-shells, and decayed vegetables" (Thomas, 1851: 563).

4.2.3 Having taken in the horrors of Salisbury Crescent, the visitor went on to describe the bizarre collection of dwellings that crowded the banks of the Regent's Canal:

> Along the canal side, the huts of the settlers, of many shapes and sizes, were closely ranged. Every tenant...appeared to have disdained to imitate his neighbour, and to have constructed his abode according to his own ideas of beauty or convenience. There were the dog-kennel, the cow-shed, the shanty, and the elongated watch-box, styles, of architecture. To another, the ingenious residence of Robinson Crusoe seemed to have given his idea. Through an opening was to be seen another layer of dwellings, at the back: one looking like a dismantled windmill, and another, perched upon a wall, like a guard's look-out on the top of a railway carriage. The love of variety was, everywhere, carried to the utmost pitch of extravagance. Every garden had its nuisance - so far the inhabitants were agreed - but, every nuisance was of a distinct and peculiar character. In the one, was a dung-heap; in the next, a cinder-heap; in a third, which belonged to the cottage of a costermonger, were a pile of whelk and periwinkle shells, some rotten cabbages, and a donkey; and the garden of another, exhibiting a board inscribed with the words "Ladies' School," had become a pond of thick green water, which was carefully dammed up, and prevented from flowing over upon the canal towing-path, by a brick parapet (*ibid*).

4.2.4 Whilst some contemporaries bemoaned the impact that the arrival of the Great Northern and Midland Railways had on the northern suburbs of London in the 1850s and 1860s, it can scarcely have been any worse than the filthy shanty town that preceded them.

4.3 The Great Northern Railway Stations at King's Cross and the Regent's Canal, 1850-1853

4.3.1 In 1846 an Act was passed by Parliament that permitted the Great Northern Railway Company to develop a new line linking London and the north. Prohibited from building its London terminus south of the Euston Road, the company decided to locate the passenger station on the site of the old Smallpox and Fever Hospitals at King's Cross. The tracks entering the station would be carried beneath the Regent's Canal in a purpose-built tunnel (named the Gasworks Tunnel, owing to its proximity to the Pancras Gasworks on the south bank). With the canal offering a ready-made route for the movement of goods and coals through the capital, the company chose to build its goods yard and coal depot in Maiden Lane on the north bank of the canal. The architect Lewis Cubitt was appointed to design both stations.

4.3.2 Prolonged negotiations with local landowners over the acquisition of the hospitals

caused repeated delays to the scheme. Development of the land on the north side of the canal finally began in 1849; however an impasse over the acquisition of the land to the south forced the railway company to construct a temporary passenger station in the goods yard in 1850. The latter remained in use until the permanent passenger terminus was opened in 1852. Like many local landowners, the Regent's Canal Company objected to the Great Northern's initial application to build at King's Cross, rightly fearing the disruption to traffic that might be caused by the excavation of the Gasworks Tunnel (TNA RAIL 860/42: 89). It was not long however, before the canal company appreciated the boost to trade that railway goods and coal traffic promised to bring, and at the beginning of 1849 the two companies negotiated terms for the transport of goods on the canal "with a view to the modelling of traffic arrangements which may be mutually beneficial" (*ibid*: 169).

4.3.3 In early May 1850 Joseph Cubitt, the Chief Engineer of the Great Northern, met William Radford, his counterpart at the Regent's Canal Company in order to discuss proposals to build "two large docks" at the King's Cross Goods Station to tranship coal and goods traffic between railway and canal (*ibid*: 224). Radford raised no objection to Cubitt's proposals and two weeks later the parties signed an agreement that permitted the railway company to construct "a dock communicating with the canal opposite the Imperial Gas Company's Works" for goods (known subsequently as the Granary Basin) and a second dock near Pancras Lock for coal traffic (TNA RAIL 236/469, 14/05/1850, A: iii, v).

4.3.4 The articles of agreement permitted the Great Northern to undertake an extensive programme of works above and beside the canal (*ibid*: 14/05/1850). In addition to constructing the goods and coal docks, the company was authorised to take down and rebuild Maiden Lane Bridge; to place a culvert beneath the canal to drain the King's Cross Passenger Station; to rebuild Somers Bridge; and to build a bridge to carry the towing path over the mouth of the new coal dock (*ibid*: 14/05/1850 A: i, ii, iv, v). The terms compelled the Great Northern both to pay for the cost of construction and to maintain the works 'for ever hereafter' (*ibid*: B: i-iii).

4.3.5 Reports written by Joseph Cubitt suggest that construction of the new goods dock had commenced by May 1850 (TNA RAIL 236/273: 09/05/1850). The formation of the basin itself began after the completion of the canal tunnel, and it was not until late September that Cubitt reported that excavations were 'proceeding satisfactorily' (*ibid*: 26/09/1850). Towards the end of October Cubitt announced that the earthworks of the basin were "well-advanced", while the spoil from the excavations was being used to form the "Embankment for the Coal Station" (*ibid*: 24/10/1850). The two canal arms beneath the Eastern and Western Transit Sheds had been completed by the beginning of January 1851, by which date water had already been admitted to the easternmost dock (Anon, 1851). The entire installation was complete and fully-functioning by September that year (TNA RAIL 860/44: 81).

4.3.6 At the start of 1851 construction of the coal dock had yet to commence. At the end of January, Cubitt and Radford modified the existing plans in order to accommodate separate docks for coal traffic (200' by 35') and for stone traffic (125' by 50') (*ibid*: 12). Approval for the proposed enlargement was granted at the end of January (TNA RAIL 236/71: 296), while plans were submitted to Radford in March (TNA RAIL 860/44: 32). A contemporary sketch plan of the Great Northern coal depot indicates that the new basin had been completed by early 1853 (**Figure 5**).

4.4 The development of the Midland Railway passenger and goods stations at St Pancras, 1862-1868

4.4.1 In contrast to the Great Northern Railway, which was set up in order to provide railway services between the capital and the north, the Derby-based Midland Railway originated as an entirely provincial concern. In order to gain a foothold in the capital the company made arrangements first with the London and North Western Railway (LNWR), and subsequently with the Great Northern, to allow its passengers to travel to the London termini at Euston and King's Cross respectively. Although the Midland

company was initially prohibited by the Great Northern from running its own trains into King's Cross, in the second half of 1857 the directors of the two companies agreed to allow the Midland to run trains on Great Northern tracks into both the Goods and Passenger Stations at King's Cross (Biddle, 1990: 62, 65).

4.4.2 The arrangement between the two companies was only a stop-gap measure while the Midland sought alternative accommodation for its goods and passenger termini in the capital. In 1861 the company announced its intention to develop its own goods-handling facilities, which it proposed to build on a site on the north bank of the canal (Townend 1989: 16). The new Midland Goods Station was completed in 1862, and the company vacated its premises in the King's Cross Goods Yard in July of that year (*ibid;* **Figure 6**).

4.4.3 Like the London and North Western and Great Northern Railways before it, the Midland decided to build its new passenger terminus on the Euston Road. This meant that William Henry Barlow, the consulting engineer to the company, was confronted by similar problems to those faced by the Cubitts nearly two decades earlier. Barlow's solution to the descent from the high ground to the north to the low ground on the south bank of Regent's Canal was ingenious; in order to avoid tunnelling under the canal or a sharp descent by viaduct, he chose to elevate the station itself above street level (Biddle, 1990: 66). The development of the two stations, together with associated bridges and viaducts necessitated the wholesale demolition of Agar Town, the destruction of 4,000 properties in Somers Town and the clearance of Old St Pancras churchyard and burial ground. The passenger lines into St Pancras crossed the Regent's Canal on two new viaducts built a short distance to the east of the old Oblique Bridge (**Figure 8**). The Midland also laid down a number of sidings a short distance to the east of these viaducts for rolling stock needed to assemble trains travelling out of St Pancras. Given the lack of space in the vicinity of St Pancras Station, it is possible that these sidings were used to accommodate carriages. Cartographic evidence suggests that the Midland built a wall along the south boundary of the new carriage yard at some point between 1866 and 1871 (**Figures 7** and **8**). It is likely that this was built in 1867 or 1868, as the Midland's new lines opened to goods traffic in September 1867 and to passengers in October the following year (Faulkner, 1990: 51).

4.5 Water supply problems in the Regent's Canal, *c.*1824-1898

4.5.1 As the railways began to take increasing volumes of traffic from the canals during the middle of the 19th century, a number of entrepreneurs spotted an opportunity to convert canal companies into railways. Some of these ventures took over failing waterways, such as the Croydon Canal, and converted them into profitable railway lines. Others were less successful, including a number of efforts which were made to develop a railway along the Regent's Canal. As early as 1845 the canal company itself had made an unsuccessful approach to Parliament with a view to building a railway along its banks (*ibid*: 53). Thirty years later the Regent's Canal and Dock Company was incorporated to purchase the canal and to build a railway which was to link up with the Great Eastern Railway network. Nothing came of the venture. Seven years later the Regent's Canal City and Docks Railway Company was established in order to build a railway beside the canal from Paddington to the City; however this too failed to come to fruition. The failure of these schemes did not prevent the canal company from reforming in 1892 as the North Metropolitan Railway and Canal Company, although efforts to build a canalside railway were abandoned (*ibid*).

4.5.2 Despite the nationwide battle for traffic between the canal and railway companies turning decisively in the favour of the latter during the second half of the 19th century, the volume of traffic on the Regent's Canal was maintained at a sufficiently high level for the company to continue paying competitive dividends to shareholders into the 1880s and beyond (*ibid*). In 1888 1,009,451 tons of goods was carried on the canal; ten years later the annual tonnage carried had risen by an additional 32,055 tons (*ibid*).

4.5.3 Notwithstanding its continuing profitability, by the early 1890s the perennial shortage of water in the canal was becoming an increasing handicap to traffic (Smith, 1993). As early as 1828 the Regent's Canal Company had accused the operators of the Pancras Gasworks of the unauthorised extraction of 950 tons of water per day from the canal at King's Cross, a process that was discovered to have been going on since the works opened in 1824 (Faulkner, 1990: 49). The volume of water supplied to the canal increased considerably in the mid-1830s with the completion of the Brent Reservoir near Hendon (later known as the Welsh Harp Reservoir) (*ibid*: 52). In the 1860s the canal company installed steam engines at certain points along the canal in order to pump water back up to the higher levels, where the effects of the water shortage were most keenly felt. One of these engines was installed at Pancras Lock; however by the 1890s many of the back-pumping engines had fallen into disrepair and the company resorted to hiring engines to maintain water levels in elevated stretches of the canal (Smith, 1993). It is possible that this engine and/or its boiler were accommodated in one of the single-storey outbuildings shown in the 1911 photograph of the lock (**Plate 1**).

4.5.4 In 1897 the canal company appointed the civil engineer Sir John Wolfe Barry to devise a permanent solution to the water supply problem. Sir John (1836-1918) was the youngest son of the architect Sir Charles Barry, the designer of the Houses of Parliament. He had been involved with the erection of the railway bridges across the Thames at Charing Cross and Cannon Street in the 1860s, and he oversaw the construction of Tower Bridge in the early 1890s. Barry's scheme for the canal company involved the construction of a principal pumping station at Limehouse, with subsidiary stations fitted with new plant at the City Road, Pancras and Kentish Town Locks (TNA RAIL 860/64: 529). In 1897 the builder Henry Lovatt of Belmont Wharf, York Road was appointed principal contractor for the construction of the Limehouse station; in September of that year Lovatt's contract was extended to include the three subsidiary pumping stations (*ibid*; *Post Office London Directory*, 1895: 1683). The contract value of these stations was estimated at a little over £3,000, the cheapest of which was to be built at Pancras Lock for an estimated cost of £764.5.9 (TNA RAIL 860/64: 529).

4.5.5 The new pumping station at St Pancras was contained in a purpose-built building on the west side of the lock, to the south-west of the 1820 lock-keeper's cottage, which was evidently still in use when the photograph reproduced here as **Plate 1** was taken (**Figure 11**; **Plate 1**). Historical maps show that the older building was still standing just over a century after it was built, however both it and the toll booth had disappeared by 1942 (**Figures 12** and **13**). An Ordnance Survey map indicates that the small single-storey outbuilding located at the southern end of the cottage survived into the early 1950s, although this too was subsequently demolished (**Figure 15**).

4.6 The King's Cross Goods Station enlargement programme, 1897-1899

4.6.1 In May 1897 the Board of the Great Northern Railway approved a scheme that promised to end delays and ease congestion at King's Cross Goods Station by separating outwards from inwards goods traffic. The scheme was intended to disentangle 'down' from 'up' lines by establishing separate Inwards and Outwards Goods Depots. The centrepiece of the latter was to be the new Western Goods Shed, which was to be constructed over two levels on the site of the existing Coal and Stone Basin. Once the new Shed had been completed and the Western Coal Drops converted into a subsidiary Outwards Goods Shed, the existing 1850s goods sheds were to handle inward-bound goods traffic only (**Figure 15**).

4.6.2 An early 20th century photograph of the lock and the Western Goods Shed shows the recently completed building and the tall boundary wall at the south-west end of enlarged goods yard (**Plate 1**).

4.7 The Regent's Canal at King's Cross during the early 20th century

4.7.1 In early 1904 the Gas Light and Coke Company closed the Pancras Gasworks having decided to transfer production to the company's much larger works in Beckton. Within

a few years the site of the gasworks had been acquired by the Great Northern Railway, in order that the latter might develop improved road access to the Goods Yard on the north bank of the canal. Meanwhile the tonnage carried on the canal was in decline, falling to 859,428 tons by 1918 (Faulkner, 1990: 53). During the 1920s a number of official committees considered ways and means of managing the decline of the inland waterways, a process viewed by many policymakers as inevitable. Although proposals to drastically reduce the extent of the canal network by merging economically viable canals and closing the rest largely fell by the wayside, in 1929 the Regent's Canal Company acquired the assets of both the Grand Junction and Warwick canals, thereby forming the Grand Union Canal.

4.8 The Second World War, 1939-1945

4.8.1 The Civil Defence Act 1939 specified that both the railway companies and canal undertakings implement a number of Air Raid Precaution (ARP) measures in order to protect both personnel and property from aerial attack, placing particular emphasis upon the need to make special provision to protect both 'vulnerable points' (VPs) and 'Specified Areas' such as goods stations and marshalling yards (TNA RAIL 390/1165: 28/09/1939). In addition to awarding grants to offset the cost of constructing shelters and other ARP measures, the Government offered companies financial assistance for a range of emergency schemes under Section 40 of the Act (*ibid*:, 13/06/1942). Measures undertaken by the London and North Eastern Railway (successor to the Great Northern) in the King's Cross District under Section 40 of the Act included the construction of Emergency Switchboards and a number of unspecified "protective measures on the Regent's and Grand Union Canal at Somers Bridge (*sic*), King's Cross" (*ibid*). These works included the installation of stop gates, which were installed in order to prevent flooding of the railway tunnels beneath the canal in the event of an exploding bomb fracturing the canal floor. The responsibilities of the various committees of the LNER Board that oversaw the running of the railway were assumed by an 'Emergency Board' for the duration of the conflict.

4.8.2 It was decided before the war began that those canal undertakings and carriers not owned by the railway companies would remain independent for the duration of hostilities (TNA MT 52/44: CDAC, 12/09/39; MT 52/41: MoT memorandum 29/11/38). Owing to a dramatic decline in canal-borne traffic in the early years of the war as a result of competition from the government-subsidised railways and a growing shortage of labour, in the summer of 1942 the Ministry of War Transport reversed existing policy and extended state control to those canals and carriers which could make an appreciable contribution to the war effort (TNA MT 52/112: Minutes, 12/06/42). The Grand Union was one of eighteen undertakings and 42 carriers taken over by the Inland Waterways Division of the MoWT from 1st July 1942.

4.8.3 Premises on both sides of the Regent's Canal suffered bomb damage during the Second World War. Considerable damage was inflicted upon the buildings of the Goods Station during the Blitz of September 1940 to May 1941, with the single most damaging raid occurring on Saturday 9th November 1940. Despite the provision of the stop gates to protect nearby railway tunnels in the event of a bomb breaching the floor of the canal, no such incident occurred. In July 1943 the Emergency Board of the LNER awarded a contract worth £3,159 to Pitchers Ltd for the reconstruction of the Inwards Messroom, which had been destroyed by enemy action (TNA RAIL 390/1974, no. 3293, 29/07/1943). Given that the Western Goods Shed of 1898/9 had been converted into the Inwards Goods Shed in the mid-1930s, it is possible that the messroom built to replace the one destroyed by enemy bombs was the building first shown standing to the west of the shed on a plan of the goods yard and an Ordnance Survey map both dating to 1951 (**Figures 14** and **15**). Some damage was inflicted to buildings on both sides of the canal in August 1944, when a V1 flying bomb landed on the raised timber decking of the LMS coal drops in Purchese Street (TNA HO 198/92, 14/08/1944; TNA RAIL 390/1192: 25/09/1944).

4.9 The post-war period, 1946-present

4.9.1 At the beginning of January 1948 the majority of canal undertakings in mainland Britain including the Grand Union were nationalised. The newly formed British Transport Commission (BTC) was given oversight over all nationalised branches of the transport infrastructure. The canal was subsequently administered by the South Eastern Division of the Docks and Inland Waterways Executive. Authority was transferred to the British Waterways Board from the beginning of 1963 (Faulkner, 1990: 54).

4.9.2 The Big Four railway companies were nationalised on the same day as the waterways, with control passing to the Railway Executive of the BTC. Management of the King's Cross Goods Station was handed over to the newly constituted Eastern Region of British Railways.

4.9.3 During the years of austerity that followed the end of the Second World War there were few resources available for the refurbishment of the railways. The few large-scale projects which were authorised in the aftermath of nationalisation were confined to those "designed to improve the net revenue position, or of an essential maintenance character" (TNA AN 8/85: 67). Despite tight restrictions on spending, in 1951 the King's Cross District Civil Engineer's Department issued plans to install two 6" pipes on the south side of the King's Cross Goods Yard to draw water from the Regent's Canal to be used in the event of fire at the yard (NRRG: DMFP 00026295. 51-LKC-144, 1951). It was intended to place the westernmost suction pipe a short distance to the west of Pancras Lock, while the second pipe was to draw water from the canal at a point near the eastern end of the Coal and Fish Offices (**Figure 14**). Revised drawings of the pipes were reissued in March of the following year (NRRG: 51-LKC-144a, 11/03/1952), while a plan published in 1953 showing the location of fire hydrants and other fire-fighting facilities confirms that the two suction pipes were indeed fitted shortly thereafter (NRRG: King's Cross Goods: Fire Hydrants Revised, 12/1953).

4.9.4 While the opening of the private St Pancras Yacht Basin in the early 1960s stimulated the growth of leisure traffic on the otherwise moribund Regent's Canal, the area declined throughout the second half of the 20th century. The designation of the Regent's Canal Conservation Area in 1974 and its subsequent enlargement in the 1980s provided a degree of statutory protection, although efforts to regenerate the area in the late 1980s and early 1990s came to nothing.

4.9.5 The decision to proceed with the extension of the Channel Tunnel Rail Link to St Pancras prompted the first major structural modifications to the Regent's Canal walls in the vicinity for several decades. Preparatory works authorised under the terms of the Channel Tunnel Rail Link Act 1996 included the provision of a construction haul road passing northwards from Battle Bridge Road, crossing Goods Way and the Regent's Canal via new bridges to join with Wharf Road on the north bank (CTRL Act 1996: Schedule 1 Roadworks: Work No. 5D (1)). Goods Way was closed to traffic from 26th November 2001 to 16th December 2001 to allow for construction of the haul road bridge, which was itself removed and the banks restored in advance of the completion of the rail link (RLE & Union Railways, 2001: 'CTRL Road Closures').

5 DESCRIPTION

5.1 Regent's Canal Walls

Introduction

5.1.1 In 2007 and 2008 Pre-Construct Archaeology Limited recorded the Regent's Canal walls between Maiden Lane Bridge, which carries York Way, in the east to St Pancras Lock in the west (Thompson and Matthews, 2011). In 2012 and 2013 the recording was extended to include the wall on the north side of the Regent's Canal from St Pancras Lock in the south-east to the CTRL (Channel Tunnel Rail Link) Bridge in the north-west (**Figures 1**, **2** and **16**). The recording included both sides of the south-east half of the wall and one side of the north-west half of the wall (**Figure 16**).

5.1.2 The Regent's Canal opened in 1820, some 30 years before the construction of the King's Cross Goods Yard. The walls that line the canal itself are built of early 19th century stock moulded (handmade) purple bricks in fabric 3032. A wall was built in *c.*1850 on the north side of the canal towpath to act as a retaining wall for the higher level Goods Yard (Western Goods Yard) to the north (**Figures 1**, **2** and **16**).

5.1.3 The north wall from St Pancras Lock to the CTRL Bridge is described below from south-east to north-west. This continues the description of the north wall from Maiden Lane Bridge to St Pancras Lock in the earlier report (*ibid*). To place the present work in context, the description of the north wall just to the south-east of St Pancras Lock has been summarised here from the previous report (*ibid*):

A brick relieving arch, some 12m long, for a cast iron girder over the former entrance to the Coal and Stone Basin (now infilled and built on with the Western Goods Shed) is described in that report (*ibid*, fig. 32). The arch is located in the north canal wall just to the south-east of St Pancras Lock. Another cast iron girder supports the outer (south-west) edge of the towpath where it spans over the canal inlet (*ibid*: plates 44 and 45). The Coal and Stone Basin was constructed *c.*1851; although the infilling of its western side had been started by 1894 and it was finally replaced by the Western Goods Shed, which was completed by 1899. The inlet entrance to the Coal and Stone Basin, which is visible below the towpath footbridge, had latterly been infilled using a pier and panel wall of blue engineering bricks (*ibid*; pl. 45).

5.2 Points L to M

5.2.1 To the north-west of the footbridge over the basin entrance ten circular cast iron tie-bar plates are present along the base of the canal wall (**Figure 17**; **Plates 2**, **3** and **6**; Thompson and Matthews, 2011, fig. 32, pl. 46). The tie-bar plates span a length of *c.*26.5m along the base of the wall starting *c.*13m north-west of the blocked opening into the former Coal and Stone Basin. They extend from the south-east of Point L to the north-west of Point M (**Figure 17**). The tie-bar plates are each a single circular casting with a pronounced bead detail to the edge. Each is convex in section, swelling to a central opening, through which the tie-bar passes and is secured by a hexagonal nut of 3 inch or 76mm across flats. The tie-bar plates are all the same form and dimension, measuring 640mm in diameter with a 30mm wide beaded edging. The tie-bar plates are regularly spaced at between 3.8m and 4.2m centres, though the majority measure approximately 4m apart. Given the regularity of the spacing it is unusual that the tie-bar plates are erratic in their vertical relationship, with few on the exact same level (**Figure 17**). The location of the tie-bars within a cluster directly to the south-west of the former Coal and Stone Basin (see **Figures 6** to **10**) would suggest a direct relationship between the two. The considerable loads imposed upon the canal walls from the Wharf Road Viaduct to the north-east required an appropriate engineering response by strengthening the base of the canal wall with supplementary lateral bracing.

5.2.2 The north canal boundary wall at Point L is a continuation of that previously recorded to the east (Thompson and Matthews, 2011) and accordingly is built using mid-19th century red and discoloured purple stock moulded bricks (in fabric 3032 and

transitional fabric 3032/3035) laid in a quarter-lap English bond and held by a firm white Portland cement mortar. Portland cement was patented in *c.*1830 and would have been an appropriate and readily available mortar to use in heavy construction work. The north canal wall at this point dates to *c.*1850 and was probably built when the Goods Yard was constructed. At this time the ground level to the north-west of the canal was raised to provide a level platform for the construction of the Western Goods Yard and the creation of the Coal and Stone Basin. The north canal wall is a 1½ brick wall finished with a brick-built saddle-back coping (see Section B on **Figure 18**; **Plates 2** to **7**).

5.2.3 The mid-19th century brickwork continues at full height (measuring 3.35 to 3.4m or 40 courses below the coping) uninterrupted to the north-west from Point L for 21.2m to Point M. Later patch repairs using yellow stock brick are present roughly half-way down the wall towards Point M (**Figures 17** and **18**; **Plates 5** to **7**).

5.2.4 Between Points L and M, at the south-eastern end of the survey and in an area adjacent to the lock, evidence of a former building or structure, in the form of a vertical wall scar, 2m in height and 0.3m wide, is present on the south-west (canal) side of the wall. It is located just to the south-east of a modern ventilating or stench pipe to an underground drain and a water stopcock (**Figure 17**; **Plate 2**). There was no evidence of a return for the wall scar but a significant section of the canal wall brickwork immediately to the north-west of the scar is spalled (**Plates 2** and **3**). Above this, the brickwork (upper eleven courses) is pointed, while below the brickwork is not and is less well preserved. This unpointed and spalled brickwork extends to the west for approximately 13.7m where later patching and pointing obscures a definitive end or return wall. This marks the location of the 1820 lock-keeper's cottage and outbuildings, against which the *c.*1850 Goods Yard wall was erected (**Plate 1**). Furthermore the presence of small tethering rings set into the canal wall within the area of the removed building suggests that it may also have provided shelter/livery for the canal horses, while barges were passing through St Pancras Lock.

5.3 Points M to N

5.3.1 From Point M north-westwards towards Point N the upper section of the mid 19th century wall and coping had been replaced by a yellow brick wall of eighteen courses in height (**Figure 17**). The yellow stock brick wall was built in-line and directly onto the remaining lower 20 courses of the mid-19th century brickwork (**Figure 17**; **Plates 6** and **11**). The upper part of the wall was built using mainly 20th century yellow stock bricks, but incorporated a smaller number of over-fired red and purple/pink coloured bricks and equates with a rebuilding of the wall level with the higher ground surface on the Goods Yard (north-eastern) side of the wall (**Plates 8** and **9**). Each brick is regular machine made and all of them are pocked with voids where impurities in the clay have burnt out. The bricks are laid in quarter-lap English Bond and have been repointed using a cement-based mortar. For the section between Points M and N the wall is topped with a brick-on-edge coping course. At Point M the yellow stock brick wall butts up, using a ragged joint, against the upper courses of the *c.*1850 brickwork (**Figure 17**; **Plates 6** to **8**). The canal wall continues north-westwards in this vein for another 20.2m, at which point the yellow stock brick wall on the canal (south-west) side becomes full height (35 courses). It continues as a full-height wall for a further 59m to Point O (**Figure 17**; **Plates 11** to **13**).

5.3.2 On the north-east (land) side the yellow stock brick wall continues north-westwards up to the scar of a return wall (**Figure 18**; **Plate 9**). Beyond this point the wall is lined with an internal skin of Fletton brickwork (**Figure 18**; **Plates 9** and **10**). White paint on part of the wall suggests that this part was the internal wall of a building, although no buildings in this location are shown on any the 20th century maps collated for this report.

5.3.3 A large bore 6-inch diameter cast-iron water suction pipe pierces through the fabric of the yellow stock brick wall from the Goods Yard (north-east) side of the canal wall and extends down through the ground between the wall and the towpath and on into the

canal (**Figures 17** and **18**; **Plate 12**). It is located just south-east (0.8m) of Point N and just to the north-west of St Pancras Lock. The pipe was one of two pipes installed after the war in 1951 by the King's Cross District Civil Engineer's Department. They had issued plans to install two 6" pipes on the south side of the King's Cross Goods Yard to draw water from the Regent's Canal to be used in the event of fire at the yard (**Figure 14**). It was intended to place the westernmost suction pipe a short distance to the north-west of Pancras Lock, while the second pipe was to draw water from the canal at a point near the eastern end of the Coal and Fish Offices (Thompson and Matthews, 2011, plates 28 and 29). The construction of the yellow brick wall therefore predates the 1951 suction pipe.

5.4 Points N to O

5.4.1 The yellow stock brick wall continues at a full height of 35 courses between Points N and O on the south-west (canal) side of the wall where the wall turns north-east (**Figure 16**; **Plates 16** and **17**). A remnant of the 1850 brickwork (fifteen courses maximum height and 6.2m in length) remained at the base of this wall, *c*.1.5m north-west of Point N (**Figure 17**; **Plate 15**). Its presence confirms that the mid 19th century work continued at least as far as the (north-west) end of St Pancras Lock.

5.4.2 The yellow stock brick wall is overlain by at least six courses of red brickwork which incorporates the bases of structural pilasters set either side of nine regularly spaced former window openings with bull-nose brick sills (**Figures 17** and **18**; **Plates 15** and **16**). The canal wall at this point was bulked up and strengthened by applying another single course (half brick wide) of red Fletton brickwork on the land (north-east) side. This strengthening work was added to support the end flank wall of a post-war building which reused the pre-existing canal wall as a structural foundation. The scar of the building's south-east return wall was visible in the north-east (land) side of the north canal wall just to the north-west of the suction pipe at Point N (**Figure 18**; **Plate 13**). A large building labelled as a 'Mess Room' is shown in this location on the 1951 water supplies for fire fighting plan (**Figure 14**) and is also shown on the 1951 Ordnance Survey map (**Figure 15**). It is not shown on the 1942 Goad plan (**Figure 13**).

5.5 Points O to P

5.5.1 The north-western end wall of the building remained, returning north-eastwards for *c*.5m from Point O (**Figure 16**; **Plates 16** to **19**). The return wall comprised an inner (south-east) skin **o**f Fletton brickwork in Flemish bond (**Plate 18**) built up against an outer skin of re-used yellow stock brick built (210-220 x 65 x 105mm) in English bond. This outer wall was originally a single brick wide and provided the same appearance as the canal wall on the outer visible (north-west facing) elevation (**Plates 17** and **18**). This wall appears to have acted as a revetment with lower land to the south-east and higher ground to the north-west (**Figures 17** and **18**; **Plates 17** to **19**). The inner walls incorporate two single brick wide wall stubs, the south-eastern one coinciding with the extent of cement rendered coping lying on top of the return wall (**Figure 18**; **Plates 17** to **19**). This feature overlies an on-edge brick and tile coping and is likely to have been a recent adaptation associated with the former building's roofline.

5.5.2 From Points L to O on the south-west side of the north canal wall is a row of J-brackets along the upper part of the elevation (**Figure 17**). These presumably previously supported electric cabling that has since been removed. The row of brackets continued along the north-west side of the return wall (Points O to P; **Figure 18**).

5.6 Points P to Q

5.6.1 At its north-east end, the return wall (Points O to P) abuts the south-easternmost pier of a short length of earlier wall (Points P to Q) set at right angles and on an approximate south-east to north-west alignment (**Figure 16**; **Plate 18**). This short wall is a pier and panel construction and was built with substantial four bricks wide piers at each end and yellow stock brickwork in English bond which is very similar in

character to the 1850s canal wall brickwork. This wall pre-dates the rebuilt return wall (Points O to P). The latter butts against the south-eastern pier of the former with a straight joint (**Plates 18** to **20**). The short wall (Points P to Q) is capped with a stone saddle-back coping and the piers by shallow pyramidal copings of the same stone and design.

5.6.2 These walls are first depicted on the First Edition Ordnance Survey map of 1871 (**Figure 8**), where they clearly form the boundary walls of an area of railway sidings set parallel to the main line into St Pancras Station. The sidings were used by the Midland Railway and its post-1922 successor, the London, Midland and Scottish Railway (LMS). The 1951 Ordnance Survey map reproduced here as **Figure 15** indicates that they remained in use after the Second World War, although they were subsequently lifted. The return wall (Points O to P) was rebuilt after the war as part of the construction of a ramped access into the canal cutting and subsequently was integrated along with the north canal wall into a 'Mess Room' building.

5.7 Point O to the CTRL Bridge

5.7.1 From Point O to the CTRL railway bridge the character of the canal wall changes considerably. This stretch of wall was built only to a height of 1.8m above the level of the towing path and above comprises a simple low chain-link fence held by concrete fence posts (**Plate 21**). The land surface to the north-east of the canal wall gradually slopes down level with or above the top of the wall and (at the time of the survey) was overgrown with scrub. The wall typically comprises 19 to 21 courses (as the ground level varied) of soft red bricks laid in English bond. The bricks had weathered faces and many were spalling, possibly due to the inappropriate use of a cement mortar for re-pointing work. The wall was capped by a single course on-edge brick coping, which has in places been replaced with harder modern bricks or is being undermined by the undergrowth. A modern concrete drainage gulley runs along the base of the wall, suggesting this particular area has suffered from flooding running off the banked up higher ground to the north-east. This wall post-dates the construction of the yellow stock brick canal wall to the south-east, which is thought to be early 20th century in date, and uses large post-war red bricks measuring 230 x 80 x 115mm. The wall remains consistent along its length, although it is built over at its north-western end and towards the recently-built CTRL railway bridge (**Plate 22**). This work comprises a short stretch of 21st century brickwork of thirteen courses deep in English bond which forms part of the abutments for the new CTRL railway bridge.

6 CONCLUSIONS

6.1 Building recording of the canal walls along the Regent's Canal between St Pancras Lock and the CTRL railway bridge has corroborated much of the documentary evidence for these structures and shed additional light on those areas less well served by the surviving archival resource.

6.2 Building recording and documentary research have confirmed that the earliest phase of the canal and St Pancras Lock date to 1820, when the lock compartments and lock-keeper's cottage were built. The northern canal wall on the (north-eastern) side of the towpath was built in *c.*1850 as the south-western boundary wall of the Great Northern Railway King's Cross Goods Yard. Architectural features within this wall, identified previously during survey works on the canal walls to the south-east (Thompson and Matthews, 2011), included brick relieving brick arches built for cast iron girders which spanned the former entrances to the Granary Basin and the Coal and Stone Basin, and 26 brick arches over openings in the south wall of the vaults under the Wharf Road Viaduct.

6.3 The stretch of canal wall between St Pancras Lock and the CTRL bridge includes a series of 19th century tie-bars and plates and evidence of a former canalside building. The tie-bars were fitted in order to strengthen the base of the canal wall against the considerable loads imposed upon it from the Wharf Road Viaduct. The scars of the canalside building, seen in the canal wall adjacent to the lock, represented the lock-keeper's and collector's cottage and outbuildings, originally erected in 1820. This building was still in existence in the early 1920s, although it had been removed by 1942. As canal traffic declined dramatically during the first half of the 20th century it is possible that the canal company no longer felt the need to maintain a permanently manned presence on the east bank of the canal, although the 1890s pumping station on the south-west side of the lock was retained.

6.4 The survey also recorded a number of rebuilding events to the main canal wall that occurred during and after the Second World War. A long stretch of the wall was rebuilt in machine-made yellow stock brickwork between 1942 and 1951, possibly in association with the construction of a messroom for staff of the Inwards Goods Department based at the Western Goods Shed. In 1943 authorisation was granted for the construction of a new messroom to replace an earlier building destroyed by enemy action. It is possible that this new building was the 'Mess Room' first shown on maps and plans of 1951. The structure was built in Fletton brickwork against and on part of the north canal wall that had been rebuilt in yellow stock brickwork. Some of the rebuilding works were associated with the removal of the possible carriage sidings alongside the Midland Railway main line into St Pancras Station, whilst evidence was also observed of 21st century demolition and construction works associated with the rebuilding of the CTRL bridge crossing.

7 ACKNOWLEDGEMENTS

7.1 Pre-Construct Archaeology Ltd would like to thank King's Cross Central General Partner Limited for commissioning the work and the assistance of Ken Trew is gratefully acknowledged. The collaborative role of Kim Stabler, English Heritage Greater London Archaeological Advisor (North-West) is also acknowledged. Michael Bussell and Richard Hughes of International Heritage Conservation and Management (IHCM) are thanked for their help and advice.

7.2 Thanks are also given to the staff of the Camden Local Studies and Archives Centre, The National Archives at Kew and Network Rail Record Group, York for their help and assistance.

7.3 The project was managed for Pre-Construct Archaeology Limited by Charlotte Matthews. The recording of the structures was carried out by Adam Garwood and Paul McGarrity. This report was written by Guy Thompson (Historical Background) and Adam Garwood (Descriptions) and the figures were prepared by Mark Roughley.

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Goad Insurance Sheet 12/400 1921. King's Cross Goods Yard, revised to January 1921

Goad Insurance Sheet 12/400 1942. King's Cross Goods Yard, revised to 1942

APPENDIX 1 NMR OASIS FORM

OASIS ID: preconst1-165689

Project details

Project name	Regent's Canal Walls St Pancras Lock to CTRL Bridge Building Recording
Short description of the project	Pre-Construct Archaeology Limited was commissioned by King's Cross Central General Partner Limited to undertake building recording of the Regent's Canal wall between St Pancras Lock and the CTRL Railway Bridge, King's Cross, London, centred on OS NGR TQ 29892 83665. This report follows on from an earlier programme of survey works carried out on the Regents Canal walls from Maiden Lane Bridge in the east, to St Pancras Lock in the west by Pre-Construct Archaeology. The Regent's Canal walls are not listed buildings but they lie within the Regent's Canal Conservation Area. Building recording was carried out in 2012 and 2013. The survey work included (where possible) both sides of the canal wall, and was completed in accordance with English Heritage Level 4. The canal was first built *c.*1820. The north canal wall on the north side of the towpath was built in 1850 when the King's Cross Goods Yard was constructed by the Great Northern Railway. The stretch of wall between St Pancras Lock and the CTRL Bridge represented a continuation of the canal wall built in 1850, and incorporated a series of large tie-bar plates providing lateral retention at the base of the canal wall, plus a series of 20th century rebuilding events and many localised repairs. The scar of the original lock-keeper's cottage of 1820 was also recorded in this wall.
Project dates	Start: 03-12-2012 End: 28-02-2013
Previous/future work	No / No
Any associated project reference codes	KXD07 - Sitecode
Type of project	Building Recording
Site status	Conservation Area
Current Land use	Other 15 - Other
Monument type	WALL Post Medieval
Monument type	WALL Modern
Significant Finds	NONE None
Methods & techniques	"Measured Survey", "Photographic Survey", "Survey/Recording Of Fabric/Structure"
Prompt	Planning condition

Project location

Country	England
Site location	GREATER LONDON CAMDEN CAMDEN Regent's Canal walls from St Pancras Lock to CTRL Bridge
Postcode	N1C 4PN
Study area	0 Square metres
Site coordinates	TQ 29892 83665 51 0 51 32 11 N 000 07 37 W Point

Project creators	
Name of Organisation	Pre-Construct Archaeology Limited
Project brief originator	IHCM
Project design originator	Alex Rose-Deacon
Project director/manager	Charlotte Matthews
Project supervisor	Adam Garwood
Type of sponsor/funding body	Developer
Name of sponsor/funding body	King's Cross Central General Partner Limited

Project archives	
Physical Archive Exists?	No
Digital Archive recipient	LAARC
Digital Archive ID	KXD07
Digital Contents	"none"
Digital Media available	"Images raster / digital photography", "Survey", "Text"
Paper Archive recipient	LAARC
Paper Archive ID	KXD07
Paper Contents	"Survey"
Paper Media available	"Drawing", "Plan", "Report", "Survey ","Unpublished Text"

Project bibliography 1	
Publication type	Grey literature (unpublished document/manuscript)
Title	Historic Building Recording of the North Regent's Canal Wall from St Pancras Lock to the CTRL Railway Bridge, King's Cross Central, London Borough of Camden
Author(s)/Editor(s)	Thompson, G. and Garwood, A.
Other bibliographic details	R11577
Date	2013

Issuer or publisher	Pre-Construct Archaeology Limited
Place of issue or publication	Brockley, London
Description	A4 report
Entered by	Charlotte Matthews (cmatthews@pre-construct.com)
Entered on	29 November 2013

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Figure 1
Site Location
1:10,000 at A4

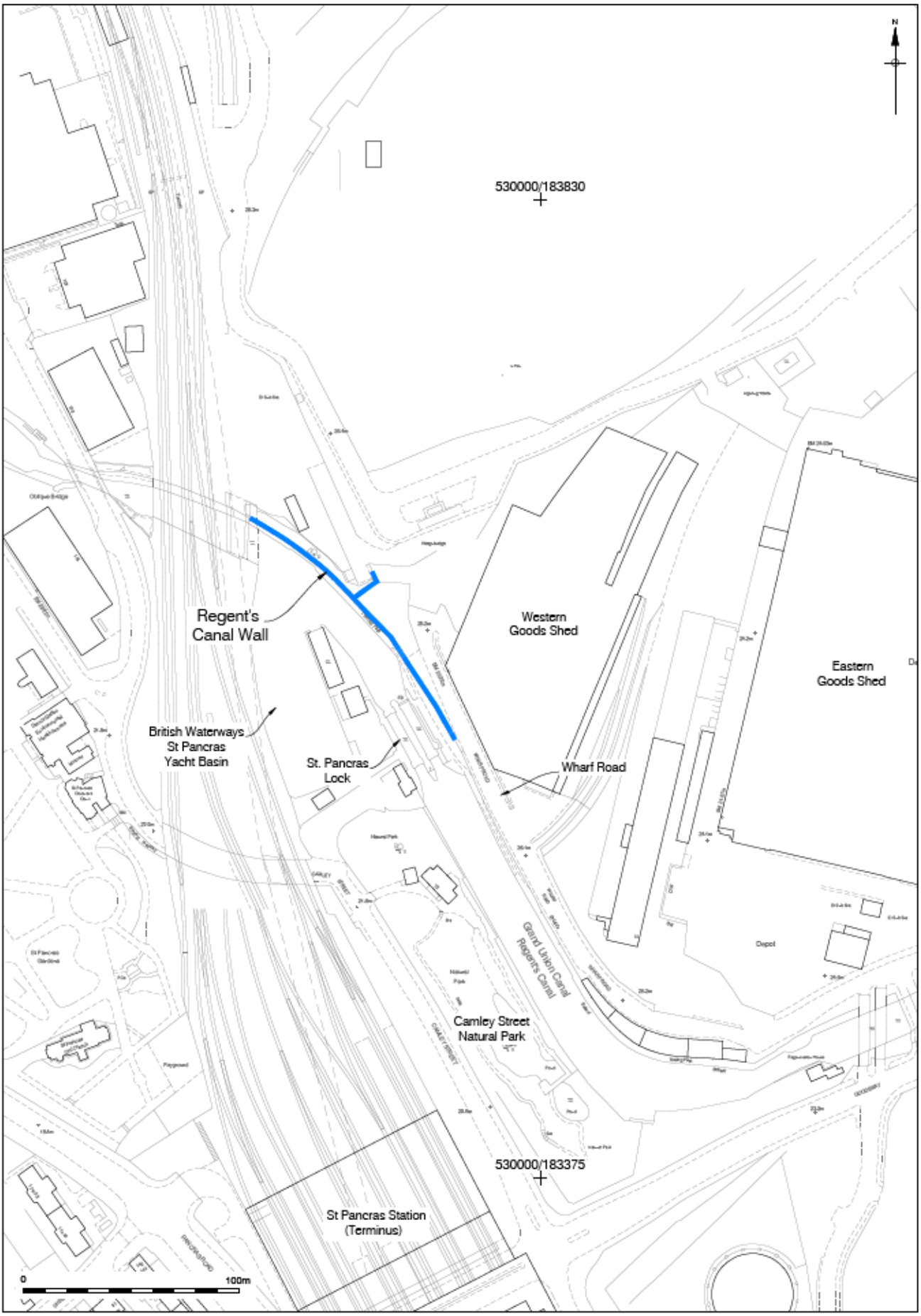

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Figure 2
Detailed Site Location
1:2,500 at A4

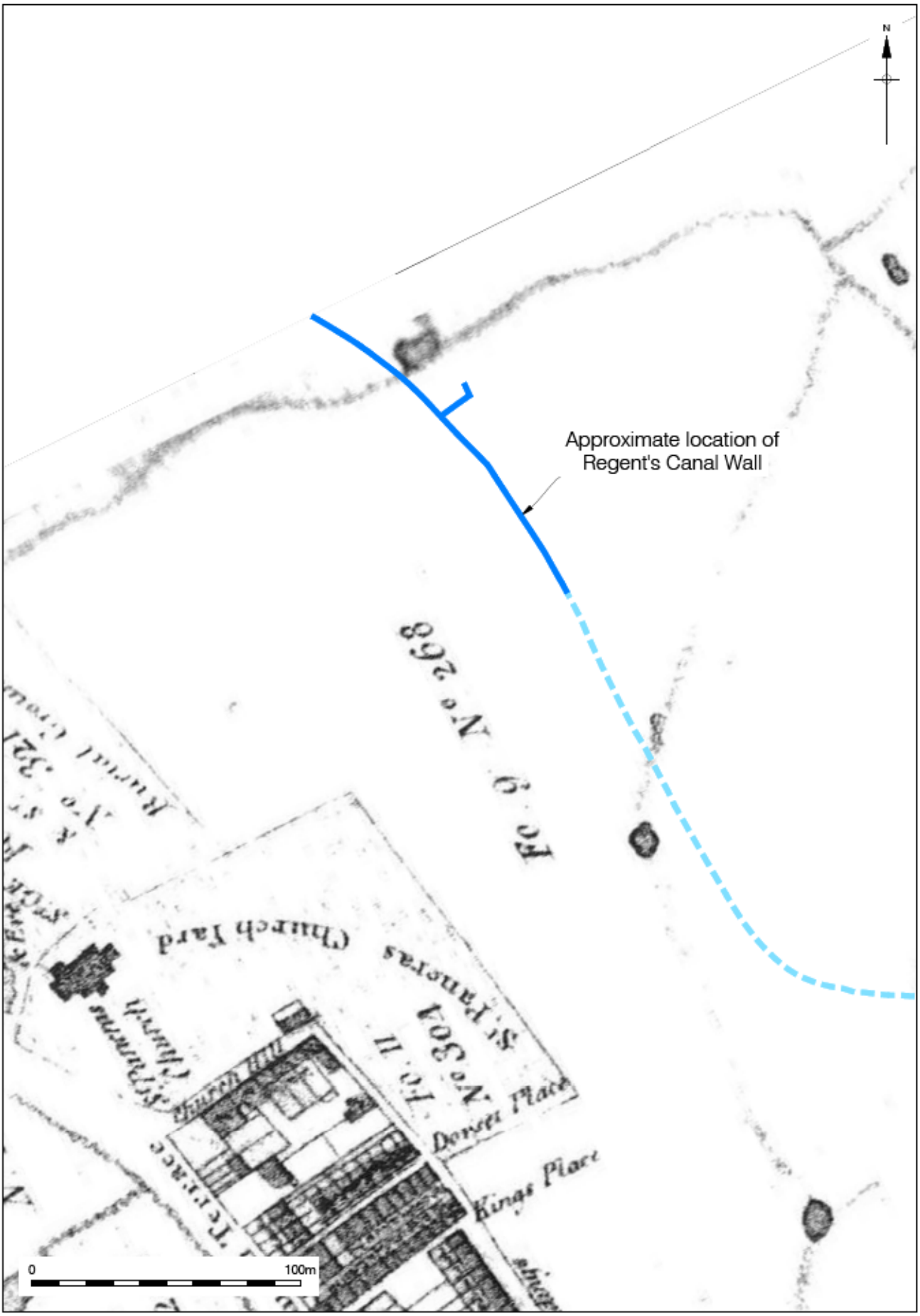

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Figure 3
Thompson's map of the Parish of St Pancras, 1804
Approx. 1:2,000 at A4

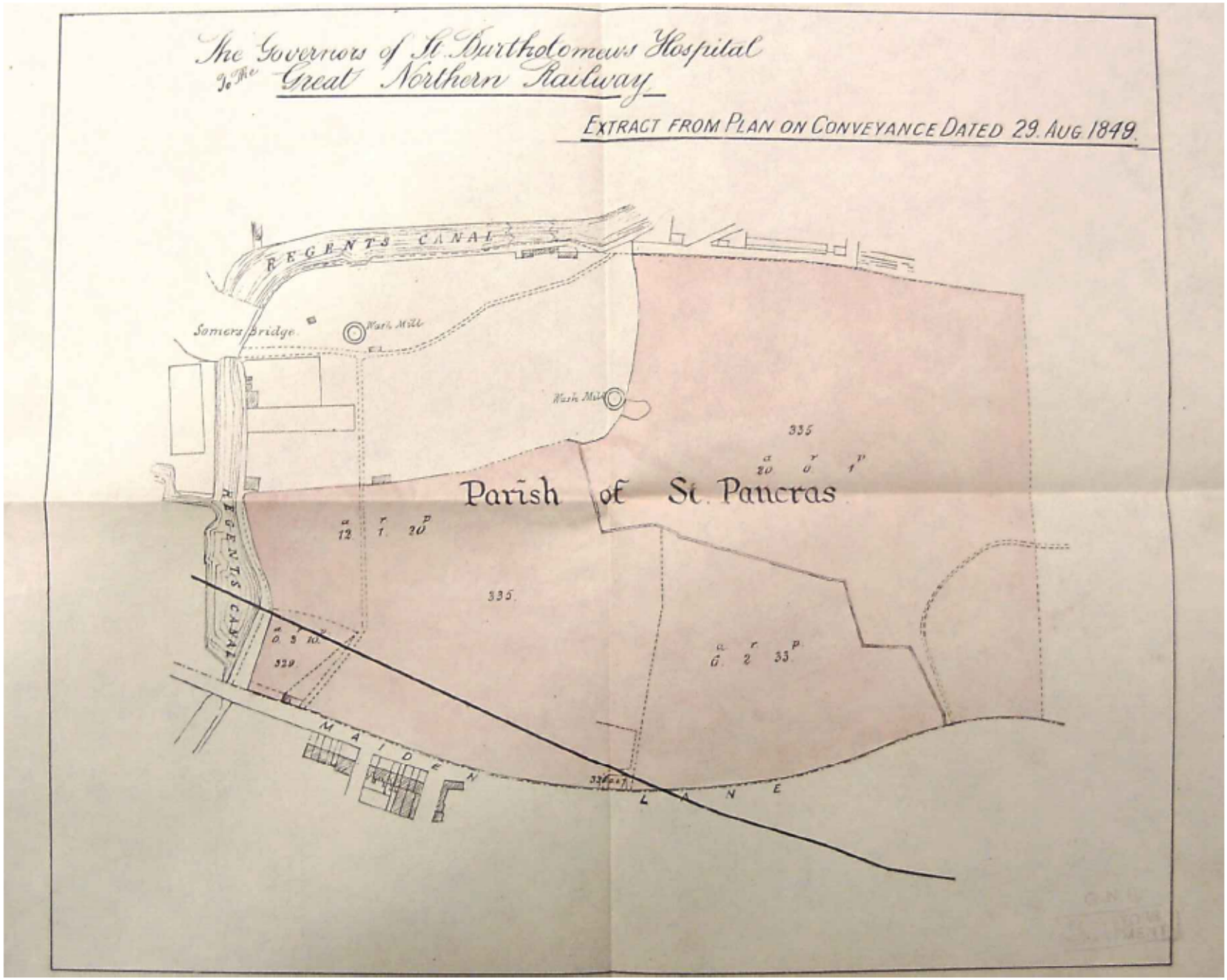

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Figure 4
Plan of Conveyance, 1849
Approx. 1:4,000 at A4

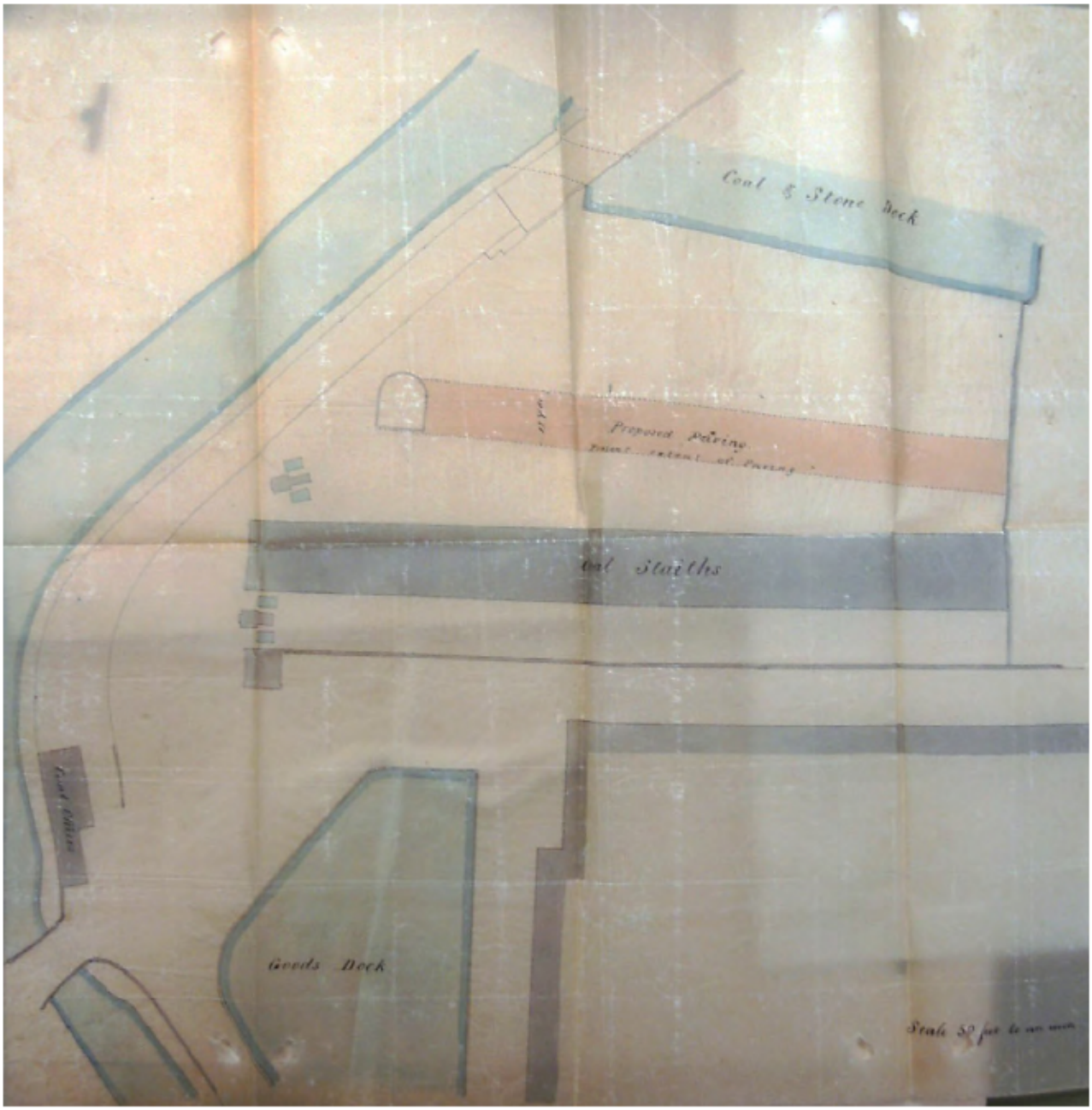

Figure 5
Sketch plan of the Coal Depot, March 1853
Approx. 1:1,250 at A4

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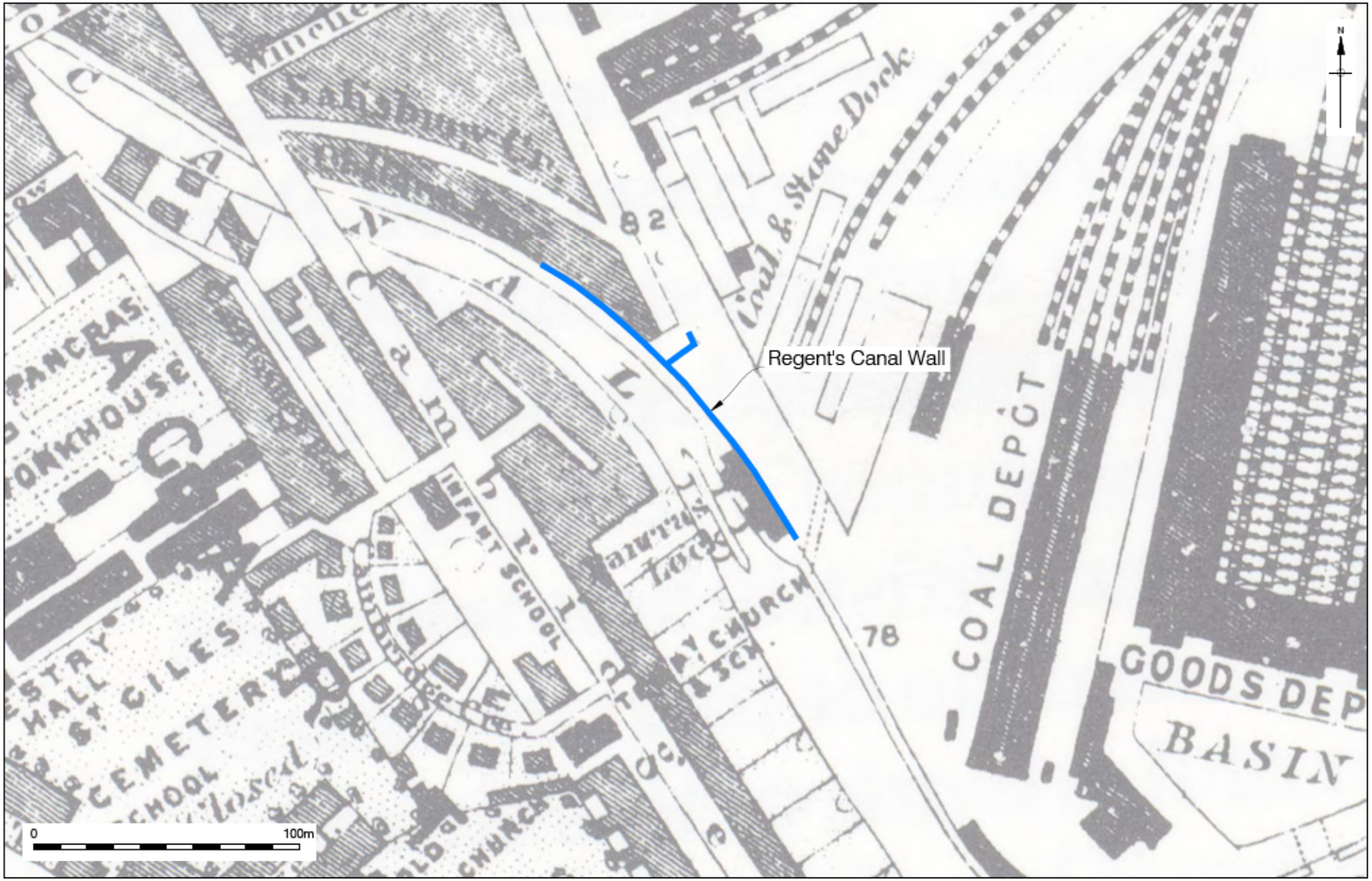

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Figure 6
Stanford's map, 1862
1:2,000 at A4

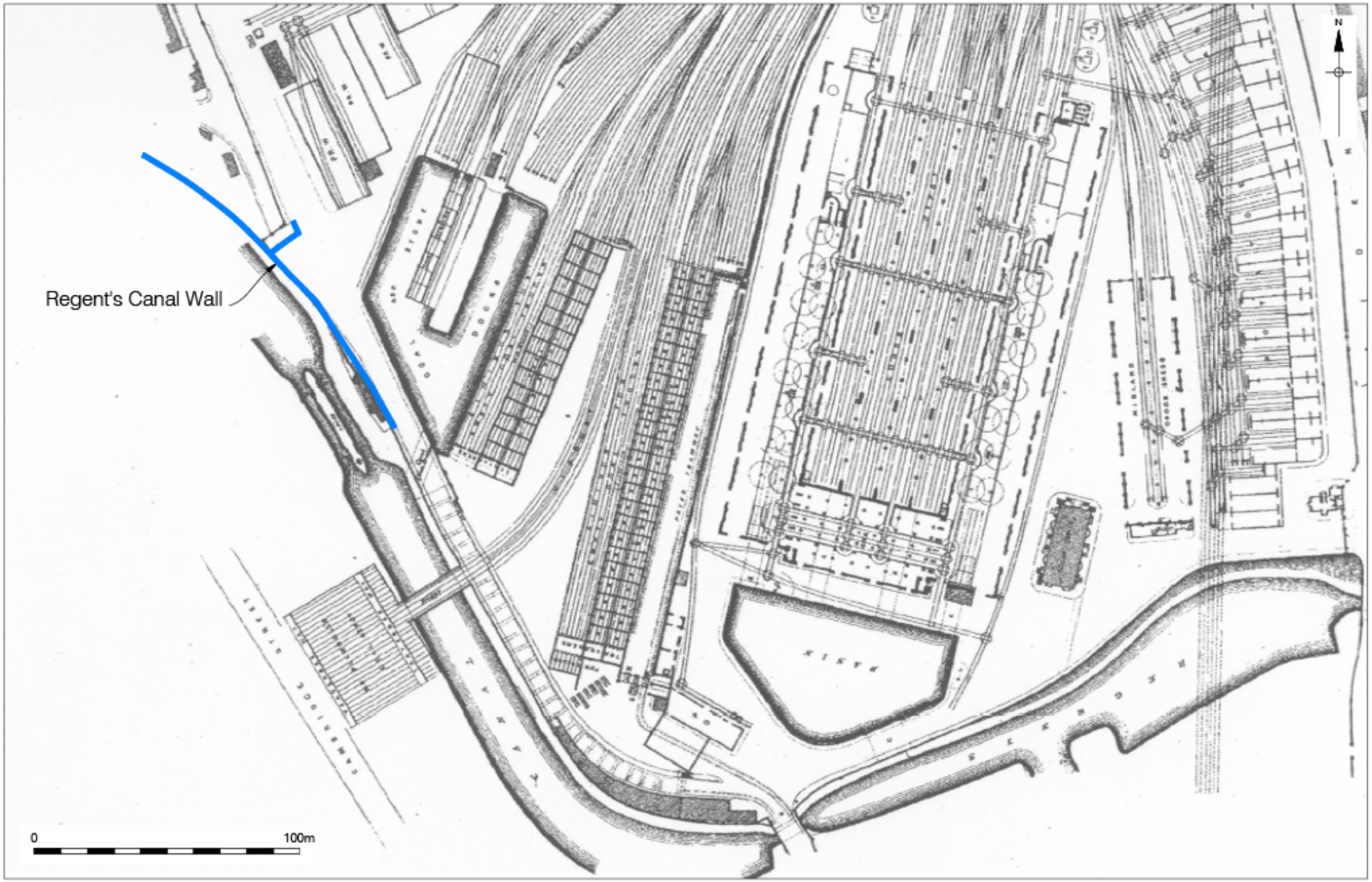

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Figure 7
William Humber's plan of King's Cross Goods Station, 1866
1:2,000 at A4

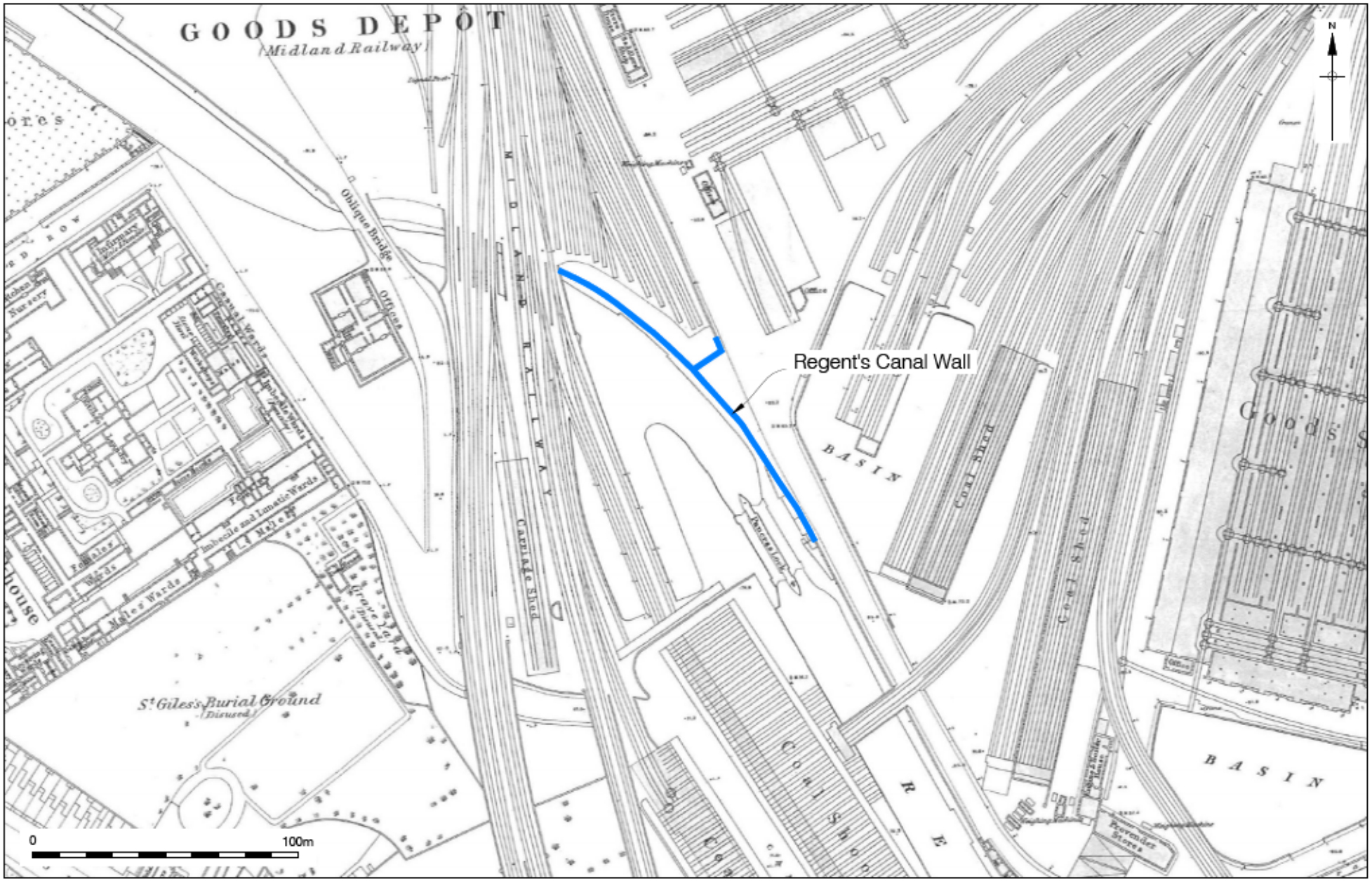

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Figure 8
Ordnance Survey First Edition, 1871
1:2,000 at A4

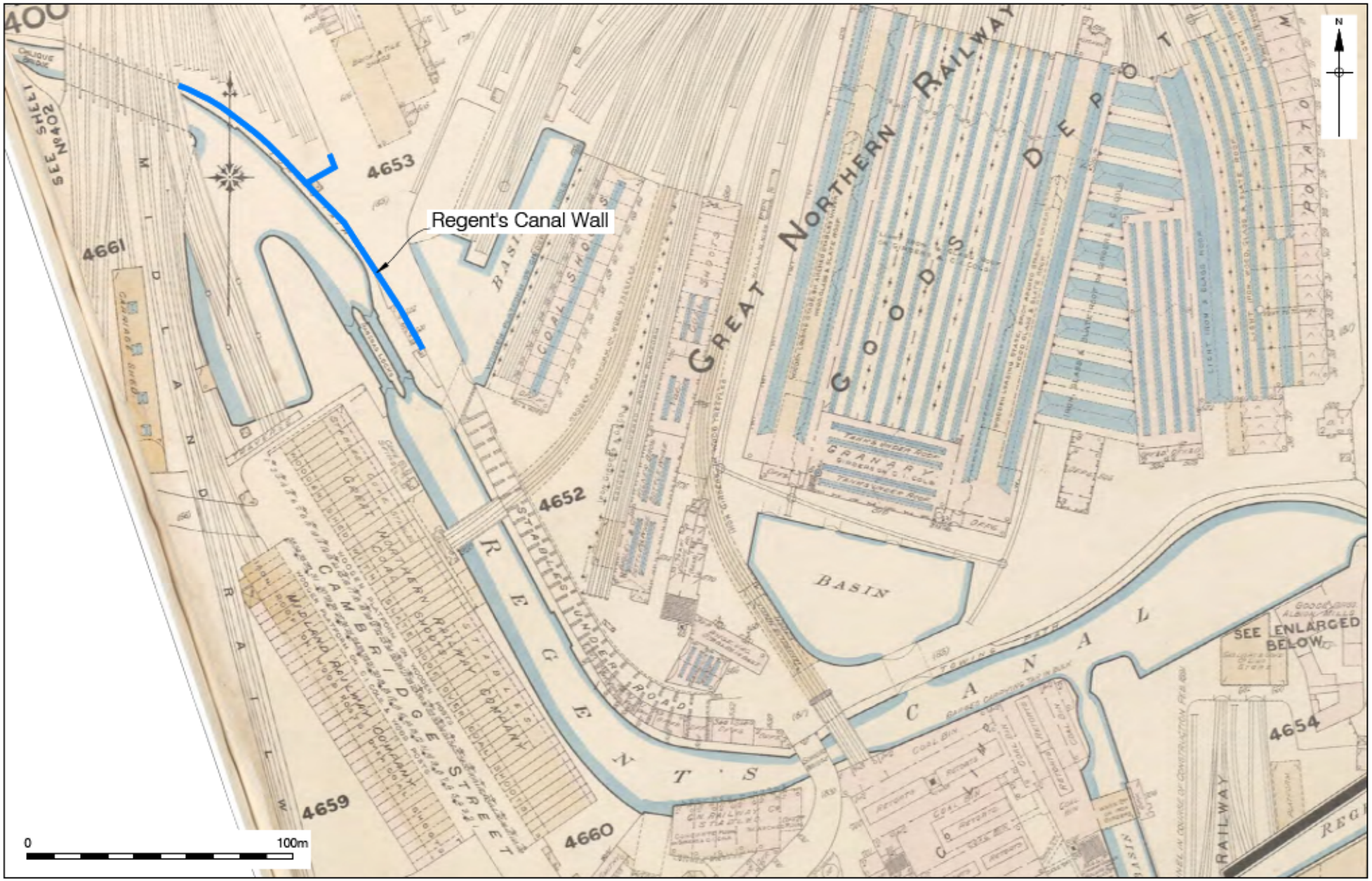

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Figure 9
Goad Fire Insurance plan, 1891
1:2,000 at A4

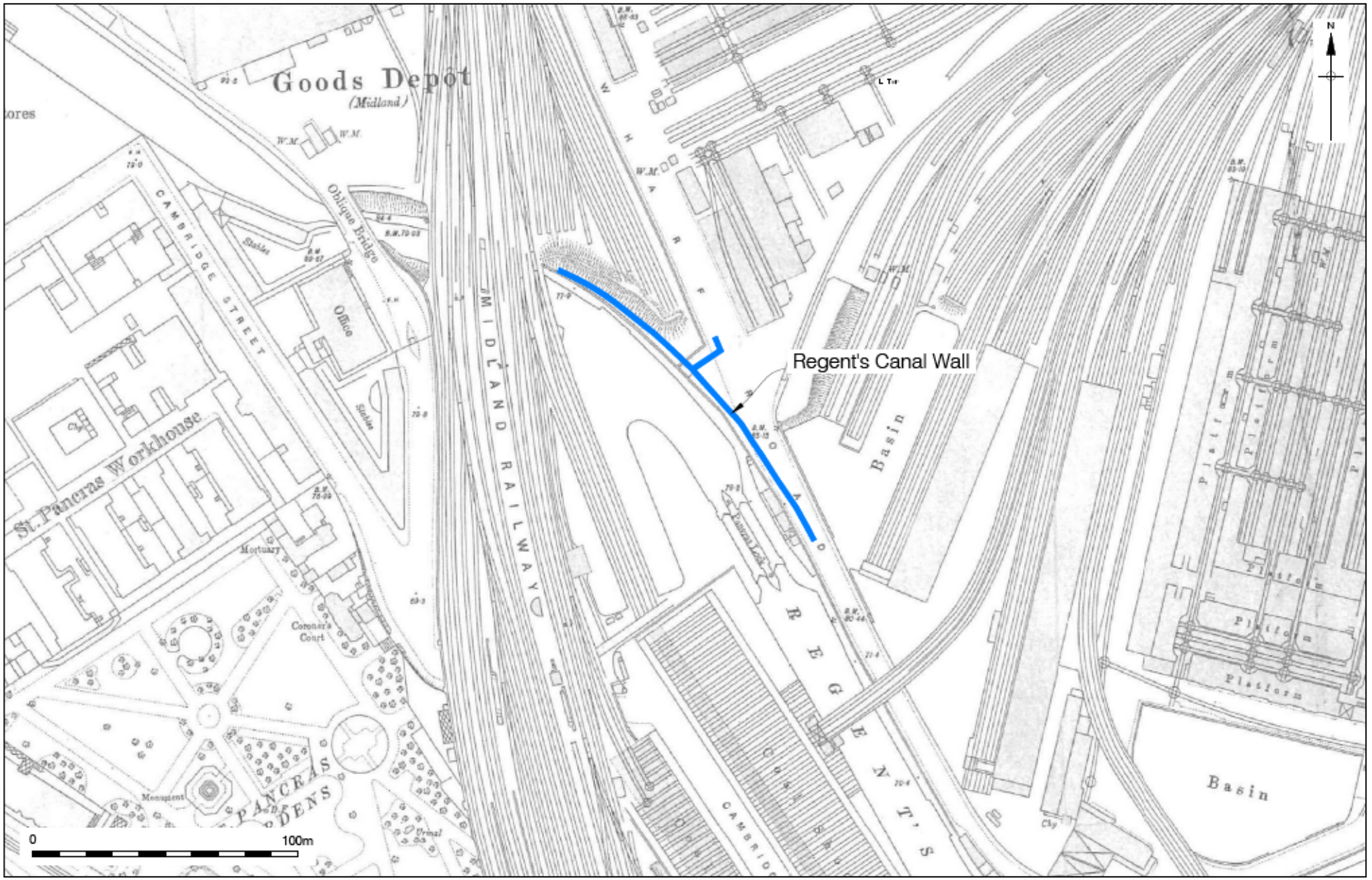

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Figure 10
Ordnance Survey Second Edition, 1894-96
1:2,000 at A4

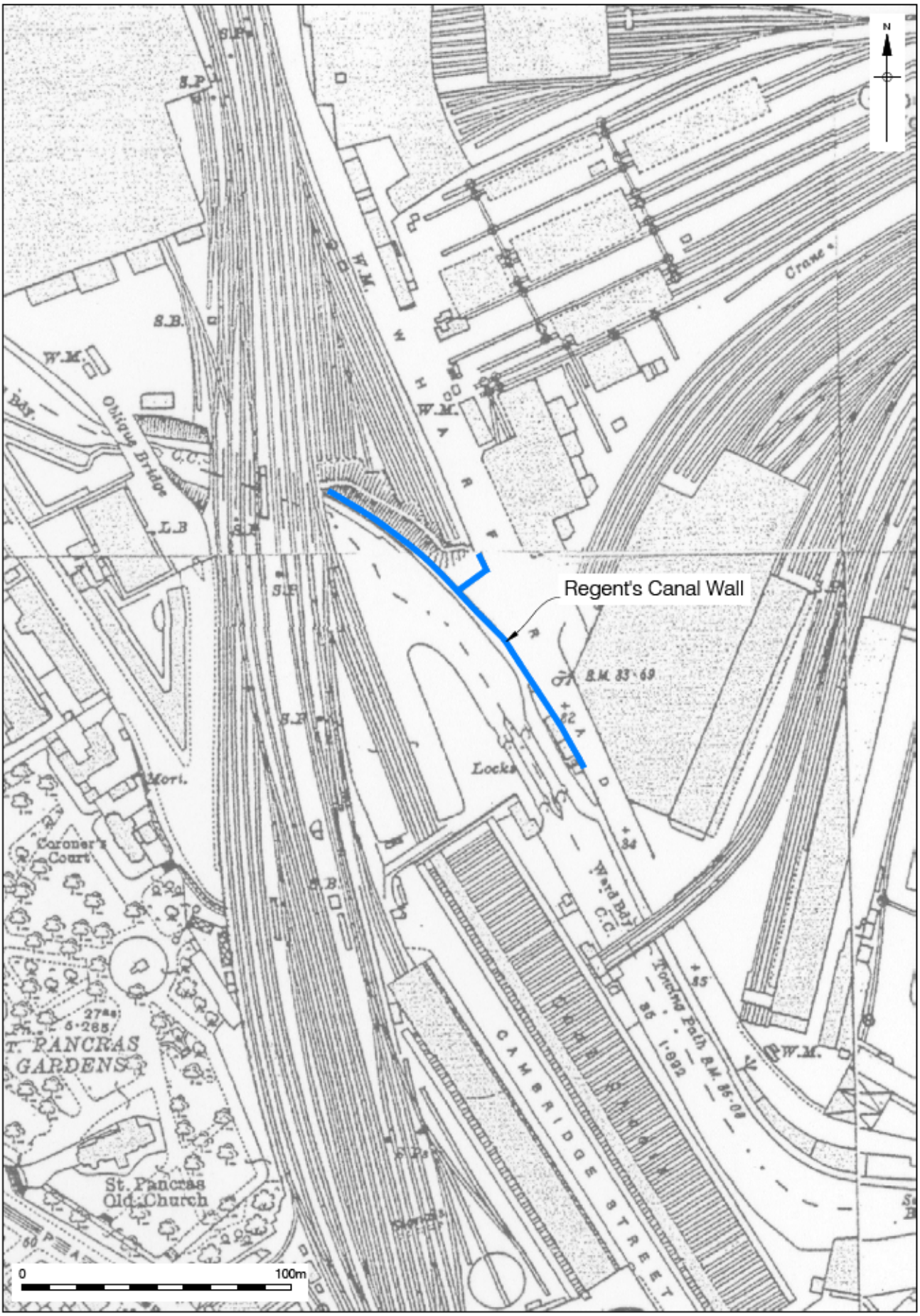

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Figure 11
Ordnance Survey Third Edition, 1914-16
1:2,000 at A4

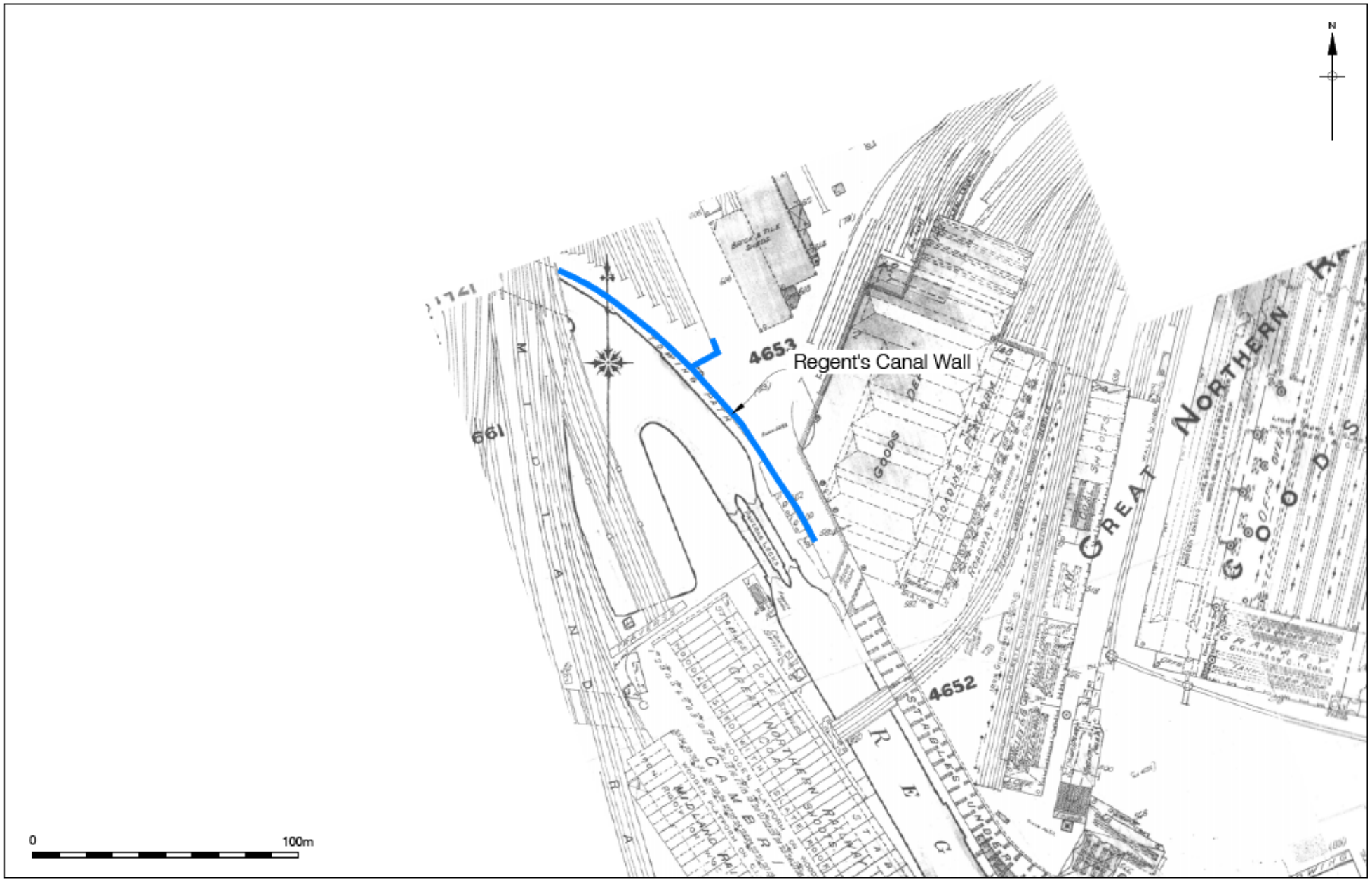

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Figure 12
Goad Fire Insurance plan, 1921
1:2,000 at A4

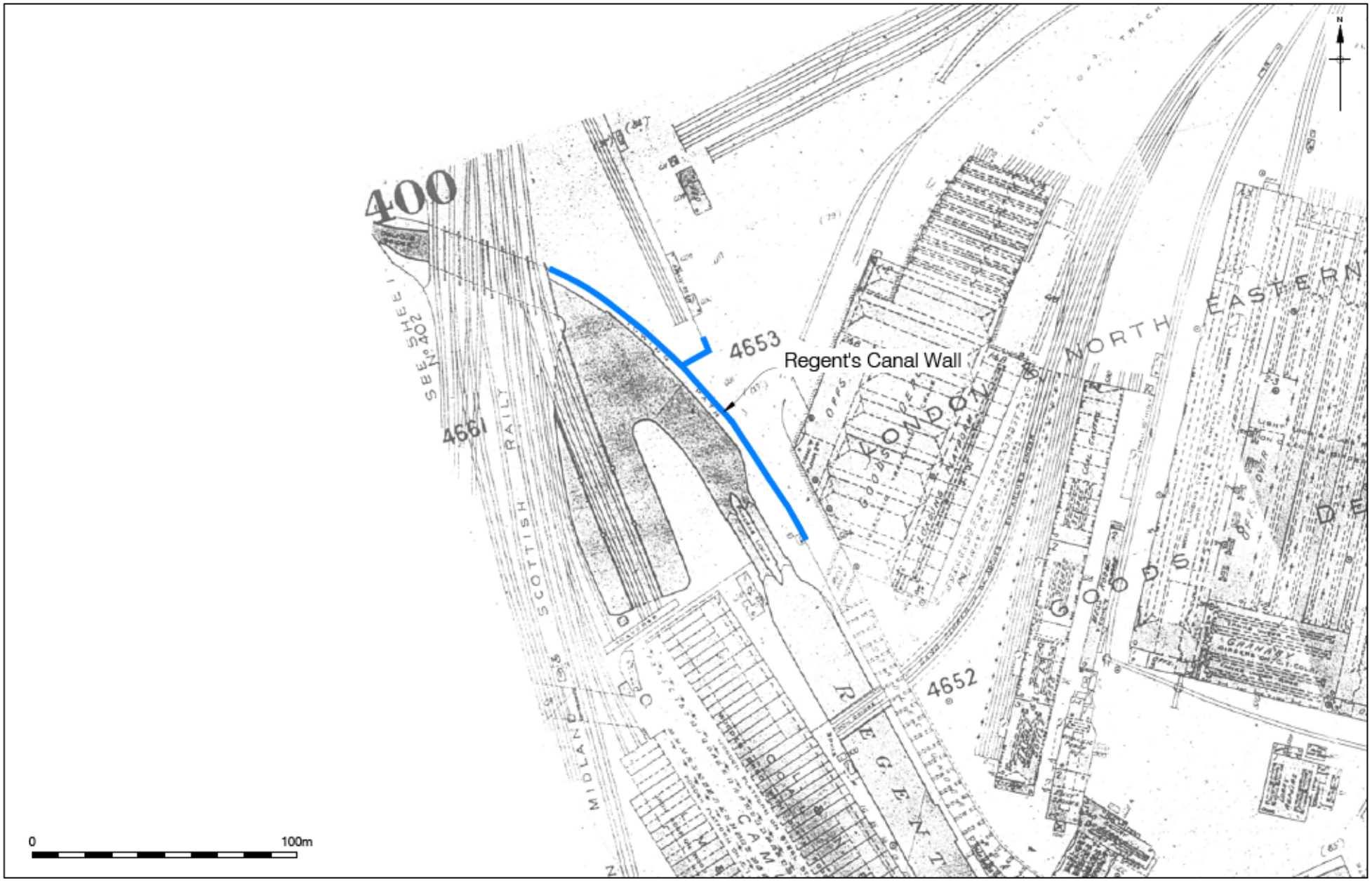

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Figure 13
Goad Fire Insurance plan, 1942
1:2,000 at A4

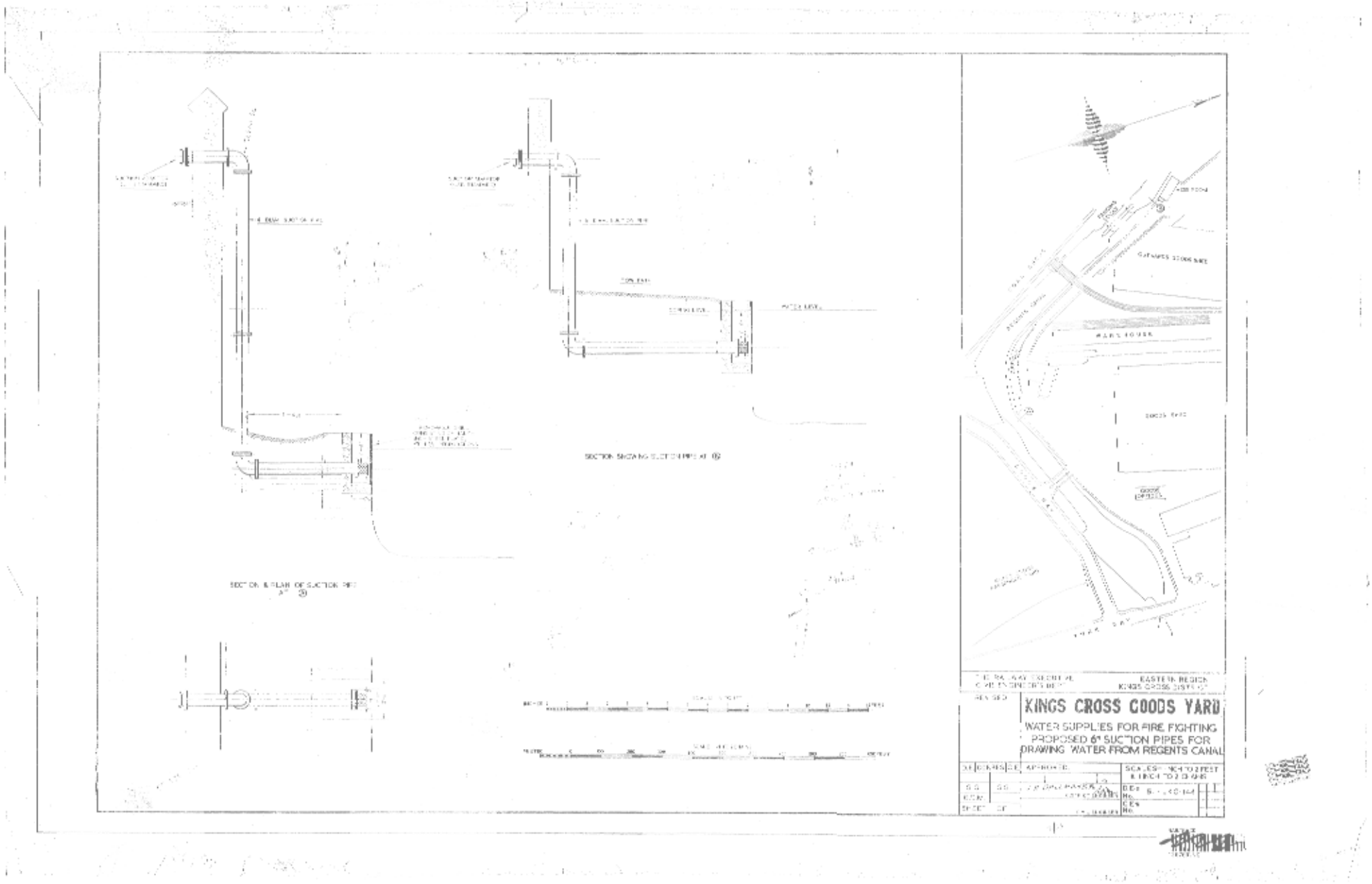

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Figure 14
King's Cross Goods Yard: Water supplies for fire fighting, proposed 6" suction pipes for drawing water from Regent's Canal, 1951
Detail approx. 1:80 at A4

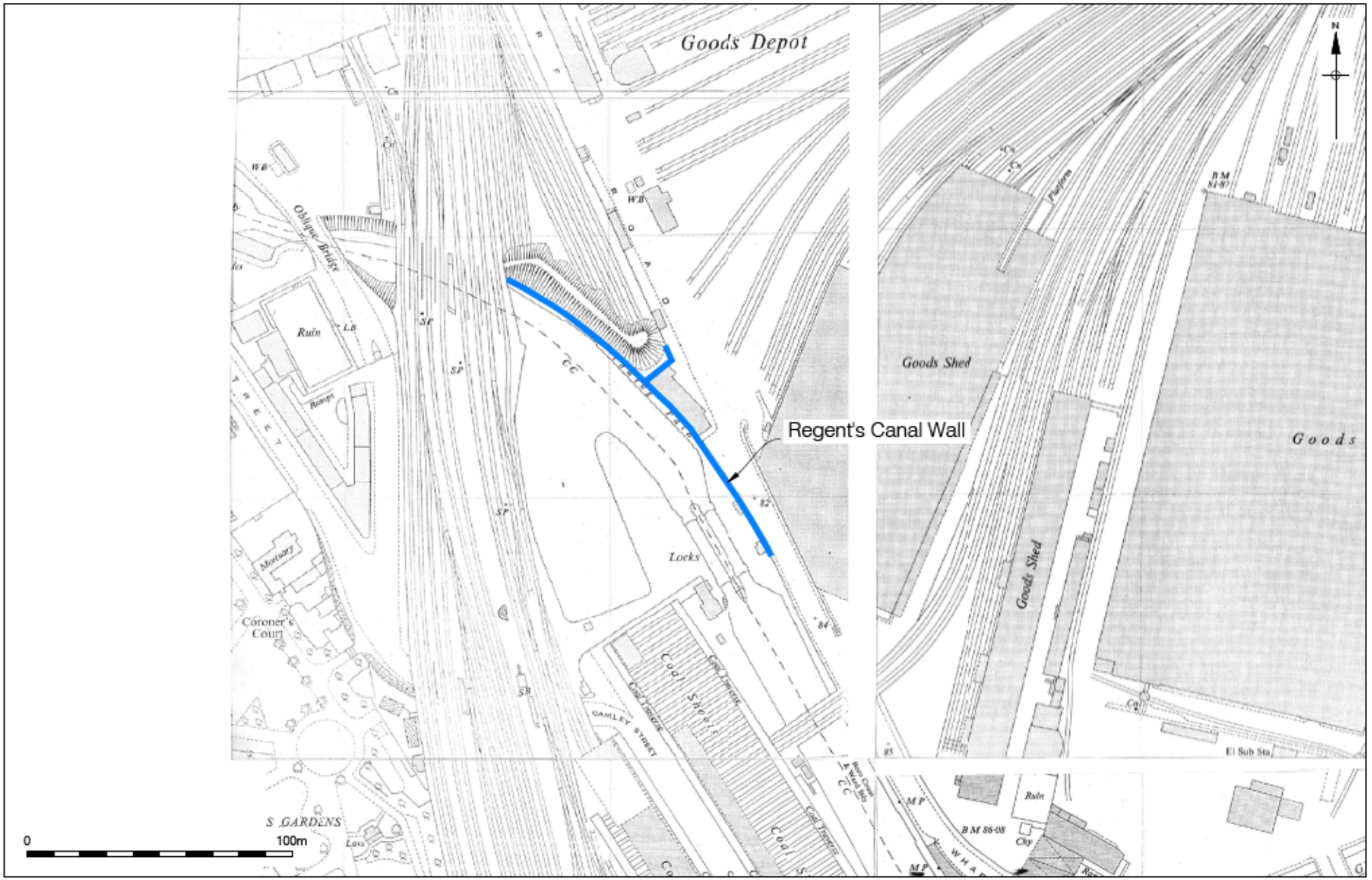

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Figure 15
Ordnance Survey map, 1951
1:2,000 at A4

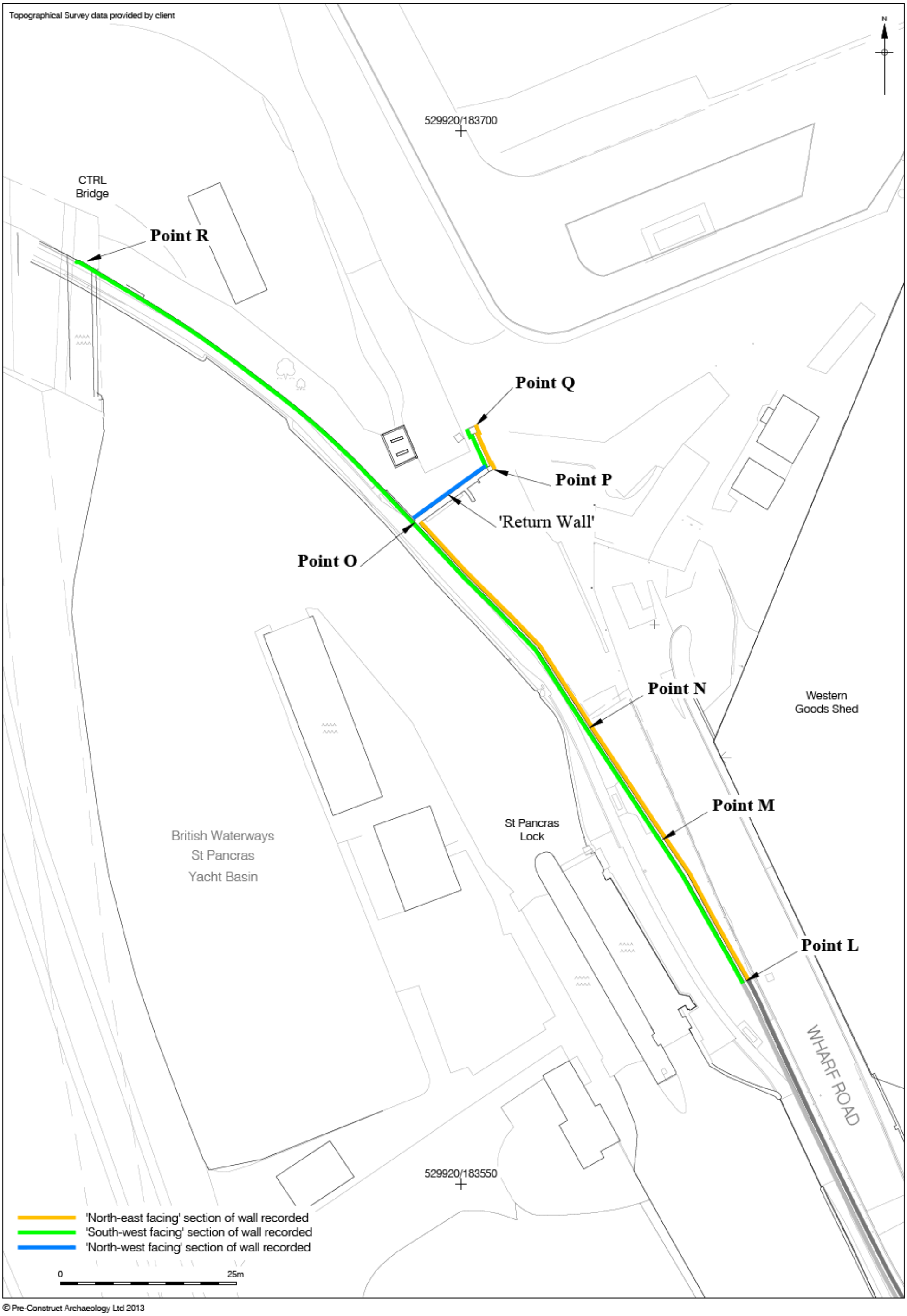

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Figure 16
Plan showing the recorded sections of the Regent's Canal Walls
1:500 at A3

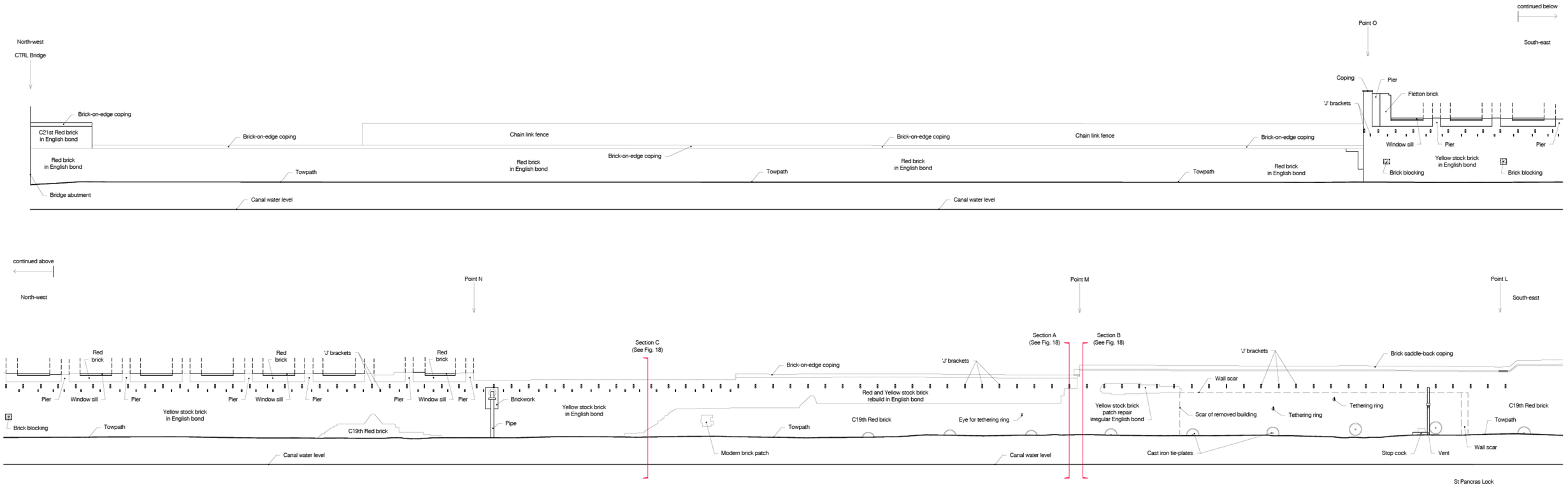

Figure 17
South-west elevation of Regent's Canal Wall
King's Cross Central
1:100 at A1

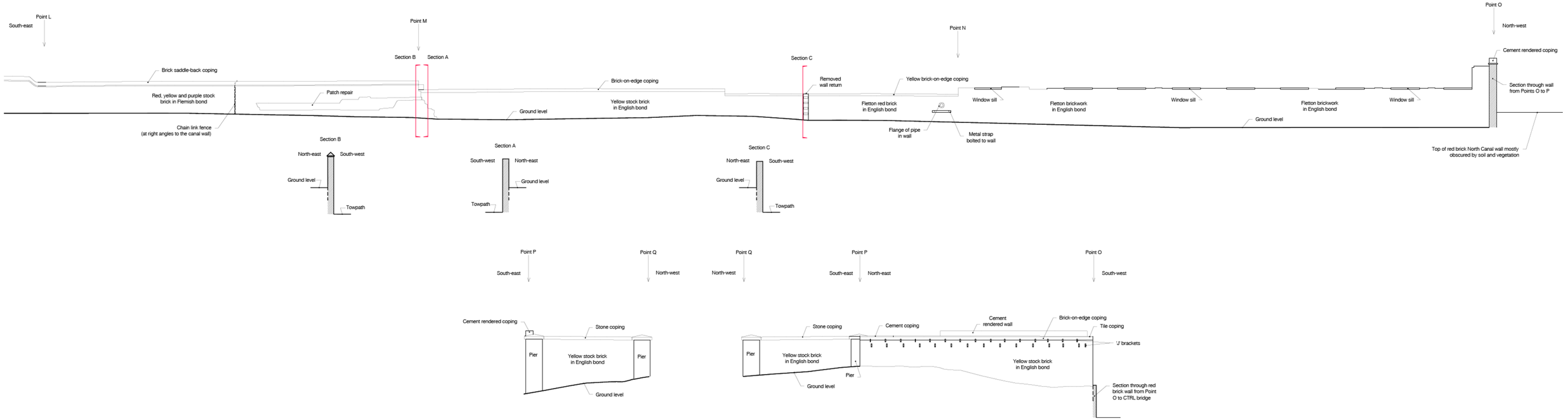

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Figure 18
North-east elevation of Regent's Canal Wall and Return Wall (Points O-P-Q)
King's Cross Central
1:100 at A1

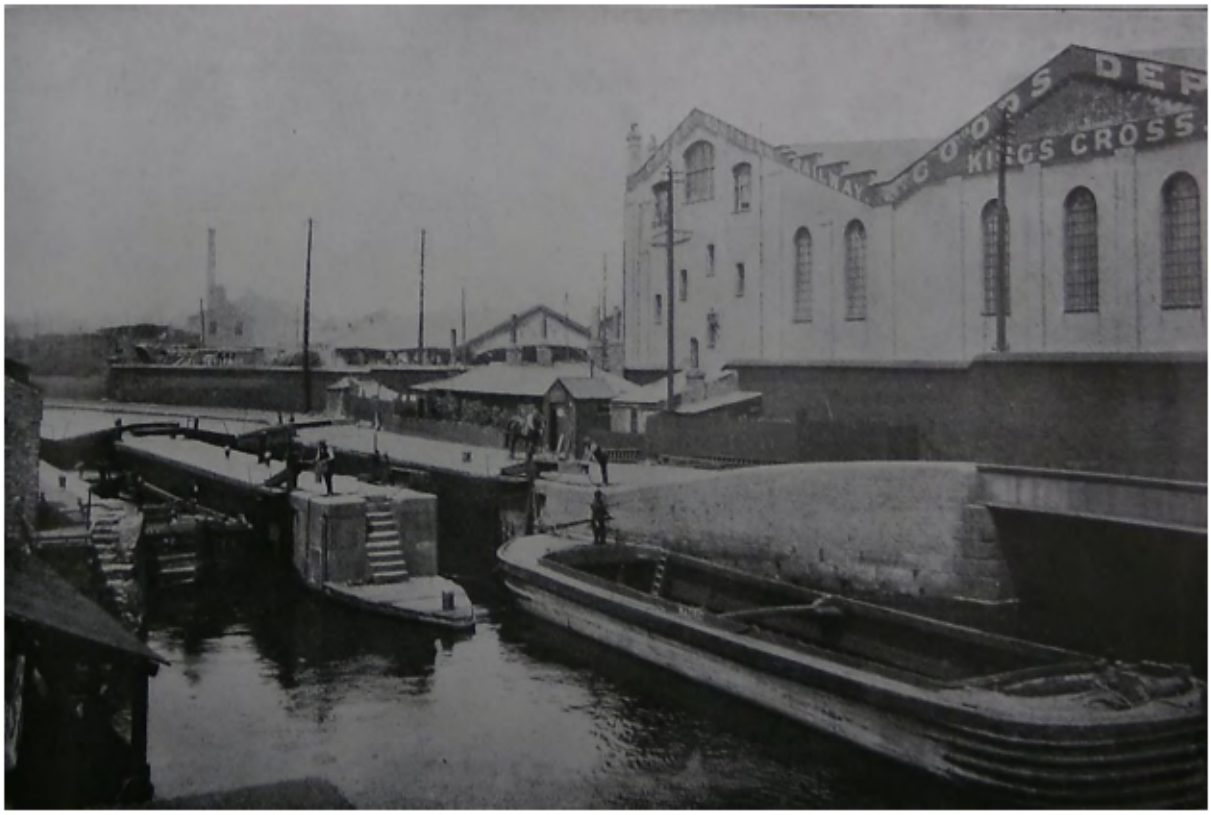

Plate 1: Great Northern Railway publicity photograph taken in 1911, showing Pancras Lock and the Western Goods Shed, looking north-east (©The National Archives)

Plate 2: Tie-bar plates at the base of the south-west (canal) side of the north canal wall next to St Pancras Lock (between Points L and M), looking north-east

Plate 3: Tie-bar plates and scarring of former building on the south-west (canal) side of the north canal wall next to St Pancras Lock (between Points L and M), looking north-east

Plate 4: North-east (land) side of the north mid-19th century canal wall at Point L, looking south-west

Plate 5: North-east (land) side of the north mid-19th century canal wall, looking south-east from Point M towards Point L

Plate 6: South-west (canal) side of the north canal wall with later rebuilding of the upper part of the wall (left), looking north-east at Point M

Plate 7: North-east (land) side of the north canal wall at Point M, looking south-east towards Pont L

Plate 8: North-east (land) side of the north canal wall showing rebuilt yellow stock brick wall, looking north-west from Point M towards Point N

Plate 9: North-east (land) side of the north canal wall showing rebuilt yellow stock brick wall, looking south-east towards Point M

Plate 10: North-east (land) side of the north canal wall showing rebuilt Fletton brick wall, looking north-west towards Point N

Plate 11: South-west (canal) side of the north canal wall with full height yellow stock brick wall (left), looking north-west towards Point N

Plate 12: South-west (canal) side of the north canal wall showing 1951 water suction pipe looking north-west towards Point N (near the pipe) and beyond

Plate 13: North-east (land) side of the north canal wall showing rebuilt Fletton brick wall, looking south-west with Point N to the left (south-east)

Plate 14: North-east (land) side of the north canal wall showing rebuilt Fletton brick wall, looking west with Point N to the left (south-east) and Point O to the right (north-west)

Plate 15: South-west (canal) side of the north canal wall showing overlying Fletton brick wall with integral pilasters and bases of openings looking north-west from Point N towards Point O and beyond

Plate 16: South-west (canal) side of the north canal wall showing overlying Fletton brick wall with integral pilasters and bases of openings looking north-west to Point O and beyond

Plate 17: North-west side of return wall (Point O (right) to Point P (to the left), looking south-east

Plate 18: North-west side of return wall (Point O to the right) to Point P (left), looking south-east

Plate 19: Pier (right) at Point P and remains of Fletton brick building, looking west towards Point O (left)

Plate 20: Pier (left) at Point Q and pier (right) at Point P, looking north-east

Plate 21: South-west (canal) side of the low red brick north canal wall with chain-link fence above, looking north between Point O and the CTRL Bridge

Plate 22: South-west (canal) side of the low brick north canal wall (centre and right) and CTRL Bridge (left) looking north towards Point R

P C A

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