



Howarth Metals, Jersey Street, Ancoats, Manchester

Archaeological Desk- based Assessment

Oxford Archaeology North



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CONTENTS

SUMMARY	2
ACKNOWLEDGEMENTS	3
1. INTRODUCTION	4
1.1 Circumstances of Project.....	4
1.2 Location, Topography and Geology.....	4
2. METHODOLOGY	6
2.1 Introduction	6
2.2 Desk-based Assessment	6
2.3 Site Visit.....	7
2.4 Archive	7
3. BACKGROUND	8
3.1 Historical and Archaeological Background.....	8
3.2 Development of Ancoats	11
3.3 Development of the Study Area	13
3.4 Site Visit.....	20
4. GAZETTEER OF SITES	28
5. SIGNIFICANCE OF THE REMAINS	33
5.1 Introduction	33
5.2 Criteria.....	33
5.3 Significance	35
6. LIKELY IMPACT OF DEVELOPMENT.....	36
6.1 Impact.....	36
6.2 Impact Assessment.....	37
7. RECOMMENDATIONS FOR ARCHAEOLOGICAL MITIGATION	39
7.1 Introduction	39
7.2 Archaeological Mitigation.....	39
8. BIBLIOGRAPHY	40
8.1 Cartographic and Primary Sources.....	40
8.2 Secondary Sources	41
ILLUSTRATIONS	44
Figures.....	44

SUMMARY

In April 2009, Oxford Archaeology North (OA North) was commissioned by GVA Grimley Ltd, acting on behalf of the North West Regional Development Agency (NWDA), to undertake an archaeological desk-based assessment of land bounded by Radium Street, Poland Street, Naval Street and Jersey Street, in the Ancoats area of Manchester (centred on SJ 85147 98764). The study aimed to assess the potential for significant buried archaeological remains on the site, and was required to inform any future proposals for the redevelopment of the site. Whilst it is owned by the NWDA, the majority of the study area has been occupied since 1988 by a metals-processing plant, which produces aluminium alloy ingots and other silicon aluminium alloys; this plant is to be relocated to a purpose-built foundry at Ardwick. The metal-processing plant, and its associated buildings, are largely of twentieth-century origin, and are of little archaeological importance, although part of the site boundary wall along Jersey Street and Poland Street incorporate the vestiges of a nineteenth-century iron works. This wall is of historical interest, and should be retained if possible, as it represents the rare physical remnants of an industry that was once of key importance to the area.

Ancoats incorporates some 400 acres on the north-eastern edge of Manchester city centre, which, from the late eighteenth century, became one of the most intensely developed manufacturing centres in the world. The industrial prowess of the area was derived primarily from a large number of closely-packed steam-powered textile mills and a variety of ancillary industries, together with a dense concentration of workers' housing, and a network of canals that provided the factories with a transport infrastructure and a supply of water for their steam-power plant. The origins of this unique industrial townscape can be traced to the 1770s, when a grid-iron pattern of streets was laid out across part of Ancoats, and the intervening plots of land were sold to middlemen for development. The present study is focused on one such plot, part of which was developed at an early stage in the urbanisation of Ancoats.

The study area lies in the Ancoats Conservation Area, but does not have any other statutory designations. However, the site does have some potential to contain the buried remains of archaeological importance. In particular, there is considerable potential for buried structural remains of a late nineteenth-century glass works to survive *in-situ* in the centre of the site, and the remains of late eighteenth-century artisans workshops/cellar dwellings fronting onto Jersey Street. The site may also contain the buried remains of a former branch canal, an iron foundry/engineering works and its associated steam-power plant, and a small part of a textile mill.

Any future redevelopment of the site may have a negative archaeological impact on buried remains, involving their damage or destruction as a result of site clearance, piling, or the excavation of service trenches. It is considered likely that any application for the redevelopment of the site is likely to attract a condition that requires an appropriate scheme of works to mitigate the loss of the sub-surface archaeological resource. The scope of any such scheme of works would be devised in consultation with the Greater Manchester County Archaeologist, although it is anticipated that an archaeological evaluation may be required in the first instance to establish the presence or absence of any buried remains and, if present, assess their significance.

ACKNOWLEDGEMENTS

Oxford Archaeology North (OA North) would like to thank Andrew Thompson of GVA Grimley Ltd for commissioning and supporting the project on behalf of the North West Regional Development Agency (NWDA). Thanks are also due to Norman Redhead, the Greater Manchester County Archaeologist, for his support and advice. Thanks are also expressed to the staff of the Local Studies Unit in Manchester Central Library, and the Lancashire County Record Office for facilitating access to the sequence of historic mapping. Further thanks are due to John Howarth and the staff at Howarth Metals for facilitating the site visit.

The desk-based assessment was undertaken by Ian Miller, and the illustrations were produced by Marie Rowland. The report was checked and approved by Alan Lupton.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF PROJECT

- 1.1.1 In April 2009, GVA Grimley Ltd, acting on behalf of the North West Regional Development Agency (NWDA), commissioned Oxford Archaeology North (OA North) to undertake an archaeological desk-based assessment of a site in the Ancoats area of Manchester. The principal aim of the assessment was to identify, as far as possible, the nature and significance of the sub-surface archaeological resource within the study area, and to establish the impact of any future development upon this resource. The resource has been examined to see if it includes Scheduled Monuments, Listed Buildings, Conservation Areas, Registered Parks and Gardens, and non-designated features of regional or local archaeological or historical interest and value.
- 1.1.2 The desk-based assessment comprised a search of both published and unpublished records held by the Greater Manchester Archaeology Unit Historic Environment Record (HER) in Manchester, the Local Studies Unit in Manchester Central Library, and the archives and library held at OA North. This report sets out the results of the desk-based assessment, and a statement of the archaeological potential and significance (defined by the criteria detailed in PPG 16 (DoE 1990)), in which an assessment of the impact of the proposed development on the historic environment is taken into account. This has been carried out in accordance with government advice in the form of Planning Policy Guidance notes 15 Planning and the Historic Environment (DoE/DoNH 1994) and 16 Archaeology and Planning (DoE 1990).

1.2 LOCATION, TOPOGRAPHY AND GEOLOGY

- 1.2.1 The study area (centred on SJ 85147 98764) is situated within the Ancoats area of Manchester, which lies on the north-east side of the city centre (Fig 1). The site forms the majority of a plot of land bounded by Jersey Street, Radium Street, Naval Street and Poland Street, and forms part of the Ancoats Conservation Area (Plate 1).
- 1.2.2 Topographically, the Manchester Conurbation as a region is within an undulating lowland basin, which is bounded by the Pennine uplands to the east and to the north. The region as a whole comprises the Mersey river valley, whilst the rivers Irwell, Medlock, and Irk represent the principal watercourses in Manchester (Countryside Commission 1998, 125). The topography of Ancoats, however, reflects the shallow valley of Shooter's Brook, a rivulet that flows westwards from Newton Heath, through Ancoats and into the river Medlock (Ashworth 1987, 22). Shooter's Brook was culverted during the early nineteenth century, and the topography of the valley has since been masked considerably by urban expansion. The study area lies some 200m to the north-west of Shooter's Brook.

- 1.2.3 The solid geology of the area comprises Carboniferous sedimentary material and a series of Permo-Triassic rocks, consisting mainly of New Red Sandstone. The overlying drift incorporates Pleistocene boulder clays of glacial origin, and sands, gravels, and clays of fluvial/lacustrine origin (Hall *et al* 1995, 8).



Plate 1: Recent aerial view of the study area

2. METHODOLOGY

2.1 INTRODUCTION

- 2.1.1 The desk-based assessment was carried out in accordance with the relevant IFA and English Heritage guidelines (Institute of Field Archaeologists 2001, *Standard and Guidance for archaeological Desk-based Assessments*; English Heritage 2006, *Management of Research Projects in the Historic Environment* (MoRPHE)).

2.2 DESK-BASED ASSESSMENT

- 2.2.1 Several sources of information were consulted as part of the assessment, to provide an understanding of the developmental history of the study area. The principal sources of information consulted were historical and modern maps, although published and unpublished secondary sources were also reviewed. The study has focused on the proposed development area, whilst information from the immediate environs has been summarised in order to place the results of the assessment into context. The results were analysed using the Secretary of State's criteria for the scheduling of ancient monuments, outlined in Annex 4 of *Planning Policy Guidance 16: Archaeology and Planning* (DoE 1990).

- 2.2.2 Archive sources that were consulted include:

- **Greater Manchester Historic Environment Record (HER):** the Greater Manchester Historic Environment Record (HER), maintained by the Greater Manchester Archaeological Unit (GMAU), was consulted to establish the sites of archaeological interest already known within the study area;
- **Lancashire Record Office, Preston (LRO(P)):** before the county boundaries were changed during the mid-1970s, Manchester lay within the county of Lancashire, and therefore most of the available published maps of the area are held in Lancashire Record Office in Preston. All available Ordnance Survey maps for the study area were examined;
- **Greater Manchester Record Office, Manchester (GMRO(M)):** the catalogue of the Greater Manchester Record Office was searched for information relating to the study area;
- **Archives and Local Studies, Manchester Central Library (MCL):** the catalogue of the Archives and Local Studies section of Manchester Central Library was searched for information relating to the study area;
- **Oxford Archaeology North:** OA North has an extensive archive of secondary sources relevant to the study area, as well as numerous unpublished client reports on work carried out in the vicinity. These were consulted where necessary.

2.3 SITE VISIT

- 2.3.1 In addition to the desk-based research, a rapid inspection of the study area was carried out in order to relate the past landscape and surroundings to that of the present. It also allowed for a rapid appraisal of the modern ground surface, and a photographic record of the metal-processing plant and its associated structures was compiled.

2.4 ARCHIVE

- 2.4.1 Copies of this desk-based assessment will be deposited with the Greater Manchester Historic Environment Record.

3. BACKGROUND

3.1 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

- 3.1.1 The following section presents a summary historical and archaeological background of the general area. This is presented by historical period, and has been compiled in order to place the study area into a wider archaeological context.

Period	Date Range
Palaeolithic	30,000 – 10,000 BC
Mesolithic	10,000 – 3,500 BC
Neolithic	3,500 – 2,200 BC
Bronze Age	2,200 – 700 BC
Iron Age	700 BC – AD 43
Romano-British	AD 43 – AD 410
Early Medieval	AD 410 – AD 1066
Late Medieval	AD 1066 – AD 1540
Post-medieval	AD 1540 – c1750
Industrial Period	cAD1750 – 1901
Modern	Post-1901

Table 1: Summary of British archaeological periods and date ranges

- 3.1.2 **Prehistoric Period:** there are relatively few sites known from this period in the vicinity, although general patterns of settlement locations that have been identified indicate that the Irwell valley would have been a favourable location for occupation and transport routes, whilst a small group of prehistoric finds have been discovered during archaeological excavations in the Castlefield area of Manchester (Nevell *et al* 2003). The upland areas of the surrounding moors may have been exploited for hunting, but the poor drainage of the Pennines and spread of blanket peat at higher altitudes would have discouraged any settlement (Hall *et al* 1995, 117). There is no known evidence for prehistoric activity in proximity to the present study area, and the potential for any such remains to exist on the site seems low.
- 3.1.3 **Roman Period:** the first military occupation of Manchester was established during the governorship of Agricola (AD 77-84), and commenced with a five-acre wooden fort, known as *Mamucium*, apparently meaning ‘a breast shaped hill’ (Brunton 1909). The site of this encampment is marked today by Camp Street in Castlefield, situated on the opposite side to the city centre from the present study area.
- 3.1.4 The Roman road between the forts of Manchester and Castleshaw is thought to have a route through Ancoats. Whilst its precise line is uncertain, it has been suggested that modern-day Old Mill Street follows the route of the Roman road (Margary 1957, 98). There is no known evidence for Roman activity in proximity to the present study area, and the potential for any such buried remains to exist on the site seems low.

- 3.1.5 **Early Medieval Period:** the area around Manchester came under the control of several kingdoms during this period. In AD 620, Edwin conquered and occupied Manchester, and it may have been during this period that settlement in the town was established around the cathedral (Farrer and Brownbill 1908).
- 3.1.6 The physical remains of this period are rare in the North West as a region (Newman 1996), and this is certainly the case in Manchester (Walker 1986). One of the few artefacts in the city known to be of an Anglo-Saxon origin is the so-called 'Angel Stone', or effigy of the Archangel Michael, which was unearthed by workmen repairing the South Porch of the cathedral in 1871 (manchester2002-uk.com/history). Another remnant of the period is a Saxon-style funerary urn of probable sixth-century date, which was found to the north of Red Bank in Cheetham during construction work in c 1850 (Morris 1983). However, there is no known evidence for early medieval activity in proximity to the present study area, and the potential for any such buried remains to exist on the site seems low.
- 3.1.7 **Late Medieval Period:** following the Norman Conquest, William I assigned most of the land between the Ribble and Mersey rivers to Roger of Poitou, who retained the manor of Salford demesne (Tupling 1962, 116), but divided his other newly-acquired land into several fiefdoms (Kidd 1996, 13). The largest of these was the landholding centred on Manchester, created by the grant of extensive lands in the hundreds of Salford, Leyland and West Derby to Albert Grelley (Tupling 1962, 116). By the thirteenth century, the Grelley family had established a manor house at the confluence of the rivers Irwell and Irk, and the medieval town grew up around it (Hartwell *et al* 2004, 256). It was from this hall that they governed both the manor and the extensive barony.
- 3.1.8 In 1222 Manchester was granted an annual fair, and in 1301 Thomas Grelley was granted the Great Charter of Manchester by Edward I, and thus it became a free borough (*ibid*). Throughout this period, Ancoats formed one of eight hamlets within the township of Manchester, as noted in a survey of 1320 (Harland 1861). This is reflected in the origins of its name, which is likely to have derived from the Old English *ana cots* and may be translated as 'lonely cottage' (Cooper 2002, 13). The area will have comprised open land, described as 'an almost idyllic rural backwater' (Swindells 1908, 19-26), with a few scattered dwellings. The most notable building was the timber-framed Ancoats Hall, which overlooked the river Medlock on the southern edge of the district, and some 0.75km to the south-east of study area. It is uncertain when the hall was built, although it is thought to have been sold by the De la Warr family to Sir Edward Trafford during the reign of Henry VIII (1509-47), and then passed to the Byrons of Clayton (Darbyshire 1887, 118). The hall was remodelled in stone during the 1820s, and demolished in the mid-twentieth century (Miller and Wild 2007).
- 3.1.9 There were no known remains of medieval date within or close to the present study area, and the potential for any such buried remains to exist on the site seems low.

- 3.1.10 **Post-medieval Period:** by 1539, John Leland was able to describe Manchester as the ‘finest and busiest town in the whole of Lancashire, with the best buildings and the greatest population’ (Chandler 1993, 263), at a time when the textile industries in south Lancashire were beginning to flourish. Manchester emerged as a centre for the textile finishing processes, as woollen cloth was brought in from outlying areas for bleaching and dying. Most importantly, however, Manchester expanded its role as a market centre for textiles produced in the towns and hamlets of the surrounding district (Frangopulo 1962, 26).
- 3.1.11 From the early seventeenth century, fustians produced in a network of towns with Manchester at their hub were being exported regularly to western and southern Europe, and the town became the principal commercial centre for the region (Hartwell 2001, 8-9). A flourishing business community developed, which was dominated by a few wealthy merchant manufacturers and fustian-dealing families, notably the Chethams, the Booths, the Wrigleys, and the Byroms (*op cit*, 299). However, there are no known structural remains of a sixteenth- or seventeenth-century date in Ancoats, although fragments of seventeenth- and eighteenth-century pottery were recovered from a soil horizon during a recent archaeological excavation on George Leigh Street. Analysis of palaeo-environmental samples taken from this horizon, moreover, indicated that the local landscape had comprised a mosaic of damp, waste and cultivated ground, with some areas of shallow or slow-moving water (OA North 2008).
- 3.1.12 **The Industrial Period:** in his tour of the country in the 1720s, Daniel Defoe (1971, 219) noted that Manchester had ‘extended in a surprising manner, being almost double to what it was a few years ago’, reflecting further expansion of the textile trade (Baines 1835). By the 1790s, Manchester’s thriving export market was beginning to displace London as a centre of overseas trade in cotton cloth (Edwards 1967, 176), reflecting great improvements to the transport network across the North West. In particular, the development of the canal system following the completion of the Worsley Canal to Castlefield in 1765 was of prime importance (Hadfield 1994, 65). This economic climate was linked to a rapid growth in the town’s population; in 1773, an estimated 22,481 people lived in Manchester, but this figure had tripled to 75,281 by 1801 (Lloyd-Jones and Lewis 1993). As early as 1815, the Ancoats area had become the most populous district of the rapidly expanding town. By 1851, the total number of residents within Ancoats had risen to 53,737, representing a local population far larger than other entire towns in Lancashire, such as Burnley, Blackburn, Rochdale or Wigan, and yet lacked the basic amenities and institutions of self-government.

3.2 DEVELOPMENT OF ANCOATS

- 3.2.1 Ancoats was rapidly transformed to an urban environment during the 1770s, and on an unprecedented scale. In 1775, George and Henry Legh of High Legh in Cheshire sold land between Newton Lane and Ancoats Lane to Thomas Bound (Swindells 1908, 203), representing an early stage in the development of the area. Early trade directories for Manchester list Thomas Bound as a 'bricklayer' (Raffald 1781, 12), although in this instance he is perhaps more appropriately described as a property developer, as some of the land he purchased was passed to others to develop; he is listed in trade directories for the early nineteenth century as a 'gentleman' (Bancks 1800), implying that he had amassed some wealth from his activities.
- 3.2.2 The process of development involved selling tracts of land to middlemen, often subject to a 'perpetual' rent and a covenant to build, to protect the rent income (Roberts 1993, 15-6). This charge was payable from the day of sale, and encouraged the middlemen to build rapidly, which they either undertook themselves or sold the land on with a doubled chief rent for others to develop. As with other parts of Manchester, such as the Chorlton Hall Estate and the Lever Estate to the south-east and north of Piccadilly respectively, the sale of land for development involved surveying and laying out streets in a grid-iron pattern, which effectively created development plots (Chalklin 1974). This layout is shown on several maps that were produced during the late eighteenth century, including Laurent's *Map of Manchester and Salford*, published in 1793 (Fig 2), which also shows the corner of Great Ancoats Street and Oldham Road to have been a focus for initial development. The main elements of the existing street plan are shown to have been laid out on former fields of the area, providing a false impression of considered town planning; development was controlled by speculators rather than a regulatory body and, unlike other areas of Manchester, covenants attached to the sale of land in Ancoats typically lacked clauses regulating nuisances (Hartwell 2001, 273).
- 3.2.3 The earliest dwellings for the new breed of factory worker were erected with little legislative control. The Manchester Police Commissioners had sought to apply a rudimentary form of building regulations as early as 1792, including a requirement to provide party walls between properties. However, in the absence of any practical way of enforcement, the regulations were largely ignored (Hylton 2003, 152). Most of the workers' houses built during this period were erected without any form of water supply or sanitation; at best, an open drain from an ashpit privy might have been installed down the middle of the street or court (Parkinson-Bailey 2000, 35).
- 3.2.4 The earliest textile factories in the area included several water-powered mills erected along Shooter's Brook, to the south of Union (now Redhill) Street. There is some evidence to suggest, for instance, that New Islington Mill and Salvin's Factory originated in the late 1780s as water-powered textile mills situated on the bank of Shooter's Brook (Miller and Wild 2007). However, this was a small watercourse, and in seeking a solution to the inadequate power supplied to their waterwheels from the brook, some manufacturers experimented with steam power.

- 3.2.5 The completion of the Ashton-under-Lyne Canal in 1796, and the Rochdale Canal in 1804, was a key element in the phenomenal expansion of Ancoats, and led to its transformation from a semi-rural district to an industrial suburb. This was coupled with a breakthrough in the application of steam power to manufacturing, and the national demand for textiles, particularly cotton, which created the explosion of factory building (Little 2002, 31). In Ancoats, this new breed of textile mills were built on an unprecedented scale, many depending upon the developing network of short branch canals for transport and a source of water for their steam-power plants (Williams 2002, 35).
- 3.2.6 Numerous trades ancillary to textile manufacturing were also established in Ancoats during the nineteenth century, including the glass industry, which rapidly developed a reputation for producing fine-quality wares. The earliest glass works in Ancoats was that of Maginnis Molineaux and Co, which was established in 1827, and eventually became the celebrated Molineaux Webb Ltd Co Manchester Flint Glass Works. Another important glass works in Ancoats was that established on Jersey Street in 1844 by Thomas Percival and William Yates. This firm became known as Percival, Vickers & Co Ltd, and their works on Jersey Street emerged as one of the most important glass-manufacturing centres in Manchester (Miller 2007).
- 3.2.7 Another important glass-manufacturing firm in Ancoats was Burtles Tate & Co, which was founded in 1858 and specialised in the manufacture of flint glass, coloured glass and ornamental glass, although the firm eventually became particularly well known for its pressed glass coloured ornaments. Their original works was on Poland Street but, by the early 1880s, they were also operating the Victoria Glass Works in Bolton. However, in 1887, the firm opened a new works on German Street, within the present study area (*Section 3.3.12 below*), and the firm concentrated their production in the Manchester factories and closed their premises in Bolton (Hajdamach 1991, 353). By the later 1890s, the firm's output was predominantly in ornamental and utilitarian glass. The firm was eventually acquired by Butterworths of Manchester in 1924 (Notley 1986, 20). Other significant glass-making firms that were established in Ancoats during this period included Thomas Kidd and Co at the Holt Town Glass Works, Ker Webb and Co at the Prussia Street Glass Works, the Ancoats Machine Glass Works on Pollard Street, and the Phoenix Glass Works on Collyhurst Street. However, many of the Manchester glass works closed during the 1890s, largely as a result of the great depression in trade (Yates 1987, 37), and very few survived into the twentieth century.
- 3.2.8 Foundries and engineering works were also important industries in Ancoats, many having been established to produce the machinery, fixtures and fittings demanded by the local textile mills. One of the largest engineering works was the Vulcan Works on Pollard Street, which was operated by John Hetherington & Sons Ltd, and produced a large range of machinery for the textile industry. There were, however, numerous other smaller iron works and foundries, which became a characteristic feature of Ancoats, and were of great importance to the local economy.

3.3 DEVELOPMENT OF THE STUDY AREA

- 3.3.1 The development of the study area may be traced reasonably well from the sequence of available historic mapping, allowing sites of archaeological interest to be identified. These sites have been allocated reference numbers (Site 00), which correspond to entries in the Gazetteer (*Section 4 below*).
- 3.3.2 The earliest reliable maps that show the study area are Charles Laurent's *Map of Manchester & Salford* of 1793, and William Green's survey that was published in 1794 (Fig 2). These show the streets in Ancoats laid out in a grid pattern, creating a series of regular plots, with development apparently focused on the Great Ancoats Street and Newton Lane (Oldham Road) area. Elliott Street (Jersey Street), Poland Street, Elizabeth Street (Naval Street), and German Street (Radium Street) are all named on the map. Another minor lane, named as Heath Street on Green's map, is shown parallel to Elliott Street and Elizabeth Street, crossing the centre of the study area. However, it seems likely that this street was actually prospective at the time of Green's survey, but was not actually built. Green's map also depicts a block of buildings (Site 02) fronting the northern side of Elliot Street in the south-western corner of the study area (Fig 2). The size of this block is consistent with a terrace of artisans' workshop dwellings. The remainder of the study area is shown as undeveloped, presumably used for agricultural purposes, with a north/south-aligned field boundary (Site 01) crossing the approximate centre.
- 3.3.3 Several maps of the area were published during the first decade of the nineteenth century. Whilst most are of a small scale, precluding detailed analysis of individual buildings, they do provide an indication of the extent of development in Ancoats, and show many of the vacant plots to have been infilled relative to Laurent's map. The study area, however, is shown as unchanged on Bancks and Thornton's map of 1800, and occupied solely by the terrace of workshop dwellings (Plate 2).

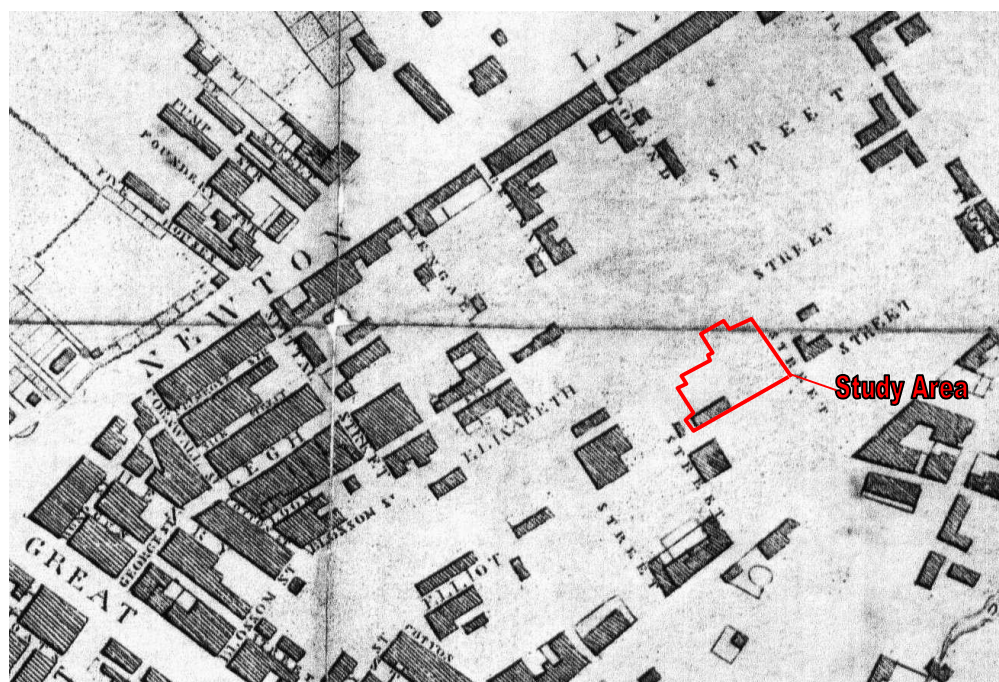


Plate 2: Extract from Bancks and Thornton's map of 1800

- 3.3.4 The next available maps of the area include those produced by Pigot in 1819 (Plate 3) and Johnson in 1820. This map shows the Bengal Street branch of the Rochdale Canal to have been constructed along the route of Heath Street as shown on Green's map of 1794. The branch canal (Site **03**) is shown to have passed underneath Poland Street and German Street, across the study area and terminated at Bengal Street to the west. This canal branch formed a crucial transport link for commercial premises along its banks, and a water source for steam-power plant in adjacent mills. The rest of the study area, however, is shown to have been undeveloped relative to the earlier mapping.

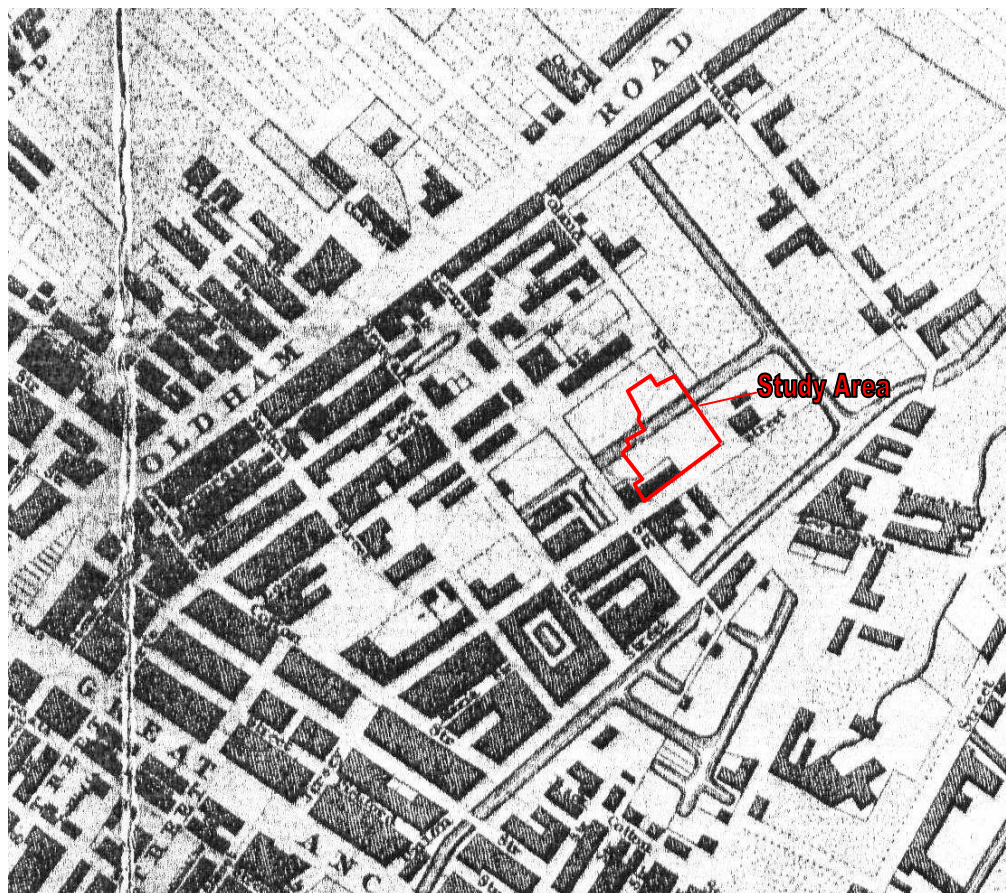


Plate 3: Extract from Pigot's map of 1819

- 3.3.5 Bancks and Co's *Map of Manchester and Salford*, published in 1831, provides the first detailed nineteenth-century survey of the study area (Fig 3). This confirms that the block of buildings fronting onto Elliott Street, which is now named Jersey Street, comprised a terrace of six houses, with a larger property at the eastern end, presumably representing retail or commercial premises. A second block of buildings (Site **04**), comprising nine workers' houses, is shown to have been erected to the east, infilling the street frontage as far as Poland Street. Development along the German Street frontage included a Sunday School (Site **05**), the site of which lies immediately beyond the western boundary of the study area. The remainder of the study area is shown as undeveloped land.
- 3.3.6 A small-scale map produced in 1841 indicates that the study area had attracted some development during the 1830s (Plate 4). In particular, a large, rectangular block is shown to have been erected in the western part of the

study area to the south of the branch canal, parallel to the Sunday School. Whilst the building is not named on the map, it is likely to represent the first element of an iron foundry (Site **06**) that dominated the site from the mid-nineteenth century (*Section 3.3.8 below*). Some development in the north-eastern part of the study area, to the north of the canal, is also shown, and comprised a range of buildings along the southern side of Elizabeth Street.



Plate 4: Extract from Pigot's map of 1841

- 3.3.7 Entries in a contemporary trade directory provide an indication of the activity on the site. Two coal merchants, Andrew Knowles & Sons and Anthony Lane, are listed on Elizabeth Street (Pigot and Slater 1841, 58), and it seems likely that they occupied the coal wharves on the northern side of the canal arm (Site **08**). The same directory lists John and Peter Thornton as fustian finishers on Poland Street (*op cit*, 67). However, there are no iron founders or brass foundries listed for the study area, and the lack of any entries that can be identified firmly with the properties on Jersey Street suggest that they were all domestic residences.
- 3.3.8 The layout of the study area during the mid-nineteenth century is depicted on two detailed plans: the Ordnance Survey 60": 1 mile map of 1850 (Fig 4); and Adshead's *Plan of the Townships of Manchester*, published in 1851 (Fig 5). Both maps show that the study area was subject to considerable development during the 1840s. The houses (Site **02**) in the south-western corner of the study area are shown on the Ordnance Survey map to have incorporated cellars, as indicated by the steps and cellar lights shown along the Jersey Street frontage. Conversely, the houses to the east (Site **04**) do not appear to have had cellars. The area to the rear of the houses, as far as the southern bank

of the canal arm, is shown to have been occupied by the Phoenix Iron Works (Site **06**). This comprised a casting shop fronting onto Poland Street, a large central yard, another large building, with all the elements of a steam-power plant (Site **07**), comprising an engine house, boiler, chimney and cistern, situated to the west. To the north of the canal arm, the study area incorporated the two coal wharves (Site **08**), and a cotton warp sizing and fustian finishing works (Site **09**). It is likely that this cotton works will have incorporated its own steam-power plant, although no indication of its location is provided from the detail of the historical mapping.

- 3.3.9 Adshead's map essentially depicts the same layout as that shown by the Ordnance Survey, although some additional detail may be discerned. The four houses (Site **02**) in the south-western corner of the study area are shown to have comprised three private properties, and one retail premises, and the larger property at the eastern end of the block is marked as the Cross Keys public house. The second block of properties along the Jersey Street frontage (Site **04**) comprised eight private dwellings, and a retail premises at the eastern end, at the junction with Poland Street. Adshead's map also shows the Phoenix Iron Works to have incorporated an additional building, situated parallel and immediately adjacent to the southern bank of the canal arm.
- 3.3.10 A directory for 1851 lists John Elce & Co as iron and brass founders at the Phoenix Iron Works (Slater 1851, 35). The two coal merchants on Elizabeth Street are also listed in the directory (*op cit*, 20), although there is no entry for the cotton works (Site **09**). Similar entries appear in a trade directory for 1879, which lists Andrew Knowles & Sons as a coal merchant on Elizabeth Street (Slater 1879, 58), and John Elce & Co is still listed as machine makers at the Phoenix Iron Works (*op cit*, 136).
- 3.3.11 In 1891, the Ordnance Survey published the detailed first edition 5': 1 mile map of the area, which was surveyed in 1888-9 (Fig 6); the survey was also published in 1894 at a scale of 25": 1 mile (Plate 5). These maps show the layout of the study area to have been remodelled during the second half of the nineteenth century. The two blocks of properties (Sites **02** and **04**) fronting onto Jersey Street are shown to have been demolished, with the south-western part of the study area remaining undeveloped, suggesting that demolition had occurred shortly before the survey was carried out in 1888; a commercial trade directory for 1886 does not contain any entries for properties on Jersey Street within the study area (Slater 1886, 141).
- 3.3.12 The houses that had occupied the south-western part of the study area (Site **04**) appear to have been replaced by an expansion of the Phoenix Iron Works. Conversely, the part of the iron works that occupied the western part of the study area is named on the 5': 1 mile map as a glass works (Site **10**). The area to the north of the branch canal is also shown to have been developed with the addition of several new buildings. In particular, a new block is shown to have been erected along the northern bank of the canal arm, and is shown to have incorporated a chimney in its north-western corner. It seems likely from entries in commercial trade directories (*Section 3.3.14 below*) that the cotton works had been converted to an engineering works by this date.

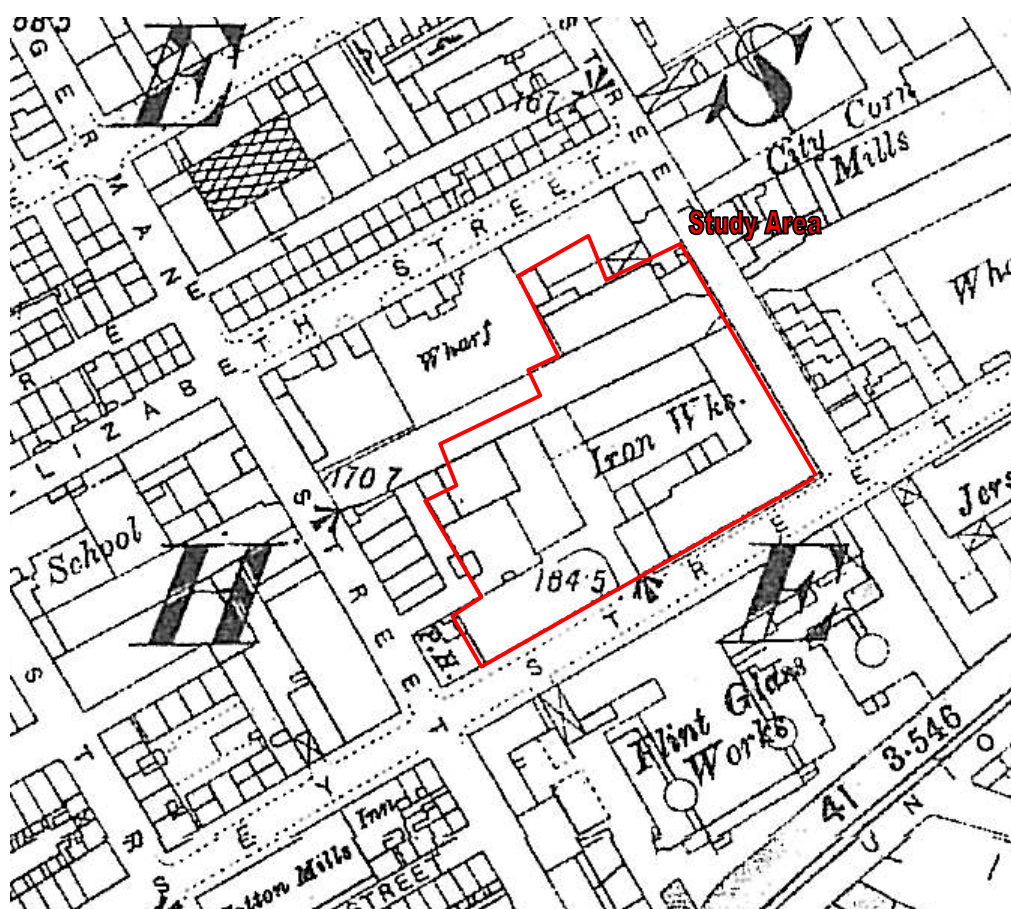


Plate 5: Extract from the Ordnance Survey 25": 1 mile map of 1894

- 3.3.13 The glass works (Site 10) named on the 1891 Ordnance Survey map was owned by the notable firm of Burtles Tate Co Ltd. This firm was founded in 1858, and initially occupied a works on Poland Street (*Section 3.2.7 above*). In 1887, the firm established the works within the study area (Hajdamach 1991, 353), probably as a subsidiary works to their main plant on the eastern side of Poland Street (Bone 2004, 33). It is uncertain whether primary manufacture or secondary finishing was carried out at the German Street site, although it is of note that the detailed Ordnance Survey map of 1891 does not mark any furnaces.
- 3.3.14 Entries in a commercial trade directory for 1895 refer to Naval Street, suggesting that Elizabeth Street changed its name at about this date (Slater 1895, 317). The firm of Guest & Brookes is listed as machine makers in the northern part of the study area (*op cit*, 317), with William Allen, a brassfounder, seemingly occupying John Elce & Co's former premises on Jersey Street (*op cit*, 229). The address for Burtles Tate & Co is given as Poland Street, further suggesting that their works in the study area was a subsidiary plant. However, the firm is listed as a glass manufacturer on German Street in a trade directory for 1903 (Slater 1903, 227). This directory also lists William Allen as a brassfounder on Jersey Street, and Gilbert Forrest as an iron founder on Naval Street, presumably occupying the premises formerly occupied by Guest & Brookes. The details of the entry imply that Forrest's works was situated at the junction of Naval Street and Poland Street. Mabbott & Co Ltd, engineers, are listed on Poland Street (*op cit*, 427).

- 3.3.15 The next available map of the study is the Ordnance Survey second edition 5': 1 mile map of 1909 (Fig 7). This shows some minor additions to the glass works, the Phoenix Iron Works, and the works to the north of the canal arm, but in general terms the layout of the site is largely unaltered.
- 3.3.16 Charles Goad's insurance map, surveyed in 1928, provides a useful plan of the study area. This shows that the glass works had been converted for use as a leather works, presumably following the purchase of Burtles Tate & Co by Butterworths in 1924, and was occupied by the firm of T Ward & Co. The layout of the buildings appears to be unaltered relative to the Ordnance Survey map of 1909. Goad's map shows that the leather works comprised a range of buildings, each of four storeys, and included a saw mill powered by electric motors. None of these buildings are marked as having a basement. The south-western part of the study area is named as Van Yard.
- 3.3.17 The south-eastern part of the study area is shown to have been occupied by W Allen's engineering works and foundry, which had a similar layout to that shown on the Ordnance Survey map of 1909, although the range situated along the side of the canal arm, forming the northern part of the complex, had been demolished. The surviving buildings comprised a four-storey building and a single-storey range along the Jersey Street frontage; the four-storey building was used as offices. The adjacent building probably represented the main processing area of the foundry, incorporating a chimney at its western end, and two cupola furnaces in its north-eastern corner. A long, single-storey building along the Poland Street frontage contained a travelling crane, and may have been used as an erecting shop. None of the buildings had basements.
- 3.3.18 The buildings to the north of the canal arm are named on Goad's plan as the Phoenix Iron Works, occupied by Mabbott & Co Ltd, engineers. A small, single-storey building on the corner of Poland Street and Naval Street is named as an office, and was situated adjacent to a three-storey building fitted with electric motors. A smithy equipped with a travelling crane lay adjacent. The map also shows the canal arm to have been infilled to the west of German Street, which is shown to have been re-named as Radium Street; this change of street names actually occurred during the First World War. The Sunday School (Site **05**) still occupied the Radium Street frontage, and is annotated as a four-storey building with a basement.
- 3.3.19 The layout of the site depicted on Goad's insurance plan is replicated on the Ordnance Survey map of 1932 (Fig 8). The next available map is that produced by the Ordnance Survey in 1948 (Fig 9). This shows the part of the study area to the south of the canal arm to have undergone some remodelling. The leather works, incorporating the buildings of the former glass works, had evidently been demolished, and a new structure erected on its footprint. The canal arm is shown as disused on the map, and had seemingly been partially subsumed by an expansion of the Phoenix Iron Works. The remodelling of the iron works also appears to have resulted in the infilling of the central yard area. A range of three new buildings was erected along the Jersey Street frontage on the site of Van Yard; these buildings are depicted on a photograph of Jersey Street dated to 1962 (Plate 6).



Plate 6: Looking south-west along Jersey Street in 1962, showing the single-storey iron works' building and adjacent four-storey office



Plate 7: Looking south-west along Jersey Street in 2009, showing the remnants of the Phoenix Iron Works

3.3.20 The majority of the study area has been occupied since 1988 by a metals-processing plant, which produces aluminium alloy ingots and other silicon aluminium alloys. Several new industrial processing units were erected on the site as part of this works, and the buildings first shown on the 1948 Ordnance Survey map were adapted; an aluminium-melting furnace was installed inside one of these buildings, and the furnace chimney can be seen protruding through the roof of one of these buildings on an aerial photograph of the area taken in 1988 by the former Royal Commission on the Historical Monuments of England (RCHME). The aerial photograph also shows the four-storey office block on Jersey Street to have been derelict and without a roof; this building was demolished subsequently.

3.4 SITE VISIT

3.4.1 The north-eastern corner of the plot, adjacent to the junction of Naval Street with Poland Street and just beyond the boundary of the study area, is presently vacant land; the cotton works/engineering works that occupied the site formerly has been cleared, and the site awaits redevelopment (Plate 8). Immediately to the south along Poland Street is the bridge over the infilled canal arm, which crossed the study area; a modern industrial building has been erected on part the infilled canal arm (Plate 9), although much of the route of the canal is sealed beneath modern yards.

3.4.2 Further to the south along Poland Street is a brick wall that is of late nineteenth-century date (Plate 10), representing the vestiges of the Phoenix Iron Works shown on historic mapping. A stone lintel above a series of brick-filled apertures built into this wall is whitewashed, and retains the remnants of lettering that read 'Phoenix Foundry' (Plate 11). Behind the wall is the main part of the aluminium-processing plant, which utilises some of the former iron works' buildings, although these have been remodelled and reroofed. This part of the works comprises four contiguous rectangular sheds that housed the melting furnaces (removed early June 2009) and casting area in the northern part, with the remainder of the area being used largely for the sorting and storage of materials. The corrugated iron roofs are supported by iron trusses of typical late nineteenth- / early twentieth-century design.

3.4.3 Other late nineteenth-century fabric survives along the Jersey Street frontage, again representing the vestiges of the Phoenix Iron Works (Plate 7). The brick-built wall incorporates recessed arcading, with decorative stone string coursing and a stone voussoir at the apex of each arcade (Plate 12). The upper course of the wall comprises decorative dentilated brickwork, typical of the late nineteenth century; the course of dentilated brickwork is shown on a photograph of 1962 (Plate 6) to have been approximately 1m below the top of the wall, indicating that the wall has been reduced in height. The section of historic wall on the Jersey Street frontage is purely a façade, however, with the area behind serving as a metals sorting yard (Plate 13).

3.4.4 The south-western part of the study area is occupied by a row of three sheds of slightly varying sizes. These were erected between 1932 and 1948, and are used for storage purposes. They are of little, or no, archaeological interest.



Plate 8: Looking south-west, showing the junction of Poland Street with Naval Street. The chimney from the aluminium-melting furnace can also be seen prior to its removal



Plate 9: Looking south across the northern part of the study area, showing the modern unit erected on the infilled canal and the chimney from the aluminium-melting furnace



Plate 10: Buildings fronting onto Poland Street in the south-eastern corner of the study area, and the bridge across the former canal arm



Plate 11: Detail of the wall fronting onto Poland Street in the south-eastern corner of the study area



Plate 12: Detail of the wall fronting Jersey Street in the south-eastern part of the study area, representing the remnants of the Phoenix Iron Works



Plate 13: The internal elevation of the wall fronting Jersey Street in the south-eastern part of the study area



Plate 14: Looking north-east across the aluminium-processing works, with the site of the glass works occupying the yard in the foreground



Plate 15: The interior of the aluminium-processing works, looking north-east



Plate 16: The interior elevation of the former iron works wall fronting onto Poland Street



Plate 17: The interior of the aluminium-processing works, looking north across the site of the melting furnace



Plate 18: The three sheds erected on the Jersey Street frontage between 1932 and 1948, and used presently for storage purposes



Plate 19: The rear elevation of the twentieth-century storage sheds on Jersey Street



Plate 20: Looking north-east across Radium Street, showing the modern building occupying the site of the former Sunday School

4. GAZETTEER OF SITES

Site number	01
Site name	Boundary ditch
NGR	SJ 85142 98758
Site type	Site of
Period	Post-medieval
SMR No	-
Stat. Designation	None
Sources	Green's map 1794.
Description	A dotted line shown on Green's map of 1794, marking the line of a field boundary. Excavation elsewhere in Ancoats has demonstrated that the position of these dotted lines correspond to ditches, the excavation of which has provided important palaeo-environmental evidence for the character of the area prior to urbanisation (OA North 2007; OA North 2008).
Assessment	The site lies within the study area, and whilst it will have been largely destroyed by subsequent development, there is some potential for buried remains. Any future development may have an archaeological impact, which may require further investigation prior to development.

Site number	02
Site name	Workers' Housing, Jersey Street
NGR	SJ 85142 98732
Site type	Site of
Period	Late eighteenth century
SMR No	-
Stat. Designation	None
Sources	Green's map 1794; Pigot's map 1809; Ordnance Survey 1850
Description	A block of buildings fronting onto Jersey Street, probably representing artisans' workshop dwellings, is depicted on Green's map of 1794; these are likely to be some of the earliest workers' housing in Ancoats. The detail provided by the Ordnance Survey map of 1850 indicates that these properties incorporated cellars, with separate access from the street, suggesting that they were used for dwellings. The houses had been demolished by the late 1880s, although subsequent development does not appear to have included any basements, offering some potential for the survival of the original cellar dwellings.
Assessment	The site lies within the study area, and has some potential for buried remains. Any future development of the site may have an archaeological impact, which may require further investigation prior to development.

Site number	03
Site name	Bengal Street Canal Arm
NGR	SJ 85145 98772
Site type	Site of
Period	Early nineteenth century
SMR No	-
Stat. Designation	None
Sources	Pigot's map 1819; Johnson's map 1820.
Description	An arm of the Rochdale Canal aligned broadly east/west across the centre of the study area, and continuing westwards as far as Bengal Street. Opened by 1808, but first shown cartographically on Pigot's map of 1819. Appears to have been infilled on the Ordnance Survey map of 1948.
Assessment	The site lies within the study area, and has some potential for buried remains. Any future development may have an archaeological impact, which may require further investigation prior to development.

Site number	04
Site name	Workers' Housing, Jersey Street
NGR	SJ 85178 98754
Site type	Site of
Period	Early nineteenth century
SMR No	-
Stat. Designation	None
Sources	Bancks and Co's map 1831; Ordnance Survey 1850; Adshead's map 1851.
Description	A terrace of workers' dwellings fronting onto Jersey Street is depicted on Bancks and Co's map of 1831. The detail provided by the Ordnance Survey map of 1850 indicates that these properties did not incorporate cellars. The houses had been demolished by the 1880s, and the site was subsumed by an expansion of the Phoenix Iron Works (Site 06).
Assessment	The site lies within the study area, although there seems little potential for the survival of buried remains. Any future development is likely to have a negligible archaeological impact.

Site number	05
Site name	Sunday School, Radium Street
NGR	SJ 85120 98741
Site type	Site of
Period	Early nineteenth century
SMR No	-
Stat. Designation	None
Sources	Bancks and Co's map 1831; Ordnance Survey 1850; Adshead's map 1851.
Description	A Sunday School erected in 1826 by John Young, a local cotton spinner (Swindells 1908, 225). The building is annotated as a

Assessment	<p>Sunday School on Bancks and Co's map of 1831 and subsequent maps. The Sunday Schools is named on historical mapping until the mid-twentieth century, but has been replaced subsequently with a three-storey, brick-built structure.</p> <p>The site lies beyond the boundary of the study area, and development will have a negligible archaeological impact.</p>
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Site number	06
Site name	Phoenix Iron Works, Jersey Street
NGR	SJ 85163 98766
Site type	Site of
Period	Mid-nineteenth century
SMR No	-
Stat. Designation	None
Sources	Ordnance Survey 1850; Ordnance Survey, 1891.
Description	An iron works first depicted clearly on the Ordnance Survey first edition map of 1850, although one component of the complex appears on Pigot's map of 1841. The works was remodelled and expanded in several episodes during the later nineteenth and twentieth centuries. The early elements of the iron works have been largely demolished, although the remnants of late nineteenth-century walling surviving along the Jersey Street and Poland Street frontages.
Assessment	The site of the iron works lies within the study area, and has some potential for buried remains. Any future development may have an archaeological impact on buried remains, which may require further investigation prior to development. In addition, the surviving elements of wall along the Jersey Street and Poland Street frontages are of historical interest, and consideration should be afforded to their incorporation into any future design proposals. Demolition of these walls will require Conservation Area Consent.

Site number	07
Site name	Steam Power Plant, Phoenix Iron Works
NGR	SJ 85126 98757
Site type	Site of
Period	Mid-nineteenth century
SMR No	-
Stat. Designation	None
Sources	Ordnance Survey, 1850.
Description	An engine house, boiler, cistern and chimney, named on the Ordnance Survey map of 1850, situated in the western part of the study area. Cumulatively representing a steam-power plant, it seems probable that these features provided the power requirements of the Phoenix Iron Works, also their detached location is curious. The size and configuration of the engine house is consistent with a vertical beam engine. A similarly sized building in the same position is shown to have formed part of the

Assessment	<p>glass works (Site 10) on the Ordnance Survey map of 1891. However, the building had been demolished by 1948.</p> <p>The site lies within the study area, and has some potential for buried remains. Any future development may have an archaeological impact, which may require further investigation prior to development.</p>
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Site number	08
Site name	Coal Wharves, Elizabeth Street
NGR	SJ 85120 98778
Site type	Site of
Period	Mid-nineteenth century
SMR No	-
Stat. Designation	None
Sources	Pigot 1841; Ordnance Survey, 1850.
Description	Two coal merchants are listed on Elizabeth Street in a trade directory for 1841, and are likely to correspond with buildings shown on a map published in the same year; the coal wharves are named on subsequent mapping.
Assessment	The site lies beyond the boundary of the study area, and development will have a negligible archaeological impact.

Site number	09
Site name	Cotton Works/Engineering Works, Poland Street
NGR	SJ 85149 98797
Site type	Site of
Period	Mid-nineteenth century
SMR No	-
Stat. Designation	None
Sources	Ordnance Survey, 1850; Ordnance Survey, 1891.
Description	A cotton warp sizing and fustian finishing works named on mid-nineteenth century maps. It seems likely that the works will have been steam powered, although there is no indication on historical mapping as to the location of the steam-power plant. The works had seemingly been converted to an iron works and engineering works by the 1890s. The conversion of the site necessitated the erection of a large building along the north bank of the canal arm, which lies within the boundary of the study area. This building contained a chimney, marked on the Ordnance Survey map of 1891, suggesting that it formed part of the processing/manufacturing area.
Assessment	A small element of the site lies within the study area, and any future development may have an archaeological impact, which may require mitigation prior to development.

Site number	10
Site name	Glass Works
NGR	SJ 85138 98757
Site type	Site of
Period	Late nineteenth century
SMR No	12431.1.0
Stat. Designation	None
Sources	Ordnance Survey, 1891.
Description	A building that appears to have originated as part of the Phoenix Iron Works, but converted to a glass works by Burtles Tate & Co Ltd in the late nineteenth century.
Assessment	The site lies within the study area, and any future development will have an archaeological impact, which may require mitigation prior to development.

5. SIGNIFICANCE OF THE REMAINS

5.1 INTRODUCTION

- 5.1.1 The assessment has identified a total of ten sites of archaeological interest within the study area, of which eight lie partially or wholly within the boundary of the study area (Fig 10). There were no designated sites (*eg* Scheduled Monuments or Listed Buildings) within the study area, although the site does lie within the Ancoats Conservation Area.
- 5.1.2 The Ancoats Conservation Area was designated in 1989, and is bounded by Great Ancoats Street, Oldham Road, Kemp Street, Wadeford Close, Jersey Street and the Rochdale Canal.

5.2 CRITERIA

- 5.2.1 There are several different methodologies used to assess the archaeological significance or importance of sites; that to be used here is the ‘Secretary of State’s criteria for scheduling ancient monuments’ which is included as Annex 4 of PPG 16 (DoE 1990). The sites listed in *Section 4* were each considered using the criteria, with the results below.
- 5.2.2 **Period:** most of the sites within the study area date to the Industrial Period (*c* 1750 – 1901). There is little, or no, potential for remains from any earlier periods to survive within the site, with the exception of the boundary ditch (Site 01), which is likely to be of post-medieval origin.
- 5.2.3 **Rarity:** the remains of late eighteenth-century workers’ housing can be considered to be of regional rarity. The remains of nineteenth-century glass works are also considered to be of regional rarity. In addition, the extant walls along Jersey Street and Poland Street represent surviving elements of a nineteenth-century iron works, which have a rarity value in Ancoats despite their former predominance.
- 5.2.4 **Documentation:** the historical development of the study area from the late eighteenth century can be traced reasonably well from cartographic sources, and some of the occupants of the properties may be identified from the available commercial directories. Further documentary research may furnish additional evidence, including more precise dating of the construction of the relevant buildings, although this is unlikely to alter the outline presented in this assessment.
- 5.2.5 **Group value:** the study area lies within an area of Manchester that was developed as a direct result of the commercial and industrial expansion of the town during the late eighteenth century. The potential buried remains within the site are associated with this period, and form a small group of domestic, industrial and small commercial properties. Similarly, the walls along the Jersey Street and Poland Street frontages, representing the vestiges of the

Phoenix Iron Works, have a group value with the historic fabric of the Flint Glass Works, situated on the opposite side of Jersey Street. The engine house, boiler, chimney and cistern, representing the key elements of a mid-nineteenth-century steam-power plant (Site **07**), also have a group value.

- 5.2.6 **Survival/Condition:** the extent to which any buried archaeological remains survive beneath the modern ground surface is unknown. However, the intensive development of the study area during the late eighteenth and nineteenth centuries is likely to have obliterated any surviving remains from earlier periods, although there is some potential that fragmentary elements of the boundary ditch (Site **01**) may survive to the south of the former glass works building, as part of that part of the study area may not have been subject to earth-moving works. Similarly, there is considerable potential for the remains of the putative cellar dwellings (Site **02**) to survive in the south-western part of the study area.
- 5.2.7 **Fragility:** any surviving buried remains may be adversely affected by development.
- 5.2.8 **Diversity:** the remains relate mainly to the industrial and domestic use of the site. None of the sites within the gazetteer are considered to be significant due to diversity.
- 5.2.9 **Potential:** there are no prehistoric sites within the study area, and the potential for prehistoric remains is considered to be low. Similarly, there are no known Romano-British or medieval sites within the study area, and the potential for remains from these periods is considered to be low.
- 5.2.10 The study area was probably used for agricultural purposes during the post-medieval period, represented by deposits of cultivation soils excavated on George Leigh Street, to the north of the study area (OA North 2008), and field boundary features, such as that excavated on Bengal Street, to the west (OA North 2007). However, it is likely that the intensive development of the study area between the late eighteenth and twentieth centuries resulted in the disturbance or loss of these soils, and their potential to survive seems low, although short sections of the ditch (Site **01**) shown on Green's map of 1794 may survive.
- 5.2.11 The greatest potential for buried archaeological remains of significance lies in the Industrial Period. There is considerable potential for the remains of artisans' workshops/cellar dwellings to survive along the Jersey Street frontage, the glass works to their rear, and the canal arm across the centre of the site.

5.3 SIGNIFICANCE

5.3.1 Table 2 shows the sensitivity of the site scaled in accordance with its relative importance using the following terms for the cultural heritage and archaeology issues, with guideline recommendations for a mitigation strategy.

Importance	Examples of Site Type	Mitigation
National	Scheduled Monuments (SMs), Grade I and II* Listed Buildings	To be avoided
Regional/County	Conservation Areas, Registered Parks and Gardens (Statutory Designated Sites), Grade II Listed Buildings Sites and Monuments Record/Historic Environment Record	Avoidance recommended
Local/Borough	Sites with a local or borough value or interest for cultural appreciation Sites that are so badly damaged that too little remains to justify inclusion into a higher grade	Avoidance not envisaged
Low Local	Sites with a low local value or interest for cultural appreciation Sites that are so badly damaged that too little remains to justify inclusion into a higher grade	Avoidance not envisaged
Negligible	Sites or features with no significant value or interest	Avoidance unnecessary

Table 3: Criteria used to determine Importance of Sites

5.3.2 Sites **02** and **10** are considered to be of Regional/County importance. In addition, the extant remnants of the Phoenix Iron Works (Site **06**) that survives along the Jersey Street and Poland Street frontages may be considered to be of Regional/County importance, not least as they lie within the Ancoats Conservation Area. All of the other sites of buried remains are considered to be of Low Local or Local/Borough importance.

6. LIKELY IMPACT OF DEVELOPMENT

6.1 IMPACT

6.1.1 In its Planning Policy Guidance *Note 16*, the Department of the Environment (DoE) advises that archaeological remains are a continually diminishing resource and ‘should be seen as finite, and non-renewable resource, in many cases, highly fragile and vulnerable to destruction. Appropriate management is therefore essential to ensure that they survive in good condition. In particular, care must be taken to ensure that archaeological remains are not needlessly or thoughtlessly destroyed’. It has been the intention of this study to identify the archaeological potential of the study area, and assess the impact of redevelopment, thus allowing the advice of the DoE to be enacted upon. Assessment of impact has been achieved by the following method:

- assessing any potential impact and the significance of the effects arising from redevelopment;
- reviewing the evidence for past impacts that may have affected the archaeological sites;
- outlining suitable mitigation measures, where possible at this stage, to avoid, reduce or remedy adverse archaeological impacts.

6.1.2 The impact is assessed in terms of the sensitivity or importance of the site to the magnitude of change or potential scale of impact during future redevelopment scheme. The magnitude, or scale of an impact is often difficult to define, but will be termed as substantial, moderate slight, or negligible, as shown in Table 4.

Scale of Impact	Description
Substantial	Significant change in environmental factors; Complete destruction of the site or feature; Change to the site or feature resulting in a fundamental change in ability to understand and appreciate the resource and its cultural heritage or archaeological value/historical context and setting.
Moderate	Significant change in environmental factors; Change to the site or feature resulting in an appreciable change in ability to understand and appreciate the resource and its cultural heritage or archaeological value/historical context and setting.
Slight	Change to the site or feature resulting in a small change in our ability to understand and appreciate the resource and its cultural heritage or archaeological value/historical context and setting.
Negligible	Negligible change or no material changes to the site or feature. No real change in our ability to understand and appreciate the resource and its cultural heritage or archaeological value/historical context and setting.

Table 4: Criteria used to determine Scale of Impact

- 6.1.3 The interaction of the scale of impact (Table 4) and the importance of the archaeological site (Table 3) produce the impact significance. This may be calculated by using the matrix shown in Table 5:

Resource Value (Importance)	Scale of Impact Upon Archaeological Site			
	Substantial	Moderate	Slight	Negligible
National	Major	Major	Intermediate/Minor	Neutral
Regional/County	Major	Major/Intermediate	Minor	Neutral
Local/Borough	Intermediate	Intermediate	Minor	Neutral
Local (low)	Intermediate / Minor	Minor	Minor/Neutral	Neutral
Negligible	Neutral	Neutral	Neutral	Neutral

Table 5: Impact Significance Matrix

- 6.1.4 The extent of any previous disturbance to buried archaeological levels is an important factor in assessing the potential impact of the development scheme. This is largely unattested, although it seems probable that the intensive nineteenth-century development will have had a substantial impact on any buried archaeological remains of earlier periods, and their potential is therefore considered to be low. Conversely, there is considerable potential for significant archaeological remains of the Industrial Period to survive, namely the buried remains of the late eighteenth-century building shown on historical mapping.

6.2 IMPACT ASSESSMENT

- 6.2.1 Following on from the above considerations, the significance of effects on buried remains has been determined based on an assumption that large elements of the extant buildings will be demolished, their associated floor surfaces removed, and piled foundations will be required for the new development. The results are summarised in Table 6, although will require review once design proposals are known.

Site Number	Nature of Impact	Importance	Impact	Significance of Impact
01	Disturbance of below-ground remains	Local/Borough	Substantial	Intermediate
02	Disturbance of below-ground remains	Regional/County	Substantial	Major
03	Disturbance of below-ground remains	Local/Borough	Substantial	Intermediate
04	Disturbance of below-ground remains	Low Local	Negligible	Neutral

Site Number	Nature of Impact	Importance	Impact	Significance of Impact
05	None	Local/Borough	Negligible	Neutral
06	Disturbance of below-ground remains	Local/Borough	Substantial	Intermediate
07	Disturbance of below-ground remains	Local/Borough	Substantial	Intermediate
08	None	Low Local	Negligible	Neutral
09	Disturbance of below-ground remains	Low Local	Substantial	Intermediate / Minor
10	Disturbance of below-ground remains	Regional/County	Substantial	Major

Table 6: Assessment of the impact significance on each site during development

7. RECOMMENDATIONS FOR ARCHAEOLOGICAL MITIGATION

7.1 INTRODUCTION

- 7.1.1 Current legislation draws a distinction between archaeological remains of national importance and other remains considered to be of lesser significance. Those perceived to be of national importance may require preservation *in-situ*, whilst those of lesser significance may undergo preservation by record, where high local or regional significance can be demonstrated.
- 7.1.2 No known or potential buried remains have been identified within the study area that may be considered as being of national importance and therefore merit preservation *in-situ*. Similarly, the majority of the built heritage on the site is of little archaeological interest, except for the extant elements of the Phoenix Iron Works that survive along the Jersey Street and Poland Street frontages, and should be retained where possible. However, the site has considerable potential to contain *in-situ* buried remains of Local/Borough and Regional/County importance, which would require preservation by record should they be directly affected by future development proposals.

7.2 ARCHAEOLOGICAL MITIGATION

- 7.2.1 The scope and details of any archaeological mitigation required in advance of scheme of redevelopment would be devised in close consultation with the County Archaeologist for Greater Manchester once detailed design proposals are known. However, it may be anticipated that the extent, character, and nature of buried remains on selected known sites should be investigated via an appropriate programme of archaeological investigation in order to provide sufficient information to fully mitigate the impact of the development.
- 7.2.2 In the first instance, the primary objectives of any such investigation would be to establish the presence, character, date, and extent of any buried remains of the eighteenth-century buildings (Site **02**), the canal arm (Site **03**), the Phoenix Iron Works (Site **06**) and its steam-power plant (Site **07**), and the glass works (Site **10**). This could be achieved effectively by stripping the existing floor surfaces across the site once demolition works have been completed, or through the excavation of targeted trial trenches.

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ILLUSTRATIONS

FIGURES

- Figure 1: Site location map
- Figure 2: Extract from Green's map of 1794, showing study area boundary
- Figure 3: Extract from Bancks and Co's map of 1831
- Figure 4: Extract from the Ordnance Survey 60": 1 mile map of 1850
- Figure 5: Extract from Adshead's map of 1851
- Figure 6: Extract from the Ordnance Survey 5': 1 mile map of 1891
- Figure 7: Extract from the Ordnance Survey 5': 1 mile map of 1909
- Figure 8: Extract from the Ordnance Survey 25": 1 mile map of 1932
- Figure 9: Extract from the Ordnance Survey map of 1948
- Figure 10: Location of gazetteer sites

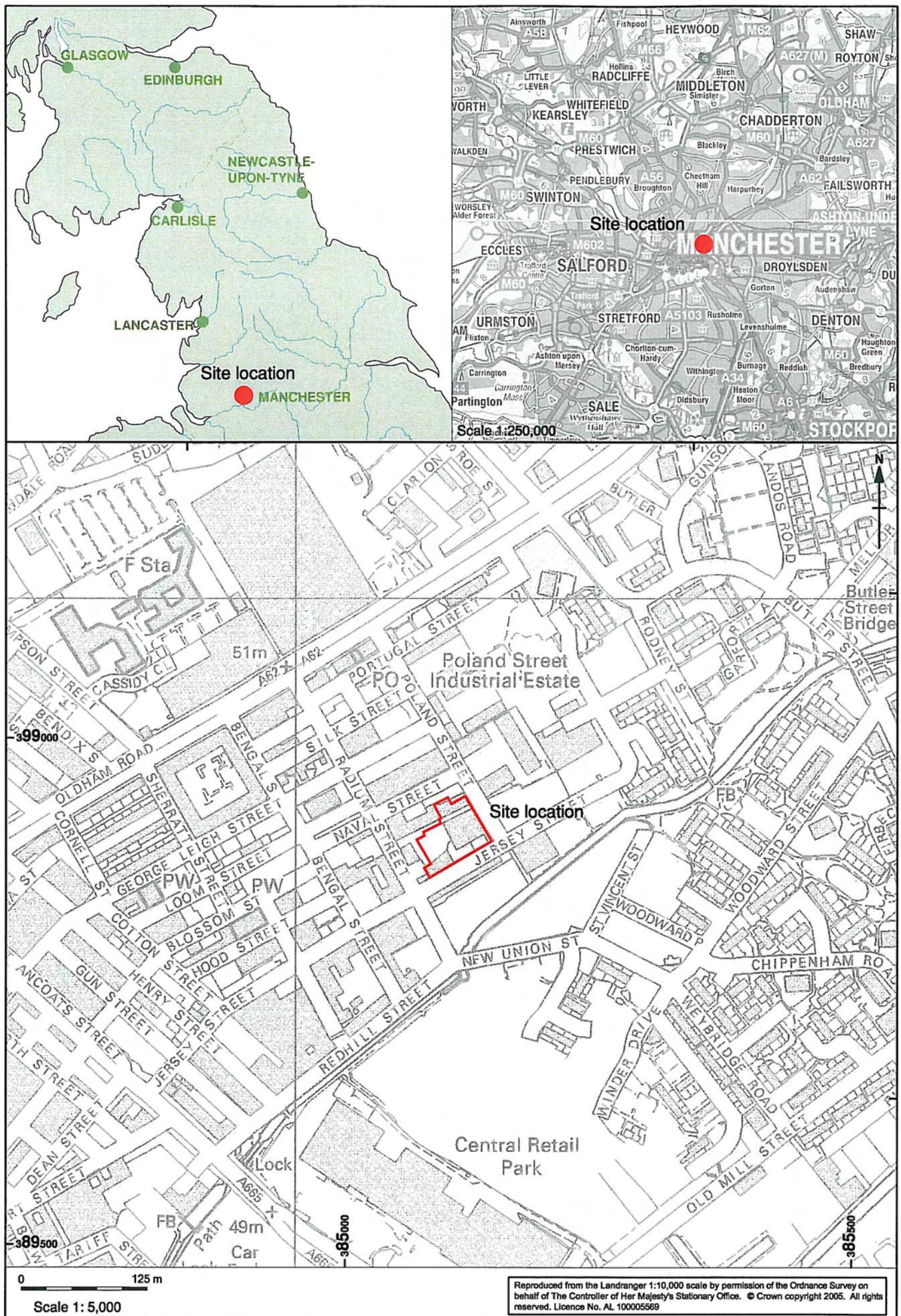


Figure 1: Site Location

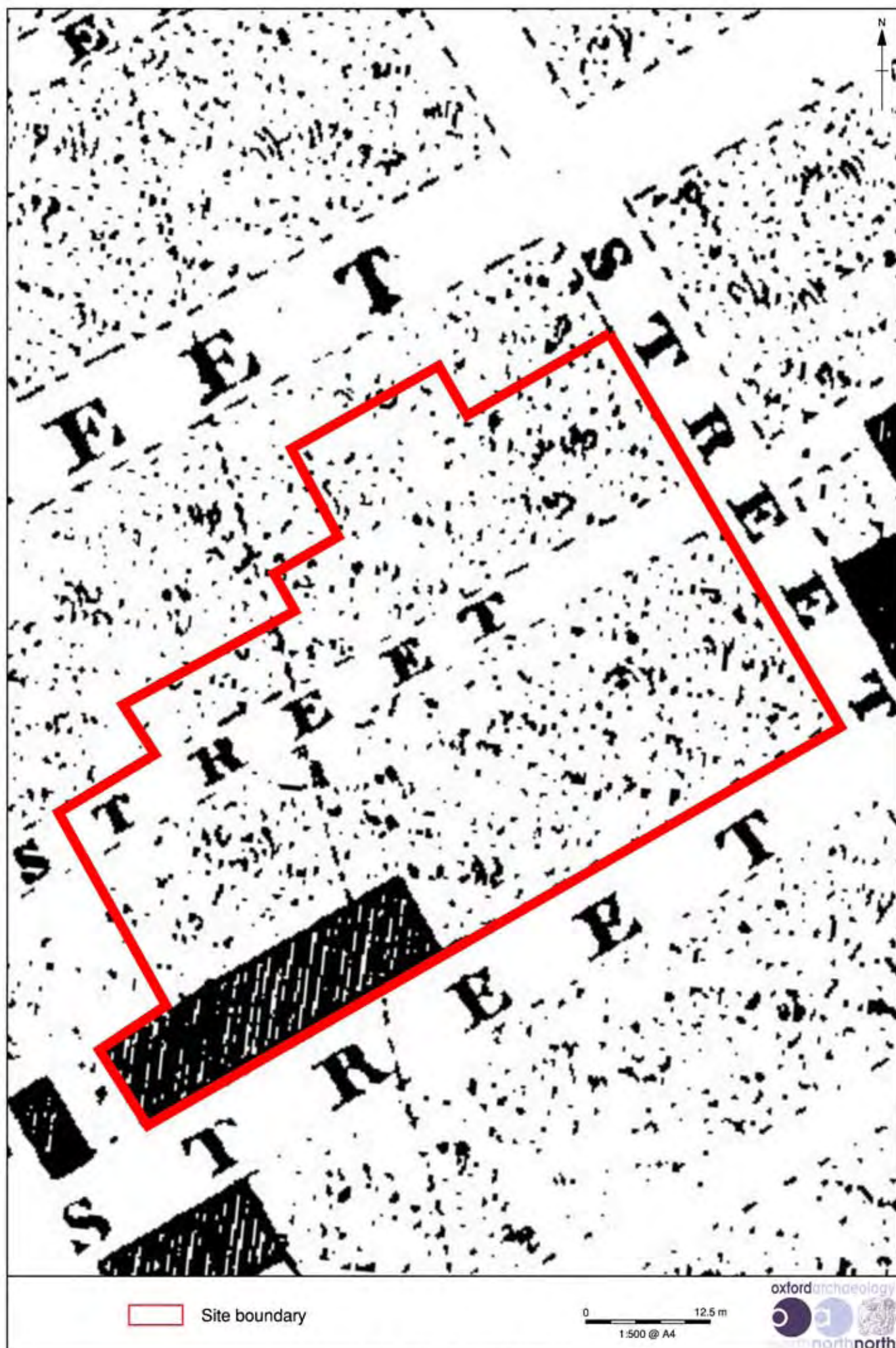


Figure 2: Detail of Green's 1794 map

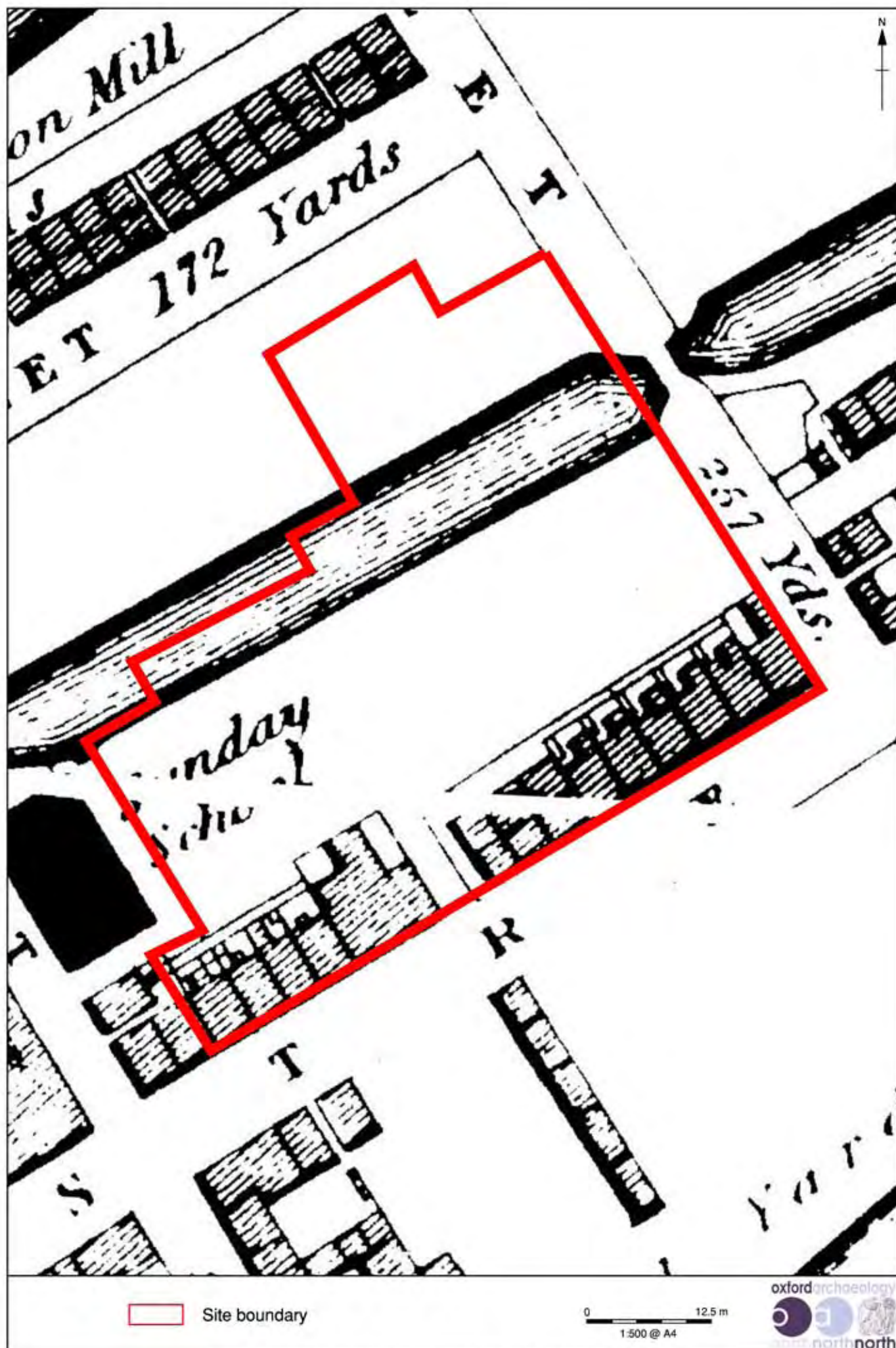


Figure 3: Extract from Bancks & Co's map of 1831

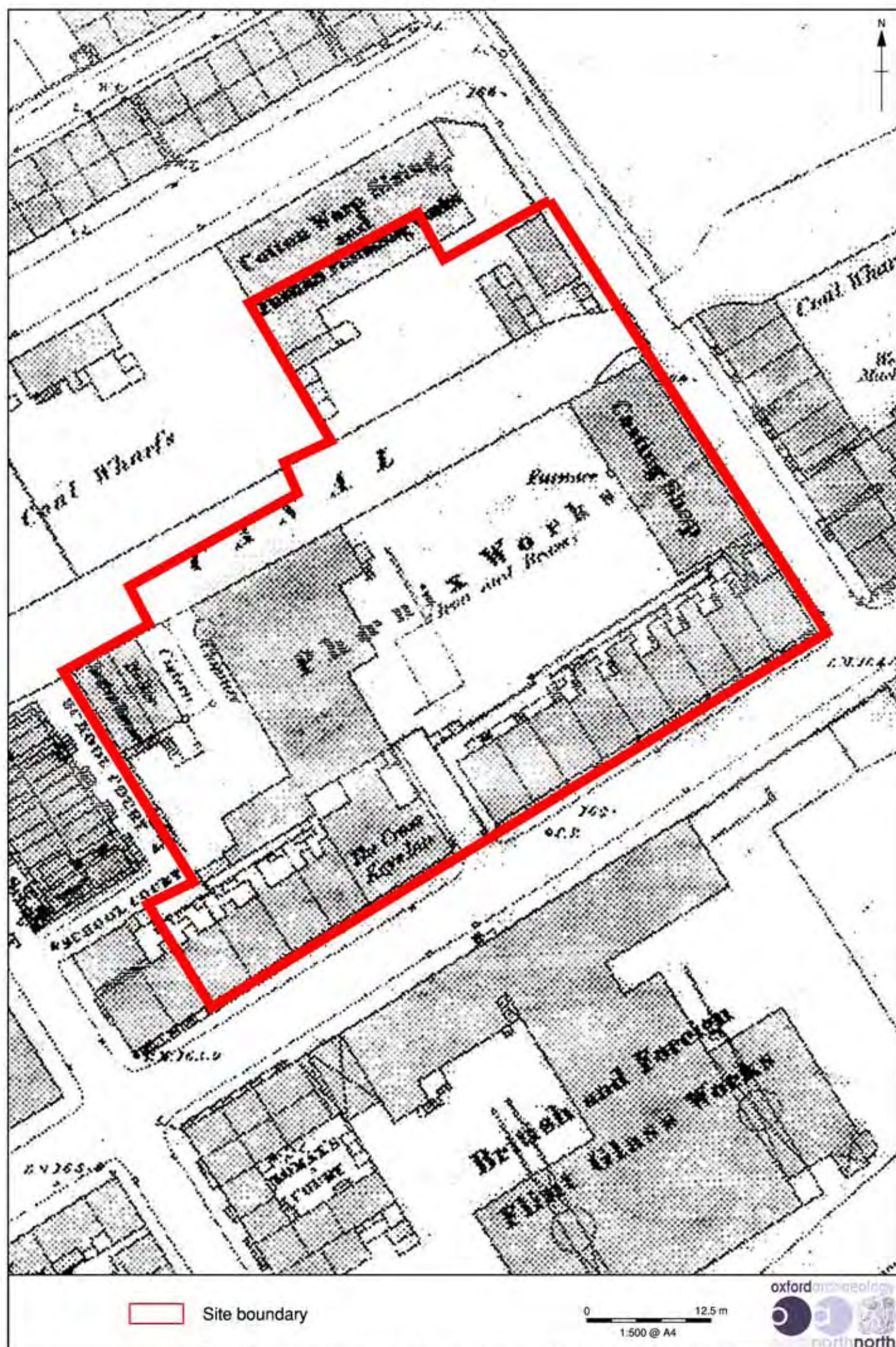


Figure 4: Extract from the Ordnance Survey 60": 1 mile map of 1850

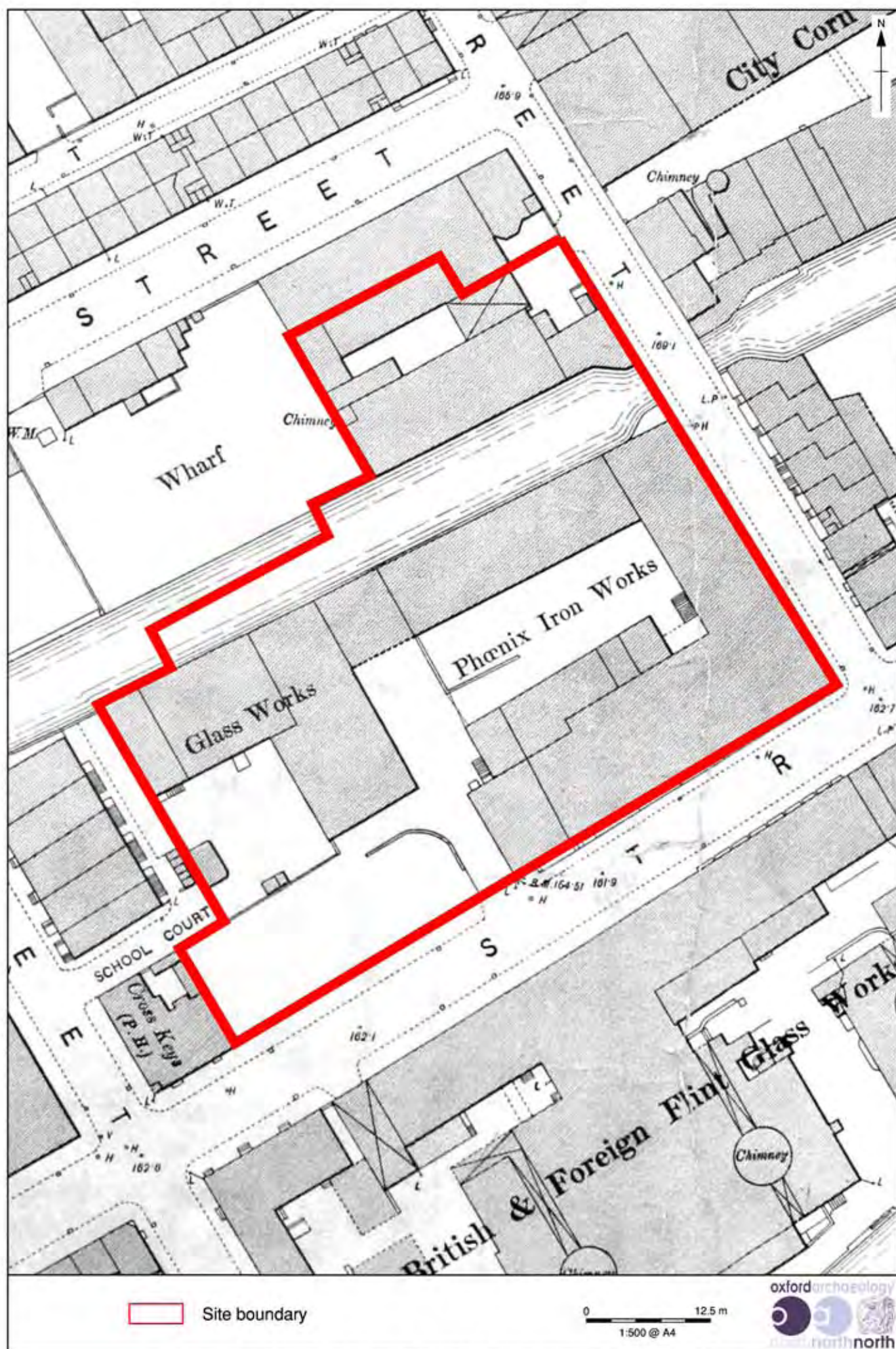


Figure 6: Extract from the Ordnance Survey 5' : 1 mile map of 1891

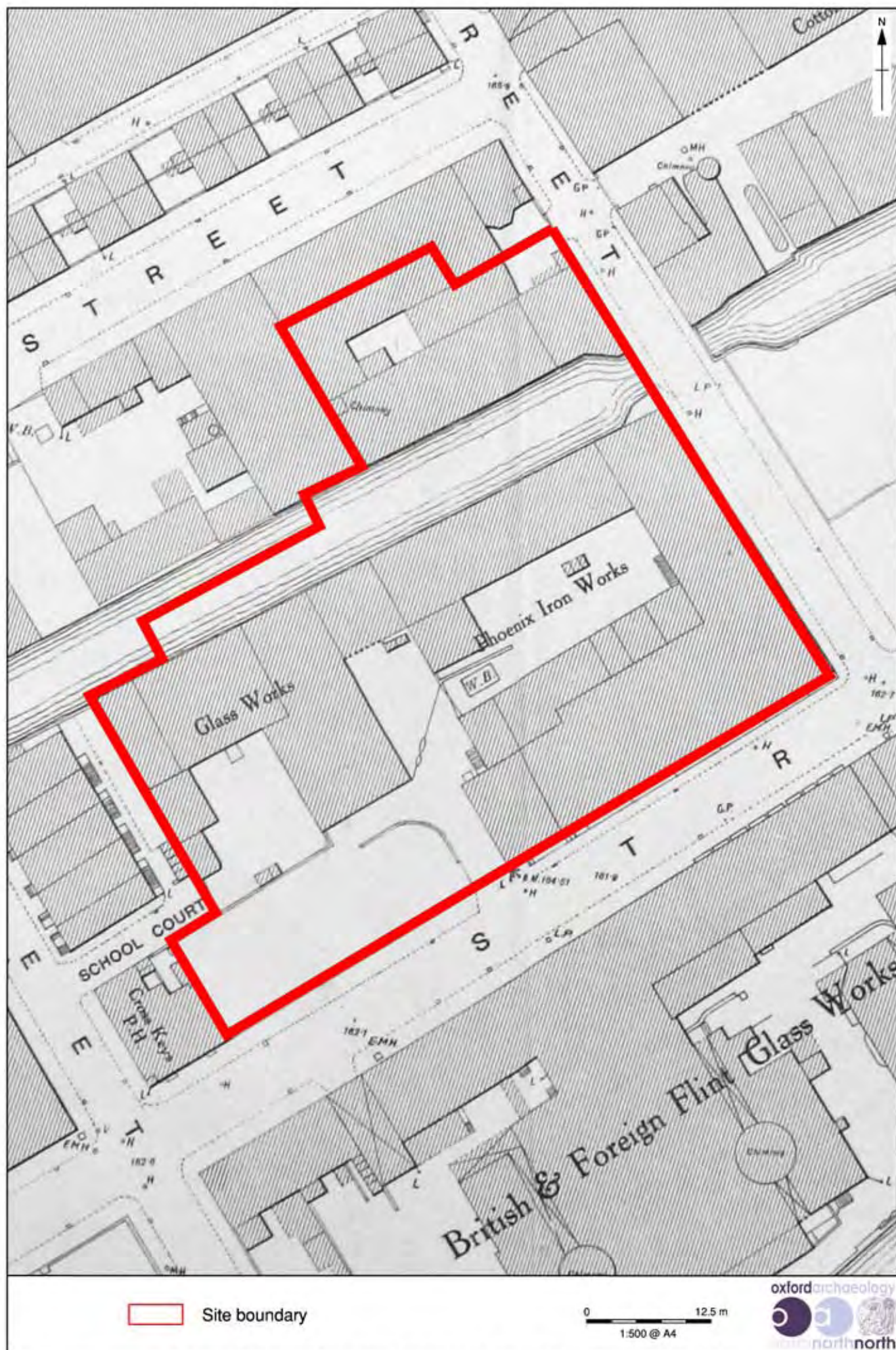


Figure 7: Extract from the Ordnance Survey 5' : 1 mile map of 1909

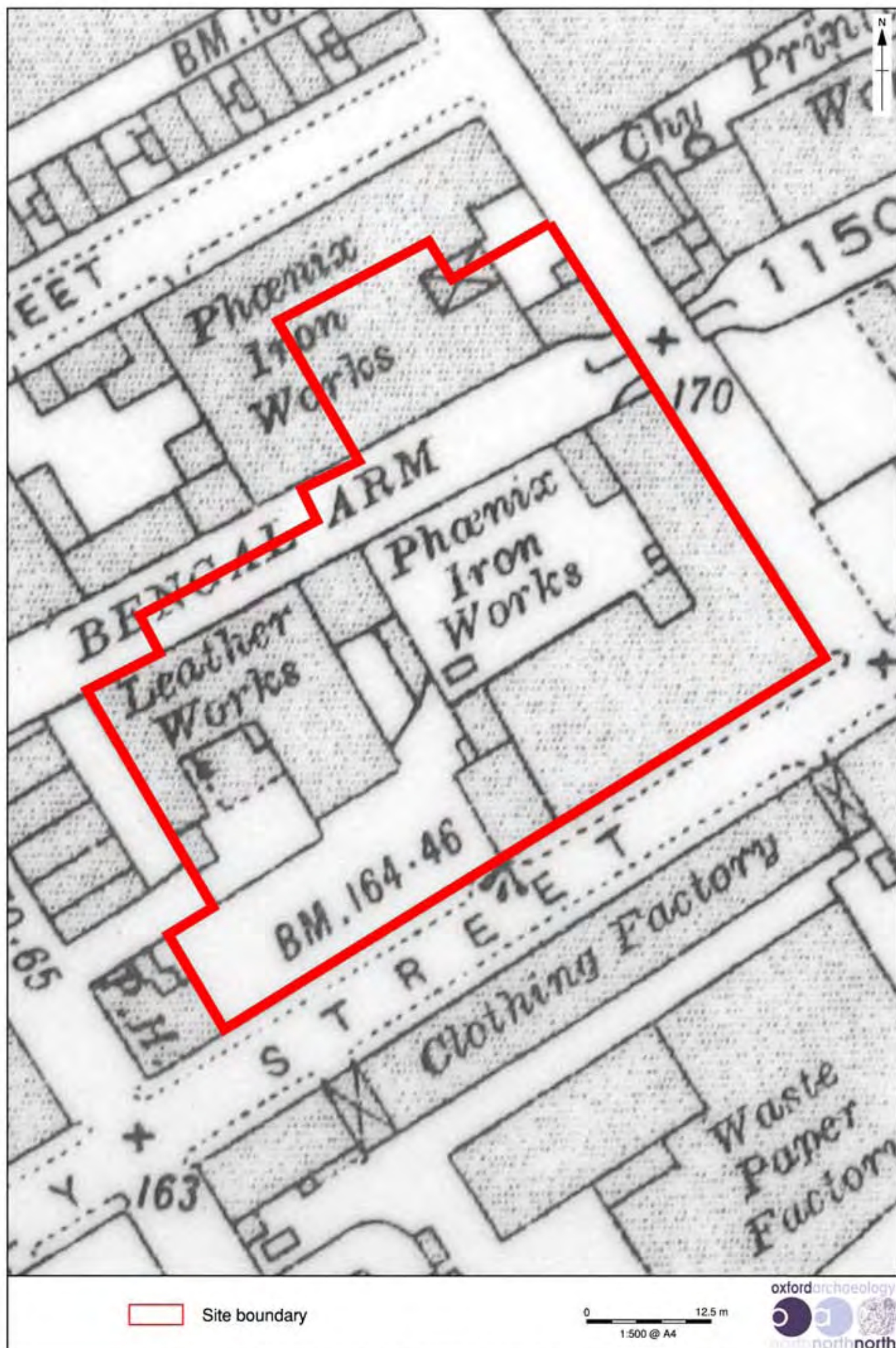


Figure 8: Extract from the Ordnance Survey 25": 1 mile map of 1932

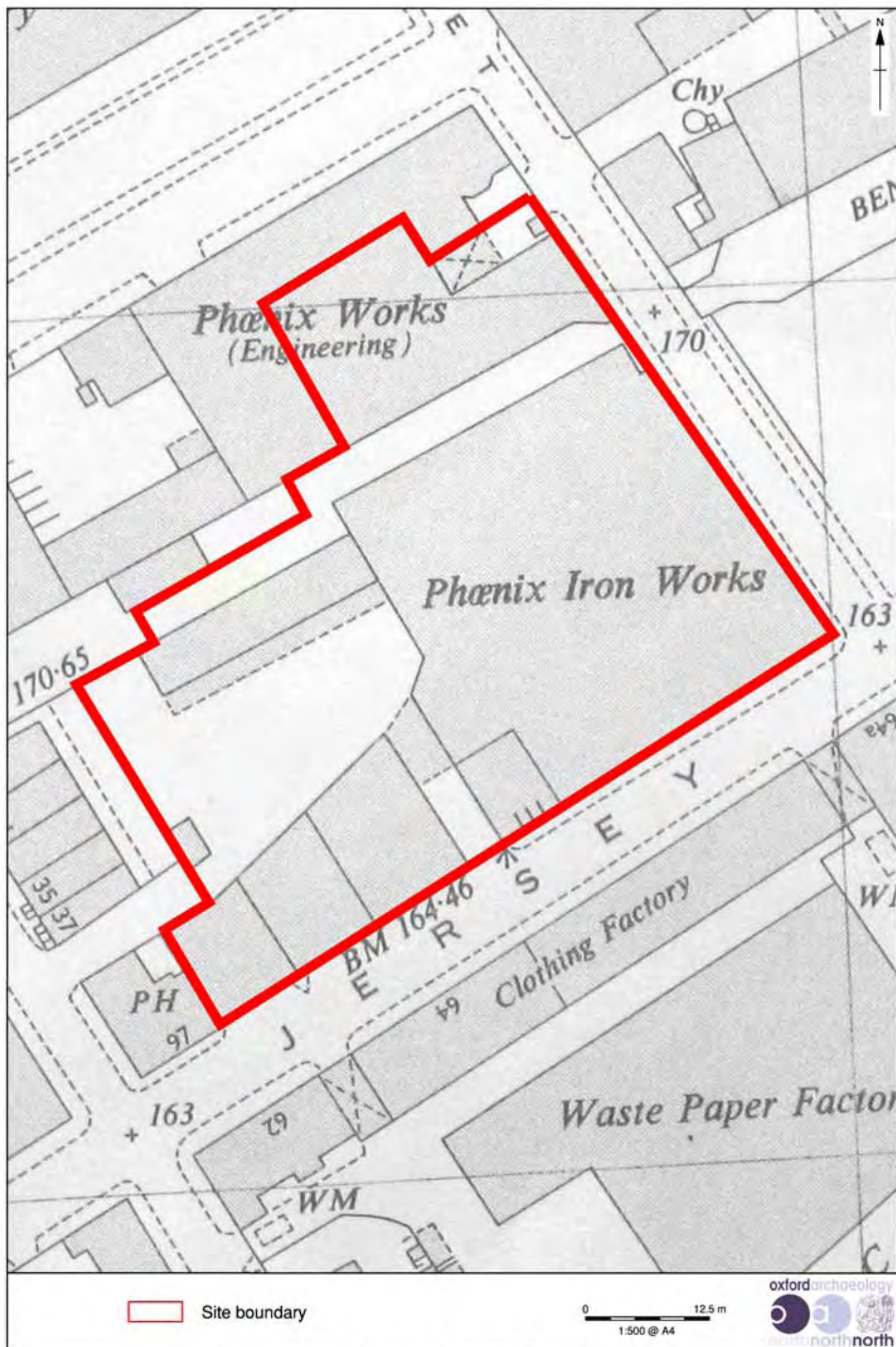


Figure 9: Extract from the Ordnance Survey map of 1948

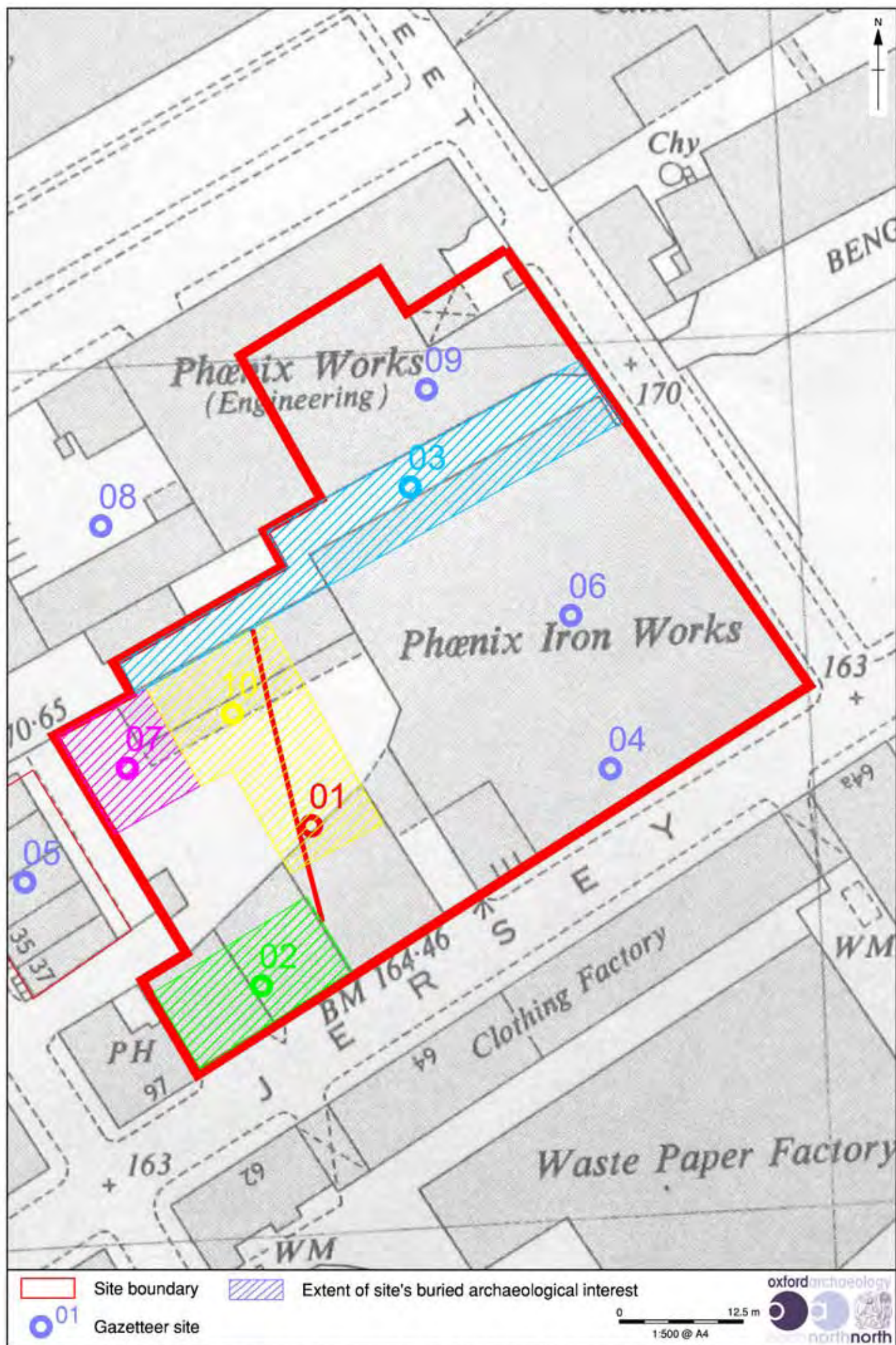


Figure 10: Location of gazetteer sites, superimposed on the Ordnance Survey map of 1948, showing areas of archaeological interest