

NOMA Plot L, Miller Street, Manchester

Archaeological Desk- based Assessment



Oxford Archaeology North

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The Co-operative Group

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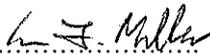
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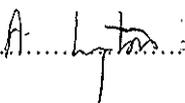
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SUMMARY

The Co-operative Group is presently considering enabling the redevelopment of land situated in the Shudehill area of Manchester (centred at NGR 384420 398960). In order to facilitate the process, the Co-operative Group commissioned Oxford Archaeology North (OA North) to carry out an archaeological desk-based assessment of the Site Area. This was intended to establish, as far as possible, the nature and significance of the sub-surface archaeological resource within the area, and to establish the impact of any future development upon this resource. The data generated from the assessment is intended to provide an informed basis regarding the significance of any archaeological heritage assets within the site. This was coupled with the archaeological monitoring of six small trial pits that were excavated to inform an understanding of the ground conditions across the site, but also allowed some indication as to the survival of buried archaeological remains across the site.

In total, 43 heritage assets have been identified in the wider study area, of which 11 lie either partially or wholly within the boundary of the Site Area. None of the known heritage assets identified within the Site Area are afforded statutory designation, and are thus not considered to be of national importance that would require preservation *in-situ*. However, any buried remains of Arkwright's Mill, especially the original block, its waterwheel and the sequence of steam-power plant features, are of considerable archaeological and historical importance, and may merit preservation *in-situ*.

Of the other non-designated heritage assets within the Site Area, several merit preservation by record, where these will be directly affected by development. In particular, any buried remains of the former Manchester Bath and Wash House are likely to be of regional or county importance. Other buried remains may include the foundations of ancillary building to Arkwright's Mill, a mid-nineteenth-century foundry and small brewery, and workers' housing on Miller Street dating to the late eighteenth and early nineteenth centuries could potentially be of borough importance.

The scope and specification of an appropriate programme of archaeological recording would be devised in consultation with the archaeological curatorial service advising Manchester City Council, although it may be anticipated that all of these heritage assets would require intrusive archaeological investigation. In the first instance, this is likely to comprise targeted evaluation trenching to establish the extent of buried remains. Should significant remains be found which will be damaged or destroyed by the future development of the site, these may require further excavation work to ensure preservation by record.

ACKNOWLEDGEMENTS

Oxford Archaeology North (OA North) would like to thank John Luddington, Construction Project Manager for the Co-operative Group, for commissioning and supporting the project. Thanks are also due to Norman Redhead, the Heritage Management Director with the Greater Manchester Archaeological Advisory Service (GMAAS), for his support and advice. Further thanks are expressed to Damien Newell and Chris O'Hara of Buro Happold Ltd for logistical support during the ground investigation works. OA North is also grateful to the staff of the Local Studies Unit at Manchester Central Library, the Museum of Science and Industry in Manchester, and the Lancashire County Record Office, for their assistance with the historical research.

The desk-based research and report was compiled by Ian Miller, the ground investigation works were monitored by Graham Mottershead, and the illustrations were produced by Mark Tidmarsh.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF PROJECT

1.1.1 The Co-operative Group is presently considering enabling the redevelopment of land situated in the Shudehill area of Manchester (referred to hereafter as the Site Area). In order to facilitate the process, the Co-operative Group commissioned Oxford Archaeology North (OA North) to carry out an archaeological desk-based assessment of the Site Area. This was intended to establish as far as possible, the nature and significance of the sub-surface archaeological resource within the area, and to establish the impact of any future development upon this resource. The data generated from the assessment is intended to provide an informed basis regarding the significance of any archaeological heritage assets within the site. This was coupled with the archaeological monitoring of six small trial pits that were excavated to inform an understanding of the ground conditions across the site.

1.2 LOCATION, TOPOGRAPHY AND GEOLOGY

1.2.1 The study area (centred on NGR 384420 398960) is situated on the northern fringe of the city centre (Fig 1). The site is bounded by Angel Street, Rochdale and Miller Street, with the Co-operative Group's Headquarters Building forming the northern boundary (Plate 1).

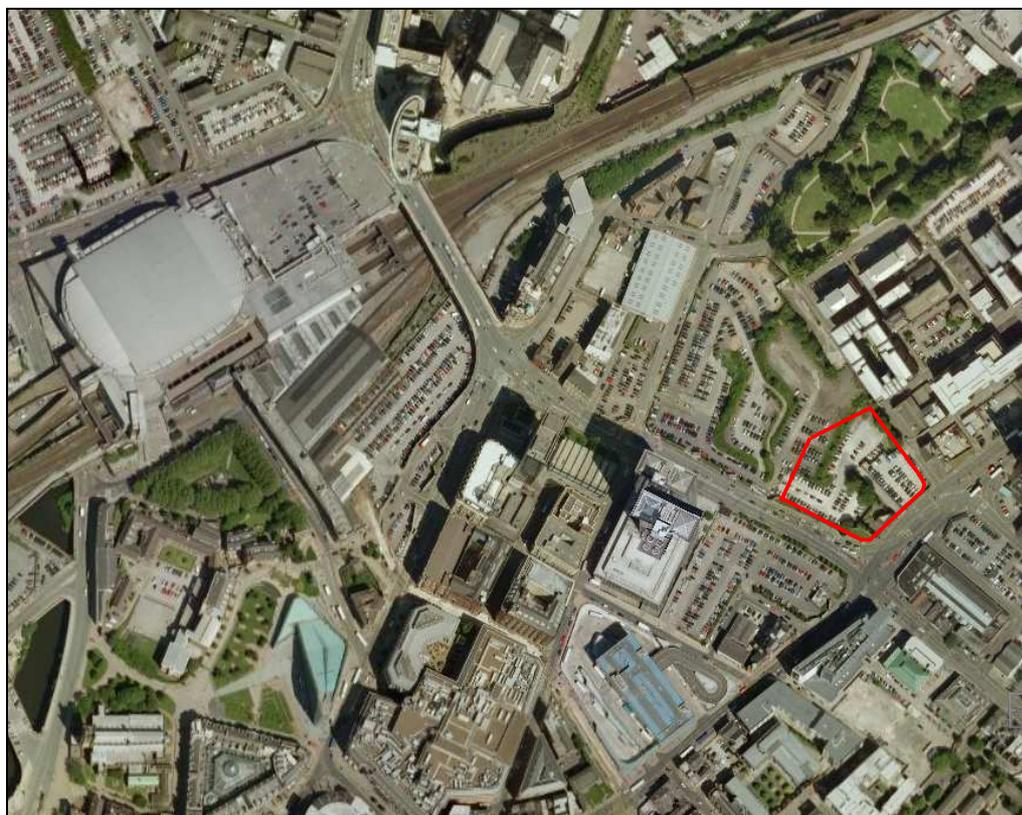


Plate 1: Recent aerial view of the Site Area and its environs prior to the development of the Co-operative Group's Headquarters Building and the NOMA Regeneration

- 1.2.2 **Topography:** 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 study area lies on the east side of the valley of the River Irk, and across the area ground levels fall from east to west towards the river.
- 1.2.3 **Geology:** 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).

1.3 STATUTORY SITES

- 1.3.1 The proposed Site Area does not contain any heritage assets that are afforded statutory protection, such as Scheduled Monuments, listed buildings, or any Registered Parks and Gardens. The Site Area does not fall within the boundary of a Conservation Area, although elements of three Conservation Areas lie within a 250m radius: the Cathedral Conservation Area; Shudehill Conservation Area; and Smithfield Conservation Area.
- 1.3.2 There is a total of 20 listed buildings within a 200m radius of the Site Area, and whilst development will not have a direct impact on these designated buildings, their setting will require consideration in development schemes. Indirect impacts on the settings of the listed buildings in the wider study area have not been assessed, as detailed design proposals have not yet been produced.

2. METHODOLOGY

2.1 DESK-BASED ASSESSMENT

2.1.1 The archaeological assessment has focused on Plot L of the NOMA development, referred to hereafter as the Site Area, although information for the immediate environs has been considered in order to provide an essential contextual background. The assessment was carried out in accordance with the relevant IfA and English Heritage guidelines (IfA 2011, *Standard and Guidance for Archaeological Desk-based Assessments*; IfA 2010 *Code of Conduct*; English Heritage 2006, *Management of Research Projects in the Historic Environment* (MoRPHE)). The principal sources of information consulted were historical and modern maps, although published and unpublished secondary sources were also reviewed. The following repositories were consulted during the data-gathering process:

- **Greater Manchester Historic Environment Record (HER):** the HER holds data on the historic environment for Greater Manchester, including Listed Buildings, all known archaeological sites, along with the location and results of previous archaeological interventions in a linked GIS and database format. The HER was consulted to establish the extent of sites of archaeological and historic interest within the study area;
- **Lancashire County Record Office (LRO), Preston:** holds an extensive series of mapping for the Manchester area, as well as a collection of secondary sources about the city and its suburbs;
- **Greater Manchester Record Office, Manchester (GMRO):** the catalogue of the Greater Manchester Record Office was searched for information relating to the study area, and relevant data was incorporated into the report;
- **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;
- **Local Studies Unit at Manchester Central Library:** the local studies unit was consulted for information pertinent to the study area;
- **Museum of Science and Industry, Manchester:** the catalogue of the Museum of Science and Industry archives was searched for information relating to the study area, and relevant data was incorporated into the report;
- **Oxford Archaeology North:** OA North has an extensive archive of secondary sources relevant to the study area, incorporating both published work and unpublished client reports.

2.1.2 All archaeological sites in the Site Area and within a radius of 200m have been included in the Site Gazetteer (*Section 4*; Fig 11).

2.2 ASSESSMENT METHODOLOGY

2.2.1 The results of the assessment have identified the significance of the archaeological resource of the Site Area. In order to assess the potential impact of any future development, consideration has been afforded to:

- assessing in detail any impact and the significance of the effects arising from any future development of the Site Area;
- reviewing the evidence for past impacts that may have affected the archaeological sites of interest identified during the desk-based assessment;
- outlining suitable mitigation measures, where possible at this stage, to avoid, reduce, or remedy adverse impacts.

2.2.2 Such impacts on the identified archaeological sites may be:

- positive or negative;
- short, medium or long term;
- direct or indirect;
- reversible or irreversible.

2.2.3 Key impacts have been identified as those that would potentially lead to a change to the archaeological site. Each potential impact has been determined as the predicted deviation from the baseline conditions, in accordance with current knowledge of the site and the proposed development. Table 1 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 archaeological value or interest 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 archaeological value 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 archaeological value or interest	Avoidance unnecessary

Table 1: Criteria used to determine Importance of Sites

2.2.4 The impact is assessed in terms of the sensitivity of the site to the magnitude of change or scale of impact during any 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 2.

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 2: Criteria used to determine Scale of Impact

2.2.5 The interaction of the scale of impact (Table 2) and the importance of the archaeological site (Table 1) produce the impact significance. This may be calculated by using the matrix shown in Table 3:

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 3: Impact Significance Matrix

2.2.6 The impact significance category for each identified archaeological site of interest will also be qualified, and recommended mitigation measures will be provided, where possible at this stage, to impacts that are of moderate significance or above; any measures to reduce any impact will be promoted in the report. It is also normal practice to state that impacts above moderate significance are regarded as significant impacts. It is important that the residual impact assessment takes into consideration the ability of the mitigation to reduce the impact, and its likely success.

2.2.7 It is also considered important to attribute a level of confidence by which the predicted impact has been assessed. For the purpose of this assessment, the criteria for these definitions are set out in the table below.

Confidence in Predictions	
Confidence Level	Description
High/Certain	The predicted impact is either certain, <i>ie</i> a direct impact, or believed to be very likely to occur, based on reliable information or previous experience, and may be estimated at 95% chance or higher.
Medium/Probable	The probability can be estimated to be above 50%, but below 95%.
Low/Unlikely	The predicted impact and its levels are best estimates, generally derived from the experience of the assessor. More information may be needed to improve the level of confidence, which can be estimated using the present information at above 5% but less than 50%.
Extremely Unlikely	The probability can be estimated at less than 5%.

Table 4: Impact Prediction Confidence

2.3 PLANNING BACKGROUND AND LEGISLATIVE FRAMEWORK

2.3.1 **National Policy Framework:** in considering any planning application for development, local planning authorities are bound by the policy framework set by government guidance. This guidance provides a material consideration that must be taken into account in development management decisions, where relevant. In accordance with central and local government policy, this assessment has been prepared in order to clarify the study site's archaeological potential and to assess the need for any further measures to mitigate the impact of the proposed development.

2.3.2 National planning policies on the conservation of the historic environment are set out in National Planning Policy Framework (NPPF), which was published by the Department of Communities and Local Government (DCLG) in March 2012. Sites of archaeological or cultural heritage significance that are valued components of the historic environment and merit consideration in planning decisions are grouped as 'heritage assets'; 'heritage assets are an irreplaceable resource', the conservation of which can bring 'wider social, cultural, economic and environmental benefits...' (DCLG 2012, *Section 12.126*). The policy framework states that the 'significance of any heritage assets affected, including any contribution made by their setting' should be understood in order to assess the potential impact (DCLG 2012, *Section 12.128*). In addition to standing remains, heritage assets of archaeological interest can comprise sub-surface remains and, therefore, assessments should be undertaken for a site that 'includes or has the potential to include heritage assets with archaeological interest' (DCLG 2012, *Section 12.128*).

- 2.3.3 NPPF draws a distinction between designated heritage assets and other remains considered to be of lesser significance; ‘great weight should be given to the asset’s conservation. The more important the asset, the greater the weight should be...substantial harm to or loss of a grade II listed building, park or garden should be exceptional. Substantial harm to or loss of designated heritage assets of the highest significance, including scheduled monuments, protected wreck sites, battlefields, grade I and II* listed buildings and grade I and II* registered parks and gardens and World Heritage Sites, should be wholly exceptional’ (DCLG 2012, *Section 12.132*). Therefore, preservation *in-situ* is the preferred course in relation to such sites unless exception circumstances exist.
- 2.3.4 It is normally accepted that non-designated sites will be preserved by record, in accordance with their significance and the magnitude of the harm to or loss of the site as a result of the proposals, to ‘avoid or minimise conflict between the heritage asset’s conservation and any aspect of the proposals’ (DCLG 2012, *Section 12.129*). Non-designated heritage assets of archaeological interest will also be subject to the policies reserved for designated heritage assets if they are of equivalent significance to scheduled monuments (DCLG 2012; *Section 12.132*).

3. BACKGROUND

3.1 HISTORICAL BACKGROUND

3.1.1 The following section provides an historical context to the present study, and is considered by period as detailed in Table 5 below. Key sites are summarised in the Gazetteer of Sites with numbers given in brackets (*Section 4*), and are mapped on Figure 11.

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 – c 1750
Industrial Period	c AD1750 – 1914
Modern	Post-1914

Table 5: Summary of British archaeological periods and date ranges

3.1.2 **Prehistoric period:** the current understanding of any human activity in the Manchester region during the prehistoric period is poor, although it is reasonable to suggest that the Castlefield area in the centre of the city may have been conducive for late prehistoric settlement on account of the natural topography and its riverside location. Similarly, the area around Manchester Cathedral, close to the confluence of the rivers Irwell and Irk, provides a location which would have been favourable for early activity. However, the only known physical evidence for prehistoric activity in the vicinity of the Site Area is provided by a Bronze Age axe-hammer, reported to have been discovered at the junction of Todd Street and Corporation Street.

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* (Brunton 1909). During the second century, the fort was developed in association with a substantial extramural settlement, or *vicus*, which expanded in both a northerly direction, and along the line of Chester Road to the south (Grealey 1974, 11). Roads from the fort linked Manchester with Ribchester to the north, Castleshaw, Slack and York to the north-east, Wigan to the north-west, Northwich and Chester to the south (Gregory 2007), and Buxton to the south-east. However, evidence for Roman activity in the vicinity of the Site Area is limited. Roman coins were discovered along the River Irk in 1899-1901, when the river between Ducie Bridge and Scotland Bridge was diverted for the railway, and a coin of Constantine I (AD 306-33) was discovered in Angel Street, together with a circular quernstone, believed to be Roman, in St Michael's Square, in 1904.

- 3.1.4 **Early medieval period:** there is scant archaeological evidence in the region as a whole that represents the period between the end of the Roman occupation and the Norman Conquest. 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 at this time that settlement in the town was established around the cathedral (Farrer and Brownbill 1911). An urn dating to the late sixth century was discovered at Red Bank to the north of the Site Area in the nineteenth century, providing rare physical evidence for human activity during this period.
- 3.1.5 In AD 919, the Anglo-Saxon king Edward the Elder established a fortified base, or burh, at Manchester, which was then part of Viking Northumbria. It has been suggested that the burh lay within the area around the cathedral, but recent research favours it being at the Roman fort in Castlefield. However, the area of the cathedral had become a new focus for settlement by the late eleventh century, and the site occupied presently by Chetham's School is thought to have been the site of a castle founded by Manchester's Norman barons. This early settlement at the confluence of the Irwell and Irk seems to have been bounded on the landward side by Hanging Ditch, whose curving line ran between the two rivers, taking a line that was followed subsequently by Toad Lane, the forerunner of Todd Street and Corporation Street.
- 3.1.6 **Medieval and Post-medieval periods:** the present Site Area lay on the north-eastern fringe of the medieval settlement, on the east side of Long Millgate. This was one of the town's longest and most populous streets, which extended along the south side of the River Irk to Manchester's manorial corn mill. Millgate is documented from the early fourteenth century, but the mill is referred to in documents dating to the first half of the twelfth century. Long Millgate also led to Scotland Bridge over the River Irk, one of the principal routes into Manchester, and to Ashley Lane, another main route into the town from the north-east. Long Millgate was superseded in the 1850s when Corporation Street was extended from Withy Grove to Ducie Bridge.
- 3.1.7 Long Millgate is shown on the earliest known map of Manchester, dating to c 1650, which shows a continuous line of properties along the east side of the street (Plate 2). This map also shows several properties along Miller Street and Shudehill. Miller's Lane, the forerunner of Miller Street, is documented from the 1580s, and may have originated as a convenient link between the manorial corn mill and the eastern approach to the town via Shudehill and what is now Swan Street.
- 3.1.8 In 1621, Edward Mayes of Manchester bequeathed money for the purchase of land to be used for the benefit of the poor of the town. His trustees bought four acres on the south side of Miller's Lane in 1635, which were rented out and the profits distributed to the poor. The charity also owned a row of cottages on the north side of this land in which they housed 20 poor families. These almshouses are shown clearly on a map produced by Casson and Berry in 1741, which also shows the west side of Shudehill lined with buildings as far as the junction with Miller's Lane and buildings of the north side of Miller's Lane (Plate 3). However, most of the Site Area lies beyond the edge of the map, and is likely to have been fields.



Plate 2: Plan of Manchester dating to c 1650, with arrow marking approximate location of the present Site Area

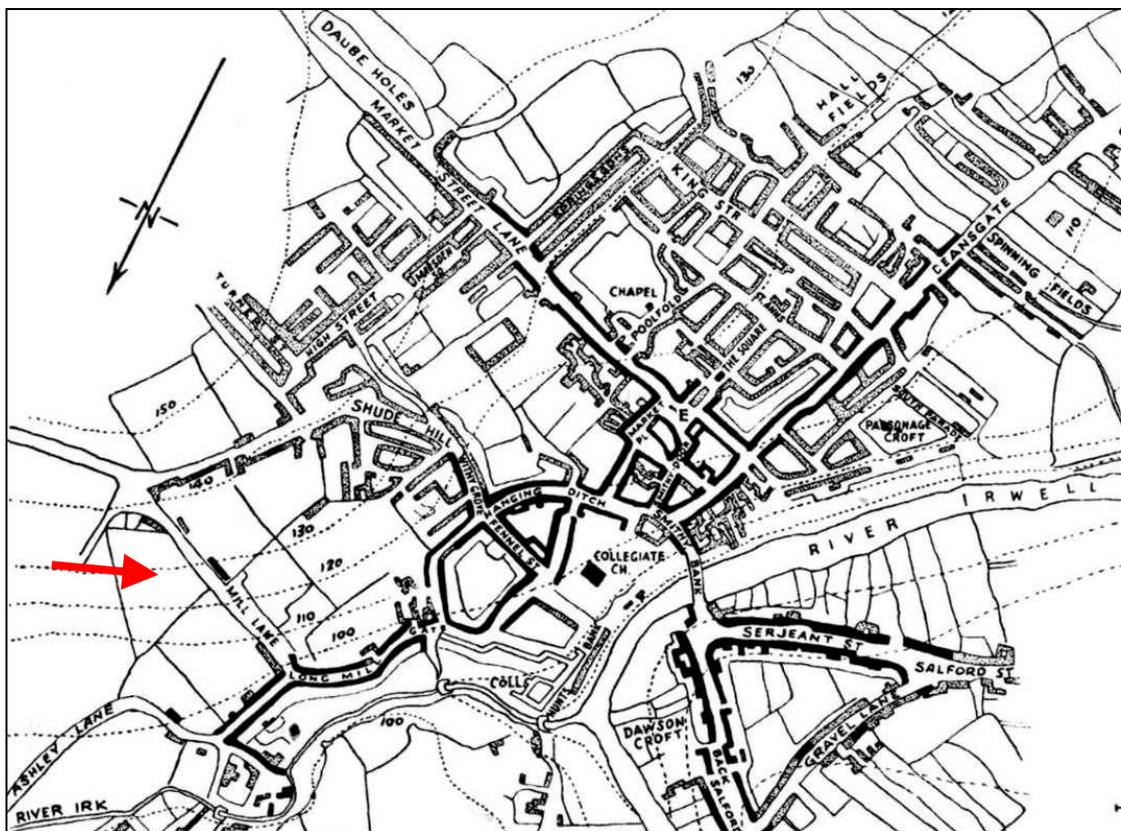


Plate 3: Copy of Casson and Berry's map of 1741, with arrow marking approximate location of the present Site Area

- 3.1.9 In 1731, a scheme was launched to provide Manchester with a new workhouse, and a bill to advance the scheme was submitted to Parliament, but was aborted due to disagreements among the townspeople. However, the lord of the manor had proceeded to erect part of the workhouse on Miller's Lane, which was earliest building of this type in Manchester. The original plan was for a set of buildings arranged around a quadrangle, but only one was actually completed. This measured 34 yards (31m) long, 6 yards (5.5m) wide inside, and was four storeys in height. The ground floor was intended to contain broad looms, the first floor was to have a dining hall, a parlour for the governor, kitchens and other offices, the second floor lodging rooms, and the third floor housed Dutch looms for weaving smallwares. The workhouse was short-lived, and later mapping annotates the building as more almshouses.
- 3.1.10 A flavour of the other types of buildings in the vicinity of the Site Area can be gained from an illustrated survey of 1753, which shows the lands bequeathed by William Hulme (Plate 4). This shows several different types of properties to have been established in the area, ranging from merchant's houses to tenements that were probably occupied by artisans with attic workshops.



Plate 4: Extract from a survey of the buildings and lands bequeathed by William Hulme, 1753

3.1.11 **Industrial period:** the onset of the rapid industrialisation centred on Manchester from the late eighteenth century resulted in a massive expansion of the town's population. The development of the Site Area at the end of the eighteenth century is captured on detailed plans produced by William Green in 1787-94 (Plate 5; Fig 2) and Charles Laurent in 1793. These maps show new streets to have been laid out across the area, and numerous buildings to have been erected. The new streets included Angel Street, which provided a link between Ashley Lane and Rochdale Road, and also afforded access to the church of St Michael and All Angels. The church was built in 1788, and was coupled with a new burial ground that was consecrated in 1787. The church was originally planned as a 'carriage church', which wealthy Mancunians could drive to from the city. However, with the purchase of the land by the Overseers of the Poor of Manchester in 1786 for the burial ground, and the absorption of this area into the city, the church instead predominantly served the new working-class population in the area (Gregory 2006; Groundwork nd). The burial ground comprised a mass burial pit for the poor, which has been estimated to contain 40,000 unmarked inhumations. The pit was full by 1816, after which this open area became notorious for activities such as cock-fighting and gambling.

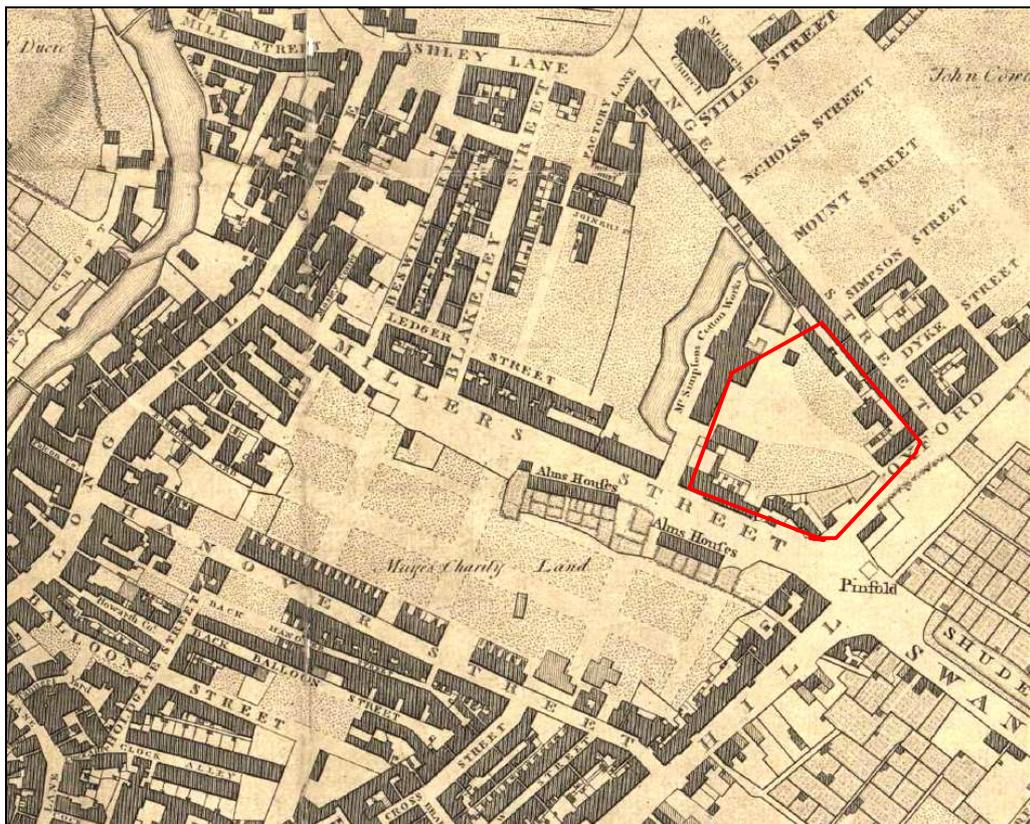


Plate 5: Extract from William Green's map, published in 1794

3.1.12 The main exception to this pattern of development was the Mayes charity land, although in 1794 the trustees obtained an Act of Parliament allowing them to sell it off on leases of 99 years, and it was developed subsequently. On the opposite side of Miller Street to the Mayes charity land lay Arkwright's cotton mill (Site 01), which was erected in 1780-3 on the site of a former brick yard.

- 3.1.13 The cotton mill was built by Richard Arkwright and partners and was one of a number of early cotton factories in England and Scotland built to house Arkwright's patented machinery for carding and spinning. The Manchester mill was five storeys high, 9.1m (30ft) wide and, on the cartographic evidence, approximately 68m long. As such, it was one of the largest of the Arkwright mills, reflecting the importance of Manchester as a centre of textile manufacture. It was probably the first purpose-built mill in Manchester, and the first in the town to employ a steam engine and to have a mill chimney. The original engine was of the atmospheric type and was used to raise water from a lower to an upper reservoir to supply the mill's waterwheel, which was 8ft (2.4m) wide and 30ft (9.1m) in diameter. It has been suggested that the engine was originally planned to power the mill directly, and that the waterwheel was only added when this proved a failure. However, the position of the mill on sloping ground implies that the upper and lower reservoirs were part of the initial design. Archaeological evaluation of the site Channel 4's *Time Team* in 2005 concluded that the waterwheel was situated within the body of mill, again implying that the use of water power was an original feature. The Arkwrights' partnership in the mill ended in 1786, when their former partners John and Samuel Simpson took full control. In 1791 Boulton and Watt installed a 6hp in the mill, followed in 1792-3 by a 40hp engine to replace the old atmospheric engine and waterwheel. A third engine, of 30hp, was added in 1799.
- 3.1.14 The main factory was surrounded by other buildings, details of which are provided by a survey of Manchester's spinning mills produced in c 1822. On its eastern side were an engine house and boilers, with a large square-section chimney lying further from the mill. On the same side of the building were a southern range, used as a mule factory (Site **02**), and a northern L-shaped range (Site **03**), which in c 1822 contained a smithy, joiner's shop and lumber rooms. A second factory block (Site **12**), five storeys high and c 60m long and 9m wide, with an engine house and boiler house to the rear, lay on Miller Street, a short distance to the south-west of the main block.
- 3.1.15 The main mill was originally almost surrounded by its extensive reservoir system (Site **04**). Its larger reservoir ran across the full length of the western elevation and continued around the north end of the building to the eastern elevation. Laurent's map of 1793 shows that at the other end it joined with a smaller reservoir to the south-east of the mill. This second body of water was probably the higher reservoir which fed the waterwheel. It is absent from Green's survey of 1787-94 which instead shows one of the mill's ancillary buildings on this site. Presumably when the waterwheel went out of use in 1792-3, the upper reservoir was no longer required, while the lower reservoir was retained to supply the boilers and condensers. Between the time of Green's map and the survey of 1822 the remaining reservoir actually increased in size.

- 3.1.16 By the late 1840s cotton spinning at the mill had ceased, possibly because the relatively narrow width of the mill could not accommodate the larger machinery of the time. Instead both factories were used as warehousing. A fire at the main mill in 1854 resulted in a major rebuilding which saw the mill being widened on the west, lengthened on the north and increased in height by the addition of two storeys. This rebuilt mill survived until December 1940 when it was destroyed during the Christmas blitz on Manchester.
- 3.1.17 An archaeological evaluation of the main mill was carried out for Channel 4's *Time Team* in 2005. This uncovered structural remains of the late eighteenth century mill, including the wheelpit, as well as remains of the rebuilding following the 1854 fire. The excavation also uncovered several fragments of possible saggars, ceramic containers used to protect pottery during firing, which may be evidence of pottery production on, or within the vicinity of, the site prior to the construction of Arkwright's Mill.
- 3.1.18 Other industrial activity within the Site Area included the Manchester Foundry (Site **05**), established within the eastern grounds of Arkwright's Mill in c 1840. This site was rebuilt as the iron works of Baxendale & Co, a firm of engineers and plumbers merchants, which occupied several premises in the Miller Street area during the late nineteenth and early twentieth century. A rope works (Site **13**), situated to the west of the mill, was erected between 1818 and 1824. Other small-scale industrial activity in the area included two breweries, which were in operation by the 1840s. One of these breweries lay on Miller Street (Site **14**), and another lay in the north-east of the Site Area, off Kenyon Street (Site **06**). There were also several timber yards in the area, some with saw mills.
- 3.1.19 Miller Street was also the location of the town's first public wash house (Site **07**). This was established in response to a recognition amongst the middle class of the appalling and filthy living conditions of the urban poor, which led to the launch of an appeal in 1845 to finance a baths for the poor. The funds raised were used to convert a three-storey dwelling for use as an experimental bath-house in Miller Street. This contained 12 bath-tubs for men and six for women, and a wash-house, it was inadequate for the requirements of the whole city; but it was well used and yielded a small profit. run for the benefit of its working class. The wash house opened for business on 7 September 1846. Water was stored on the upper floor in two tanks, one for cold water, the other for water heated by steam from a boiler. In addition, as described in a contemporary article in *The Builder*:
- 'The cellars are devoted to the washing department, and give accommodation to twenty-six washers at one time, and contain two large boilers for boiling the clothes. There is also a drying stove, and all these advantages are afforded for a space of time not exceeding four hours for the sum of one penny...The drying stove contains a number of "horses" which run upon pullies, and are, when filled with clothes, pushed into a chamber containing a great number of steam-pipes'.*

- 3.1.20 The Miller Street establishment was followed in 1849 by a wash house and swimming bath in Miles Platting funded by a private benefactor, and in the following decade by baths and laundries in Salford, Manchester and Hulme built by a private company founded in 1854. The pioneering Miller Street wash house continued in use until about 1876.
- 3.1.21 The most common site-type built within the study area between the late eighteenth and early nineteenth century comprised workers' housing. Among the earliest were artisans' dwellings of three storeys and a basement. The Shudehill area also included inferior, and generally later, housing in the form of back-to-backs, twin rows of one-up one-down houses sharing a common rear wall. In the course of the first half of the nineteenth century, houses of all types within the area became notorious for their overcrowding and insanitary conditions. Engels famously described the squalid state of Long Millgate and its neighbouring courts, an area containing dwellings from the pre-industrial town as well as more recent workers' houses. The district to the north of Miller Street and east of Rochdale Road, known as Angel Meadow, equally attracted the attention of nineteenth-century commentators. Angus Reach in 1849 described it as 'the lowest, most filthy, most unhealthy, and most wicked locality in Manchester'.

3.2 MAP REGRESSION ANALYSIS

- 3.2.1 The development of the study area may be traced reasonably well from the sequence of available historic mapping. The earliest reliable maps that show the study area at a reasonable scale are Charles Laurent's *Map of Manchester & Salford*, published in 1793, and William Green's survey published in 1794 (Fig 2). These show development along the whole of Blakeley Street (which became Charter Street subsequently), the south-western side of Angel Street with Factory Lane heading south-south-west from the junction of Angel Street with Ashley Lane, approximately opposite St Michael's Church. Properties are also shown to occupy both sides of Mill Gate.
- 3.2.2 The map also shows 'Mr Simpson's Cotton Mill'. This mill was built in 1782-3 by the renowned inventor and entrepreneur, Richard Arkwright. It was Manchester's first industrial-scale cotton factory, representing the origins of the urban textile mill, and was also one of the first factories to employ a steam engine to power its machinery. It was one of the larger Arkwright mills, erected shortly before Arkwright's patent lapsed. The principal source of power in the mill was a 9.1m diameter waterwheel, which was supplied with water from a complex arrangement of reservoirs. An atmospheric steam engine was also installed, and was seemingly intended to raise water from a lower to an upper reservoir to ensure that the waterwheel had a constant supply. It is likely that the opening of this factory stimulated the development of the surrounding land for housing the mill workers, represented in street names such as Factory Lane and Factory Court (Fig 2).
- 3.2.3 Several maps of the area were produced during the first decade of the nineteenth century. All of these maps were published at a small scale, including that produced by Dean and Pigot in 1809 (Plate 6).



Plate 6: Extract from Dean and Pigot's map, published in 1809, showing the approximate boundary of the present Site Area

- 3.2.4 The next available maps of the study area are those produced by Pigot in 1819 and Johnson in 1820 (Fig 3). Whilst these maps were produced as a fairly small scale, they show that further development at the corner of Miller Street and Rochdale Road.
- 3.2.5 Bancks & Co's map of 1831 shows the buildings in the Site Area in more detail (Fig 4). The properties along Angel Street all appear to be 'through houses', some having small outshuts to their rear. The reservoir for Arkwright's Mill is shown to have been expanded, and the area in the southern corner of the Site Area has been infilled with new properties to the rear of those on the street frontage.
- 3.2.6 The Ordnance Survey 60": 1 mile map of 1850 shows a similar layout of the extent of development as on Bancks & Co's 1831 map, but provides much more detail of the buildings (Fig 5). The most significant additions to the Site Area are the Manchester Foundry (Site **05**), erected immediately to the east of Arkwright's Mill, an expansion of the brewery on Kenyon Street (Site **06**), and the development of the Manchester Bath and Wash House (Site **07**). A large timber yard (Site **08**) is also annotated to the south-west of Kenyon Street. Joseph Adshead's map of 1851 adds additional information to that provided by the Ordnance Survey by identifying commercial buildings (Plate 7; Fig 6).

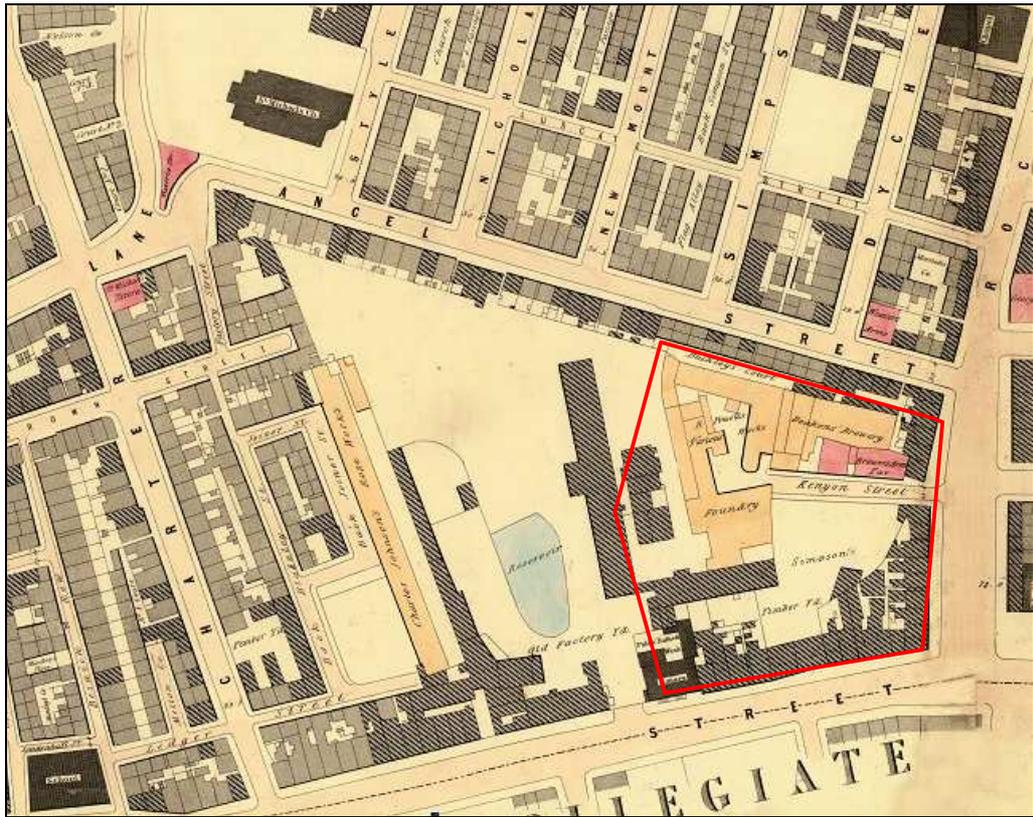


Plate 7: Extract from Joseph Adshead's map of 1851, showing the approximate boundary of the present Site Area

- 3.2.7 The next available edition of Ordnance Survey mapping was published at a scale of 1:500 in 1891 and at 25":1 mile map in 1892 (Fig 7). This shows broadly the same layout of properties as shown on the earlier mapping, although some slight changes can be seen. The main changes to the study area shown on the 1892 25" to 1 mile OS map are to the immediate east of the former rope works. The reservoir is now only shown in the northern part of this area, and industrial buildings surround it, including a cotton mill running parallel with the rear of the northern end of Angel Street. This also included a large building replacing the rope works. The successive editions of Ordnance Survey mapping show progressive demolition of the buildings in the study area (Figs 8 and 9), although most still remain on the edition published in 1933.
- 3.2.8 Extensive air raids took place across Manchester on the 22 and 23 December 1940. These are thought to be the air raids which destroyed Arkwright's Mill to the south-east of the study area. The fire records for 1939-40 (MCL/MI/37) were checked in order to confirm this, although the reports do not give street by street detail of the damage. The records stated that over the course of the December air raids there were over 700 fires in Manchester, which meant that the fire crews worked constantly for two-three days.

- 3.2.9 The Town and Country Planning Act of 1944 permitted Manchester Town Planning Committee to make compulsory purchases of areas it wished to redevelop. One area comprised '6.61 acres of land bounded by Miller Street, Rochdale Road, Angel Street, and Dantzig Street, of which 4.38 acres have been cleared. In addition, nearly half an acre has been cleared under the Housing Acts and only seven buildings remain on the site. The area has been zoned for general industrial development' (*Manchester Guardian*, 18 September 1946).
- 3.2.10 Despite this apparent aspiration for redeveloping the study area in the 1940s, it is evident that this did not take place, as the 1951-2 Ordnance Survey map shows the area as almost completely clear of buildings (Fig 10), and the 1966 Ordnance Survey map shows just a few warehouses within the study area, which eventually became a car park in the 1980s.

3.3 PREVIOUS ARCHAEOLOGICAL WORK

- 3.3.1 A considerable amount of archaeological work has been undertaken in the immediate locale of the Site Area in recent years. One of the first archaeological investigations was carried out in 2005, when Channel 4's 'Time Team' excavated four evaluation trenches of varying dimensions across the footprint of Arkwright's Mill (Site **01**). This uncovered structural remains of the late eighteenth century mill, including the wheelpit, as well as remains of the rebuilding following a devastating fire in 1854 (Wessex Archaeology 2006). The cellar of a late eighteenth-century house on Angel Street was also excavated. This had originally contained two rooms, each equipped with a fireplace. The cellar was sub-divided in the nineteenth century, providing two single-room dwellings which could therefore have been occupied by two families, and thus provided more rent (Wessex Archaeology 2006, 15-18; Nevell 2008, 143-4).
- 3.3.2 A large excavation within the immediate vicinity of the present Site Area was undertaken in 2009, beneath the footprint of the new Headquarters Building for the Co-operative Group (OA North 2011). The remains of approximately 75 structures were identified, almost exclusively relating to domestic dwellings, with the majority dating from the late eighteenth and early nineteenth centuries. Four broad phases of activity were recognised, with the earliest structure appearing to represent the cellar of a mid-eighteenth century town house. Other houses mainly comprised two-up-and-two down-type artisans' dwellings, with top floor loomshops, and two-roomed cellars with independent access, which had probably used as cellar dwellings. Evidence for the decline of the area was also observed, with various buildings being partitioned to facilitate an expansion of the local population, and also perhaps to maximise rent revenue. These larger dwellings were converted subsequently into notorious lodging houses, whilst the cellars continued to provide accommodation for the poorest families, which were frequently of Irish origin.
- 3.3.3 In 2012, further excavation was carried out adjacent and parallel to Angel Street in advance of road-widening works (OA North 2013a). The work complemented the previous large-scale excavation in 2009, with different plan-types for late eighteenth-century buildings identified on the Angel Street frontage, most notably eighteenth century dwellings that included back extensions, a variant of the terraced house that only developed on a large scale in the second half of the following century. The remains of back-to-back cellared dwellings were also observed. Whilst their method of construction was similar to the earlier, higher-status buildings, the size and arrangement of the structures provided a fine example of the conditions that led to Angel Meadow gaining its infamous reputation.
- 3.3.4 Following the completion of the excavation, an archaeological watching brief was maintained during the road-widening works along the south side of Angel Street, and the west side of Rochdale Road (OA North 2013b). Few remains of archaeological interest were exposed during this watching brief, which concluded that the remains of properties along the street frontage had been largely destroyed.

3.4 GROUND INVESTIGATIONS

- 3.4.1 Six trial pits were excavated across the Site Area for geotechnical purposes in September 2013. The excavation of all the trial pits was monitored archaeologically, which enabled buried remains of archaeological interest to be identified in several parts of the site. In particular, remains of probable late eighteenth-century domestic cellars were identified in the vicinity of Kenyon Street, whilst elements of the mid-nineteenth-century iron foundry (Site **05**) were also exposed, together with the seemingly well-preserved remains of the Manchester Wash and Bath House (Site **07**).
- 3.4.2 **Trial Pit 1:** this pit measured 3.0 x 0.6m, and was placed north-east/south-west across the eastern part of the Site Area, immediately to the north of Kenyon Street and to the west of Angel Street. It was excavated to a maximum depth of 2.1m. A thick layer of clay was exposed at a depth of 1.8m below the modern ground surface, clearly representing the natural drift geology. The clay geology had been cut by cellars for late eighteenth-century properties fronting onto Angel Street and buildings used in the mid-nineteenth century as a brewery (Site **06**).
- 3.4.3 The well-preserved remains of cellar walls formed the north-western and north-eastern sides of the excavated trial pit. The walls comprised hand-made bricks that had been bonded in a lime-based mortar, consistent with a late eighteenth-century construction date. A 0.2m long section of wall abutting the north-eastern wall may have formed part of a fireplace, or an entrance to the adjacent cellar. The cellar contained demolition rubble to a depth of 1.8m, which was sealed beneath modern tarmac surfacing and associated bedding material (Plate 8).



Plate 8: historic fabric revealed in the north-east-facing section of Trial Pit 1

- 3.4.4 **Trial Pit 2:** this pit was placed in the eastern corner of the Site Area, close to the junction of Angel Street with Rochdale Road. The pit measured 3.0 x 0.6m, and was excavated to a maximum depth of 3.3m (Plate 9). The natural clay geology was exposed at the base of the trial pit, and was overlain by a thick layer of mixed demolition rubble. This was sealed beneath a 1.5m thick layer of modern stone aggregate, which formed a levelling for the modern tarmac surfacing. No buried structural remains were identified in the trial pit.



Plate 9: General view of Trial Pit 2

- 3.4.5 **Trial Pit 3:** this was placed in the northern part of the study area, alongside Angel Street, in an area that was subject to archaeological excavation in 2012 (OA North 2012). It measured 3.0 x 1.2m, and was excavated to a maximum depth 1.1m. The natural clay geology was exposed at a depth of 1.1m, which was cut by a wall. This was three-courses wide and a single course deep, and comprised hand-made bricks bonded with a lime mortar. The wall was enveloped in a 0.8m thick deposit of demolition rubble, which was sealed by a thin layer of modern aggregate and tarmac surfacing.
- 3.4.6 **Trial Pit 4:** was located in the south-western part of the Site Area, within the footprint of the former Manchester Bath and Wash House. The trial pit measured 3.0 x 0.6m, and was excavated to a maximum depth of 0.9m (Plate 10). Immediately to the north-west of the trial pit were the remains of the former cobbled road, currently visible at ground level, and the associated kerb was exposed in the north-west end of the trial pit. The natural clay geology was encountered at a depth of 0.9m below the modern ground surface. This had been cut by the brick-built foundations for the wash house, which were identified in the western corner of the trial pit, together with a ceramic drain that lay between the wall and the roadside kerb. These buried structural remains were sealed beneath a 0.8m thick layer of demolition rubble



Plate 10: Trial Pit 4, looking north

- 3.4.7 **Trial Pit 5:** this pit was placed in northern part of the study area, along the top of the slope leading down to the Headquarters Building. It measured 2.0 x 0.6m, and was excavated to a maximum depth of 1.3m. The surface of the natural clay geology was encountered at a depth of 0.6m, and this was excavated for another 0.7m. The natural clay was overlain by a 0.35m thick layer of mixed demolition rubble, which was sealed by modern stone aggregate and associated tarmac surfacing. No buried structural remains of archaeological interest were exposed, whilst the relatively shallow depth at which the natural geology was encountered suggests that any archaeological remains in this area have been truncated.
- 3.4.8 **Trial Pit 6:** the final trial pit was excavated in two parts. The first section was placed at the top of a grassy slope in the centre of the Site Area, and measured 3.0 x 0.6m and was excavated to a maximum depth of 1.3m. The natural clay geology was exposed at a depth of 1.1m, and was overlaid by a 0.4m thick deposit of brick rubble. This was sealed by a floor composed of hand-made bricks, which probably represented structural remains of the mid-nineteenth-century iron foundry (Site **05**). The surface was overlain by another layer of rubble, which presumably derived from twentieth-century demolition.
- 3.4.9 The second section of the trial pit was excavated at the base of the slope. This section measured 1.8 x 0.6m, and was excavated to a maximum depth of 1.3m, where solid surfacing was encountered. It was not possible to establish in the confines of the pit whether this comprised stone flags or concrete.

4. GAZETTEER OF SITES

Site Number	01
Site Name	Arkwright's Mill (Site of)
HER Number	9867.1.0
Site Type	Industrial Buildings
Period	Eighteenth century
NGR	384390 398980
Source	Green's Map 1794; OS 1848
Description	Five-storey cotton mill built 1780-3 by Richard Arkwright and partners. It was one of Arkwright's larger cotton mills, erected shortly before his patent expired. Mapping from the 1790s onwards shows it as a substantial range, aligned roughly north/south, with a central projection on the west elevation. Powered solely by steam from 1792-3, previously having used an atmospheric engine to raise water from a lower to an upper reservoir to supply a waterwheel. Laurent's map of 1793 shows the waterwheel on the east side of the mill, where its location within the mill body has been proved by archaeological trial trenching. The engine house and boilers were also situated on this side of the mill. They are shown individually on a survey of <i>c</i> 1822, but from other mapping were located in an extension to the building. A detached square-section chimney stood further to the east. The mill was badly damaged by fire in 1854, and was rebuilt subsequently. This is thought to have involved widening the building on the west, and increasing its length to the north, although this was not confirmed during evaluation trenching carried out in 2005. The building was destroyed during the 1940 blitz.
Assessment	The heritage asset lies astride the boundary of the Site Area, and elements may be affected by earth-moving works.

Site Number	02
Site Name	Arkwright's Mill (Site of)
HER Number	9867.1.0
Site Type	Industrial Building
Period	Nineteenth century
NGR	384390 398940
Source	Johnson 1820; OS 1848
Description	Rectangular range added to Arkwright's Mill in 1793-4, on the site of the upper reservoir (Site 04). The building was extended to the east within a few years, possibly by 1800. Described in <i>c</i> 1822 as a 'mule factory and picking room'. It was demolished between 1850 and 1888, and a road built across its footprint.
Assessment	The heritage asset lies within the boundary of the Site Area, and may be affected by earth-moving works.

Site Number	03
Site Name	Arkwright's Mill (Site of)
HER Number	9867.1.0
Site Type	Industrial Building
Period	Nineteenth century
NGR	384440 398960
Source	OS 1848
Description	L-shaped range, originally associated with Arkwright's Mill (Site 01), and erected a short distance to the east. Historical mapping implies that the western part of the range was the earlier structure, but the eastern part appears to have been added by 1793. A plan of <i>c</i> 1822 shows the west range to have contained a smithy, joiner's shop and lumber room, with no indication of the building having contained a basement. The building housed several engineering firms by the mid-nineteenth century, with the east wing being used as a saw mill. Redeveloped as the iron works of Baxendale & Co in the late nineteenth century. These works were probably destroyed in 1940.
Assessment	The heritage asset lies within the boundary of the Site Area, although the early remains are likely to have been destroyed and development will thus have a negligible impact.

Site Number	04
Site Name	Arkwright's Mill (Site of)
HER Number	9867.1.0
Site Type	Water management features
Period	Eighteenth century
NGR	384402 398928 (Upper Reservoir)
Source	OS 1848
Description	An extensive reservoir system, comprising a main reservoir running along the north-western side of Arkwright's Mill, linked to a smaller reservoir against the north-eastern corner of the mill. A smaller reservoir lay originally to the south-east, and is thought to have been the upper reservoir which fed the mill's waterwheel. Once water had passed over the waterwheel, it was pumped from the lower, larger, reservoir back to the upper. The lower reservoir had increased in size by <i>c</i> 1822, but between 1848 and 1888 was greatly reduced, and much of its site was used for new buildings. The small reservoir in the north-eastern corner may also have been infilled as early as 1850, and had been at least partly built upon by 1888. Archaeological evaluation trenches placed across this reservoir failed to yield any surviving physical remains, although the well-preserved brick foundations of later buildings were exposed. The upper reservoir to the south-east appears to have gone out of use by 1793, and was built over by an extension to Arkwright's Mill (Site 02). The means by which the reservoirs were supplied with water remains uncertain, although it is possible that it was fed via culverts that crossed the present site area.
Assessment	The heritage asset crosses the boundary of the Site Area, and elements may be affected by earth-moving works.

Site Number	05
Site Name	Manchester Foundry (Site of)
HER Number	-
Site Type	Industrial Building
Period	Nineteenth century
NGR	384420 398960
Source	OS 1848; Adshead 1850
Description	Large iron works dating originally from 1838 to 1841, based on the evidence of the trade directories. It was occupied in the 1840s by John and Henry Rowcroft, iron founders. The north end of the foundry seems to have incorporated the chimney of Arkwright's Mill. The foundry was rebuilt in the late nineteenth century, when it was occupied by Baxendale & Co. Elements of these large works were probably destroyed in the 1940 blitz.
Assessment	The heritage asset lies within the boundary of the Site Area, and may be affected by earth-moving works.

Site Number	06
Site Name	Brewery (Site of)
HER Number	-
Site Type	Industrial Buildings
Period	Nineteenth century
NGR	384450 398950
Source	OS 1848; Adshead 1850
Description	A building annotated on Adshead's map of 1850 as 'Deaken's Brewery'. This occupied buildings which probably dated back to the late eighteenth century. Trade directories suggest that the brewery was established between 1838 and 1841, when Christopher Kenyon is listed as a brewer on Kenyon Street. A 'working mens' home' was built on the site in the late nineteenth century. This was probably destroyed in the 1940 blitz. It is not known whether the building incorporated a cellar, although the sequence of historical mapping provides no evidence for the presence of a basement.
Assessment	The heritage asset lies within the boundary of the Site Area, and may be affected by earth-moving works.

Site Number	07
Site Name	Manchester Bath and Wash House (Site of)
HER Number	-
Site Type	Public Buildings
Period	Nineteenth century
NGR	384370 398920
Source	OS 1848; Adshead 1850
Description	Public wash house established in 1846 in a converted late eighteenth-century house on Miller Street, comprising a basement laundry, with bath tubs on the ground and first floors and hot and cold water tanks on the second. It continued in use until about 1876. The five-storey Victoria Buildings were erected subsequently on the site, although these were probably destroyed in the 1940 blitz. As a result of road widening, the site lies partly under Miller Street. However, ground investigation works carried out in 2013 exposed buried remains that appeared to represent surviving element of the wash house.
Assessment	A large proportion of the heritage asset lies within the boundary of the Site Area, and may be affected by earth-moving works.

Site Number	08
Site Name	Timber Yard (Site of)
HER Number	-
Site Type	Industrial Building
Period	Nineteenth century
NGR	384430 398920
Source	OS 1848
Description	Yard, with an associated building built by 1845. The yard was occupied in the 1840s by Cryer and Vitty, timber merchants. In the late nineteenth and early twentieth century the site was built over, which is likely to have destroyed all physical remains of the timber yard.
Assessment	The heritage asset lies within the boundary of the Site Area, although development will have a negligible impact.

Site Number	09
Site Name	Miller Street Workers' Housing (Site of)
HER Number	-
Site Type	Workers' Housing
Period	Eighteenth century
NGR	384434 398902
Source	Green 1794
Description	Housing shown on late eighteenth-century mapping.
Assessment	The footprint of these houses lie within the boundary of the Site Area, and may be affected by earth-moving works.

Site Number	10
Site Name	Rochdale Road Workers' Housing (Site of)
HER Number	-
Site Type	Workers' Housing
Period	Eighteenth century
NGR	384466 398918
Source	Green 1794
Description	Housing shown on late eighteenth-century mapping.
Assessment	The rear portion of these houses lie within the boundary of the Site Area, and may be affected by earth-moving works.

Site Number	11
Site Name	Angel Street Workers' Housing (Site of)
HER Number	-
Site Type	Workers' Housing
Period	Eighteenth century
NGR	384460 398967
Source	Green 1794; OS 1848; Adshead 1850
Description	A row of workers' housing along the south-western side of Angel Street, which had been erected by the late eighteenth century. Well-preserved remains of the row have been exposed by previous archaeological excavations, and the survival of remains in the Site Area was confirmed during the ground investigation works.
Assessment	The rear portion of some of these houses lie within the boundary of the Site Area, and may be affected by earth-moving works.

Site Number	12
Site Name	Mottershead's Mill (Site of)
HER Number	-
Site Type	Industrial Building
Period	Eighteenth century
NGR	384330 398950
Source	Green 1794
Description	Five-storey cotton mill aligned alongside Miller Street with, to the rear, a centrally placed engine house and a detached boiler house. Probably late eighteenth century. The factory seems to have been originally associated with Arkwright's Mill (Site 01) but by 1831 was separately occupied as 'Mottershead's Cotton Mill'. By 1848 the eastern half of the building was used as a warehouse, while the western half seems to have been rebuilt as other premises. By 1888 the site had been redeveloped with basemented warehousing. This was probably destroyed in the 1940 blitz and the site was redeveloped again by the early 1960s. As result of road widening, the site lies largely under Miller Street.
Assessment	The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number	13
Site Name	Rope Works (Site of)
HER Number	-
Site Type	Industrial Building
Period	Nineteenth century
NGR	384330 399010
Source	OS 1848; Adshead 1850
Description	Elongated range built between 1818 and 1824. Named on Adshead's map of 1850 as 'Charles Johnson's Rope Works'. By 1888, the site was occupied by a wider three-storey building used as a hardware factory by Baxendale & Co. This was probably destroyed during the 1940 blitz. Archaeological evaluation suggests that remains of the northern end of the rope works have been removed by later activity.
Assessment	The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number	14
Site Name	Brewery (Site of)
HER Number	-
Site Type	Industrial Building
Period	Nineteenth century
NGR	384320 398950
Source	OS 1848
Description	The Ordnance Survey map of 1848 annotates a brewery on Miller Street, housed in a rectangular range. The site was redeveloped in the late nineteenth century, when a warehouse was erected. This contained a basement, that is likely to have destroyed any remains of the brewery. The warehouse was probably destroyed in the 1940 blitz, and the site was redeveloped again by the early 1960s.
Assessment	The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number	15
Site Name	Almshouses (Site of)
HER Number	
Site Type	Public Building
Period	Seventeenth century
NGR	384320 398920
Source	Green 1794
Description	Row of almshouses built or remodelled in 1680 by the trustees of the Mayes charity. Demolished in 1807-8. Its eastern half was built over by Edward Street and a block of buildings, on the street's west side, which were at least partly basemented. The remainder of the site was developed by a large commercial building in the late nineteenth century. These later buildings were probably destroyed in the 1940 blitz. The site now lies on the north-east side of the CIS Tower.
Assessment	The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number	16
Site Name	35 Angel Street (Site of)
HER Number	13736.1.0
Site Type	Workers' Housing
Period	Eighteenth century
NGR	384453 398986
Source	HER
Description	An eighteenth-/nineteenth-century cellar dwelling, a typical example of workers' housing in the area. The cellar was excavated in 2005.
Assessment	The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number	17
Site Name	Quern and Coin (Site of)
HER Number	1253.1.0
Site Type	Findspot
Period	Roman
NGR	384400 399100
Source	HER
Description	Roman quern found at St. Michael's Square, Ashley Lane, and a coin of Constantine the Great was found in Angel Street in April 1904.
Assessment	The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number	18
Site Name	St Michael's Church (Site of)
HER Number	9876.1.0
Site Type	Public Building
Period	Eighteenth century
NGR	384400 399110
Source	HER
Description	Foundation stone laid 1788. Green shows St. Michael's Church situated in almost open land. St. Michael's has north/south alignment with possible porch on north gables. Unchanged on OS 2nd Edition. Anglican church, funded by prominent local businessman Humphrey Owen, demolished in 1935. A large brick building with a foundation for a steeple, not erected, nothing remarkable in any point either on the outside or inside, except for some colossal saints which outrage nature from the communion recess, and which seem as if they had emanated from a painter who had the fear of breaking the second commandment, full in his eyes.
Assessment	The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number	19
Site Name	Clay Pits (Site of)
HER Number	9906.1.0
Site Type	Quarry
Period	Post-medieval
NGR	384500 398830
Source	HER
Description	Daub for building infill mined from "the dawbehole by the Pinfolde". 1598 it was forbidden to take any daub between the pinfold and Shudehill. In 1794, Green shows Shudehill Pits ran alongside the north side of Swan Street. The Pinfold is at the top of Shudehill and the corner of Swan Street. Area now built over. Shudehill Pits was partially filled in 1809 and a chapel built on site, later utilised for shops and dwelling houses. Marl pits in Shudehill acted as reservoirs for water from River Tib and for water pumped along stone pipes from reservoirs in Holt Town. This water fed pond at Piccadilly Infirmary and during 1776-1823 (Gorton Reservoir) acted as chief water supply to Manchester. Thought to have had bridge with three arches straddling pits.
Assessment	The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number	20
Site Name	Buildings, Shudehill (Site of)
HER Number	15555.1.0
Site Type	Public House
Period	Nineteenth century
NGR	384424 398814
Source	HER
Description	This area underwent wholesale redevelopment around 1820, roughly contemporary with the establishment of Smithfield Market on adjacent land and involving construction of new housing-cum-commercial premises. In the early and mid-twentieth century it underwent further development replacing earlier buildings with new covered market areas and office building to the north.
Assessment	The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number	21
Site Name	Warehouse (Site of)
HER Number	11241.1.0
Site Type	Warehouse
Period	Nineteenth century
NGR	384290 398810
Source	HER
Description	The site of a former warehouse.
Assessment	The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number	22
Site Name	Buildings (Site of)
HER Number	11293.1.0
Site Type	Workers' Housing
Period	Nineteenth century
NGR	384240 398820
Source	HER
Description	Three blocks of buildings shown on Bancks & Co's 1831 map to the 1908 Lancs 1:2500 sheet 104.6. One block bounded by Balloon Street, Back Balloon Street and Cross Street. Second block bounded by Back Balloon Street, Back Hanover Street and Cross Street. Third block bounded by Hanover Street, Back Hanover Street, and Cross Street. Located within area was Houghton's Court.
Assessment	The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number	23
Site Name	29, Dantzig Street (Co-operative Society Building)
HER Number	11706.1.0
Site Type	Commercial building
Period	Twentieth century
NGR	384200 398860
Source	HER
Description	Offices. 1937-42. By WA Johnson, Chief Architect to CWS. Buff and blue/purple brick with stone dressings and flat roof. Seven storeys. Continuous window range to Dantzig Street of metal-framed casements in a slightly projecting front for five storeys, the front, including windows, curving at the corners. Fifth floor has decorative cornice band and sixth floor is recessed and has vertical bands. Above is a small services block. Ground floor has entrance and windows separated by piers.
Assessment	Designated listed building. The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number	24
Site Name	Co-operative Society Building
HER Number	11705.1.0
Site Type	Commercial Building
Period	Twentieth century
NGR	384220 398920
Source	HER
Description	Five-storey offices, built in 1937 by WA Johnson. Buff brick with flat roof. Curving glazed entrance to Redfern Street. Dantzig Street front steps forward with curving corners and has, to left, a tall stair/lift tower with entrance and slit windows to left and vertical articulation to the windows and brickwork above. Small services block on roof.
Assessment	Designated listed building. The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number	25
Site Name	23, New Mount Street (Co-operative Press)
HER Number	12079.1.0
Site Type	Commercial Building
Period	Nineteenth century
NGR	384480 399070
Source	HER
Description	Industrial building or warehouse. Later nineteenth century with addition or alteration of c1905. Brown brick with red brick dressings, and red brick with yellow terracotta dressings. Rectangular plan on island site, in two portions. Left range is four storeys with basement and attic, four windows plus canted corner to left; right hand range is four storeys with basement. The left hand range is in Edwardian Baroque style, with string courses, yellow terracotta bands, pilasters and open pedimented gable; the first three bays are a symmetrical composition with banded pilasters carried up from cartouches at first floor, a modillioned open pediment containing a large lunette with run out terracotta voussoirs and keystone, and one-light sashed windows to each floor except the third which has keyed oculi flanking the two-light window; all these windows have moulded terracotta architraves with keystones. The fourth bay has similar windows.
Assessment	Designated listed building. The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number	26
Site Name	Sharp Street Ragged School
HER Number	12131.1.0
Site Type	Public Building
Period	Nineteenth century
NGR	384510 399100
Source	HER
Description	Ragged School, now mission, Sunday School and Boys' Club. Established 1853, rebuilt 1869. Red brick, slate roof. Rectangular plan. Two storeys and eight bays, pilastered, with a corbel table to each bay. The ground floor has a round-headed doorway to the first bay, with panelled door and fanlight with semi-circular tracery, a segmental-headed window to the fourth bay with a doorway below the sill (perhaps an insertion), and coupled segmental-headed windows in the other bays; the first floor has coupled round-headed windows. The rear is similar. Founded by local evangelist John Napier. A noteworthy pupil of the school was Thomas 'Tommy' Johnson, a local orphan boy and street urchin from Angel Meadow who went on to become the superintendent of the nearby Charter Street Ragged School for Girls.
Assessment	Designated listed building. The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number	27
Site Name	8, Cable Street
HER Number	11700.1.0
Site Type	Warehouse
Period	Nineteenth century
NGR	384660 398780
Source	HER
Description	Warehouse or industrial building. Mid- to later nineteenth century. Brick with some stone dressings. Rectangular. Four storeys, gable to road, 3 x 10 windows. Central segmental-headed doorway and segmental-headed windows, all these with stepped jambs in the form of simplified pilasters with moulded heads and feet. Rear gable wall has tiered loading doorways to right.
Assessment	Designated listed building. The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number	28
Site Name	104-106 High Street
HER Number	11679.1.0
Site Type	Warehouse
Period	Nineteenth century
NGR	384400 398690
Source	HER
Description	Small warehouse, now shops, c 1860-70, altered. Red brick with sandstone dressings and slate roof. Rectangular plan on corner site. Italian palazzo style. Four storeys and four bays with pilastered ground floor, sill-bands to both upper floors, prominent moulded cornice and brick parapet with moulded coping; ground floor has two twentieth-century shop windows. Small corner chimneys.
Assessment	Designated listed building. The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number	29
Site Name	New Century House
HER Number	15571.1.0
Site Type	Commercial Building
Period	Twentieth century
NGR	384210 398960
Source	HER
Description	Office and conference hall. 1962. Sir John Burnet, Tait and Partners with GS Hay. Steel frame, glass curtain walling with black vitreous enamel panels at floor levels. Fourteen storey rectangular tower and adjacent double-height single storey conference hall of seven bays. Central entrance to Corporation Street, with abstract stone relief wall to left by John McCarthy.
Assessment	Designated listed building. The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number	30
Site Name	Simpson Street
HER Number	12132.1.0
Site Type	Warehouse
Period	Nineteenth century
NGR	384540 399080
Source	HER
Description	Small four-storey warehouse, now handbag workshop. Probably mid-nineteenth century, slightly altered. Brick, with corrugated sheet roof. Almost square plan. Four storeys, 3x3 bays; gabled facade with central four-stage loading slot complete with timber sills, board doors and crane jib, flanked by segmental-headed windows.
Assessment	Designated listed building. The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number	31
Site Name	10-20 Thomas Street
HER Number	12139.1.0
Site Type	Warehouse
Period	Nineteenth century
NGR	384320 398680
Source	HER
Description	Probably a wholesale garment warehouse c.1870-1880, altered at ground floor. Iron frame, with cladding of sandstone ashlar and dressings of polished granite (roof concealed). Rectangular plan. Venetian Gothic style. Four storeys and attic.
Assessment	Designated listed building. The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number	32
Site Name	46 Shudehill (Hare and Hounds)
HER Number	13629.1.0
Site Type	Public House
Period	Nineteenth century
NGR	384314 398731
Source	HER
Description	Public house, c 1800, with late nineteenth-century alterations, the public house interior remodelled c 1925 Painted brick with glazed tile. A city centre public house with early nineteenth-century origins, remodelled to a high standard c 1925, and retaining the contemporary plan form, and almost all of the interior detail of that remodelling, including bar counters, back bar and bar superstructures, door joinery and glazing. Such a complete survival of this period is rare nationally and all the more so in a city centre location.
Assessment	Designated listed building. The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number	33
Site Name	39-45 Swan Street
HER Number	8631.1.0
Site Type	Workshop
Period	Nineteenth century
NGR	384510 398780
Source	HER
Description	Built in 1858. Coursed freestone. Two storeys. Main facade to Goadsby Street at rear. Three slightly projecting bars, central with pilasters having Corinthianesque capitals incorporating goats heads. Three semi-circular windows with cast iron grilles (one removed) in rusticated surrounds with keyblocks, having carved bulls heads. Blind arched recesses between bays with oblong windows above having grilles pierced with circular openings. Entablature inscribed with above date.
Assessment	Designated listed building. The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number	34
Site Name	Co-operative Insurance Society
HER Number	15569.1.0
Site Type	Commercial Building
Period	Twentieth century
NGR	384270 398900
Source	HER
Description	Office building. 1962. Sir John Bumet, Tait and Partners with GS Hay. Steel frame; glass curtain walling with black vitreous enamel panels at floor levels. Concrete service shaft with vitreous mosaic cladding in grey.
Assessment	Designated listed building. The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number	35
Site Name	Co-operative Wholesale Society
HER Number	15570.1.0
Site Type	Commercial Building
Period	Twentieth century
NGR	384140 398930
Source	HER
Description	Warehouse and office block. 1928, by WA Johnson. Sandstone ashlar (roof concealed). Rectangular plan. Classical style. Five unequal storeys plus double attic storey; channelled rustication to ground and first floors, giant pilastrade to second-fourth floors, modillioned cornice; parapet to first attic storey, mansard roof with dormers.
Assessment	Designated listed building. The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number 36
Site Name Parkers Hotel
HER Number 11670.1.0
Site Type Commercial Building
Period Twentieth century
NGR 384180 399070
Source HER
Description Formerly commercial offices, now hotel, c 1900-10, in two builds. Entrance block of red brick and Portland stone, rear range of sandstone ashlar, with slate roof. On island site between Corporation Street and railway, the rear range rectangular with the entrance block forming a quadrant at the south end.
Assessment Designated listed building. The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number 37
Site Name Police and Fire Station
HER Number 8406.1.0
Site Type PublicBuilding
Period Nineteenth century
NGR 384700 398890
Source HER
Description Mid-late nineteenth century. Red brick, ashlar, slate. Rectangular plan. Office and domestic block on west side. Cell range to the south, with tall chimney stack, fire engine garage on east side. Curtain wall with sandstone ashlar plinth.
Assessment Designated listed building. The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number 38
Site Name 29 Swan Street
HER Number 8406.1.0
Site Type Commercial Building
Period Nineteenth century
NGR 384550 398750
Source HER
Description Shop former offices (now storage) above, c 1865. "Ruskinian" Gothic style. Red brick, black brick banding, limestone dressings. Welsh slate roof. Three storeys.
Assessment Designated listed building. The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number 39
Site Name 73 Rochdale Road
HER Number 8587.1.0
Site Type Public House
Period Nineteenth century
NGR 384680 399080
Source HER
Description Built by McKenna's Brewery in 1888.
Assessment Designated listed building. The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number 40
Site Name Fish Market
HER Number 8424.1.0
Site Type Public Building
Period Nineteenth century
NGR 384360 398710
Source HER
Description Three-storey office block frontage to Thomas Street Fish Market Hall.
Assessment Designated listed building. The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number 41
Site Name Co-operative Union Ltd
HER Number 8418.1.0
Site Type Commercial Building
Period Twentieth century
NGR 384200 398890
Source HER
Description Built in 1911. Matt glazed faience, in blue to ground floor & basement, cream to upper. Neo-Baroque manner. Three storeys, with attic and basement.
Assessment Designated listed building. The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number 42
Site Name Ashton House
HER Number 8349.1.0
Site Type Hostel
Period Twentieth century
NGR 384280 399150
Source HER
Description Women's hostel, c 1910. Red brick, buff terracotta dressings, slate roof.
Assessment Designated listed building. The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

Site Number	43
Site Name	Co-operative Wholesale Society
HER Number	8348.1.0
Site Type	Commercial Building
Period	Twentieth century
NGR	384130 398880
Source	HER
Description	Built in 1907. Red brick, sandstone dressings. Grey granite to basement and surrounding central large round-headed entrance.
Assessment	Designated listed building. The heritage asset lies beyond the Site Area, and will not be directly affected by the development.

5. SIGNIFICANCE OF THE REMAINS

5.1 INTRODUCTION

5.1.1 In total, 43 sites of archaeological interest have been identified within the study area, of which 11 (Sites **01–11**) lie either partially or wholly within the boundary of the proposed Site Area (Fig 8). All of these heritage assets within the Site Area developed as a direct result of the early industrial development and expansion of Manchester (Table 7), and span the period between the late eighteenth and twentieth centuries. None of the heritage assets within the proposed Site Area have legal designations, although 20 buildings within a 200m radius are afforded statutory designation as listed buildings.

Period	No of sites	Sites
Prehistoric	0	-
Roman	0	-
Medieval	0	-
Post-medieval	0	-
Industrial	11	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11
Unknown	0	-

Table 7: Number of heritage assets within the Site Area by period

5.2 CRITERIA

5.2.1 Where sites do not possess a statutory designation their value as a heritage asset has been determined with reference to the Secretary of State's criteria for assessing the national importance of monuments, as contained in Annexe 1 of the policy statement on scheduled monuments produced by the Department of Culture, Media, and Sport (2010). These criteria relate to period, rarity, documentation, group value, survival/condition, fragility/vulnerability, diversity, and potential. The heritage assets within the Site Area (Sites **01–11**) have been considered using the criteria, with the results below.

5.2.2 **Period:** it is almost certain that any buried archaeological remains that survive across the Site Area will pertain to the Industrial Period, spanning the period of Manchester's rapid development as one of the world's leading manufacturing centres between the late eighteenth and twentieth centuries. Several of the heritage assets (Sites **01, 02, 03** and **04**) form components of Arkwright's Mill, which is widely acknowledged as the first cotton mill in Manchester to have been fitted with a steam engine.

5.2.3 **Rarity:** Arkwright's Mill has a high rarity value as the earliest example in Manchester of a textile mill equipped with a steam engine and an unusual water-power system that returning water to an upper reservoir via mechanical means. These elements of the mill form part of Site **01**. Other component buildings (Sites **02** and **03**) do not have the same rarity value.

- 5.2.4 The site of the Manchester Bath and Wash House (Site **07**) has a high rarity value as a pioneering example of a public wash house. This was the first public wash house to be established in Manchester, and its design was considered to be experimental. It is likely to have acted as a model for numerous other public wash houses that were built subsequently, although few of these survive in the modern townscape.
- 5.2.5 **Documentation:** the historical development of the study area from the late eighteenth century can be traced reasonably well from cartographic sources and from entries in the available commercial trade 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.
- 5.2.6 **Group Value:** the 11 sites within the Site Area represent key elements of the early urban industrial townscape, which played a crucial role in the development of the city from the late eighteenth century. As such, the heritage assets identified in the Site Area have a high group value.
- 5.2.7 **Survival/Condition:** some of the sites identified in the Site Area are likely to have been destroyed during redevelopment in the later nineteenth century, or during aerial bombing raids in 1940. In particular, Sites **03**, **08** and **10** may have been destroyed entirely. However, based on the available documentary evidence for cellared structures, coupled with the results obtained from previous archaeological investigations and the monitoring of the recent ground investigation works, there is potential for elements of Sites **01**, **02**, **04**, **05**, **06**, **07**, and **09** to survive as buried remains.
- 5.2.8 **Fragility/Vulnerability:** any buried archaeological remains, should they be present and survive *in-situ*, are vulnerable to damage or destruction during any earth-moving works across the site. Pending the precise location of any new buildings that are erected in the Site Area, and the depth of their foundations, buried archaeological remains may be adversely affected by the proposed development.
- 5.2.9 **Diversity:** the remains relate mainly to the industrial expansion of the area, and the associated development of domestic housing and public buildings. None of the sites within the Site Area are considered to be significant due to diversity.
- 5.2.10 **Potential:** there are no prehistoric sites within the Site Area or its environs, and the potential for prehistoric remains is considered to be very low. Similarly, there are no known Roman, medieval or post-medieval sites within the Site Area or its immediate environs, and the potential of remains from these periods is considered to be low.

5.3 SIGNIFICANCE

- 5.3.1 The most significant heritage asset in the Site Area is undoubtedly Arkwright's Mill, and particularly the site of the original main block (Site **01**) and its associated water-management features (Site **04**). This heritage asset is certainly of Regional/County significance, and could perhaps even be seen as being of national significance in terms of the role it played in the early development of Manchester's steam-powered, factory-based textile industry. However, further detailed comparative and historical research should be undertaken in order to provide a clearer understanding of the significance of Arkwright's Mill and its component elements.
- 5.3.2 The site of the Manchester Bath and Wash House is considered to be of Regional/County (Site **04**) significance as a rare example of a public wash house. This pioneering facility was erected as a prototype for what became an important feature of the nineteenth- and twentieth-century urban townscape.
- 5.3.3 Other heritage assets in the Site Area are considered to be potentially of Local/Borough Importance, pending the extent to which buried remains survive. These include ancillary elements of Arkwright's Mill (Sites **02** and **03**), a mid-nineteenth-century foundry and brewery, and workers' housing along Miller Street and Angel Street (Sites **09** and **11**).
- 5.3.4 A few heritage assets identified in the Site Area are considered to be of Low Local significance, reflecting the extent to which they have been damaged or destroyed during twentieth-century redevelopment. These include a former timber yard (Site **08**) and workers' housing along Rochdale Road (Site **10**).

6. LIKELY IMPACT OF DEVELOPMENT

6.1 INTRODUCTION

- 6.1.1 Current planning policy guidance for the historic environment, embodied in NPPF (DCLG 2012), advises that archaeological remains are an irreplaceable resource. It has been the intention of this study to identify the archaeological significance and potential of the Site Area, and assess the impact of proposed development, thus allowing the policy stated in NPPF (DCLG 2012) to be enacted upon.
- 6.1.2 It should be noted that the present assessment has focused on sub-surface archaeological resource of the Site Area. Indirect impacts on the settings of adjacent standing buildings have not been assessed, as detailed design proposals have not yet been produced. The results are summarised in Table 8.

6.2 IMPACT

- 6.2.1 Groundworks for any future development within the Site Area, including the reduction or other disturbance of ground levels, the digging of foundations and service trenches, have the potential for having a direct impact by damaging or destroying below-ground archaeological remains. The extent of any previous disturbance to buried archaeological levels is an important factor in assessing the potential impact of the proposed scheme of development. In some instances, the identified heritage assets within the Site Area are likely to have been destroyed by previous development. This is likely to be the case with one of the ancillary blocks to Arkwright's Mill (Sites **03**), a former timber yard (Site **08**), and workers' housing that fronted the western side of Rochdale Road (Site **10**). However, there is considerable potential for the remains of Arkwright's Mill (Site **01**) and its associated structures (Sites **02** and **04**), elements of the mid-nineteenth-century iron foundry (Site **05**) and brewery (Site **06**), Manchester's first publish wash house (Site **07**), and late eighteenth-century workers' housing (Site **09**) to survive as buried remains. Previous archaeological investigation has demonstrated that well-preserved remains of the workers' housing along Angel Street survive *in-situ*, although only a very small element of these buildings lie within the Site Area, and thus the impact will be limited.

6.3 IMPACT ASSESSMENT

- 6.3.1 Following on from the above considerations, the impact on the heritage assets within the Site Area has been largely determined as substantial, based on an assumption that there will be earth-moving works associated with the development, and a requirement to remove the loose rubble fill infilling demolished cellared structures. Exceptions are Sites **03**, **08**, **10** and **11**, where the impact significance may be determined as Slight or Negligible due to damage or redevelopment during the twentieth century.

Site Number	Site Name	Importance	Impact	Significance of Impact
01	Arkwright's Mill (Main Block)	Regional/County	Substantial	Major
02	Arkwright's Mill (SE Block)	Local/Borough	Substantial	Intermediate
03	Arkwright's Mill (Western Block)	Local/Borough	Slight	Minor
04	Arkwright's Mill (Water System)	Local/Borough	Substantial	Intermediate
05	Manchester Foundry	Local/Borough	Substantial	Intermediate
06	Kenyon Street Brewery	Local/Borough	Substantial	Intermediate
07	Manchester Bath and Wash House	Regional/County	Substantial	Major
08	Timber Yard	Low Local	Negligible	Neutral
09	Miller Street Workers' Housing	Local/Borough	Substantial	Intermediate
10	Rochdale Road Workers' Housing	Low Local	Slight	Neutral
11	Angel Street Workers' Housing	Local/Borough	Slight	Minor

Table 8: Assessment of the impact significance on each site within the Site Area during development

7. RECOMMENDATIONS

7.1 INTRODUCTION

- 7.1.1 The *National Planning Policy Framework* instructs that in the case of heritage assets which either have designated status or are non-designated but are of a significance demonstrably comparable with a Scheduled Monument, *ie* of national importance, the general assumption should be in favour of conservation. Where the loss of the whole or a part of a heritage asset's significance is justified by a development, the developer should be required first to record that asset and advance understanding of its significance, in a manner proportionate to their importance and the impact (NPPF, p 32 para 141). Development also has the potential for enhancing heritage assets. This might include the consolidation and display of excavated below-ground remains, or the reference to heritage assets within the design. NPPF encourages developments which change the setting of a heritage asset so as to better reveal its significance.
- 7.1.2 None of the known heritage assets identified within the Site Area are afforded statutory designation, and are thus not considered to be of national importance that would require preservation *in-situ*. However, any buried remains of Arkwright's Mill, especially the original block, its waterwheel and the sequence of steam-power plant features (Site **01**), are of considerable archaeological and historical importance, and may merit preservation *in-situ*. Any damage to these buried remains as part of a future development scheme would require robust justification, and is likely to attract a requirement for significant mitigation, although the precise extent to which buried remains of the mill survive within the Site Area needs to be established. Those heritage assets of slightly lesser historical importance merit preservation by record, where these will be directly affected by development.

7.2 RECOMMENDATIONS

- 7.2.1 Any surviving buried remains of borough or regional significance would merit preservation by record. The scope and specification of any archaeological recording required would be devised in consultation with the archaeological curatorial service advising Manchester City Council, which is carried out currently by the Greater Manchester Archaeological Advisory Service. However, it may be anticipated that the remains of ancillary element of Arkwright's Mill (Sites **02** and **04**), the Manchester Foundry (Site **05**), the Kenyon Street Brewery (Site **06**), the Manchester Bath and Wash House (Site **07**), and cellar dwellings on Miller Street (Site **09**) will necessitate intrusive archaeological investigation. The small elements of the original block of Arkwright's Mill (Site **01**) that may survive within the Site Area similarly merit intrusive investigation to establish the precise extent and significance of any buried remains.

7.2.2 In the first instance, an appropriate scheme of archaeological investigation is likely to involve the excavation of a series of trial trenches to establish the presence or absence of buried remains. Should significant remains be found which will be damaged or destroyed by the proposed development, these may require further excavation work to ensure preservation by record.

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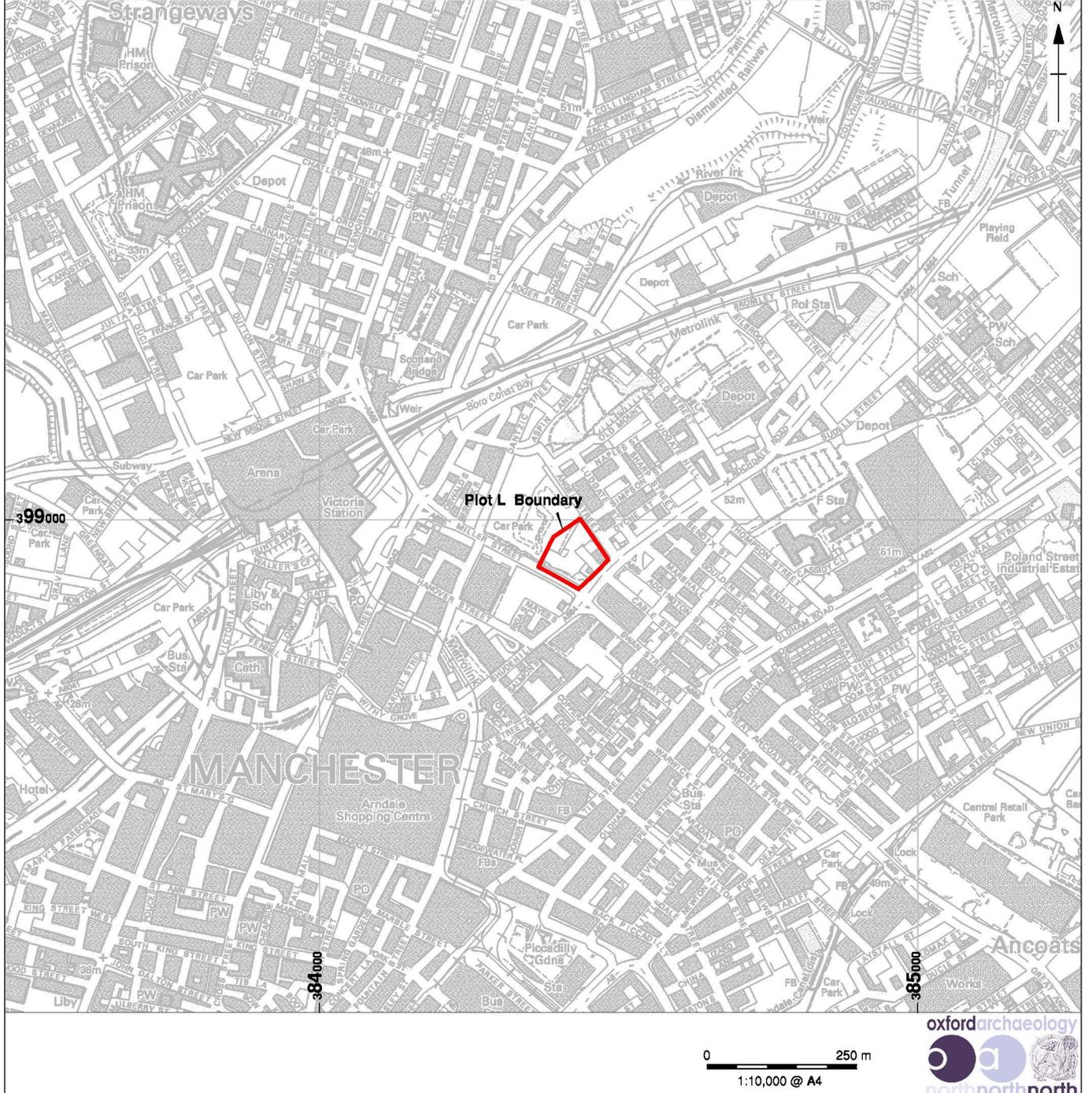
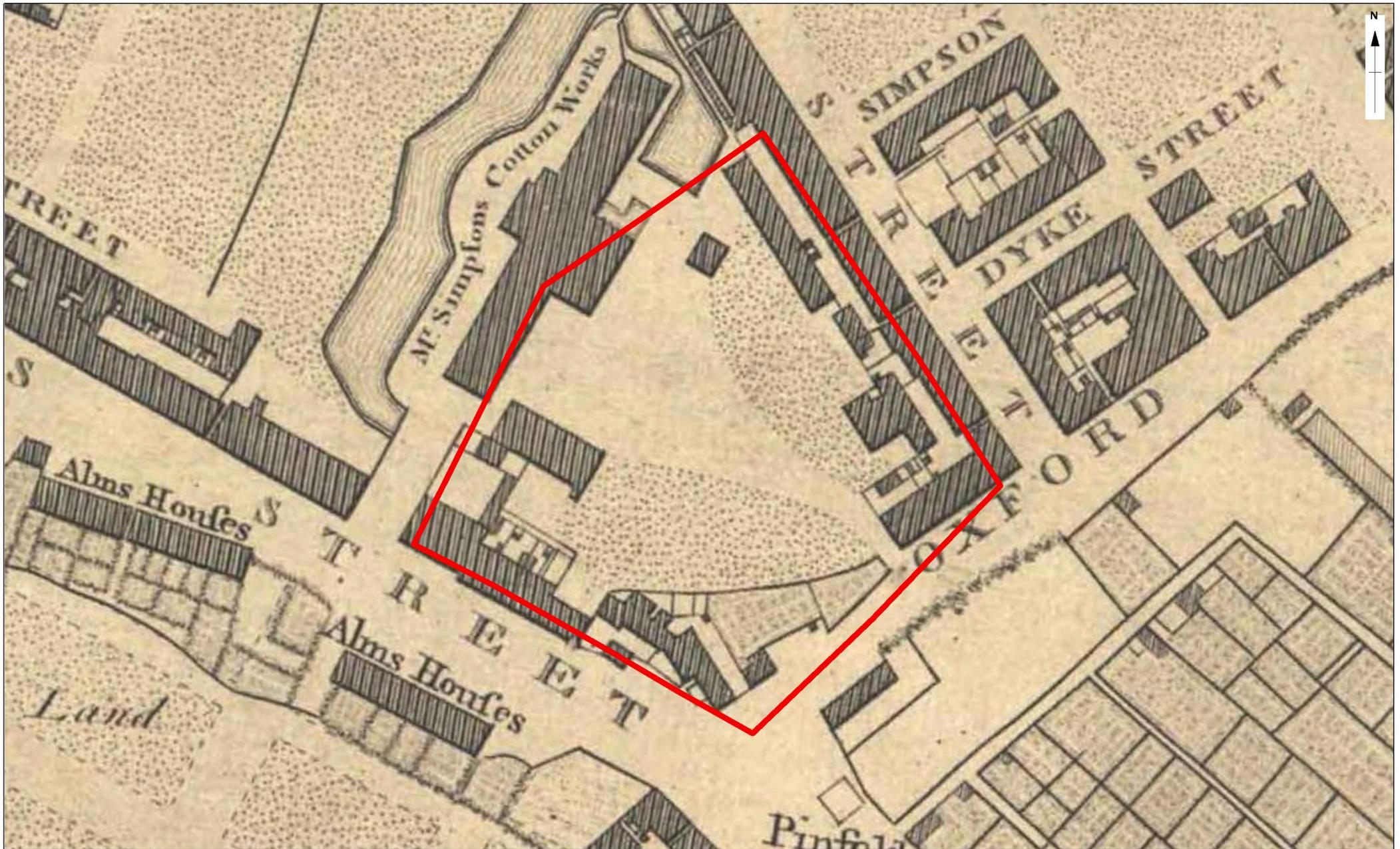


Figure 1: Site location



 Plot L Boundary

0 25 m
1:1000 @ A4



Figure 2: Site Area superimposed on William Green's map of 1794



 Plot L Boundary

0 25 m
1:1000 @ A4



Figure 3: Site Area superimposed on Johnson's *Plan of the Parish of Manchester* of 1820



 Plot L Boundary

0 25 m
1:1000 @ A4

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Figure 4: Site Area superimposed on Bancks & Co's map of 1831



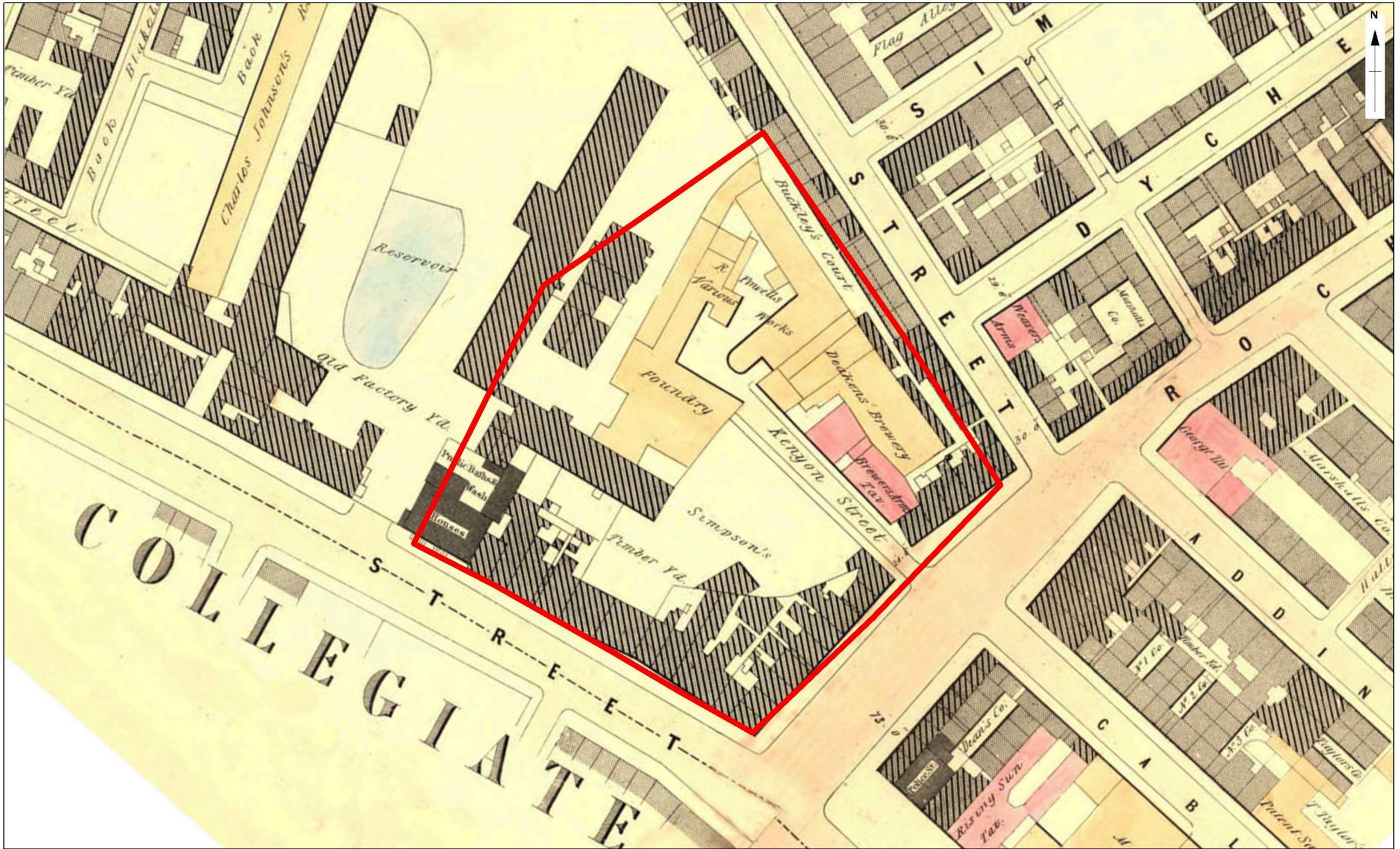
 Plot L Boundary

0 25 m
1:1000 @ A4

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Figure 5: Site Area superimposed on the Ordnance Survey map of 1850



 Plot L Boundary

0 25 m
1:1000 @ A4



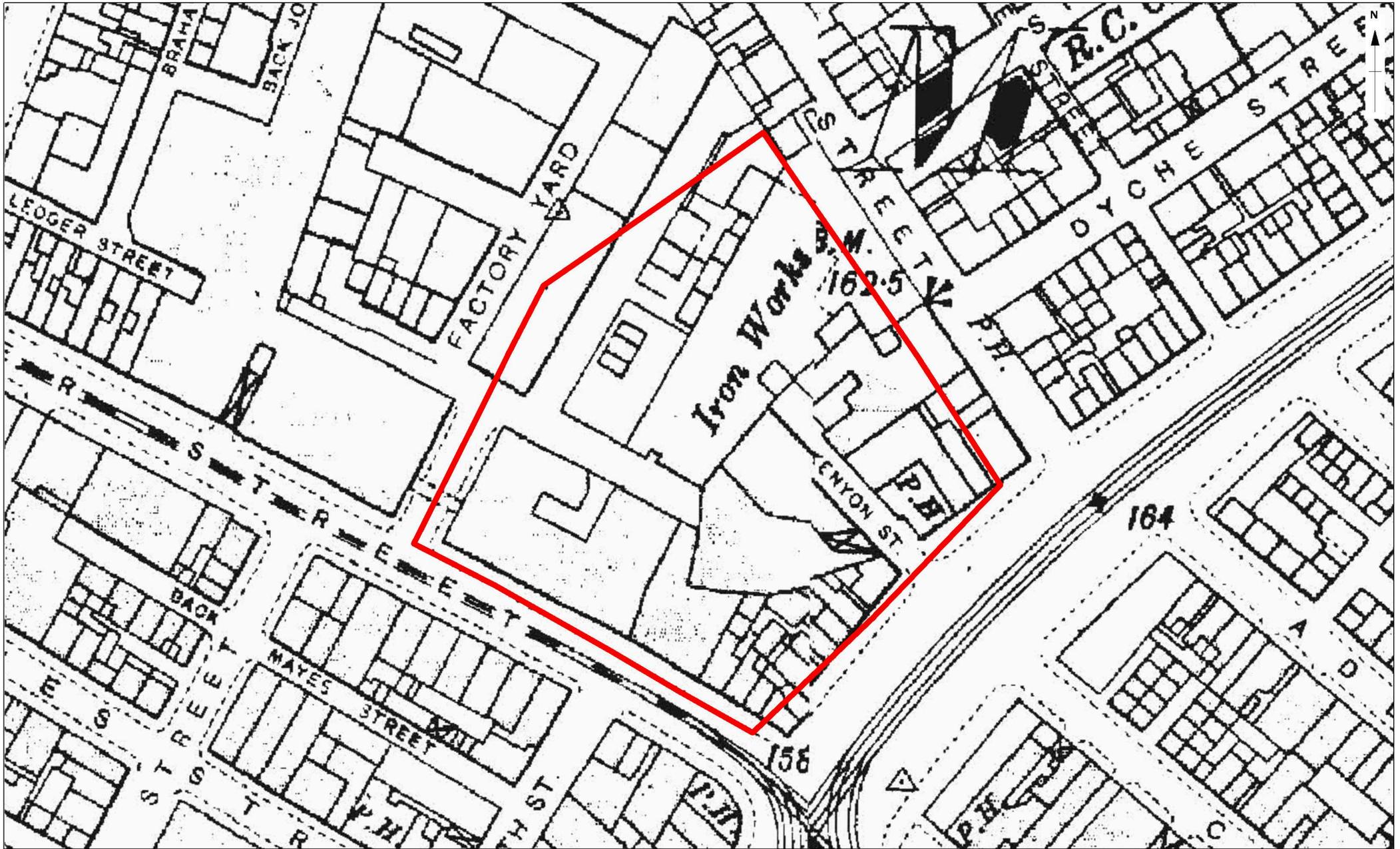
Figure 6: Site Area superimposed on Adshead's map of 1850



 Plot L Boundary



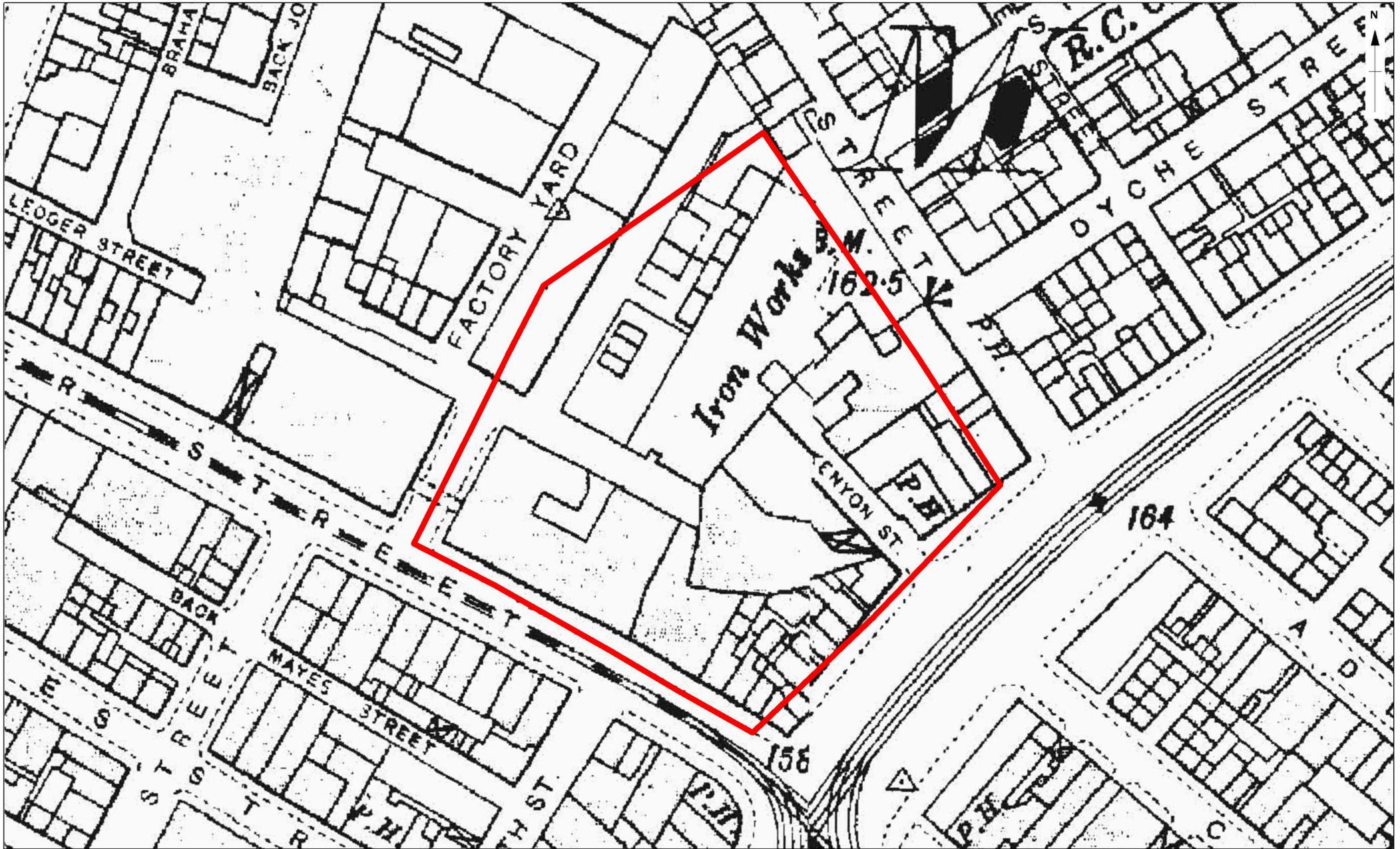
Figure 7: Site Area superimposed on the Ordnance Survey 25":1 mile map of 1892



 Plot L Boundary



Figure 8: Site Area superimposed on the Ordnance Survey 25":1 mile map of 1908



 Plot L Boundary

0 25 m
1:1000 @ A4

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Figure 10: Site Area superimposed on the Ordnance Survey 25":1 mile map of 1951-2

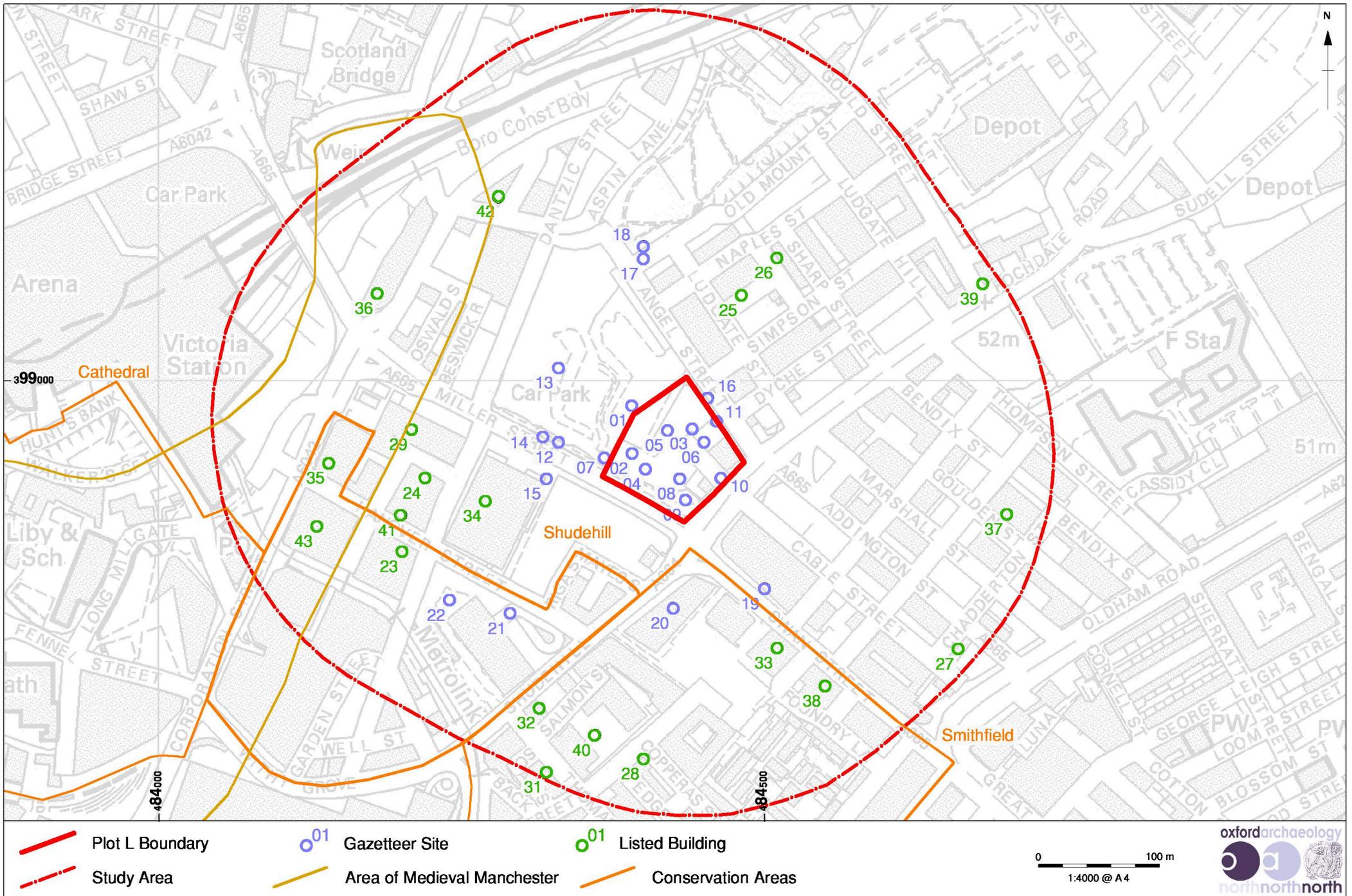


Figure 11: Plan of gazetteer sites