



Archaeological Desk-Based Assessment

Ancoats Green,
Manchester

Client:

Faithful and Gould

Technical Report:

Katie Fletcher

Report No:

2022/15



Site Location: The development area is located within the Ancoats area of Manchester and is bounded by Oldham Road to the north, Rodney Street to the east, Rochdale Canal to the south, and Bengal Street to the west

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Summary

Faithful and Gould are devising proposals for a scheme of public realm works within the Ancoats area of Manchester (centred on NGR 385219 398926). The proposed area is located within the Ancoats Conservation Area and is bounded by Oldham Road to the north, Rodney Street to the east, Rochdale Canal to the south, and Bengal Street to the west. Public realm works will include the demolition of a former canal bridge on Jersey Street and levelling of the road surface, landscaping works at Ancoats Green and works on the highways within the development site. In order to support the planning applications for the scheme, Faithful and Gould commissioned Salford Archaeology to carry out an archaeological desk-based assessment of the proposed development site. This was intended to establish, as far as possible, the nature and significance of the sub-surface archaeological resource in order to enable informed recommendations to be made for the future treatment of any surviving remains.

By the late 18th-century, former agricultural land within the development site had been divided into a grid of streets in anticipation of development. Terraces of worker's houses had already been erected at the Loom Street and Prussia Street junction and at the Portugal Street and Prussia Street junction, in the area currently known as Ancoats Green.

The Rochdale canal was built to the south of Jersey Street in the early 19th century, causing slight alterations to the proposed street layout. The Prussia Street arm of the canal had been constructed through the development site by 1820. It was aligned northwest to southeast, cutting through the grid of streets. A second canal arm branched southwest from the Prussia Street arm, known as the Bengal Street arm. Three canal bridges were constructed over the canal arms, erected on Jersey Street, Poland Street and German Street.

By 1834, Manchester Glass Bottle Works had been established at Prussia Street by Warrington-born glass manufacturer John Woolfall. The footprint of the glassworks is first captured on mid-19th-century mapping, which shows that the building was circular in plan, indicating that the glassworks was a conical-shaped structure. The glassworks was subsequently occupied by John Cannington and Co in 1863 and by George Rowlinson in 1871. The glassworks, and the late 18th-century houses on Prussia Street and Portugal Street, were demolished before the end of the 19th century. A recreation ground, Ancoats Green, was created in their place. Other developments included the laying of Purdon Street, lined by terraced houses.

Slum clearances were underway by the 1960s, resulting in the widespread demolition of dwellings within the site including houses on Purdon Street and Loom Street, which then became an extension of Ancoats Green. During this period, the Prussia Street and Bengal Street arms of the canal were infilled, making the canal bridges redundant. Courts of back-to-back dwellings were redeveloped into Mozart Close, Derwent house and Rodney Court, erasing the historic street layout in the northeast part of the site.

Much of the late 18th-century street layout has been retained in the southwest part of the site, which comprises narrow roads some of which are only wide enough for one-way traffic. In addition, the former canal bridges survive as standing structures,

demarcated by stone walls. At the site of the former bridges, the road surface is slightly raised, denoting the arch of the canal bridge below.

The potential for the site to contain buried archaeological remains is considered to be high. Remains may include remains of historic field boundaries, late 18th-century workers' houses, an early 19th-century glass works and buried remains associated with the former canal bridges. Most of the potential buried remains would be of local significance, however, any remains of Manchester Glass Bottle Works would be of regional, if not, national significance.

The exact scope and extent of any further investigation of the proposed development area will be determined by the Greater Manchester Archaeological Advisory Service (GMAAS), in their capacity as archaeological advisor to Manchester City Council, however, it may be anticipated that a level I historic building survey will be required at the three former canal bridges. Archaeological monitoring, in the form of a watching brief, may be required along the highways within the Site, depending on the depth and extent of ground-breaking works. Similarly, a programme of archaeological mitigation may be required at Ancoats Green. The exact scope of archaeological works required would depend on the depth and extent of the ground-moving works.

Should significant archaeological remains be encountered during the archaeological evaluation, further excavation may be required to offset the harm of the development to the buried archaeological resource, in line with the guidance provided by the National Planning Policy Framework. The scope and extent of any such further investigation will be determined by the Greater Manchester Archaeological Advisory Service (GMAAS), in their capacity as archaeological advisor to Manchester City Council.

1. Introduction

1.1 Planning Background

Faithful and Gould have prepared a planning application for a public realm scheme at Ancoats Green, Manchester (referred to herein as 'the Site'). The proposed development will include the demolition of a former canal bridge on Jersey Street and levelling of the road surface, landscaping works at Ancoats Green and public realm works on the highways within the Site boundary. The delivery of these proposals will necessitate earth-moving works that have potential to damage or remove any below-ground archaeological remains.

In order to support the planning application, Faithful and Gould commissioned Salford Archaeology within the University of Salford to carry out an archaeological desk-based assessment of the Site, which was intended to establish, as far as possible, the nature and significance of the archaeological resource, in order to enable informed recommendations to be made for the future treatment of any surviving remains.

1.2 Government and Local Planning Policies

1.2.1 National Planning Policy Framework (NPPF)

The significance of the archaeological resource identified within this report has been assessed as recommended in the revised *National Planning Policy Framework* (Ministry of Housing, Communities and Local Government, revised July 2021). The NPPF sets out the Government's planning policies and outlines the presumption in favour of sustainable development, which is defined by three principles: economic, social and environmental. Of the core planning principles underpinning decision making, conserving heritage assets 'in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of existing and future generations' is one. Section 16 deals specifically with this historic environment (paragraphs 189-208), and states that local planning authorities should consider:

- the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation;
- the wider social, cultural, economic and environmental benefits that conservation of the historic environment can bring;
- the desirability of new development making a positive contribution to local character and distinctiveness; and
- opportunities to draw on the contribution made by the historic environment to the character of a place.

Paragraph 194 states that local planning authorities, when determining applications, should require the applicant to describe the significance of any affected heritage assets, including any contribution made by their setting. 'The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets

assessed using appropriate expertise where necessary. Where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation’.

Paragraph 203 states that the effect of a proposal on non-designated heritage assets (designated assets are covered in paragraphs 199-202) should be taken into account in determining a planning application.

Paragraph 205 states that local planning authorities should require developers to record and advance understanding of any heritage assets to be lost, in a manner appropriate to their importance and impact, and to make this evidence publicly accessible.

1.2.2 Local Development Framework

The NPPF outlines the need for local planning policies to create local plans and frameworks to implement the NPPF at a local level. Manchester City Council adopted a Core Strategy in 2012, which is scheduled until 2027. The heritage strategy is outlined in *Objective 6: Environment* and summarises the approach the local authority will take in determining planning applications which may affect the historic environment.

Policy EN3 states:

‘Throughout the City, the Council will encourage development that complements and takes advantage of the distinct historic and heritage features of its districts and neighbourhoods, including those of the City Centre.

New developments must be designed so as to support the Council in preserving or, where possible, enhancing the historic environment, the character, setting and accessibility of areas and buildings of acknowledged importance, including scheduled ancient monuments, listed buildings, registered parks and gardens, conservation areas and archaeological remains. Proposals which enable the re-use of heritage assets will be encourage where they are considered consistent with the significance of the heritage asset.’

Manchester City Council is advised on archaeological matters by the Greater Manchester Archaeological Advisory Service (GMAAS).

2. Methodology

The assessment considers the potential impact of the proposed development upon any buried archaeological remains within the Site, and comprises a desk-based study. The production of the assessment followed the Chartered Institute for Archaeologists (CIfA) standard and guidance for undertaking archaeological desk-based assessments (*Standard and Guidance for Historic Environment Desk-based Assessment*, 2017).

2.1 Research Sources

The desk-based assessment made use of the following sources:

- Published and unpublished cartographic, documentary and photographic sources;
- The Greater Manchester Historic Environment Record, maintained by the Greater Manchester Archaeological Advisory Service;
- The National Heritage List for England;
- The North West England Regional Research Framework

The aim of the research was to provide the relevant historical and archaeological background relating to the development of the Site. The available sequence of historical mapping was the principal source of information, as this provides evidence for the development of the Site since the late-eighteenth century. The results of the historical and archaeological research are analysed against the current framework for the region, *The North West England Regional Research Framework*, in order to identify whether there is potential for Site to contribute to the current initiatives and research questions listed within the agenda.

2.2 The Document

The following presents the historical and archaeological evidence for the Site. A gazetteer (Chapter 5) is presented of heritage assets and sites of potential archaeological interest identified within the Site and this information, along with a map regression (Figs 2-11), is used to assess the significance of the remains (Chapter 6) and impact of the proposed development (Chapter 7). A mitigation strategy is outlined in Chapter 8, based on the assessment presented in the previous chapters.

3. The Setting

3.1 Location

The Site (centred on NGR 385219 398926) is situated in the Ancoats Conservation Area, Manchester (Plate 1; Fig 1). The Site is bounded by Oldham Road to the north, Rodney Street to the east, Rochdale Canal to the south, and Bengal Street to the west. The Site comprises a mixture of 19th-century factories, modern single-storey industrial units, residential buildings, car parks and shop fronts. The southwest part of the Site is dissected by several roads established during the late 18th century. In contrast, the historic street layout has been lost in the northeast part of the Site.

An open area of parkland is in the northeast part of the Site, currently known as Ancoats Green. The recreation ground was initially created in the late 19th century and was expanded to the south in the 1960s, following the demolition of industrial period buildings. Ancoats Green contains a small amount of shrubbery and trees, most of which line the north and south boundaries of the park.

The Site lies at a height of approximately 49.7m above Ordnance Datum (aOD) in the south, rising to a maximum of 52.1m aOD in the northwest.



Plate 1: Recent aerial view looking north across the Site

Topographically, the Manchester conurbation as a region lies 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).

3.2 Geology

The Site is located on a band of solid geology comprising the mudstone of the Manchester Marls formation, consisting, in an area previously dominated by lakes and lagoons, and which is overlain by superficial deposits of Devensian Till. Just outside the eastern boundary of the Site the solid geology comprises of the Collyhurst Sandstone Formation (British Geology Society).

3.3 Designations

The Site contains Beehive Mill, a Grade II* Listed Building, however, the building will not be affected by the public realm scheme, which is concentrated on Ancoats Green, the highways and Jersey Street bridge. The Site does not contain any other statutory designated sites such as Scheduled Monuments, or any Registered Parks and Gardens, however, the Site is located within the Ancoats Conservation Area. Manchester City Council has undertaken some analysis of the history and character of the Area, which is summarised below.

Ancoats Conservation Area Description:

“The streets of Ancoats were laid out during the latter part of the 18th century, with little development taking place other than small houses and shops along Great Ancoats Street and Oldham Road. Survey work for the Rochdale Canal was carried out by James Brindley in 1765. The knowledge that its construction would make the transport of raw materials and finished goods more convenient gave industrialists the confidence to build their cotton mills. The first mills were built in Ancoats as early as 1790. From the opening of the Rochdale Canal in 1804 through to 1912, the development of mills continued on a much larger scale, and enough of these buildings remain to enable the progress of mill design to be appreciated today.

The first single-class housing area in the country was built in 1889 to provide homes for mill workers in Ancoats. This block, called Victoria Square, was the first example of municipal housing in Manchester, which was followed shortly by the development of model housing in adjacent Anita Street (originally known as Sanitary Street).

The substantial economic activity generated by such a concentration of mills was halted by the slump in the cotton industry in the 1930's. Thereafter, the prosperity of the mills declined steadily, and the only new industry to establish itself in Ancoats was newspaper printing. In 1939, the Daily Express newspaper company opened new premises, which were built in the "functional" style, using new curtainwall technology identical to that of the company's buildings in London and Glasgow.”

Ancoats and its buildings today

“Ancoats, with its concentration of mill buildings, is an important landmark in the history of the Industrial Revolution. Old Mill, which is probably the oldest surviving in Manchester, was built in two phases in 1798 and 1801. It is one of the group of Murray's Mills and was constructed around a courtyard, with a canal basin and tunnel under one of the mills and Redhill Street, connecting it with the Rochdale Canal.

The firm of McConnel and Kennedy, whose group of mills was the largest cotton employer with 1500 workers, claimed to be the first to run spinning mules by steam power. Sedgwick Mill, dating from 1818-1820, is the oldest of the group still standing, and it is believed to be the oldest surviving iron-framed, fireproof factory in Greater Manchester.

Beehive Mill, completed in 1824, has internal timber construction with rare cast-iron roof trusses, whilst the warehouse part has stone flag floors supported on cast-iron T-beams. The roof is a very early castiron spaceframe structure, unique in the area. These three groups of buildings, together with Brownsfield Mill on the other side of Great Ancoats Street, represent the chronological development of cotton mill architecture from 1800 to the 1920's. Together they constitute the first industrial estate in the world.

Although the area is dominated by the massive mill buildings, it also contains other listed buildings of differing character. The Victoria Square housing, noted earlier, is a five-storey block of flats dating from 1889. Built in red brick with a pitched slate roof and in the form of an enclosed courtyard, it may fairly claim to be one of the most successful local authority housing schemes in Manchester, due in part to its enclosure of shared inner space.

Modern printing technology has meant that the original Daily Express building is not now used for that purpose, although it is still in commercial use. Printing now takes place in new premises to the rear of the original building.

The Crown and Kettle public house on the corner of Oldham Road and Great Ancoats Street, is a late 19th Century buff brick, Gothic-style building with stone traceried windows.

These latter buildings, together with the older non-listed buildings in the area, provide a contrast of architectural styles with the with the surviving massive mill buildings. The character of the area remains largely industrial, therefore any new development must ensure retention of that character through detailing and the use of compatible materials. The maintenance of road surfaces, kerbstones and street lighting, together with vacant site enclosures and "hard and soft" landscaped areas will also be essential."

There are also 13 statutory listed buildings within a 200m radius of the Site (Table 1). The scheme will not have a physical impact on these designated heritage assets, and they are therefore not considered further in this report.

List Entry No.	Description	Grade	NGR
1270855	Waulk Mill (formerly Doubling and Fireproof Mills)	II*	SJ 8510 9862
1270860	Retaining wall on S. side of Redhill Street, W. of Union Street Bridge	II	SJ 8504 9854
1247473	Old Mill and Decker Mill	II*	SJ 8507 9858
1246277	Victoria Square	II	SJ 8491 9881
1200821	New Mill (Murray's Mills)	II*	SJ 8503 9864
1291735	Beehive Mill	II*	SJ 8509 9871
1270856	Sedgwick Mill and Sedgwick New Mill	II	SJ 8501 9854
1220282	Murray's Mills: Former Warehouse and Offices of Old Mill, Decker Mill, and New Mill	II	SJ 8503 9860
1282961	Little Mill	II	SJ 8509 9866
1197806	Church of St. Peter (former)	II	SJ 8495 9867
1247550	Union Street Bridge (Rochdale Canal)	II	SJ 8516 9863
1247474	Royal Mill	II*	SJ 84975 98526
1219048	Paragon Mill	II*	SJ 84961 98591

Table 1: Summary of listed buildings within a 200m radius of the Site

4. Historical Background

The following section provides a framework to the present study, working chronologically through the periods listed below (Table 2). Key sites are summarised in the Gazetteer of Sites (Section 5, below).

Period		Date Range
Prehistoric	Palaeolithic	Pre-10,000 BC
	Mesolithic	10,000 – 3500 BC
	Neolithic	3500 – 2300 BC
	Bronze Age	2300 BC – 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 2: Summary of British archaeological periods and date ranges

4.1 Prehistoric Period

4.1.1 Archaeological Evidence

The current understanding of any human activity in the Manchester region during the prehistoric period is poor, although it is reasonable to suggest that several areas in the centre of the city, such as Castlefield and Ardwick, may have been conducive for late prehistoric settlement on account of the natural topography and the abundance of natural water sources (i.e. rivers) (Gregory 2007).

Physical indications of human activity in the Manchester area are provided by a small number of residual finds. A Neolithic stone hammer and arrow head, for instance, were unearthed in the Castlefield area of Manchester in 1845 (HER 119.1.0), whilst excavations at 77-83 Liverpool Road (HER 13944.1.0) produced two Mesolithic flints, one Neolithic/Bronze Age waste flake and a single sherd of late Bronze Age/Iron Age pottery. These finds complement a growing regional body of finds representing prehistoric activity, known to be concentrated on well-drained sand and gravel sites in proximity to watercourses and moss lands.

4.1.2 Archaeological Potential

There is no known evidence for prehistoric activity within the boundary of the Site, and the potential for any such remains to survive from this period is considered to be very low.

4.2 *Romano-British Period*

4.2.1 *Archaeological Evidence*

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* (Bruton 1909), situated c 2km southwest of the Site. The fort underwent several phases of development subsequently, the earlier defences being deconstructed and improved. The military complex evolved in response to the on-going military campaigns, from a purely defensive site to an established supply depot, essential to the expansion and consolidation of control in the region. The maturation of the military complex can be seen in the growing body of evidence for a military annexe, occupying an area to the north and east of the fort (Arrowsmith 2016, 9-12). Evidence pertaining to this annexe is relatively scant and thus the exact nature of early settlement is unclear.

As this military complex developed, a grid of roads was laid out and a substantial extramural settlement, or *vicus*, grew up. This settlement was made up of civilians, attracted by the security and commercial benefits of the nearby fort. Based on archaeological excavations and the distribution of Roman finds, the limits of this civilian settlement appear to have extended south-eastwards along Chester Road, terminating somewhere in the vicinity of Great Jackson Street, northwards from the fort to approximately Quay Street, westwards along Liverpool Road for c 100m from the northwest corner of the fort, and eastwards across Deansgate to the area now occupied by Beetham Tower. Roads from the fort linked Manchester with Buxton to the southeast, Chester to the south, Wigan to the north-west, Ribchester to the north, and Castleshaw and York to the north-east. The Roman Road from Manchester to Castleshaw likely followed the course of the present Old Mill Street, which is located approximately 390m to the south of the Site. The settlement was well connected in terms of trade and consequently lasted until the late 3rd century AD.

4.2.2 *Archaeological Potential*

The potential for any remains of Romano-British activity to exist within the Site is considered to be very low.

4.3 *Medieval Period*

4.3.1 *Historical and Archaeological Evidence*

There is very little archaeological evidence in the region as a whole that represents the period between the end of the Roman occupation and the Norman Conquest of 1066. The area around Manchester came under the control of several kingdoms during this period. In AD 620, Edwin occupied Manchester, and it may have been at this time that settlement in the town was established around the cathedral (Farrer and Brownbill 1908).

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, which had become a focus for settlement by the late 11th century. The site occupied presently by Chetham's School is thought to have been the site of a castle founded by Manchester's Norman barons.

Following the Norman Conquest, William I assigned most of the land between the Ribble and Mersey rivers to Roger of Poitou, who retained the manor of Salford demesne (Tupling 1962, 116), but divided his other newly acquired land into several fiefdoms (Kidd 1996, 13). The largest of these was the landholding centred on Manchester, created by the grant of extensive lands in the hundreds of Salford, Leyland and West Derby to Albert Grelley (Tupling 1962, 116).

By the 13th century, the Grelley family had established a manor house at the confluence of the rivers Irwell and Irk and the medieval town grew up around it (Hartwell *et al* 2004, 256). It was from this hall that they governed both the manor and the extensive barony. In 1222 Manchester was granted an annual fair, and in 1301 Thomas Grelley was granted the Great Charter of Manchester by Edward I, and thus it became a free borough (*ibid*).

The Site is situated within the Ancoats area of Manchester. The name Ancoats is believed to originate from *Elnecot*, and the Old English *ana cots*, meaning 'lonely cottage' (Cooper 2002, 13). The area likely remained rural during the medieval period and is first mentioned in land grants dating back to the 13th century. In 1908 Swindells described it as 'an almost idyllic rural backwater' (Swindell 1908, 19-26). In 1320 Ancoats was recorded in a survey as forming eight hamlets in the township of Manchester, within the Salford hundred (Harland 1861). It is believed that these dwellings, formed mainly of cottages and farmhouses, may have been along Ancoats Lane (now Great Ancoats Street), Newton Lane (now Oldham Road) and Butler Lane (Miller, Wild and Little, 2007, 25).

4.3.2 Archaeological Potential

Given the later development of the Site and the lack of evidence of medieval settlement within the immediate area, the potential for medieval remains to survive with the Site is considered to be low.

4.4 Post-medieval and Industrial Period

4.4.1 Historical Setting

Ancoats likely remained largely rural during the post-medieval period, with the most significant building in the area being Ancoats Hall. The manor of Ancoats was held by the Byrons of Clayton Hall for over four hundred years until they sold it to Oswald Mosely. Oswald Moseley built the timber-framed building at Ancoats Hall in 1596. Ancoats Hall overlooked the River Medlock on the eastern fringe of the area (Miller, Wild and Little, 2007, 25) and was described by Bruton as 'beautifully situated above the Medlock with lovely views over the green wooded country'. The Mosleys held the manor for the next two centuries until it was bought by mill owner George Murray who altered it into a Victorian brick-built mansion (Rose *et al*, 2011, 5).

Ancoats retained a semi-rural aspect until the late 18th century, but by 1800 the area had been transformed into an industrial suburb (Miller and Wild 2007). This transformation began in the 1770s when land owned by the Leigh family was sold to Thomas Bound, a builder, who then sold it on to others for development (Little 2002, 31). William Green's *Map of Manchester and Salford*, surveyed between 1787 and 1794 (Fig. 3), shows that development was initially focused on Great Ancoats Street and Oldham Road. The map also depicts the main elements of the existing street plan

laid over the former agricultural fields. The principal driving force of development was the national demand for textiles, particularly cotton, and the introduction of steam-powered spinning mills (Williams and Farnie 1992, 3).

The earliest textile factories consisted of water-powered mills erected along Shooter's Brook to the south of Union (now Redhill) Street. There is some evidence to suggest, for instance, that New Islington Mill and Salvin's Factory originated in the late 1780s as water-powered textile mills situated on the bank of Shooter's Brook (Miller and Wild 2007). New Islington Mill was 85m to the south of the Site. However, Shooter's Brook was a small watercourse, and in seeking a solution to the inadequate power supplied to their waterwheels from the brook, some manufacturers experimented with steam power. Notably, John Kennedy is reputed to have first applied steam power to one of his spinning mules whilst renting space at Salvin's Factory in 1793 (Lee 1972, 9).

The invention of steam engines, and the demand for textiles, caused an explosion of factory building in Ancoats (Little 2002, 31). Development was accelerated by the construction of the Rochdale and Ashton under Lyne canals, which offered cheap and reliable transport for goods and materials (Miller and Wild 2007). The Ashton Canal was proposed in 1791 and would link the factories in Manchester to the collieries in the Ashton and Oldham area. An Act of Parliament was passed in 1792, and construction commenced immediately under the direction of Edward Banks (Hadfield and Biddle 1970). The Ashton Canal opened in 1799. Many of the mills in Ancoats depended on the developing network of short branch canals for transport, coal and water for their steam-power plants.

4.4.2 The Rochdale Canal

The Rochdale Canal was authorised by an Act of Parliament in 1794 and was linked to the Ashton Canal at Piccadilly in 1800. The canal linked Manchester with the ports of the East Coast via the rivers Aire and Trent and to Liverpool via the Ashton to Bridgewater Canal. These links made Piccadilly Basin a focus for trans-shipment goods and a key location in the canal network (Miller 2007, 16).

The first design for the Rochdale Canal Basin was proposed in 1796, and revised in 1804, although neither of these proposed schemes were carried out. The Rochdale Canal Company's first warehouse was eventually constructed in 1806, at the end of one of the canal arms to the east of Dale Street and survives today as Dale Warehouse. Dale Street effectively divided the basin into two with a smaller, western section bounded by Lees Street, London Road (later Piccadilly) and Ducie Street. The eastern section was bounded by Back China Lane, Upper Stanley Street, Leech Street and Ducie Street. A plan drawn up in 1810 closely resembles the final layout, and proposed 23 wharf plots, with two general wharves and the four buildings that had been completed by that stage (Maw *et al* 2009, 22; Plates 2 and 3).

After the development of the Dale Warehouse, the company's offices were constructed immediately to the south-east in 1807, with two sheds located between the two arms. This range of buildings formed one of the two general wharfs for the Rochdale Canal Company and was completed by 1810. However, development of the rest of the basin was slow, only being progressed during periods of prosperity. The next major development was not until 1817, when existing warehouses were expanded. Other

improvements included new surfacing of the wharfs and installing cranes for loading and unloading goods (*op cit*, 22-3).

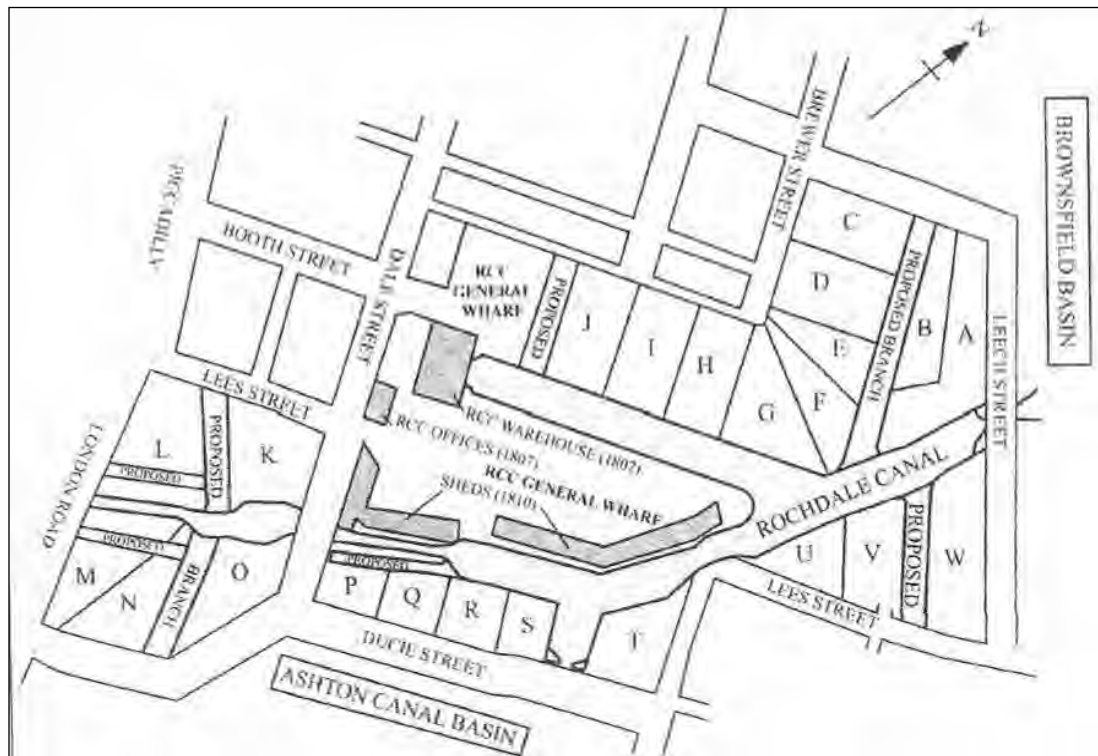


Plate 2: Plan of the Rochdale Canal Basin drawn in 1810

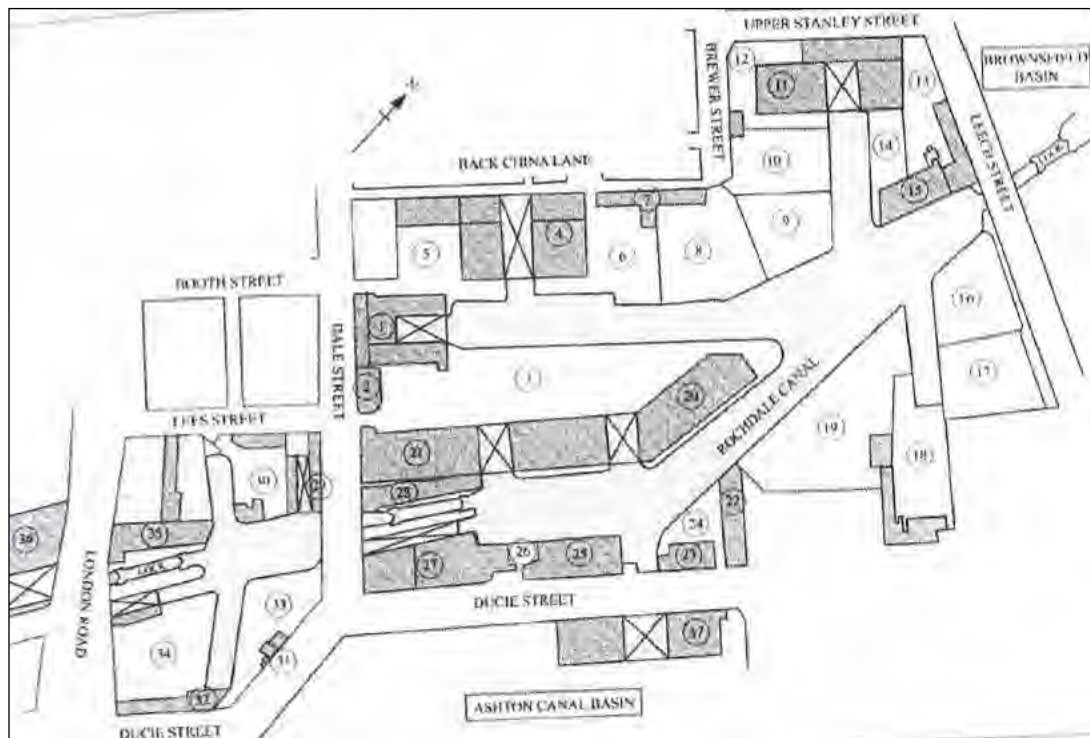


Plate 3: Plan of the Rochdale Canal Basin drawn in 1855. Select Key: 1 – Dale Warehouse (1807); 4 – Merchant's Warehouse (1825); 11 – Jackson's Warehouse; 18 – Stone Wharf; 19 – Stone Wharf & Sand Shed; 22 – Stables; 23 – Stables; 24 – Stable Yard

New warehousing was built in 1822, replacing the western warehouse of 1810, and was one of the first to employ iron in its structure. Over the next few years, the Rochdale Canal Company made several minor improvements, including renovating warehouse space as well as constructing the Lees Street Branch of the basin on the western edge. As part of traffic regulation, the Rochdale Canal Company ordered the construction of a stone gateway between the offices and the 'new' warehouse, which still stands today (*op cit*, 23).

Expansion into the north-eastern part of the basin was carried out in 1825, with the cutting of the Upper Stanley Street canal arm, as well as one further west, near Dale Warehouse, towards Back China Street. Growth stagnated in 1826 and, in 1829, the Merchant's Warehouse was destroyed by fire, leading the Rochdale Canal Company to implement new safety regulations. Trade picked up again during the 1830s, and warehousing was added at the south-west corner of Ducie and Dale Street, as well as around Upper Stanley Street. Jackson's Warehouse was completed in 1836, named after a carrier company that operated between Liverpool and Hull (*op cit*, 23-5).

Railway Competition: the introduction of a viable railway in the 1820s brought an alternative, and faster, means of transporting bulk goods. The advantages of this new form of transportation were recognised instantly, leading to the rapid expansion of the railway network. The Ashton Canal was purchased by the Manchester, Sheffield & Lincolnshire Railway in 1842, and was operated as a single concern together with the Peak Forest and Macclesfield canals. The Rochdale Canal Company resisted take-over bids from various railway companies initially but, in 1855, it leased the canal to a consortium of railway companies. The canal remained profitable into the twentieth century, but was in sharp decline by the end of the First World War. The final boat journey across the Pennines on the Rochdale Canal was made in 1937 and, in 1952, the canal was closed to navigation, apart from the short section between Castlefield and the Ashton Canal junction at Piccadilly (Hadfield and Biddle 1970).

4.4.3 Overview of Manchester's Textile Industry

By the 1780s, the national demand for textiles, particularly cotton, had begun to rise, resulting in a dramatic increase in mill building that transformed Manchester into a centre of the factory-based cotton manufacturing industry of international repute (Baines 1835). The ebb and flow of business confidence powerfully influenced development, which was concentrated into short and intense bursts of investment (Williams with Farnie 1992, 19). The high price of land influenced the location of fresh industrial ventures, and thus the new steam-powered mule mills were built on the outskirts of the established nucleus of Manchester. The first of these was established in Ancoats during the 1780s. A commercial boom in 1800-02 saw the number of cotton-spinning firms in the township of Manchester double from 51 in 1799 to 111 in 1802, setting Manchester on its path to becoming the most highly concentrated centre of cotton spinning in the world (Williams with Farnie 1992, 19).

In broad terms, fluctuations in the cotton market during the 1820s brought 'boom and bust' conditions for Manchester's manufacturers, although a report in the *Manchester Mercury* in 1827 claimed that 'the market for manufactured goods was the briskest which there has been for a very long time'. This favourable economic situation persisted until 1836, and led to numerous new textile mills being established around

the fringes of the Manchester. However, a serious depression of trade in 1837 resulted in the loss of inefficient firms. Boom conditions reigned between 1848 and 1853, and the number of cotton mills in Manchester reached a peak of 108 at the close of 1853 (Williams with Farnie 1992, 21). It was at this time that Manchester gained its popular designation as 'Cottonopolis' in recognition that the city represented the nucleus of the whole cotton industry, harbouring representatives of all its component branches and ancillary trades.

The number of mills in Manchester declined gradually during the second half of the 19th century, and was surpassed by Bolton as the leading centre for cotton spinning in the 1850s. This reflected the continuing inflation of land values in Manchester in the face of increased competition for development plots, which presented significant issues to individual mill owners that needed to expand their factory premises. Some old, established firms in the city centre relocated their business to the suburbs for the same reason, a notable example being Henry Houldsworth, who moved from his large mill complex on Newton Street in Manchester to Reddish, where he established a 'state of the art' spinning mill in 1865.

By the early 1880s, the number of cotton spindles operating in the city was in the process of absolute decline, exacerbated by the 'Great Depression' of 1873–96. This had a significant impact on many cotton-spinning firms. Some of Manchester's largest firms, such as McConnel & Kennedy (HER 2042.1.0) and A & G Murray in Ancoats (HER 2043.1.0), specialised in the spinning of ultra-fine yarn, a branch of the industry that sustained less impact from the trade depression, whilst other firms were afforded some protection through diversification into the weaving and finishing branches.

Apart from textile mills, numerous other industries became established in the Ancoats area, including copperas works, iron foundries, steel works, sizing works, wire works, hat manufactories, and machine works, as shown on contemporary maps of the area. Manchester also emerged as a major glass-making district, centred largely in the Ancoats area.

4.4.4 Development of Glass

During the medieval period, the traditional centre of glassmaking was the Weald of Sussex and Surrey, where the densely forested areas had a ready supply of wood to fuel the furnaces and bracken as a source of potash. Simple furnaces and impurities in the potash meant that the glass was of poor quality, and production was on a small scale (OAN 2004, 11). Improvements in glassmaking began in the late 16th century when French glassmakers migrated to England.

King James I banned glassmakers from using wood in their furnaces in 1615, forcing glass workers to adapt their furnaces for coal. One key change was that the glass melting pots needed to be closer to the heat source, as coal burns with a shorter flame and requires much more air. An important feature of the coal-fired furnace was the installation of grates made from iron bars. The use of coal also necessitated modifications to facilitate the efficient venting of sulphur produced from burning coal, resulting in the English glass cone furnace. Glass cones were designed to remove smoke and soot, in addition to increasing the size of glass furnaces. The structure comprised an open-ended cone around and over the furnace, which increased the draught through the grate whilst maintaining a steady working temperature around the

furnace (Parkin 2000, 8). After its introduction in the late 17th century, the cone furnace became widely recognised as a classic symbol of the English glass-making industry.

After wood was banned, glassmaking shifted away from the traditional forest centres to areas where there was an abundance of coal. As a result, Tyneside, South Lancashire and South Yorkshire developed into important glass production centres.

Although Britain was an important glass exporter during the 17th century, the finest colourless glass was produced in Venice. In 1676, George Ravenscroft succeeded in developing good quality clear lead glass, also known as flint glass, in England. Ravenscroft patented his new technique, which introduced lead in addition to potash as a flux. Upon the expiry of Ravenscroft's patent in 1681, the production of lead glass was taken up by numerous glassmakers. A document dating to 1696 listed 27 out of 88 glasshouses were producing 'flint glass' (Vose 1980, 198-99).

The introduction of plate glass was a major advance in the glass-making industry. The process allowed glass to be cast into thick plates and then flattened by heavy rollers. The glass was finished by grinding and polishing. English plate glass was first manufactured by a company established in 1773 at Ravenhead, near St Helens (Redding 1842, 89). Specialist glassworkers were hired from France, but by the mid-19th century, 'the great majority of persons employed are Englishmen' (op cit, 90). Redding also claimed that English glass of the 19th century was superior to that of either the French or Venetian artisans as a result of 'the application of chemical and mechanical science to the improvement of several processes', but noted that 'great jealousy is manifested by the proprietors in keeping secret the details of their processes' (*ibid*).

The next improvement in glassmaking was the press-moulding technique, developed in America in the 1820s. Press-moulding was established in England in the 1830s, initially in the West Midlands, and eventually became a large industry. The first press-moulded glass known to have been produced in Manchester has been dated to 1848 (4.4.5 below), although it was not produced widely until the 1860s, coinciding with the introduction of tank furnaces and regenerative gas furnaces at the Pilkington glassworks in St Helens. The new German technology was developed by the Siemens brothers (Krupa and Heawood 2002), and these new methods began to replace the old glass cones and pots.

In Manchester, the glass industry, however, does not appear to have taken advantage of the new technology, and glass manufacture continued to use traditional crucibles, although the results of the archaeological investigation at the Percival, Vickers & Co Glass Works implies that considerable modifications were made to the traditional cones which housed the furnaces (OAN 2004, 14).

Few details are available regarding the improvements made to glass furnaces during the 19th century, reflecting that 'glassmaking was a closely guarded secret and little was recorded in the period 1826 to 1896' (Parkin 2000, 2). However, it is generally accepted that whilst the round reverberatory furnaces of the early 19th century contained two or four crucibles, the period 1835-50 saw enlargements to accommodate eight or ten crucibles, each with a capacity of up to five hundredweight of molten glass (op cit, 14).

4.4.5 Glass Manufacturing in Lancashire

Entries in the parish registers of Stockport and Ashton-under-Lyne for the years 1605-53 are the earliest reference to glassmaking in the Manchester area (Vose 1980, 146). The first coal-fired glasshouse in the region to have been excavated archaeologically was at Haughton Green, near Denton, which was in production between 1636 and 1643 (Vose 1994). Green, blue and black domestic glass, including decorated vessels, bottles and window glass were produced at the glasshouse. References to other 17th-century glassworks appear in a list of glasshouses in England and Wales compiled at the end of the century (Houghton 1696), which refers to two works in Lancashire, one near Warrington, erected in c 1650 (Harris 1968), and one at Sutton that was established c 1698.

The region's glass industry expanded during the 18th century, with works opening at Prescott in 1719 (Buckley 1929), two works were established in Liverpool (Ashmore 1982, 14), a bottle works was opened at Thatto Heath, near St Helens, and the products of a Salford glasshouse were advertised in local papers in 1759-60 (Ashmore 1969, 124). In 1785, Imison and King opened a glassworks in Newton Heath for the manufacture of 'all sorts of glass wares', and references to the Manchester firm of Atherton and Whalley, cut and engraved glass manufacturers, date back to 1795 (Dodsworth 1980, 64).

The first well-documented large-scale glasshouse in Lancashire was established at Ravenhead, St Helens, in 1773 (Redding 1842, 89). St Helens had become established as the main centre of plate-glass manufacture in the country by the 1860s, reflecting the local availability of raw materials such as coal, alkalis from the chemical works, and good supplies of suitable sand (Krupa and Heawood 2002). Manchester, however, also emerged as a major glass-manufacturing centre; the industry was well enough established by 1821 for glassblowers to take part in the processions which marked the coronation of George IV (Dodsworth 1980, 64), and by 1872 Manchester was the largest employer of glassmakers in England (Yates 1987, 29).

An important group of Manchester's 19th-century glassworks were established within the Oldham Road and Ancoats area, although another concentration of works was also established in Hulme. Most of the glassworks in Ancoats were established by Warrington glass workers, who had moved to Ancoats to set up their businesses in the 1820s. The earliest glassworks in Ancoats, established in 1827, was Maginnis Molineaux and Co, which became the Molineaux Webb Ltd Co Manchester Flint Glass Works (HER 12336.1.0). In 1833-4, Jackson, Woolfall and Percival established the Manchester Glass Bottle Works (HER 12428.1.0) at no. 6, Prussia Street, Ancoats. In 1844, however, Thomas Percival, the son of one of the partners in the Manchester Glass Bottle Works (HER 12428.1.0) concern, established his own manufactory on nearby Jersey Street (HER 6477.1.0; 12432.1.0), after spending several years as the manager of the Molineaux Webb works (Children's Employment Commission 1843). The Ordnance Survey map of 1848 (Fig. 6) shows that both the Manchester Bottle Works and Thomas Percival's British and Foreign Flint Glass Works (HER 6477.1.0; 12432.1.0) had been established within the Site Area.

Between 1855 and 1865, the number of glassworks in Manchester increased four-fold. Significant glass-making firms that were established in Ancoats during this period

included Burtles Tate Ltd (1858) at the Poland Street works (HER 12429.1), Thomas Kidd and Co (1868) at the Holt Town Glass Works, Ker Webb and Co (1868) at the Prussia Street Glass Works (HER 12430.1.0), the Ancoats Machine Glass Works on Pollard Street, and the Phoenix Glass Works on Collyhurst Street. The prosperity of the trade during these years reflected a shift from free-blown luxury items to the mass-production market, influenced by a growing demand for pressed glass.

Manchester became a major centre for the production of press-moulded glass in the third quarter of the 19th century, second only to Newcastle in terms of the quality and quantity of pressed glass that was manufactured (OAN 2004, 14). The first Manchester firm to produce pressed glass is thought to have been Molineaux Webb, who were manufacturing such wares as early as 1848, although they did not begin to register designs regularly until the 1860s (Dodsworth 1980, 67).

During the 1880s and 1890s, many of the Manchester glassworks began to close, possibly as a result of the great depression in trade, but also likely due to cheaper imports and failure to adopt new technology (Yates 1987, 37). The Ordnance Survey map of 1893 (Fig. 7), however, shows that four glassworks were still in operation within the Site Area. Very few glassworks survived into the 20th century, especially after the Great War. A detailed survey of Manchester's industries undertaken during the 1920s, makes no reference to glass manufacture in the city (Clay and Brady 1929). The Ordnance Survey map of 1922 (Fig. 8) annotated the flint glassworks on Poland Street, indicating that it may have still been in production. Slater's trade directory of 1909 lists Burtles and Tate & Co as glass manufacturers at the address (Slater 1909, 474).

4.4.6 Housing in Manchester

Dense plots of workers' housing were built adjacent to the mills and factories within the Site as people flocked from the countryside to the growing urban centres. The net result was the creation of the world's first industrial suburb: an edge-of-town industrial estate with associated housing, community facilities (churches, pubs and charitable refuges) and related businesses. Workers' houses were generally poorly built and within inadequate sanitary facilities, which caused disease and horrendous living conditions for the working classes.

Attempts were made by the Manchester Police Commissioners to apply a rudimentary form of building regulations as early as 1792. However, with no way to enforce these regulations, they were largely ignored (Hylton 2003, 152). By the 1820s and 1830s, housing conditions deteriorated further, with poor sanitation, no form of water supply and poor-quality bricks and mortar (Nevell 2008, 136; Pearlman 1956, 3). At best, an open drain from an ashpit privy might have been installed down the middle of the street or court (Parkinson-Bailey 2000, 35). 18th-century houses were compromised during this period by the infilling of areas between these dwellings with back-to-back and blind-back housing, and by the increasing use of these buildings, originally designed for occupation by one family, as tenements, that were occupied by two or more families. As a result, houses became increasingly overcrowded and cellars were used as separate dwellings (Nevell 2008, 152; Marr 1904, 34 and 60).

A description of the housing conditions during the early 19th-century was given by Dr J Ferriar in the proceedings of the Board of Health in 1805:

“The number of damp and very ill-ventilated cellars inhabited in many parts of the town is a most extensive and prominent evil. It may be necessary to explain to gentlemen who have not visited such places, that they each consist of two rooms underground, the front apartment of which is used as a kitchen, and though frequently noxious by its dampness, and closeness, is greatly preferable to the back-room: the latter has only one small window, which, though on a level with the outer ground, is near the roof of the cellar, it is often patched with boards or paper, and in its best state, is so much covered with mud, as to admit very little either of air or light. In this cell, the beds of the whole family, sometimes consisting of seven or eight, are placed. The floor of this room is often unpaved: the beds are fixed on the damp earth. But the floor, even when paved, is always damp. In such places, where a candle is required, even at noon-day, to examine a patient, I have seen the sick without bedsteads, lying on rags; they can seldom afford straw. This deplorable state of misery becomes frequently the origin, and certainly supports in a great degree the progress, of infectious fevers.” (Board of Health 1805, 12-13).

Further acts were introduced during the 19th century to improve living conditions in Manchester. The Manchester Police Act of 1844 stated that any new house should be provided with a toilet, with a door and covering, and all existing houses were to have one installed; significantly, this act also banned the building of new back-to-backs (Muthesius 1982, 126; Lloyd-Jones and Lewis 1993). The Public Health Act of 1848 further sought to improve conditions by giving ‘local authorities powers to supply water, to pave and clean streets, to arrange the collection of refuse and the whitewashing and purifying of houses’ (Parkinson-Bailey 2000, 40). Cellar dwellings also became illegal in 1853 through the Manchester New Streets Act, however, this took approximately three decades to take full effect, as many cellar dwellings remained occupied until 1872 (Hylton 2003, 154).

Two significant advances in housing legislation were introduced in the late 1860s. The first was the Manchester Waterworks and Improvement Act of 1867, which led to the appointment of a Medical Officer of Health for the town, the first of which was Dr John Leigh (Parkinson-Bailey 2000, 41). Nationally, this act was the first of its kind that enabled houses unfit for habitation to be closed and demolished. Significantly, the 1867 act also specified the minimum requirements for room sizes and window areas in new dwellings, and also required that every new house had a yard at the rear. This act also required a minimum street width of 30ft (*ibid.*). This local act was then supplemented in 1868 by the passing of a national act. This was the Artisans’ and Labourers’ Dwelling Act, also known as the Torren’s Act after its author, which focused on the improvement, maintenance, or demolition of pre-existing houses and also new-build houses (*ibid.*). To bring houses up to the required standard, landlords might create a through-dwelling by knocking doors through the party wall between a pair of back-to-backs. Pairs of back-to-backs or individual one-up one-downs might be removed altogether to create the space for yards for the remaining property (Roberts 1993, 22-3). In 1875, the Artisans’ and Labourers’ Dwellings Improvement Act was introduced to provide the mechanism of slum clearance, the first act of its kind (Pearlman 1956, 28). However, the Manchester authorities were initially resistant to this act, and it was not until 1890, with the amendment of this Act, that slum clearance and regeneration began in earnest (*op. cit.* 34).

By the 1880s a series of medical reports produced by the medical officer at the time, Dr Leigh, had described the slums of Manchester and the still prominent issue of housing and sanitation. In 1890 the Artisans' and Labourers' Dwellings Improvement Act was amended, meaning that the local authority was to take responsibility for the construction of new dwellings, and it was only after this that slum clearance and regeneration began in earnest in Manchester (Pearlman 1956). Soon after, the first municipal housing development, known as Victoria Square, was constructed in Ancoats (Gould 1895; Historic England 2021d; HER 8504.1.0). The block was built to house the mill workers of Ancoats who were moved from the slums and was followed shortly by the development of model housing in adjacent Sanitary Street, now Anita Street.

The architect, C. J. Maycock, visited Manchester and Liverpool to assess the practicality and financial security of the new model housing schemes. He suggested that new buildings should only be constructed in Manchester under exceptional circumstances and believed that the only way to house families of the lower classes comfortably and cheaply was to find a suitable old building that could be remodelled instead into a flat system. This concept would also not need as much ground as it would to construct new cottages. Plans were then prepared by Maycock to convert the then unused Jersey Street Mill into dwellings (HER 13698.1.0). Unlike the Victoria Square and Anita Street developments, which were new purpose-built schemes, the conversion of the mill for residential use was to be the first act of its kind (Gould 1895). Maycock's plan was supported by the Medical Officer of Health and the Corporation, and was described as 'a much needed reform in work-people's dwellings' (*Manchester Courier and Lancashire General Advertiser* 17 March 1891).

The *Manchester Times* newspaper reported on the proposed scheme and claimed that the whole cost of transforming the mill into dwelling houses was estimated to cost £20,000 (*Manchester Times* 15 February 1890). The *Manchester Times* wrote a follow up article four months later and included a copy of Maycock's plan of the proposed scheme (Plate 4). The plan showed that the dwellings were to be reached via external balconies and four staircases, two at each end of the main mill building and the proposed outdoor children's playground in place of the former weaving shed (*Manchester Times* 14 June 1890). It was also proposed that a Co-operative Provision Store was to occupy part of the premises (*Manchester Courier and Lancashire General Advertiser* 21 January 1891).

The Jersey Street Mill (HER 13698.1.0) was converted into 149 dwellings and the homes were opened by the Mayoress of Manchester in 1892, by which time 105 of the flats had been let (*Coventry Evening Telegraph* 31 May 1892). They were 'intended as a first step towards the provision of sufficient healthy accommodation for those of our artisans who are compelled to live in crowded portions of the city' (*Empire News & The Umpire* 29 May 1892). A photograph taken outside the Jersey Street dwellings in 1893 shows the children's playground and the balconies from which the flats were accessed (Plate 5).

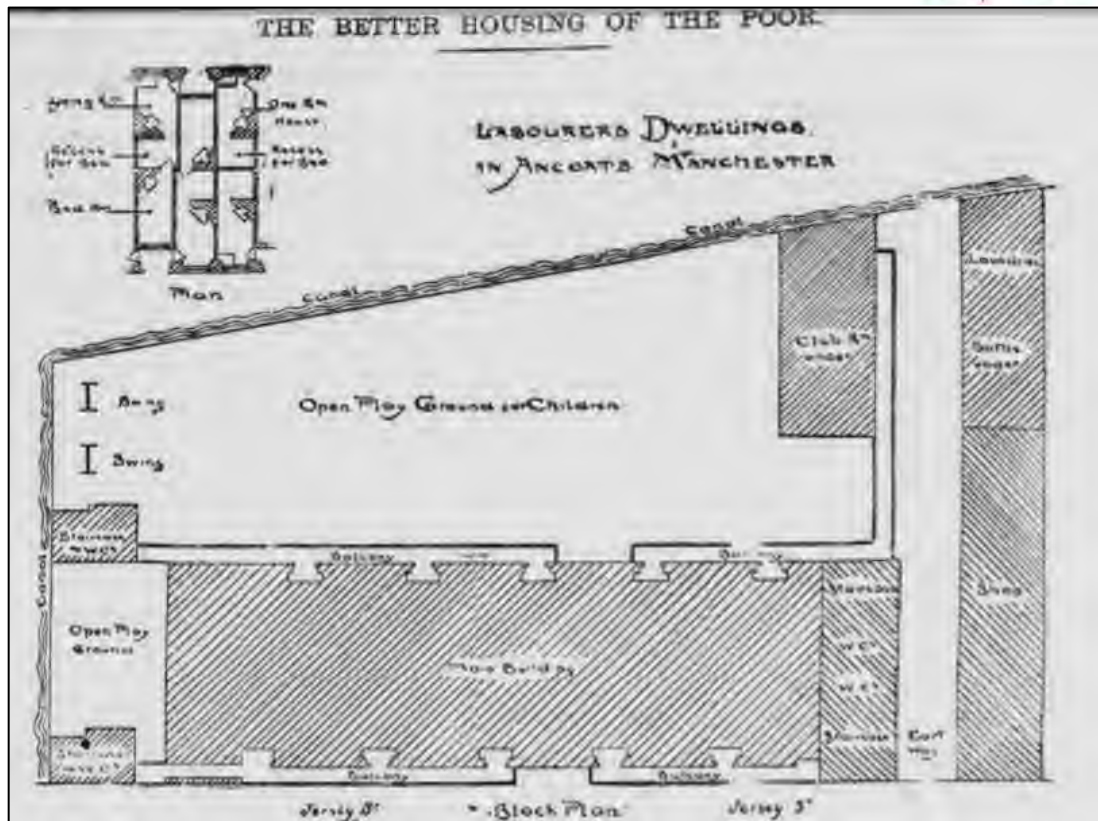


Plate 4: Copy of a plan of the proposed dwellings (Manchester Times 14 June 1890).



Plate 5: Jersey Dwellings, Ancoats in 1893, courtesy of Manchester Local Image Collection

4.5 Development of the Site

The development of the Site may be traced reasonably well from the sequence of available historic mapping. The earliest maps that capture the Site are Laurent's 1793 map of Manchester and Salford (Plate 6) and Green's map of 1787-1794 (Plate 7; Fig 3). Aspects of the pre-industrial landscape, such as field boundaries, are depicted on the map, running to the northwest and southeast of the Site boundary. The field boundary had likely run through Elliot Street, Heath Street, Elizabeth Street, Loom Street, Leigh Street, Caroline Street and Portugal Street. The remnants of relict soil and a field boundary were excavated at Silk Street in 2008 (EGM 16146.1.0). The relict soil and field boundary contained 17th- and 18th-century pottery, including a clay pipe bowl that dated to 1640-80 (HER 16146.1.0).

Both maps show that a grid of streets had been laid over former agricultural fields. The streets established within the Site included Portugal Street, Caroline Street, Leigh Street, Loom Street, Elizabeth Street, Heath Street and Elliot Street (later renamed Jersey Street), which were aligned northeast to southwest. Some of these streets were named after the original landowning families (George and Henry Cornwall Leigh for example) (Rose *et al* 2011, 8). The grid of streets laid northwest to southeast comprised Bengal Street, German Street, Poland Street, Prussia Street and Rodney Street.

Laurent's plan (Plate 6) indicates that an additional street had been laid between Poland and Prussia Street named Buckle Street, however, the road was not captured on Green's map (Plate 7). Both maps indicated that the Site was semi-rural in the late 18th-century, with piecemeal development along the newly laid streets, though development was mainly focused on Newton Lane (Oldham Road).

The area currently occupied by Ancoats Green was bounded by Portugal Street to the north, Prussia Street to the east, Loom Street to the south, and Buckle Street to the west. Both late 18th-century maps show that development had taken place at the Portugal and Prussia Street junction, and the Loom Street and Prussia Street junction. An L-shaped row of workers' terraced houses had been built along the Prussia Street and Loom Street frontage. Each property had a small backyard with a possible privy to the rear. The footprint of the buildings along the Portugal Street frontage were slightly larger, some of which may have functioned as businesses.

Scholes trade directory of 1794 recorded some of the occupants along Loom Street. The trade directory gives an insight into the occupations of the residents and indicates the increasing employment opportunities in the textile industries. William Howarth, John McEvoy, Charles Morrow, John Radford, and Robert Robinson, all worked as weavers, whilst James Partington, was a fustian-cutter (Scholes 1794, 69-112).

The trade directory also listed several semi-skilled and skilled craftspeople such as John Burrows, a blacksmith (Scholes 1794, 24), John Cottingham, a book-keeper (Scholes 1794, 34), William Heys, a plasterer (Scholes 1794, 62), Phillip Phillips, a shopkeeper (Scholes 1794, 103), William Ratcliffe, a bread baker (Scholes 1794, 107), and William Warrington, a shoemaker (Scholes 1794, 141).

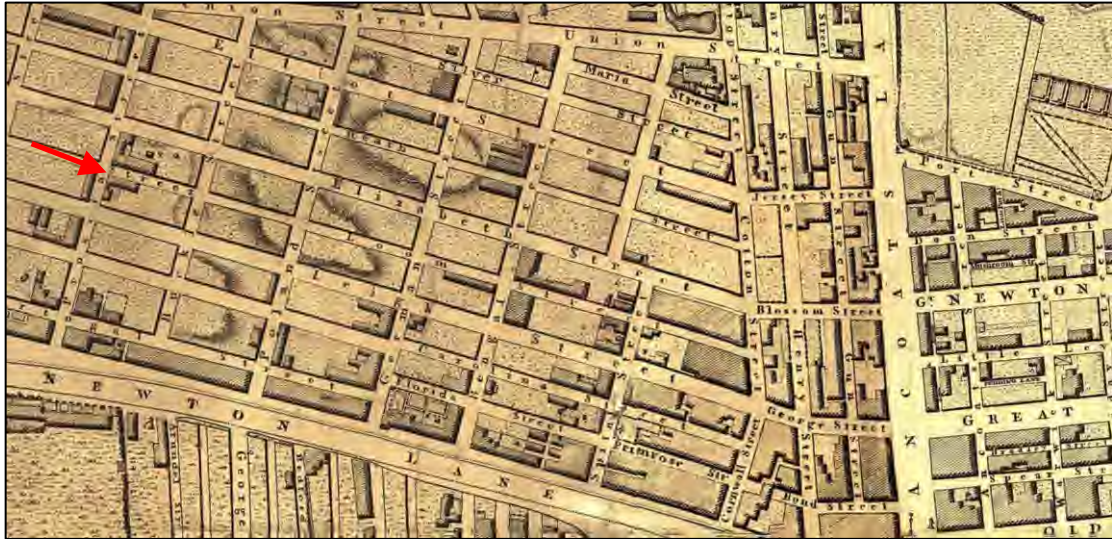


Plate 6: Laurent's 1793 map of Manchester and Salford showing the approximate location of the Site



Plate 7: Site boundary superimposed onto Green's map of 1787-1794

By 1820, the Prussia Street arm (HER 6476.1.0) of the Rochdale Canal had been constructed through roughly the centre of the Site, dividing it into two (Plate 8). The arm was built between 1805 and 1808 and ran northwards towards Oldham Road, along the former route of Buckle Street, shown on Laurent's plan of 1793 (Plate 6). The construction of the canal arm altered the proposed street layout, cutting through the middle section of Caroline Street, Leigh Street, Loom Street, Elizabeth Street, and Heath Street. The canal arm split west towards Bengal Street, known as the Bengal Street Arm (HER 16148.1.0; Arrowsmith 2005). Johnson's map of 1820 shows that the canal arm was crossed by bridges on Jersey Street (HER 6476.1.0), German Street (HER 6461.1.0) and Poland Street (HER 6478.1.0; Plate 8).

The Prussia Street Arm (HER 6476.1.0) of the canal ran along the west side of the plot of land currently known as Ancoats Green. A similar arrangement of buildings was captured on Johnson's map within the Ancoats Green area, which shows buildings at the Prussia Street and Portugal Street junction and buildings along the Loom Street and Prussia Street junction (Plate 8).

Several vacant plots of land were captured on the 1820 map, though these likely functioned as coal yards and wharves, built to supply the surrounding steam-powered mills (Plate 8). An entry in the 'Manchester Directory' of 1811 refers to a coal yard operated by Edward Stelfox, a coal merchant at no. 8 German Street. Evidence from subsequent directories suggests that the coal yard was at the bottom of German Street, adjacent to the canal bridge and arm. The plots of land that had been developed likely consisted of a mixture of domestic, retail, commercial and industrial buildings.

In the late 18th-century, the area remained semi-rural and sparsely populated with its residents being a mixture of businessmen, tradespeople and even gentlemen. By the 1820s, there had been a demographic shift. An article published in *The Times* in 1819 stated that Ancoats had been 'created by the success of the cotton trade, and swarms with inhabitants, who all share its vicissitudes. It is occupied chiefly by spinners, weavers, and Irish of the lowest description, and may be called the St Giles' of Manchester' (*The Times* 24 August 1819). The rate books for Bengal Street and Gerrard's Court list several Irish surnames by the 1820s.

Pigot and Dean's trade directory of 1821 seems to support this notion, recording that most of the residents at Prussia Street were employed as weavers (Pigot and Dean 1821, 12-20). A few people were employed as spinners, and there was also a carder, a joiner, two warpers and a fustian dresser. In addition, several of the inhabitants had Irish surnames, including Murphy, McWade, McNally, McLaughlin, McConvill and Connelly (Pigot and Dean 1821, 2-81). The trade directory also recorded that most of the residents along Loom Street were also employed as weavers (Pigot and Dean 1821, 6-28).



Plate 8: Johnson's map of 1820 showing an arm of the Rochdale Canal at the Site

Swire's map shows that by 1824, Elliot Street had been renamed Jersey Street (Plate 9; Fig 4). The same grid of streets was captured on the plan, and the same footprint of buildings occupied land within Ancoats Green. The plan shows limited detail of the individual buildings within the Site, and it also shows that much of the land on either side of the canal arms remained undeveloped. Larger blocks of buildings most likely represented factories or mills, such as the large rectangular building on the southern side of Jersey Street, which was an early depiction of Beavers Cotton Mill. Beavers Cotton Mill was opened on Jersey Street by Hugh Beaver as a 'principal mill' in 1825.

Beavers Cotton Mill was constructed at the peak of mill building in Manchester when numerous new textile mills were being established on the fringe of the town. One of the first mills to have been constructed in the vicinity of the Site was Murray's Mill on Jersey Street, to the immediate southwest of the Site boundary. Murray's Mill complex was built in phases during the late 18th and early 19th centuries (Historic England 2021a; HER 2043.1.1). Other mills built during this period included Sedgwick Mill, which was established by 1820, located 308m west of the Site (HER 2120.1.0; Historic England 2021b) and Beehive Mill, completed by 1824 within the Site (HER 2121.1.0; Historic England 2021c).



Plate 9: Site boundary superimposed onto Swire's map of 1824

Bancks and Co's plan of 1831 (Fig. 5) shows the individual buildings within the Site and annotates industrial premises (Plate 10). The map shows that many of the streets had been developed into back-to-back houses. Larger, double-depth houses occupied Prussia Street, Poland Street, German Street, Bengal Street, Jersey Street and Oldham Road. At least three cotton mills had been established off the streets within the Site, together with a chemical works, coal yards and a Sunday School (HER 16150.1.0). The narrow canal bridges on Jersey Street, German Street and Poland Street were depicted in greater detail on Bancks' plan (HER 6476.1.0; 6478.1.0; 6461.1.0).

By 1831 (Plate 10; Fig. 5), double-depth terraced houses lining the southern side of Portugal Street had been expanded up to the Prussia Street canal arm, within the area currently occupied by Ancoats Green. The same buildings first shown on Green's map of 1787-94 (Plate 7; Fig. 3) occupied the Loom Street and Prussia Street junction. The buildings comprised five dwellings with back yards and privies along the north Loom Street frontage, with three larger buildings along Prussia Street. A ropery had been established in the plot of land between Loom Street and Portugal Street.

An article titled ‘Accident and Offences”, published in the *Manchester Mercury* in 1830 reported the violent behaviour of the Irish in Ancoats. It reported that an English cart driver was attacked by a group of Irishmen on Poland Street following a dispute about a donkey. The report stated that the attack “serves to show the almost murderous spirit of violence that exists in the breast of some of the lower order of Irish”. The Irishman with whom the driver had had the dispute had summoned a “posse of Irishmen, some of them armed with sticks” from the Death of Nelson public house, who then struck the driver several times (*Manchester Mercury* 05 January 1830).

The census returns of 1841 recorded the inhabitants of Loom Street. The residents were employed in a range of occupations, including galls cutters, shoemakers, a bookbinder, a lawyer, weavers, spinners, carders, and cotton doublers (1841 Census Returns, Manchester, Lancashire). The residents of Prussia Street had a similar variety of occupations. The 1851 census returns recorded a similar demographic. Many inhabitants were employed in the textile industry, including fustian cutters, card room cotton, cotton piecers, cotton winders and silk winders. Shoemakers, painters, and whitesmiths were some of the semi-skilled professions listed. The residents were born in a mixture of places, including Ireland, Manchester, Derbyshire and Yorkshire (1851 Census Returns, Manchester, Lancashire). Occasionally, the properties were occupied by multiple families. The inhabitants of Prussia Street were employed in the same types of jobs and were born in Ireland, Liverpool, Derbyshire and Manchester.



Plate 10: Site boundary superimposed onto Bancks & Co.'s map of 1831

Mid-19th-century mapping (Plate 11; Fig. 6) captures the development of the glassmaking industry in Ancoats. The glassworks in Ancoats were established by Warrington glass workers, who had moved to Ancoats to set up new glass businesses. Warrington glass manufacturers included Thomas Percival senior, Thomas Percival junior and John Woolfall. John Woolfall moved from Warrington to a private house at no. 6 Prussia Street during the early 1830s, establishing the Manchester Glass Bottle Works (HER 12428.1.0), immediately to the south of his house by 1833 (Census Returns 1861, New Cross, Manchester).

The earliest reference to the Manchester Glass Bottle Works (HER 12428.1.0) appears in a newspaper advertisement in the *Liverpool Mercury* on 22nd August 1834. It states that "Manchester Glass Bottle Works, Prussia Street, Oldham Road. Jackson, Woolfall and Percival, manufacturers of wine, spirit, porter, soda water, castor oil and medicine bottles, Gooseberry; mustard, and pickling jars, carboys of all sizes and every other description of articles in the trade, for home use and exportation". The advertisements also stated that John. S. Royle was the sole agent in Liverpool (*Liverpool Mercury*,

22nd August 1834). The Manchester Glass Bottle Works was also listed in Pigot and Dean's trade directory of 1841 (Pigot and Dean 1841, 143). The business was registered at no. 8 Prussia Street, occupied by Jackson, Woolfall and Percival.

The Ordnance Survey map of 1848 (Fig. 6) and Adshead's map of 1851 (Plate 11) are the first accurate maps that capture the layout of the Site. The Manchester Glass Bottle Works was circular in plan, with a long rectangular building extending southwest towards the canal arm. The plan of the glassworks implies that it was a traditional glass cone, typical of the early 19th century. The long narrow building extending from the furnace may have been a flue that led to a square-based chimney. A further industrial property associated with the glassworks was situated to the north of the glassworks and directly west of the property owned by John Woolfall. This building may have been used to cool or store glass objects.

The same configuration of buildings along Loom Street, Prussia Street and Portugal Street were captured on the two mid-19th-century maps (Plate 11; Fig. 6). The Ordnance Survey map of 1848 depicts external staircases and window lights along Loom Street and much of the Prussia Street frontage, indicating that the buildings contained cellars. The street layout remained unchanged, with the same three drawbridges crossing the canal arms.

Adshead's map marked the building at the junction of Portugal Street and Prussia Street as a warehouse or place of business (Plate 11). Slater's trade directory of 1850 listed John Woolfall as the owner of the Manchester Glass Bottle Manufacturers at no. 8 Prussia Street. John Percival, a shopkeeper, lived at no. 2, whilst Maria Percival occupied the premises at no. 6 (Slater 1850, 83). Most of the buildings along Oldham Road also functioned as businesses.

Adshead's map annotates the many industrial factories within the Site, which included Percival, Yates and Vickers Flint Glass Works (HER 12432.1.0), Hugh Beaver's Cotton Mill, J. Elloe & Co Phoenix Iron Works (HER 6473.1.0), Thornton's Fustian Mill, Irlam and Bothell's Gibraltar Iron Works, Howarth's cotton mill, Walker's cotton mill, McGregor & Co's ironworks, Cross and Openshaw's cotton mill, Purnell and Thompson's cotton mill, A & G Murray cotton mills, Bank's Foundry, Sykes and Miller's cotton mill, and Lamb's Spindle Manufactory (Plate 11).

Several public houses had been established, including Beehive Tavern, Death & Nelson, Murray's Arms Tavern, Cross Keys (HER 6472.1.0), White Lion, Wheatsheaf Tavern, Spread Eagle Tavern, and Lord Howi's Fleet. On the opposite side of Prussia Street, the Odd Fellows Tavern had been established, which may have functioned as a meeting house. Odd Fellows is one of the earliest fraternal societies, which began to gain popularity during the mid-18th century. Slater's trade directory of 1850 recorded John Hardman as the occupier of the Odd Fellows Arms at no. 9 Prussia Street (Slater's Trade Directory 1850, 83). John lived with his wife, niece, and son. His wife, Bridget, was born in Ireland, whilst the other occupants were born in Manchester. A waiter/vault man, Robert Garner, was also recorded in the census returns, as was a servant, Sarah Holeshead (Census Returns 1851, Manchester, St Barnabas).

On 28th April 1860, John Woolfall placed an advertisement in the Newcastle Guardian and Tyne Mercury to find a new partner. The advertisement stated that "The proprietor, John Woolfall, who built the said works, with large cone, pot arch, ash arches, and 15

annealing arches and in full work, in consequence of declining health wants a partner of active business habits, to find equal capital and equal interest. A steady practical man would be preferred" (*Newcastle Guardian and Tyne Mercury*, 28th April 1860).

John, aged 59, resided at the same residence in 1861, living with two servants. He continued to work as a glass manufacturer (1861 Census Returns, New Cross, Manchester, Lancashire). Shortly after the census returns, John moved out of no. 6 Prussia Street and presumably sold his business. By 1863, John Cannington and Co were glass bottle manufacturers at no. 10 Prussia Street (Slater 1863, 115). Land adjacent to the glass bottle works was the Bridgewater Trustees Coal Wharf.

A fire, reported in the *Manchester Times* on 16th March 1870, implies that John Cannington had purchased the former Manchester Glass Bottle Works on Prussia Street. The fire took place at no's 8 and 10 Prussia Street, occupied by glass blowers John Cannington and Co (*Manchester Times News* 19th March 1870). The fire reportedly took place in a shed building, which was destroyed.

The census returns for 1871 recorded a new glass manufacturer at no. 10 Prussia Street, Glass Works. George Rowlinson, a glass bottle maker, was recorded as the head of the household. He lived at the property with his wife, three children and a boarder, who worked as an apprentice. The family members were born in a mixture of places, including Bold, Newton, Liverpool and Ireland (1871 Census Returns, New Cross, Manchester). George Rowlinson appears to have been the last glass manufacturer at the former Manchester Glass Bottle Works site.



Plate 11: Site boundary superimposed onto Adshead's map of 1851

During the last quarter of the 19th century, the glassworks off Prussia Street were demolished, together with the late 18th-century properties that had lined the southern side of Portugal Street and the west side of Prussia Street. Demolition works were

most likely undertaken during the late 1870s, as properties between 4 to 24 Prussia Street were not in the census returns of 1881 or Slater's trade directory of 1879. The Ordnance Survey map of 1891 shows that the land had been redeveloped into a Recreation ground with plenty of seating (Plate 12; Fig. 7).

Purdon Street had been laid to the north of Loom Street and consisted of rows of terraced workers' housing. Additional dwellings had been constructed to the north, along Prussia Street. A group of buildings centred on a courtyard had been built to the north of Purdon Street. Presumably, the buildings were workshops, stables or sheds associated with a wharf that had been established immediately to the southwest (Plate 12; Fig. 7). A photograph taken in 1901 shows stables off Prussia Street (Plate 13).

The 1891 census returns were similar to the earlier censuses, with the inhabitants of Loom Street employed in the textile industry, as well as labourers, machine and engine fitters and iron moulders. The residents were born in the same places, including Lancashire, Ireland, London, Manchester and Yorkshire (1891 census returns, New, Manchester, Lancashire). The occupants of Purdon Street were employed in a similar range of occupations, including gas stoker, textile workers, boilermakers, joiners and labourers. They were also born in a similar variety of places.

Although the glassworks within the area of Ancoats Green had been demolished by the late 1870s or early 1880s, glass manufacturing remained important within the Site Area. Slater's trade directory of 1877 listed the premises of a new glassworks, occupied by Andrew Flint and Co, flint glass manufacturers at Flint Glass Works, Prussia Street, Oldham Road (Slater 1877, 300). This entry likely refers to the Prussia Street Flint Glass Works (HER 12430.1.0), captured on the 1891 map (Plate 12; Fig. 7), off Harriet Street. Percival, Vickers & Co Ltd operated the glass manufactory off Jersey Street until 1880, which was shown on the 1891 map as British and Foreign Flint Glass Works (OA North 2004; HER 12432.1.0). A third glassworks was situated off German Street (HER 12431.1.0), to the south of the canal arm, whilst a fourth Flint Glass Works was at Poland Street.

Other industrial premises and warehouses within the Site Area included Portugal Street mill (cotton), Street Mains Department (Gas), City Corn Mills, Bridgewater ironworks, Jersey Street Mills, City of Manchester Screw and Bolt Works (HER 6475.1.0), cotton mills, Beehive Cotton mill (HER 2121.1.0), Phoenix Iron Works (HER 6473.1.0), City File Works, a smithy and German Street Cotton Mills (HER 16139.1.0).



Plate 12: Site boundary superimposed onto the Ordnance Survey Town Plan of 1891



Plate 13: View of stables adjoining Prussia Street in 1901, courtesy of Manchester Local Image Collection

The Ordnance Survey map of 1909 (Fig. 8) captures the same Site layout, though Loom Street had been renamed Cymbal Street and Jersey Street Mill had been converted into tenements (HER 13698.1.0). Another minor change included the demolition of stables north of Purdon Street. Despite the conversion of the mill into model housing, the 1908 map shows that most of the back-to-back houses were still in use in the west part of the Site. Slater's trade directory of 1909 recorded Edward Kelsall, a shopkeeper, who lived at 42 Prussia Street, between Purdon Street and Cymbal (formerly Loom) Street (Slater 1909, 486). Ellesmere (Earl of) Bridgewater still owned the coal wharf at Purdon Street (*ibid*).

Little further development took place within the Site during the early 20th century (Fig 9). The 1922 plan shows that German Street had been renamed Radium Street, and Prussia Street was renamed Kemp Street (Fig. 9). Back-to-back houses between Loom Street and Naval (formerly Elizabeth) Street had been demolished, together with back-to-backs in the west part of the Site between Naval Street and Primrose Street and between Silk Street and Portugal Street. Double-depth houses along the main streets had been retained, and the area continued to be occupied by a dense arrangement of factories and warehouses.

By 1922 (Fig. 9), only one glassworks was still in operation, located to the south of the Street Mains Department (Gas). The Flint glassworks on the southern side of Jersey Street had largely been cleared, with the remaining building along the street frontage converted into a waterproof factory.

Goad's fire insurance plan, surveyed in 1928, did not seem to capture the eastern portion of the Site between Rodney Street and the Prussia Street canal arm (Plates 14-5). The plan captures a similar arrangement of buildings and streets within the Site Area, however, it suggests that the Bengal Street canal arm had been partly infilled between Bengal Street and Poland Street, making the bridges on German Street and Poland Street redundant. Goad's insurance plan of 1928 is the last available map that captures the Jersey Street tenements (Plates 14-5).



Plate 14: Goad's Fire Insurance Map, surveyed 1928, sheet 217, showing zoomed in image of the Site (full Site boundary lies beyond the zoomed in image)

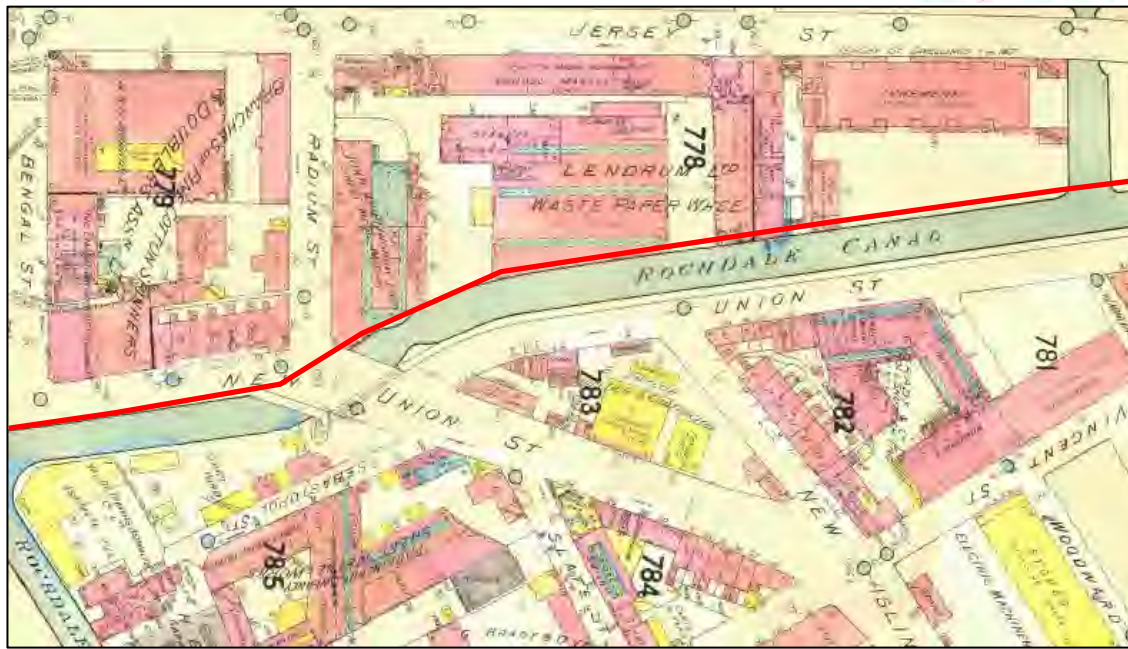


Plate 15: Goad's Fire Insurance Map, surveyed 1928, sheet 218, zoomed in image of the Site (full Site boundary lies beyond the zoomed in image)

The same street layout, recreation park and dwellings are captured on the Ordnance Survey map of 1947 (Fig. 10) at Purdon Street and Loom Street, in the area currently occupied by Ancoats Green. A similar street layout and most of the same buildings were captured in the remainder of the Site. Many factories were still standing, though some had changed function. The map also showed that by the mid-20th century, the Jersey Street dwellings had been demolished, and the area remained vacant.

In the late 1940s (Fig. 10) and into the 1950s, back-to-back dwellings were still in use within the Site Area, though numbers 2 to 8 Purdon Street had been demolished. Back-to-backs still stood along Silk Street and in the northern tip of the Site at Collinge Court.

Before the survey for the Ordnance Survey map of 1969 (Fig. 11), the late 18th-century dwellings along Cymbal Street were demolished, along with the houses to the north at Purdon Street. The former Prussia Street arm of the Rochdale Canal was infilled, together with the remainder of the Bengal Street canal arm. Most of the 18th- and 19th-century dwellings had been demolished and replaced by new houses at Mozart Close and Derwent Home. Oldham Road continued to be interspersed with 19th-century houses, as was the area between Rigel Street and Portugal Street, in the north tip of the Site (eventually replaced by Rodney Court flats in the 1970s).

Modern mapping shows that the Site Area is currently occupied by a mixture of 19th-century industrial buildings, a former 19th-century school, modern warehouses, hard-standing car parks, the 1960s and 1970s residential developments and more recent mid-rise residential apartment blocks (Fig 2). Following the demolition of houses on Purdon Street and Cymbal (Loom Street,) the recreation ground was extended up to Harriet Street and is currently known as Ancoats Green. A photograph shows Ancoats Green in 1962 (Plate 16).



Plate 16: View of Ancoats Recreation Ground, Kemp (Prussia) Street in 1962, courtesy of Manchester Local Image Collection

Much of the original street layout has been retained in the southwest part of the Site, with Bengal Street, Primrose Street, Portugal Street, Loom Street and Silk Street and the west portion of George Leigh Street all forming very narrow one-way roads. In addition, the vestiges of former factory walls are visible along Poland Street, Jersey Street and German Street. In contrast, most of the former streetscape has been lost in the northeast part of the Site Area, which was redeveloped in the 1960s and 1970s.

Other surviving aspects of the 18th- and 19th- century streetscape include the stone parapets of the former canal bridges on Jersey Street (Plates 17-9), Poland Street (Plates 20-1) and Radium (German) Street (Plates 22). Both walls of the former canal bridges are still visible (Fig. 2). The sites of the former bridges also survive as slightly raised features along the relatively level roads. Photographs taken in 1962 and 1972 show the canal bridges during the infilling of the canal arms (Plates 19 and 21).



Plate 17: Canal bridge within the Site boundary at Jersey Street



Plate 18: Canal bridge within the Site boundary at Jersey Street



Plate 19: View of Jersey Street bridge during infilling, 1972, courtesy of Manchester Local Image Collection



Plate 20: Canal bridge within the Site boundary at Poland Street



Plate 21: View of Poland Street bridge, taken in 1962, courtesy of Manchester Local Image Collection



Plate 22: Radium (German) Street bridge, looking northeast

4.6 Previous Archaeological Excavations

Several desk-based assessments, heritage statements and building recordings have taken place within a 250m radius from the Site. Building surveys have been undertaken at Murray's Mills (EGM 2512), Waulk Mill (EGM 3365), The Smith's Arms (EGM 3840), George Leigh Street School (EGM 3848), Howarth Metals (EGM4014), Beehive Mill (EGM 4018;EGM 455), Murray's Mills: Old and Decker Mills (EGM 4026), Murray's Mills: Murray Street Block and Bengal Street Block (EGM 4027), Former Edinburgh Castle Public House (EGM 4355), McConnel and Kennedy's Mill (EGM 456) and Mount Pleasant, 162-4 Oldham Road (EGM 4980).

In total, eight archaeological evaluations and six excavations have been undertaken within the vicinity of the Site. An evaluation at Mount Pleasant, 162-4 Oldham Road (EGM 4939) was undertaken within the Site boundary, together with four excavations.

The presence of well-preserved 18th- and 19th-century workers' houses was confirmed at Loom Street (EGM4029) and were excavated in seven open area trenches by University of Manchester Archaeology Unit in 2007 (UMAU 2007). Similarly, an excavation at George Leigh Street recorded the remains of early 19th century workers' housing (EGM4028; OAN 2008). A third excavation was undertaken at Beehive Mills (EGM 4024).

In 2003 an archaeological excavation was carried out on the site of the former Percival, Vickers & Co Ltd British and Foreign Flint Glass Works (EGM3737). The work was undertaken by Oxford Archaeology North, following a previous watching brief and archaeological evaluation, which revealed that remains of the glassworks were extensive and well-preserved. The excavation was then followed by a further watching brief in 2004. The results were presented in a report titled "Flint Glass Works, Jersey Street, Manchester: Post-Excavation Assessment" (OA North 2004). The aim of the assessment was to investigate the survival and significance of the buried archaeological remains at the site.

The Flint Glass Works was established in 1844 and was part of an important group of glassworks that opened in Manchester in the 19th century. By 1863, it was the largest of Manchester's glass factories. It was sold by 1914 and converted into clothes works and later used as a wastepaper warehouse.

The investigation revealed the remains of three furnaces and their flues at the site, two of which were original, whilst the third was a later addition (c 1870). The remains of an annealing house and workshops were also exposed. The finds assemblage included 3628 glass fragments of different colours and styles, post-medieval pottery, clay tobacco pipes, metalwork and crucibles. The finds were significant as they provided a comprehensive insight and record of the technological developments of glassworks during the period and could highlight details of the glass manufacturing process.

5. Gazetteer

The following gazetteer entries summarise the sites of potential archaeological interest within the Site. The identification of these non-designated heritage assets is drawn primarily from the historic map regression analysis. The locations of the gazetteer entries are given on Figure 12 (*Appendix 1*).

Gazetteer Entry 01

Site Name	Historic field boundaries (site of)
Designation	Non designated asset
Her number	16146.1.0
Site Type	Field boundaries
Period	late 18 th century
NGR	385311 398817; 385077 398883
Source	HER; Laurent's map 1793; Green's map 1787-94
Description	Numerous historic field boundaries were likely to have crossed the Site in the 18 th century. Green's map (Fig. 3) shows that a former field boundary had previously traversed through the Site, which continued to the northwest and southeast of the Site. The field boundary likely ran through Elliot Street, Heath Street, Elizabeth Street, Loom Street, Leigh Street, Caroline Street and Portugal Street. Relict soil and former field boundary were excavated at Silk Street in 2008, yielding 17 th - and 18 th -century dating evidence. The survival of the pre-industrial landscape in Ancoats is rare. Modern services may have impacted the survival of the former 18 th -century landscape.
Assessment	Field boundaries may include ditches, hedges, or fences. Remains of ditches associated with field boundaries may contain evidence of the medieval and post-medieval landscape, which could be affected by the public realm works.

Gazetteer Entry 02

Site Name	Loom Street and Prussia Street (site of)
Designation	No designation
Site Type	Workers' houses
Period	late 18 th century
NGR	385263 398915
Source	Laurent's map 1793; Green's map 1787-94; Johnson's map, 1820; Swire's map, 1824; Bancks & Co's map, 1831; Adshead's map, 1851; OS mapping
Description	An L-shaped block of terraced workers' houses built along the north side of Loom Street and Prussia Street. Green's map (Fig. 3) shows that there were five double-depth dwellings along Loom Street, with backyards and outbuildings to the rear. A blind-back house was situated at the Prussia Street junction, with three similar sized larger properties along Prussia Street. Window lights and external staircases along Loom Street and at one of the properties at Prussia Street were captured on the OS map of 1848 (Fig. 6), indicating that the houses contained cellars. The houses stood within the area currently occupied by Ancoats Green until the late 1950s.
Assessment	Remains of the houses likely survive within the Site and could be affected by the proposed public realm works.

Gazetteer Entry 03

Site Name	Portugal Street and Prussia Street (site of)
Designation	No designation
Site Type	Workers' houses
Period	late 18 th century
NGR	385213 399006
Source	Laurent's map 1793; Green's map 1787-94; Johnson's map, 1820; Swire's map, 1824; Bancks & Co's map, 1831; Adshead's map, 1851; OS mapping
Description	An L-shaped block of terraced workers' houses, built along the south side of Portugal Street and the west side of Prussia Street. Green's map (Fig. 3) shows that buildings had been erected on Portugal Street and at its junction with Prussia Street. The same buildings were captured on Johnson's map and Swire's map (Fig. 4). Bancks' map (Fig. 5) indicates that two additional properties had been added along the Prussia Street frontage. Window lights and external staircases along Prussia Street were captured on the OS map of 1848 (Fig. 6), indicating that the houses contained cellars. All these houses were demolished by 1890 to create the Recreation Ground. The site of the houses remained undeveloped and is currently known as Ancoats Green.
Assessment	Remains of the houses likely survive within the Site and could be affected by the proposed public realm works.

Gazetteer Entry 04

Site Name	Manchester Glass Bottle Works (site of)
Designation	Non designated heritage asset
HER Number	12428.1.0
Site Type	Industrial
Period	Early 19 th century
NGR	385221 398971
Source	Adshead's map, 1851; OS mapping
Description	John Woolfall established the Manchester Glass Bottle Works to the south of his house at no. 8 Prussia Street in 1833-4. The footprint of the glassworks is first captured on the OS map of 1848 (Fig. 6) and Adshead's map of 1851. The circular plan of the glassworks indicates that it was a typical early 19 th -century glass cone structure. A newspaper advertisement describes the glassworks as comprising of a large cone, pot arch, ash arches, and 15 annealing arches (<i>Newcastle Guardian and Tyne Mercury</i> , 28 th April 1860). Between 1861-3, John Cannington & Co seems to have taken over the glassworks at no. 8-10 Prussia Street. A fire destroyed a shed at the glassworks in 1870 (<i>Manchester Times News</i> 19 th March 1870). The 1871 census returns lists George Rowlinson as occupying the house and glassworks on Prussia Street. Slater's trade directory of 1879 indicates that the houses on Prussia Street and the glassworks were demolished before the late 1870s. No's 4-24 Prussia Street are not included in the census returns of 1881 and the OS map of 1893 (Fig. 7) confirms that the glassworks had been demolished and redeveloped into a Recreation Ground. The site of the glassworks remains a park, currently known as Ancoats Green.
Assessment	Archaeological remains of the glassworks may survive <i>in-situ</i> within the

Site boundary and could be affected by the proposed public realm works.

Gazetteer Entry 05

Site Name	Former Canal Bridge Jersey Street
Designation	Non designated heritage asset
HER Number	6476.1.0
Site Type	Canal bridge
Period	Early 19 th century
NGR	385274 398795
Source	HER; Johnson's map, 1820; Swire's map, 1824; Bancks & Co's map, 1831; Adshead's map, 1851; OS mapping; Goad's map, 1928
Description	The Prussia Street Arm of the Rochdale Canal was situated within the Site boundary. The canal was built in the early-19 th century and opened in 1808. Johnson's map of 1820 is the first map to show the canal arm, with a bridge constructed over it at Jersey Street. The arm was infilled during the late 1960s. The bridge is currently visible within the Site, demarcated by stone blocks and a slightly raised road surface, denoting the arch of the former bridge.
Assessment	The canal bridge survives as an upstanding remain within the Site, whilst the cobbled surface of the bridge and other associated features may survive as <i>in-situ</i> buried remains, which will be affected by the proposed development.

Gazetteer Entry 06

Site Name	Former Canal Bridge Poland Street
Designation	Non designated heritage asset
HER Number	6478.1.0
Site Type	Canal bridge
Period	Early 19 th century
NGR	385184 398797
Source	Johnson's map, 1820; Swire's map, 1824; Bancks & Co's map, 1831; Adshead's map, 1851; OS mapping; Goad's map, 1928
Description	The Bengal Street Arm of the Rochdale Canal was situated within the Site boundary. The canal was built in the early-19 th century and opened in 1808. Johnson's map of 1820 is the first map to show the canal arm, with a bridge constructed over the canal at Poland Street. The arm was infilled during the late 1960s. The bridge is currently visible within the Site, demarcated by stone blocks and a slightly raised road surface, denoting the arch of the former bridge.
Assessment	The canal bridge survives as an upstanding remain within the Site, whilst the cobbled surface of the bridge and other associated features may survive as <i>in-situ</i> buried remains, which could be affected by the proposed development.

Gazetteer Entry 07

Site Name	Former Canal Bridge Radium (German) Street
Designation	Non designated heritage asset
HER Number	6461.1.0
Site Type	Canal bridge

Period	Early 19 th century
NGR	385091 398751
Source	Johnson's map, 1820; Swire's map, 1824; Bancks & Co's map, 1831; Adshead's map, 1851; OS mapping; Goad's map, 1928
Description	The Bengal Street Arm of the Rochdale Canal was situated within the Site boundary. The canal was built in the early-19 th century and opened in 1808. Johnson's map of 1820 is the first map to show the canal arm, with a bridge constructed over the canal at German Street. The west end of the canal arm was infilled in the late 1920s. The bridge is currently visible within the Site, demarcated by stone blocks and a slightly raised road surface, denoting the arch of the former bridge.
Assessment	The canal bridge survives as an upstanding remain within the Site, whilst the cobbled surface of the bridge and other associated features may survive as <i>in-situ</i> buried remains, which could be affected by the proposed development.

Gazetteer Entry 08

Site Name	Purdon Street (site of)
Designation	No designation
Site Type	Housing
Period	Late 19 th century
NGR	385248 398939
Source	OS mapping
Description	Rows of terraced workers' houses were built on the north and south side of Purdon Street, which was laid to the north of Loom Street in the late 19 th century. The houses were first captured on the OS map of 1891 (Fig. 7). The properties were demolished during the 1950s and 1960s.
Assessment	Remains of the houses likely survive within the Site and could be affected by the proposed development.

6. Significance

6.1 The Policy Context of Heritage Assets

The archaeological resource of an area can encompass a range of assets, including below-ground remains, earthworks, and standing buildings and other structures. Some of these remains may have statutory protection, such as Scheduled Monuments or listed buildings. Others do not, but may nevertheless be of archaeological significance. Under both national and local planning policy, as outlined below, both statutory and non-statutory remains are to be considered within the planning process.

The NPPF sets out the Government's planning policy and framework for England, and how these are expected to be implemented. The NPPF places particular emphasis on assessing the development proposals in line with an up-to-date local plan. Consequently, Manchester's Core Strategy (adopted July 2012) was consulted as the key Development Plan Document in the Local Development Framework (LDF), with particular reference to Policy EN3: Heritage. In determining applications, local planning authorities must be able to understand the significance of any heritage assets affected by a proposed development in order to assess its impact. This enables the conservation of heritage assets in a manner suitable to their significance so that they can be enjoyed for their contribution to the quality of life of this and future generations, or else they can be recorded and advance understanding of the significance of any heritage assets to be lost in a manner proportionate to their importance and the impact, and to make this evidence publicly accessible.

6.2 Assessment Methodology and Significance Criteria for Below-Ground Archaeological Remains

An accepted methodology for assessing archaeological significance is the Secretary of State's criteria for the scheduling of ancient monuments, outlined in Annex 1 of *Scheduled Monuments: identifying, protecting, conserving and investigating nationally important archaeological sites under the Ancient Monuments and Archaeological Areas Act 1979* (DCMS March 2010). These criteria have all been utilised in this assessment and are listed below:

- Period
- Rarity
- Documentation
- Group Value
- Survival/Condition
- Fragility/Vulnerability
- Diversity
- Potential

6.3 *Baseline Significance Conditions*

6.3.1 *Period*

No prehistoric, Roman or medieval activity is known to have taken place within the Site, and the potential for such remains is considered to be extremely low due to the intensive development of the Site since the early nineteenth century.

The most likely remains to be encountered within the Site would date to the industrial period, which could include historic field boundaries, the late-18th-century remains of workers' houses on Loom Street, Prussia Street and Portugal Street, the remains of the early-19th-century Manchester Glass Bottle Works, and buried remains associated with former canal bridges. The industrial period was significant to Manchester's history. Therefore, sites reflecting Manchester's industrial heritage may be considered significant due to period.

6.3.2 *Rarity*

Remains of old farming practices such as ridge and furrow and remnants of late medieval field systems require programmes to further refine dating and usage patterns. Remains of late medieval former field boundaries within the Site would be considered rare (North West Regional Research Framework 2021). Archaeological remains of post-medieval field boundaries or gardens would also be considered rare.

Any surviving 18th-century remains would be considered significant due to rarity, as these were often disturbed by the later industrial development of the town during the 19th and 20th centuries. Furthermore, remains associated with the Manchester Glass Bottle Works may be significant due to rarity.

The late 19th-century terraced properties on Purdon Street would not be considered significant due to rarity as these were a common feature of the industrial landscape and many remain standing. The remains of the canal bridge would also not be significant due to rarity.

6.3.3 *Documentation*

The historical development of the Site from the late 18th century can be traced reasonably well from cartographic and other primary sources. Further documentary research would undoubtedly furnish additional evidence, although this is unlikely to alter the outline and conclusions presented in this assessment.

6.3.4 *Group Value*

The potential archaeological remains within the Site are associated with the industrial and residential development of Ancoats during the late-18th and early-19th-centuries and include bridges over the Rochdale canal arm and industrial and residential properties. Any 18th and 19th-century remains within the Site may therefore have some group value.

6.3.5 *Survival / Condition*

The survival, extent and condition of any below-ground archaeological remains within the Site is presently unknown, however, it is possible that some remains may survive beneath Ancoats Green, which was turned into a Recreation Ground, following the demolition of dwellings and the glassworks. Similarly, little development has been

undertaken since the demolition of the buildings at Loom Street and Purdon Street. It is therefore likely that remains associated with the glassworks, dwellings and canal bridges will survive within the Site.

6.3.6 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 associated with the proposed development.

6.3.7 Diversity

The diversity of the below-ground remains within the Site is presently unknown. However, cartographic sources suggest that any intact remains would most probably relate to the development of Ancoats during the late 18th and early 19th centuries.

6.3.8 Potential

There are no prehistoric sites within the Site or its environs, and the potential for prehistoric, Romano-British or medieval remains is considered to be very low. The Site was probably used for agricultural purposes during the post-medieval period. The survival of field boundaries has the potential to address several of the research aims listed in the current Archaeological Research Framework (<https://researchframeworks.org/nwrf/sample-page/late-medieval/>):

LM12: How do we improve our knowledge of the region's various agricultural practices, plant and animal husbandry, and how did these change and develop over time?

PM10: Where does pre18th century enclosure survive in the region?

PM09: How did ecological changes linked to agricultural improvement impact upon the wider landscape?

PM15: How well recorded and understood are farming landscapes, field patterns, distributions of buildings and building types?

Ind05: How well understood is change and development of the agrarian landscape in response to industrialisation and enclosure?

Ind09: How does the nature of rural settlement change during this period?

Below-ground remains pertaining to the former fields may survive within the Site, below the road surfaces. Modern services may have impacted the survival of 18th-century remains. Therefore, there is some potential for the Site to address the potential research aims listed above.

The Site was initially developed in the late 18th century when former agricultural land was divided into a grid of streets. L-shaped rows of workers' houses had already been constructed at the Site by the late 18th century at the Loom Street/Prussia Street junction and at the Portugal Street/Prussia Street junction, captured on Green 's map (Fig. 3). The research agendas listed in the *Archaeological Research Framework for North West England* (<https://researchframeworks.org/nwrf/industrial/>) aim to address aspects of industrial housing that are currently poorly understood:

Ind21: How did industrial period towns affect the pre-existing historic landscape?

Ind22: How can we take forward our understanding of the impact of industrialisation on the working class and their living conditions?

Ind23: What evidence do we have for the improvement of urban public health during this period?

Ind30: How have buildings changed in response to planning regulations?

Ind32: To what extent did houses and shops incorporate workshops and warehousing?

Ind33: How well studied and understood are the back yards of workers housing and what is their significance?

The Ordnance Survey map of 1848 (Fig. 6) indicates that the houses on Loom Street and Prussia Street contained cellars, which likely survive as *in-situ* buried remains within the Site. Furthermore, the site of the houses has not been redeveloped. Therefore, any remains associated with the former houses have the potential to address the research aims listed above.

Manchester Glass Bottle Works was located within the Site. The glass works was established in 1833 and is first shown on the Ordnance Survey map of 1848 (Fig. 6). The footprint of the glassworks was circular, indicating that it was a traditional conical structure. The research agendas listed in the *Archaeological Research Framework for North West England* (<https://researchframeworks.org/nwrf/industrial/>) aim to address industrial processes that are currently poorly understood:

Ind58: How have industrial buildings adapted to new technology and processes?

Ind60: How can we make sense of the relative significance of historic industrial processes and building types perceived as poorly understood and recorded?

The glassworks was demolished towards the end of the 19th century. The former site of the glassworks remains undeveloped, though some landscaping works had been undertaken in the late 19th century to create a Recreation Ground, known today as Ancoats Green. Therefore, buried remains of the glassworks has the potential to address the research aims listed above.

The technological and social archaeology of canals has been recognised as an avenue of research. This is articulated in the current *Archaeological Research Framework for North West England* (<https://researchframeworks.org/nwrf/industrial/>) which identified several initiatives that should be prioritised for archaeological research:

Ind67: To what extent are trade routes and their context understood?

Ind93: How well do we understand the evolution of rural versus urban bridge construction?

Ind98: How well understood and recorded are the North-Wests canals, waterways and basins?

In total, three former canal bridges have been identified within the Site boundary. The bridges survive as standing structures and are represented by stone walls, and a slightly raised ground surface, denoting the former arch of the bridges. The cobbled surface of the bridge and other potential features associated with the canal bridge may

survive as *in-situ* below-ground remains, which may have the potential to address the research aims listed above.

6.4 *Significance of Below-Ground Archaeological Remains*

It can be concluded from the information gained from the desk-based research that the Site is of archaeological interest and has the potential to contain remains of local significance, including remains of historic field boundaries (GE01), late 18th- and early 19th-century workers' houses (GE02-3), and remains associated with the infrastructure of the Rochdale Canal (GE05-07). Any remains associated with Manchester Glass Bottle Works (GE04) are likely to be of regional, if not, national significance.

The Site also has the potential to contain below ground remains of remains of late-19th-century properties (GE08). However, these remains would be of little archaeological significance.

7. Impact of Development

7.1 Development Proposals

The delivery of the proposals will involve the demolition of a former canal bridge on Jersey Street and the levelling of the road surface, landscaping works at Ancoats Green and public realm works on the streets within the Site boundary. The delivery of the proposals will involve ground-breaking works that have the potential to affect any surviving archaeological remains within the Site (Fig. 12).

7.2 Impact of Development on Below-Ground Remains

This assessment has demonstrated that the Site has the potential to retain buried remains of historic field boundaries (GE01), late 18th- and early 19th-century workers' housing (GE02-3), an early 19th-century glassworks (GE04) and former canal bridges (GE05-7). Any such remains that do exist within the Site are likely to be of local and regional significance and, without a programme of mitigation, the scheme could damage or destroy these remains.

8. Further Investigation

8.1 Heritage Assets

The NPPF makes clear that where the loss of the whole or a material part of a non-designated heritage asset's significance is justified by a development, the developer should be required to record that asset and advance understanding of its significance, and to make this evidence publicly accessible.

The assessment has demonstrated that there is potential for buried archaeological remains to exist on the Site, which, pending the extent of their survival and condition, would merit preservation 'by record'.

8.2 Further Investigation

The exact scope and extent of any such further investigation of the Site will be determined by the Greater Manchester Archaeological Advisory Service (GMAAS), in their capacity as archaeological advisor to Manchester City Council. It may be anticipated, however, that level 1 historic building recording may be required at Jersey Street bridge and the other former canal bridges. Archaeological monitoring in the form of a watching brief may be required along the highways within the Site, depending on the depth and extent of ground-breaking works within the Site. Similarly, a programme of archaeological mitigation would be required at Ancoats Green, depending on the depth and extent of ground-moving works.

Should significant archaeological remains be encountered during the archaeological evaluation, further excavation may be required to offset the harm of the development to the buried archaeological resource, in line with the guidance provided by the National Planning Policy Framework. The scope and extent of any such further investigation will be determined by the Greater Manchester Archaeological Advisory Service (GMAAS), in their capacity as archaeological advisor to Manchester City Council.

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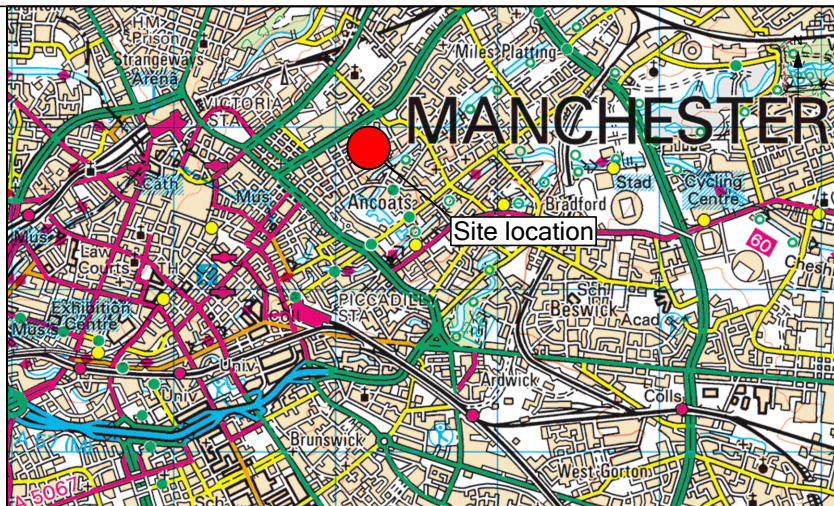
Acknowledgements

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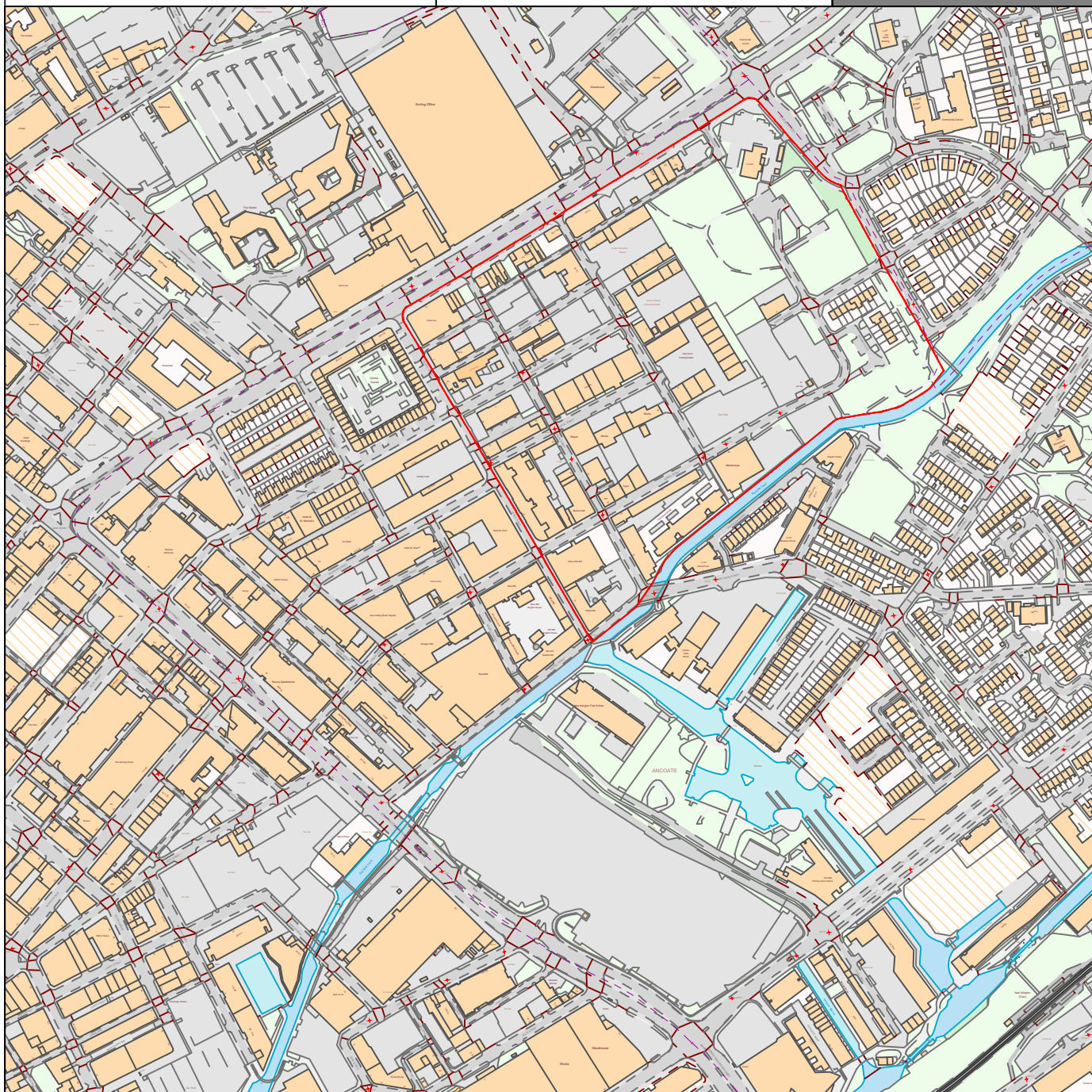
Appendix 1: Figures

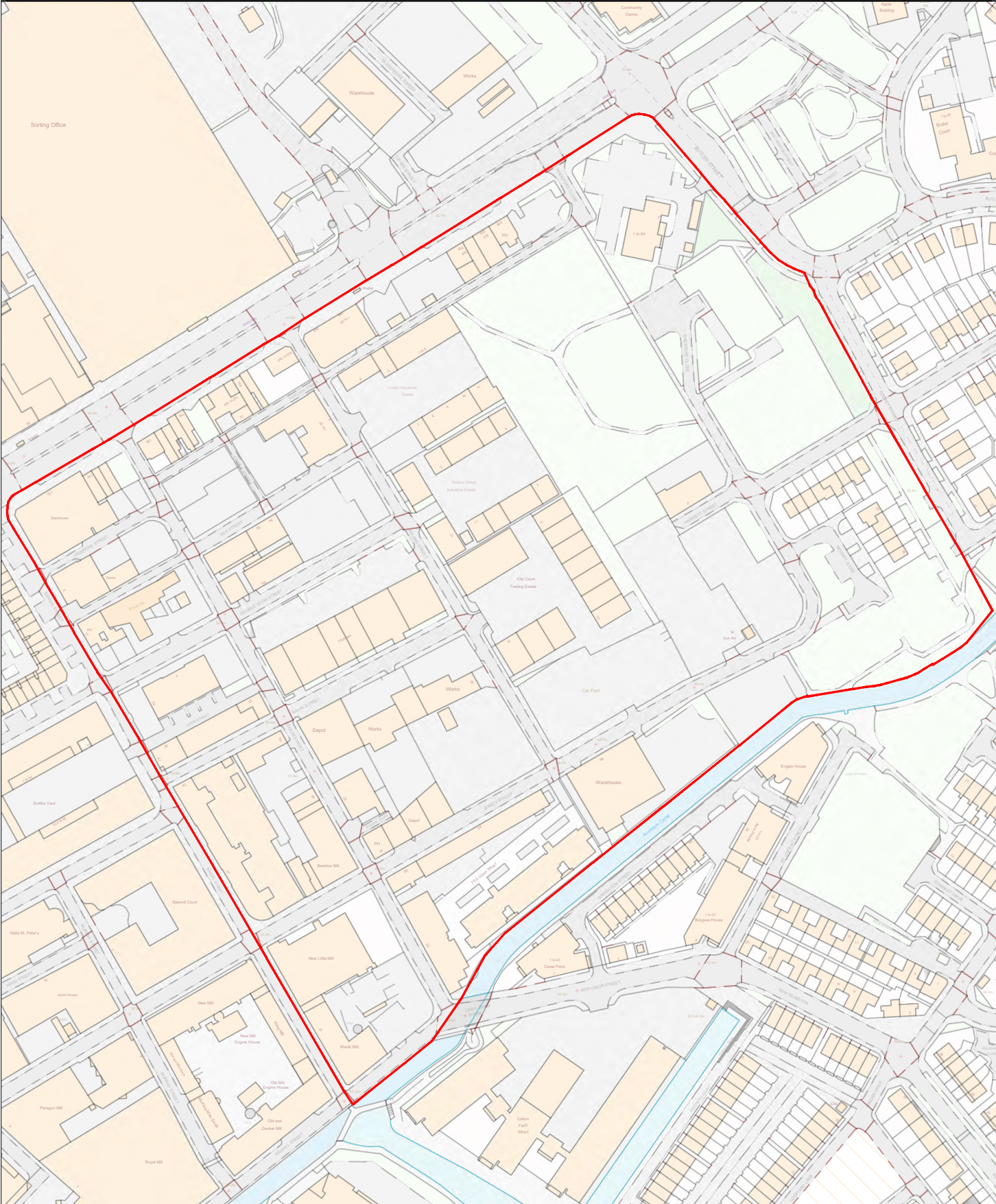
- Figure 1: Site location map
- Figure 2: Site boundary superimposed on modern mapping
- Figure 3: Site boundary superimposed on Green's map of 1787-94
- Figure 4: Site boundary superimposed onto Swire's map of 1824
- Figure 5: Site boundary superimposed onto Bancks & Co.'s map of 1831
- Figure 6: Site boundary superimposed on to the six-inch Ordnance Survey Plan of 1848
- Figure 7: Site boundary superimposed on the Ordnance Survey 1: 500 Town Plan of 1891
- Figure 8: Site boundary superimposed on the Ordnance Survey 1:2500 map of 1909
- Figure 9: Site boundary superimposed on the Ordnance Survey 1:2500 map of 1922
- Figure 10: Site boundary superimposed on the Ordnance Survey 1:2500 map of 1947
- Figure 11: Site boundary superimposed on the Ordnance Survey 1:1250 map of 1969
- Figure 12: Location of Gazetteer Entries



Ancoats Green

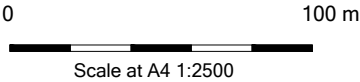
Figure 1: Site location





Ancoats Green

Figure 2: Site boundary superimposed on the modern Ordnance Survey map



Key:
[Red outline box] Site boundary



Ancoats Green

Figure 3: Site boundary superimposed on Green's Plan of Manchester and Salford, 1787

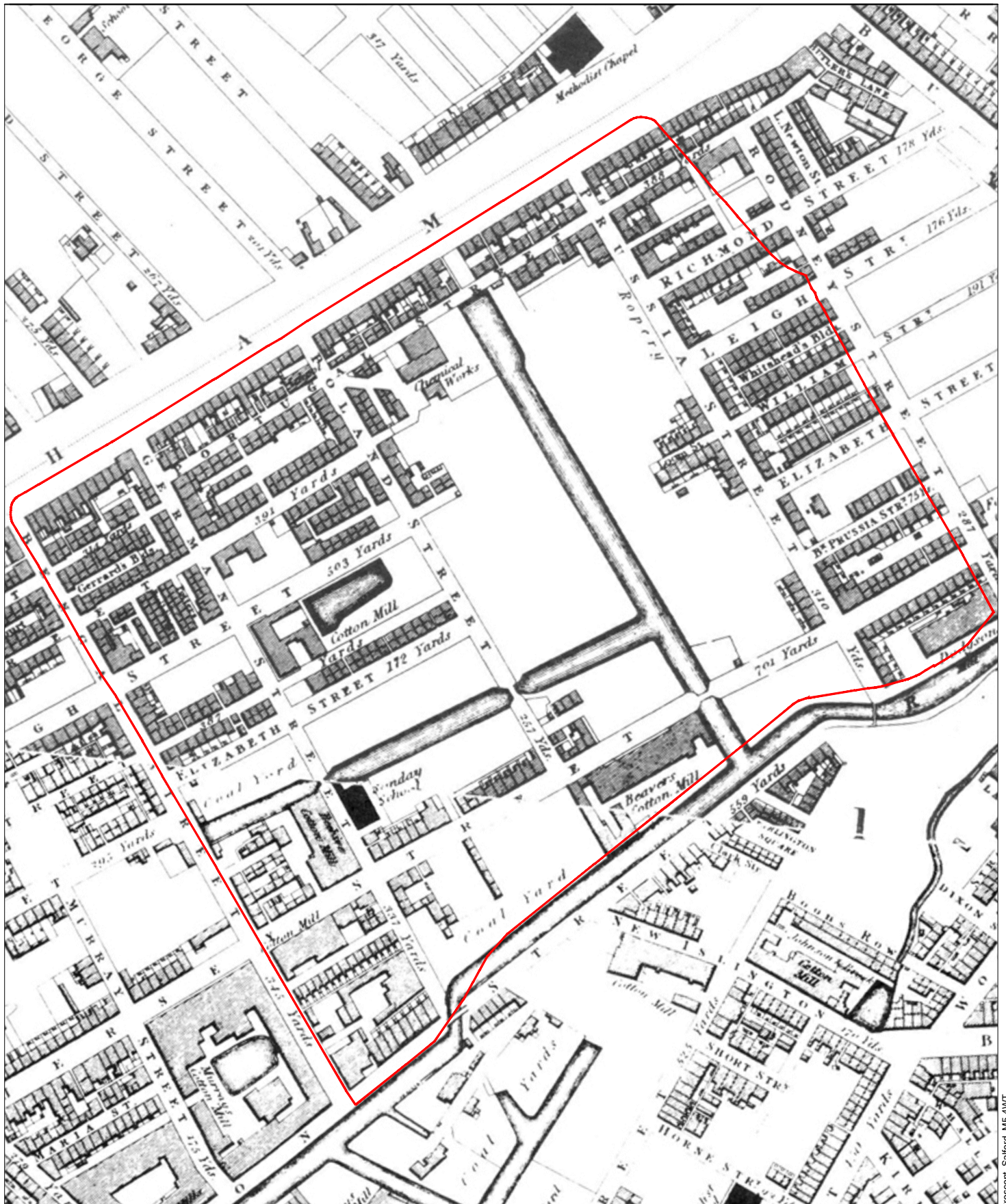


Key:

Site boundary

0 100 m

Scale at A4 1:2500



Ancoats Green

Figure 5: Site boundary superimposed on Bancks & Co's. Plan of Manchester and Salford, 1831



Key:

Site boundary

0 100 m
Scale at A4 1:2500



Ancoats Green

Figure 6: Site boundary superimposed on the six inch Ordnance Survey map of 1848



Key:

Site boundary

0 100 m

Scale at A4 1:2500



Ancoats Green

Figure 7: Site boundary superimposed on the Ordnance Survey town plan of 1891



Key:

Site boundary

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Scale at A4 1:2500



Ancoats Green

Figure 8: Site boundary superimposed on the 6 inch Ordnance Survey map of 1909



Key:

Site boundary

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Scale at A4 1:2500



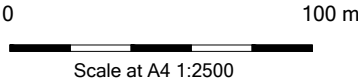
Ancoats Green

Figure 9: Site boundary superimposed on the 25 inch Ordnance Survey map of 1922



Key:

Site boundary





Ancoats Green

Figure 10: Site boundary superimposed on the 6 inch Ordnance Survey map of 1947



Key:

Site boundary

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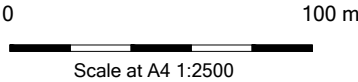


Ancoats Green

Figure 11: Site boundary superimposed on the national grid Ordnance Survey map of 1969



Key:
□ Site boundary



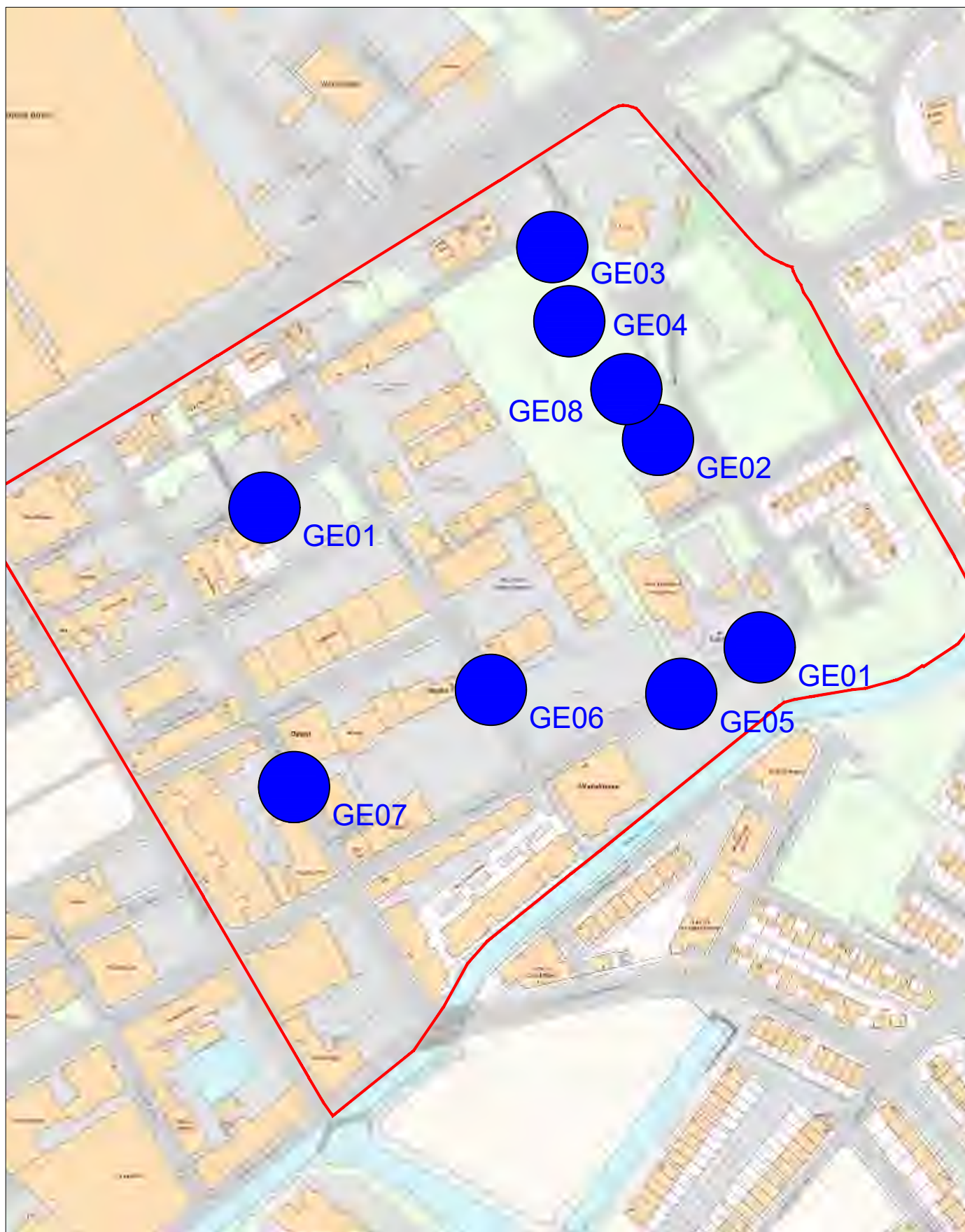


Figure 12: Gazetteer Entries Superimposed onto

Modern Mapping

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Key:

- Site Boundary
- Gazetteer Entries

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Scale at A4 1:2500



CONSULTANCY



DESK-BASED ASSESSMENTS



WATCHING BRIEF & EVALUATION



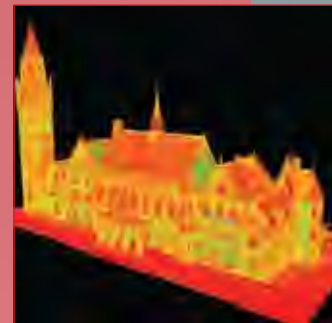
EXCAVATION



BUILDING SURVEY



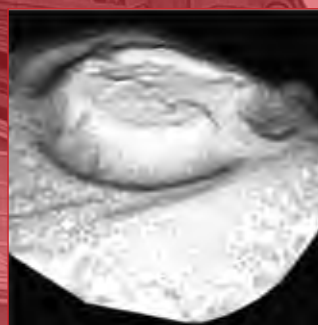
3D LASER SCANNING



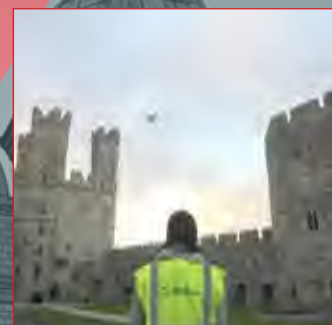
COMMUNITY INVOLVEMENT



LANDSCAPE SURVEYS



DRONE SURVEYS



WORKSHOPS & VOCATIONAL TRAINING



RESEARCH PUBLICATIONS



SEMINARS, DAYSCHOOLS CPD EVENTS

