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MANCHESTER

Archaeological Desk-Based Assessment

Rochdale Road,
Manchester

Client:

Portwood
Developments Ltd

Technical Report:

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Report No:

2020/97



Site Location: The development area is located off Rochdale Road, Manchester, and is bounded by Gould Street to the west, CCP car park to the north, Clive Street and Back St George Street to the east, and 73 and 85 Rochdale Road and Ashley Street to the south.

NGR: Centred at NGR SJ 84699 99133

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Summary

Portwood Developments Ltd is devising proposals for the development of land off Rochdale Road, near Manchester City Centre. In order to facilitate the planning process, Mulbury Homes, on behalf of Portwood Developments Ltd, 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 archaeological resource within the site, in order to enable informed recommendations to be made for their future treatment.

The assessment showed that during the early-mid nineteenth century, workers' houses were located within the proposed development site, including back-to-back terraced housing along Ashley Street. By the second half of the nineteenth century, the houses had been demolished to make way for the expansion of the Rochdale Road Gas Works, which had been established to the north of the site in 1824. This new part of the gas works was used for transporting coal into the works, which was the raw material used in gas manufacture. Warehouses and a joiner's workshop associated with the works and the Gould Street School, built in 1837, were also located within the proposed development site. The majority of the buildings within the proposed development site were demolished in phases, beginning in the mid-20th century, however some locally significant upstanding remnants of the gas works survive within the site as upstanding remains, including depot buildings, brickwork arches and walls.

Due to the lack of development within the site since the demolition of the works' buildings, it is likely that locally significant *in-situ* buried archaeological remains associated with the nineteenth-century gas works will survive beneath the present car park.

The requirement for any further archaeological investigation in advance of, or during, development works will be decided by the Greater Manchester Archaeological Advisory Service (GMAAS), in their capacity as archaeological advisor to Manchester City Council. It may be anticipated, however, that the upstanding remains within the site will require an archaeological building survey prior to development works commencing on site. As part of this survey work, further archival research should be conducted, including accessing plans of the gas works at the National Gas Archive.

For the buried archaeological remains that are likely to survive beneath the surface of the site, the extent and condition of the remains will likely need establishing through a programme of archaeological evaluation trenching. Should any significant buried remains be encountered during the initial evaluation, further works in the form of an archaeological excavation may be appropriate to ensure an archival record is compiled prior to the ultimate loss of the remains.

Consideration should also be given to adding value to the new development project by assessing the practicality of incorporating some elements of the upstanding remains of the gas works into the development design. This would maintain a tangible connection to the long and significant industrial history of the proposed development site and could provide an authentic 'hook' on which to market the development to prospective customers.



1. Introduction

1.1 Planning Background

In September 2020, Mulbury Homes, on behalf of Portwood Developments Ltd, commissioned Salford Archaeology to carry out an archaeological desk-based assessment to support the development of land off Rochdale Road, Manchester (centred on NGR SJ 84699 99133; referred to herein as ‘the Site’). The desk-based study aimed to identify as far as possible the nature, extent and significance of the archaeological resource within the Site so as 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 February 2019). 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 184-202), 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 189 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 197 states that the effect of a proposal on non-designated heritage assets (designated assets are covered in paragraphs 193-96) should be taken into account in determining a planning application.

Paragraph 199 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 encouraged 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. Method Statement

The assessment considers the potential impact of the proposed development upon any upstanding or 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;
- Manchester Local Archives and the Greater Manchester Record Office in Manchester Central Library;
- The National Heritage List for England;
- Salford Archaeology's extensive library of archaeological work carried out in the vicinity of the Site.

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.

2.2 The Document

The following presents the historical and archaeological evidence for the Site. The upstanding remains identified within the site have been outlined (Chapter 5). A gazetteer (Appendix 1) is presented of heritage assets and sites of potential archaeological interest identified within the Site and this information, along with a map regression (Figs 3-14), is used to assess the significance of the remains (Chapter 6) and impact of the proposed development (Chapter 7). Recommendations for the future treatment of the archaeological resource is given in Chapter 8.

3. The Setting

3.1 Location

The Site (centred on NGR SJ 84699 99133) is situated off Rochdale Road, which lies to the north of Manchester City Centre (Figs 1 and 2). The Site comprises three depot buildings and a car park (Plate 1). The Site is bounded by Gould Street to the west, CCP car park to the north, Clive Street and Back St George Street to the east, and 73 and 85 Rochdale Road and Ashley Street to the south. The Site lies at a height of approximately 52m above Ordnance Datum (aOD).



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 solid geology of the area comprises the Chester Sandstone Formation, which is overlain by superficial deposits of Devensian till (British Geology Society).

3.3 Designations

The Site does not fall within a conservation area and does not contain any listed buildings, Scheduled Monuments, or any Registered Parks and Gardens. There are, however, five statutory listed buildings within a 250m radius of the Site (Table 1). Consideration of the development proposals on any impacts to the settings of these designated heritage assets will be assessed in a separate Heritage Statement, and so they are not considered further in this report.

List Entry No.	Description	Grade	NGR
1270681	Warehouse on West Corner of Junction with Simpson Street	II	SJ 84538 99073
1292052	Former Police and Ambulance Station	II	SJ 84710 98885
1254650	Sharp Street Ragged School	II	SJ 84511 99107
1247604	Marble Arch Inn	II	SJ 84677 99084
1291013	Cooperative Press	II	SJ 84473 99072

Table 1: Summary of listed buildings within a 250m 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 – 2200 BC
	Bronze Age	2200 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 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 are provided by a small number of residual finds. A Neolithic flint flake, for instance, was found at Spinning Field, near Deansgate, and reported in the *Transactions of the Lancashire and Cheshire Antiquarian Society* in 1892 (HER 414.1.0; Sutton 1892). A Neolithic stone hammer and arrowhead 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 evidence 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, particularly due to the intensive development since the late-eighteenth century.



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 south of the Site. The fort underwent several phases of development, with the earlier defences being deconstructed and improved. The military complex evolved in response to the ongoing 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 north-west 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 south-east, Chester to the south, Wigan to the north-west, Ribchester to the north, and Castleshaw and York to the north-east. The settlement was well connected in terms of trade and consequently lasted until the late third century AD.

Two Roman finds have been found within 300m of the Site, including a Roman quern, found at St Michael's Square and a coin of Constantine the Great, found at Angel Street in 1904.

4.2.2 Archaeological Potential

There is no known evidence for Romano-British 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, particularly due to the intensive development of the Site since the late-eighteenth century.

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-eleventh 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 thirteenth century, the Grelley family had established a manor house at the confluence of the rivers Irwell and Irk and the medieval town grew up around it (Hartwell *et al* 2004, 256). It was from this hall that they governed both the manor and the extensive barony. 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*).

4.3.2 Archaeological Potential

The potential for buried archaeological remains dating to the medieval period is considered to be very low due to the intensive development of the Site since the late-eighteenth century.

4.4 Post-medieval and Industrial Period

4.4.1 Historical Setting

The onset of the rapid industrialisation centred on Manchester from the eighteenth century resulted in a massive expansion of the town's population. The development Site at the end of the eighteenth century is captured on a detailed plan Charles Laurent in 1793 (Fig 2). The map shows the plans for new streets to be laid out across the area. The new streets included Ashley Street, Back Ashley Street and Cobourg Street, which were located off Rochdale Road.

The most common site-type built within the Site between the late eighteenth and early nineteenth centuries comprised workers' housing. The Site is adjacent to the area known as Angel Meadow, which included inferior, and generally, later housing in the form of back-to-backs: twin rows of one-up one-down houses sharing a common rear wall. In the course of the first half of the nineteenth century, houses of all types within the area became notorious for their overcrowding and insanitary conditions. Engels famously described the squalid state of Long Millgate and its neighbouring courts, an area containing dwellings from the pre-industrial town as well as more recent workers' houses (Engels 1845). The district equally attracted the attention of nineteenth-century commentators and was widely acknowledged to be one of Manchester's worst slums by the end of the century.

Aspects of housing conditions in Manchester: the earliest dwellings for the new breed of factory worker were erected with little legislative control. The Manchester Police Commissioners had sought to apply a rudimentary form of building regulations as early as 1792, including a requirement to provide party walls between properties.



However, in the absence of any practical way of enforcement, the regulations were largely ignored (Hylton 2003, 152). There was a marked contrast between the housing from the late eighteenth century, and that from the 1820s and 1830s, even including the use of poorer quality bricks and mortar for the later houses (Nevell 2008, 136; Pearlman 1956, 3). Most of the worker's houses built during this period were erected without any form of water supply or sanitation; at best, an open drain from an ashpit privy might have been installed down the middle of the street or court (Parkinson-Bailey 2000, 35).

The better quality eighteenth-century houses had also been compromised by this time, 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. The houses were therefore increasingly overcrowded and cellars were used as separate dwellings (Nevell 2008, 152; Marr 1904, 34 and 60).

There are several contemporary descriptions of Manchester's nineteenth century housing stock, including that provided by Dr J Ferriar in the proceedings of the Board of Health in 1805, who noted that 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).

According to Engels, in the north-western part of the town, very poor workers' housing was present at Shude Hill, specifically the area contained by Long Millgate, Ashley Lane, Angel Street, Withy Grove/Shude Hill, which was composed of a newer stock of housing arranged around ill-ventilated alleys and courts (1845, 62). Engels noted that this area was slightly 'better than the slums in the valley of the Irk', and the 'streets do sometimes have gutters' (*ibid*), though most had a cellar dwelling beneath each property and 'filth, heaps of refuse and ashes and dirty pools in the streets are common to both districts' (*ibid*). He also notes that in the Shude Hill area there were large numbers of pigs kept in the courts or allowed to roam freely, and in 'nearly every court there are one or more little nooks in which pigs are kept' and that the inhabitants 'throw all their garbage into these sites' (*ibid*). Engels noted that, together, the Irk slums and the Shude Hill area were known as the 'Old Town' (although he is at pains to stress that the appalling living conditions were solely a product of the industrial age) and it was this 'Old Town' area, that he described as 'hell upon earth'.



In the late eighteenth and early nineteenth centuries, several acts and by-laws were passed that were designed to regulate the living conditions within Manchester (Nevell 2014). These date from 1790 onwards, were initially implemented by the Police Commissioners, and included by-laws relating to the width of streets, paving, drainage, as well as rudimentary building regulations relating to providing party walls. However, as evidenced by the descriptions of Engels and other social commentators, these by-laws were largely ineffectual (Hylton 2003, 152) and Manchester continued on its very specific social and economic trajectory, which meant that by the mid-nineteenth century it formed one of the pre-eminent industrial slum cities in the country.

By that time, the atrocious living conditions within the town, coupled with the appearance of liberal social reformers and local politicians, created a legislative watershed in Manchester, following which a series of more effective acts were passed that were specifically designed to improve the living conditions of those occupying workers' housing. The first of these was the Manchester Police Act of 1844, which 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). This was further aided by the Public Health Act of 1848, which 'gave 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 were also made illegal in 1853, through the Manchester New Streets Act, though this was largely unsuccessful at first, and the cellar population of Manchester is calculated at 22,924 in 1845 and 12,396 in 1861 (Roberts 1993, 22). Indeed, it was not until 1868-72 that the majority of cellar dwellings in Manchester were vacated (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 without compensation being given to their owners; however, this said, a compensation of £15 was normally paid for each dwelling demolished (*ibid*). 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, which had to be at least 70ft square. 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).

4.4.5 A Brief History of the Development of Gas Works

During the post-medieval and industrial periods, many individuals across Europe experimented with the distillation of coal through splitting it into its constituent parts: gas, ammonia rich water, tar and coke (Thomas 2014, 1).

Experiments with gas and coal were first documented in the seventeenth century. Jean Tardin experimented with coal and gas after identifying that the source of the fire at Grenoble was the gas escaping from coal beds. Tardin heated crushed coal in a closed vessel to produce gas and reported his observations in '*Histoire naturelle de la fontaine que brusle pres de Grenoble*', published in 1618 (Thomas 2014, 2). Other seventeenth century experiments included those of Thomas Shirley and Dr John Clayton. In 1659, Thomas Shirley observed 'carburetted hydrogen' at a natural spring, which lit his candle when placed at the surface of the water. In 1684, Dr John Clayton continued Shirley's work and excavated near the spring and found coal 18 inches below. (Thomas 2014, 2). Clayton's work remained largely unknown for several years, as his findings were only published in 1739.

During the eighteenth century, experiments with coal and gas were undertaken across Europe, with many individuals lighting their own homes and offices, including Carlisle Spedding and George Dixon. Experiments were undertaken in Durham by George Dixon in 1760, which included heating coal in a kettle and igniting the gas. He established a works to extract the tar from coal in Cockfield and in, 1779, lit his house with gas. (Thomas 2014, 2). Following Sir James Lowther's work of 1733, Carlisle Spedding, who was the manager at Lord Lonsdale's Saltom mine in Whitehaven, lit his office in 1765 with 'fire damp', which was vented from the mine. He offered to supply the town with gas for street lighting, but this offer was refused.

William Murdoch, a Scottish engineer, is often credited with being the first to discover a commercial process for coal gas manufacture. Murdoch was born in 1754 and had experimented with producing gas from coal from childhood. He began working for Boulton and Watt in 1777 and was given the task of selling and installing steam-powered water pumping equipment to Cornish mine owners. Murdoch married a local coal mine owner's daughter and settled in Redruth, where he continued his experiments with coal and gas. Murdoch produced gas in a small iron retort in his back yard and piped the gas to his house, which allowed him to light his office and house in 1792. In 1802, Murdoch lit the Soho Works of Boulton and Watt in Birmingham. By 1805, Boulton and Watt were the only producers of gas-making plant in the world.

From the early nineteenth century, numerous Mancunians contributed to the success of gas lighting, including the chemist, Dr. Henry, who worked as an analyst in the field; Mr. Clegg, a former officer of health in Manchester who partly originated and successfully completed the gas meter; and John Leigh, who contributed to the utilization of the products of tar for the production of different colours (Institute of Mechanical Engineers 1894).

A timeline of the gas industry has been produced by the National Gas Museum, which details the history of the industry from the seventeenth to the end of the twentieth century (<http://www.nationalgasmuseum.org.uk/gas-industry-chronology/>).



4.4.6 The Production of Gas from Coal in the Nineteenth Century

Once the coal had been mined, it was placed into a sealed vessel called a retort house, where it would be heated externally by a furnace. Without air the heated coal could not burn, and so moisture was driven off and the large organic molecules within the coal were thermally broken down into smaller compounds. This process produced molecules of hydrogen, water, and hydrogen sulphide, which were released into the gas. The gas leaving the retort was cooled, which removed the tar and oil compounds, and washed, which removed the soluble compounds such as ammonia and phenol. The gas would then be purified to remove the sulphur and cyanide compounds. The finished product was known as 'Town Gas'. Coke remained in the retort, which was removed and cooled using water (Thomas 2014, 15). Plate 2 shows the stages of the process of producing gas, along with the processing of the by-products. The process for making gas from coal remained essentially unchanged from the early nineteenth century until the last coal gas works closed during the 1970s (<http://www.nationalgasmuseum.org.uk/making-gas-from-coal/>).

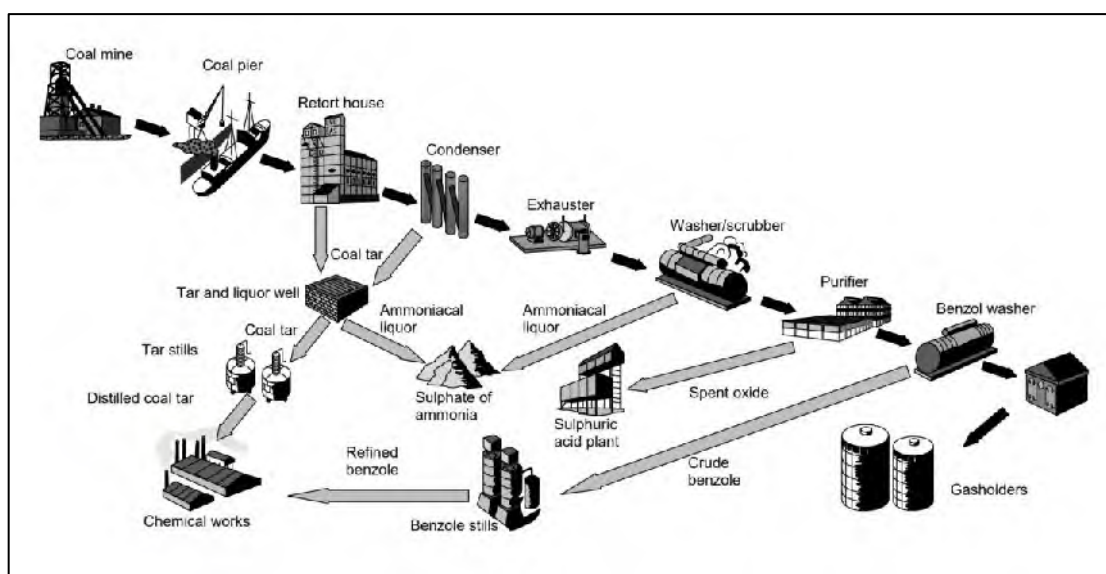


Plate 2: The production of town gas from coal. The black arrows show the progress of the gas through the plant and the grey arrows show the processing of the by-products (Thomas 2014)

4.4.7 Manchester Corporation Gas Works

During the nineteenth century, Manchester was known for being one of the most well-lit cities in England due to its success in the development of gas. In 1807, the Police Commissioners of Manchester affixed a public lamp outside their premises in Police Street. During the early years of the nineteenth century, gas undertakings were all privately owned.

In 1817, the first Manchester Gas Works was built by the Manchester Police Commissioners. The works was located at Water Street and was used to supply gas to streetlamps and police offices on a commercial basis (National Gas Archive: Manchester Corporation). Manchester was the first municipal authority to obtain powers for the manufacture and supply of gas, which was achieved through the Manchester Gas Act of 1824. The Act set the areas of supply for the Police

Commissioners Gas Undertaking and the police commissioners were responsible for lighting the streets.

A second gas works was opened at Gould Street in 1824 (later known as Rochdale Road Gas Works) and in the following years a further three gas works were established within Manchester by the Police Commissioners: Gloucester Street Gas Station (1830-1847), Every Street, Ancoats (1831-1867) and Gaythorn Gas Station. The latter had been established in 1825 and was purchased by the Police Commissioners in 1837, the same year in which the first established gas works at Water Street were closed. With the purchase of Gaythorn Gas Works came the right to supply gas to Chorlton-upon-Medlock (Institute of Mechanical Engineers 1894).

The responsibility of the Manchester Gas Undertaking was transferred from the Police Commissioners to the Manchester Corporation in 1843. The Corporation bought the Droylsden Station in 1869 and constructed and opened Bradford Road Station in 1884. The last gas station to be acquired by the Manchester Corporation was Partington, which opened in 1929. Through nationalisation, the Manchester Corporation Gas Undertaking became part of the North West Gas Board in 1949 (National Gas Archive: Manchester Corporation).

4.4.8 Rochdale Road Gas Works

Construction of The Rochdale Road Gas Works, which was originally known as the Gould Street Gas Works, began in 1824 at a time of social unrest within Manchester, with the construction site becoming a target for sabotage during the Chartists' disruptions of that year. Newly built sections of the gas works were damaged, however, work continued and the gas works were completed. The third gasometer was erected at the Rochdale Road Gas Works in 1850; the gasometers had the capacity to allow the storage and the controlled release of their contents into the networks of gas-mains and pipes (Jones 2006).

Prior to the construction of the railway network, coal had been transported to the gas works via horse and cart, which had become a severe limitation on the output of the gas works. The arrival of the railway brought with it a leap in production, allowing up to 7,000,000 cubic feet of gas to be produced per day, a massive increase from the 50,000 cubic feet previously. Trains arrived at the Rochdale Road Gas Works straight from the mines, which allowed 400 tons of coal to arrive at the gas works daily by 1860. The works required a workforce of 700 to maintain this increased output (*ibid*).

Further attempts to sabotage the Rochdale Road Gas Works occurred in 1876, this time during the Fenian Movement (an Irish-American Republican secret society, first emerging in 1858 as the forerunner to the IRA). After the attempts, the workers of the gas works were given the power of special constables "to act in any way necessary and according to the situation" (*ibid*).

Working conditions in gas works were poor, particularly for the stokers, whose role was to load coal into the retorts and remove the resulting coke, as well tending to the furnaces in hot, dirty and dangerous conditions. The painting below shows workers drawing coke from the retorts at Rochdale Road Gas Works (Plate 3). The removal of the coke was a particularly hazardous exercise as the material was extremely hot and gave off sulphurous gases. Due to the dangerous nature of the job, the Rochdale Road



Gas Works offered various benefits to their employees, including a free coffin “if required” (*ibid*).

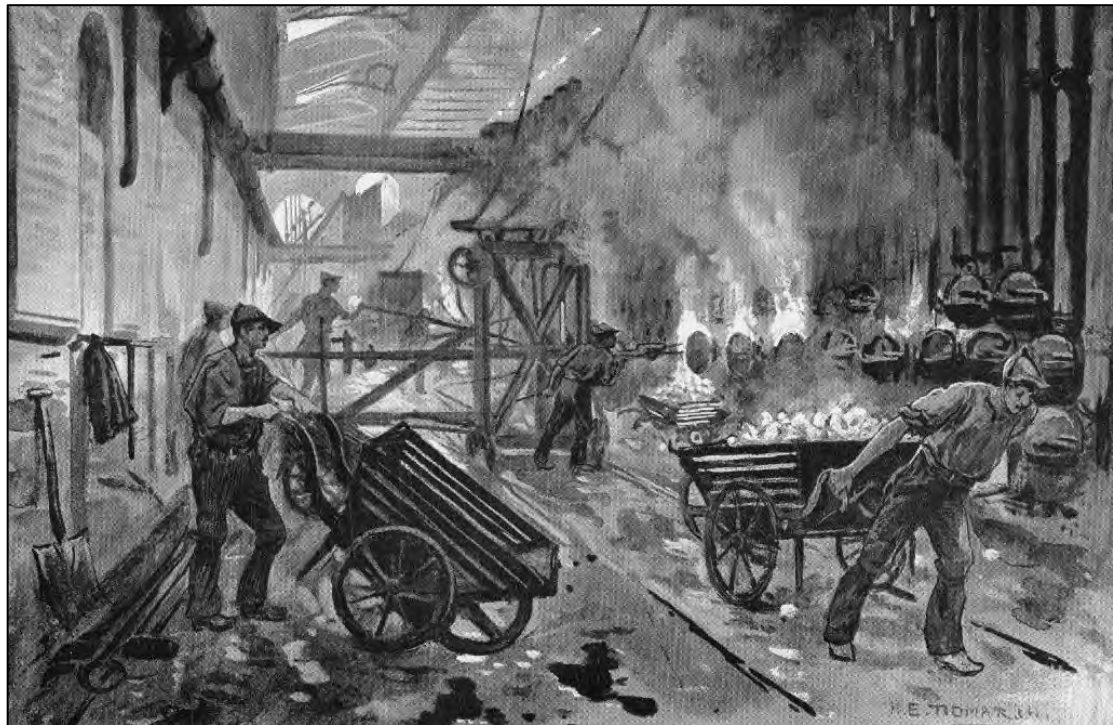


Plate 3: Drawing coke, Rochdale Road Gas Works

Throughout the nineteenth century, numerous accidents occurred at the gas works, many of which resulted in fatalities. In January 1893, a 19 year old man named Michael Shanton died after getting trapped between two carts whilst waiting to use the weighing machine (*Manchester Evening News* 11 January 1893). In 1899, Andrew Cavanagh, aged 31, died whilst assisting in emptying railway wagons (*Manchester Evening News* 02 November 1899).

Explosions at the gas works were also common causes of injury. In 1870, an explosion resulted in a fatality and numerous injuries. The incident was caused by gas escaping from a new gas exhauster, resulting in an explosion and fire in the engine room. An elderly man named Mark Clark was knocked down by the explosion and buried in a heap of sand. His body was found an hour later with gruesome injuries caused by severe burns (*Bradford Observer* 02 December 1870).

An explosion was also reported in 1899, which resulted in 13 people being injured. Alterations were being carried out at the gas works when the explosion occurred from beneath the old meter house. The manager of the works, M. Stevenson, was killed as a result of injuries sustained during the accident (*Manchester Evening News* 30 October 1899; *Manchester Courier and Lancashire General Advertiser* 23 December 1899).

An article on the Manchester Corporation, published in the *Proceedings of the Institute of Mechanical Engineers* in 1894, includes a description of the Rochdale Road Gas works:

“Rochdale Road gas station stands on over nine acres, and has four retort houses capable of carbonizing 830 tons of cannel and coal daily, producing 8,500,000 cubic



feet of gas. House A with 252 mouthpieces is worked with Foulis' charging machines; House B with 294 mouthpieces is worked with Foulis and Woodward's machines; House C with 280 mouthpieces is worked with West's charging machines; and House D with 304 mouthpieces is worked with Woodward's gas stoking machines. The stack in House D was reconstructed in 1891 on the generator (cold air) principle; and the stack in House B was reconstructed in 1892 on the regenerator (hot air) principle. There are six gasholders with three lifts, constructed on the telescopic principle, with a storage capacity of 5,000,000 cubic feet. Storage is provided for 32,000 tons of cannel. The number of men employed varies from 410 to 662. These works have good railway siding accommodation, and are in direct communication with the *Lancashire and Yorkshire Railway.*"

(Institute of Mechanical Engineers 1894, 409).

The Rochdale Road Gas Works expanded throughout the nineteenth century and, by the 1870s, had expanded into the Site (Plate 4). The entrance for the railway carriages used for importing coal was located within the Site, at Rochdale Road.

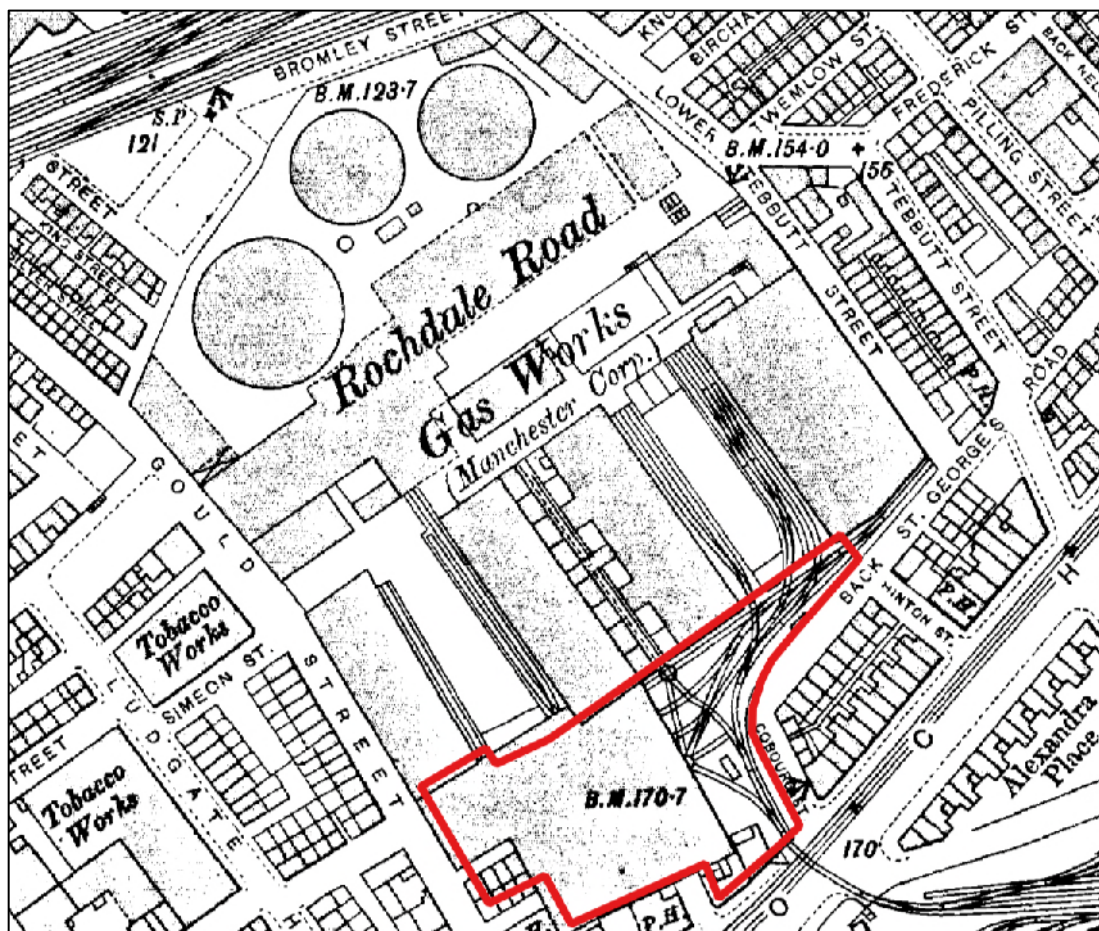


Plate 4: Extract from the 1:2500 County Series OS map of 1908 showing the Rochdale Road Gas Works

Many of the buildings associated with the Rochdale Road Gas Works were photographed during the early twentieth century. The photographs include views of the interior workspaces, including the mechanics shop (Plate 5), the general offices (Plate 6) and views of the works from Rochdale Road (Plate 7).



Plate 5: Mechanics shop 1901 Rochdale road gas works



Plate 6: Rochdale Road Gas Works general offices 1901



Plate 7: Gas Works on Back St Georges Road, 1958

In 1931, Albert Vincent Reade (1864-1940) painted '*Dinner Hour at St Michael's Flags, Angel Meadow, Manchester*', which shows a view of Angel Meadow, with the gasometers of the Rochdale Road Gas Works in the background (Plate 8).



Plate 8: Dinner Hour at St Michael's Flags, Angel Meadow, Manchester', Albert Vincent Reade (1864-1940)

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 reliable published map that shows the study area at a useful scale is Laurent's map of 1793, which shows that the area surrounding the Site during the late-eighteenth century was largely undeveloped, however, streets had been laid out and houses had been constructed within the Site along Ashley Street and Back Ashley Street (Plate 9; Fig. 3).

Swire's map of 1824 shows further development within the vicinity of the Site, including the newly constructed Rochdale Road Gas Works to the north of the Site (Plate 10; Fig. 4). Houses had been constructed along Back St George's Road and at the junctions between Dewhurst Street and Ashley Street. Bancks' map of 1831 shows these houses in more detail (Plate 11; Fig. 5).

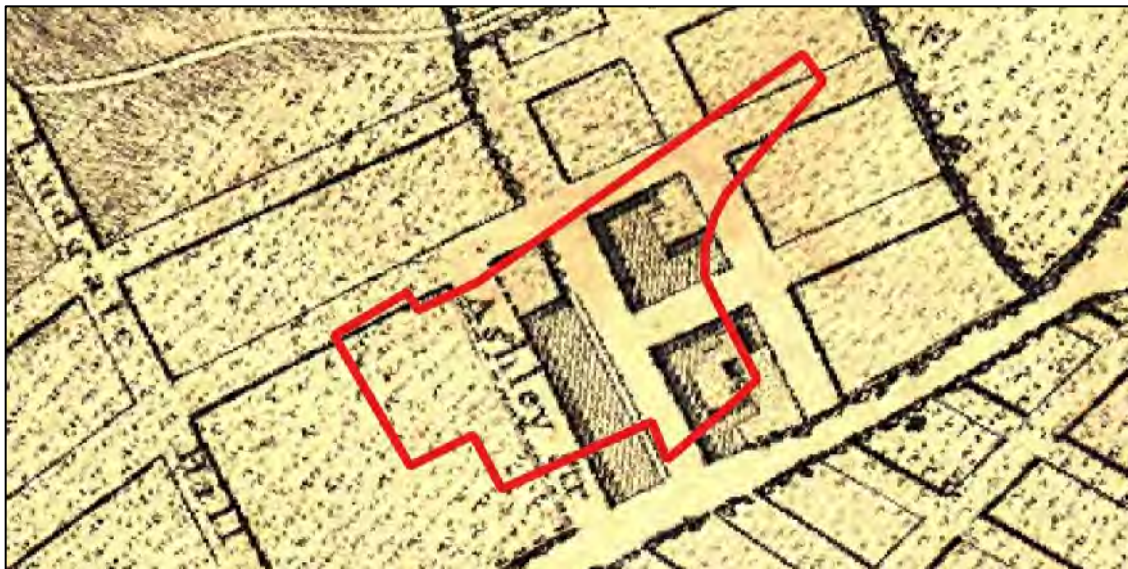


Plate 9: Extract from Laurent's map of 1793



Plate 10: Extract from Swire's map of 1824

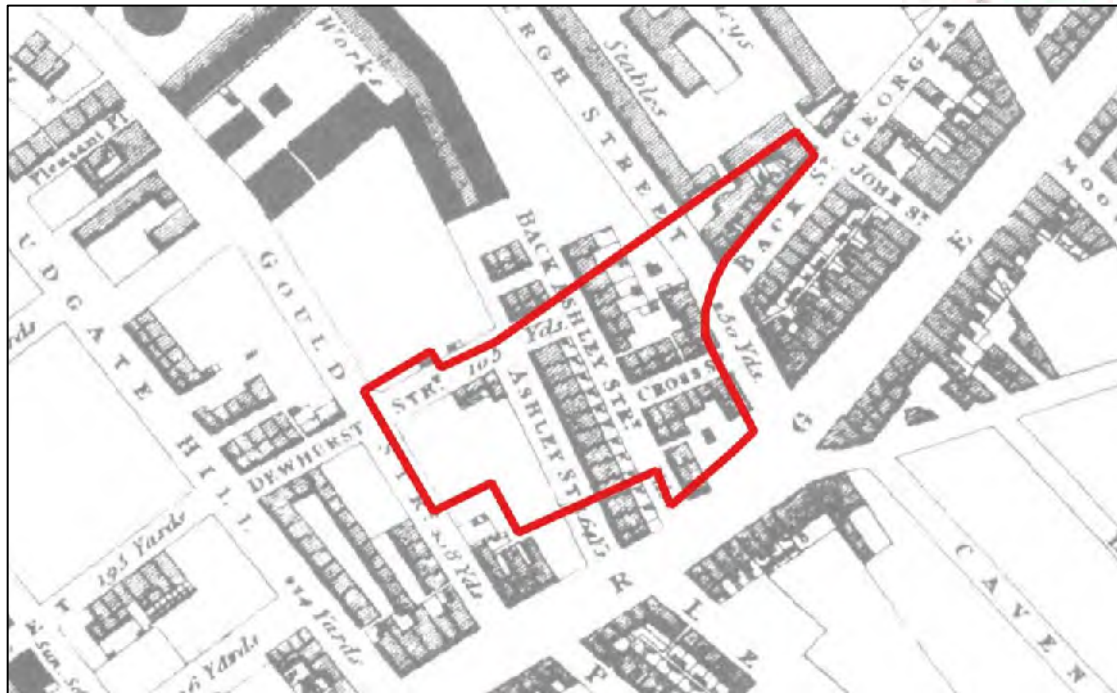


Plate 11: Extract from Bancks & Co.'s map of 1831

Gould Street School was constructed in 1837 to serve as a new school building for a group of Sunday School workers who had previously been occupying a room in Simpson Street (http://www.purdy.org.uk/genealogy/gould_street_sunday_school.htm). The school can be seen on the 1851 OS map, labelled as 'Gould Street School (Day and Sunday)' (Plate 12; Fig. 6).

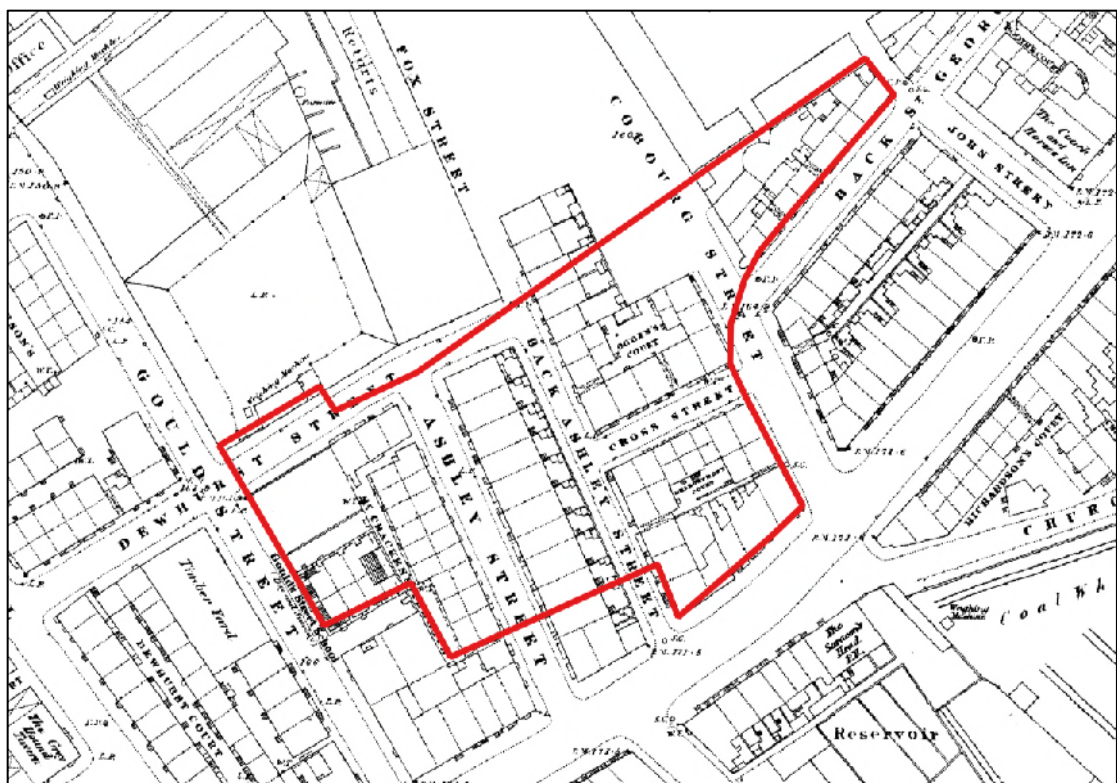


Plate 12: Extract from the 1:500 town plan of 1851



The 1851 OS map also shows that back-to-back housing had been constructed along Ashley Street between 1831 and 1851. The Site is located to the east of Angel Meadow, an area notorious for its poor living conditions, and therefore it is likely that the conditions for those living within the area of the Site were similarly poor. Conditions would have also been worsened by the presence of the gas works to the north, which would have released foul smells and toxic gases. It is also likely that many of those living within Angel Meadow and within the Site would have worked at the gas works.

By 1891, the Rochdale Road Gas Works had expanded into the Site, which had necessitated the demolition of the majority of the terraced houses from the late eighteenth and early nineteenth centuries. Railway lines were constructed within the Site, along with a warehouse, to allow for more coal to be brought into the works, which arrived through the entrance at Rochdale Road, which was linked to the Oldham Road Goods Station to the south. The 1891 OS map shows the railway lines within the Site along with turntables and a weighing machine (Plate 13; Fig. 7).

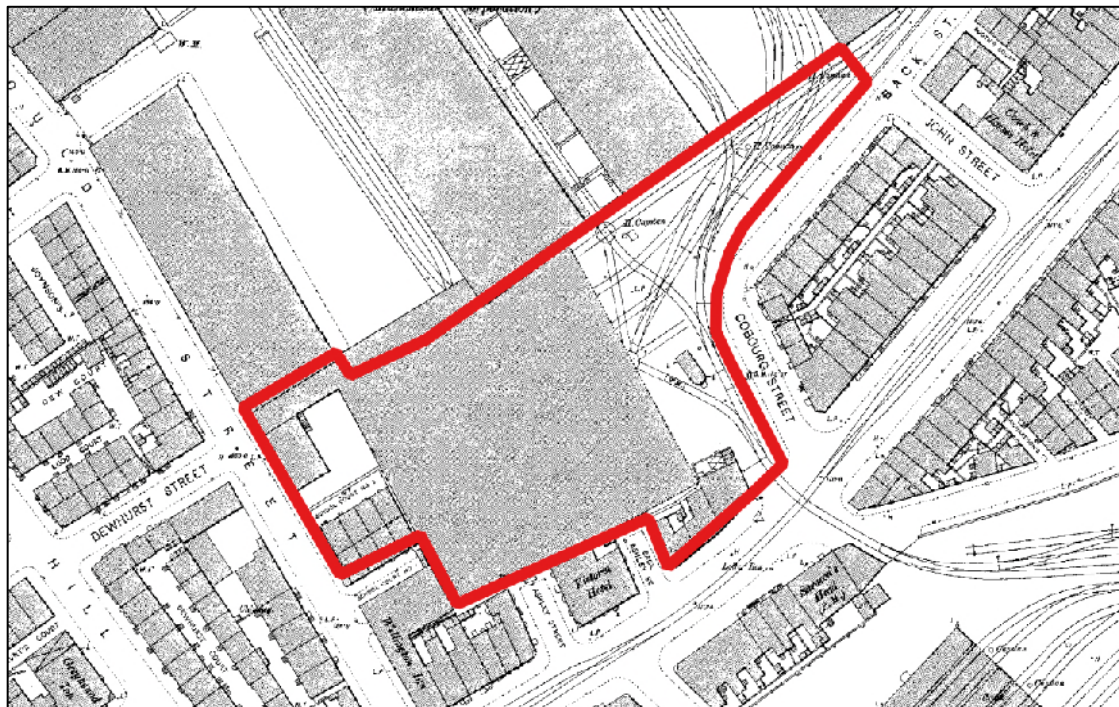


Plate 13: Extract from the 1:500 town plan of 1891

A photograph taken in 1901 shows Gould Street School and a view into the warehouse within the Site (Plate 14). A crane can be seen inside the warehouse, showing that goods were handled within this area. The brick wall separating the school from the gas works can also be seen on the 1891 OS map.

During the early twentieth century, a new joiner's workshop was added along Gould Street, which can be seen on the 1908 OS map (Plate 15; Fig. 8). This workshop was located to the north of Gould Street School, within the western section of the Site. Photographs show the workshop in 1907, shortly after its construction (Plate 16). The 1908 OS map also shows that more platforms appear to the north of the Site to cater for the increased transportation of goods. The 1922 OS map (Fig. 9) shows that Cobourg Street and Back St George Street had been renamed Clive Street between 1908 and 1922.





Plate 14: Photograph taken in 1901 showing Gould Street School to the right, the warehouse formerly located within the Site in the background and another building associated with the works to the left

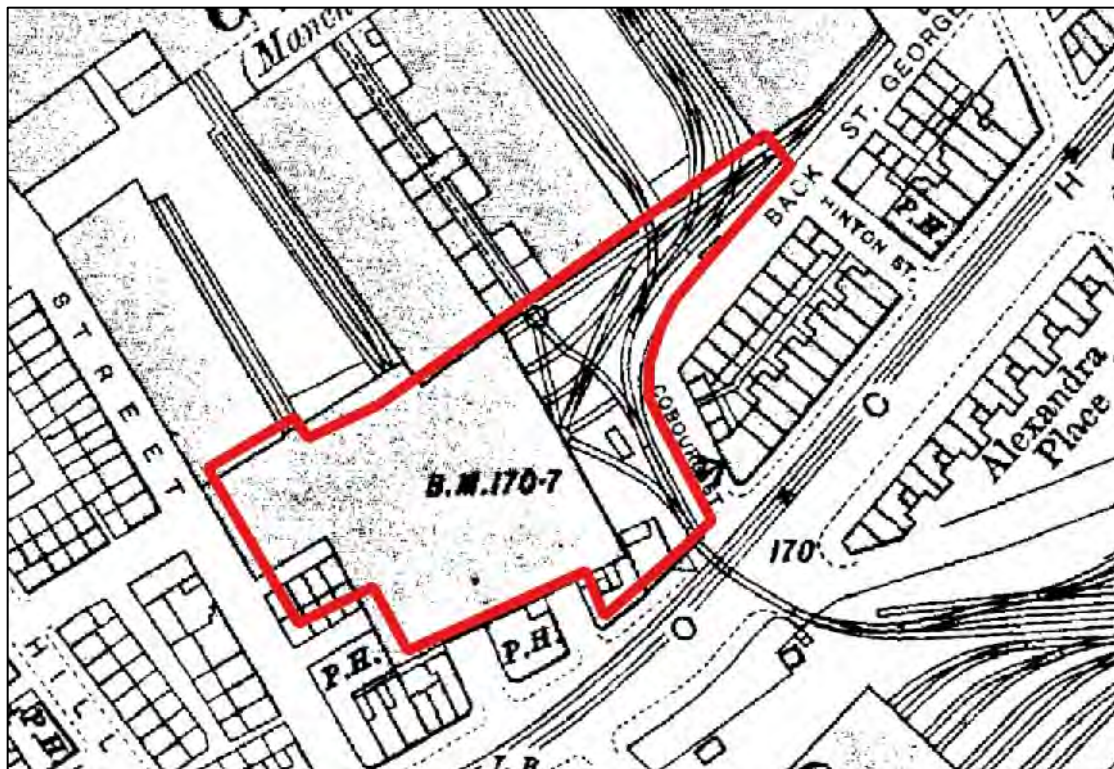


Plate 15: Extract from the 1:2500 County Series OS map of 1908



Plate 16: Joiner's Workshop at Rochdale Road Gas Works in Gould Street, Manchester, 1907

An aerial photograph, taken in 1939, shows the railway lines and warehouse associated with the Rochdale Road Gas Works (Plate 17). The gasometers of the works can also be seen to the north of the Site.

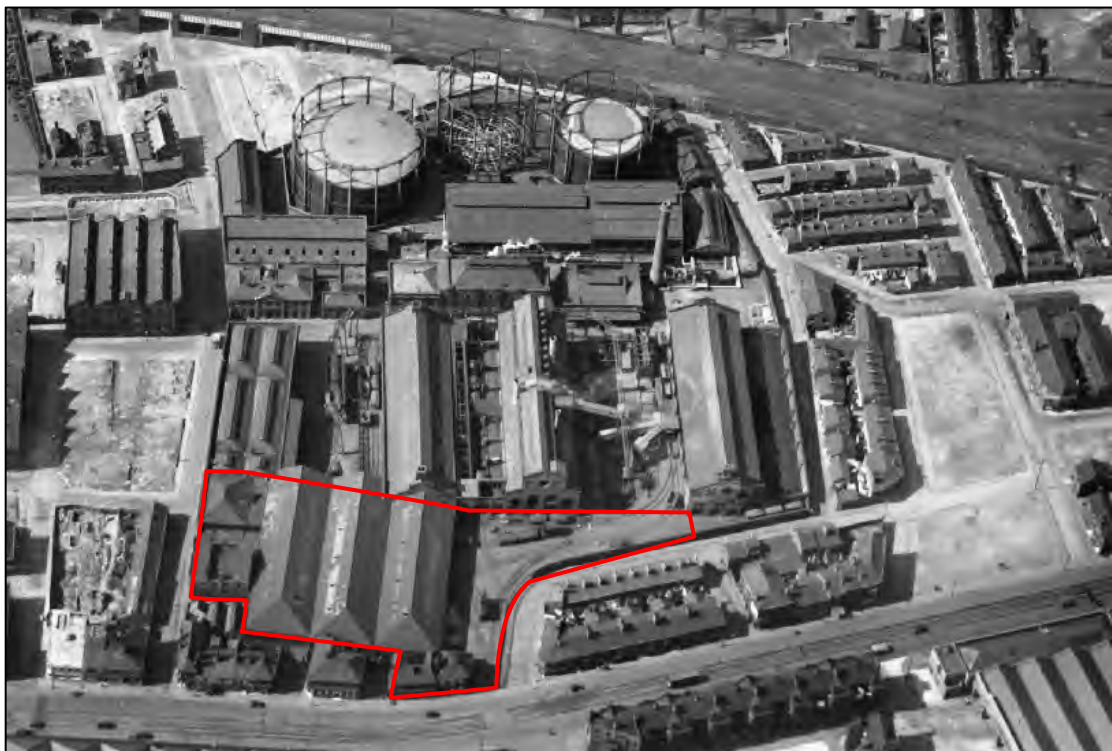


Plate 17: Aerial photograph of the Site taken in 1939, showing approximate Site location

The 1951 OS map shows the warehouse within the Site had been partially dismantled, revealing the railway lines (Plate 18; Figs 10 and 11). The map also labels various parts of the complex, including the coke feeder to the north, tanks, platforms and conveyors. A photograph taken in 1958 shows the railway entrance to the Rochdale Road Gas Works, located on Rochdale Road (Plate 19). The photograph shows a carriage entering the gas works complex.

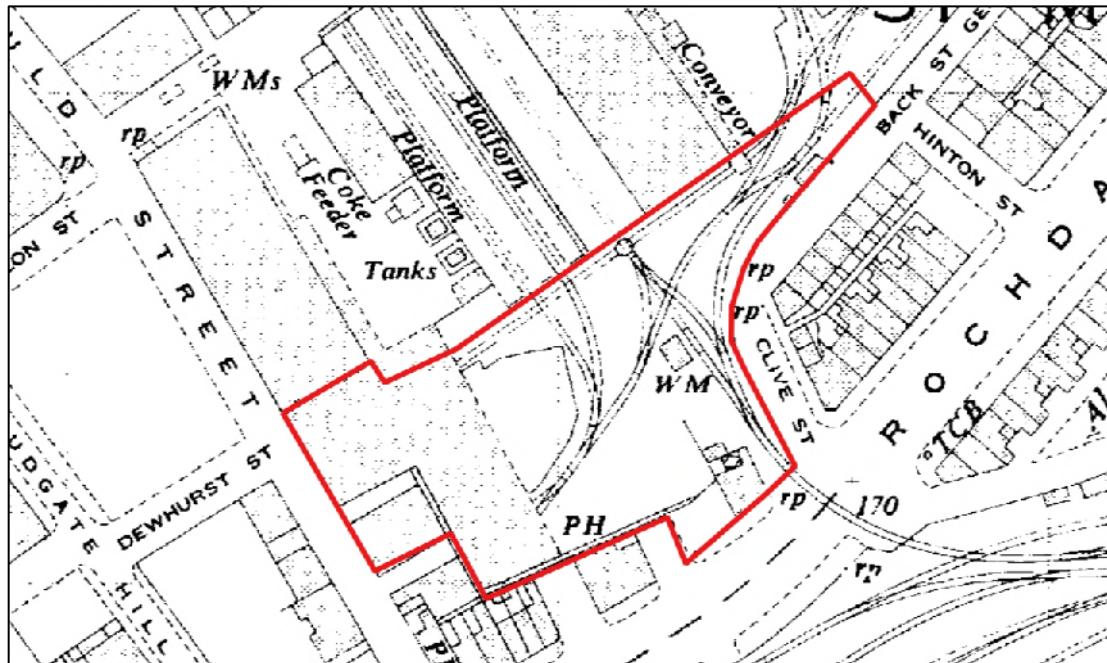


Plate 18: Extract from the 1:2500 National Grid OS map of 1951



Plate 19: Gas Works on Back St Georges Road, 1958, showing railway entrance

By 1970, Gould Street School had been repurposed as a warehouse and the railway lines associated with the Rochdale Road Gas works had been removed (Plate 20; Fig.

12). An additional depot was constructed along the southern boundary of the Site. The Gas Works is labelled on the 1970 OS map to the north of the Site.

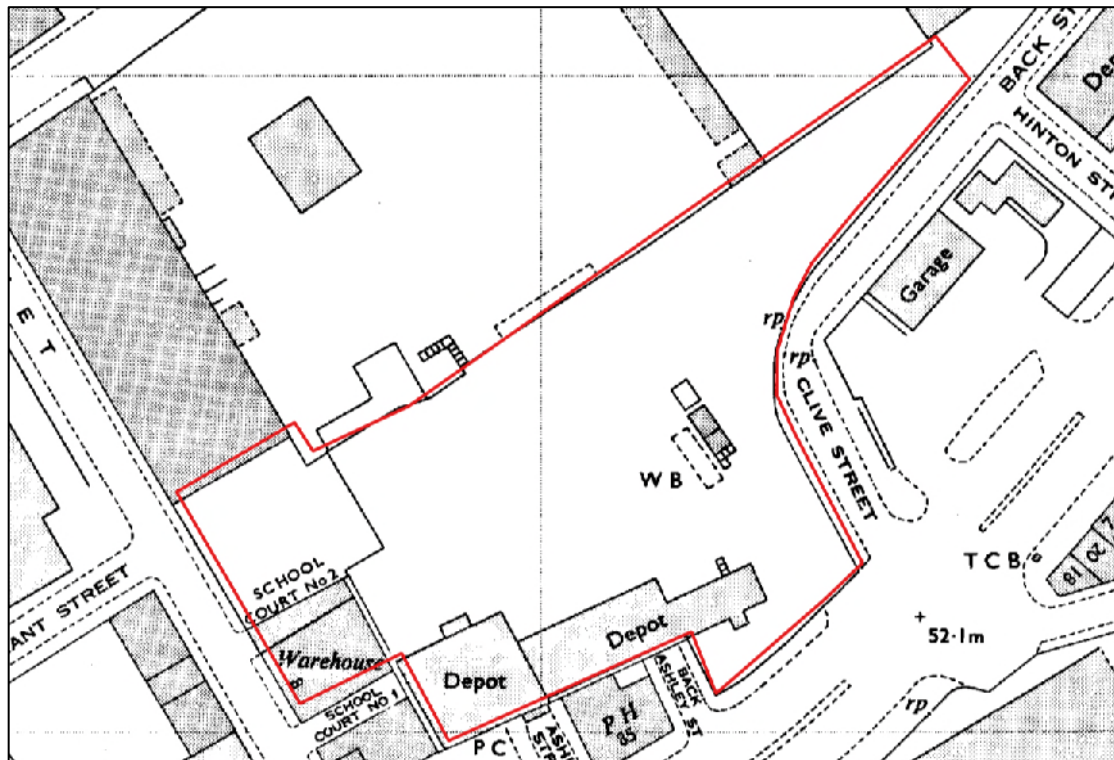


Plate 20: Extract from the 1:1250 National Grid OS map of 1970

By 1989, the gas works to the north of the Site had closed. The 1989 OS map shows that a new depot building had been constructed along the northern boundary of the Site (Plate 21; Fig. 13). The former Gould Street School was demolished by 1989.

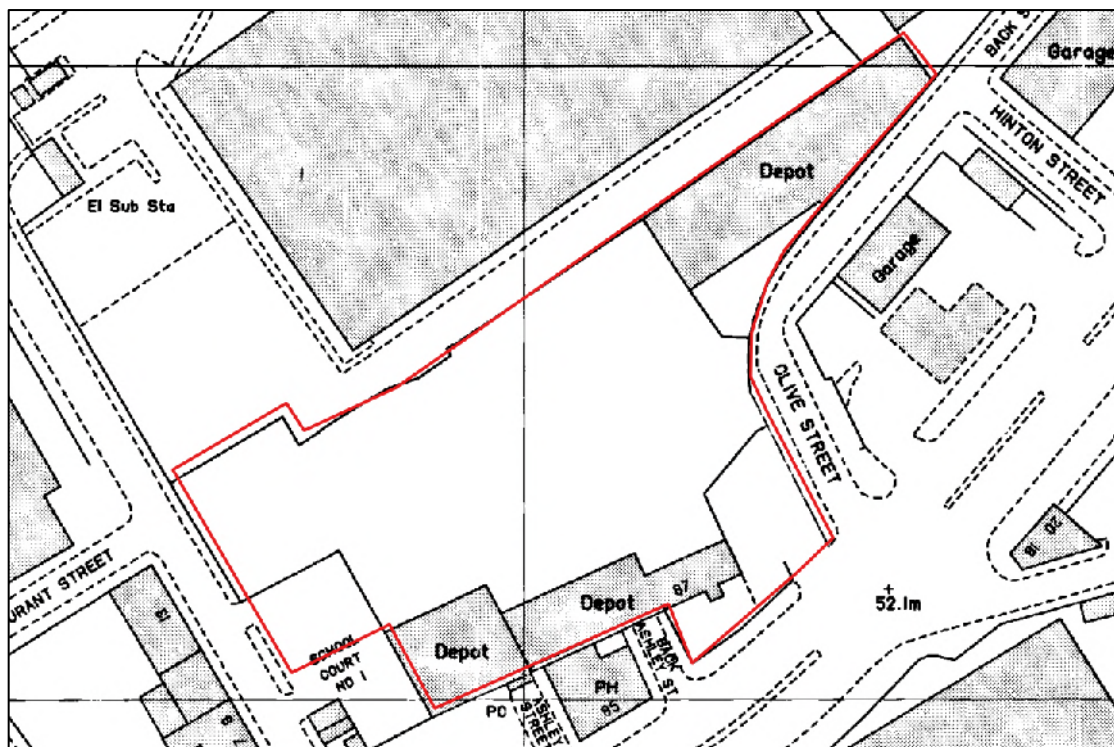


Plate 21: Extract from the 1:1250 National Grid OS map of 1989

5. Upstanding Remains

5.1 Introduction

Upstanding remains can be identified within the Site (Plate 22; Fig. 14), including arches identified beneath the railway lines, and brick walls along the northern and western Site boundary. One of the depots located within the Site appears to be a reused warehouse associated with the Rochdale Road Gas Works. Some of the structures identified within the Site may have been basements beneath the railway lines and gas works' buildings, however, their function is not yet fully understood. Other remains within the Site include the walls of a warehouse and the remains of the joiner's workshop on Gould Street adjacent to the western boundary of the Site.



Plate 22: Map showing the upstanding remains of the Rochdale Road Gas Works

5.2 Former Warehouse

The Rochdale Road Gas Works extended into the Site during the second half of the nineteenth century as the railway lines were added to the Site to increase the quantity of coal brought into the gas works. The 1891 OS map shows a warehouse located within the central area of the Site. This warehouse is also shown in an aerial photograph, taken in 1939 (Plate 23). The surviving depot within the Site closely resembles, in location and appearance, part of the warehouse to the west (Plate 24). It is therefore likely that the surviving depot within the Site is part of a repurposed warehouse, formerly associated with the Rochdale Road Gas works.

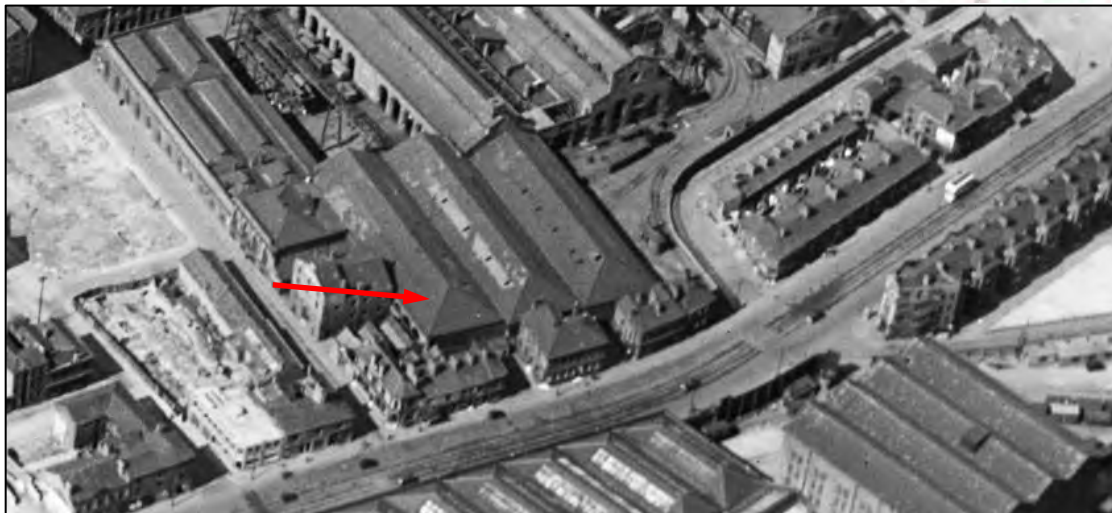


Plate 23: Aerial photograph of the Site in 1939, showing the depot



Plate 24: Recent aerial photograph of the Site, showing the depot

5.3 Arches Beneath Former Railway

The arches beneath the railway are accessible from the car park to the north of the Site and allow access to space beneath the Site (Plate 25). This space may have been used as storerooms. The arches of the structure resemble those shown in photographs of other areas of the gas works taken in 1901 (Plate 26). Due to the arches being built in the same design as others within the gas works complex, it is likely that the arches were constructed in the second half of the nineteenth century. The function of these arched areas is yet to be confirmed.



Plate 25: Arches identified within the site, located along the northern boundary



Plate 26: Similar arches within a different part of the gas works shown in photograph dated to 1901

5.4 Wall of Joiner's Workshop

A brick wall located at Gould Street represents a later addition to the Rochdale Road Gas Works. The wall represents a warehouse, most likely the joiner's workshop, built between 1901 and 1907. A photograph of the warehouse taken in 1907 shows the surviving wall at Gould Street.



Plate 27: Surviving brick wall in Gould Street, looking east towards the Site



Plate 28: Rochdale Road Gas Works in Gould Street, Manchester 1907

5.5 Wall of Former Warehouse

Other walls located within the Site include a standing wall of the former warehouse located within the Site, shown in a photograph taken in 1901 (Plate 29). These arches are still visible looking east from Gould Street and looking west from the central area of the Site.

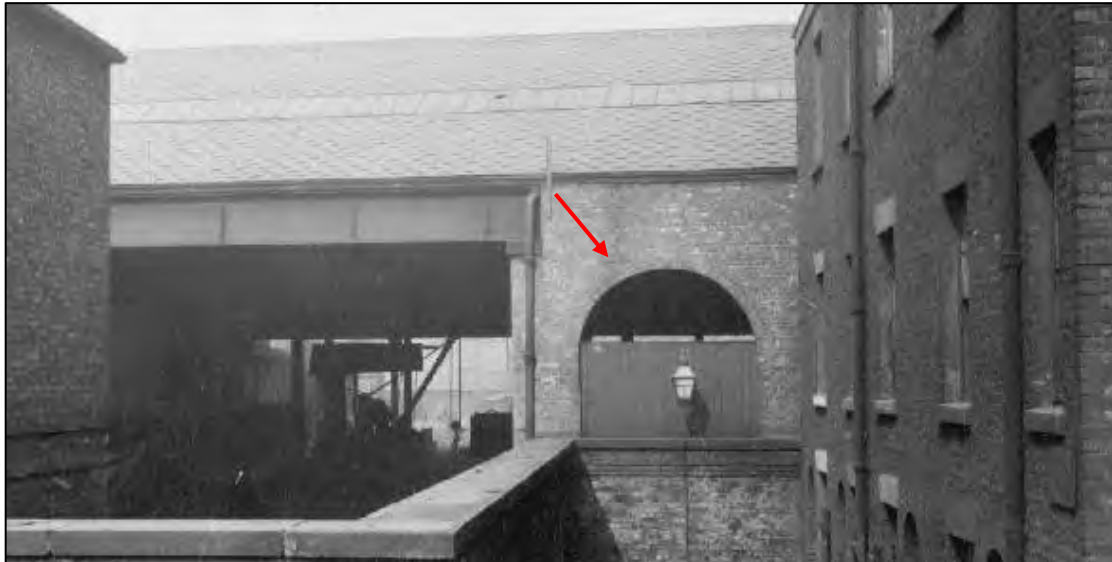


Plate 29: Photograph taken in 1901 showing the arches that survive within the Site belonging to the former warehouse

5.6 Wall along Northern Boundary

The northern boundary of the Site is marked by a brick wall, which rises from the lower ground level of the car park to the north to the ground level of the Site (Plate 30). The wall is likely associated with the Rochdale Road Gas Works.



Plate 30: Brick wall along northern boundary of the Site, looking south towards the Site

6. Significance

6.1 Introduction

Two accepted methodologies have been chosen to assess the significance of the archaeological resource within the Site. The below-ground archaeological remains have been assessed using 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). The upstanding remains, including the arches identified beneath the Site, have been assessed using the statutory criteria set out in the '*Principles of Selection for Listing Buildings*' (DCMS 2010), which provides a list of principles for assessing significance based on architectural and historic interest, age and rarity, aesthetic merits, selectivity and national interest.

6.2 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.

6.3 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:

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

6.4 Historic and Archaeological Significance

6.4.1 Archaeological Interest

The site of the Rochdale Road Gas Works has the potential to hold evidence of past human activity. The archaeological remains of the gas works will provide a primary source of evidence relating to the development of these industrial sites. Any remains of the gas works will therefore be of archaeological interest.

Back-to-back housing remains are recognised as being of archaeological interest within the North West Archaeological Regional Framework (Newman and McNeil 2007). The Gould Street School holds limited archaeological interest.

6.4.2 Historic Interest

The Rochdale Road Gas Works is of historic interest, as it can be connected to the development of Manchester, the poor conditions of the surrounding area (including Angel Meadow) and the development of the gas industry. The gas works therefore provides a material record of Manchester's history through both its association with the poor conditions of Manchester during the nineteenth century and through its illustration of the development of the gas industry. The Gould Street School has limited historical interest.

6.5 Baseline Significance Conditions

6.5.1 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 during the nineteenth century.

The most likely remains to be recovered from within the site date to the nineteenth century and include remains associated with the Rochdale Road Gas Works and Gould Street School. Gould Street School was built in 1837 and, although the gas works were established in 1824, they did not extend into the Site until the second half of the nineteenth century. The remains of the Rochdale Road Gas Works may therefore be considered somewhat significant due to period.



6.5.2 *Rarity*

Remains associated with early gas works are considered to be rare (Historic England 2019), however, the remains within the Site are much later and are unlikely to be associated with the industrial processes which took place within the works. Remains associated with the gas works may therefore be considered somewhat rare, as the remains associated with the early industrial processes are located beyond the Site boundary.

Remains of the Gould Street School and back-to-back housing would not be considered significant due to rarity.

6.5.3 *Documentation*

The historical development of the Site from the late eighteenth century can be traced reasonably well from cartographic and other primary sources. Further documentary research would undoubtedly furnish additional evidence, including more precise dating of the construction of the component buildings, although this is unlikely to alter the outline and conclusions presented in this assessment. Documentation within the National Gas Archive will likely shed light on the layout of the gas works and the functions or the spaces beneath the arches within the Site.

The archives associated with the Rochdale Road Gas Works likely survive within the National Gas Archives and, if so, would enhance the significance of the remains of the gas works as a well-documented Site with a rich history. However, site investigation would undoubtedly add to this body of evidence.

6.5.4 *Group Value*

The heritage assets identified within the Site all relate to the nineteenth century development within Manchester. The majority of remains identified within the Site will be associated with the Rochdale Road Gas Works, and so these remains will have a group value. The Gould Street School and back-to-back housing, other than being contemporary with the works, do not have a group association with the Rochdale Road Gas Works.

Industrial sites function by importing raw materials, applying one or more processes to produce a product (along with any waste products), then transporting the output off-site to market or to form a raw material for another industry. Sites where this sequence of activities or 'process flow' is still recognizable are often have a higher group value than sites where only part of the industrial process can be identified (Historic England 2018, 23). Evidence of each sequence likely survive across the site of the gas works, however, only the early stage of the sequence is likely to be uncovered within the Site (the taking in of the coal). The potential for the rest of the gas works to be excavated in the future, however, gives the Rochdale Road Gas Works a high group value.

6.5.5 *Survival / Condition*

The survival, extent and condition of any below-ground archaeological remains within the Site is presently unknown, however, it is likely that numerous structural elements survive beneath the car park within the Site. Extensive upstanding remains within the Site have also been identified.



6.5.6 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. Upstanding remains are at risk of demolition.

6.5.7 Diversity

The heritage assets within the site are all associated with the development of Manchester during the industrial period, and therefore are not considered to be significant due to diversity.

6.5.8 Potential

The potential for below-ground remains of the Rochdale Road Gas Works to survive within the Site are considered to be very high, especially as structural remains can be seen along the northern boundary of the Site (assessed in section 6.8).

The most significant structures associated with gas works sites, outlined in Historic England's '*Gasworks and Redundant Gasholders: Guidelines for their evaluation and recording*', include the retort houses, purifier buildings and gasholder bases. These structures are unlikely to be recovered within the Site, as the main industrial processes took place to the north of the Site. Further investigation of the documentary evidence should confirm whether any of these structures are likely to be identified within the Site. Early structures associated with the gas works are also unlikely to be identified within the Site, as the gas works only expanded into the Site during the second half of the nineteenth century.

There is some potential for the remains of Gould Street School to be recovered, however, these remains would be of low local significance. The potential for remains of the back-to-back housing of Ashley Street to survive is considered to be low, due to the later development of the gas works.

6.6 Significance of Below-Ground Archaeological Remains

Using the above criteria, the Site most likely contains non-statutory remains of local significance (Table 3). The Rochdale Road Gas Works holds both historic and archaeological significance, further enhanced by the following principles: rarity, documentation, group value, fragility/vulnerability.

GE No	Heritage Asset Name	Significance
01	Rochdale Road Gas Works	High local
04	Gould Street School	Low local
08	Back-to-back housing along Ashley Street	Low local

Table 3: Assessment of the significance of the heritage assets identified within the Site



6.7 Assessment Methodology and Significance Criteria for Upstanding Heritage Assets

Criteria have been established to appraise a building's significance. Statutory criteria, as set out in the *'Principles of Selection for Listing Buildings'* (DCMS 2010) provides a list of principles for assessing significance based on architectural and historic interest, age and rarity, aesthetic merits, selectivity and national interest.

Historic England's criteria outlined in *'Conservation Principles, Policies and Guidance'* which partially overlap with the Statutory Criteria, have also been considered, and encompass the following values which may be attached to place. These are:

- **Evidential Value** – relating to the potential of a place to yield primary evidence about past human activity;
- **Historical Value** – relating to ways in which the present can be connected through a place to past people, events and aspects of life;
- **Aesthetic Value** – relating to the ways in which people derive sensory and intellectual stimulation from a place;
- **Communal Value** – relating to the meanings of place for the people who relate to it, and whose collective experience or memory it holds.

There are upstanding buildings of historic value within the Site, including upstanding arches and an upstanding depot. The upstanding remains are outline in *Section 5: Upstanding Remains* and *Appendix 1: Gazetteer*.

6.8 Assessing the Significance of Upstanding Remains of the Gas Works within the Site

The significance of gas works is outlined in Historic England Guide, *'Gasworks and Redundant Gasholders: Guidelines for their evaluation and recording'*, which states that:

"The highest priority should be afforded to sites, structures and archaeological deposits relating to the earliest phase of the manufactured gas industry in England between the construction of the Gas Light & Coke Company's first gasworks in Westminster in 1812 and the passing of the Metropolitan Gas Act of 1860. Any physical remains from the early 19th century are of the highest significance, especially as the earliest sites are likely to be less well documented and predate large scale Ordnance Survey mapping. Given the rapid pace of development during the 19th century, it is most likely that remnants of the earliest phase of the manufactured gas industry will survive as below-ground archaeology or as fragments of later buildings." (Historic England 2019, 4)

"Priority should also be given to any in situ plant and machinery, or any structural elements of buildings which relate directly to the processes involved in gas manufacture. The survival of machinery in situ is likely to be exceptionally rare, but where ovens, retort benches, purifiers and exhausters are found, detailed recording will contribute greatly to the understanding of the industry." (Historic England 2019, 5)

The Rochdale Road Gas Works dates to 1824, however, the structural remains within the Site date to the second half of the nineteenth century, and therefore are not significant due to date. The structural remains within the Site include stores beneath the former railway line, warehouses and a joiner's workshop, and therefore are unlikely to represent the processes involved in the manufacture of gas. Although the structural remains within the Site do not represent the most significant aspects of historic gas works, the upstanding remains still hold significance, as outlined in Historic England's guide:

"Meter Houses, Stores, Jetties, Piers and Tanks survive in limited numbers and generally require limited investigation, however they have potential for significance and should not be discounted." (Historic England 2019, 7)

6.8.1 Evidential Value

The upstanding remains of the Rochdale Road Gas Works have the potential to yield evidence of activities at the gas works, particularly those activities surrounding the delivery of coal to the site and the storage and movement of material. The standing remains represent a primary source of evidence of the development of the railway system at the gas works, the warehouses and the joiner's workshop, which together allowed the production of gas at the works to flourish.

The available documentation of the upstanding remains beneath the former railway lines is inaccessible at present (documents held within National Gas Archives, currently unavailable), however, the cartographic evidence reveals little information concerning the arches beneath the former railway lines, as they are located below-ground level.

An investigation of the arches beneath the former railway lines has the potential to reveal the uses of these structures, and therefore **the arches beneath the former railway lines hold a medium evidential value**. Other upstanding remains within the Site are more fragmentary and their functions are better understood. Therefore, **the former warehouse, wall of the joiner's workshop at Gould Street and the other walls of the gas works can be considered to have a low evidential value**.

6.8.2 Historical Value

The historical value of the Rochdale Road Gas Works derives from its association with the historic development of Manchester and the poor living conditions within the surrounding area, which would have been worsened by the presence of the gas works. It is also likely that many of the inhabitants living within the surrounding areas would have worked at the gas works, which was a dangerous job with many reported deaths and injuries. The historic value also derives from the illustrative aspects of the upstanding remains, which represent the development of the gas industry, particularly the development of a network of railway lines to boost the quantity of coal brought into the works.

The historical value of the upstanding remains within the Site is considered to be low, as the remains are illustrative of a later phase of the gas works yet are still significant due to their association with the early gas works.

6.8.3 Aesthetic Value

The brick walls (GE05; GE06) within the Site, located along the northern and western boundary of the Site are considered to have low aesthetic value. The wall along the northern boundary appears to be part of a basement, and therefore has no designed features. The arches of the wall of the depot have lost their aesthetic value as they have been blocked up and are presently covered in vegetation. There is potential for the arches to regain aesthetic value through restoration.

The depot located at the southern boundary of the Site (GE03) has undergone alterations and was not designed to be decorative. Therefore, the depot within the Site is not considered to hold aesthetic value.

The upstanding remains of the joiner's workshop (GE04) include a decorated brick wall, which was purposefully designed to be aesthetically appealing. The upper part of the wall has been demolished, but some of the patterns within the brickwork can be seen. The wall of the joiner's workshop is therefore considered to have low aesthetic value.

The arches beneath the railway are of a similar design as those shown on other photographs of the gas works, and therefore fit in with the formally designed aesthetic of the gas works. The arches beneath the railway lines therefore have a low aesthetic value.

6.8.4 Communal Value

The gas works is no longer in use and the buildings associated buildings have been mostly demolished, with only a few surviving walls and structures. The upstanding remains therefore do not hold communal value.

6.9 Summary of Significance

The table below summarises the evidential, historical, aesthetic and communal values of the upstanding remains within the Site (Table 4).

Value	Arches Beneath Former Railway (GE02)	Former Warehouse/ Depot (GE03)	Joiner's Workshop along Gould Street (GE04)	Other upstanding walls associated with the gas works (GE05; GE06)
Evidential	Medium	Low	Low	Low
Historical	Low	Low	Low	Low
Aesthetic	Low	None	Low	None
Communal	None	None	None	None

Table 4: Summary of the significance of the upstanding remains within the Site

7. *Impact of Development*

7.1 *Impact of Development on Upstanding Remains*

The redevelopment of the Site has the potential to have an adverse impact on the upstanding remains identified within the Site. This assessment has demonstrated that these remains hold low heritage value and that the impact of the unmitigated removal of these remains would be substantial.

7.2 *Impact of Development on Below-Ground Remains*

Any ground-breaking works associated with the proposed development have the potential to have an adverse impact on buried archaeological remains. This assessment has demonstrated that the Site has the potential to retain buried remains dating from the nineteenth century, including remains of the Rochdale Road Gas Works and Gould Street School. It is, therefore, possible that remains of these sites may be disturbed by any ground-breaking works. These remains are likely to be of local (low) significance and the unmitigated adverse impact of the proposed development on these remains is likely to be substantial.

8. Recommendations

8.1 Recommendations

The requirement for any further archaeological investigation in advance of, or during, development works will be decided by the Greater Manchester Archaeological Advisory Service (GMAAS), in their capacity as archaeological advisor to Manchester City Council. However, based on the results of this assessment, it may be anticipated, that the upstanding remains within the Site that have been assessed as being related to the gas works will require recording via an archaeological building survey, prior to development works commencing on site.

A level 2 (enhanced) archaeological building survey should be undertaken of the arches beneath the railway line (GE02). For other upstanding elements of the gas works within the Site, including the depot and the wall of the joiner's workshop, a level 2 (basic) recording should be undertaken.

This archaeological building survey should be accompanied by further archival research, which would include accessing the National Gas Archives for plans of the Site, and which would assist greatly with the building recording.

For the buried archaeological remains relating to the gas works that are highly likely to survive beneath the surface of the site, the extent and condition of the remains will need to be established through a programme of archaeological evaluation trenching. Should any significant buried remains be encountered during the initial evaluation, further works in the form of an archaeological excavation may be appropriate to ensure an archival record is compiled prior to the ultimate loss of the remains.

Consideration should also be given to adding value to the new development project by assessing the practicality of incorporating some elements of the upstanding remains of the gas works into the development design. This would maintain a tangible connection to the long and significant industrial history of the Site and could provide an authentic 'hook' on which to market the development to prospective customers.



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The desk-based research, report and illustrations were compiled by Ashley Brogan. The report was edited by Anthony Lee, who was also responsible for project management.



Appendix 1: Gazetteer

The following gazetteer entries (GE) summarise the sites of potential archaeological interest within the Site (Figs 14 and 15). The identification of these non-designated heritage assets is drawn primarily from the historic map regression analysis.

Gazetteer Entry 01

Site Name	Rochdale Road Gas Works (site of)
Designation	No designation
HER number	9918.1.0
Site Type	Gas works
Period	Early nineteenth to late twentieth century
NGR	SJ 8465 9925
Source	HER; OS mapping; National Gas Archive; Swires 1824; Bancks & Co. 1831
Description	The Rochdale Road Gas Works was constructed in 1824 for the Police Commissioners Gas Undertaking, however, by 1843, the responsibility of the gas undertaking was transferred to the Manchester Corporation. The works expanded over the course of the nineteenth century and in the second half of the nineteenth century a railway network was added to allow more coal to be transported straight to the gas works.
Assessment	Remains of the gas works have been identified within the Site, with surviving arches located beneath the ground level of the Site. Surviving remains of the railway network and other features associated with the gas works likely survive as below-ground remains within the Site.

Gazetteer Entry 02

Site Name	Arched structures associated with Rochdale Road Gas Works
Designation	Non-designated heritage asset
HER number	9918.1.0
Site Type	Gas works
Period	Late nineteenth century
NGR	SJ 8465 9925
Source	OS mapping; Google Earth
Description	Arched structures have been identified beneath the Site, which are visible looking south from the car park to the north of the Site. The arches contain rooms, which may have been used for storage. Above the structures were the former railway lines associated with the Rochdale Road Gas Works. The structures appear similar in design to those shown in photographs of the works, dated to 1901, which include stone columns and brick arches.
Assessment	The structures are extant and are located within the Site.



Gazetteer Entry 03

Site Name	Depot associated with Rochdale Road Gas Works
Designation	Non-designated heritage asset
HER number	-
Site Type	Warehouse
Period	Late nineteenth century
NGR	SJ 84690 99106
Source	OS mapping
Description	The Site presently contains three depot buildings, one of which appears to have been associated with the Rochdale Road Gas Works. Aerial photography of the works taken in 1939 shows the building, however, it has since been partially demolished.
Assessment	The structure remains extant and is located within the Site.

Gazetteer Entry 04

Site Name	Wall of joiner's workshop along Gould Street
Designation	Non-designated heritage asset
HER number	-
Site Type	Workshop
Period	Early twentieth century
NGR	SJ 84690 99106
Source	OS mapping
Description	The workshop was likely the new joiner's shop, built in the early twentieth century, between 1901 and 1907. The workshop is shown on the 1908 OS map (Fig 8). A brick wall of the warehouse survives along Gould Street.
Assessment	The wall remains extant and is located within the Site.

Gazetteer Entry 05

Site Name	Brick wall of Rochdale Road Gas Works along northern Site boundary
Designation	Non-designated heritage asset
HER number	-
Site Type	Wall
Period	Mid-late nineteenth century
NGR	SJ 84708 99168
Source	OS mapping
Description	A brick wall can be seen looking south from the car park to the north of the Site, which was associated with the Rochdale Road Gas Works and likely represents a basement wall or foundation.
Assessment	The wall remains extant and is located within the Site.



Gazetteer Entry 06

Site Name	Arched brick wall of Rochdale Road Gas Works warehouse boundary
Designation	Non-designated heritage asset
HER number	-
Site Type	Wall of warehouse
Period	Mid-late nineteenth century
NGR	SJ 84674 99117
Source	OS mapping
Description	A surviving wall of a warehouse survives along the western boundary of the Site. The wall was part of the warehouse to the east of Gould Street school. The warehouse was partially demolished in the mid-twentieth century, however, part of the structure remains (GE03).
Assessment	The wall remains extant and is located within the Site.

Gazetteer Entry 07

Site Name	Gould Street School (site of)
Designation	No designation
HER number	-
Site Type	School
Period	Nineteenth century
NGR	SJ 84668 99109
Source	OS mapping
Description	Gould Street School opened in 1837 and functioned as a day school and Sunday school. The school is shown in some detail on the 1851 OS map (Fig. 6). The school is shown on the 1958 OS map and the 1970 OS map as a warehouse (Figs 11 and 12). The school was demolished prior to the surveying of the 1989 OS map (Fig. 13).
Assessment	The school likely survives as below-ground remains, as the land has been used as a car park since the demolition of the school building.

Gazetteer Entry 08

Site Name	Back-to-back housing on Ashley Street (site of)
Designation	No designation
HER number	-
Site Type	Dwellings
Period	Nineteenth century
NGR	SJ 84683 99106
Source	OS mapping
Description	The back-to-back housing was built at Ashley Street between 1824 and 1831, as they first appear on Bancks & Co.'s map of 1831 (Fig. 5). The houses are also shown on the 1851 OS map (Fig. 6). The houses were demolished for the expansion of the Rochdale Road Gas Works in the second half of the nineteenth century.
Assessment	Remains of the back-to-back houses of Ashley Street may survive within the Site, however, the later development of the Rochdale Road Gas Works may have removed remains of the houses.



Appendix 2: Figures

- Figure 1: Site location map
- Figure 2: Site boundary superimposed on modern mapping
- Figure 3: Site boundary superimposed on Laurent's map of 1793
- Figure 4: Site boundary superimposed on Swire's map of 1824
- Figure 5: Site boundary superimposed on Bancks & Co's map of 1831
- Figure 6: Site boundary superimposed onto the Ordnance Survey 1:500 Town Plan of 1851
- Figure 7: Site boundary superimposed onto the Ordnance Survey 1: 500 Town Plan of 1891
- Figure 8: Site boundary superimposed onto the Ordnance Survey 1:2500 map of 1908
- Figure 9: Site boundary superimposed onto the Ordnance Survey 1:2500 map of 1922
- Figure 10: Site boundary superimposed onto the Ordnance Survey 1:2500 map of 1951
- Figure 11: Site boundary superimposed onto the Ordnance Survey 1:1250 map of 1958
- Figure 12: Site boundary superimposed onto the Ordnance Survey 1:1250 map of 1970
- Figure 13: Site boundary superimposed onto the Ordnance Survey 1:1250 map of 1989
- Figure 14: Locations of upstanding heritage remains (GE 02-06) superimposed on modern mapping
- Figure 15: Archaeological potential (GE01; 07; 08) superimposed on modern mapping





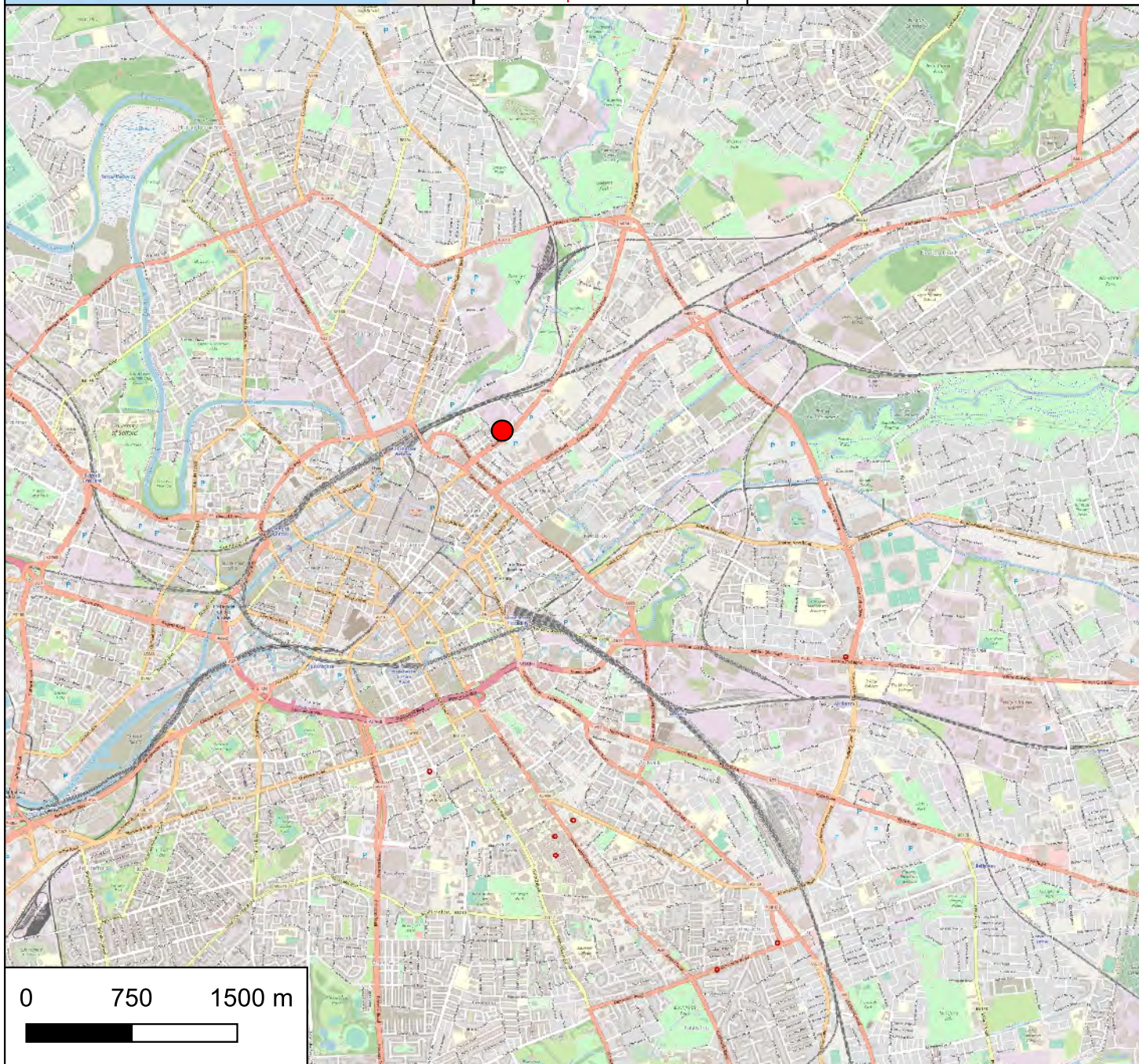
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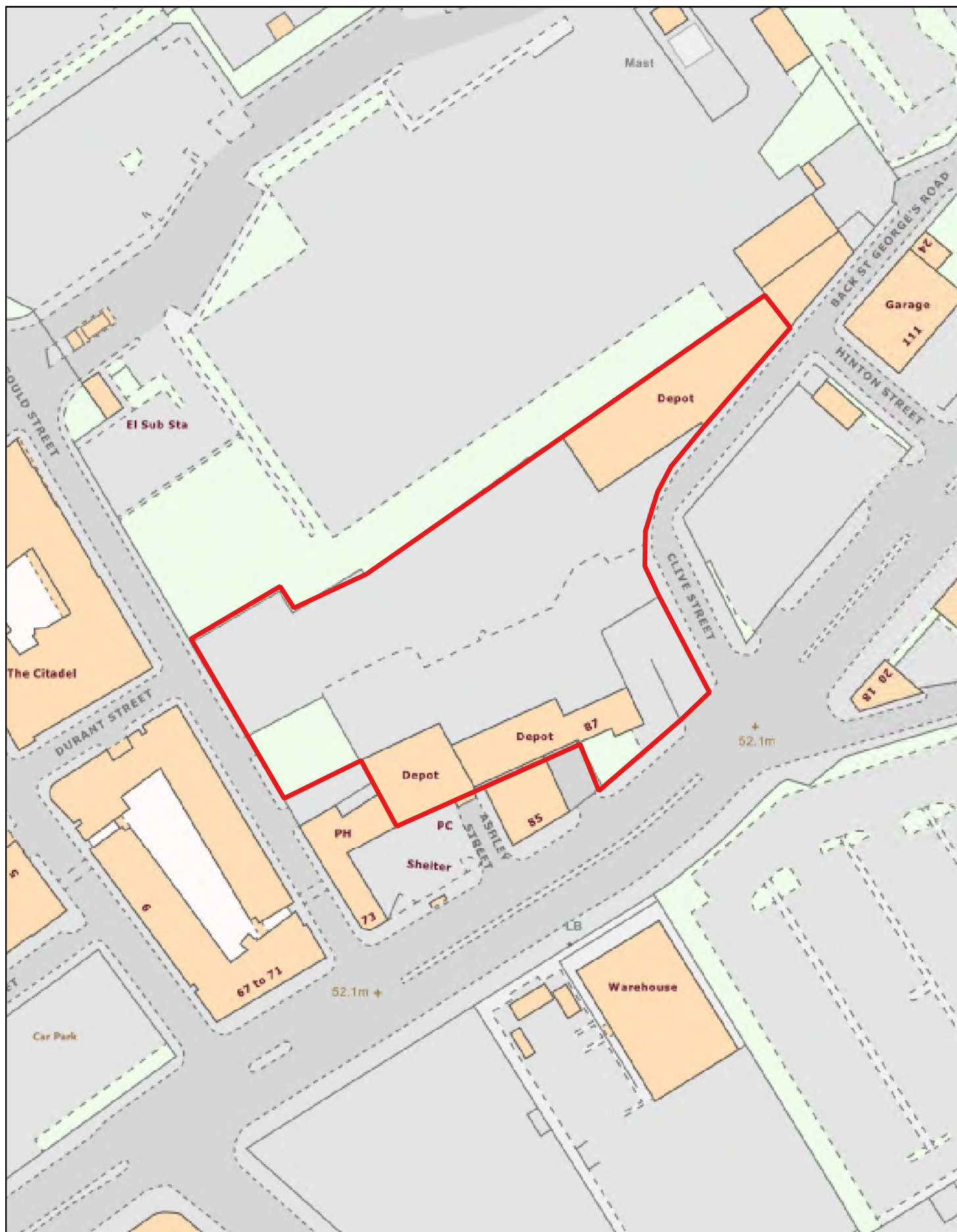
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Figure 1: Site location

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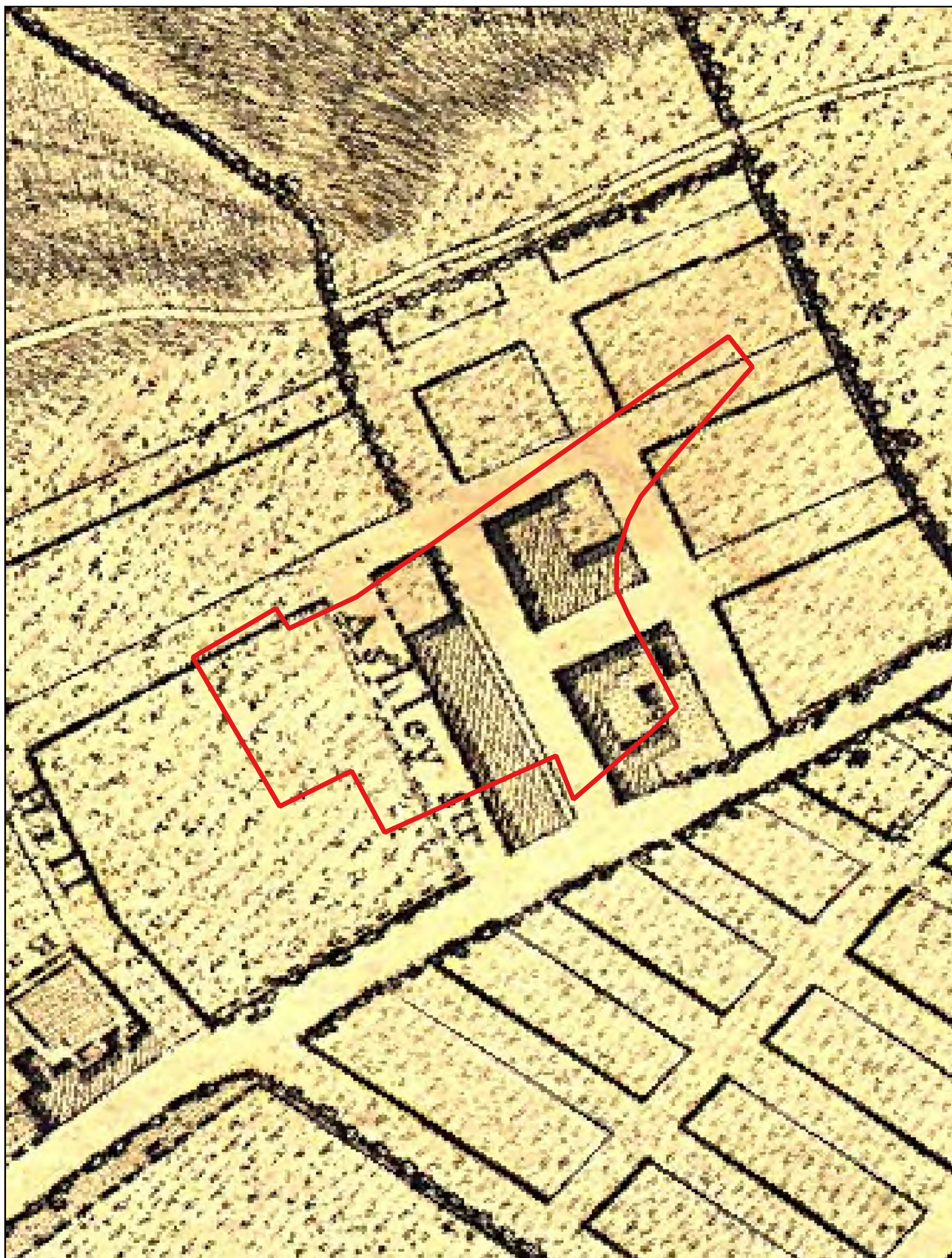


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Figure 2: Site boundary superimposed onto modern mapping

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0 20 40 m



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Figure 3: Site boundary superimposed onto
Laurent's 'A Topographical Plan of Manchester
and Salford' published 1793

0 20 40 m

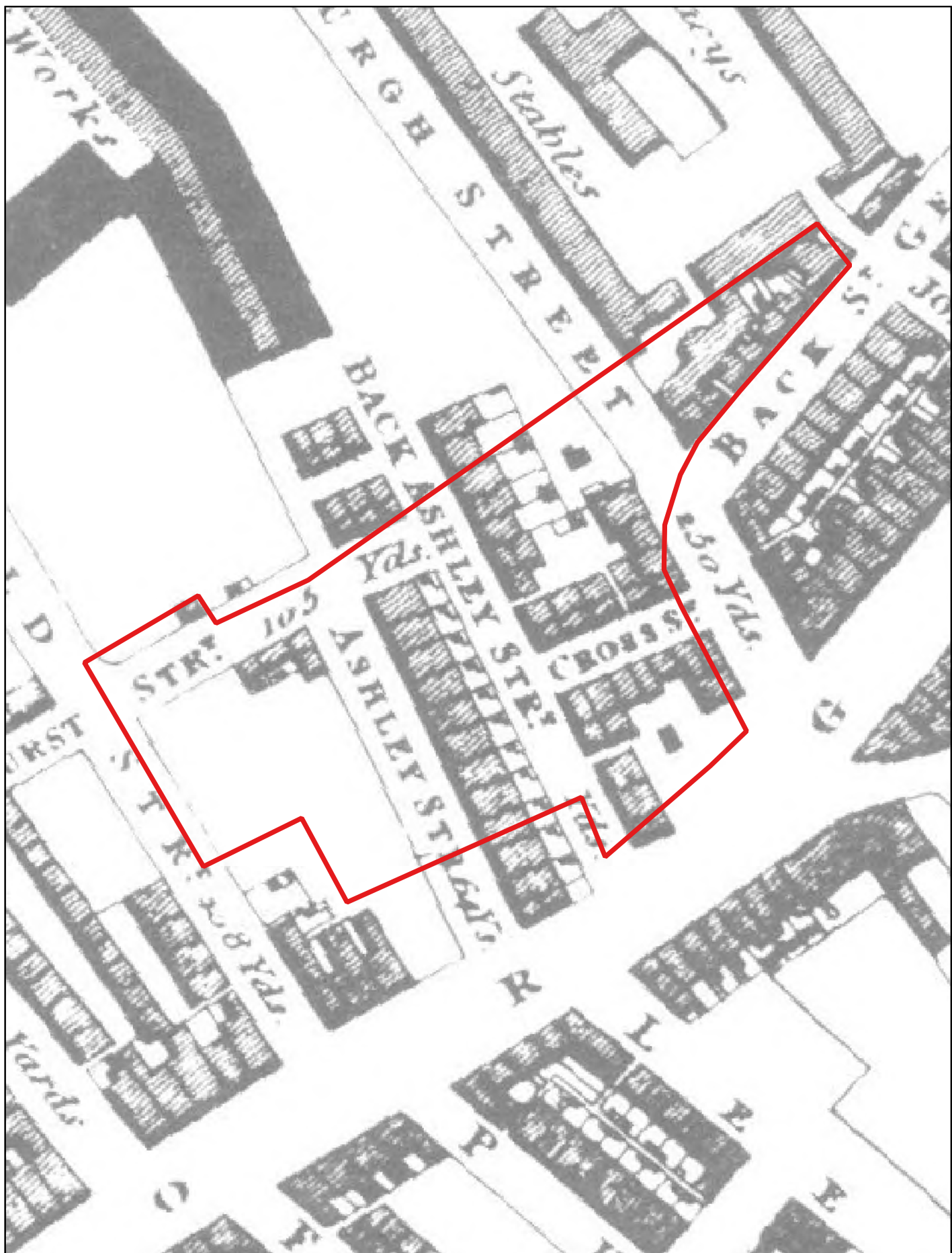




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Figure 4: Site boundary superimposed onto Swire's 'Map of Manchester and its Environs' published 1824

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Figure 5: Site boundary superimposed onto Banks & Co.'s map of 'A Map of Manchester and Salford' of 1831

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Figure 6: Site boundary superimposed onto the 1:1056 Town Plan of 1851

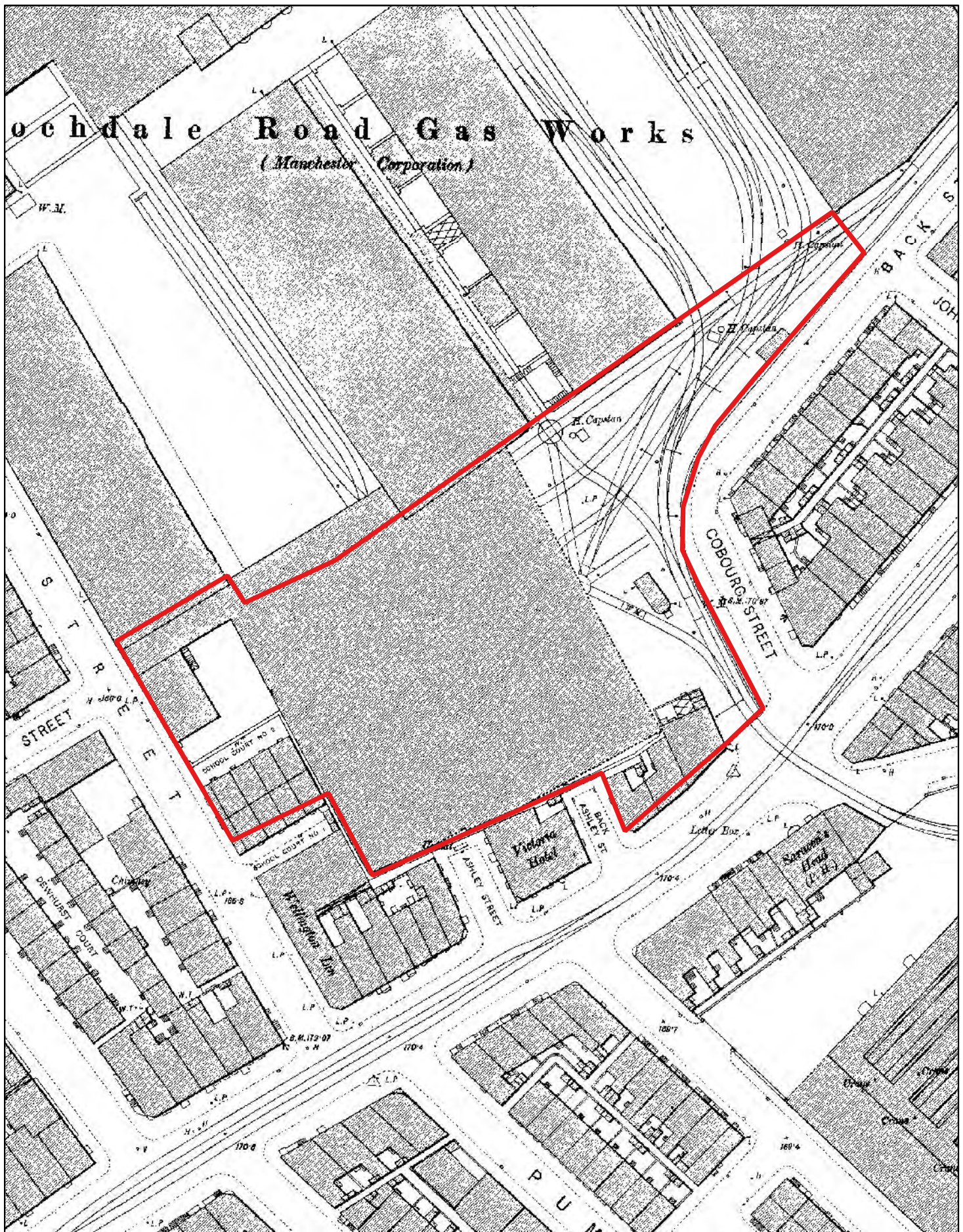
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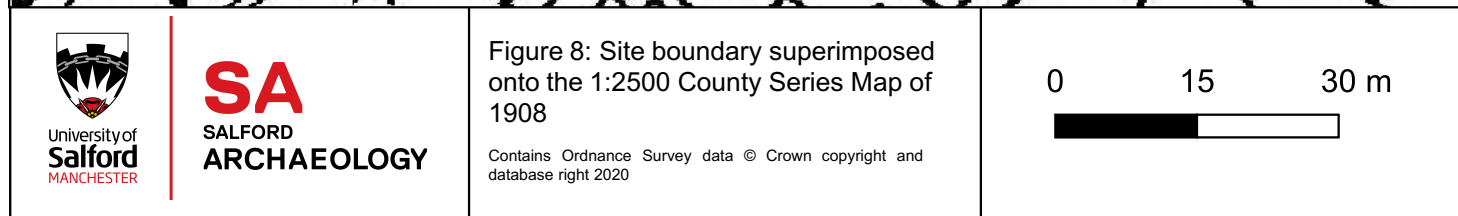
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Figure 7: Site boundary superimposed onto the 1:500 Town Plan of 1891

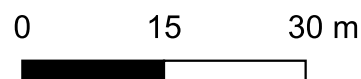
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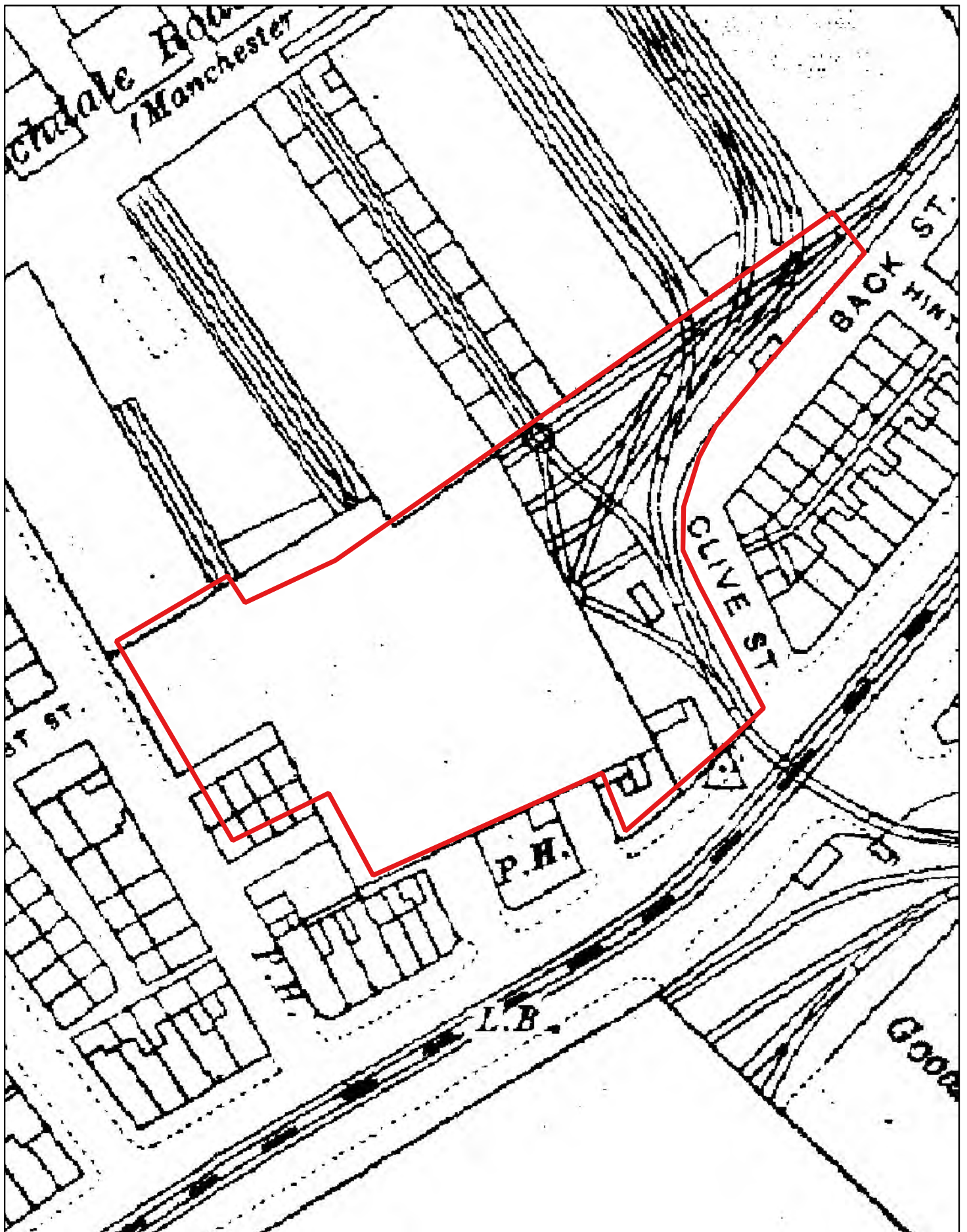
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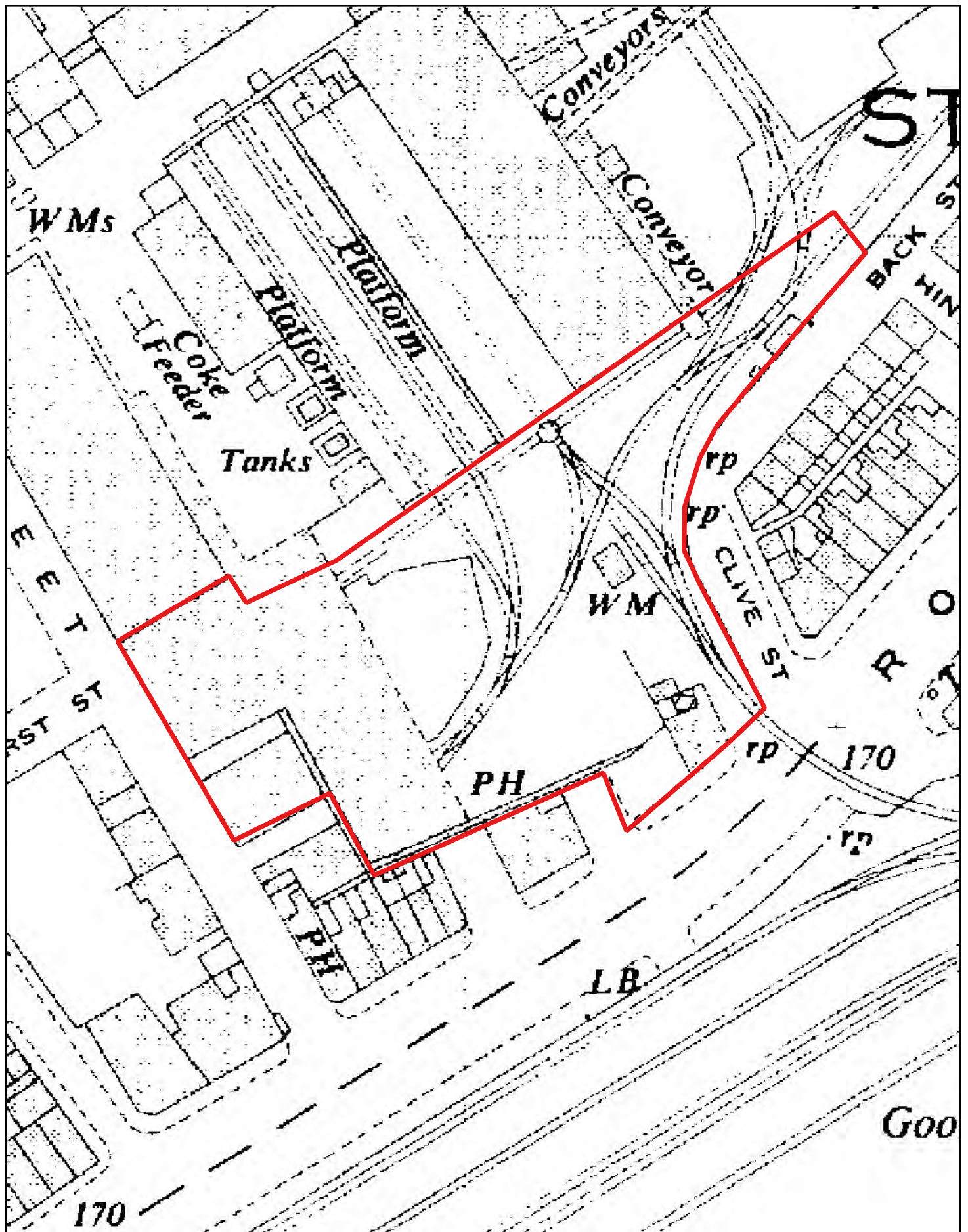
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Figure 9: Site boundary superimposed
onto the 1:2500 County Series Map of
1922

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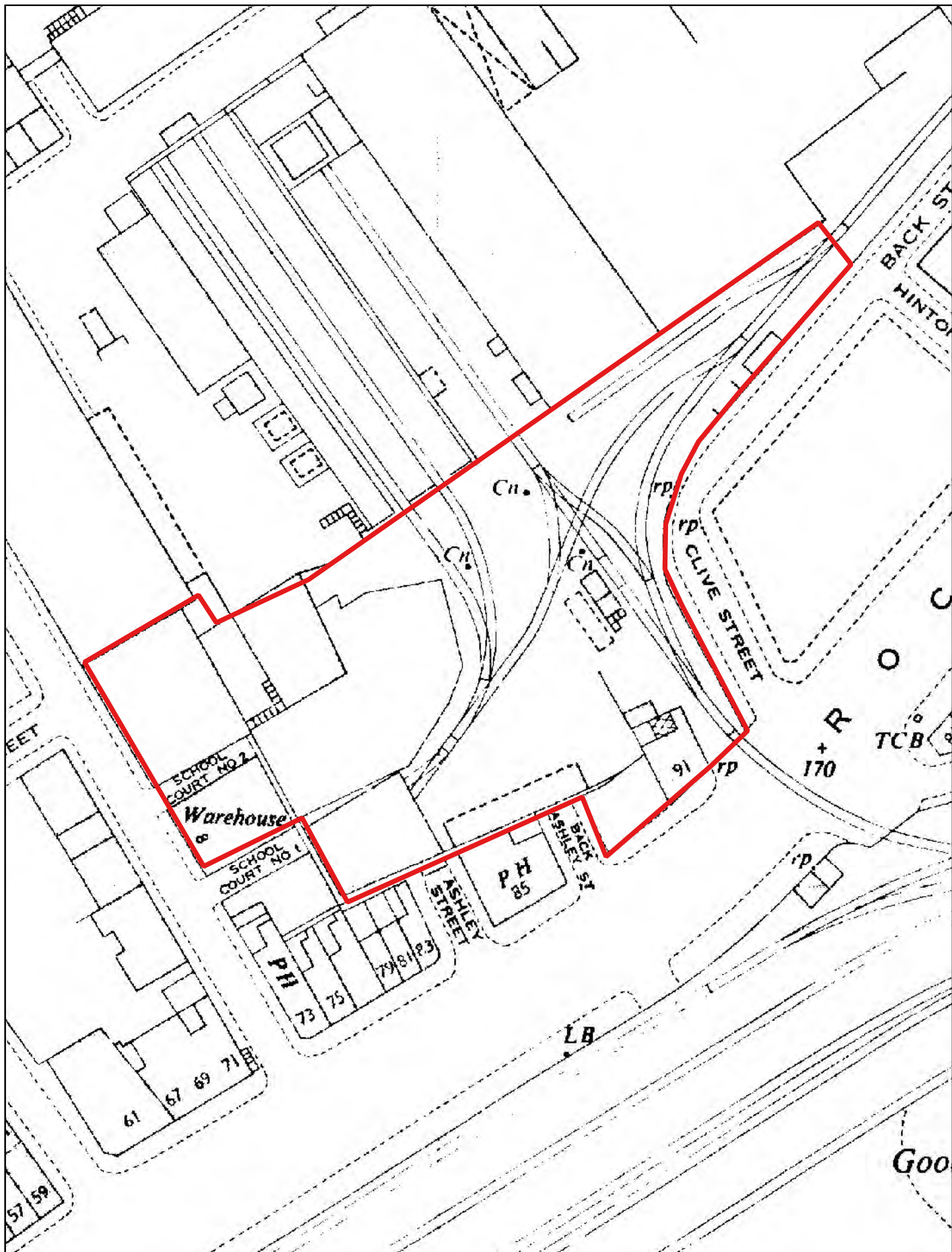
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Figure 10: Site boundary superimposed onto the 1:2500 National Grid Map of 1951

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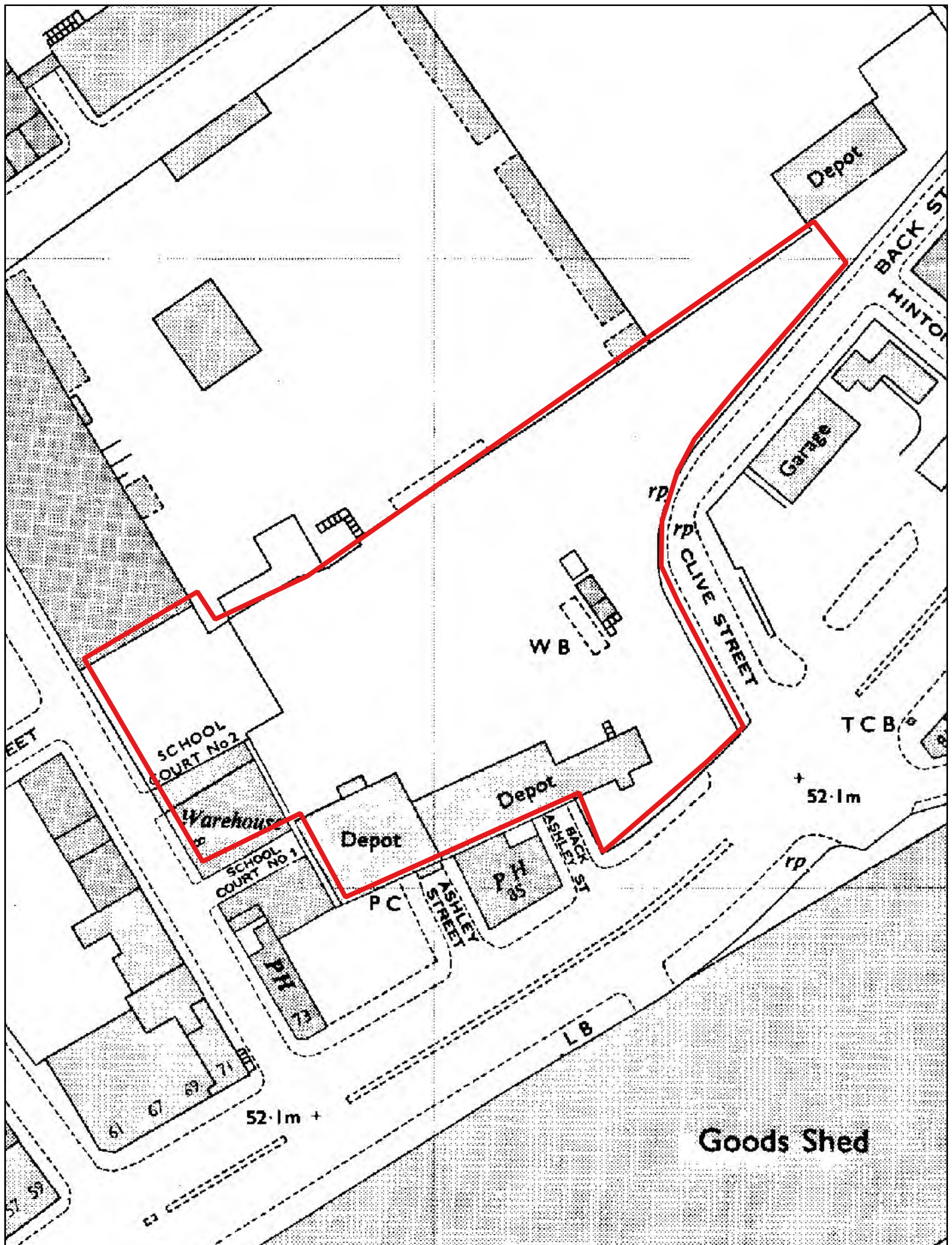
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Figure 11: Site boundary superimposed onto the 1:1250 National Grid Map of 1958

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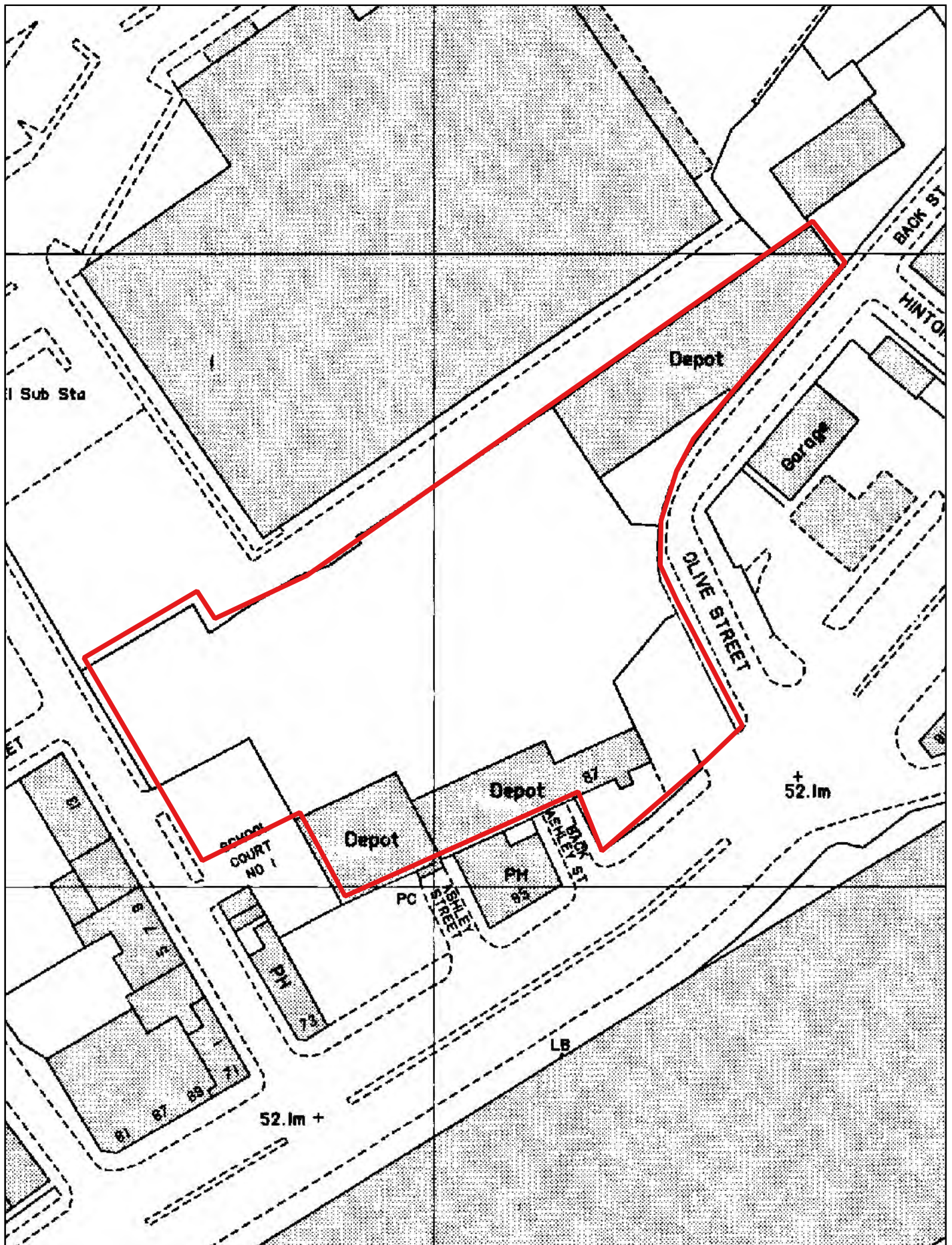
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Figure 12: Site boundary superimposed onto the 1:1250 National Grid Map of 1970

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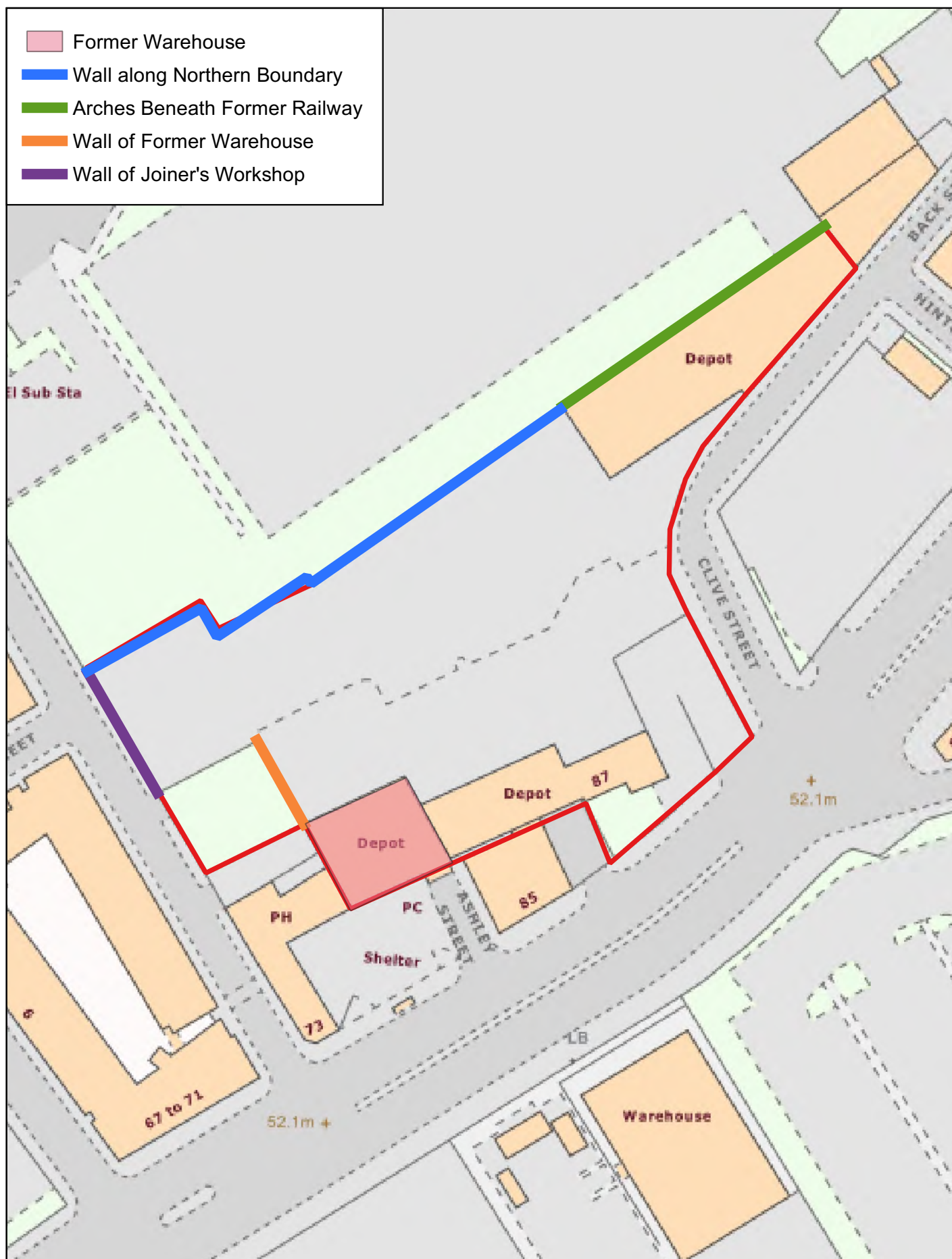
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Figure 13: Site boundary superimposed onto the 1:1250 National Grid Map of 1989

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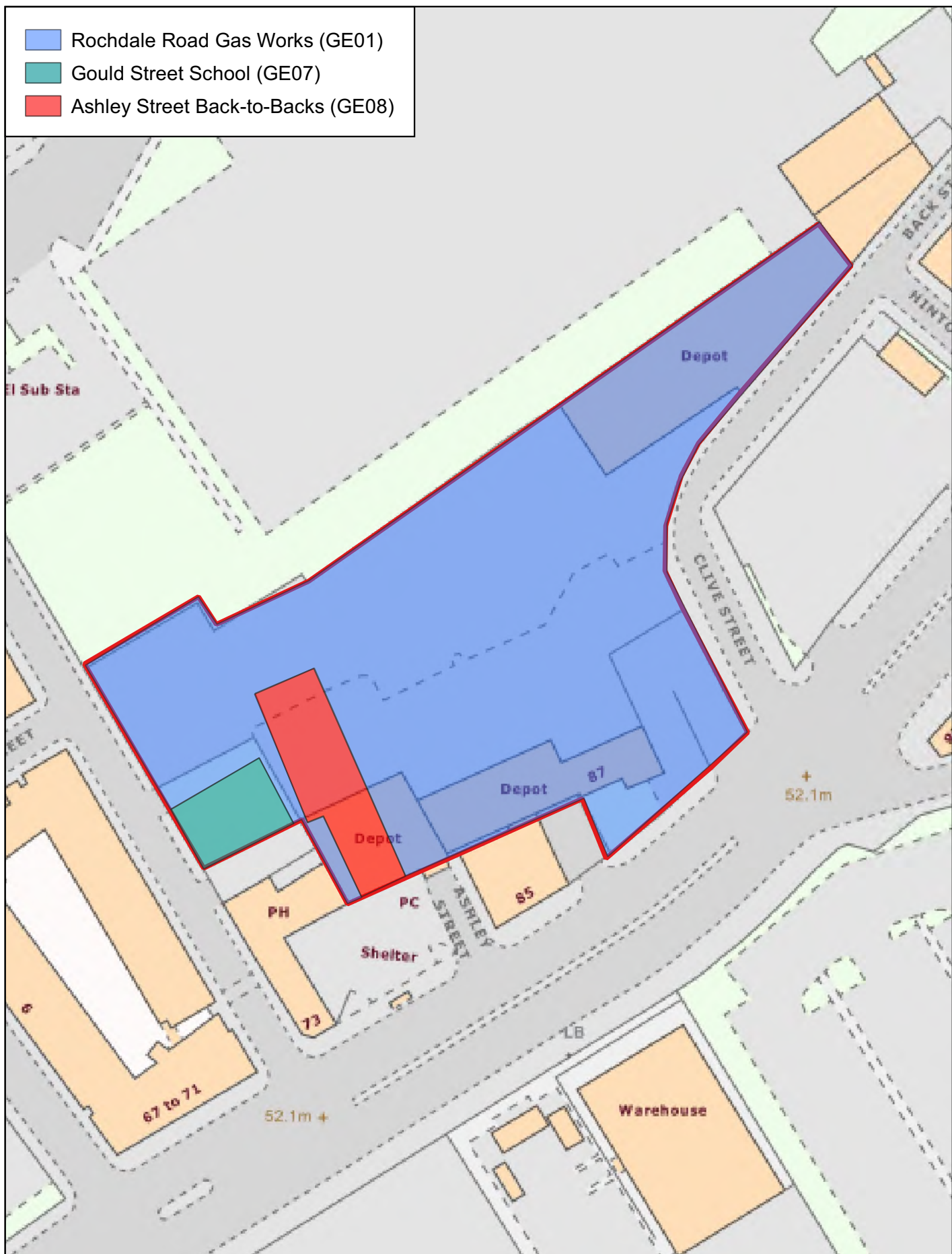


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Figure 14: Locations of upstanding heritage remains (GE 02-06) superimposed on modern mapping

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Figure 15: Archaeological potential (GE01; 07; 08) superimposed on modern mapping

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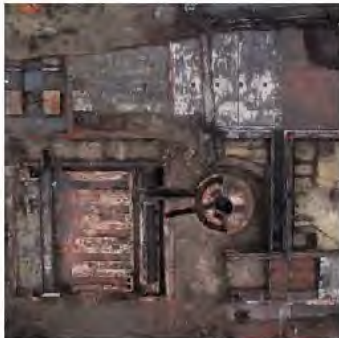
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WATCHING BRIEF & EVALUATION



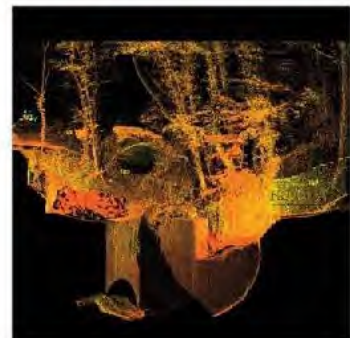
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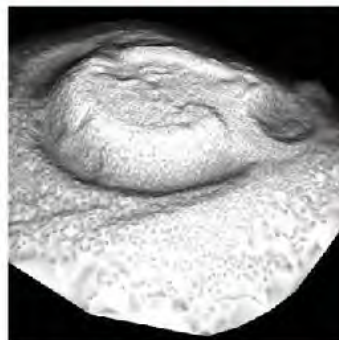
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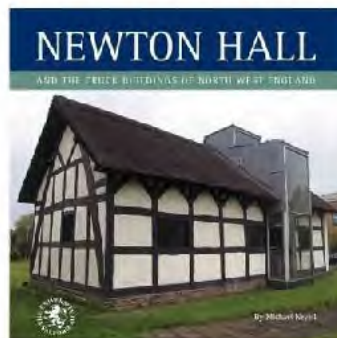
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