



University of  
**Salford**  
MANCHESTER

## Archaeological Desk-based Assessment

Brunswick  
Place,  
Bradford Road,  
Ancioats,  
Manchester

**Client:**  
Maryland Securities  
Group

**Technical Report:**  
Ian Miller

**Report No:**  
SA/2021/13



Site Location: The site is bounded by Bradford Road, Beswick Street and the Ashton-under-Lyne Canal in the Ancoats area of Manchester city centre

NGR: Centred at NGR SJ 85830 98705

Prepared for: Maryland Securities Group

Document Title: Brunswick Place, Bradford Road, Ancoats Manchester

Report Number: SA/2021/13

Project Code: ELCA1188

Document Type: Desk-based Assessment

Version: Version 1

Author: Ian Miller  
Position: Assistant Director  
Date: February 2021

Checked By: Anthony Lee  
Position: Director of Heritage Management  
Date: May 2021

Signed: 

Copyright: Copyright for this document remains with the Centre for Applied Archaeology, University of Salford.

Contact: Salford Archaeology, Centre for Applied Archaeology, Peel Building, University of Salford, Salford, M5 4WT

Telephone: 0161 295 4467      Email: [i.f.miller@salford.ac.uk](mailto:i.f.miller@salford.ac.uk)

**Disclaimer:**

This document has been prepared by Salford Archaeology within the Centre for Applied Archaeology, University of Salford, for the titled project or named part thereof and should not be used or relied upon for any other project without an independent check being undertaken to assess its suitability and the prior written consent and authority obtained from the Centre for Applied Archaeology. The University of Salford accepts no responsibility or liability for the consequences of this document being used for a purpose other than those for which it was commissioned. Other persons/parties using or relying on this document for other such purposes agrees, and will by such use or reliance be taken to confirm their agreement to indemnify the University of Salford for all loss or damage resulting therefrom. The University of Salford accepts no liability or responsibility for this document to any other party/persons than by whom it was commissioned.

# Contents

---

Summary	1
1. Introduction	2
2. Method Statement	4
3. The Setting	5
4. Historical Background	7
5. Significance	31
6. Impact of Development	34
7. Further Investigation	35
Sources	39
Acknowledgements	40
Appendix 1: Figures	41



## Summary

---

Proposals are being devised for the redevelopment of land on Bradford Road in the Ancoats area of Manchester city centre (centred at NGR SJ 85830 98705). The proposed development involves the repurposing of Brunswick Mill, a Grade II listed mill, and the erection of a suite of apartment blocks on adjacent land that was occupied from 1826 by another steam-powered cotton mill. The delivery of the proposed development will necessitate considerable earth-moving works that will damage or remove any archaeological remains that exist across the site.

In order to support the development proposals, and inform the planning process, Maryland Securities Group commissioned Salford Archaeology to undertake an archaeological desk-based assessment of the application area on behalf of the applicant. The assessment aimed to establish the nature and significance of the sub-surface archaeological resource within the area, and assess the impact of any future development upon this resource; a separate study that considers the potential harm of development on the built heritage has been prepared independently.

The considerable archaeological and historical interest in Brunswick Mill is reflected in its designation as a Grade II listed building (No 387942); the building is also entered on the Greater Manchester Sites and Monuments Record (SMR 2051.1.0 – MGM271), and the National Monuments Record (NBR 53304). The adjacent cotton mill, known originally as Pooley's Mill, was demolished in the later 20<sup>th</sup> century without record, but there is considerable potential for below-ground remains of high local, if not regional archaeological significance, to survive *in-situ*. There is very little potential for any below-ground remains deriving from earlier periods.

The requirement for any further archaeological investigation of the site will be decided by the Greater Manchester Archaeological Advisory Service, in their capacity as archaeological advisor to Manchester City Council. In the first instance, however, it is expected that a programme of historic building investigation of Brunswick Mill commensurate with a Historic England Level 3-type survey will be required, as the impact of the proposed works on the character and fabric of the buildings will require detailed assessment. The results obtained from the survey would allow informed decisions to be made on sympathetic treatment of the historic fabric, and removal of any structures or buildings within the mill complex.

In addition, it is envisaged that a programme of intrusive archaeological evaluation will be required in advance of any ground-reduction works within the application site. This would be targeted specifically on whether any elements of the steam-power plant for Pooley's Mill survive *in-situ*. The primary objectives would be to establish the presence, character, date and extent of any buried remains. Should significant archaeological remains be encountered during the initial investigation, further excavation may be required to offset the harm of development on the sub-surface archaeological resource, in line with the guidance by the *National Planning Policy Framework*, specifically Section 16 paragraph 199 that requires developers 'to record and advance understanding of heritage assets to be lost, in a manner appropriate to their importance and impact'.

# 1. Introduction

---

## 1.1 Planning Background

Proposals are being devised for the redevelopment of land on Bradford Road in the Ancoats area of Manchester city centre (centred at NGR SJ 85850 98720). The proposed development involves the repurposing of Brunswick Mill, a Grade II listed building, and the delivery of new residential blocks and associated infrastructure on the adjacent land, the delivery of which will necessitate considerable earth-moving works that will damage or remove any archaeological remains that exist across the site. In order to inform and support the design proposals, Salford Archaeology was commissioned by the Maryland Securities Group to undertake an archaeological desk-based assessment of the application area (referred to hereafter as the Site).

The aim of the archaeological assessment was to identify, as far as possible, the nature, extent and significance of the archaeological resource and the potential impact of the proposed development upon that resource so as to enable informed recommendations to be made for the future treatment of any surviving remains. This report focuses solely on the potential impact of the sub-surface archaeological resource, and no attempt has been made to assess the impact of development on the designated heritage asset and the setting of the wider built historic environment.

## 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 *National Planning Policy Framework* (Department for Local Communities, 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 12 core planning principles underpinning plan- and decision-making, conserving 'heritage assets in a manner appropriate to the quality of life of this and future generations' is one.

Section 16 specifically deals with this historic environment (paragraphs 184-202) and 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. This should be sufficient so as to understand the potential impact on their significance and this should be done using the appropriate expertise where necessary.

Paragraph 197 indicates that the effect of the proposal on non-designated heritage assets (designated assets are covered in paragraphs 193-96) should be taken into account. Paragraph 199 requires developers to record and advance understanding of heritage assets to be lost, in a manner appropriate to their importance and impact.

### *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 adopted a Core Strategy in 2012, which is scheduled until 2027. The heritage strategy is outline in *Objective 6: Environment* and summarises the approach the local authority will take in determining planning applications that 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 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 development control archaeologist at Greater Manchester Archaeological Advisory Service (GMAAS).

## 2. Method Statement

---

The assessment considers the potential impact of the proposed development upon any buried archaeological remains within the Site, and comprised 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*, revised 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;
- 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 18<sup>th</sup> century.

### 2.2 The Document

The following presents the historical and archaeological evidence for the Site. A map regression (Figures 2-8) is used to assess the significance of the remains (Chapter 5) and the impact of the proposed development on the below-ground archaeological resource (Chapter 6). A mitigation strategy is outlined in Chapter 7, based on the assessment presented in the previous chapters.

## 3. The Setting

### 3.1 Location

The Site (centred on NGR SJ 85830 98705) is bounded by Bradford Road, Beswick Street, and the Ashton-under-Lyne Canal in the Ancoats area of Manchester city centre (Figure 1). It occupies a trapezoidal plot of land (Plate 1).



*Plate 1: Site boundary superimposed on a recent satellite view (Google Earth)*

Topographically, the Manchester Conurbation as a region is within an undulating lowland basin, which is bounded by the Pennine uplands to the east and to the north. The region as a whole comprises the Mersey river valley, whilst the rivers Irwell, Medlock, and Irk represent the principal watercourses in Manchester (Countryside Commission 1998, 125). The Site lies on the south bank of the River Irwell, and occupies a fairly level terrace at a height of c. 26m above Ordnance Datum.

Topographically, the Manchester Conurbation as a region is within an undulating lowland basin, which is bounded by the Pennine uplands to the east and to the north. The region comprises the Mersey river valley, which is dominated by its heavily meandering river within a broad flood plain (Countryside Commission 1998, 125). The topography of the study area, however, reflects the shallow valley of Shooter's Brook, a rivulet that flows westwards from Newton Heath, through Ancoats and into the river Medlock (Ashworth 1987, 22). The application area lies on the southern berm of this natural valley, although Shooter's Brook was culverted during the early 19<sup>th</sup> century, and the topography of the area has since been masked considerably by in-filling associated with urban expansion and redevelopment.



The present land use of the Site varies. The north-eastern part is occupied by Brunswick Mill, a large textile mill that is currently unoccupied. Another building survives in the south-western corner of the study area, occupying a plot on the corner of Bradford Road and Beswick Street. The remainder of the Site comprises vacant land, having been occupied until recently by another textile mill.

### 3.2 *Geology*

The solid geology of the area comprises Carboniferous sedimentary material and a series of Permo-Triassic rocks, consisting mainly of New Red Sandstone. The overlying drift incorporates Pleistocene boulder clays, and sands, gravels, and clays of fluvial/lacustrine origin (Ordnance Survey Geological Survey 1970).

### 3.3 *Designations*

The Site does not lie in a conservation area, but does contain Brunswick, a Grade II listed building. The listed building description for this designated heritage asset reads:

MANCHESTER SJ8598 BRADFORD ROAD, Beswick And Clayton 698-1/17/529 (South East side) Brunswick Mill GV II Cotton spinning mill, now various workshops and warehouses. c.1840, with some later C19 alterations. Constructed by the firm of David Bellhouse, but with possible involvement by William Fairbairn (the mill is planned according to principals which have been particularly associated with him). Brick with slate roofs, fireproof internal construction, with cast iron columns and beams, and transverse brick arches. Trussed wrought iron tie rods added to strengthen structure when the mill was converted to use the heavier ring spinning machinery c1920. Built largely in a single phase to a courtyard plan, with main spinning mill alongside canal, 2 wings for spinning and ancillary processes including blowing and winding and a front block housing main entrance, and use for warehousing and offices. Main spinning mill is 7 storeys, and 28 bays with 2 rows of cast iron columns internally. Small rectangular windows with flat arched heads in each bay. External engine house (built to house 2 beam engines) at W of site. Advanced wings are also 7 storeyed, each of 6 bays. Semi-circular stair-cases in each wing, adjoining spinning mill. 4-storey, 20-window range \*upper storey a later addition) to street links the 2 wings and encloses the yard; central entrance in wide segmental archway. 2-storey loading bays built in internal angles in yard. The mill is thought to be the first Greater Manchester mill to be converted to use mains electricity as its principal power source, and later additions include an electricity transformer house added in angle of W wing and spinning mill (electric motor towers built on inner face of main spinning block have been removed). A dust flue was also added as a tower to the We of the W wing. This was a large scale operation, a distinctive example of site planning and built as a single phase around a courtyard. Structurally and technologically conventional, but of interest as an example of adaptation to suit changing technologies, both in relation to power supply (the first mill in the region to be converted to use mains electricity), and spinning technology (the structure adapted to take ring spinning machinery).

## 4. Historical Background

The following section provides a framework to the present study, working chronologically through the periods listed below (Table 1). Each section details evidence of archaeological remains and the potential for their recovery.

Period		Date Range
Prehistoric	Palaeolithic	Pre-10,000 BC
	Mesolithic	10,000 – 3500 BC
	Neolithic	3500 – 2200 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 1: Summary of British archaeological periods and date ranges

### 4.1 Prehistoric Period

#### 4.1.1 Archaeological Evidence

There are relatively few sites known from this period in the vicinity, although general patterns of settlement locations that have been identified indicate that the Irwell valley would have been a favourable location for occupation and transport routes, whilst a small group of prehistoric finds have been discovered during archaeological excavations in the Castlefield area (Nevell *et al* 2003). The upland areas of the surrounding moors may have been exploited for hunting, but the poor drainage of the Pennines and spread of blanket peat at higher altitudes would have discouraged any settlement (Hall *et al* 1995, 117). However, physical evidence is wanting, and there are no known prehistoric remains within the vicinity of the Site.

#### 4.1.2 Archaeological Potential

The potential for buried archaeological remains deriving from prehistoric activity within the Site is considered to be 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*, situated in Castlefield (Bruton 1909). 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 north. 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 (Gregory 2007).

Roads from the fort linked Manchester with Ribchester to the north (HER 14.1.0), Castleshaw, and York to the north-east, Wigan to the north-west, Chester to the south, and Buxton to the south-east (HER 28.1.3). The Roman road between the forts of Manchester and Castleshaw is thought to have a route through Ancoats; antiquarians writing in the 18<sup>th</sup> and 19<sup>th</sup> centuries noted evidence for the course of this road (Watkin 1883, 50-1). Drawing on some of these sources, Margary suggested that modern-day Old Mill Street (which becomes Bradford Road to the north-east of Butler Street) follows the route of the Roman road (Margary 1957, 98). However, this awaits confirmation and there is, as yet, no known evidence for Roman activity in close proximity, and the potential for any such buried remains to exist in the Site seems low.

### 4.2.2 *Archaeological Potential*

The Site lies well beyond the limits of the Roman settlement in Manchester and the potential for any buried remains deriving from this period to exist in the Site is considered to be low, although the possibility that the Roman road takes a course across the Site cannot be dismissed entirely.

## 4.3 *Medieval Period*

### 4.3.1 *Historical and Archaeological Evidence*

There is scant archaeological evidence in the region as a whole that represents the period between the end of the Roman occupation and the Norman Conquest, although the area around Manchester is known to have come under the control of several kingdoms during this period. In AD 620, Edwin conquered and occupied Manchester, and it may have been at this time that settlement in the town was established around the cathedral (Farrer and Brownbill 1911). A gold finger ring (HER 9916.1.0), discovered in antiquity, has been traced to the Castlefield area, providing rare physical evidence for human activity in Manchester during this period.

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, on the northern edge of the modern city centre. The area of the cathedral had certainly become a new focus for settlement by the late 11<sup>th</sup> century, and the site occupied presently by Chetham's School is thought to have been the site of a castle founded by Manchester's Norman barons.

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 13<sup>th</sup> 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*). Throughout this period, Ancoats formed one of eight hamlets within the township of Manchester, as noted in a survey of 1320 (Harland 1861). This is reflected in the origins of its name, which is likely to have derived from the Old English *ana cots* and may be translated as 'lonely cottage' (Cooper 2002, 13). The area will have comprised open land, described as 'an almost idyllic rural backwater' (Swindells 1908, 19-26), with a few scattered dwellings. The most notable building was the timber-framed Ancoats Hall, which overlooked the river Medlock on the southern edge of the district, and some 0.75km to the south-east of study area. It is uncertain when the hall was built, although it is thought to have been sold by the De la Warr family to Sir Edward Trafford during the reign of Henry VIII (1509-47), and then passed to the Byrons of Clayton (Darbyshire 1887, 118). The hall was remodelled in stone during the 1820s, and demolished in the mid-20<sup>th</sup> century (Miller and Wild 2007).

#### 4.3.2 *Archaeological Potential*

Given the location of the Site away from Manchester's medieval core, the potential for buried archaeological remains is considered to be very low.

#### 4.4 *Post-medieval and Industrial Periods*

The onset of the rapid industrialisation centred on Manchester from the 18<sup>th</sup> century resulted in a massive expansion of the town's population. It was during this period that some of the principal streets, including Deansgate, Market Street and Shude Hill, developed commercially (Farrer and Brownbill 1911, 180). By the 1780s, the national demand for textiles, particularly cotton, began 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). This process of industrial development was facilitated greatly by the introduction of efficient transport systems, initially in the form of water-borne shipping on the River Irwell and, from the mid-1760s, the Bridgewater Canal.

*The Canal Network:* the first true industrial canal in Britain was that built by the Duke of Bridgewater, which was completed from his mines at Worsley to Manchester in 1764, the terminus of which was at Castlefield (Hadfield and Biddle 1970). Of particular relevance to the present study area is the Ashton-under-Lyne Canal, which was opened in 179 and was a key catalyst in the development of Ancoats.

## 4.5 *Development of Ancoats*

The transformation of Ancoats from a semi-rural area into an effective industrial suburb 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. William Green's *Map of Manchester and Salford*, published in 1794, shows the focus for initial development to have been at the corner of Great Ancoats Street and Oldham Road, and depicts the main elements of the existing street plan laid out on former fields of the area. Building speculation then drove further expansion, with plots of land within a grid-iron pattern of streets being sold for development.

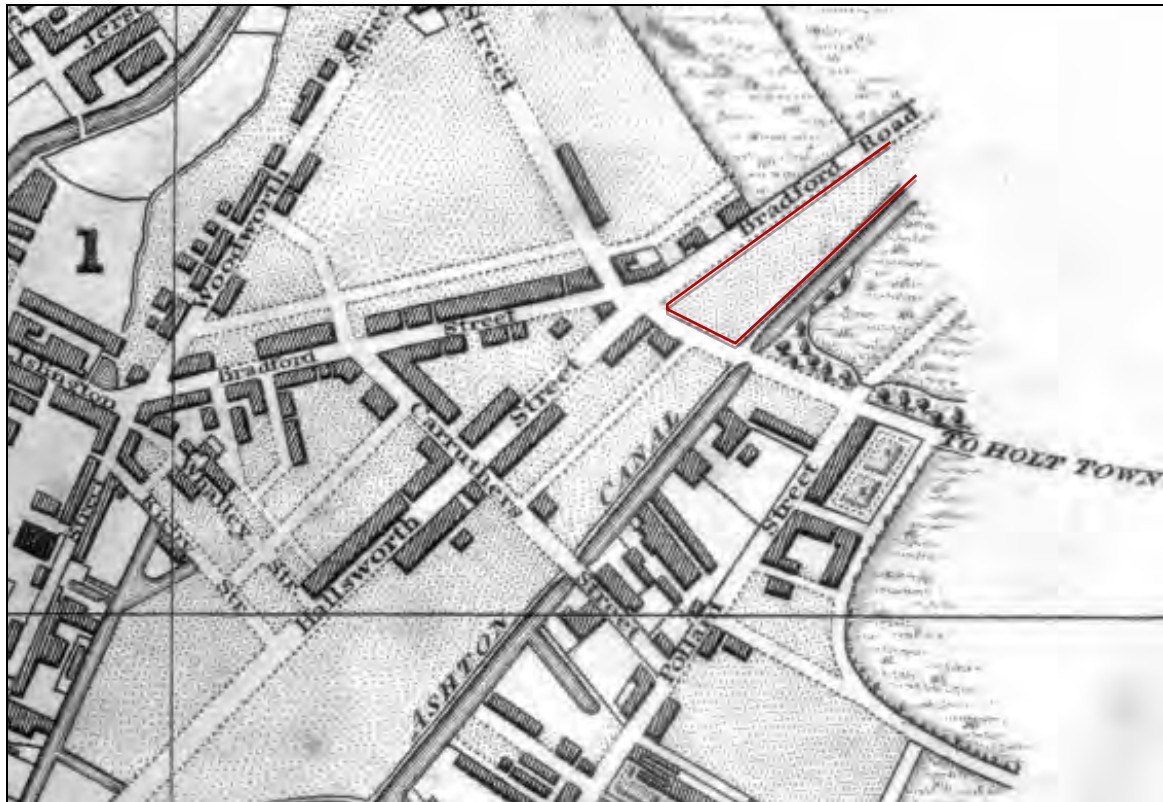
A small number of water-powered mills erected along Shooter's Brook represented the earliest textile factories in the area. These included a 'room-and-power' mill known as Salvin's Factory, and New Islington Mill, which originated in the late 1780s as an Arkwright-patented water frame mill (Miller and Wild 2007). However, in seeking a solution to the inadequate power supplied to their waterwheels from Shooter's Brook, several firms 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).

It was on the basis of a breakthrough in the application of steam power, and the national demand for textiles, particularly cotton, that created the explosion of factory building in Ancoats (Little 2004, 31). This was fuelled by the potential of cheap and reliable transport for goods and materials offered by the construction of the Rochdale and Ashton-under-Lyne canals, and led to the creation of a new breed of mill building in Ancoats. These were built on an unprecedented scale, many depending upon the developing network of short branch canals for transport and a source of water for the steam-power plants. The net result was the creation of an industrial suburb; an edge-of-town industrial estate with associated housing and related businesses.

From its origins as the first true industrial suburb to Manchester during the late 18<sup>th</sup> century, Ancoats expanded rapidly throughout the first half of the 19<sup>th</sup> century. Bancks and Co's detailed map of the area, published in 1831, shows an early stage in the development of land between Mill Street and the Ashton-under-Lyne Canal, on the eastern fringe of Ancoats (Figure 2). The deeds to Brunswick Mill describe several changes in land ownership before any building commenced, which probably reflects a high demand for building land on the outskirts of Manchester in this period. The rate of expansion during the mid-19<sup>th</sup> century, and particularly with the development of land to the south of the Ashton-under-Lyne Canal, is highlighted by comparing Bancks and Co's map with that surveyed by the Ordnance Survey in 1850 (Figure 3), and that published by Adshead two years later (Figure 4).

## 4.6 Development of the Site

The development of the Site may be traced reasonably well from the sequence of available 19<sup>th</sup>-century mapping. The Site remained open agricultural land until the mid-1820s, and is shown as such on Swire's map of 1824 (Plate 2). The initial development of the area can be traced to 1826, when a steam-powered cotton-spinning mill was erected on behalf of Charles Pooley along the northern bank of the Ashton-under-Lyne Canal. The mill may have taken several years to complete, or at least to fill with machinery, as it remained unoccupied until 1829 (PP (HC) 1834 [167] XX D1).



*Plate 2: The Site boundary superimposed on an extract from Swire's map of 1824*

The next available map of the study area is that published by Bancks & Co in 1831, which provides the first detailed 19<sup>th</sup>-century survey of the site (Figure 2). This shows a factory complex, named 'Pooleys Cotton Mill', to have been established in the south-western part of the site. The factory complex comprised a long, rectangular mill block lying parallel and adjacent to the Ashton-under-Lyne Canal, with a smaller block situated at a right angle. The larger block appears to have incorporated a slightly narrower section at its north-eastern end. Whilst the map does not indicate the function of the individual buildings on the site, it is possible that the narrower section of the larger block may have represented the steam-power plant; the mill was powered originally by a steam engine of 53hp (PP (HC) 1834 [167] XX D1).

Bancks & Co's map also shows the south-eastern boundary of the Site to have been developed. This comprised the erection of a terrace of six properties, presumably representing workers' cottages, fronting Beswick Street. It is notable that these houses appear to have been slightly larger than many other domestic properties in the area, and seemingly incorporated outshuts or privies to their rear.

The north-eastern part of the Site remained undeveloped until January 1837, when a plot of undeveloped land was released in fee from David Worthington to Messrs Charles Pooley, Alexander Kelly and James Gilmour. The greater portion of the land, comprising 4736 square yards, was to be shared by Kelly and Gilmour, whilst Charles Pooley was to have the remaining 348 square yards, which adjoined his existing cotton-spinning factory. In September 1838, however, the two plots were combined to form a single block of land comprising 5084 square yards, which was to be released to Kelly and Gilmour for development. This represented the origins of Brunswick Mill.

At this time, Alexander Kelly and James Gilmour are both listed in a trade directory as independent cotton-spinners in Ancoats, although their premises are not specified (Pigot 1838). Kelly and Gilmour appear to have formed a cotton-spinning partnership in 1839, and embarked upon commissioning a new cotton mill to be erected on their newly acquired land in Ancoats.

Pooley's extensive mill complex was damaged by a large fire on 4 November 1842. The broke out near the centre of the building known as the New Mill, or No 3 Mill, which was the only part of the premises that was not of fireproof construction. 'A great portion of the new mill was soon a mass of ruins, and the fire had spread along the roof of what is called the fireproof mill before it was arrested'. The adjacent warehouse was also destroyed entirely, and several operatives lost their lives in the blaze (*The Examiner*, 5 November 1842). Another newspaper account of the blaze described the mill buildings as forming two sides of a parallelogram, situated between Bradford Street and the canal. The building next to the canal was continuous, and was 22 windows (bays) long; the building fronting onto Bradford Road was approximately half of that length. The damage was estimated at £10,000 (*The Hull Packet*, 11 November 1842). It is clear from this description that Pooley's site had expanded considerably since Bancks & Co's survey of 1831, not least with the addition of a new mill block.

The layout of the study area during the mid-19<sup>th</sup> century is depicted on two detailed plans: the Ordnance Survey 60": 1 mile map, surveyed in 1848 and published in 1850 (Figure 3); and Adshead's *Plan of the Townships of Manchester*, published in 1851 (Plate 3). Both maps show Pooley's Mill to have expanded considerably since 1831, presumably involving the rebuilding of the blocks destroyed by fire in 1842.

The maps also confirm that the properties fronting Beswick Street were domestic, with outshuts and possibly privies to the rear, which were served by a narrow passageway along the boundary with Pooley's Mill. The maps also show a new building to have been erected at the north-western end of the terrace, occupying the south-western corner of the Site. This is named as a Methodist chapel on the Ordnance Survey map, and as a school on Adshead's map. It seems likely, however, that the detail on Adshead's map is incorrect, as other primary documentation confirms this building to have been a United Methodist Free Church Circuit.

Pooley's Mill and Kelly & Gilmour's Brunswick Mill were both affected by a strike in July 1853. The strike had arisen from a wage dispute (*Daily News*, 5 July 1853). Pooley's Mill sustained another fire in June 1880. The damage inflicted on the mill buildings by this fire, however, appears to have been minor (*Manchester Times*, 26 June 1880).

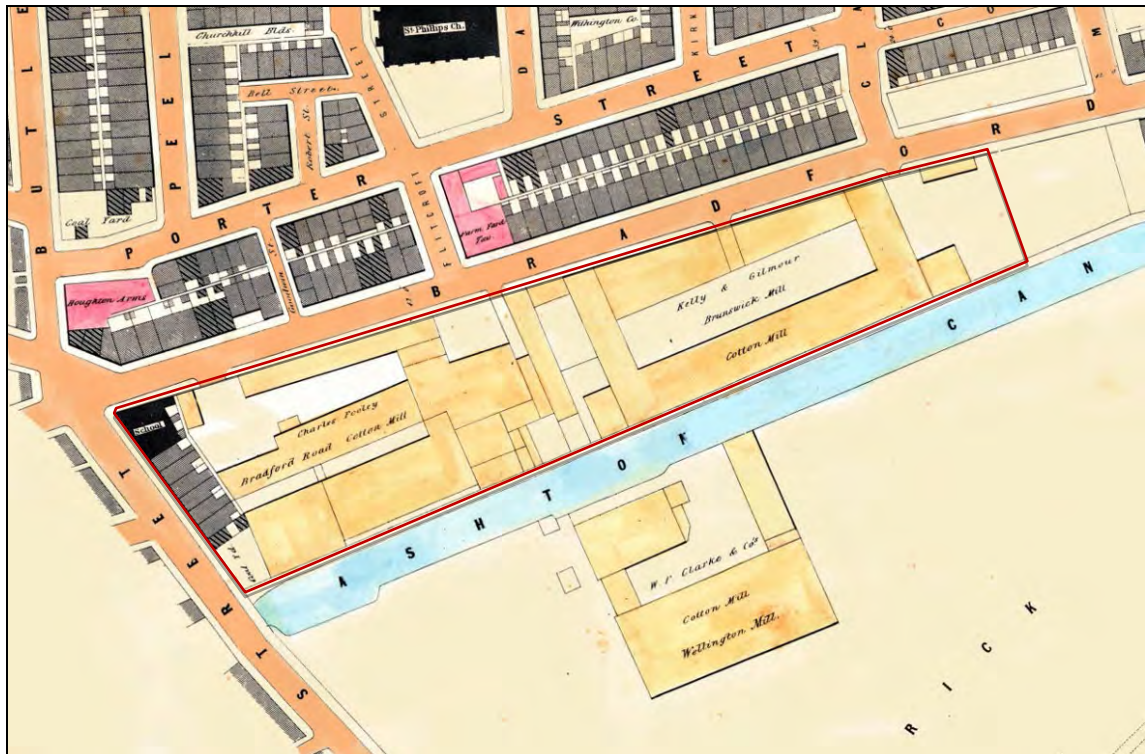


Plate 3: The Site boundary superimposed on an extract from Adshead's map of 1851

Charles Pooley is listed at India Mills on Bradford Road in a trade directory for 1891 (Worrall 1891, 125). The entry accredits the mill with 58,000 spindles, producing extra hard twist and mule twist. The layout of the mill at this date is shown on the Ordnance Survey 1:500 Town Plan of 1891, which names Pooley's Mill as India Mills (Figure 4). The footprint of the mill is considerably different to that shown on the earlier mapping, indicating it to have been remodelled. A chimney is depicted in the eastern part of the mill, suggesting the general location of the steam-power plant; the position of this chimney coincides broadly with the narrower section of the original mill block shown on Banks & Co's map of 1831. Some expansion of Brunswick Mill may also be discerned from the detail of the Ordnance Survey map.

The Ordnance Survey Town Plan of 1891 shows some alterations to the properties fronting onto Beswick Street along the south-western boundary of the Site (Figure 4). In particular, the Methodist chapel appears to have been replaced by a continuation of the terraced houses. However, a new building for the mission was built in 1893-4, and is depicted on subsequent mapping.

Charles Pooley is listed as a cotton spinner at India Mills in a trade directory for 1895 (Slater 1895, 47), although a directory for 1903 gives the form of James Bentley & Co, calenderers, as the occupants (Slater 1903, 62); the same entry is given in a directories for 1909 (Slater 1909, 71) and 1911 (Slater 1911, 83). The layout of the mill at the latter dates is shown on the Ordnance Survey map of 1908 (Figure 5), which names Pooley's Mill as Manchester Works (Finishing & Storage). The detail of this map suggests that the mill had been remodelled slightly between 1891 and 1908, with some additions to the south-western end of the mill building. Conversely, several outbuildings on the south-western boundary of the site appear to have been demolished.



The footprint of Brunswick Mill appears unaltered relative to the earlier map published by the Ordnance Survey in 1922 (Figure 6). This shows some slight additions to Pooley's Mill relative to the 1908 map, namely the addition of a small structure against the south-western elevation of the main factory block. The map also shows some slight alterations to Brunswick Mill relative to the 1908 map, namely the addition of three small structures in the enclosed central courtyard. These structures, however, represent a major alteration to the mill complex, with the installation of electric drive.

The footprint of both mill sites are shown as largely unchanged on the next edition of Ordnance Survey mapping, published in 1931. Pooley's Mill, however, is named as Manchester Works (Cotton Cloth Storage), suggesting that it was no longer used for manufacturing purposes. Further details of the buildings in the Site during this period are provided by Goad's insurance plans, which were revised in 1943. The plan of Pooley's Mill shows that the complex incorporated several buildings, the largest of which comprised an eight-storey block adjacent and parallel to the Ashton-under-Lyne Canal. This building, and the adjacent four-storey block, was occupied by S Miller, a clothing manufacturer. A square-section chimney, 130ft high, was situated between the two blocks, again indicating that the steam-power plant was situated within that part of the mill complex. However, no other elements of the steam plant are annotated on the plan, suggesting that steam power may have been superseded by electric drive by the 1940s.

The northern part of the mill site was occupied by E Raffles & Co, manufacturers of waterproof clothing. The majority of their premises comprised a single-storey building, with another single-storey range abutting the south-western side of the main block. The insurance plan also marks the terrace of six dwellings, 9-10 Beswick Street, that form the south-western boundary of the Site, together with the mission hall at the western end of the terrace. The dwellings are all annotated as two storeys, and none are marked to have a basement.

Goad's insurance plan also provides a survey of Brunswick Mill. This shows the main block adjacent and parallel to the Ashton-under-Lyne Canal to have been of seven storeys, with brick-arched floors. The two wing blocks are similarly shown to have been seven-storeys high, with a 100ft high chimney situated on the Bradford Road frontage against the western wing. These features are visible in an aerial view of the mills taken in the mid-1980s. It is apparent, however, that the single-storey structure in the southern part of Pooley's Mill had been demolished by that date, together with the domestic properties fronting Beswick Street.

Pooley's Mill is depicted on the Ordnance Survey map of 1999, which marks the front portion of the site simply as 'works', and the rear part is identified as Brunswick House. Brunswick Mill is shown as largely unaltered relative to the Ordnance Survey map of 1949 (Figure 7), although the chimney is no longer shown.

Pooley's Mill has since been demolished, although the vestiges of the mill complex survive as a façade along the Bradford Road frontage. The area to the rear has been cleared of all buildings, and presently supports scrub vegetation.

## 4.7 *Development of Brunswick Mill*

### 4.7.1 Origins

A detailed specification for the erection of Brunswick Mill was devised in February 1839 by David Bellhouse Jnr, on behalf of Kelly and Gilmour. The firm of David Bellhouse had been responsible for constructing a number of early to mid-19<sup>th</sup>-century textile mills in Manchester, and became one of the earliest specialist textile mill building firms; most of their mills were of fireproof construction, and the firm appears to have combined the range of trades involved with fireproof mill construction, occupying a foundry and a timber yard, and being referred to as ‘architects’ from the early 1820s (Clark 1978, 213). However, examination of the deeds to Brunswick Mill has indicated that the eminent millwright and engineer William Fairbairn also had some input into the design of Brunswick Mill, as the design of the cast-iron beams and columns used in the mill was subject to his approval. Moreover, several notable features that were adopted in the design of Brunswick Mill mirrored those of mills built by Fairburn, particularly Orrell’s Mill in Stockport, which was erected in c. 1834 (Williams with Farnie 1992, 75).

The specification provided for a mill complex comprising four main blocks, arranged in a quadrangle with an enclosed central courtyard. The main mill block, placed to the rear of the plot and adjacent to the Ashton-under-Lyne Canal, was an unprecedented 92m long and built to a height of seven stories. Forward-projecting wings, also of seven stories but of reduced widths, were attached to each end of the main block. The central courtyard was enclosed by a three-storey block fronting Bradford Road, which incorporated the arched main entrance to the complex. This layout was essentially preserved throughout the lifetime of the site as a cotton-spinning mill.

All of the component buildings were to be of an advanced fireproof construction, comprising transverse ceiling vaults supported on Hodgkinson-type cast-iron beams and columns. The brick ceiling vaults were to be reinforced by cast-iron arch ribs, which were located at intervals along the length of the vaults. The floors of all the upper stories were to comprise square tiles, with stone flags providing the surfacing of the ground floors.

This type of construction was enabled largely by experiments undertaken by Eaton Hodgkinson during the 1820s. Hodgkinson had embarked upon a detailed investigation into the optimum design of cast-iron floor beams in response to a series of well-publicised collapses of fireproof mills caused by failures of cast-iron beams and columns. Hodgkinson’s experiments were undertaken partly at William Fairbairn’s foundry in Ancoats, who started to produce a greatly improved type of cast-iron beam during the early 1830s that was based on the results of Hodgkinson’s work. These beams were of I-shaped cross-section with a wider bottom flange, and were reputed to be lighter and could safely be made longer than the earlier inverted T-section beams (Pole 1877). This allowed fireproof mills to be built to a greater width, with a corresponding increase in the size of machinery they could contain, and a resultant expansion of output. This technological advance represented a significant stage in the evolution of mill design, and the beams within Brunswick Mill have been described as amongst the most spectacular application of Hodgkinson-type beams that survive in the region (Williams and Farnie 1992, 80).

A trade directory for 1841 contains an entry for the firm of Kelly & Gilmour, cotton-spinners at Brunswick Mill (Pigot 1841, 296). This is the earliest trade directory to list Brunswick Mill, suggesting that the mill had been put into production during 1840/41. However, given that the design specification is dated February 1839, it is debatable whether all four blocks had been completed when Pigot's directory was published. This is reinforced by the detail shown upon a small-scale map produced to accompany this directory, which does not depict Brunswick Mill.

In September 1844, Kelly & Gilmour obtained from Sir Oswald Mosley a further 148 square yards of land, adjoining the eastern extent of their existing plot of 5084 square yards, to allow for a three-storey extension to the mill. This structure may have been intended for storage, although in 1856 it was noted to contain machinery associated with the production of cotton yarn. During the same year, Kelly & Gilmour mortgaged the mill to Robert Barbour, presumably in order to raise additional capital to finance this extension.

In 1846, another plot of land at the eastern end of the mill was released to Kelly & Gilmour to allow further expansion of the complex. This plot was considerably larger than the plot obtained in 1844, extending up to what is now the Cambrian Street bridge over the Aston under Lyne Canal. However, this land was not developed immediately; the first detailed map of the mill is provided by the Ordnance Survey 60": 1 mile series, which was surveyed in 1848 and published in 1850, and this shows the newly-acquired plot as undeveloped (Figure 3). In order to raise an additional £2,500, the mill was mortgaged for a second time in April 1848. Again, Robert Barbour accepted the mortgage, although this time in conjunction with John Parlance. This appears to have been paid off in September 1856, when the mortgage was released.

Detailed plans of Brunswick Mill at this time are provided by the Ordnance Survey 60": 1 mile, and a comparable map of the site produced by Adshead, which was published in 1851. These maps show the mill complex laid out forming its distinctive quadrangle plan. The main block, overlooking the canal, has smaller buildings attached to each end. The building at the south-western end is marked as an engine house, whilst its large dimensions suggest that it contained a double-beam engine. Access to the engine house from the central courtyard appears to have been afforded via a wide passage through the West Wing block. This passage also provided direct access to the canal bank. Neither of the maps show the position of the boilers associated with the steam engine, although the chimney is marked adjacent to Bradford Road. It is therefore possible that the boilers were placed within one of the mill buildings, and probably the West Wing Mill. This suggestion is reinforced by the presence of a rectangular building immediately adjacent to the West Wing Mill, which is marked on the Ordnance Survey map as a 'coal shed and platform' (Figure 3).

The main entrance to the mill complex is shown on both maps to have been via a wide passage through the centre of the Bradford Road block. The 1850 Ordnance Survey map shows this main gate to have been flanked on each side by narrower passageways, which may have been for the use of mill operatives; a similar layout existed at Murrays' Mills in Ancoats, which also had an enclosed courtyard plan (Miller and Wild 2007).

Alexander Kelly died on 26 November 1852 and, in 1856, a schedule was compiled as part of the process of conveying Kelly's real estate to James Gilmour. This schedule states that the mill complex had been valued at £29,779, and also provides considerable details of the mill's infrastructure at this time. This includes a summary of the cotton processing machinery within the mill complex, which comprised 276 carding engines, 81 roving frames, 20 drawing frames, 50 slubbing frames, 129 cop reels, and nearly 77,000 mule spindles (Parkinson-Bailey 2000, 27). It is interesting to note that the spinning mules were of the self-acting type, which had been developed by Richard Roberts by 1830. This machine was to have a significant impact on the cotton-spinning process, but its widespread adoption was slow to be implemented, and initially did not affect the spinning of fine yarns as it was confined largely to the production of coarser yarns (Catling 1986, 115-16). Indeed, it was noted as late as 1865 that 'self-acting mules are seldom found in use for finer numbers than 80. The finer yarns are spun on hand mules' (Neste 1865), highlighting the fact that Brunswick Mill incorporated the most up-to-date machinery.

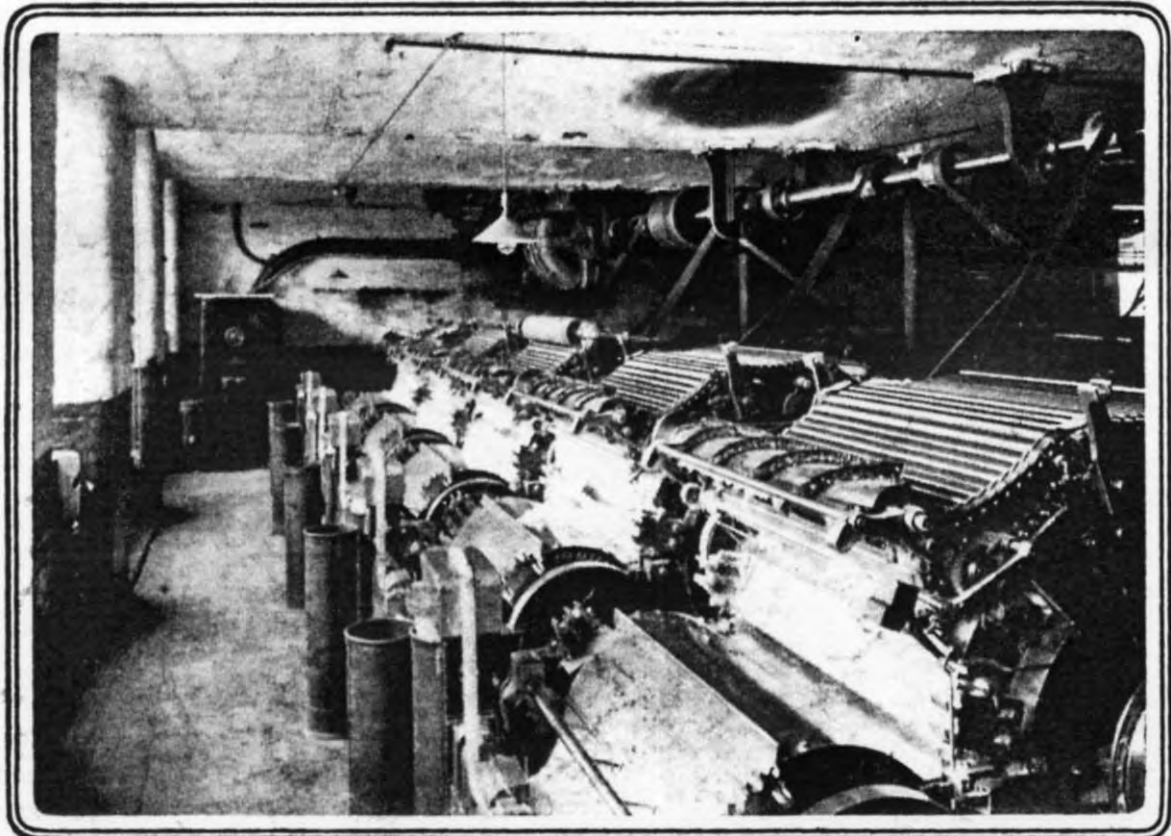
#### 4.7.2 The Main Mill Block

Referred to appropriately on the 1856 schedule as 'Large Mill', the seven-storey main block was used predominantly for spinning. The advanced type of fireproof construction provided the mill with an internal width of 16m (Plate 10), forming five bays and allowing self-acting mules of 400 to 500 spindles each to be accommodated transversely across the upper stories of the building, maximising efficient use of the available space.



*Plate 4: The top floor of the main spinning block, showing the fireproof construction*

The internal organisation of a large early to mid-19<sup>th</sup>-century mill normally allowed for spinning mules within the upper stories and preparation machinery to be installed on the lower floors, a format that was largely adhered to within Brunswick Mill. Carding engines were situated on the second storey of the main block (Plate 5), and roving, slubbing and drawing frames were installed throughout the third storey. The upper stories were dominated by spinning mules arranged transversely across the building. In addition, and unusually, the ground floor of this block also contained 28 spinning mules, one per bay.

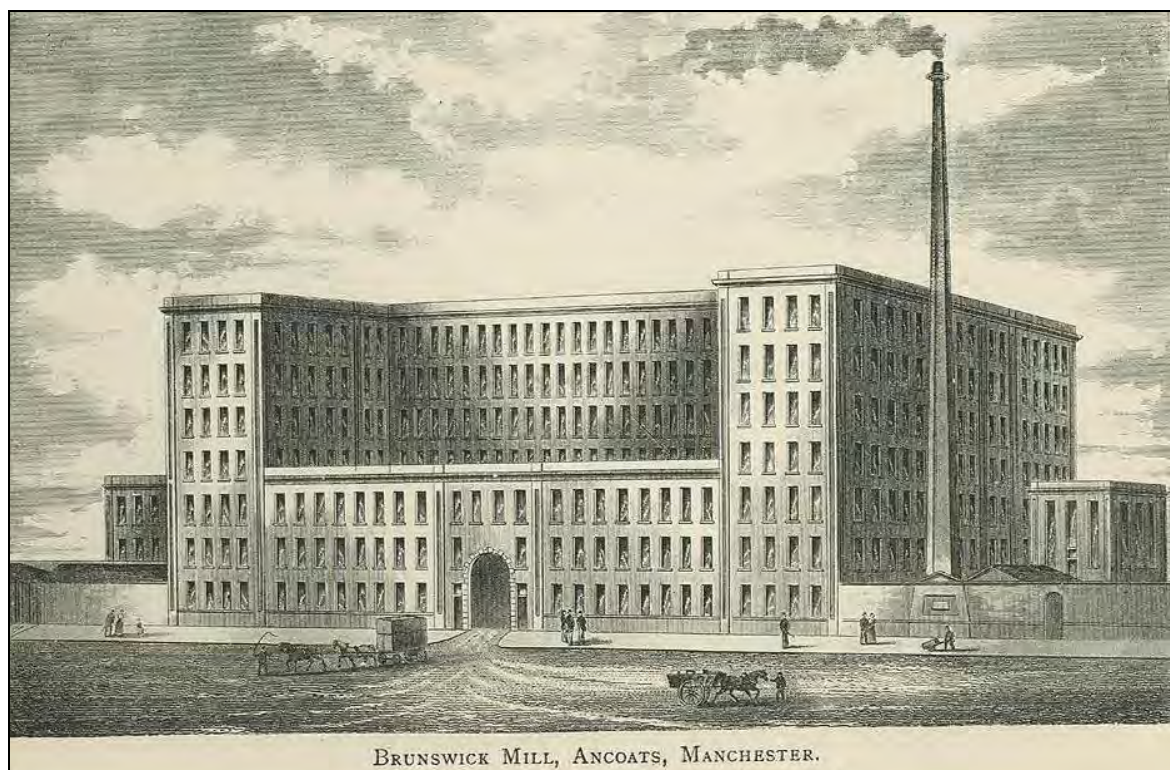


*Plate 5: Carding engines within the main block of Brunswick Mill in 1909 (reproduced from the Illustrated London News July 1909)*

Brunswick Mill was one of the largest textile mills to have been built in the country during the mid-19<sup>th</sup> century, and represented a 'state of the art' factory when it was first put into production (Williams with Farnie 1992). The mill was built to a very high standard, using the best materials available, and incorporated some advanced design features that are unusual for mill of its date, although became characteristic of textile factories constructed during the late 19<sup>th</sup> century. The mill remained at the forefront of technological innovation in the early 20<sup>th</sup> century, not least by becoming the first steam-powered mill in Manchester to be converted to electric drive. In recognition of its importance, Brunswick Mill was designated a Grade II listed building (no 387942) in 1994. The mill is entered on the Greater Manchester Sites and Monuments Record (SMR 2051.1.0 – MGM271), and the National Monuments Record (NBR 53304).

### 4.7.3 The Wing Mills

Two forward-projecting wings, also of seven stories, were attached to each end of the main block (Plate 6). These were used for a combination of spinning, preparatory and ancillary processes, including yarn winding. Both mills were four bays wide, although they differed in length, reflecting the trapezoidal shape of the site; the West Wing was nine bays long, whilst the East Wing was seven bays long. Both were of fireproof construction, although only contained a single row of cast-iron columns. Each wing incorporated a stone stair tower, which provided the access to each floor within the wing mills and the main block. Cross walls placed within the south end of each wing isolated the stair towers, and separated the wings from the main block. Most mills of this period had stone stair towers, normally square or circular in plan, attached to their external elevations. Both of the Brunswick Wing Mills, however, incorporate unusual internal semi-circular towers, each having a half-domed ceiling in the top storey.



*Plate 6: Engraving of Brunswick Mill in 1909, showing the wing mills*

The West Wing Mill housed the initial preparation machinery, including bale-breakers and scutchers on the second floor. It is likely that the system of internal ducting specified in the 1856 schedule connected with this floor and led to a dust house on the roof of the mill. Roving frames were housed on the third floor, with the upper stories being dominated by spinning mules that were arranged longitudinally, probably with two mules on each side of the central row of cast-iron columns.

There is also some evidence for the West Wing Mill having contained the original boiler. Evidence for this is derived from wide arched openings in the five north end bays of the west wall of the ground floor. These are of similar dimensions to those in boiler houses of Sedgewick Mill and Chorlton New Mill, and suggests that the original boiler house was internal, situated on the ground floor of the West Wing.

The East Wing similarly housed preparatory machinery on the lower floors and spinning mules arranged longitudinally on the upper stories. The detail of the schedule with the conveyance indicates the ground floors of these wings to have been used originally for storage, a feature that was to become common during the late 19<sup>th</sup> century but was unusual for a mill of this date.

#### 4.7.4 The Bradford Road Block

The range along the Bradford Road frontage was originally three stories high and 20 bays long, and of a trapezoidal plan. The main point of access to the mill complex was via a large gate through the two central bays, and comprised a two-storey high through-passage with a brick-vaulted ceiling. This entrance was highlighted with rusticated voussoirs and flanking doorways, similar to the entrances of some earlier mills in the area, but also incorporated double pilasters that are more characteristic of the second half of the 19<sup>th</sup> century (Williams and Farnie 1992, 78). These features represent the move to architectural adornment of spinning mills, which stemmed from the 1830s. Internally, the transverse cast-iron beams are in two pieces of unequal length, supported by a single row of columns running parallel to the north side wall.

The ground floor of this wing unsurprisingly contained the company offices and counting houses. The second floor appears to have contained more processing machinery, whilst spinning mules occupied the top floor. Again, these are likely to have been arranged longitudinally either side of the central row of columns.

#### 4.7.5 The Steam-Power Plant

Power for the mill was provided by a large double-beam engine, fitted with two side-by-side cylinders working a single flywheel. This type of engine was used increasingly in textile mills from the mid-1830s, such as that known to have powered Orrell's Mill in Stockport. The original engine at Brunswick Mill was installed in an external engine house, attached to the western end of the main block. This three-storey high structure incorporated three tall arched windows, and an unusual flat roof. Access to the engine house from the central courtyard appears to have been afforded via a wide passage through the West Wing block. This arrangement was typical of large mills that were being built by the 1850s, whilst those of an earlier date tended to house the engines internally.

Details of the engine within the 1856 schedule are vague, although it appears to have been a 'pusher-type' beam engine. This engine was probably compounded, with 47" low pressure cylinders and 26" high pressure cylinders placed in the northern part of the engine house. It was probably not of the McNaught type as the high pressure cylinders connected to it by spur wheels, suggesting that they were situated close to the flywheel in the southern end of the engine house. Power transmission from this engine was via spur-gears, upright shafts and bevelled gears to line shafting on each floor. The mules were probably powered directly from belt drums on the line shafts, which was to become common practice during the late 19<sup>th</sup> century (Williams and Farnie 1992, 89).

The steam for this engine is likely to have been provided originally by wagon-type boilers. Surviving physical evidence indicates that these had been located internally to the West Wing Mill, with an attached coal shed and platform, as marked on the 1848 Ordnance Survey map. However, the details of the 1856 schedule indicate that the putative wagon boiler was replaced by a bank of four double-flue boilers, presumably of the Lancashire type, that was situated to the north of the engine house, subsuming the 'coal shed' and 'platform' marked on the Ordnance Survey map of 1848. This revolutionary boiler design, patented by Fairbairn and Hetherington in 1844, was a variation on the Cornish design and became widely adopted during the second half of the 19<sup>th</sup> century (Watkins 1999, 218). It seems probable that the boiler installation was fitted with a fuel economiser, although such a device is not alluded to in any of the available documentation.

The form of the chimney is not described in any of the available primary documentation, although it is depicted upon two engravings of the mill complex, dating from 1893 (Plate 16) and 1926. These show a detached, multi-faceted stack, tapering to its crown that incorporated some form of embellishment, probably acting as an over-sailor. Whilst the detail is unclear, the stack appears to have been mounted on a tall plinth that seems to have incorporated recessed panels, mirroring the chimney of Orrell's Mill in Stockport. This type of chimney represents a stage in the evolution of chimney design, and a departure from the attached or internal types characteristic of early 19<sup>th</sup>-century mills.

The 1856 schedule also lists five gas meters together with fixtures and fittings required for 994 gas lights. There is no mention of any gas retorts or holders within the mill complex, implying that gas was derived from the Manchester Corporation.

#### 4.7.6 Henry Bannerman & Sons

On 24 December 1856, James Gilmour mortgaged the mill again, this time to Messrs William Young and James Alexander Bannerman. This represented the first stage in a process of conveying Brunswick Mill to the Bannerman Mills Company. By 1861, Brunswick Mill was occupied by the firm of James Gilmour & Co (Slater 1861), although this firm was to be short-lived as, in March 1865, Gilmour's mortgage of the site had not been repaid and the entire site was conveyed to Young and Bannerman, partners in the firm of Henry Bannerman & Sons. From this date, Brunswick Mill was owned and occupied by the Bannerman Mills Company, the manufacturing subsidiary of Henry Bannerman & Sons.

Henry Bannerman was a prosperous Scottish farmer who sent his son David to Manchester during the early 19<sup>th</sup> century, seemingly with the intention of investigating opportunities in the region's textile industry (Mortimer 1891). David evidently met with considerable success, as his father and three brothers with their families were induced to relocate to Manchester to establish the firm of Henry Bannerman & Sons. Initially, the firm was engaged as textile merchants, with a warehouse and offices in Market Street Lane. The success of the firm by the 1840s is reflected by their commissioning the erection of an immense block of warehouses on York Street, Manchester, which acted as their head office and main warehouse facility.



During 1864, the firm diversified into cotton-spinning and manufacturing in addition to continuing their role as textile merchants. They took over four large textile factories, including Brunswick Mill, leading to the formation of the Bannerman Mills Company, which had come into existence to facilitate the management of the industrial departments (Men of the Period 1895, 41). These mills appear to have each concentrated on complimentary processes, either spinning different counts of yarn or weaving, and it seems likely that all of these factories were managed as a single concern by the 1880s.

In 1889, the Bannerman Mills Company was registered as a limited liability company. This was followed in 1890 by the registration of the parent company, which became known as Henry Bannerman & Sons Ltd. A few years later, the firm was described as 'one of the giants of Manchester commerce and industry', and that no other business could 'claim a more eminent or a more honourable position in the city's trade' (The Century's Progress 1892, 102). This accolade was reinforced three years later, when Henry Bannerman & Sons Ltd was reported to have 'attained colossal dimensions, and is a monument to the splendid energies and administrative powers that have been brought to bear upon it' (Men of the Period 1895, 42). The same report alludes briefly to Bannerman & Sons mills, which are described as ranking amongst the largest and finest in Lancashire and being 'elaborately equipped with the best modern machinery' (*ibid*).

By 1910, Brunswick Mill served as the head office of the Bannerman Mills Company Ltd, the Bradford Road block being referred to as the 'administration block' in that year.

#### 4.7.7 Late 19<sup>th</sup>-Century Development

An indication of the changes wrought to the mill complex during the second half of the 19<sup>th</sup> century may be obtained by comparing the detail of the site as depicted on Ordnance Survey mapping of 1850 and 1891. The latter map, published at a scale of 1: 500 (Figure 5), shows the layout of the mill complex as essentially unchanged, although some additions may be noted. Two loading bays were placed in the central courtyard, in the angle between the Bradford Road block and each wing mill. The western loading bay, attached to the West Wing Mill, was two stories high and four bays long, with a full-height double doorway in the east end. The doorway was served by a single hoist, although this was not an original feature. It seems likely that this loading bay may have been used primarily for taking in raw cotton, as the adjoining West Wing Mill contained the initial preparation machinery. Conversely, the East Wing Mill contained yarn reeling machinery, suggesting that the eastern loading bay may have been used for the dispatching of spun yarn to its market. A weighing machine, probably associated with these operations, had also been installed in the mill yard by this date.

The 1891 Ordnance Survey map also depicts the plot immediately to the east of the mill to have been developed, seemingly comprising a structure contiguous to the West Wing block and the Waste House. However, subsequent mapping of the site indicates this addition to have been divided into four rooms, all except one of which were of a single storey. These were used predominantly for warehousing purposes, although it seems that one room was used to house ring-spinning frames, and the two-storey room incorporated an office on its upper floor.

A minor but nevertheless interesting addition to the complex shown on the 1891 map is a short plateway running between the canal and the mill's steam-power plant. This was doubtless intended to facilitate the delivery of coal from canal boats to the boiler house, and reinforces the continued crucial role of the canal in the operation of the mill during the late 19<sup>th</sup> century. During this period, a single cylinder horizontal steam engine had been installed to supplement the power provided by the original twin cylinder beam engine, providing a combined power of 1600 ihp (*The Times*, 21 March 1911). This new engine was located in the south-western corner of the mill yard, on the site that was to be occupied subsequently by the transformer house. Power transmission from this engine to the machinery utilised a rope drive system, whereby the main line shafts on each floor were driven from the engine flywheel by a number of cotton ropes, providing a more efficient, reliable and quieter drive than the traditional geared system. Developed in America, the installation of rope drive systems became widespread in England during the 1880s.

During this period, and possibly associated with the installation of the new engine, the original spinning mules were replaced by larger mules that were orientated longitudinally along the main block (Plate 7). The precise date at which this occurred is uncertain, although a renewal of machinery in 1884 is documented (Mills 1917, 68). The mill was accredited with operating 80,000 mule spindles at this time (Worrall 1884), although it is unknown whether this total accounted for the new machinery. Similarly, orders for new scutchers, carding engines and ten mules of up to 1308 spindles were placed with Platts of Oldham between 1889 and 1893. This programme of renewal led to a strike by the minders and piecers in the mule-spinning department, the eleventh strike at the mill since 1876 (*ibid*).

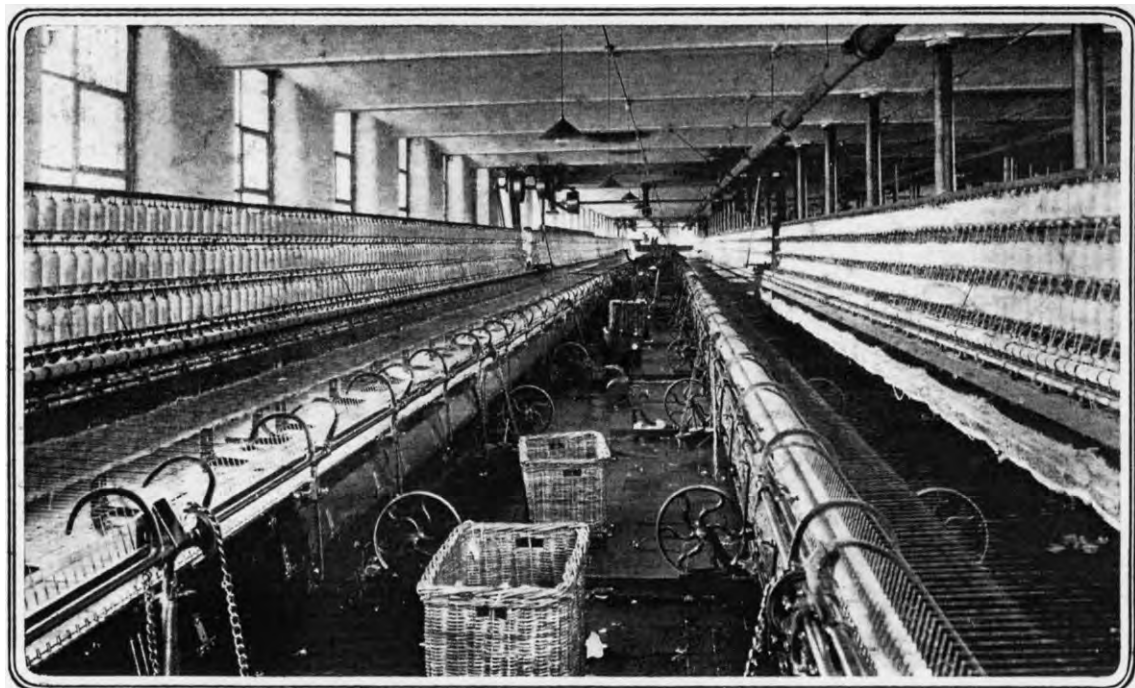


Plate 7: A view along one of the spinning rooms at Brunswick Mill, showing the remodelled mules arranged longitudinally (reproduced from the *Illustrated London News*, July 1909)

#### 4.7.8 Early 20<sup>th</sup>-Century Development

In 1908-09, Brunswick Mill reputedly became the first mill in Manchester to adopt electricity as a source of power, which was applied to every part of the mill (Williams and Farnie 1992). Electricity was supplied from the Manchester Corporation main at 6,500 volts, and was transformed down to 400-440 volts for machinery and 220 volts for lighting purposes in a newly-built transformer house, located in the south-western corner of the courtyard (Plate 8). The installation of electric drive motors necessitated the entire system of gearing within the mill to be replaced, except for one pair of bevelled gears that continued to drive a small amount of machinery in one of the wing blocks (*Illustrated London News* 1909). This remodelling appears to have included the removal of the two steam engines. The electric motors installed in Brunswick Mill replaced the power supplied by two steam engines: a two-crank beam engine; and a single-crank horizontal engine, together producing 1,600 ihp. The power from these engines was transmitted in the various sections of the mill by spur gears, upright shafts, bevelled gears and rope drives (*The Times*, 21 March 1911).

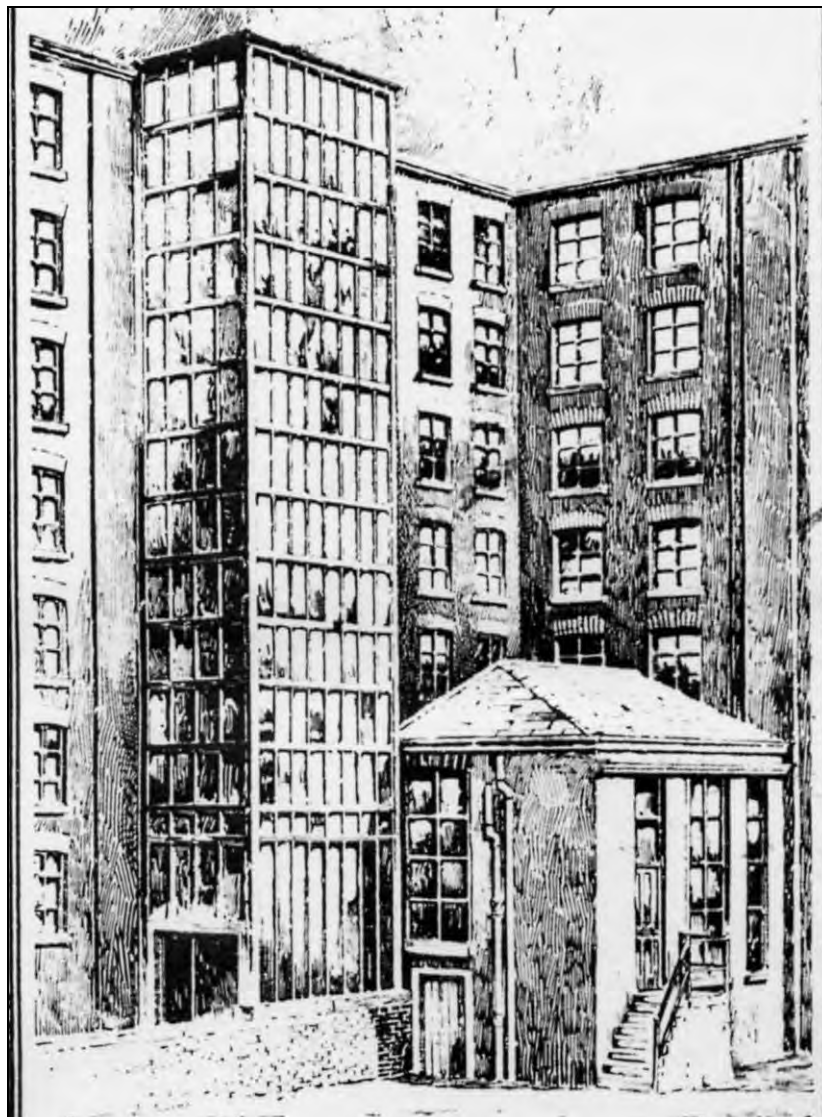


Plate 8: One of the towers erected to house the electric motors, and the transformer house  
(reproduced from the *Illustrated London News*, 1909)

The new system comprised 37 electric motors, which were supplied by the British Thompson-Houston Company of Rugby. Most of these motors were installed within two external towers that were erected against the courtyard elevation of the main block (Plate 8). These towers were constructed of steel framing with glazed casings, purportedly to protect the electric motors from dust (*Textile Mercury* 1910), although concerns of fire associated with what was essentially untried technology is likely to have been a factor.

Each spinning floor was served by two electric motors, which were fixed directly to the spinning mules' line shafts by means of a flexible coupling. Each of the motors for the spinning mules was rated at 75hp, and ran at 485 revolutions per minute. The motors used to power the ring spinning frames were rated at 30hp, running at 725 revolutions per minute, and were similarly coupled to existing line shafts by flexible couplings (*Illustrated London News* 1909). These motors were all installed in the eastern tower, and one motor was required to drive four ring spinning frames per floor. A more powerful motor, rated at 45hp, was installed in the western tower to drive six frames. For driving the preparation machinery, electric motors were directly coupled to the original line shafts (*ibid*).

The firm took advantage of the remodelling necessitated by the installation of electric motors to install a new sprinkler system. This included the erection of a water tank atop the eastern motor tower. The supply of water was provided by an electrically-driven pump, which had a capacity to raise 650 gallons of water a minute to the reservoir tank.

At some point during this period, a large rectangular external dust flue was added to the western end of the Bradford Road block. This had a decorative and distinctive castellated top, with the dust chamber at its base inserted into the former boiler house. An additional storey with a flat concrete roof was also added to the Waste House. The east end wall of this storey contained six windows, in contrast to the lower stories that had none.

Other modifications to the mill complex at this time included the replacement of all the original roofs. Also, the original cornice around most of the main walls was replaced with terracotta embellishment. Single-storey sheds with multi-aisle roofs were added to the eastern end of the site during the late 19<sup>th</sup> century. These were attached to the East Wing Mill, and enclosed the ground floor of the Waste House. The precise function of these structures is uncertain, although they are likely to have been intended for storage and warehousing purposes. The following year, a trade directory accredited Brunswick Mill with 23,000 ring spindles, together with 46,500 mule spindles (Worrall 1910). This demonstrates that the process of replacing the tradition mule with the ring frame which was to dominate the final years of cotton spinning in Lancashire had begun at Brunswick Mill by the first decade of the 20<sup>th</sup> century.

A visit to the mill by a representative of the *Empire Mail* in 1925 resulted in the publication of a useful article that described the mill at this time. The newspaper correspondent was clearly impressed with the scale and magnitude of the factory, commenting that 'it is one of the most interesting cotton mills in the country, one of the oldest and largest and best equipped' (*Empire Mail* 1925). It is clear within the published article that the Bradford Road block had been raised to four stories by 1825, and this incorporated a flat concrete roof with a row of inclined sky-lights. Whilst the additional floor is not shown on an engraving published in 1926 (Plate 9), it is probable that this had actually been produced several years previously.



*Plate 9: An engraving of Brunswick Mill published in 1926*

By 1923, the Bannerman Mills Company Limited was in liquidation, and the business was merged with the parent company. Hence, Brunswick Mill continued to be operated by Henry Bannerman & Sons Ltd, as listed in trade directories subsequently. The final entry for the firm in association with the entire mill complex, however, occurs in a directory for 1928, as the following year Henry Bannerman & Sons Ltd was amalgamated with the Lancashire Cotton Corporation Ltd, and Brunswick Mill was conveyed to this new combine. Within 12 months, the Bradford Road block had been leased back to Henry Bannerman & Sons Ltd, initially for a period of ten years.

The Lancashire Cotton Corporation Ltd replaced the spinning mules with ring-spinning frames, presumably as part of a programme of modernisation in the face of increasing foreign competition. Ring-spinning frames were somewhat heavier than spinning mules, necessitating the strengthening of the original cast-iron floor structure (Jones 1985, 183). This was achieved by installing a system of trussed tie-rods mounted beneath the beams on short vertical brackets.

#### 4.7.9 Post-Cotton Spinning

Brunswick Mill ceased to be used for cotton production during the mid-1960s, and in January 1968 the mill was sold by the Lancashire Cotton Corporation Ltd to the Trownbay Property Company Ltd. Since that date, the mill complex has been used by a variety of small firms. At least one of these was associated with ancillary textile processes and, until recently, represented a very rare survival of textile-related industries still operating in Ancoats during the 21<sup>st</sup> century. Presently, however, much of the mill is vacant, and a music-related business occupies some of the building.

Pooley's Mill was demolished in the late 20<sup>th</sup> century, and its site has been used for stockpiling earth / demolition material (Plate 11). All the buildings along the Bradford Road and Beswick Street frontages of the Site have also been demolished (Plates 12-13).



*Plate 10: Aerial view of Brunswick Mill and Pooley's Mill in the mid-1980s*



*Plate 11: View across the site of Pooley's Mill, showing Brunswick Mill to the rear*



*Plate 12: View of the Bradford Road frontage on the south-western part of the Site*



*Plate 13: The demolished remains of the buildings occupying the Beswick Street frontage*

## 4.8 Previous Archaeological Work

The Site has not been subject to any intrusive archaeological work previously, although the remains of a large cotton mill known as Phoenix Mill that occupied the plot immediately to the south was subject to archaeological excavation in 2019 (Plates 14 and 15). The excavation demonstrated that Phoenix Mill was built in two phases as two separate establishments in c. 1824 and c. 1841. It was upgraded and expanded through the 19<sup>th</sup> century before being converted for warehousing and light industrial activities in the early 20<sup>th</sup> century and was finally demolished in the 1980s. The survival of the remains related to the 19<sup>th</sup>-century activity was substantial, in particular the remains of the power-systems survived to a considerable extent which allowed further understanding of the phasing and development of the site. The earliest of the excavated structures most likely related to a '64ft x 45ft' mill referenced in 1869 and referred to as 'Bridge Mill' throughout the later 19<sup>th</sup> and early 20<sup>th</sup> centuries.

Phase 2 consisted of the initial construction of the main Phoenix Mill buildings and potentially the earliest upgrades or changes within the site, c.1836-41. This included substantial wall foundations, a chimney and associated flue, and the foundations for a Hick Hargreaves beam engine.

Phase 3 consisted of the initial repairs and developments to the structures of that likely took place c. 1844-69. An expansion of the boiler house occurred in, c. 1841-4, though it had likely been completed by 1851, based upon the available cartographic sources. Phase 3 also included the installation of a new economiser which may have been associated with the expansion to the south of the chimney. The cylindrical boiler beds which were found during the excavation also likely dated to this period.

Phase 4 consisted of some of the most significant changes to the mill's power systems, and likely took place c. 1869-90. It included the replacement of a documented Boulton & Watt beam-engine with a Hick-Hargreaves 350 HP compound engine. Phase 4 reflected the rapid technological advances that occurred in the mid- to late 19<sup>th</sup> century.

The archaeological investigations at Phoenix Mill allowed for a mid-sized excavation to take place at an important cotton mill within Ancoats. It contributed to some of the academic aims laid out in the *Regional Research Framework* (McNeil and Brennand, 2007), and in particular those related to the *Industrial and Modern Period* (Newman and McNeil, 2007):

*Initiative 7.41:* 'The retention of later period artefacts and their routine analysis as part of all archaeological excavation projects...' (*op cit*, 156);

*Initiative 7.44:* 'Build upon the archaeological investigation of warehousing undertaken thus far in the region to examine warehousing in all towns and establish regional distribution patterns and typologies...' (*op cit*, 156).





*Plate 14: The excavated remains of Phoenix Mill*



*Plate 15: The masonry engine beds excavated in the south-western part of the site, with Brunswick Mill visible to the rear*

## 5. Significance

---

### 5.1 *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. NPPF places particular emphasis on assessing the development proposals in line with an up-to-date local plan (*op cit*, Section 3.28). Consequently, Manchester's Core Strategy (adopted 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.

### 5.2 *Assessment Methodology and Significance Criteria*

The most commonly 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

## 5.3 *Baseline Significance Conditions*

### 5.3.1 *Period*

The archaeological interest within the application area dates firmly to the Industrial and Modern periods. In particular, the archaeological interest spans the years 1826-1910, and incorporates all the major innovations adopted in the construction of textile mills. The site of Pooley's Mill has considerable potential to contain the buried remains of an early textile mill and its associated steam-power plant, whilst the surviving fabric of Brunswick Mill is likely to retain physical evidence for the pioneering adoption of electric drive in a textile mill. The domestic properties along the south-western boundary of the Site are similarly associated with the growth of the area as an industrial townscape, although these buildings are of lesser archaeological interest.

### 6.3.2 *Rarity*

The remains of early 19<sup>th</sup>-century industrial buildings, and especially their power systems, can be considered to be of regional rarity. This is particularly the case in Ancoats, which is acknowledged as the pioneering centre of the factory-based textile industry, based on steam-powered. Physical evidence for all of the major advances in structural engineering applied to a textile mill may survive in the fabric of Brunswick Mill, which can be considered to be of national rarity, whilst Pooley's Mill is likely to retain below-ground physical evidence for a steam-powered mill that may of high local or regional importance. Conversely, the remains of the domestic properties along the Beswick Street frontage are not considered to have a rarity value.

### 6.3.3 *Documentation*

The historical development of the study area from the late 18<sup>th</sup> 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 relevant buildings, although this is unlikely to alter the outline and conclusions presented in this assessment.

### 6.3.4 *Group Value*

The sites within the study area all fall into the Industrial Period, and form part of an important group of steam-powered textile mills that were erected along the Ashton-under-Lyne Canal corridor. In addition, the domestic properties, and public building in the form of the Methodist church, add to the group value of the 19<sup>th</sup>-century industrial townscape. As such, these heritage assets have some group value.

### 6.3.5 *Survival / Condition*

The extent to which any buried archaeological remains survive *in-situ* is currently largely unknown. The intensive development of the study area during the 19<sup>th</sup> century is likely to have obliterated any surviving remains from earlier periods. Conversely, the site of Pooley's Mill has remained undeveloped since the mill was demolished, and offers considerable potential for buried remains to survive *in-situ*.

### 6.3.6 *Fragility/Vulnerability*

Any buried archaeological remains within the Site, should they be present and survive *in-situ*, are vulnerable to damage or destruction during any earth-moving works required to deliver the proposed development.

### 6.3.7 *Diversity*

The potential archaeological remains derive from the Industrial Period. They include industrial buildings, public buildings and housing. These sites are not diverse in themselves, and are not significantly diverse as a group.

### 6.3.8 *Potential*

There are no prehistoric sites within the Site, and the potential for prehistoric remains is considered to be low. Similarly, there are no known Romano-British or early medieval sites within the Site, and the potential for remains from these periods is considered to be low, although the possibility that the line of a Roman road crosses the western boundary of the Site cannot be discounted entirely. It is concluded that the potential of remains from these periods is considered to be low.

The Site was probably used for agricultural purposes during the post-medieval period. However, it is likely that the intensive development of the Site during the 19<sup>th</sup> and 20<sup>th</sup> centuries resulted in the disturbance or loss of these soils, and their potential to survive seems low.

The greatest potential for buried archaeological remains of significance lies in the Industrial Period. In particular, the buried remains of the steam-power plant associated with Pooley's Mill would be of interest, although the precise location of the power plant is not marked on the available historical mapping and is thus uncertain.

## 6.4 *Significance of Below-Ground Archaeological Remains*

Using the above criteria, and particularly rarity and survival/condition, the Site is likely to contain non-designated below-ground heritage assets of at least high local significance, and potentially regional importance, specifically the remains of the steam-power plant for Pooley's Mill. Other sites of potential below-ground archaeological interest include the former properties along the Beswick Street frontage and are likely to be of low local significance.

## *7. Impact of Development*

---

### *7.1 Development Proposals*

The proposal involves the repurposing of a Grade II listed mill and the development of a suite of apartment blocks on adjoining land. The delivery of the proposals for the apartment blocks will require substantial earth-moving works, which will to damage or remove any archaeological remains that survive below ground.

### *7.2 Impact of Development*

The results obtained from the desk-based research indicate that the Site is likely to retain the foundations the early 19th-century textile mill known as Pooley's Mill and its associated steam-power plant. Any surviving foundations of the mill, and specifically those deriving from the steam engine, boilers and associated flues will merit recording archaeologically prior to their removal as part of the proposed construction works. This would represent an appropriate strategy to offset the harm of development on the archaeological resource of the Site.

The possibility that physical evidence for a Roman road may survive across some parts of the Site cannot be dismissed entirely. Any such remains would similarly merit recording archaeologically prior to their removal during the proposed construction works.

## 8. Further Investigation

---

### 8.1 Heritage Assets

Where the loss of the whole or a material part of a 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 identified the sites of below-ground remains of non-designated heritage assets of at least local, and potentially regional, significance within the Site. Any damage to these sites during the delivery of the proposed development would merit the implementation of a strategy that would mitigate the ultimate loss of the buried remains, ie preservation by record.

### 8.2 Further Investigation

The requirement for any further archaeological recording of buried remains within the Site will be decided by the Greater Manchester Archaeological Advisory Service, in their capacity as archaeological advisor to Manchester City Council. It is expected, however, that a programme of intrusive investigation will be required in advance of development. This will aim to establish whether any buried remains of archaeological interest survive *in-situ*, and will comprise the excavation of a series of evaluation trenches that should be intended to establish the location, condition and extent of the steam-power plant of Pooley's Mill. This is in line with Section 16, paragraph 189 of the *National Planning Policy Framework* that advises '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'.

Should significant archaeological remains be encountered during the initial investigation, further excavation may be required to offset the harm of development on the sub-surface archaeological resource, in line with the guidance by the *National Planning Policy Framework*: 'Local planning authorities should require developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible'.

In addition to the below-ground archaeological resource, further archaeological study may be required to properly inform the development proposals for Brunswick Mill, as the impact of the proposed works on the character and fabric of the buildings will require detailed assessment. Similarly, Listed Building Consent will require the conversion of the mill to be carried out sympathetically, and based on sound information. In order to satisfy these requirements, an archaeological building survey, commensurate with an English Heritage Level 3-type survey, may be necessary to enhance and support existing baseline information. Any such survey would be intended to provide a comprehensive understanding of the relative significance of the historic fabric, component buildings and features throughout the Brunswick Mill complex.

The results obtained from the survey would allow informed decisions to be made on sympathetic treatment of the historic fabric, and removal of any structures or buildings within the mill complex. Again, this approach would be in line with the guidance by the *National Planning Policy Framework*.

# Sources

---

## *Cartographic Sources*

*Map of Manchester and Salford*, Pigot, 1819

*A Map of Manchester and Salford*, Bancks and Co, 1831

Ordnance Survey 60": 1 Mile, Manchester Sheet 25, published in 1850

Ordnance Survey 10': 1 Mile, Manchester Sheet 104.7.18/19, published in 1891

Ordnance Survey 25": 1 Mile, Lancashire Sheet 104.7, published in 1893

Ordnance Survey 25": 1 Mile, Lancashire Sheet 104.7, 1908 revision (surveyed 1905)

Ordnance Survey 25": 1 Mile, Lancashire Sheet 104.7, 1922 revision (surveyed 1915)

Ordnance Survey 25": 1 Mile, Lancashire Sheet 104.7, 1931 revision

Ordnance Survey 1:2500 map, Sheet 33/8598 NE, 1948 revision

Goad, Insurance Plan, Manchester, Vol II, Sheet 213, Revision of 1943

## *Primary Sources*

PP (HC) 1834 [167] XX D1, 1834 *Queries Addressed by the Central Board of Commissioners to Manufacturers*

*Daily News*, 5 July 1853

*Empire Mail*, June 1925

*Examiner*, 5 November 1842

*Hull Packet*, 11 November 1842

*Illustrated London News*, July 1909

*Manchester Times*, 26 June 1880

*Men of the Period*, 1895

*Textile Mercury*, 1910, **42**, 142-7

*Times*, 21 March 1911

*The Century's Progress*, 1892

Pigot, J, 1838 *General Classified and Street Directory of Manchester and Salford*, Manchester

Pigot, J, 1841 *Directory of Manchester and Salford*, Manchester

Slater, I, 1861 *Manchester and Salford Directory*, Manchester

Slater, I, 1895 *Manchester and Salford Directory*, **1**, Manchester

Slater, I, 1903 *Manchester and Salford Directory*, **1**, Manchester

Worrall, J, 1884 *Cotton Spinners and Manufacturers Directory*, Oldham



## Secondary Sources

- Ashworth, G, 1987 *The Lost Rivers of Manchester*, Altrincham
- Baines, E, 1835 *History of Cotton Manufacture in Great Britain*, London
- Bruton, FA (ed), 1909 *The Roman Fort at Manchester*, Manchester
- Catling, H, 1986 *The Spinning Mule*, Newton Abbot
- Chandler, J, 1993 *John Leland's Itinerary: Travels in Tudor England*, Stroud
- Chapman, SJ, 1905 *The Cotton Industry and Trade*, London
- Clark, S, 1978 Chorlton Mills and their Neighbours, *Ind Archaeol Rev*, **2**, 207-39
- Cooper, G, 2002 *Illustrated History of Manchester's Suburbs*, Manchester
- Countryside Commission, 1998 *Countryside Character Volume 2: North West*, Cheltenham
- Darbyshire, A, 1887 *A Book of Old Manchester and Salford*, Manchester
- Edwards, MM, 1967 *The Growth of the British Cotton Trade 1780-1815*, Manchester
- Farrer, W, and Brownbill, J, 1911 *The Victoria History of the County of Lancaster*, Vol **4**, London
- Frangopulo, NJ (ed), 1962 *Rich Inheritance: A Guide to the History of Manchester*, Manchester
- Hadfield, C, 1994 *British Canals: The Inland Waterways of Britain and Ireland*, 8<sup>th</sup> edn, Stroud
- Hall, D, Wells, CE, and Huckerby, E, 1995 *The Wetlands of Greater Manchester*, Lancaster Imprints **3**, Lancaster
- Harland, J, (ed), 1861 *Mamecestre: Chapters from the Early Recorded History of the Barony*, **1**, Chetham Society, Manchester
- Hartwell, C, 2001 *Manchester*, London
- Hartwell, C, Hyde, M, and Pevsner, N, 2004 *The Buildings of England. Lancashire: Manchester and the South-East*, London
- Jenner, M, 2006 *Conservation Plan for Brunswick Mill, Bradford Road, Ancoats, Manchester*, unpubl rep
- Jones, E, 1985 *Industrial Architecture in Britain, 1750 – 1939*, London
- Kidd, A, 1996 *Manchester*, 2<sup>nd</sup> edn, Manchester
- Lee, CH, 1972 *A Cotton Enterprise 1795-1840: A History of M'Connel and Kennedy, Fine Cotton Spinners*, Manchester
- Little, S, 2004 Ancoats - The First industrial Suburb, in R McNeil and D George (eds), *The Heritage Atlas 4: Manchester - Archetype City of the Industrial Revolution*, Manchester, 31-33
- Lloyd-Jones, R, and Lewis, MJ, 1993 Housing Factory Works: Ancoats in the Early 19<sup>th</sup> Century, *Manchester Region Hist Rev*, **7**, 33-6

- Margary, ID, 1957 *Roman Roads in Britain*, London
- Ministry of Housing, Communities and Local Government, 2019 *National Planning Policy Framework*, London
- Miller, I, and Wild, C, 2007 *A & G Murray and the Cotton Spinning Mills of Ancoats*, Lancaster Imprints **13**, Lancaster
- Mills, WH, 1917 *Sir Charles Macara, Bart: A Study in Modern Lancashire*, Manchester
- Morris, A, 1983 *Medieval Manchester: A Regional Study. The Archaeology of Greater Manchester*, **1**, GMAU, Manchester
- Mortimer, J, 1891 *Henry Bannerman and Sons Ltd: Its Origin, Rise and Progress, Diary and Buyer's Guide for 1891*
- Neste, K, 1865 *The Mule Spinning Process*, Manchester
- Nevell, M, McNeil, R, and Redhead, N, 2003 *Manchester Research Framework, Phase 1: The City of Manchester*, unpubl rep
- Newman, RM, 1996 Medieval Rural Settlement, in R Newman (ed) *The Archaeology of Lancashire: Present State and Future Priorities*, Lancaster, 109-124
- OA North, 2005 *Brunswick Mill, Ancoats, Manchester: Documentary Account*, unpubl rep
- OA North, 2008 *George Leigh Street, Ancoats, Manchester: Archaeological Investigation*, unpubl rep
- Parkinson-Bailey, J, 2000 *Manchester: An Architectural History*, Manchester
- Pole, WM (ed), 1877 *The Life of Sir William Fairbairn, Bart, Partly Written by Himself*, Newton Abbot (1970 facsimile)
- Swindells, T, 1908 *Manchester Streets and Manchester Men*, Manchester
- Tupling, GH, 1962 Medieval and Early Modern Manchester, in CF Carter (ed) *Manchester and its Region: A Survey Prepared for The British Association*, Manchester 115-130
- Walker, JSF (ed), 1986 *Roman Manchester: A Frontier Settlement. The Archaeology of Greater Manchester*, **3**, GMAU, Manchester
- Watkin, WT, 1883 *Roman Lancashire*, Liverpool
- Watkins, G, 1999 *The Textile Mill Engine*, 2<sup>nd</sup> edn, Ashbourne
- Williams, M, 2004 Ancoats - Where the Steam-Powered Textile Mill Began, in R McNeil and D George (eds), *The Heritage Atlas 4: Manchester - Archetype City of the Industrial Revolution*, Manchester, 34-38
- Williams, M, and Farnie, DA, 1992 *Cotton Mills in Greater Manchester*, Manchester

## *Acknowledgements*

---

Salford Archaeology would like to thank Maryland Securities Group for commissioning and supporting the project on behalf of the applicant. Thanks are also due to Norman Redhead, the Heritage Management Director with the Greater Manchester Archaeological Advisory Service (GMAAS), for his support and advice.

## *Appendix 1: Figures*

---

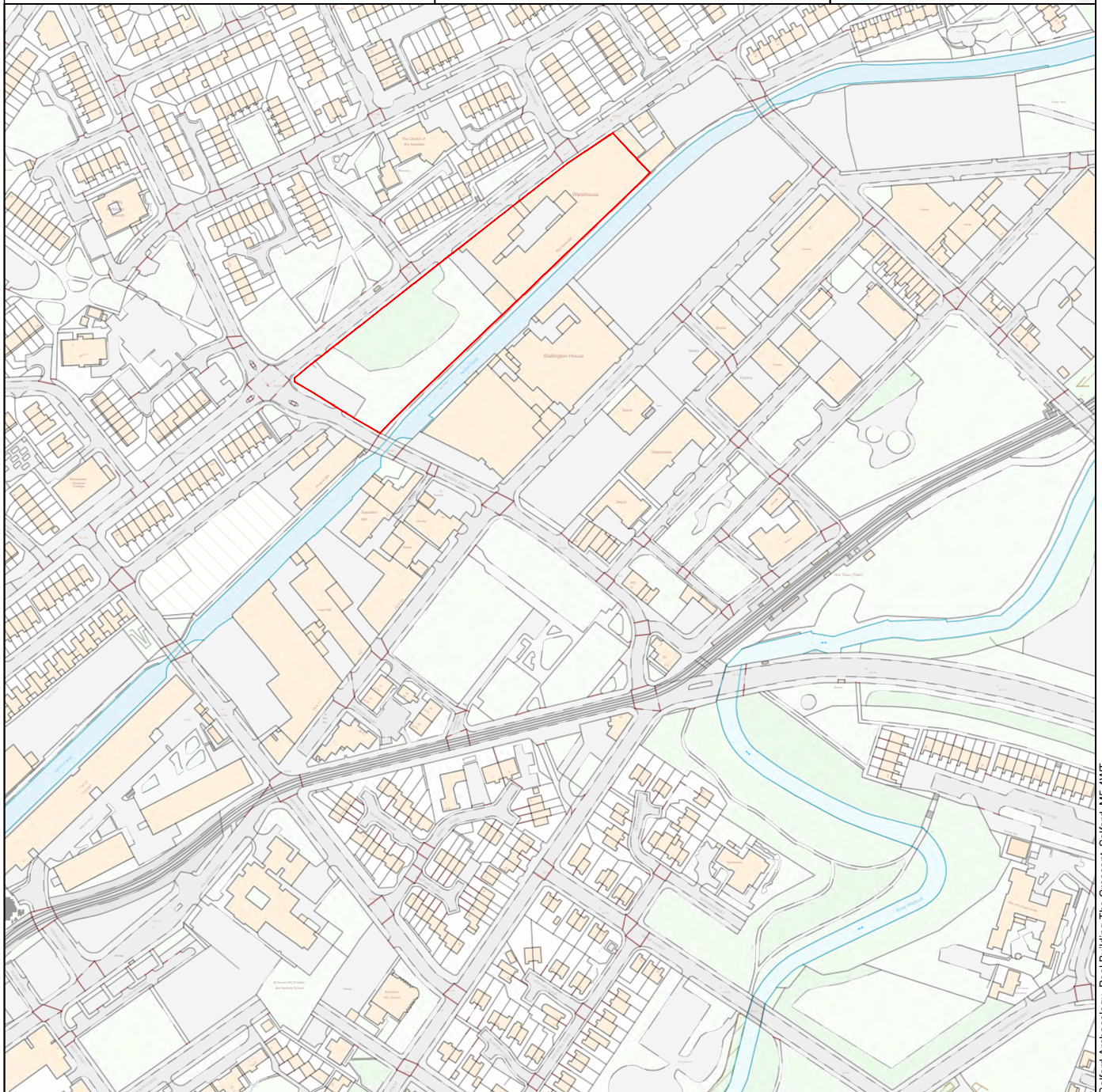
- Figure 1: Site location
- Figure 2: Site boundary superimposed on Bancks & Co's map of 1831
- Figure 3: Site boundary superimposed on the Ordnance Survey 1:1056 map of 1850
- Figure 4: Site boundary superimposed on the Ordnance Survey 1:500 Town Plan of 1891
- Figure 5: Site boundary superimposed on the Ordnance Survey 25": 1 mile map of 1908
- Figure 6: Site boundary superimposed on the Ordnance Survey 25": 1 mile map of 1922
- Figure 7: Site boundary superimposed on the Ordnance Survey 1:1250 map of 1949
- Figure 8: Site boundary superimposed on modern mapping



Figure 1: Site location



**SALFORD**  
**ARCHAEOLOGY**



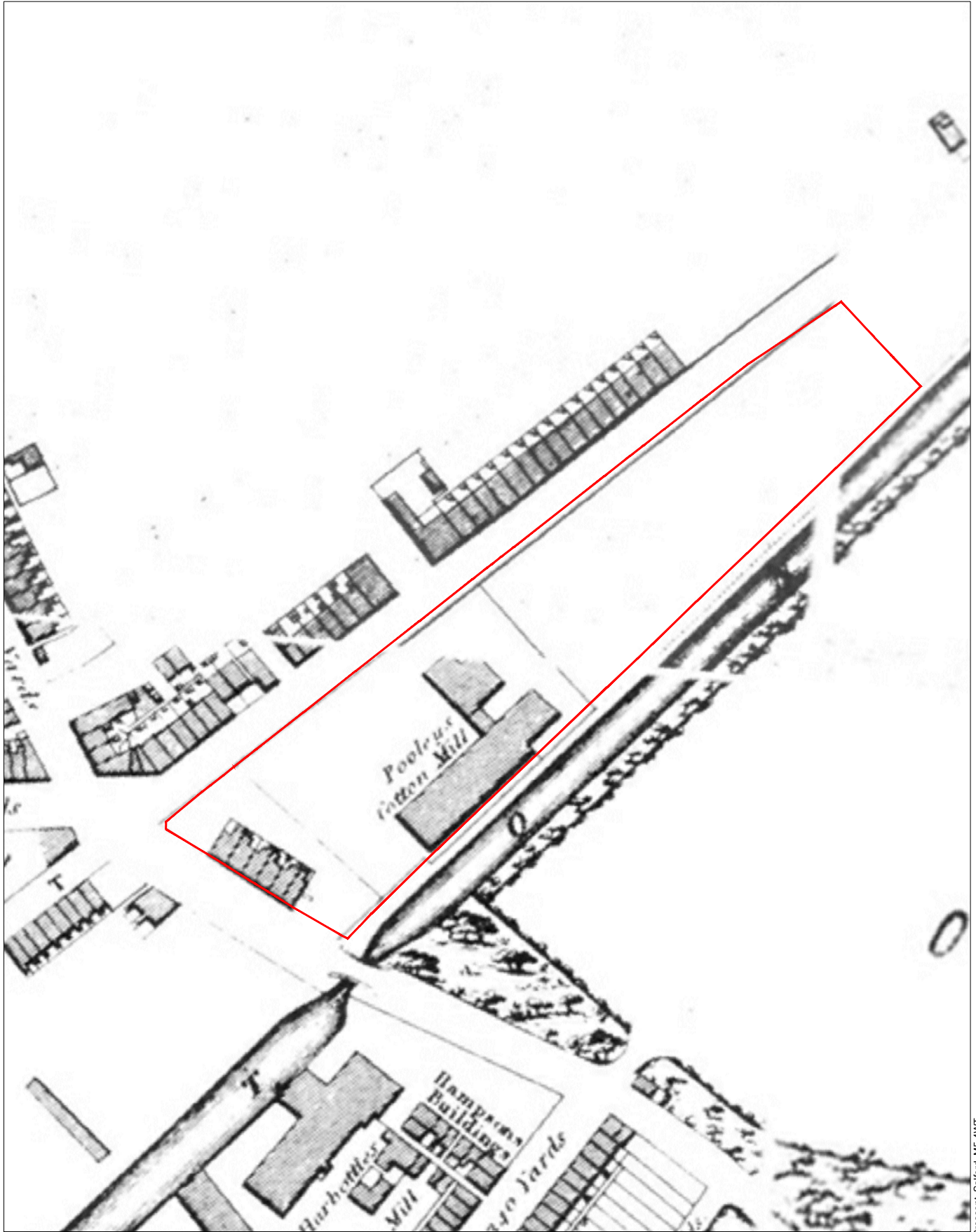


Figure 2:  
Site boundary superimposed on Bancks & Co's map of 1831



Key:  
 Site boundary



**SALFORD**  
ARCHAEOLOGY

0  50 m  
Scale at A4 1:1500

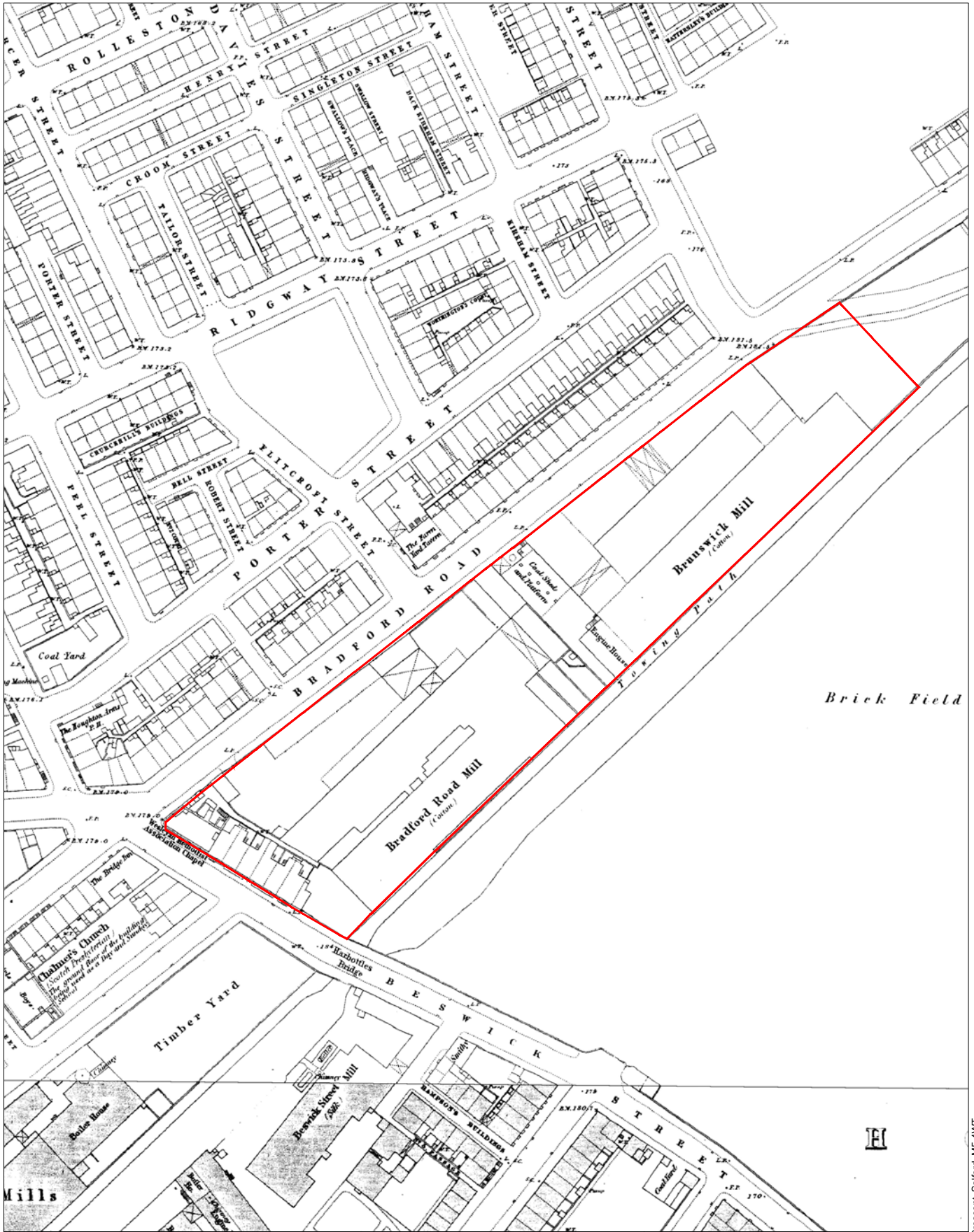


Figure 3:  
Site boundary superimposed on the Ordnance Survey 1:1056 map of 1850



Key:  
 Site boundary



**SALFORD**  
ARCHAEOLOGY

0 50 m  
Scale at A4 1:1500

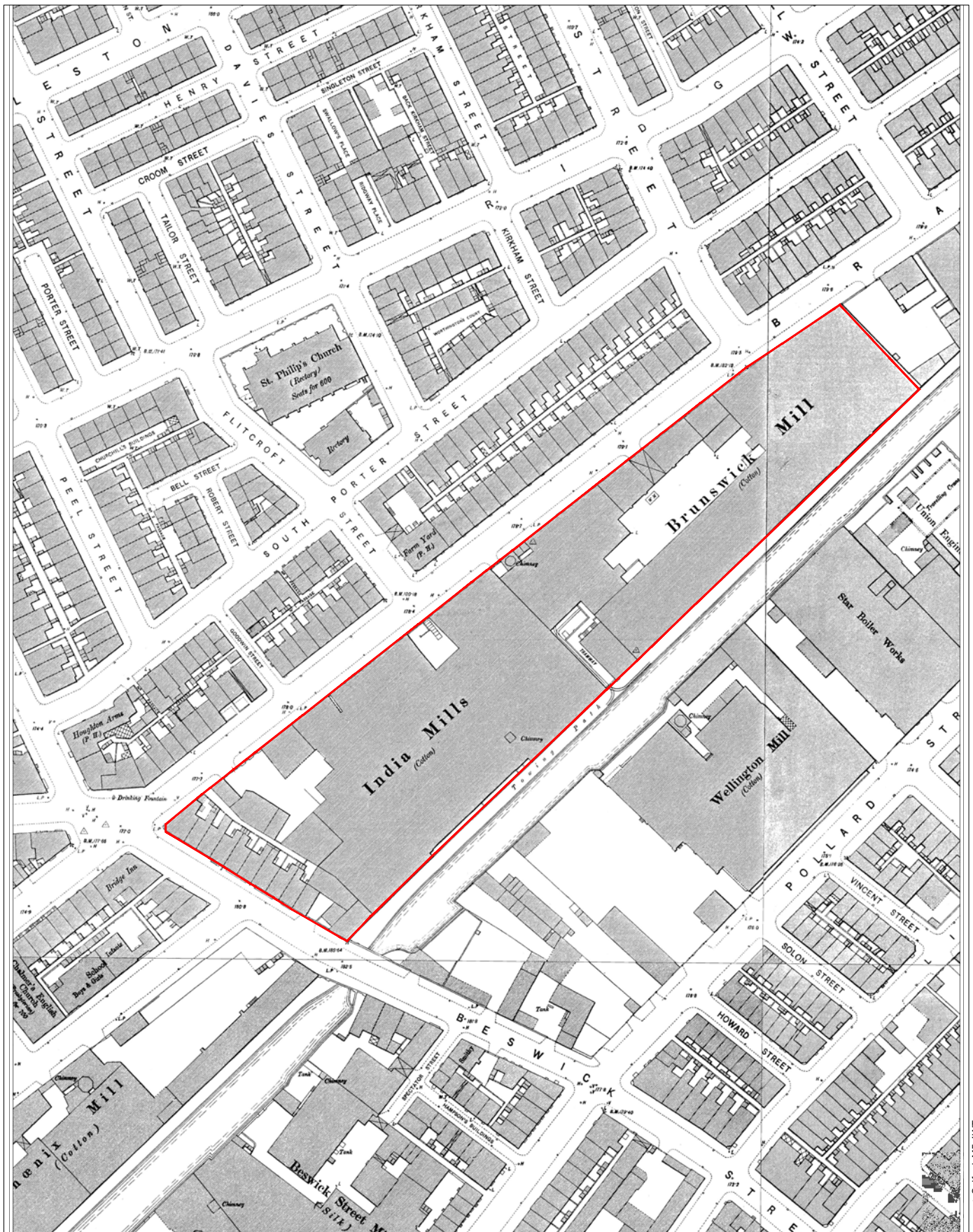


Figure 4:  
Site boundary superimposed on the Ordnance Survey 1:500 Town Plan of 1891



Key:

Site boundary



**SALFORD**  
**ARCHAEOLOGY**

0 
0
50 m
  
Scale at A4 1:1500



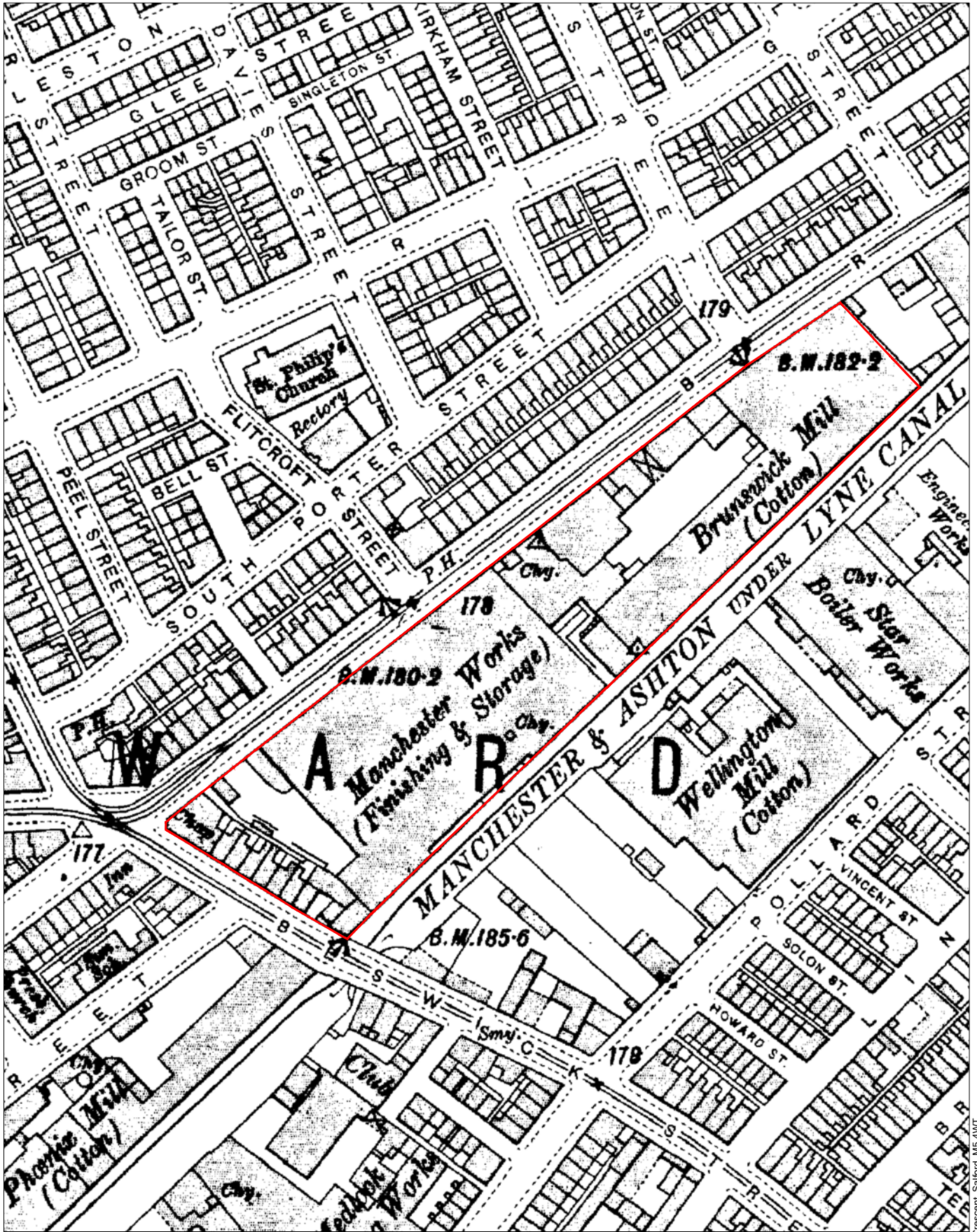


Figure 5:  
Site boundary superimposed on the Ordnance Survey map of 1908



Key:  
 Site boundary



**SALFORD**  
ARCHAEOLOGY

0  50 m  
Scale at A4 1:1500



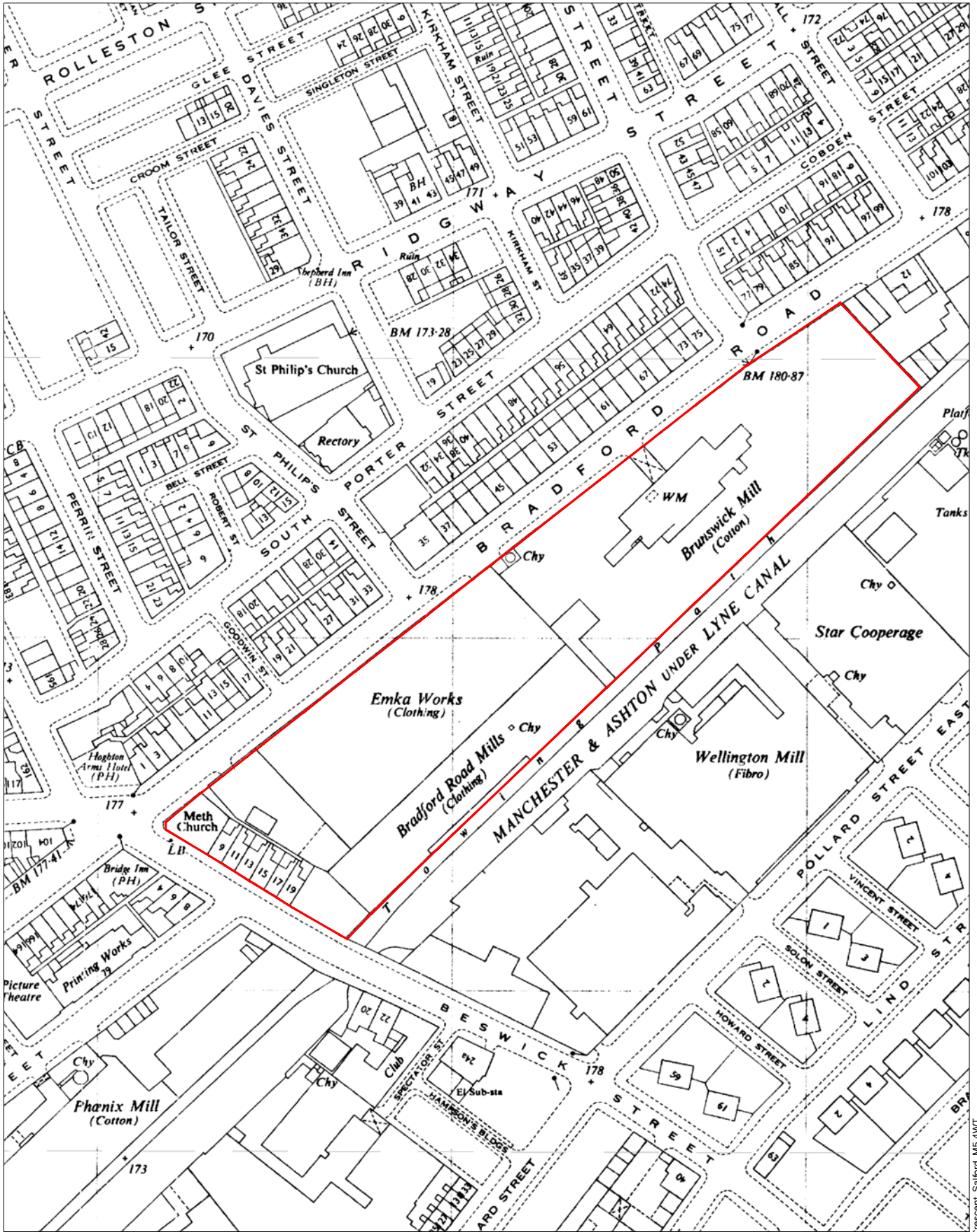


Figure 7:  
Site boundary superimposed on the Ordnance Survey map of 1949



Key:  
 Site boundary



**SALFORD**  
ARCHAEOLOGY

0 50 m  
Scale at A4 1:1500

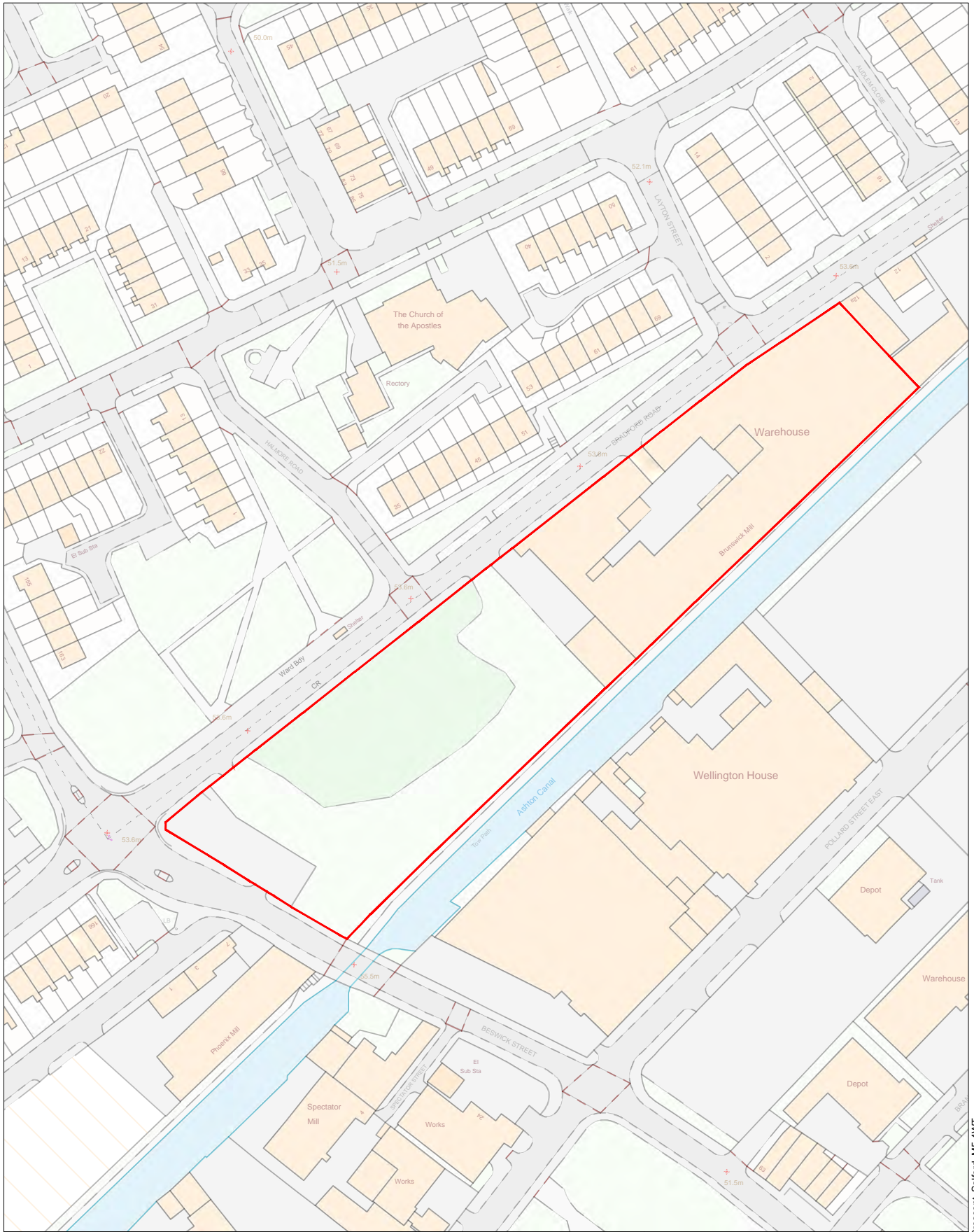


Figure 8:  
Site boundary superimposed on the modern Ordnance Survey map



Key:  
 Site boundary

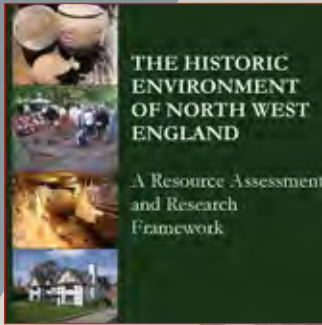


**SALFORD**  
**ARCHAEOLOGY**

0  50 m  
Scale at A4 1:1500



### CONSULTANCY



### DESK-BASED ASSESSMENTS



### WATCHING BRIEF & EVALUATION



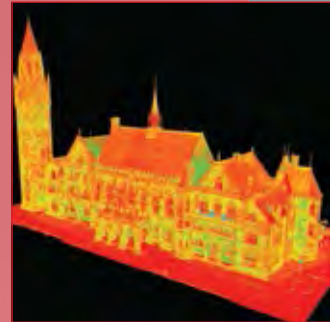
### EXCAVATION



### BUILDING SURVEY



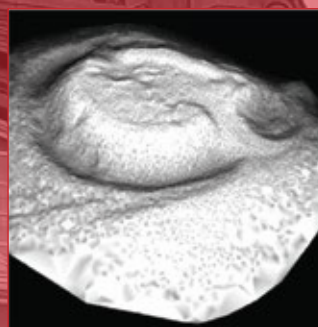
### 3D LASER SCANNING



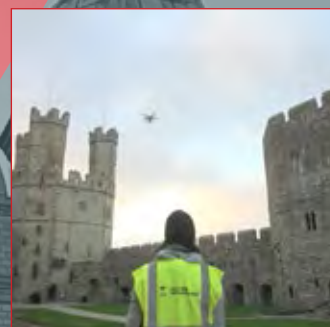
### COMMUNITY INVOLVEMENT



### LANDSCAPE SURVEYS



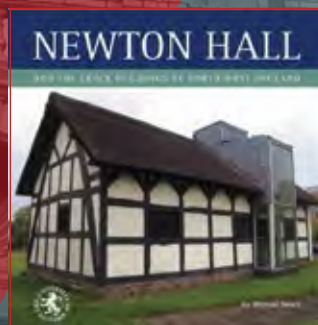
### DRONE SURVEYS



### WORKSHOPS & VOCATIONAL TRAINING



### RESEARCH PUBLICATIONS



### SEMINARS, DAYSCHOOLS CPD EVENTS

