



University of
Salford
MANCHESTER

Archaeological Desk-based Assessment

2 & 3 Angel Square,
Miller Street,
Manchester

Client:
NOMA (GP) Ltd

Technical Report:
Ian Miller

Report No:
2019/71



Site Location: The site lies on the north-eastern side of Miller Street, and to the south of the Co-operative Group's Headquarters Building in the Shudehill area of Manchester city centre

NGR: Centred at NGR 384390 398980

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Author: Ian Miller
Position: Assistant Director
Date: August 2019

Signed:

A handwritten signature in black ink, appearing to read 'I. Miller'.

Approved By: Anthony Lee
Position: Senior Heritage Consultant
Date: August 2019

Signed:

A handwritten signature in black ink, appearing to read 'A. Lee'.

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Contact: Salford Archaeology, Centre for Applied Archaeology, LG 19 – 25 Peel Building, University of Salford, the Crescent, Salford, M5 4WU.

Telephone: 0161 295 4467
Email: i.f.miller@salford.ac.uk

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Summary

NOMA (GP) Ltd is presently enabling the redevelopment of land situated in the Shudehill area of Manchester city centre as part of the NOMA Regeneration. Two adjacent parcels of land within the regeneration area, referred to as 2 & 3 Angel Square (centred on 384390 398980) are situated on the north-eastern side of Miller Street, and to the south of the Co-operative Group's Headquarters Building.

In order to facilitate the planning process, Gardiner & Theobald LLP, acting on behalf of NOMA (GP) Ltd, commissioned Salford Archaeology to carry out a desk-based assessment of the proposed development area. This was intended to establish, as far as possible, the nature and significance of the sub-surface archaeological resource within the area, and to establish the impact of any future development on this resource.

The proposed development area does not contain any designated heritage assets or archaeological remains that are considered to be of sufficient importance to necessarily require preservation *in-situ*. The site was occupied in the late 18th century by Manchester's first steam-powered cotton mill, established by Richard Arkwright in 1780-83, and whilst the site is of immense historical importance, all physical remains were removed as part of a controlled and comprehensive archaeological excavation in 2015. However, the assessment has concluded that other parts of the proposed development area hold some potential to contain buried remains of archaeological interest, albeit in a fragmentary condition. These include the footprint of another cotton mill that had been added to Arkwright's Shudehill Mill complex by 1786, and was the first to be powered by a Boulton & Watt steam engine. The site of this mill was subject to redevelopment in the 19th and 20th centuries, and limited archaeological investigation carried out in 2013 did not reveal any physical remains of the building. Similarly, an evaluation trench placed across the centre of a large reservoir that served the mill complex did not expose any 18th-century fabric. It is nevertheless possible that fragmentary remains of the late 18th-century mill and reservoir survive below ground, and any such remains would merit recording archaeologically.

The requirement for any further archaeological investigation in advance of, or during, development works will be decided by the Greater Manchester Archaeological Advisory Service, in their capacity as archaeological advisor to Manchester City Council. It may be anticipated, however, that a limited programme of evaluation trenching coupled with a watching brief during ground-reduction works will be required to offset the harm of development. The evaluation trenching could be usefully targeted to locate the culvert between the former reservoir in the centre of the site and the waterwheel pit in Arkwright's Shudehill Mill of 1780-83, whilst the watching brief should be maintained during construction works within the footprint of the 18th-century mill adjacent to Miller Street. Should any significant and extensive remains be encountered during the evaluation and/or watching brief, further archaeological investigation may be appropriate to ensure an archival record is compiled prior to the ultimate loss of the remains.

1. Introduction

1.1 Planning Background

In July 2019, Salford Archaeology was commissioned by Gardiner & Theobald LLP, acting on behalf of NOMA GP Ltd, to undertake an archaeological desk-based assessment to support a planning application for the development of a plot of land within the NOMA Regeneration area of Manchester city centre (referred to herein as the Site). The desk-based study aimed to identify as far as possible the nature, extent and significance of the archaeological resource within the Site in order to enable informed recommendations to be made for the future treatment of any surviving remains.

1.1.1 National Planning Policy Framework (NPPF)

The significance of the archaeological resource identified within this report has been assessed as recommended in the revised *National Planning Policy Framework* (Ministry of Housing, Communities and Local Government, revised February 2019).

The NPPF sets out the Government's planning policies and outlines the presumption in favour of sustainable development, which is defined by three principles: economic, social and environmental. Of the core planning principles underpinning decision making, conserving heritage assets 'in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of existing and future generations' is one.

Section 16 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, including any contribution made by their setting. 'The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation'.

Paragraph 197 states that the effect of a proposal on non-designated heritage assets (designated assets are covered in paragraphs 193-96) should be taken into account in determining a planning application. Paragraph 199 states that local planning authorities should require developers to record and advance understanding of any heritage assets to be lost, in a manner appropriate to their importance and impact, and to make this evidence publicly accessible.

1.1.2 Local Development Framework

The NPPF outlines the need for local planning policies to create 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 outlined in Objective 6: Environment and summarises the approach the local authority will take in determining planning applications which may affect the historic environment.

Policy EN3 states: 'Throughout the City, the Council will encourage development that complements and takes advantage of the distinct historic and heritage features of its districts and neighbourhoods, including those of the City Centre.

New developments must be designed so as to support the Council in preserving or, where possible, enhancing the historic environment, the character, setting and accessibility of areas and buildings of acknowledged importance, including scheduled ancient monuments, listed buildings, registered parks and gardens, conservation areas and archaeological remains.

Proposals which enable the re-use of heritage assets will be encouraged where they are considered consistent with the significance of the heritage asset.'

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

2. Method Statement

The assessment considers the potential impact of the proposed development upon any buried archaeological remains or heritage assets within the Site, and comprises a desk-based study and site inspection. The production of the assessment follows 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;
- The National Heritage List for England;
- Salford Archaeology's extensive library of archaeological work carried out in the vicinity of the Site.

The aim of the research was to provide the relevant historical and archaeological background relating to the development of the Site. The available sequence of historical mapping was the principal source of information, as this provides evidence for the development of the Site since the late 18th century.

2.2 Site Inspection

The aim of the site inspection was to relate the findings of the desk-based study to the existing land use of the Site in order to identify any evidence for surviving below-ground archaeological remains. This was undertaken in a single day in August 2019.

2.3 The Document

The following presents the historical and archaeological evidence for the study area. A gazetteer (Chapter 5) is presented of heritage assets and sites of potential archaeological interest identified within the Site and this information, along with map regression (*Appendix 1*), is used to assess the significance of the remains (Chapter 6) and impact of the development (Chapter 7). A strategy for further investigation is outlined in Chapter 8, based on the assessment presented in the previous chapters.

3. The Setting

3.1 Site Location and Description

The Site (centred on NGR 384390 398980) is situated on the northern fringe of the city centre (Fig 1), lying on the north-eastern side of Miller Street, and to the south of the Co-operative Group's Headquarters Building (Plate 1). The majority of the Site was cleared of buildings in the later 20th and early 21st century and is currently for car-parking purposes.

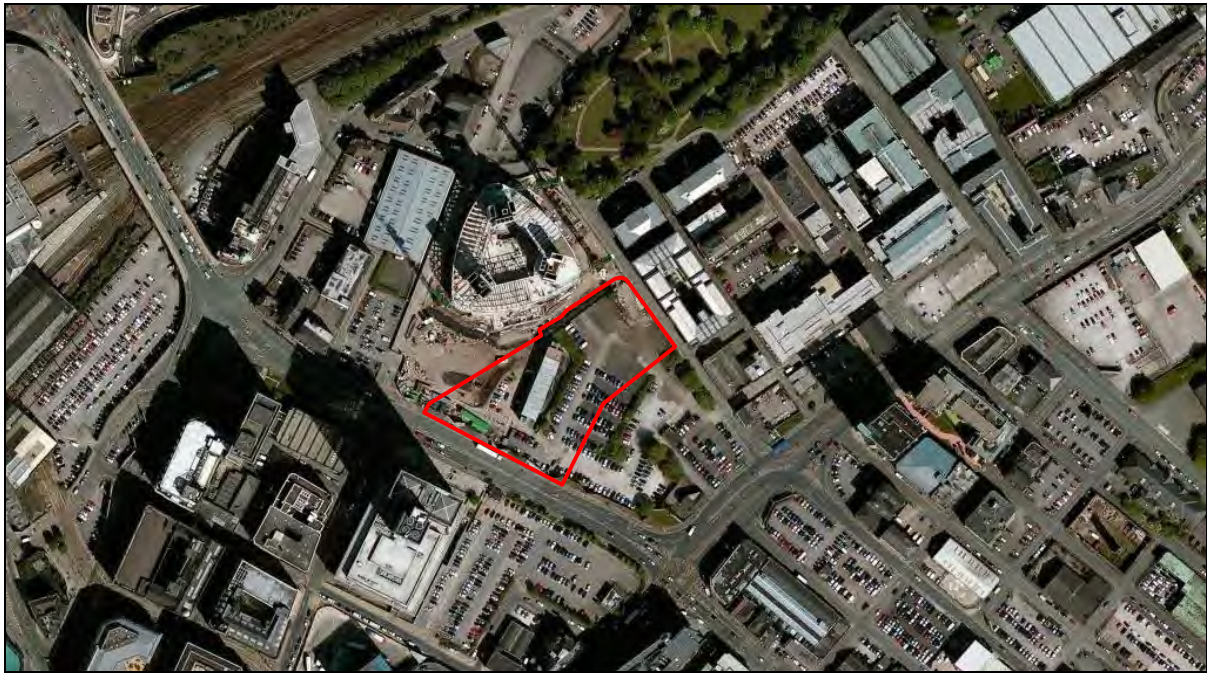


Plate 1: Site boundary superimposed on a recent aerial image across NOMA, prior to the development of 1 Angel Square

3.2 Geology and Topography

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

Topographically, the Manchester Conurbation as a region lies within an undulating lowland basin, which is bounded by the Pennine uplands to the east and to the north. The region as a whole comprises the Mersey river valley; whilst the rivers Irwell, Medlock, and Irk represent the principal watercourses in Manchester (Countryside Commission 1998, 125). The Site lies on the east side of the valley of the River Irk; across the area ground levels fall from east to west towards the river.

3.3 Designations

The Site does not contain any heritage assets that are afforded statutory protection, such as Scheduled Monuments, Listed Buildings, Registered Parks and Gardens, Registered Battlefields or World Heritage Sites.

The Site does not fall within a Conservation Area, although elements of three Conservation Areas lie within a 250m radius: the Cathedral Conservation area; Shudehill Conservation Area; and Smithfield Conservation Area.

There are 20 statutory listed buildings within a 200m radius of the Site; whilst development will not have a direct impact on these designated buildings, their setting will require consideration in development schemes in a separate Heritage Statement.

3.4 Site Description

The Site is currently in use as a car park, which has been landscaped and occupies two different levels, with that to the east being slightly higher. This reflects to some degree the historic use of the site, and specifically the water-management system that was created in the late 18th century to supply a cotton mill that was built in 1780-83 by Richard Arkwright. The existing surface is for the most part of compacted hardcore across both levels (Plates 2-6).

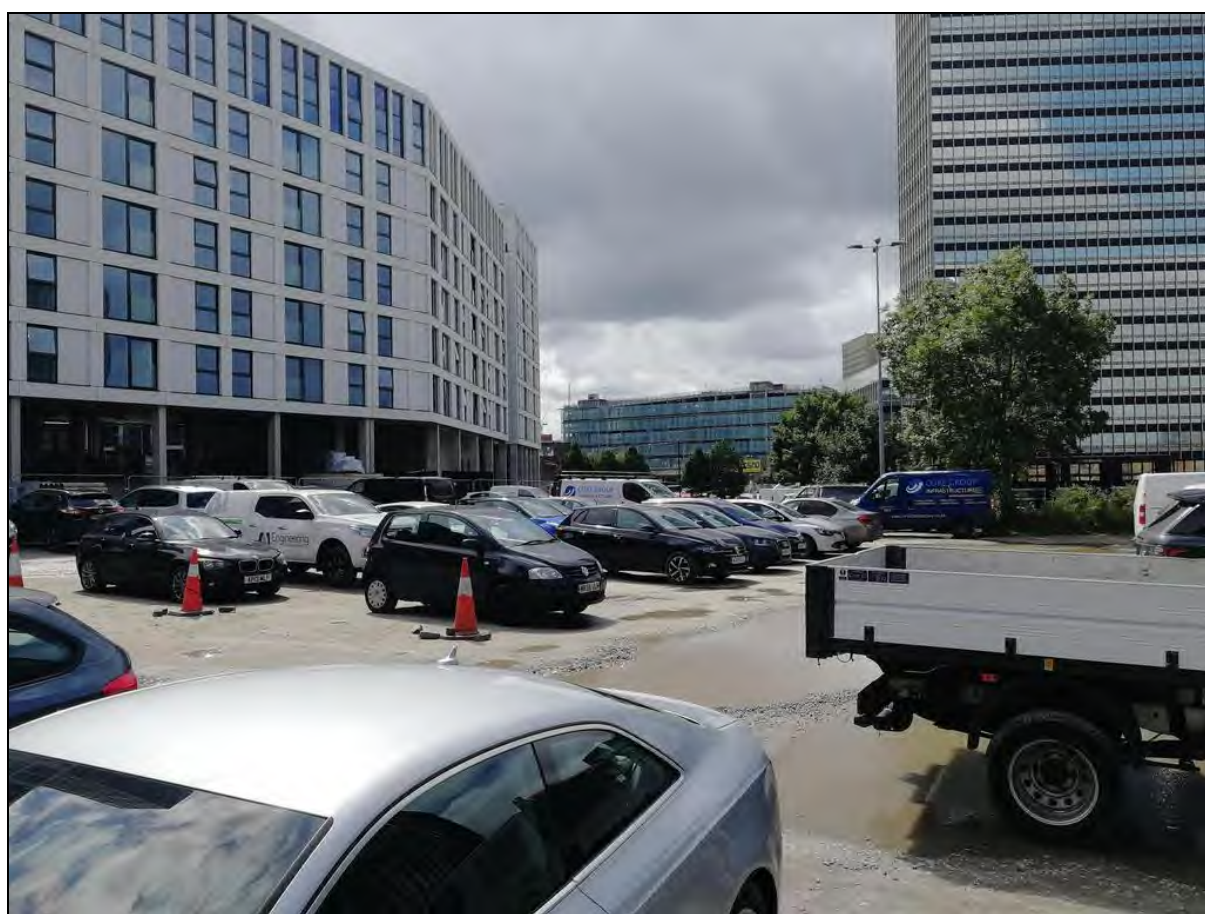


Plate 2: View looking south-west across the higher terrace that forms the eastern part of the Site, showing 1 Angel Square to the left and the CIS tower to the rear



Plate 3: View looking south-west across the lower terrace that forms the western part of the Site, showing the Co-Operative Group's Headquarter Building



Plate 4: View looking south across the lower terrace, showing the CIS Tower



Plate 5: View looking north across the lower terrace



Plate 6: View looking north-east across the lower terrace towards the upper terrace, showing 1 Angel Gardens

4. Historical Background

This section of the report is based on cartographic and documentary research, and 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. Key sites are summarized in the Gazetteer of Sites (Chapter 5).

Period		Date Range
Prehistoric	Palaeolithic	Pre-10000 BC
	Mesolithic	10000 – 3500 BC
	Neolithic	3500 – 2200 BC
	Bronze Age	2300 – 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 – AD 1750
Industrial Period		AD 1750 – 1914
Modern		Post- 1914

Table 1: Summary of British archaeological periods and date ranges

4.1 Prehistoric Period

4.1.1 Archaeological Evidence

The current understanding of human activity in the Manchester region during the prehistoric period is poor, although it is reasonable to suggest that the Castlefield area of the city may have been conducive for late prehistoric settlement on account of the natural topography, underlying geology and its location close to the confluence of the rivers Medlock and Irwell. Similarly, the area around Manchester Cathedral, close to the confluence of the rivers Irk and Irwell, provides a location which would have been favourable for early activity. However, the only known physical evidence for prehistoric activity in the vicinity of the Site is provided by the chance find of a Bronze Age stone implement (HER 408.1.0) reported to have been discovered at the junction of Todd Street and Corporation Street.

4.1.2 Archaeological Potential

The potential for buried archaeological remains deriving from prehistoric activity within the Site is considered to be low. The possibility of isolated artefacts should not be dismissed entirely, although it is considered very unlikely that artefacts will be found *in-situ* given the intensive development of the Site since the 18th century.

4.2 *Romano-British Period*

4.2.1 *Archaeological Evidence*

The first military occupation of Manchester was established during the governorship of Agricola (AD 77-84), and commenced with a five-acre wooden fort, known as *Mamucium* (Bruton 1909), located in the Castlefield area of Manchester, 1.9km south-west of the Site. During the 2nd century, the fort was developed in association with a substantial extramural settlement, or *vicus*, which expanded in both a northerly and easterly direction, and along the line of Chester Road to the south (Jones and Grealey 1974, 11). Roads from the fort linked Manchester with Ribchester to the north, Castleshaw and York to the north-east, Wigan to the north-west, Chester to the south and Buxton to the south-east (Gregory 2007). However, evidence for Roman activity in the vicinity of the Site is limited. Roman coins were discovered along the River Irk in 1899-1901 (HER 1393.1.0), when the river between Ducie Bridge and Scotland Bridge was diverted for the railway. 150m to the east of the Site a coin of Constantine I (AD 306-37) was discovered in Angel Street, together with a circular quernstone, believed to be Roman, in St Michael's Square, in 1904 (HER 1253.1.0).

4.2.2 *Archaeological Potential*

The potential for buried archaeological remains deriving from Romano-British activity within the Site is considered to be low. The possibility of isolated artefacts should not be dismissed entirely, although it is considered unlikely that artefacts will be found *in-situ* given the intensive development of the Site since the 18th century.

4.3 *Early Medieval Period*

4.3.1 *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).

In AD 919, the Anglo-Saxon king Edward the Elder established a fortified base, or burh, at Manchester, which was then part of Viking Northumbria. It has been suggested that the burh lay within the area around the cathedral, which had certainly become a new focus for settlement by the late 11th century, and the area occupied presently by Chetham's School is thought to have been the site of a castle founded by Manchester's Norman barons. This early settlement at the confluence of the Rivers Irwell and Irk seems to have been bounded on the landward side by Hanging Ditch, whose curving line ran between the two rivers, taking a line that was followed subsequently by Toad Lane, the forerunner of Todd Street and Corporation Street.

4.3.2 *Archaeological Potential*

The potential for buried archaeological remains deriving from Early Medieval activity within the Site is considered to be very low.

4.4. Medieval and Post-medieval periods

4.4.1 Archaeological Evidence

The Site lay on the north-eastern fringe of the medieval settlement, on the east side of Long Millgate. This was one of the town's longest and most populous streets, which extended along the south side of the River Irk to Manchester's manorial corn mill. Millgate is documented from the early 14th century, but the mill is referred to in documents dating to the first half of the 12th century. Long Millgate also led to Scotland Bridge over the River Irk, one of the principal routes into Manchester, and to Ashley Lane, another main route into the town from the north-east. Long Millgate was superseded in the 1850s when Corporation Street was extended from Withy Grove to Ducie Bridge.

Long Millgate is shown on the earliest known plan of Manchester, dating to c 1650, which shows a continuous line of properties along the east side of the street (Plate 7). This map also shows several properties along Miller Street and Shudehill. Miller's Lane, the forerunner of Miller Street, is documented from the 1580s, and may have originated as a convenient link between the manorial corn mill and the eastern approach to the town via Shudehill.

In 1621, Edward Mayes of Manchester bequeathed money for the purchase of land to be used for the benefit of the poor of the town. His trustees bought four acres on the south side of Miller's Lane in 1635, which were rented out and the profits distributed to the poor. The charity also owned a row of cottages on the north side of this land in which they housed 20 poor families. These almshouses are shown clearly on a map produced by Casson and Berry in 1741, which also shows the west side of Shudehill lined with buildings as far as the junction with Miller's Lane and buildings of the north side of Miller's Lane. However, most of the Site lies beyond the edge of the map, and is likely to have been fields.



Plate 7: Plan of Manchester dating to c 1650, with arrow marking approximate location of the Site

In 1731, a scheme was launched to provide Manchester with a new workhouse, and a bill to advance the scheme was submitted to Parliament, but was aborted due to disagreements among the townspeople. However, the lord of the manor had proceeded to erect part of the workhouse on Miller's Lane, which was earliest building of this type in Manchester. The original plan was for a set of buildings arranged around a quadrangle, but only one was actually completed. This measured 34 yards (31m) long, 6 yards (5.5m) wide inside, and was four storeys in height. The workhouse was short-lived, and later mapping annotates the building as more almshouses.

A flavour of the other types of buildings in the vicinity of the Site can be gained from an illustrated survey of 1753, which shows the lands bequeathed by William Hulme (Plate 8). This shows several different types of properties in the area, ranging from merchant's houses to tenements that were probably occupied by artisans with attic workshops.



Plate 8: Extract from a survey of the buildings and lands bequeathed by William Hulme, 1753

4.4.2 Archaeological Potential

The potential for buried archaeological remains from the medieval and post-medieval periods is considered to be low, reflecting the extent of redevelopment of the area that has been implemented since the late 18th century.

4.5 *Industrial period*

4.5.1 *Archaeological Evidence*

The onset of the rapid industrialisation centred on Manchester from the late 18th century resulted in a massive expansion of the town's population. The development of the Site at the end of the 18th century is captured on detailed plans produced by William Green in 1787-94 (Fig 2) and Charles Laurent in 1793. These maps show new streets to have been laid out across the area, and numerous buildings to have been erected. The new streets included Angel Street, which provided a link between Ashley Lane and Rochdale Road, and also afforded access to the church of St Michael and All Angels.

The church was built in 1788, and was coupled with a new burial ground that was consecrated in 1787. The church was originally planned as a 'carriage church', which wealthy Mancunians could drive to from the city. However, with the purchase of the land by the Overseers of the Poor of Manchester in 1786 for the burial ground, and the absorption of this area into the city, the church instead predominantly served the new working-class population in the area (Miller and Wild 2015). The burial ground comprised a mass burial pit for the poor, which has been estimated to contain 40,000 unmarked inhumations (Marsden 2014). The pit was full by 1816, after which this open area became notorious for activities such as cock-fighting and gambling. In the 1820s and 1830s, some areas of the former burial ground were dug up and sold for fertiliser to local farms. In order to prevent further illegal excavations, the area was flagged over in the 1850s and became known subsequently as St Michaels Flags (Hartwell 2001, 289).

A significant feature of the developing townscape in the late 18th century was Shudehill Mill (HA 01), which was erected in 1780-3 on the site of a former brick yard by Richard Arkwright and his financial partners, William Brocklehurst and John Whittenbury. Shudehill Mill was one of a number of early cotton factories that were built to house Arkwright's patented machinery for carding and spinning. It was one of the largest of the Arkwright mills, reflecting the importance of Manchester as a centre for textile goods. It was also the first purpose-built mill in Manchester to employ a steam engine and to have a mill chimney. The mill essentially signalled the viability of Manchester as a pre-eminent centre for cotton spinning, based on steam power, and stimulated the development of Shudehill in the late 18th century (Miller and Glithero 2015).

The mill was five storeys high, 9.1m wide and 68m long. As such, it was one of the largest of the Arkwright mills, reflecting the importance of Manchester as a centre of textile manufacture. It was probably the first purpose-built mill in Manchester, and the first in the town to employ a steam engine and to have a mill chimney. The original engine was of the atmospheric type and was used to raise water from a lower to an upper reservoir to supply the mill's waterwheel, which was 8ft (2.4m) wide and 30ft (9.1m) in diameter. It has been suggested that the engine was originally planned to power the mill directly, and that the waterwheel was only added when this proved a failure. However, the position of the mill on sloping ground implies that the upper and lower reservoirs were part of the initial design (HA 02). This was confirmed during the archaeological excavation of the site in 2015, which demonstrated that the internal waterwheel pit was a primary feature, indicating that the use of water power had been intended from the onset.

William Brocklehurst and John Whittenbury soon withdrew from the partnership and, in January 1784, Arkwright sold the mill to his son, Richard, who immediately formed a partnership with his brothers-in-law John and Samuel Simpson. The new owners invested in the site and, by 1786, another spinning block had been added to the mill complex, which was placed alongside Miller Street (HA 03). This building was slightly shorter than the original mill, measuring 171ft (52.12m) long, 30ft (9.14m) wide and five-storeys high. There is no evidence to suggest that this new mill was fitted with power immediately, and it seems likely that it may have housed hand-powered spinning machinery. In October 1786, however, Richard Arkwright Jnr sold his share in the mill for £20,640 15s 4d, leaving Shudehill Mill entirely in the hands of John and Samuel Simpson (Fitton 1989, 63).

In 1789, John and Samuel Simpson purchased from Arkwright the freehold lease of the land occupied by the Shudehill Mill complex, marking the termination of Arkwright's interest in the site. During this period, John and Samuel Simpson, together with the mill manager, John Barton, were in negotiation with Boulton and Watt of Birmingham for a steam engine to power their second mill block (HA 03). This culminated in September 1790 with the placing of an order for a 6hp double-acting 'sun and planet' engine with 14ins by 6ft cylinder. The engine was erected in January 1791, and signalled the implementation of power from a rotary steam engine at the Shudehill Mill complex. It seems that the Simpsons were also considering a replacement for the steam-assisted waterwheel that powered the original mill block (HA 01), and had apparently discussed this with Boulton and Watt.

The engine was installed later in 1792, and was apparently an urgent requirement by that date, as in April 1792 Peter Ewart was able to report that 'the old engine is giving way every day'. It is possible, however, that the engine was not put into operation until the following year, as a detailed design drawing of the sun and planet gearing for the engine that survives in the Boulton and Watt Archive is dated June 28 1793 (Miller and Glithero 2016). In 1799, the Simpsons returned to Boulton and Watt and placed an order for a 30hp double-acting engine steam engine. This appears to have been supplied in the same year as a replacement for the Simpson's 6hp engine that powered the second spinning block of 1786.

The main mill was originally almost surrounded by its extensive reservoir system (HA 02). Its larger reservoir ran across the full length of the western elevation and continued around the north end of the building to the eastern elevation. Laurent's map of 1793 shows that at the other end it joined with a smaller reservoir to the south-east of the mill. This second body of water was probably the higher reservoir which fed the waterwheel. It is absent from Green's survey of 1787-94 which instead shows one of the mill's ancillary buildings on this site. Presumably when the waterwheel went out of use in 1792-3, the upper reservoir was no longer required, while the lower reservoir was retained to supply the boilers and condensers.

The main factory was surrounded by other buildings, details of which are provided by a survey of Manchester's spinning mills produced in c 1822 (Plate 9). On its eastern side were an engine house and boilers, with a large square-section chimney lying further from the mill. On the same side of the building were a southern range, used as a mule factory, and a northern L-shaped range, which in c 1822 contained a smithy, joiner's shop and lumber rooms. The second factory block (HA 03) is shown as five-storeys high and c 60m long and 9m wide, with an engine house and boiler house to the rear; this became known subsequently as Mottershead's Mill.

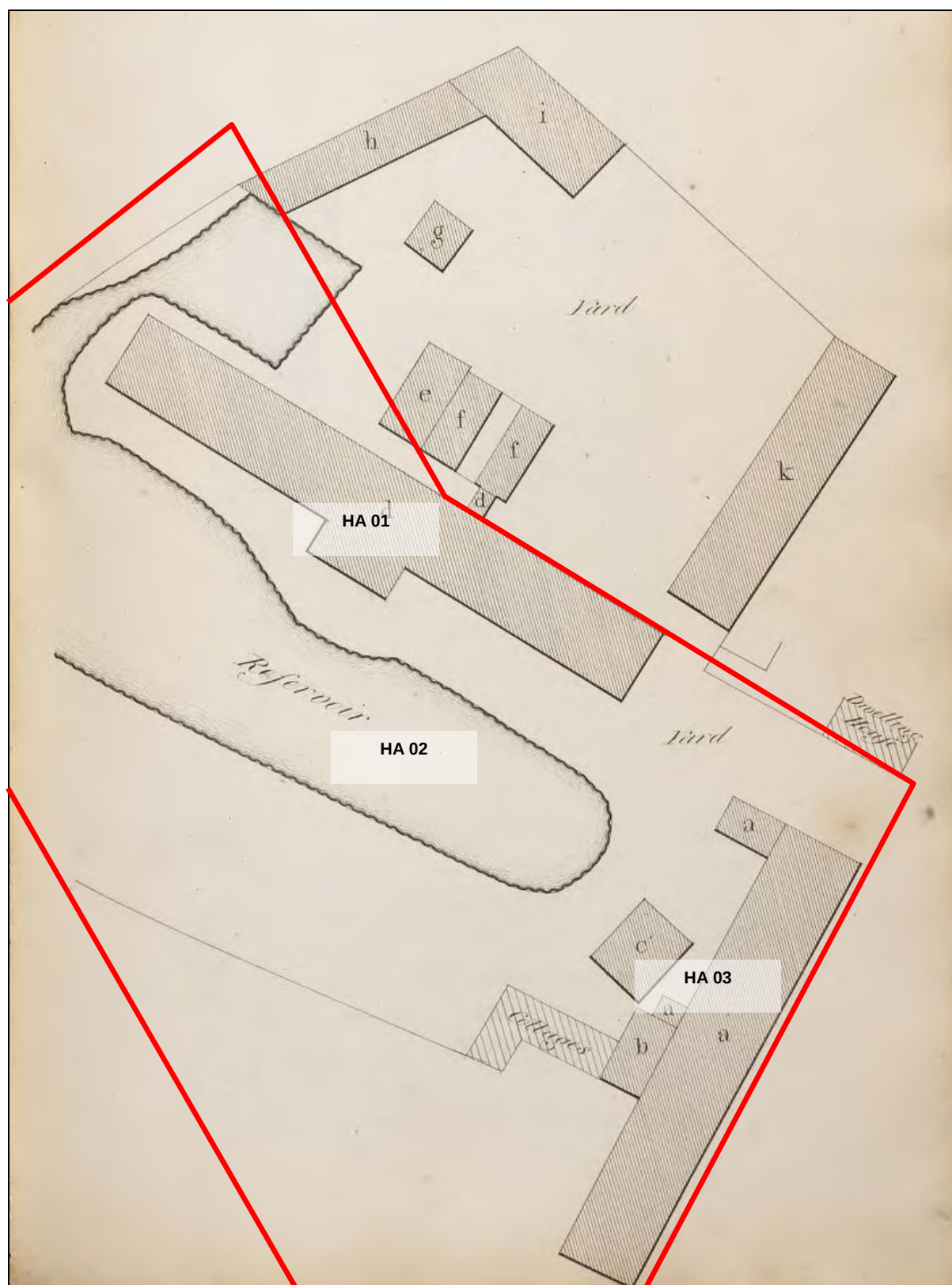


Plate 9: Site boundary superimposed on an extract from 'Plans of All the Cotton Spinning Mills in Manchester' of c 1822, showing Arkwright's Shudehill Mill (HA 01) and what became Mottershead's Mill (HA 03) annotated as components a-c. These are described as a five-storey factory with staircase and chimney (a), a two-storey engine house (b) and a single-storey boiler house (c)

J & R Simpson is listed in a trade directory for 1821-2 as cotton spinners on Miller Street (Pigot and Dean 1821, 146), although the firm advertised their Shudehill Mill for sale in the following year. Interestingly, the sale notice mentioned that the mill contained '18 drums of capital water-frames', each with 96 spindles (*Manchester Chronicle*, July 1822), even those these machines would have been antiquated by that date and superseded by spinning mules or throstles.

Shudehill Mill had been taken over by Richard Clogg and Edward Norris by 1824, when they are identified in a newspaper article describing a lightning strike during a powerful thunderstorm. The event was recorded in a newspaper article: 'the iron rod which surmounts a very large chimney in the centre of the yard of Messrs Clogg and Norris' factory in Miller Street, Shudehill, was struck by the lightning, and the electric fluid ran vividly down the chimney in the direction of the rod, and lost itself in the earth at the foot of the chimney...which is almost in the centre of the area formed by the wings of the immense building' (*Morning Post*, 7 September 1824).

Cotton spinning ceased at Shudehill Mill in the 1830s, and following a short period of use for warehousing, the building was destroyed almost entirely by a fire in 1854. The mill was rebuilt immediately to a slightly wider plan and with an additional storey, and part of the building was returned to cotton spinning in 1884. It remained in textile-related use until the early 20th century, when it was purchased by Baxendale & Co as part of their expanding hardware and ironmongery business (Plate 10).

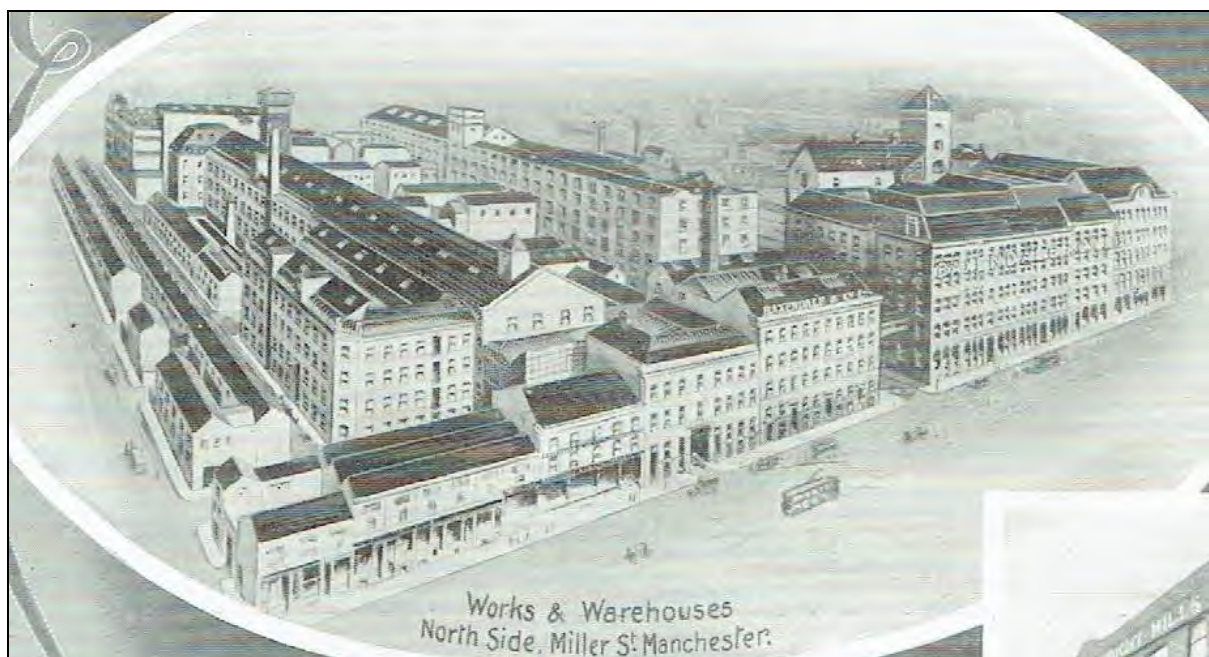


Plate 10: Shudehill Mill in the centre of Baxendale & Co's ironmongery complex, taken from their catalogue of 1910

In December 1940, however, the building sustained a direct hit during an aerial bombardment by the Luftwaffe. The site of the mill was cleared in the aftermath of the 'Manchester Blitz', and remained urban wasteland until it was put to use as a car park in the 1980s.

4.6 Development of the Site

4.6.1 Cartographic Evidence

The development of the study area may be traced reasonably well from the sequence of available historic mapping. The earliest reliable maps that show the Site at a reasonable scale are Charles Laurent's *Map of Manchester & Salford*, published in 1793, and William Green's survey published in 1794 (Plate 11; Fig 2). These show development along the south-western side of Angel Street, and properties occupying both sides of Miller Street. The map also shows 'Mr Simpson's Cotton Mill' (HA 01), which was built in 1780-3 by the renowned inventor and entrepreneur, Richard Arkwright. The principal source of power in the mill was a 9.1m diameter waterwheel, which was supplied with water via a steam-powered pumping engine from an arrangement of reservoirs (HA 02), which are depicted on Green's map (Fig 2). The footprint of the principal reservoir immediately to the north-west of main factory block, together with a second reservoir at the north-eastern end of the mill, lie within the Site.

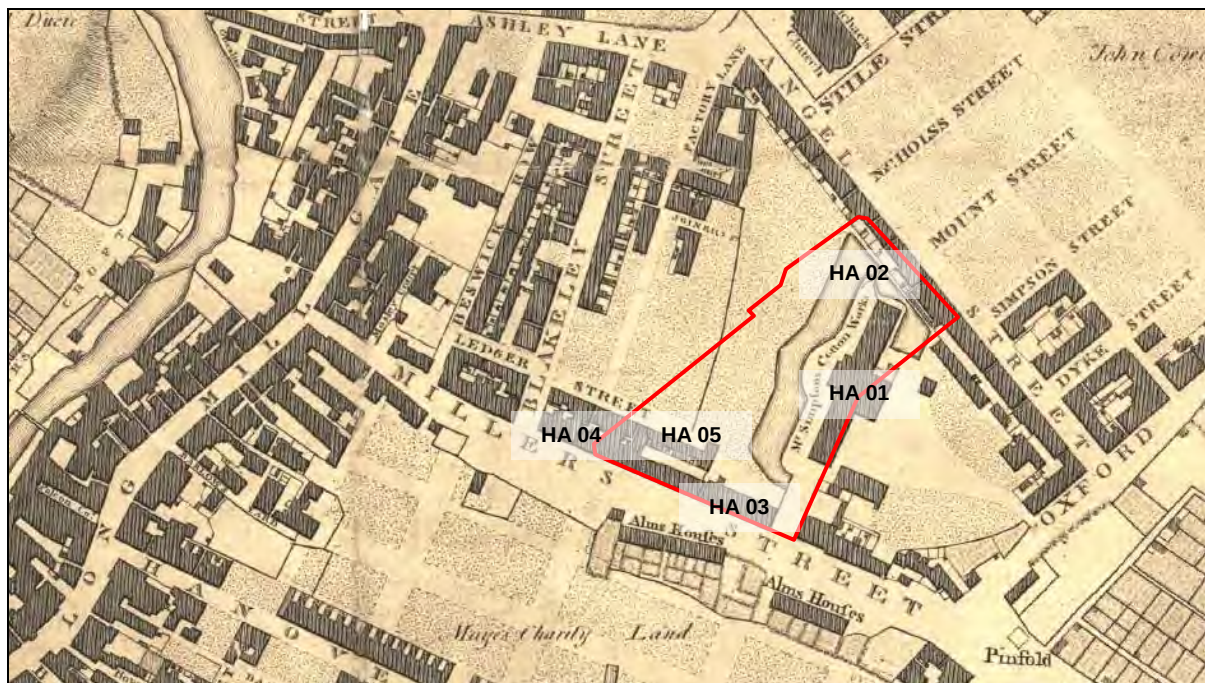


Plate 11: The Site boundary superimposed on an extract from William Green's map of 1794

Green's map depicts a linear range of buildings fronting onto Miller Street, forming the south-western edge of the Site. Much of this range comprised the second spinning block that had been added to the mill complex by John and Samuel Simpson by 1786 (HA 03). The north-western end of this range appears to have comprised commercial properties, which probably contained domestic accommodation on the upper floors (HA 04). Another range of buildings to the rear (HA 05) is also depicted by Green, and whilst it is uncertain whether they were intended as domestic or commercial/industrial premises, it is annotated on later mapping as a brewery.

Several maps of the area were produced during the first decade of the 19th century. Whilst all of these maps were published at a small scale, they show that further development at the corner of Miller Street and Rochdale Road. The footprint of the buildings within the Site is largely the same as that depicted by Green in 1794, and whilst the block to the rear of the Miller Street frontage (HA 05) is not marked clearly by Johnson, this is probably a reflection of the survey scale rather than evidence for demolition. This is reinforced by the detail shown on William Swire's plan of 1824, which does show the building. This survey also shows that a rope walk (HA 06) had been established to the west of the reservoir (Fig 3).

Bancks & Co's map of 1831 shows the buildings in more detail (Fig 4). The mill block fronting Miller Street (HA 03) appears to have been expanded, subsuming some of the properties to the north-west (HA 04). It is annotated as 'Mottershead's Mill', with a rectangular block to the rear perhaps representing the steam-power plant. The mill reservoir (HA 02) is shown to have been remodelled and expanded to the north, with a small part within the Site having been infilled.

The Ordnance Survey 60": 1 mile map of 1850 shows a similar layout of the extent of development as on Bancks & Co's 1831 map, but provides much more detail of the buildings (Fig 5). Mottershead's Mill appears to have been remodelled, and is annotated as a warehouse. The block to the north-west (HA 04) is shown to have comprised an intermittent row of double-depth properties with out shuts to the rear, whilst the block to the rear (HA 05) is annotated as a brewery. A similar building footprint is depicted on Joseph Adshead's map of 1850 (Plate 12) identifies all of the buildings in the Site as commercial premises.

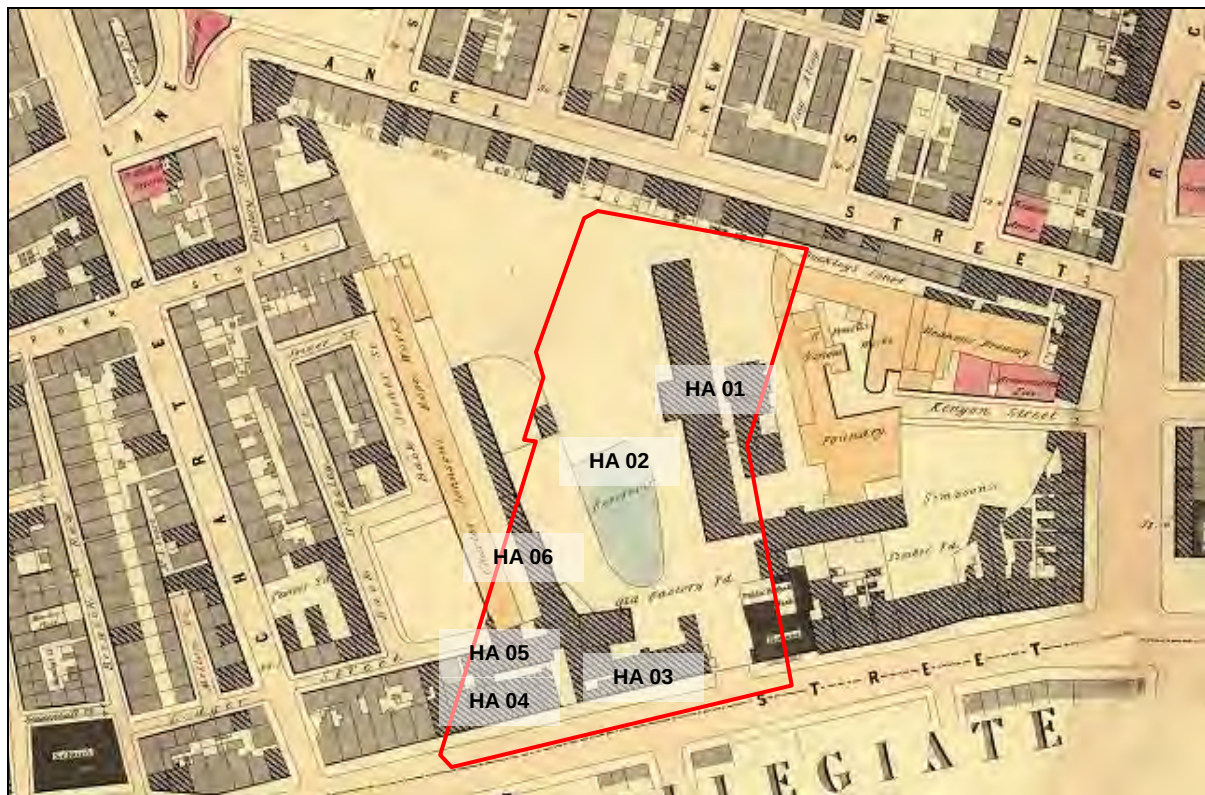


Plate 12: The Site boundary superimposed on an extract from Adshead's map of 1850

The next available edition of Ordnance Survey mapping was published at a scale of 1:500 in 1891 (Fig 6). This shows that much of the Site had been subject to redevelopment during the second half of the 19th century. In particular, Mottershead's Mill (HA 03), the brewery (HA 05), and most of the adjacent commercial properties (HA 04) had been replaced by larger warehouses the detail of which is provided by Goad's insurance plan of 1888. This shows the Albert Buildings, forming the south-western end of the block, to have comprised a four-storey warehouse with a basement. This abutted a three-storey glass warehouse, similarly with a basement, and a three-storey oil and colour warehouse. Elements of two of the 18th-century buildings appear to have remained extant. These were of three storeys along Miller Street, and of two storeys with a basement to the rear, and are shown by Goad to have been in use as stores.

The Ordnance Survey maps also show the reservoir (HA 02) that had served Arkwright's Mill to have been filled in, and a group of new buildings erected (HA 07). The detail provided by Goad's insurance plan shows that these were a mixture of one- and two-storey structures, which may have been used for stabling.

Subsequent editions of Ordnance Survey mapping show little change to the layout of the buildings within the Site until the mid-20th century. Extensive air raids took place across Manchester on the 22 and 23 December 1940, which were responsible for the destruction of Arkwright's Shudehill Mill. The fire records for 1939-40 (MCL/MI/37) were checked in order to confirm this, although the reports do not give street by street detail of the damage. The records stated that over the course of the December air raids there were over 700 fires in Manchester, which meant that the fire crews worked constantly for two-three days.

The Town and Country Planning Act of 1944 permitted Manchester Town Planning Committee to make compulsory purchases of areas it wished to redevelop. One area comprised '6.61 acres of land bounded by Miller Street, Rochdale Road, Angel Street, and Dantzic Street, of which 4.38 acres have been cleared. In addition, nearly half an acre has been cleared under the Housing Acts and only seven buildings remain on the site. The area has been zoned for general industrial development' (*Manchester Guardian*, 18 September 1946).

Despite this apparent aspiration for redeveloping the study area in the 1940s, it is evident that this did not take place, as the 1951-2 Ordnance Survey map shows the area as almost completely clear of buildings, and the 1966 Ordnance Survey map shows just a few warehouses within the study area, which eventually became a car park in the 1980s. The site has remained in use subsequently as a car park.

4.7 *Previous Archaeological Investigation*

A considerable amount of archaeological work has been undertaken across the Site and its immediate vicinity in recent years. One of the first archaeological investigations was carried in 2005, when Channel 4's Time Team excavated four evaluation trenches of varying dimensions across the footprint of Arkwright's Mill. This uncovered structural remains of the late 18th-century mill (HA 01), as well as the remains of the rebuilding following a devastating fire in 1854 (Wessex Archaeology 2006). The cellar of a late 18th-century house on Angel Street was also excavated. This had originally contained two rooms, each equipped with a fireplace. The cellar was sub-divided in the 19th century, providing two single-room dwellings which could therefore have been occupied by two families, and thus provided more rent (Wessex Archaeology 2006, 15-18; Nevell 2008, 143-4).

A large excavation within the immediate vicinity of the present Site was undertaken in 2009, beneath the footprint of the new Headquarters Building for the Co-operative Group. The remains of approximately 75 structures were identified, almost exclusively relating to domestic dwellings, with the majority dating from the late 18th and early 19th centuries. Four broad phases of activity were recognised, with the earliest structure appearing to represent the cellar of a mid-18th century town house (Miller and Wild 2015). Other houses mainly comprised two-up-and-two-down type artisans' dwellings, with top floor loomshops, and two-room cellars with independent access, which had probably been used as cellar dwellings. Evidence for the decline of the area was also observed, with various buildings being partitioned to facilitate an expansion of the local population, and also perhaps to maximise rent revenue. These larger dwellings were converted subsequently into notorious lodging houses, whilst the cellars continued to provide accommodation for the poorest families, which were frequently of Irish origin.

In 2012, further excavation was carried out adjacent and parallel to Angel Street in advance of road widening works (OA North 2013). The work complemented the previous large-scale excavation in 2009, with different plan-types identified on the Angel Street frontage, most notably 18th-century dwellings that included back extensions, a variant of the terraced house that only developed on a large scale in the second half of the following century. The remains of back-to-back cellar dwellings were also observed. Whilst their method of construction was similar to the earlier, higher-status buildings, the size and arrangement of the structures provided a fine example of the conditions that led to Angel Meadow gaining its infamous reputation. During this programme of works, a single long evaluation trench was excavated across the centre of the mill reservoir (HA 02). Whilst no physical remains of the 18th-century reservoir were encountered, the foundations of a late 19th-century building (HA 07) were uncovered.

Following the completion of the excavation, an archaeological watching brief was maintained during the road-widening works along the south side of Angel Street, and the west side of Rochdale Road (OA North 2013). Few remains of archaeological interest were exposed during this watching brief, which concluded that the remains of properties along the street frontage had been largely destroyed.

In 2014-15, the entire footprint of Richard Arkwright's Shudehill Mill (HA 01), including the engine and boiler houses, was subject to archaeological investigation, which culminated in the production of a comprehensive record of this important site (Miller and Glithero 2016).

5. Gazetteer of Sites

The following gazetteer provides a list of the non-designated heritage assets identified within the boundary of the Site. This has been compiled from the dataset gathered from previous archaeological investigations of the site, together with a study of the historical map sequence and information held by the Greater Manchester Historic Environment Record (HER).

Site Number	HA 01
Site Name	Arkwright's Shudehill Mill (Site of)
HER Number	9867.1.0
Site Type	Textile Mill
Period	18 th century
NGR	384390 398980
Source	Green's Map 1794; OS 1848; Miller and Glithero 2016
Description	Five-storey cotton mill built 1780-3 by Richard Arkwright and partners. It was one of Arkwright's larger cotton mills, erected shortly before his patent expired, and is a site of immense historical importance. Mapping from the 1790s onwards shows it as a substantial range, aligned roughly north/south, with a central projection on the west elevation. Powered initially by a waterwheel that was supplied with a constant source of water by an atmospheric steam-powered pumping engine that drew water from a system of reservoirs (HA 02). This rudimentary system was superseded in 1793 by a condensing steam engine supplied by Boulton & Watt which, in turn, was replaced by a more powerful model in 1818. The mill appears to have ceased being used for cotton spinning in the 1830s, and was used subsequently for warehousing purposes. The mill was badly damaged by fire in 1854 but was rebuilt subsequently, which involved widening the building on the west. The building was returned to use briefly as a cotton-spinning mill in the later 19 th century, before being taken over by Baxendale & Co, a firm of engineers and plumbers merchants, which occupied several premises in the Miller Street area during the late 19 th and early 20 th century. The building was destroyed during aerial bombing in December 1940.
Assessment	This important site of historic interest lies astride the boundary of the Site, but was subject to a programme of complete and detailed archaeological excavation in 2015. This provided a comprehensive record of all the buried remains of the entire building and its associated steam-power plant (which lies immediately beyond the Site boundary) prior to their removal. No archaeological remains survive <i>in-situ</i> .

Site Number	HA 02
Site Name	Arkwright's Shudehill Mill (Site of)
HER Number	9867.1.0
Site Type	Water-management features
Period	18 th century
NGR	384402 398928 (Upper Reservoir)
Source	OS 1848; OA North 2013
Description	A reservoir system, comprising a main reservoir running along the north-western side of Arkwright's Shudehill Mill, linked to a smaller reservoir against the north-eastern corner of the mill. A smaller reservoir lay originally to the south-east. Archaeological excavation in 2015 demonstrated that the original power system comprised an atmospheric steam engine that pumped water from the lower reservoir to provide a constant supply to an internal waterwheel. The lower reservoir had increased in size by c 1822, but between 1848 and 1888 was greatly reduced, and much of its site was used for new buildings. The small reservoir in the north-eastern corner may also have been infilled as early as 1850, and had been at least partly built upon by 1888. An archaeological evaluation trench placed across the centre of this reservoir in 2013 failed to yield any surviving physical remains, although the well-preserved brick foundations of later buildings (HA 07) were exposed (Plate 13). The means by which the reservoirs were supplied with water remains uncertain, although it is possible that it was fed via culverts that crossed the Site. The course and character of the culverts that connected the waterwheel pit inside the mill with the reservoir is similarly uncertain, as these lay beyond the area subject to archaeological excavation in 2015.



Plate 13: Remains of a late 19th-century building (HA 07) erected on the reservoir

Assessment	The reservoir lies within the Site. It formed a key component of Richard Arkwright's Shudehill Mill (HA 01), and is an important heritage asset. Any surviving remains would merit recording archaeologically, especially any physical evidence for the culverts that connected the reservoir with the waterwheel pit inside the mill.
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Site Number	HA 03
Site Name	Mottershead's Mill (Site of)
HER Number	-
Site Type	Industrial Building
Period	18 th century
NGR	384330 398950
Source	Green 1794
Description	Five-storey cotton mill aligned alongside Miller Street with, to the rear, a centrally placed engine house and a detached boiler house. The mill had been built by 1786, and was the first part of the Shudehill Mill complex to be fitted with a Boulton & Watt steam engine. By 1831, the mill was occupied separately as 'Mottershead's Cotton Mill'. By 1848 the eastern half of the building was used as a warehouse, while the western half seems to have been rebuilt as other premises. By 1888 the site had been redeveloped with basemented warehousing. This was probably destroyed by aerial bombing in December 1940, and the site was redeveloped again by the early 1960s.
Assessment	The footprint of the mill lies within the boundary of the Site. A review of the documentary sources suggests it likely that the original fabric of the building may have been destroyed during 19 th -century redevelopment of the site, whilst trial pits excavated in 2013 revealed a 20 th -century basement across part of the footprint of the former mill.

Site Number	HA 04
Site Name	Miller Street Shops
Site Type	Commercial Properties
Period	18 th century
NGR	384308 398957
Source	Green 1794; OS 1850; Adshead 1850
Description	A rectangular block of buildings shown on Green's map fronting onto the north-eastern side of Miller Street. Shown on Banks & Co's map of 1831 as double-depth houses with outshuts to the rear. Adshead's map of 1850 annotates the buildings as commercial premises. The Ordnance Survey map of 1850, however, depicts gaps in the row, suggesting that some had been demolished. The next edition of Ordnance Survey mapping shows most of these properties to have been replaced by warehouses, the detail of which is provided by Goad's insurance plan of 1888. This shows the Albert Buildings, forming the south-western end of the block, to have comprised a four-storey warehouse with a basement. This abutted a three-storey glass warehouse, similarly with a basement, and a three-storey oil and colour warehouse. Elements of two of the 18 th -century buildings appear to have remained extant in the western corner of the Site. These were of three storeys along Miller Street, and of two storeys with a basement to the rear, and are shown by Goad to have been in use as stores. Demolished by the mid-20 th century.
Assessment	The heritage asset lies within the boundary of the Site. It is probable that the remains of the most of the original properties were destroyed during 19 th -century redevelopment, although those at the north-western end of the block may have retained some historic fabric.

Site Number	HA 05
Site Name	Brewery (Site of)
Site Type	Industrial Building
Period	19 th century
NGR	384323 398962
Source	Green 1794; OS 1848
Description	A range of buildings shown on Green's map of 1794 situated to the rear of properties fronting Miller Street (HA 04). The Ordnance Survey map of 1848 annotates the building as a brewery. The site was redeveloped in the late 19 th century, when a warehouse was erected. This contained a basement, which is likely to have destroyed any remains of the brewery. The site had been redeveloped by the early 1960s.
Assessment	The heritage asset lies within the Site, although it is likely that the original fabric has been largely destroyed during 20 th -century redevelopment.

Site Number	HA 06
Site Name	Rope Works (Site of)
Site Type	Industrial Building
Period	19 th century
NGR	384330 399010
Source	OS 1848; Adshead 1850
Description	Elongated range built between 1818 and 1824. Named on Adshead's map of 1850 as 'Charles Johnson's Rope Works'. By 1888, the site was occupied by a wider three-storey building used as a hardware factory by Baxendale & Co. Archaeological evaluation suggests that the northern end of the works have been removed by later activity.
Assessment	The heritage asset straddles the Site boundary. However, it is probable that the remains of the works may have been destroyed during 19 th - and 20 th -century redevelopment of the site, as the rope walk will not have had any substantial foundations.

Site Number	HA 07
Site Name	Stable Block
HER Number	-
Site Type	Stables
Period	19 th century
NGR	384363 398976
Source	OS 1891 Town Plan
Description	A range of one- and two-storey structures that were erected in the second half of the 19 th century on the site of the infilled reservoir for Arkwright's Mill. Footprint of the buildings remains unchanged on subsequent editions of Ordnance Survey mapping, although all had been cleared by the mid-20 th century.
Assessment	The heritage asset lies within the boundary of the Site, although any buried remains that survive <i>in-situ</i> are likely to be fragmentary.

6. Significance of the Remains

6.1 The Policy Context of Heritage Assets

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

The updated NPPF (National Planning Policy Framework, February 2019) sets out the Secretary of State's policy on planning and includes a section on the conservation of the historic environment (including historic, archaeological, architectural and artistic heritage assets, NPPF paras 184-202), and its wider economic, environmental and social benefits. The NPPF places particular emphasis on assessing the development proposals in line with an up-to-date local plan. Consequently, Manchester's Core Strategy (adopted July 2012) was consulted as the key Development Plan Document in the Local Development Framework (LDF), with particular reference to Policy EN3: Heritage. In determining applications, local planning authorities must be able to understand the significance of any heritage assets affected by a proposed development in order to assess its impact. This enables the conservation of heritage assets in a manner suitable to their significance so that they can be enjoyed for their contribution to the quality of life of this and future generations, or else they can be recorded and advance understanding of the significance of any heritage assets to be lost in a manner proportionate to their importance and the impact, and to make this evidence publicly accessible.

6.2 Assessment Methodology and Significance Criteria

One 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*. These criteria have all been utilised in this assessment and are:

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

6.3 *Significance Assessment*

6.3.1 *Period*

The Site is considered significant in relation to the Industrial Period, primarily on account of it having been the site of one of Manchester's earliest and most important textile mill complexes. These included Manchester first steam-powered cotton mill, erected by Richard Arkwright in 1780-83 (HA **01**), and a second large spinning block that had been added to the complex by 1786 (HA **03**). Both of these were supplied with water for the steam-power plant by a system of reservoirs, the largest of which crossed the centre of the Site (HA **02**).

Other heritage assets within the Site include different elements of the late 18th- and early 19th-century industrial townscape, including a row of commercial properties along Miller Street (HA **04**), a small brewery (HA **05**) and a rope walk (HA **06**).

There is very little, or no potential for buried archaeological remains deriving from any pre-19th-century activity.

6.3.2 *Rarity*

It has been acknowledged for some time that the site of Arkwright's Shudehill Mill (HA **01**) has exceptional rarity value in terms of the pioneering application of steam power to textile manufacturing, a view that was borne out through a comprehensive archaeological excavation in 2015. One of the few elements of the mill that was not been fully investigated to date is the relationship between the mill and its attendant reservoirs, and specifically the position and character of the culverts that connected the reservoir with the base of the waterwheel pit inside the mill. Any physical remains of the culverts, together with surviving fabric of the reservoirs, would have a rarity value.

Any physical remains of the second spinning block (HA **03**) would also have a rarity value, as very few late 18th-century cotton mills in Manchester have been investigated archaeologically.

6.3.3 *Documentation*

The landscape history of the site has been recovered from the historic map base, the use of archival material such as maps, and previous historical research and archaeological work. More detail could be gleaned about the development and use of the Site through the examination of further documentary sources, but these are unlikely to alter significantly the archaeological and historical importance of the sites identified in this report.

6.3.4 *Group Value*

The group of assets, as identified through historic map regression, cover a small range of industrial site types, although the reservoir (HA **02**) and the second mill block (HA **03**) have a group value.

6.3.5 *Survival/Condition*

The site of Arkwright's Shudehill Mill (HA **01**) was subject to comprehensive archaeological excavation in 2015, which culminated in the complete removal of all the surviving foundations.

The site of attendant reservoirs (HA **02**) has also been subject to some archaeological investigation via trial trenching, although this did not reveal any structural remains. It is nevertheless possible that elements of the reservoirs do survive *in-situ*, albeit in a fragmentary condition.

The second spinning block (HA **03**), built alongside Miller Street in the mid-1780, was investigated via small trial pits in 2013. These concluded that the remains of the mill had been removed entirely by the redevelopment of the site in the 19th and 20th centuries, although the possibility that fragmentary elements survive *in-situ* cannot be dismissed.

In the light of the redevelopment of the Site in the later 19th and 20th centuries, it is unlikely that the foundations of the other heritage assets (HA **04**, HA **05** and HA **06**) will survive.

6.3.6 *Fragility/Vulnerability*

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

6.3.7 *Diversity*

The potential archaeological remains across the Site are not significant due to diversity.

6.3.8 *Potential*

There is some potential for buried remains deriving from the late 18th- and early 19th-century industrial use of the Site to survive, although it is probable that any such remains will, at best, be fragmentary.

There is no potential for any archaeological remains pre-dating the 18th century to survive on the Site.

6.4 *Significance*

6.4.1 *Significance of the buried remains within the Site*

It can be concluded from the information gained from the desk-based research that the Site as a whole is of some archaeological interest, as it has the potential to yield evidence of late 18th-century cotton mills and the water-management systems with their associated reservoirs.

Using the above criteria, and particularly rarity, surviving physical remains dating to the late 18th- and early 19th-century industrial use of the Site (HA **01**, HA **02** and HA **03**) are considered to be of potential regional or high local significance, depending upon the full extent of survival and condition. The other heritage assets identified during the desk-based research are considered to be of low local significance due to the likely damage imparted during redevelopment in the 19th and 20th centuries.

7. *Impact of the Development*

7.1 *Impact*

Delivery of the development proposals will necessitate considerable earth-moving works that have potential to damage or remove any archaeological remains that survive *in-situ*. The results obtained from the desk-based research have concluded that all physical remains of Richard Arkwright's Mill (HA **01**), which occupied the slightly higher ground that forms the eastern part of the Site, were removed completely during archaeological excavation in 2015. The impact of development on buried archaeological remains in this part of the Site is therefore considered to be negligible.

The lower terrace forming the western part of the Site has also been subject to some intrusive archaeological investigation, although this was limited to a single evaluation trench that was excavated across the centre of the former mill reservoir (HA **02**) in 2013 and a trial pit within the footprint of the second mill block that had been added to the Shudehill Mill complex by 1786 (HA **03**). Neither of these interventions revealed any late 18th-century historic fabric, although the substantial foundations of a later building (HA **07**) evidently survived intact. However, it is possible that fragmentary elements of the late 18th-century mill and the reservoir survive as below-ground remains, which may be damaged by the proposed construction works.

The other former buildings of potential archaeological interest within the site include a row of commercial properties (HA **04**), small brewery (HA **05**) and a rope walk (HA **06**). However, it is considered likely that the foundations of these buildings would have been less substantial than those for the mill, reservoir and late 19th-century building, and will probably have been removed completely during the redevelopment of the Site in the 19th and 20th centuries. The impact of development on these heritage assets is therefore considered to be negligible.

8. Further Investigation

8.1 Heritage Assets

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

None of the known below-ground archaeological remains identified within the Site are considered to be of national importance that would require preservation *in-situ*. However, there is some potential for non-designated heritage assets of lesser archaeological significance to survive, albeit on a fragmentary condition, which would merit preservation 'by record'.

8.2 Further Investigation

The requirement for any further archaeological investigation in advance of, or during, development works will be decided by the Greater Manchester Archaeological Advisory Service, in their capacity as archaeological advisor to Manchester City Council. It may be anticipated, however, that a limited programme of evaluation trenching coupled with a watching brief during ground-reduction works will be required to offset the harm of development. The evaluation trenching could be usefully targeted to locate the culvert between the former reservoir in the centre of the site and the waterwheel pit in Arkwright's Shudehill Mill of 1780-83, whilst the watching brief should be maintained during construction works within the footprint of the 18th-century mill adjacent to Miller Street.

Should any significant and extensive remains be encountered during the watching brief, further archaeological investigation may be appropriate to ensure an archival record is compiled prior to the ultimate loss of the remains.

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The archive comprises a historical map regression, photographs and historical research notes. This archive is currently held by the Centre for Applied Archaeology and a copy of this report will be forwarded to the client and deposited with the Greater Manchester Historic Environment Record.

Appendix 1: Figures

- Figure 1: Site location
- Figure 2: Site boundary superimposed on William Green's map of 1787-94
- Figure 3: Site boundary superimposed on William Swire's map of 1824
- Figure 4: Site boundary superimposed on Bancks & Co's map of 1831
- Figure 5: Site boundary superimposed on the Ordnance Survey Town Plan of 1850
- Figure 6: Site boundary superimposed on the Ordnance Survey Town Plan of 1891
- Figure 7: Site boundary superimposed on the Ordnance Survey 25": 1 mile map of 1908
- Figure 8: Site boundary superimposed on the Ordnance Survey 25": 1 mile map of 1933
- Figure 9: Site boundary superimposed on the Ordnance Survey 1:2500 map of 1963
- Figure 10: Site boundary superimposed on the Ordnance Survey map 1986
- Figure 11: Site boundary superimposed on modern mapping, showing areas of potential archaeological interest

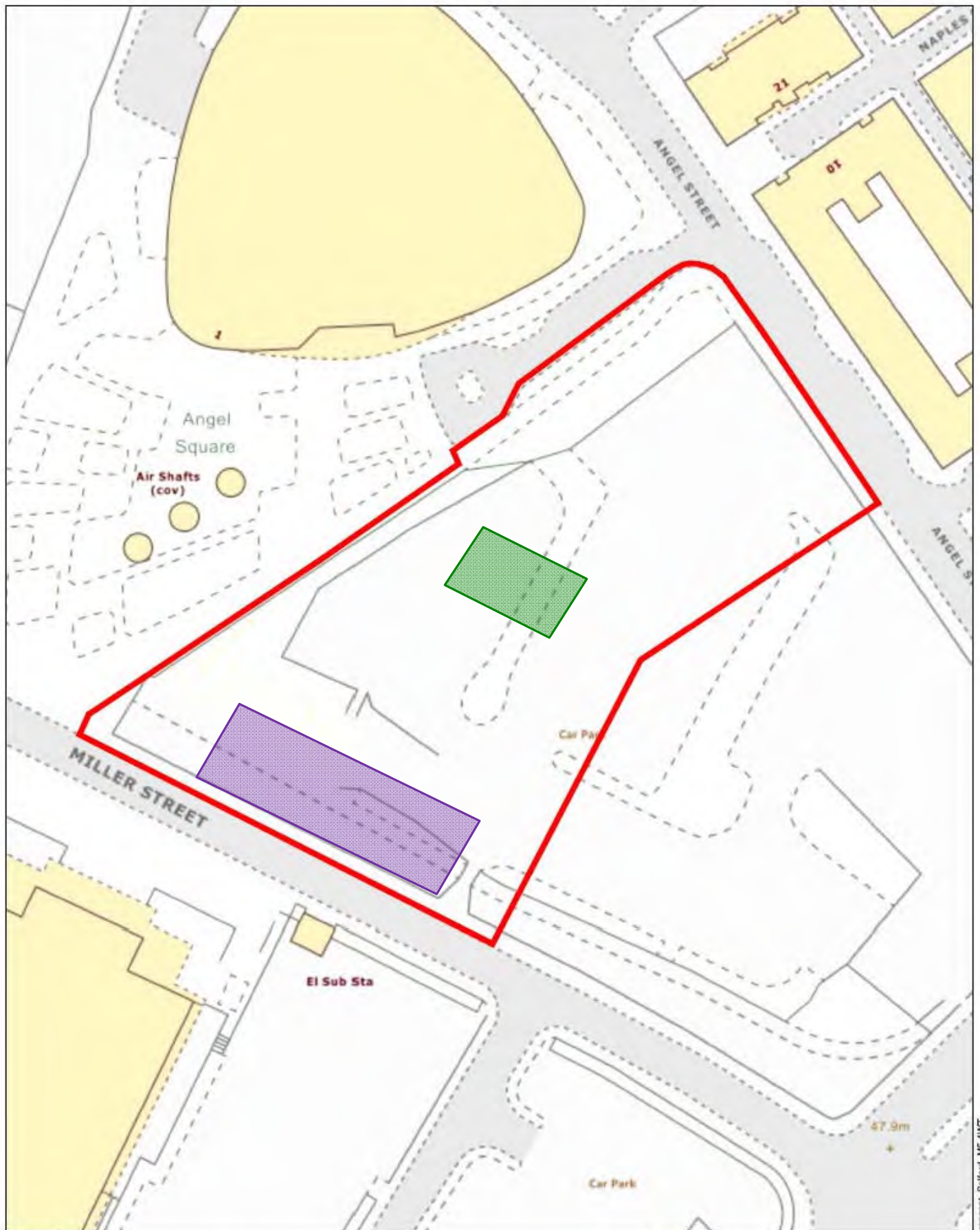


Figure 11:
Site Boundary Superimposed onto Modern Mapping



Key:

— Site Location

■ Areas of Archaeological Potential
Meriting Evaluation Trenching

■ Areas of Archaeological Potential
Meriting a Watching Brief



**SALFORD
ARCHAEOLOGY**

0 50 m

Scale at A4 1:1000

CONSULTANCY



DESK BASED ASSESMENTS



WATCHING BRIEF & EVALUATION



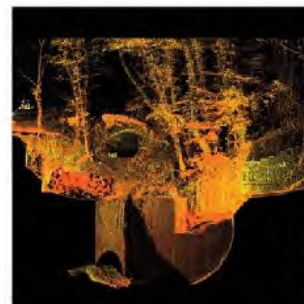
EXCAVATION



BUILDING SURVEY



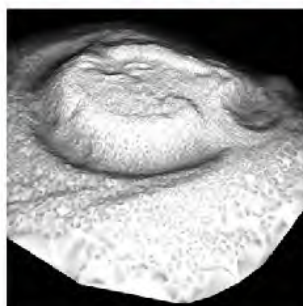
3D LASER SCANNING



COMMUNITY INVOLVEMENT



LANDSCAPE SURVEYS



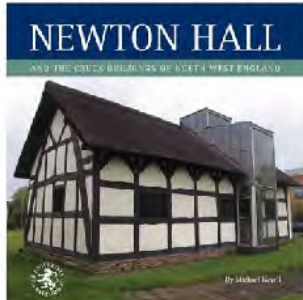
GEOPHYSICAL SURVEYS



WORKSHOPS & VOCATIONAL TRAINING



RESEARCH PUBLICATIONS



SEMINARS, DAYSCHOOLS CPD EVENTS

