

BRAZIL MILL, KNOTT MILL, MANCHESTER, Greater Manchester

Archaeological Watching Brief



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SUMMARY

In response to a request from Castlefield Estates, Oxford Archaeology North (OA North) undertook an archaeological watching brief during development work at the site of the former Brazil Mill in the Castlefield area of Manchester (centred at NGR SJ 383381 397472). The earth-moving works associated with the development were restricted to a small part of the site, enabling the watching brief to be carried out in a single day in January 2007.

A desk-based assessment of the site carried out in 2005 identified a potential for some buried remains of archaeological interest to survive on the site (OA North 2005). Whilst the study area lies within an area of known Roman activity, the greatest potential for archaeological remains was considered to be associated with an 18th-century water-powered corn mill. In particular, it was envisaged that the site may contain the buried remains of the mill's water-power system, such as a waterwheel pit and associated water-management features. Moreover, the mill had been converted to a steam-powered cotton factory by the mid-19th century, offering some potential for the surviving remains of an early steam-powered system. The cotton mill appeared from cartographic evidence to have been rebuilt completely during the mid-20th century, although the extent to which this had destroyed the historic fabric of the building was unknown.

Earth-moving works associated with the present development were restricted largely to the removal of the existing concrete floor slab and the excavation of a deep pit for the installation of a lift shaft. Archaeological monitoring of this work concluded that the 18th-century mill had been completely rebuilt during the mid-20th century, leaving virtually no historic fabric intact along the Deansgate frontage. The natural geology was exposed at the base of the excavated pit, some 2.4m below the modern ground surface, and was overlain by a thick deposit of demolition material dating from the mid-20th century. No archaeological features or artefacts were revealed. It remains possible that some buried structures of archaeological interest survive elsewhere on the site, particularly along the south-western edge adjacent to the river Medlock, although these will not be disturbed by the present development.

ACKNOWLEDGEMENTS

Oxford Archaeology North (OA North) would like to thank Sharon Barnes for commissioning the project on behalf of Castlefield Estates, and to Carl Houseby of SEP Ltd for logistical assistance. Thanks are also due to Norman Redhead of the Greater Manchester Archaeological Unit for considerable support and advice. Further thanks are expressed to the staff of the Local Studies Unit at Manchester Central Library for facilitating access to the sequence of historic maps, and to the staff of the Greater Manchester County Record Office.

The watching brief was carried out by Ian Miller, and the drawings were produced by Marie Rowland. Ian Miller compiled the report, and was also responsible for project management.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF PROJECT

- 1.1.1 In response to a request from Castlefield Estates, Oxford Archaeology North (OA North) undertook an archaeological watching brief during development work at the site of the former Brazil Mill, situated at Knott Mill, within the Castlefield area of Manchester (centred at NGR SJ 383381 397472). The watching brief followed on from a desk-based assessment of the site (OA North 2005), which concluded that the study area lies within a part of Manchester that is of considerable archaeological interest. In particular, the site of the Roman fort lies a short distance to the west, offering some potential for Roman remains to survive. The greatest archaeological potential, however, was considered to be associated with the 18th-century use of the site as a corn mill, which is presumed to have been water-powered, and its subsequent remodelling as a steam-powered textile factory.
- 1.1.2 In order to secure archaeological interests, Manchester City Planning Department requested that an archaeological watching brief monitored any earth-moving works within the scheme area. This was intended to record any archaeological remains that were exposed as part of the groundworks, and compile a mitigation record in advance of their ultimate destruction.

2. METHODOLOGY

2.1 WATCHING BRIEF

2.1.1 A programme of field observation recorded the location, extent, and character of all surviving archaeological features and deposits within the proposed ground disturbance. The work comprised observations during the excavation for the works, which comprised a single trench that was excavated to house a lift shaft and the removal of a concrete floor slab that had been laid during the mid-20th century. All excavation work was carried out using a mechanical excavator fitted with a toothless ditching bucket, which was operated under close archaeological supervision. Any subsoil horizons exposed during the course of the groundworks were systematically examined, and all archaeological features and horizons were recorded on OA North *pro-forma* recording sheets.

3. BACKGROUND

3.1 Introduction

3.1.1 The following section provides an outline of the natural setting of the study area, its location both physically and relative to other districts within the city, and provides a chronological account of the development of Brazil Mill. A more detailed history of the site is presented in the desk-based assessment (OA North 2005).

3.2 LOCATION

3.2.1 The site of the former Brazil Mill is situated in the Castlefield area of Manchester, centred at NGR SJ 383381 397472 (Fig 1). It comprises a block of land bounded by Knott Mill Bridge on Deansgate and Commercial Street to the north-west and north-east respectively. The south-eastern edge of the study area is bounded by a modern development, known as Riverside Mews, whilst the river Medlock forms the south-western edge. During the first half of the 19th century, Brazil Mill incorporated the site of Riverside Mews as an integral part of the cotton-spinning complex.

3.3 TOPOGRAPHY AND GEOLOGY

- 3.3.1 The study area lies on the eastern bank of the river Medlock (Fig 2), although the natural topography of the area has been masked largely by urban development. The site lies at a height of c28m above Ordnance Datum, whilst land to the north and west rises slightly to the 30m contour, which probably reflects the trend of the natural topography.
- 3.3.2 The solid geology of the area consists of Bunter Sandstone of the Permo-Triassic. This sandstone is exposed to a depth in excess of 2m in the bank of the Rochdale Canal, a short distance to the north of Brazil Mill. The overlying drift comprises glacial sands and gravels and late glacial flood gravels (Countryside Commission 1998).

3.4 HISTORICAL BACKGROUND TO CASTLEFIELD AND KNOTT MILL

3.4.1 Prehistoric Period: the current understanding of any activity in Manchester during the prehistoric period is very poor, although it is reasonable to suggest that the Castlefield area may have been conducive for late prehistoric settlement on account of the natural topography and its riverside location. However, physical indications for any such settlement are, at best, fragmentary and arguably the best evidence was yielded from a recent archaeological excavation that was targeted on a plot of land adjacent to Liverpool Road. During the course of this work, two Mesolithic flints, one Neolithic/Bronze Age waste flake, and a single fragment of late Bronze Age/Iron Age pottery were recovered, although none were found in securely stratified deposits

- (UMAU 2002). In addition to these artefacts, the Greater Manchester SMR includes four sites of prehistoric date in the area between Castle Street and Tomlin Street, situated to the north of the present study area.
- 3.4.2 *Roman Period:* in contrast to the earlier period, there is considerable evidence for activity in the area during the Roman period. This was focused on the Roman fort that was established in Castlefield during the late 1st century. The original fort comprised a turf rampart and timber gates, and, covering an area of *c*1.2ha, was of a size compatible with holding a 480 man infantry unit. The fort was rebuilt to similar dimensions in stone *c*AD 200 (Bryant *et al* 1986).
- 3.4.3 The fort was supported by a substantial extramural settlement, or *vicus*, that developed in both a northerly direction and along the line of Chester Road to the south (Grealey 1974, 11). It seems that this settlement originated largely during the early 2nd century, and incorporated numerous buildings and a concentration of iron-working hearths or furnaces. Much of the current understanding of the Roman *vicus* in Manchester is derived from the analysed results obtained from three major excavations, which have all focused on the area to the north of the fort: excavations on the southern side of Liverpool Road, centred on the former White Lion Street in 1972 (Grealey 1974), excavations on Tonman Street (Jones and Reynolds 1978), and an excavation between Liverpool Road and Rice Street (UMAU 2002). In addition, recent excavations at Beetham Tower concluded that Deansgate is the route of a Roman road that was lined with Roman buildings (N Redhead pers comm).
- 3.4.4 The excavations undertaken in 1972 and 1978 revealed extensive evidence for Roman buildings, representing several successive phases of occupation commencing during the late 1st century and continuing into the 3rd century. In total, the remains of 13 buildings were identified during the excavations in 1972, whilst the investigations at Tonman Street revealed another 15 (GMAU and UMAU 2003). These results were enhanced considerably by the conclusions drawn from excavations between Liverpool Road and Rice Street, which provided evidence for building plot divisions, small-scale agriculture, and possible leather preparation (UMAU 2002). It was concluded that this site lay close to the periphery of the *vicus* on the north side of the fort.
- 3.4.5 Physical evidence for the Roman settlement to the south of the fort is fragmentary, although it is believed to have incorporated a bath house on the north bank of the river Medlock, which was discovered during the 1770s, and a temple of Mithras. Evidence for the latter was provided by structural remains that were reportedly unearthed during construction work in 1821 on the south side of the river Medlock (Whatton 1821, 257).
- 3.4.6 The extent of the cemetery associated with the Roman settlement in Manchester is not well understood, although it is probable that burials will have flanked the roads on their approach to the fort. Funerary remains have been discovered near the eastern boundary of Castlefield (Grealey 1974, 17), and Whitaker reported two urns having been found on the south bank of the river Medlock (1773, 59-60). Whitaker also noted a log coffin and bones that had been discovered in the same area. Similarly, Corbett's map of 1850 notes that when Pioneer Quay was excavated in 1849, 'many graves and relics' were

- uncovered, including 'a cylindrical rock-cut grave' (GMAU and UMAU 2003). A wooden coffin set in a grave lined with tiles was also discovered in 1832 at a location which Charles Roeder later described as 'evidently near Great Jackson Street, close by the Roman road to Chester, where many other Roman sepulchral stones have been secured' (Roeder 1899, 109).
- 3.4.7 *Medieval Period:* there is very little archaeological evidence in the region as a whole that represents the period between the end of the Roman occupation and the Norman Conquest. It is therefore unsurprising that the archaeological evidence for any activity in the vicinity of Castlefield for the early medieval period is scant.
- 3.4.8 Post-Conquest Manchester was established around the manor house and parish church of St Mary. In 1223, the right to hold an annual fair was obtained, and the town was important enough to be granted a charter in 1301 (Kidd 1993, 14). However, the vicinity of Castlefield remained almost wholly undeveloped until the 18th century; the only known activity in the area during the late medieval period was focused upon a mill at Knott Mill (GMAU 1993). The earliest reference to this mill dates from 1509, when a licence was given for the mill dam; it has been suggested that the mill, and subsequently this part of Manchester, derived its name from the miller (Farrer and Brownbill 1911, 178). The site of the mill is thought to have been incorporated into, or built upon, by the Duke's Warehouse (UMAU 1998), and should not be confused with the mill that occupied the present study area.
- 3.4.9 *Post-Medieval and Industrial Period:* 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 great centre of the factory-based cotton manufacturing industry (Baines 1835). This process of industrial development was facilitated greatly by the introduction of canals, which provided the first efficient means of transporting bulk loads of goods. The first true industrial canal in Britain was that built by the Duke of Bridgewater, which was completed from Worsley to Manchester in 1764. The Manchester terminus of the canal was at Knott Mill, a short distance to the west of the present study area, whilst the bend of the river Medlock to the south of the study area was adapted as the final length of the canal (Sillitoe 1988).
- 3.4.10 During the construction of the canal, a channel was cut from the river Medlock to allow water to flow through the industrial complex at Knott Mill via a mill leat. A secondary channel, directed through a brick-built culvert system, was cut to supply water to the power features and unloading dock at the Grocers' Warehouse. As the Medlock is fed by the Pennines, and was subject to rapid and heavy flooding, this channel was fitted subsequently with an overflow tunnel that was constructed adjacent to the site of Brazil Mill. This tunnel is believed to have been built in 1838 (Tomlinson 1961, 139).

3.4.11 By this period, development had begun to encroach on the study area. An early stage in this development is depicted on William Green's *Map of Manchester and Salford*, surveyed between 1787 and 1794, which shows the main elements of the existing street plan laid out on former fields of the area south of the river Medlock. This map also depicts a medium-sized rectangular building within the study area, situated on the eastern bank of the river

Medlock. The building identified clearly as a corn mill, whilst Green's and, provides no indications as to the power source used, it is likely that the mill was driven by a waterwheel. As no part of the building overhangs the river Medlock, it seems probable that such waterwheel any located internal to the building. However, Green's map provides no indication of any watermanagement features, such as a mill dam, weir or mill races, and the possibility that the mill was actually steam-powered should therefore not be discounted entirely.

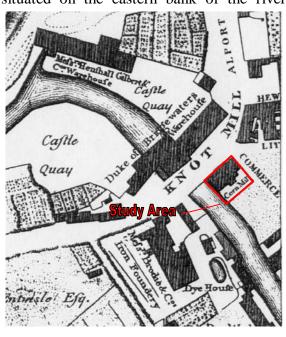


Plate 1: Extract from Green's map of 1794

3.4.12 Whilst precise details are lacking, there is some evidence to suggest that the corn mill had been converted for use as a textile mill by 1809, when Joseph Dunkerley is listed in a trade directory as a cotton-spinner at Knott Mill (Dean and Dean 1809, 56). The detail shown upon Pigot's map of Manchester, published in 1821, implies the mill to have been remodelled and expanded, with two main ranges forming a L-shaped block along the Knot Mill Bridge and Commercial Street frontages. It is tempting to suggest that this expansion

included the installation of steampower plant, although evidence is lacking. Bancks and Co's Map of Manchester and Salford, published in 1831, provides a more detailed survey of the site. The site is identified as 'Lloyd's Cotton Mill', confirming the entries listed in contemporary trade directories (eg Pigot 1832). By this date, Brazil Mill formed one of a small group of cotton mills clustered into the small area bounded by Knott Mill Bridge, the Rochdale Canal, City Road, and the river Medlock.

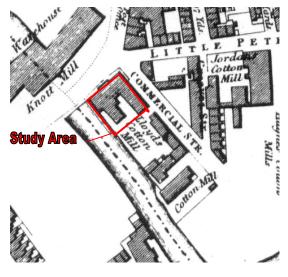


Plate 2: Extract from Bancks & Co's map of 1832

- 3.4.13 By 1865, it seems that the mill complex had fragmented into multiple occupancy, as indicated by entries in a trade directory for that year (Slater 1865, 42). This lists ten different firms as being based at 2, Commercial Street. Some of these included textile-based trades, such as smallware manufacturers, but also included an umbrella manufacturer, a wheelwright, a machine maker, and a screw bolt maker.
- 3.4.14 The Ordnance Survey map of 1909 indicates the extent of the buildings on the site to have contracted; much of the range along Commercial Street to the south of the entrance appears to have been demolished. A further episode of remodelling is evident from the detail on the 1932 revision of Ordnance Survey mapping, whilst the Ordnance Survey 1:1250 map of 1965 shows extensive modifications to the building fronting Knott Mill Bridge. The corner appears to have been chamfered, and the narrow projection along much of the front of the building appears to have been removed. This implies that the building currently occupying the study area was erected between 1948 and 1965, although its plan conformed to the earlier buildings.

4. RESULTS OF THE WATCHING BRIEF

4.1 Introduction

4.1.1 An archaeological watching brief was maintained during the excavation of a lift shaft pit within the footprint of the former mill (Fig 3). The watching brief also allowed for a close inspection of the ground immediately beneath the concrete floor slab that had formed the internal surface within the former mill.

4.2 THE LIFT SHAFT PIT

- 4.2.1 The installation of a lift system as part of the new development necessitated the mechanical excavation of a single shaft pit. The pit was located within the footprint of the former mill building that fronted onto Knott Mill Bridge (Plate 3). A 2m by 2m shaft is required for the lift shaft, although the excavated pit measured 4.5m by 3.2m to facilitate the removal of 20th-century concrete piles. The pit was excavated to a maximum depth of 3.10m. The area immediately to the south-east, which has the greatest potential for archaeological remains, was not subject to any earth-moving works other than the removal of the existing concrete floor slab (Plate 4). This area lay at a lower level than the rest of the site, reflecting 20th-century redevelopment (Plate 5).
- 4.2.2 A mixed deposit of sand and gravel was exposed at the base of the excavated pit, some 2.4m below the modern ground surface, and clearly represented the natural geology. This was overlain by a thick deposit of demolition material, which seemingly represented a single episode of redevelopment (Plate 6). The deposit contained some material of 20th-century origin, such as synthetic floor coverings, suggesting that it represented the major programme of rebuilding attributed to the period between 1932 and 1965 (3.4.14 above). No finds were recovered from the excavation.
- 4.2.3 A short section of the internal face of the former mill's north-western elevation was exposed during the excavation of the lift shaft pit. This wall was composed of dark grey clinker bricks, set in a cement mortar, typical of a 20th-century date (Plate 7). The wall incorporated internal buttresses at intervals of 4m, and the entire structure appeared to have been set on a concrete cill foundation. The base of the wall was situated 1.90m below the modern street level, although the complete absence of any internal floor implied that the building had not contained a basement.
- 4.2.4 Removal of the concrete floor slab associated with the mid-20th-century building similarly exposed demolition material across the northern part of the site. A series of concrete piles was also exposed, and were clearly associated with the 20th-century building (Plate 8).

5. CONCLUSION

- 5.1 The archaeological watching brief concluded that none of the earth-moving works associated with the redevelopment of Brazil Mill had an impact on any buried archaeological resource of the site. Ground disturbance was limited to the excavation of a single deep pit, which was cut through demolition material dating to the mid-20th century. No archaeological features of significance were encountered, although the identification of the north-western wall of the 20th-century mill has provided a better understanding of the late development of the site.
- 5.2 It remains possible that some buried structures of archaeological interest survive elsewhere on the site, particularly along the south-western edge adjacent to the river Medlock, although these will not be disturbed by the present development.

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7. ILLUSTRATIONS

FIG	UR	ES

Figure 1: Location map

Figure 2: Position of the lift shaft pit, superimposed upon the Ordnance Survey

1:2500 map, 1965

Figure 3: Position of the excavated pit, superimposed upon the Ordnance Survey

1:2500 map, 1965

PLATES

Plate 1: Extract from Green's map of 1794

Plate 2: Extract from Bancks & Co's map of 1832

Plate 3: General view looking south-east across the site, showing the position

of the lift shaft pit in the foreground

Plate 4: General view looking south-west across the site

Plate 5: View looking west across the lift shaft pit, showing the concrete piles

dating to the mid-20th century

Plate 6: The lift shaft pit during excavation, showing 20th-century demolition

material

Plate 7: The internal elevation of the former mill's north-western wall

Plate 8: One of the 20th-century concrete piles

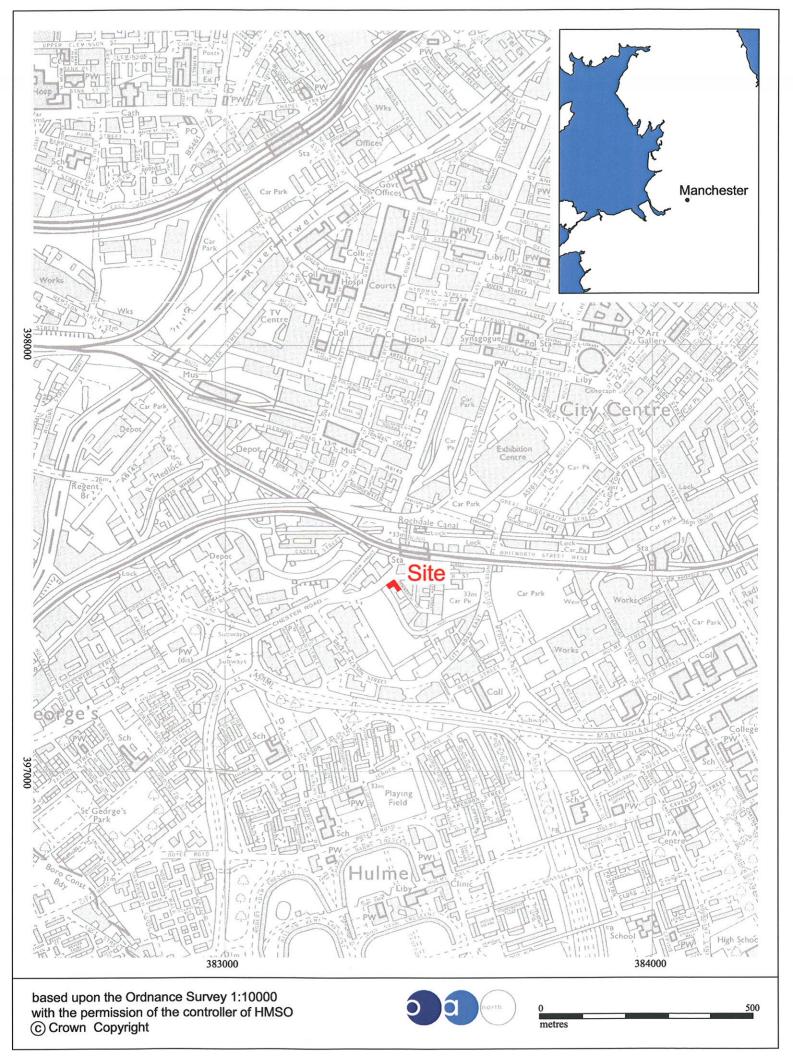


Figure 1: Location Map

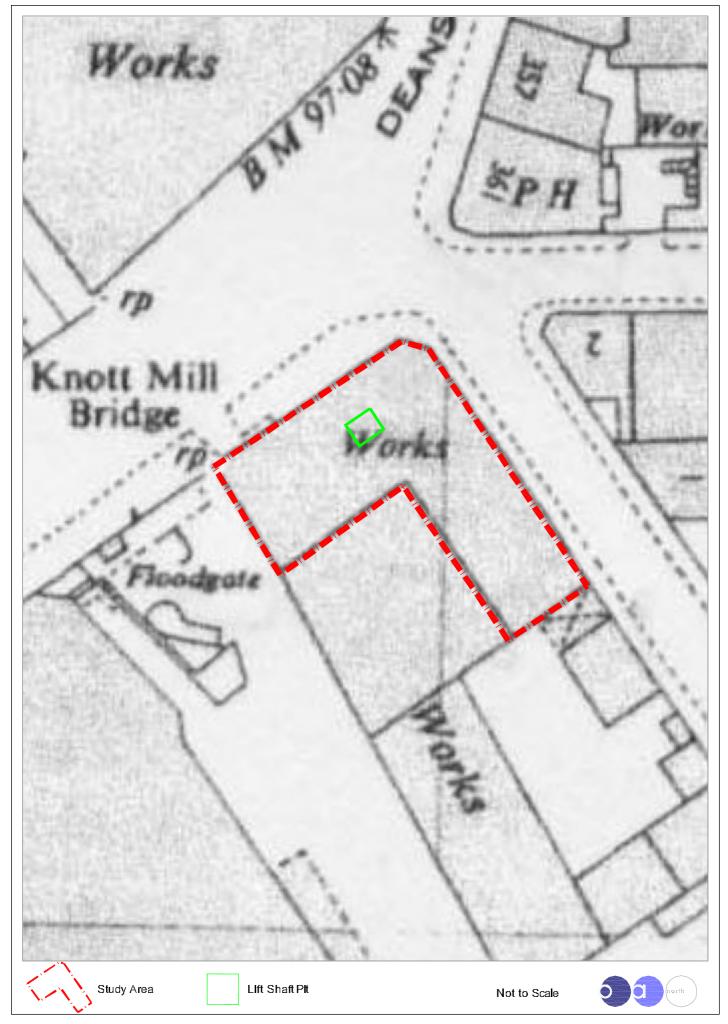


Figure 2: Position of the lift shaft pit, superimposed upon the Ordnance Survey 1:2500 map, 1965

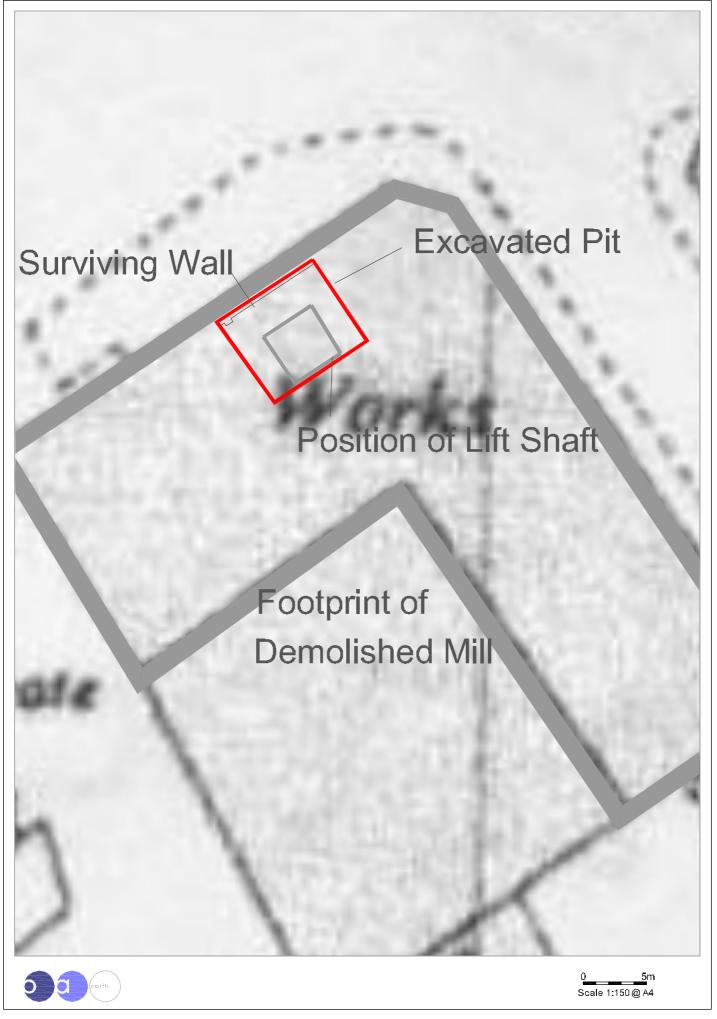


Figure 3: Position of the excavated pit, superimposed upon the Ordnance Survey 1:2500 map, 1965



Plate 3: General view looking south-east across the site, showing the position of the lift shaft pit in the foreground



Plate 4: General view looking south-west across the site



Plate 5: View looking west across the lift shaft pit, showing the concrete piles dating to the mid-20th century



Plate 6: The lift shaft pit during excavation, showing 20th-century demolition material



Plate 7: The internal elevation of the former mill's north-western wall



Plate 8: One of the 20th-century concrete piles