



EAST LANCASHIRE PAPER MILL, RADCLIFFE, Greater Manchester

Archaeological Desk-Based Assessment



Oxford Archaeology North

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Prepared by: Kathryn Blythe
Position: Project Supervisor
Date: May 2004

Checked by: Ian Miller Signed.....
Position: Senior Project Manager
Date: June 2004

Approved by: Alan Lupton Signed.....
Position: Operations Manager
Date: June 2004

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Oxford Archaeology North

Storey Institute
Meeting House Lane
Lancaster
LA1 1TF
t: (0044) 01524 848666
f: (0044) 01524 848606

w: www.oxfordarch.co.uk
e: info@oxfordarch.co.uk

© Oxford Archaeological Unit Ltd 2004

Janus House
Osney Mead
Oxford
OX2 0EA
t: (0044) 01865 263800
f: (0044) 01865 793496

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SUMMARY

In response to a request from Libero Architects, acting on behalf of P&F Properties Ltd, Oxford Archaeology North (OA North) undertook an archaeological desk-based assessment of the East Lancashire Paper Mill, Radcliffe, Greater Manchester (centred on SD 7915 0735). The assessment was required to inform the planning process in advance of the redevelopment of the area, and was compiled during March and April 2004.

The assessment examined the relevant archive sources, including maps, plans and journals, as well as referring to the Greater Manchester Sites and Monuments Record (SMR). In total, 26 sites of archaeological interest were identified within a 1km radius of the East Lancashire Paper Mill, although the proposed work will only impact upon the mill and any earlier remains that may survive beneath the footprint of the extant buildings.

The paper mill is not considered to be of national importance, and therefore does not merit preservation *in situ*. It may, however, be of high local or regional significance, and a rapid photographic survey of the standing buildings in advance of demolition should be considered as an appropriate mitigation recording strategy. In addition, there are potentially sub-surface remains of regional significance, which would require preservation by record should they be directly affected by redevelopment. These include elements of a prehistoric settlement, a section of a Roman road, and a calico printing works. The recommended form of response in these instances is, initially, archaeological evaluation by trial trenching.

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The desk-based assessment was undertaken by Kathryn Blythe, and the illustrations were prepared by Emma Carter. The report was edited by Ian Miller, who was also responsible for project management.

The project was funded by Libero Architects.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF PROJECT

- 1.1.1 In March 2004, Oxford Archaeology North (OA North) was requested by Libero Architects, acting on behalf of P&F Properties Ltd, to undertake a desk-based assessment of the former East Lancashire Paper Mill in Radcliffe. The work was required to inform the future redevelopment of the site; the details of the redevelopment have yet to be finalised, although the demolition of the extant buildings is anticipated.

1.2 SITE LOCATION, TOPOGRAPHY AND GEOLOGY

- 1.2.1 The study area (centred on SD 7915 0735) is situated within the town of Radcliffe, which is located some 4km to the south of Bury, and 10km north-north-west of Manchester (Fig 1). Radcliffe lies within the Manchester Pennine fringe, a transitional zone between the open moorlands of the Dark Peak and the Millstone Grit uplands of the Southern Pennines and the densely populated urban conurbation of Manchester (Countryside Commission 1998, 121). The area owes much of its landscape character to the pronounced landform with deeply incised steep valley sides and localised woodlands (*op cit*, 122).
- 1.2.2 The East Lancashire Paper Mill is situated towards the eastern edge of modern-day Radcliffe, and west of the town's historic core, which is represented by Radcliffe Tower and the church of St. Mary and St. Bartholomew. The mill occupies an area on the north bank of the river Irwell, some 3km downstream from its confluence with the river Roch.
- 1.2.3 The underlying drift geology of the area comprises sands and gravels overlying Carboniferous Coal Measures (British Geological Survey of England and Wales). The solid geology consists of weak sandstones and mudstones (Clinton and Higgs 1997).

2. METHODOLOGY

2.1 DESK-BASED ASSESSMENT

2.1.1 The assessment consisted of a desk-based study and a site inspection. The desk-based element was compiled from a combination of cartographic, photographic, secondary and primary archive sources. Detailed study was focused upon the site occupied currently by the East Lancashire Paper Mill, whilst land within c1km was studied in more general terms. Information relating to the study area was obtained from:

- the Greater Manchester Sites and Monuments Record (SMR);
- Lancashire County Record Office (Preston);
- Greater Manchester County Record Office (Manchester);
- Bury Archive Service;
- Various libraries including Manchester Central, Bury, Lancaster, Radcliffe, and Oxford Archaeology North's offices.

2.1.2 A gazetteer of sites of archaeological interest that lie within the study area is presented in *Appendix 1*, and their relative positions are marked on Figure 9. The gazetteer entries have been compiled principally from data within the Greater Manchester SMR database.

2.2 VISUAL INSPECTION SURVEY

2.2.1 The aim of the site inspection was to relate the findings of the desk-based study to the existing land-use, and to recover evidence not available from the desk-based sources. The site inspection was undertaken during June 2004.

2.3 ARCHIVE

2.3.1 A full archive has been produced to a professional standard in accordance with current United Kingdom Institute for Conservation (UKIC 1990) and English Heritage guidelines (English Heritage 1991). The project archive represents the collation and indexing of all the data and material gathered during the course of the project. The deposition of a properly ordered and indexed project archive in an appropriate repository is considered an essential and integral element of all archaeological projects by the IFA in that organisation's code of conduct.

2.3.2 The paper and digital archive will be deposited with the appropriate Country Record Office on completion of the project, and two copies of the report will be deposited with the Greater Manchester SMR in Manchester.

3. BACKGROUND

3.1 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

- 3.1.1 **Introduction:** a summary historical and archaeological background of Radcliffe has been compiled in order to place the study area into a wider context.
- 3.1.2 **Prehistory:** Palaeolithic and Mesolithic activity in the area is recorded mainly from the uplands above the Irwell valley (Nevell and Redhead 1999). Upland areas in the region tended to be occupied in the summer months by hunter-gatherers, and more sheltered lowland areas in the winter. This pattern is reflected by evidence for camps which may have been used on a seasonal basis. One such camp has been found on the E's in Radcliffe, where artefacts of Palaeolithic and Mesolithic date have been recovered.
- 3.1.3 The E's is a level plain of mud flats overlying sand and gravels situated north of the river Irwell and to the west of the confluence between the rivers Roch and Irwell. The commercial extraction of aggregates from the area in 1945 revealed wooden structures and flint artefacts. Eight circles of posts in a double row were found overlain by organic material such as brushwood, hazelnuts and pinecones, and sealed by clay. Unfortunately, all but one of the circles were removed by machine before they were subject to archaeological recording, and the artefacts have since been largely lost.
- 3.1.4 Archaeological excavations at the site began in 1949, when further evidence for wooden structures was obtained. A large and significant assemblage of flint implements and a cast-flanged bronze axe was also recovered (Spencer 1951, 197 *et seq*). Excavation work took place periodically until 1961, and finds dating to the Mesolithic, Neolithic, Bronze Age and Roman periods were all recovered (*ibid*). Timbers found during the 1950 excavation were interpreted as a possible Bronze Age platform and causeway of stakes, wattling and brushwood (*ibid*). In addition, excavations behind the cemetery in Radcliffe in 1951 uncovered a disk Barrow, although there were no associated inhumations (Sunderland 1995).
- 3.1.5 The continuity of occupation on the site through these early periods that is suggested by the artefact assemblage is rarely found in the North West.
- 3.1.6 **Roman:** the main Roman road between the forts at Manchester and Ribchester crossed through Radcliffe. The line of the road to the south of Radcliffe is thought to be represented in the modern landscape by Bury New Road (Margary 1957, 102). This was a turnpike road dating from 1755 when an Act of Parliament was passed to allow the improvement of the Manchester to Bury road. Margary argued that the Roman Road crossed the Irwell in Radcliffe at a point some 150 yards to the west of the ruined Radcliffe Tower (*ibid*), which places it approximately in the area of the East Lancashire Paper Mill. This is supported by Sunderland in his history of Radcliffe: '*The route (of the Roman road) was by way of (approximately) Higher Lane in Whitefield, by Dales Lane, plunging down to and crossing the Irwell and the E's through what is*

now the East Lancashire Paper Mill, up Croft Lane, crossing Cross Lane and to cross the later-built Manchester-Bolton-Bury canal (Sunderland 1995, 11).

- 3.1.7 An alternative route of the Roman road, however, has been postulated by both Barton (1973) and Farrer and Brownbill (1908), who claim that it was on the line of the present day Blackburn Street, and crossed the river Irwell at what is now Radcliffe Bridge.
- 3.1.8 The remains of the Roman road in the area have been excavated by the Radcliffe Archaeological and Historical Society (RAHS) and Bury Archaeology Group (BAG). At Starling, to the north of Radcliffe, the road was found to be approximately 7m wide plus drainage ditches, and consisted of *'pebbles laid on split flagstones'* (Sunderland 1995, 11).
- 3.1.9 Additionally, Taylor (1904, 138-39) argued that *'the Romans had a camp or small station'* on the line of the road at Radcliffe. The recovery of several sherds of Roman pottery from the E's adds weight to this postulation (Spencer 1951, 197), although firm evidence is lacking.
- 3.1.10 **Medieval:** Radcliffe is listed in the Domesday Book as *'Radeclive'*, a manor held by Edward the Confessor. It was part of the Salford Hundred, and was one of only four places from the Hundred to be mentioned in the Domesday Book. The main landholder at this time was Roger de Poitou (Farrer and Brownbill, 1908). Radcliffe remained part of the crown until it was given to Ranulf, Earl of Chester, during the reign of Stephen (1135-1154), when it became part of the Mersey Fee. According to Barton (1973, 225-27), the de Radcliffe family has been associated with the town since the mid-12th century.
- 3.1.11 During this period, Radcliffe was probably a small hamlet. The church of St. Mary and St. Bartholomew (SMR 9450.1.0 – GM10590) is listed as one of the earliest buildings in Radcliffe by Farrer and Brownbill (1908, 63): *'The oldest details of the building are the piers supporting the chancel arch, which are of 13th century date, but it is possible that the four angles of the nave may belong to an older church dating from the 12th century.'*
- 3.1.12 The original date of the Radcliffe Tower (SMR 354.1.0 – GM520), which lies to the west of the church, is uncertain. It is mentioned in 1358 through Richard Radcliffe of Radcliffe Tower (SMR), and was rebuilt in 1403 when James de Radcliffe received the King's permission to rebuild the manor house (Barton 1973, 226). Limited archaeological excavation of the site in 1979-80 demonstrated the hall and tower to be contained within a ditched enclosure (Tyson 1980).
- 3.1.13 In 1561 Radcliffe was purchased by Richard Assheton, Lord of Middleton. It was of sufficient significance to be depicted upon the earliest map of the area, surveyed by Christopher Saxton and published in 1577. Radcliffe remained in the ownership of the Assheton's until 1765, when the estate was divided between the two daughters of Sir Ralph Assheton. One of the daughters, Eleanor, married Sir Thomas Egerton of Heaton, Lord Grey de Wilton. The town then became part of the Lord of Wilton's estates (Farrer and Brownbill 1908).

- 3.1.14 **Post-medieval:** the region emerged as a centre of the woollen industry during the later Middle Ages, but many firms converted to cotton manufacture during the later 18th century. In 1773, Bury was ‘*endowed with a new staple trade*’ in the form of a calico printing works that was established by Robert Peel (Williams and Farnie 1992, 42-43). Radcliffe similarly developed as an industrial centre; during the early 19th century Baines noted the parish of Radcliffe to comprise 589 families, of which 403 were engaged in ‘*trade, manufactures or handicraft*’ (1825, 688). Another contemporary description of Radcliffe, compiled in 1833 (MCL 942.72Ra10), claimed that the area was a ‘*highly fit station for bleaching works and cotton mills, and extensive manufactories were erected in the last century which still continue to flourish with redoubled activity employing nearly all the population*’. This was due partly to its proximity to Bury and to Manchester, and the transport link provided by the Manchester to Bolton Canal, which was extended to Bury in 1797 (McNeil and Nevell, 2000).
- 3.1.15 A slightly later description of Radcliffe (Butterworth 1841, 115-16) highlighted Radcliffe’s association with the cotton industry, with reference to cotton bleaching, calico printing, weaving and spinning. However, Radcliffe did not attain its peak capacity in cotton spinning until 1914, although it grew faster in spindlage between 1884 and 1917 than any other cotton-spinning town except for Farnworth (Williams and Farnie 1992, 42-43).
- 3.1.16 The paper-making industry was not introduced to Radcliffe until 1860, when the East Lancashire Paper Mill was established. Other paper mills were erected subsequently; Wild’s Paper Mill was established in 1863, and in 1908 the Radcliffe Paper Mill Co was established.
- 3.1.17 **The Paper Industry:** in order to examine the East Lancashire Paper Mill in its wider context, a brief history of the paper industry is presented below.
- 3.1.18 Paper replaced parchment or vellum during the Middle Ages, as the demand for books increased with the invention of printing. The popularity of correspondence, and book and journal publications meant that this was an ever expanding industry. The first paper mill known in Britain was established in Hertford in 1495, although the first paper mill in Lancashire, erected at Cark in Furness, was not in production until 1617 (Ashmore 1969, 138). The first mill on the river Irwell was opened at Lever in 1674 by the Crompton family, who became one of the chief paper-makers in the region between the 17th and early 19th centuries (*ibid*).
- 3.1.19 By the end of the 18th century there were 25 mills in the North West, and by the late 19th century Bury was recognised as one of the main centres of paper-making (Ashmore 1982). This was partially a reflection of the close links between the cotton, bleaching and paper-making industries that were established during the late 18th and 19th centuries. These industries shared resources (coal and water), and were dependant on each other: cotton rags provided the raw material for paper production, and bleach for cotton and paper.

- 3.1.20 Another major stimulus to the expansion of the industry during the 19th century was the abolition of stamp duty on paper in 1860. By 1880, there were ten paper mills situated in or above Radcliffe (Hindle 1969, 6). A further boost was provided by the opening of the Manchester Ship Canal at the end of the 19th century, which facilitated the importation of wood pulp from Scandinavia and North America (Bracegirdle 1973, 121).
- 3.1.21 The earliest paper mills were not large concerns, and paper was made on a small scale from waste rags, which were converted into pulp and passed through a screen to form sheets. These were then pressed and hung to dry. It was usual practice for only one or two vats for beating the rags into pulp to be used, but mills gradually grew in size as the demand for paper increased. The beating in the early mills utilised large wooden stamps powered by water, but by the end of the 18th century these were replaced by a mechanical beater whereby the rags were beaten by a roll fitted with iron knives. The pulp was then laid over a mould of brass wire and pressed to form the individual sheets. During the 19th century, Crompton invented, patented and introduced a new method of drying and finishing paper by means of heated rollers (Wolstenholme 2000, 32). Crompton's invention of a continuous drying process by means of heated rollers was a crucial step towards the production of the large rolls of paper used in modern high-speed printing (Hunter 1978).
- 3.1.22 The initial wave of paper production in small mills using rags and water powered machinery reached its height in 1821, when the number of paper mills in the country was 564 (Trinder 1982). Ashmore estimated that by 1830 50% of the paper made in Britain was made by machine, and by 1860 this had grown to 95%. Some of the pioneers of paper-making machinery were from the Bury area. Thomas Wrigley, for instance, emerged as a leading figure in the industry, and patented many innovative improvements to paper-making machinery at Bridge Hall Mills during the 1830s (Coleman 1958). The increased mechanisation of the process led to the further growth of the paper-making industry, and the associated engineering firms that manufactured the machinery.
- 3.1.23 After 1850, the use of cotton rags as a raw material for paper was superseded by wood pulp, and from the 1860s onwards esparto grass imported from North Africa was also used in the process (Grindon 1882).
- 3.1.24 The growth of the paper-making industry in Lancashire during the late 19th century may be demonstrated by employment figures, which are summarised in the table below.

Year	Women	Men
1881	1487	2670
1891	1597	3305
1901	1314	4354

Source: Farrer and Brownbill 1908, 407-8

- 3.1.25 The number of paper mills in the area also allowed for the expansion of industries linked to paper production, such as paper staining and printing works. Much of this is associated with the town of Darwen, to the north-west

of Radcliffe, which emerged as one of the key centres for wallpaper manufacture (*ibid*). During the second half of the 20th century, however, the number of paper mills in the area declined; by 1968, the only mills in Radcliffe were the East Lancashire, Wilds, Bibby and Baron, and Radcliffe Paper Mill (Hindle 1969), and by 1993 this figure had reduced to two.

- 3.1.26 ***The East Lancashire Paper Mill:*** the paper mill was built on the site of a former calico printing works and a barracks, as shown on the tithe map of 1841. The earliest references to the calico printing works date to 1825, and are provided in commercial trades directories by Baines (3.1.14 above) and Pigot and Dean (1825, 450). These sources indicate the works to have been owned by the firm of Horrox and Sons. The Radcliffe works do not appear in earlier trades directories, although that published by Dean and Co in 1804 lists John Horrox, calico printer at Harrison's Court, Manchester.
- 3.1.27 A sketch of Radcliffe in 1830 (MCL 942.72Ra10) shows the calico printing works, and the accompanying notes refer to it as '*Messers Hutchinsons, late Horroxes*', and state that it was powered by a steam engine. This indicates the ownership of the works to have changed hands between 1825 and 1830. It appears that the calico printing works ceased production during the late 1850s, as it is not listed in a trades directory of 1858 or subsequently.
- 3.1.28 The East Lancashire Paper Mill was founded in 1860, and was built to the north of the calico printing works upon a green field site owned by Lord Wilton. James Hutchinson, presumably the same person who had operated the calico printing works, occupied the paper mill. The layout of the mill complex, including the former calico works, is depicted on an estate plan of 1860 (Fig 2). During the initial years, the East Lancashire Paper Mill concentrated upon the production of newsprint and lower grade paper (ELPM 1960).
- 3.1.29 A valuation list for Radcliffe in 1864 documents all the property belonging to the East Lancashire Paper Mill, at cites its location in '*Spring View*'.

Description of property	No. of storeys	Description of property	No. of storeys
Filters and pipes	-	Rag Engine House	1
Settling reservoirs	-	Bleach House no. 1	1
Guage House	1	Bleach House no. 2	1
Rag Warehouse	2	Bleach House no. 3	1
Gangway	1	Bleach and Engine House	1
Store room	2	Devil Room	3
Gate room	1	Economiser House	1
Waiting room	1	Economiser Boiler House	1
Offices and committee rooms	2	Mechanics shop	2
Making up room	2	Smithy	1
Machine House	1	New Stable	2
Beating Engine House	2	Engine Power Chimney	-

A number of houses, cottages and a '*Beer House*' are also listed for Spring View. Three of these properties are listed as having cellars, although there is no mention of cellars for the buildings comprising the mill complex.

- 3.1.30 An adequate water supply was essential to the process of making good paper. This is explained by the East Lancashire Paper Mill Co Ltd in their 1960

publication: ‘the first management wisely secured water rights over a very large area. Under succeeding administrations the water storage capacity of the mill was extended, and in 1904 the construction of a big reservoir with a capacity of 25 million gallons completed a total storage capacity of 50 million gallons.’

- 3.1.31 In 1897 Charles Seddon became the chairman of the company, and remained so until 1939. At the time of Seddon’s appointment, the paper mill was powered by a total of 31 steam engines - the last of these was disposed of in 1929 (ELPM 1962). Seddon enacted a number of improvements to the mill, including the updating of the six paper machines and 11 steam boilers in 1937. In 1948, a 4,500Kw water turbine was installed, and in 1956 a new boiler plant was erected. (*ibid*). This comprised four John Thompson ‘betatype’ water tube boilers. Other modifications enacted during the second half of the 20th century included the erection of a new machine house, offices, laboratory, waste store and new equipment, which resulted in a comprehensive remodelling of the mill complex. Seddon also changed the output of the mill from newsprint and cheaper papers to quality papers, which probably contributed to the success and longevity of the mill.
- 3.1.32 During both the first and the second world wars part of the mill was partially turned over to armaments. In the second world war the mill took on the paper production of nine mills in the area which had to shut down at this time due to lack of raw material. The East Lancashire Paper Mill Co Ltd changed their raw material from esparto grass and wood pulp to straw, which could be home grown. This led to the founding of The Straw Pulp Manufacturing Company Ltd immediately after the war by the East Lancashire Paper Mill Co Ltd, and The Wallpaper Manufacturers’ Ltd. This company was established at the Mount Sion Works, situated two miles downstream from the East Lancashire Paper Mill.
- 3.1.33 The prosperity of the mill led to their building recreational facilities for their workers in Radcliffe including tennis courts and a bowling green, both of which appear on the 1929 Ordnance Survey map. By 1937, a cricket field and a pavilion had been erected on the premises, both of which appear on the 1937 Ordnance Survey map.
- 3.1.34 The recent history of the mill is well documented by the *Bury Times* with increased stories of problems and job cuts through the 1980s and 1990s. Nevertheless, the mill continued to expand during the 1990s, and was described as ‘prosperous’ (Hudson 1994, 42). In 1994, Wilton Mill was demolished to allow for the expansion of the paper mill; Wilton Mill had been used as a paper store and despatch depot since 1966. The paper mill finally closed in 2001, and is currently empty.
- 3.1.35 At the time of the mill’s closure, a photographic survey of the recreational facilities and some of the reservoirs to the north of the complex was undertaken. This archive is currently lodged with the Greater Manchester Archaeological Unit. No other archaeological recording of the mill complex has been undertaken, although a photographic record of the paper-making machinery in operation appears within the publications produced by the East

Lancashire Paper Mill Co Ltd in 1960 and 1962. This does not, however, provide any details of the actual buildings.

- 3.1.36 ***Cartographic Evidence:*** map regression analysis provides information of the changes enacted on the site. The earliest map available that shows the site in some detail is a tithe map surveyed in 1841, which depicts a barracks and the calico printing works. This detail is reproduced to a greater degree of accuracy on the Ordnance Survey map of 1850, which shows the barracks and the calico printing works (complete with a gasometer) with large reservoirs to the east and to the north (Fig 4). An annotated map of the study area is provided by an estate plan of 1860 (Fig 2), which shows the relative positions of the paper mill, the printing works and another unspecified works; the positions of these structures relative to the current layout of the site is depicted in Figure 3. The map names the owners of the land, and it is interesting to note that part of the site was owned by Thomas Crompton, a notable pioneer in the paper industry (3.1.18 above). The map does not, however, provide much detail of the paper mill buildings, although it does depict the route of several ‘goits’, or water channels across the site.
- 3.1.37 The Ordnance Survey map of 1893 is the first cartographic source to provide comprehensive details of the buildings occupying the site (Fig 5). The study area is shown to comprise the paper mill and the printing works, whilst the unspecified works depicted on the 1860 estate plan is marked as a bleach works. These all appear to be integrated production units, with a large bank of reservoirs situated to the north, and several goits crossing the site. The boundaries of the site conform to those on the 1860 estate plan, implying little expansion, although it seems that more reservoirs have been added.
- 3.1.38 The Ordnance Survey map published in 1910 (Fig 6) shows the paper mills, but the printing works and bleach works are no longer named, implying that they had ceased production. The map also shows that the paper mill had expanded with the erection of some new buildings on the western side of the complex. The most significant extension, however, appears to be to the south of the main building, which is shown to encroach upon the northern bank of the river Irwell.
- 3.1.39 The Ordnance Survey map of 1929 (Fig 7) indicates some minor additions to the site, the most interesting of which is a tramway aligned east/west along the southern part of the mill complex. It also shows a rectangular building immediately to the west of the filter beds to have been erected. This is shown to have been fitted with a chimney, suggesting it to be associated with a boiler house. The map also shows a small part of the print works site to have been redeveloped with the erection of a small detached building.
- 3.1.40 The Ordnance Survey map of 1937 (Fig 8) shows a remodelling of the tennis grounds, and the rough grasslands containing filter beds to the north-east of the mill to have been redeveloped as a cricket ground with a pavilion. The main complex, however, appears to have been largely unaltered.
- 3.1.41 Similarly, the Ordnance Survey map of 1955 shows the site largely unaltered, although much of the tramway to the south-east of the mill appears to have

been abandoned. The 1970 edition map, however, shows some expansion of the site. The tramway has completely gone, and the putative boiler house has been subsumed by an expansion of the main mill to the south. Other buildings have clearly been erected on the eastern side of the mill, whilst the extent of the north-western corner of the mill has been reduced, presumably with some demolition. These modifications are likely to have been associated with the documented erection of a new machine house, offices, laboratory, waste store and the installation of new equipment (3.1.31 *above*). New additions also included a range of filter beds and electric sub stations within the southern and eastern parts of the complex.

4. ASSESSMENT RESULTS

4.1 DESK-BASED ASSESSMENT

- 4.1.1 In total, 26 sites, including the East Lancashire paper Mill, have been identified within a 1km radius of the study area; records of all of these sites are held on the Greater Manchester SMR, and details are presented in *Appendix 1*. The only known site that will undoubtedly be affected by the redevelopment of the study area is the extant elements of the East Lancashire Paper Mill. An examination of the available archive sources has indicated that the mill has been subject to extensive remodelling since the mid-20th century, which has resulted in the removal of parts of the industrial complex, including a printing works and a bleach works of 19th century date. Nevertheless, the extant buildings are the only surviving physical remains of a former key industry to the area.
- 4.1.2 In addition, the study area has some potential for significant buried remains. Further sites of prehistoric date such as those found on the E's may be preserved within the footprint of the East Lancashire Paper Mill. Similarly, archive sources have indicated some potential for a Roman road to lie beneath the paper mill complex.

4.2 VISUAL INSPECTION SURVEY

- 4.2.1 A site inspection of the study area was undertaken in June 2004. This confirmed that the site had been subject to considerable modification during the late 20th century, with the loss of large parts of historic fabric. Nevertheless, elements of the original mill structure appeared to have survived intact.
- 4.2.2 Little evidence for the power systems within the mill survive. Whilst elements of the turbines remain, there was no evidence for the original steam engines that provided power for the site, or their associated boilers. The turbine house, however, is a building of some interest, with large parts of the walls and bricks columns decorated with glazed tiles. The building also incorporates the arched windows typical of a 19th century steam engine house.
- 4.2.3 A water channel in the approximate position of the tail goit depicted on the 1860 estate plan (Fig 2) survives intact, and continues to direct flowing water across the site to the river Irwell. It has, however, clearly been subject to recent modification as it is lined with concrete.
- 4.2.4 Some of the workshops are clearly of a 19th century date, comprising hand-made bricks and wooden trusses. The former esparto store building is similarly of hand-made brick construction, and probably represents part of the original mill complex. Other workshops, also of hand-made brick construction, incorporate elaborate iron trusses, perhaps as a means of fire-proofing.
- 4.2.5 Elements of the former offices building are also considered to contain original fabric, although they have clearly been subject to remodelling. It seems likely

that the monumental masonry bearing the company name, which has been relocated to the car parking area, was removed during such remodelling. The earliest surviving elements of the office building appear to be in the north-western corner of the complex, fronting Church Street East. Components of the Brown Mill, forming the north-western part of the complex, similarly appear to contain original fabric, although a modern roof has been fitted.

- 4.2.6 The south-facing elevations of the paper machines house and loading bay have been erected on large freestone blocks, possibly representing early structural components. The structure used until recently as a loading bay would appear to be the earlier of the two buildings, perhaps dating to the early part of the 20th century. It contains a series of blocked windows, suggesting that it had undergone a change of function.
- 4.2.7 The site visit confirmed that most of the paper-making machinery had been stripped out of the complex.

5. SIGNIFICANCE OF THE REMAINS

5.1 STATUTORY SITES

- 5.1.1 Radcliffe Tower and the site of Radcliffe Hall is designated of national architectural or historical significance as a Scheduled Monument. However, this site lies outside the paper mill complex and will not be affected by the redevelopment.

5.2 NON STATUTORY SITES

- 5.2.1 There are a number of methodologies for assessing archaeological significance, although that which currently has been the greatest legal standing is the Secretary of State's criteria for the scheduling of ancient monuments (DoE 1990). In the following, the known or possible remains in the study area which may be directly affected by any proposed works are considered using those criteria.

- 5.2.2 **Period:** the earliest known site within the study area is the Palaeolithic and Mesolithic camp, which lies on the north bank of the river Irwell adjacent to the East Lancashire Paper Mill. The other known sites within the study area include those of Bronze Age, Roman, medieval and post-medieval date.

- 5.2.3 **Rarity:** the study area contains potentially contains several sites which may be considered to be of regional rarity. These are:

- the Ee's Palaeolithic/Mesolithic camp
- Manchester to Ribchester Roman road
- the 19th century calico printing works
- the 19th century bleach works

- 5.2.4 **Documentation:** the quality of the surviving documentation for previous investigations of prehistoric remains in the immediate vicinity of the paper mill complex is variable. Work carried out during the late 1940s and 1950s is known largely from summary accounts, and the finds assemblage is incomplete or missing. Nevertheless, the evidence that is available can be considered adequate as a guide to the potential for prehistoric archaeology still remaining in the area.

- 5.2.5 The suggested line of the Roman road within the study area is derived from cartographic sources, and from the evidence of archaeological investigations in the environs.

- 5.2.6 The historical development of the study area can be traced reasonably well from the 19th century using cartographic sources. Further documentary research may provide additional information, including more precise dating of the construction of buildings within the study area. However, it is considered unlikely that this would modify the outline provided in this assessment.

- 5.2.7 **Group Value:** the industrial sites within the study area form part of the industrial archaeology of the region, and potentially contain evidence which would complement and offer comparison with the standing and sub-surface remains in the wider area. The group value can be viewed as high with respect to the paper-making, bleaching and printing industries.
- 5.2.8 **Survival/condition:** the full extent of survival and condition of below-ground archaeological remains within the footprint of the paper mill complex is unknown.
- 5.2.9 In the case of the prehistoric and Roman sites, any survival is likely to be localised. Within the northern part of the study area, the possibility of survival is probably low, given the presence of numerous reservoirs. Within the western and south-eastern parts of the study area, below the footprint of the original paper mill building and adjacent waste ground, the chances of survival are probably higher.
- 5.2.10 The printing and bleach works were subsumed by an expansion of the paper mill during the second half of the 20th century, although the replacement buildings are not known to have included basements and sub-surface evidence for original structures may still remain. In particular, brick and stone fabric pertaining to the water supply and power systems of the earlier works may survive intact. Similarly, at least one of the goits continues to carry water, and there is some potential for the survival of other goits beneath the mill.
- 5.2.11 **Diversity:** the known sites relate to a spectrum of archaeological periods, ranging from the prehistoric to the 20th century. In particular, the diversity of industrial sites may be considerable.
- 5.2.12 **Potential:** any prehistoric remains within the study area have the potential to add to the existing body of information on the early activity within the wider region, which at present is only very poorly understood.
- 5.2.13 The 19th century remains have the potential to inform a greater understanding of the relationship between the paper-making, printing and bleaching industries. Several studies of these industries within the region have been undertaken in recent years (eg LUAU 2000), although the opportunity to examine their functional relationship is rare.
- 5.2.14 The potential for the study area containing remains other than those identified in this report is considered to be low.

5.3 SIGNIFICANCE

- 5.3.1 In addition to the Scheduled Monument, which is a site of national importance and lies to the west of the paper mill complex and will not be impacted upon, the study area is known from previous archaeological work to contain prehistoric remains that can be considered to be of regional significance. There is also some possibility to contain remains of the Roman road from Manchester to Ribchester, which may be considered to be of the same significance.

- 5.3.2 Additionally, using the above criteria, the paper mill complex possibly contains non-statutory remains of a regional or high local importance. These remains include the original elements of the paper mill, and the vestiges of a calico printing works and a bleach works.
- 5.3.3 Other non-statutory sites within the study area, including the considerable 20th century additions to the paper mill complex, are considered to be of lesser, local significance.

6. POTENTIAL IMPACT OF DEVELOPMENT

6.1 IMPACT

- 6.1.1 The potential archaeological impact of any development of the site may be assessed as either direct or indirect.
- 6.1.2 *Direct Impact:* this would involve an alteration to the physical condition of the site, which may be positive or negative. The demolition of the extant buildings, and any substantial earth-moving works, may be considered to be negative impacts, although these could be refined by assessing the likely extent of the alteration of the site.
- 6.1.3 *Indirect Impact:* this would involve an alteration to the setting of the site, and may also be either positive or negative by, for instance, improving or detracting from the appearance, understanding or appreciation of a site. Indirect impacts may be either temporary, lasting for the duration of the redevelopment works, or permanent.
- 6.1.4 Precise details of the redevelopment of the study area are not yet known, and it is therefore not possible to identify specific impacts. However, the following possible impacts can be identified.
- 6.1.5 *Sub-Surface Remains:* redevelopment of the site may potentially have a direct negative impact on sub-surface remains by damaging buried archaeological structures and deposits by the reduction or other disturbance of ground levels, including the excavation of foundation or service trenches.
- 6.1.6 In the case of the calico printing works and the bleach works, and their associated water systems, there is the potential for an indirect positive impact by displaying all or part of these remains as a component of any new development.
- 6.1.7 *Standing Remains:* development is likely to have a direct negative impact on standing remains of the paper mill complex by the demolition of significant features. Conversely, a positive impact may include the reuse of the surviving reservoirs for leisure pursuits, such as angling.

7. RECOMMENDATIONS FOR MITIGATION

7.1 RECOMMENDATIONS

- 7.1.1 *Planning Policy Guidance 16* draws a distinction between remains of national importance and other remains. In the case of the latter, which will apply to the paper mill complex, remains may undergo preservation by record, where this is warranted by their significance. The compilation of any such record would involve appropriate use of survey, photography, excavation, or other methods.
- 7.1.2 Details of the proposed development of the site have yet to be finalised, although it is envisaged that the extant buildings will be largely demolished. A rapid photographic survey of the standing buildings in advance of demolition may be considered as an appropriate mitigation recording strategy. This should be focused upon the original elements of the mill complex.
- 7.1.3 Should the redevelopment of the site involve any earth-moving works, including the excavation of foundations or service trenches, it is considered probable that some form of archaeological intervention will be required in order to preserve by record any surviving remains that will be ultimately destroyed. The scope and extent of any such work would have to be finalised with the Assistant County Archaeologist for Greater Manchester, although it is likely that, in the first instance, a programme of archaeological evaluation will be necessary. In particular, trenches may be targeted across the projected line of the Roman road and in the area of the former calico printing works, in order to establish the presence, level of survival, and significance of sub-surface remains.

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Ordnance Survey 1910 *Lancashire Sheet 95.4, 25" : 1 Mile*

Ordnance Survey 1927 *Lancashire Sheet 95, 6" : 1 Mile*

Ordnance Survey 1929 *Lancashire Sheet 95.4, 25" : 1 Mile*

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8.2 BURY ARCHIVES SERVICE

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8.5 AERIAL PHOTOGRAPHS

Greater Manchester Sites and Monuments Record, F5-11, 27/03/1996

ILLUSTRATIONS

Figures

Figure 1: Location Map

Figure 2: Plan of and Estate Belonging to Messers Hutchinson in the Parish of Radcliffe, 1860

Figure 3: 1860 Estate Plan Superimposed onto Modern 1:10000 Map

Figure 4: Ordnance Survey 6": 1 Mile Map, 1850

Figure 5: Ordnance Survey 25": 1 Mile Map, 1893

Figure 6: Ordnance Survey 25": 1 Mile Map, 1910

Figure 7: Ordnance Survey 25": 1 Mile Map, 1929

Figure 8: Ordnance Survey 25": 1 Mile Map, 1937

Figure 9: Gazetteer Sites Plan

Plates

Plate 1: Aerial view of the East Lancashire Paper Mill, showing the course of the river Irwell and Radcliffe E's (courtesy of GMSMR F5-11, 27/03/1996)

APPENDIX 1: SITES GAZETTEER

Site Name	Mesolithic lake settlement (site of)
Site number	01
NGR	SD 7980 0720
SMR no	77.1.0 – GM167
Site Type	Site and associated finds
Period	Mesolithic-Bronze Age
Source	photograph: (n/d), 9.2 (1) Serial: Spencer 1950, 196-202 (2) Bibliographic reference: Spencer, A, 1969, (Excavation at the E's Radcliffe – unpublished). (3) Serial: Hallam, JS, 1965, E's Radcliffe, an undated Riverine Site on the banks of the Irwell (Catalogue of Internal Reports). (4) Serial: Spencer 1950, 196-203

Description

Possible Mesolithic lake settlement and flint working site discovered by gravel extraction workers. Evidence: 7 posthole circles of poss. Struct. 30' dia., apparently in double row, covered by layer of brushwood 3' thick; vertical posts c. 12' below original soil level; separate rows of posts, 7m and 14m respectively, interwoven with and covered by brushwood. Maglemosian implements and flint flakes recovered from the gravel and vegetable debris but samples of hide or leather and red raddle have been lost (1) (2) (3). Finds: BA flanged axe; hollowed-out tree trunk; brass objects. Posts were c. 42 dia. Spaced at c. 202 intervals. Finds recovered by workmen before archaeologist present on site. Axe, brass and flints in private hands.

Assessment

The settlement lies outside of the site, and will not be affected by the development.

Site Name	Finds (near Mesolithic lake settlement)
Site number	02
NGR	SD 7970 0720
SMR no	77.1.1 – GM168
Site Type	Find spot
Period	Roman
Source	(1) Serial: Spencer 1950, 196-202 (2) Graphic Material: Tyson, N, 1969, (Bu'lock, JD)

Description

Other finds include brass hooks, a brass spur, a rough red pottery vessel, hollowed out tree trunk and "brass dustbin lid", all since lost. Spencer holds a possible medieval brass spur and the Bronze flanged axe. Also found were two unstratified spindle whorls and Roman tile and pottery came from the top soil dumps (1). Site destroyed in gravel digging. Cord impressed accessory vessel, possibly from this site, in Manchester Museum (2). Organic material was sent for radiocarbon 14 analysis and the results that came back do not confirm the Prehistoric dating ascribed to the site. The C14 analysis gave a range of 1730+-120AD, and a blanket modern date. Individual dating of the timbers were given as medieval or post-Conquest by an expert at the time.

Assessment

The find spot lies outside of the site, and will not be affected by the development.

Site Name	Mesolithic lake settlement (site of) – 1949 excavation
Site number	03
NGR	SD 7993 0713
SMR no	77.2.0 – GM169
Site Type	Site and associated finds
Period	Mesolithic-Bronze Age
Source	(1) Serial: Spencer, A, 1950, (Trans. Lancs. and Chesh. Antiq. Soc.) 196-202 (2) Bibliographic reference: Spencer, A, 1969, (Excavation at the E's Radcliffe – unpublished). (3) Serial: Hallam, J, 1965, E's Radcliffe, an undated Riverine Site on the banks of the Irwell. (Catalogue of Internal Reports). 33 (4) Serial: Spencer 1950, 196-203

Description

14 posts were found on excavation, 21-26" apart and 4-5" dia., circular, triangular and semi-circular in section. A second row of posts ran parallel to the first c.40" away. Posts were interwoven with branches, with a brushwood layer between and over the posts. Fragments of red raddle, baked red clay, hazel nuts, pine and fir cones and flints were found in this layer, with 3 fragments of hide or leather (Mesolithic?).

Assessment

The settlement lies outside of the site, and will not be affected by the development.

Site Name	Mesolithic lake settlement (site of) – 1950 Excavation
Site number	04
NGR	SD 7995 0730
SMR no	77.3.0 – GM171
Site Type	Site and associated finds
Period	Mesolithic-Bronze Age
Source	Bibliographic reference: Spencer, A, 1969, (Excavation at the E's Radcliffe – unpublished).

Description

Two layers of horizontal timbering were found, 9-12" apart, with a gravel layer in between. One of the vertical posts was found with a silver-grey sandy material around it. Alder catkins, hazel nuts and flint flakes were found in association. 2 spindle whorls, thought to be Neolithic, were found which had fallen into the gravels of the 1949 excavation. Other finds include several teeth and 2 bones from a small type of ox, and 35 flints and vegetable detritus from the low water table level gravel. The flints have been associated with the Pennine Mesolithic Maglemosian Culture. The timbers may form a Bronze Age platform and causeway of stakes, wattling and brushwood.

Assessment

The settlement lies outside of the site, and will not be affected by the development.

Site Name Mesolithic lake settlement (site of) – 1960 Excavation
Site number 05
NGR SD 7967 0682
SMR no 77.4.0 – GM172
Site Type Site and associated finds
Period Mesolithic-Neolithic
Source Bibliographic reference: Hallam, J, 1969, (Excavation at the E's Radcliffe – unpublished).

Description

A 30' trench was excavated showing vertical stakes and branches associated with a clay band. Under this horizon lay a series of iron-stained sands and gravels. Horizontal oak timbers on this horizon were roughly hewn, appearing as square-cut, some bearing notches or slots. Birch stakes were driven into the gravels, some lay on top. Gravels and trimmed branches appear in the clay band horizon. A sand and gravel band with a depth of between 3'6"-4' separate two distinct horizons.

Assessment

The settlement lies outside of the site, and will not be affected by the development.

Site Name Mesolithic lake settlement (site of) – 1961 Excavation (site 1)
Site number 06
NGR SD 7964 0684
SMR no 77.5.0 – GM173
Site Type Site and associated finds
Period Mesolithic-Bronze Age
Source Bibliographic reference: Hallam, J, 1969, (Excavation at the E's Radcliffe – unpublished).

Description

More horizontal timbers, stake line, brushwood and branches were exposed. Some timbers were removed for preservation. A number of small stakes were found, 12"-15" in length with a diameter of 3". A willow tree, probably axe-felled from markings on the trunk, rested on the timbers at SW cut face, horizontal stake protruded through its branches, but was in line with other timbers. Two other willow trees, branches, worked timbers and a stake lay in the NE section cut. Some willow branches and leaves survived almost intact, retaining their colour. No stratigraphy survived. Site disturbed. Wooden object, described as part of a plough found in this excavation. "Floor" of 9"-10" sticks and twigs ran NW-SE under a layer of rushes and grey clay.

Assessment

The settlement lies outside of the site, and will not be affected by the development.

Site Name Mesolithic lake settlement (site of) – 1961 Excavation (site 2)
Site number 07
NGR SD 7964 0685
SMR no 77.6.0 – GM174
Site Type Site and associated finds
Period Mesolithic-Bronze Age
Source Bibliographic reference: Hallam, J, 1969, (Excavation at the E's Radcliffe – unpublished).

Description

Main 12 stake line ran E-W 22" apart, c.5" diameter. 4 of split trunks or main spars, 9 had chamfered tops. 2 stake lines, 14" apart, joined at R-angles. W line of 7 stakes, E line of 5. E line stakes less substantial, 2-3" diameter. One stake was drilled with a peg still in it; top taken off second similar stake and preserved. Branches formed a low wattling wall. Two main areas – Grid1: 14' sq, N half v- irreg sand square, S half of uncobbled and cobbled area. Grid 2: 10'sq. Build: Branches laid parallel, brushwood laid at R-angles with 1 portion from E, other from W, both c.4'wide. Woven branches between main line. W stakes secured brushwood. 8'sq W area cobbled from local stone gravels 4"-12". Angular rocks in main line. Uncobbled area – no stones

Assessment

The settlement lies outside of the site, and will not be affected by the development.

Site Name	Mesolithic lake settlement (site of) – 1961 Excavation (site 2)
Site number	08
NGR	SD 7964 0685
SMR no	77.7.0 – GM175
Site Type	Site and associated finds
Period	Mesolithic-Prehistoric
Source	Bibliographic reference: Hallam, J, 1969 (Excavation at the E'es Radcliffe – unpublished).

Description

Grid 2: Continues Grid 1 features, 9 stakes, 22" apart, 4" dia. 4 chamfered. At R-angles to main line were 2 other lines running E-W, of 6 stakes, 4" diameter, 10' between lines. 12' between E line of grid 1 and W line of grid 2. Main line and some of side line were linked by branches, 1"-3" dia. Stakes isolated in sandy area. 2 areas within the stakes – (a) 12'x10', sand in N bottom, brushwood layer 3"-9" thick. Branches 3"-4" dia. Parallel to main line beneath and beyond inter-woven branches. Clay layer 3" thick at N end. Cobbles over full width. Wooden comb found with hazel nuts, stakes etc. Comb ascribed a Roman/Dark Age date by Hallam (1969, 43).

Assessment

The settlement lies outside of the site, and will not be affected by the development.

Site Name	Mesolithic lake settlement (site of) – 1996 summary
Site number	09
NGR	SD 7980 0720
SMR no	77.8.0 – GM176
Site Type	Site and associated finds
Period	Prehistoric-18 th century
Source	Aerial Photograph: (n/d), F5 10/11 1995

Description

Information from recent aerial photographs and Bury Archaeological group show that the site has been reclaimed by dumped gravel and landscaped. The aerial photographs indicate that there may be archaeology remaining on the eastern bank of the Irwell around the position of the 1949-1961 excavations. However, in spite of the reclamation, the E'es remains one of the most important sites in the North West for

archaeological potential, and should be flagged for further research or excavation if area development is proposed. A field visit is proposed during Autumn 1996.

Assessment

The settlement lies outside of the site, and will not be affected by the development.

Site Name	Manchester to Ribchester Roman Road
Site number	10 (Not shown on Fig X)
NGR	SJ 8350 9970
SMR no	14.1.0 – GM19
Site Type	Monument
Period	Roman
Source	(1) Monograph: Margary 1957, 102-103 (2) Monograph: Arrowsmith, P, 1993, An Arch. Assess.: Addendum. (Burke, T Gtr M/cr W and N Relief Rd M62-M66 Sect). 3,7,13 (3) Cartographic materials: OS 1850 map (4) Bibliographic reference: Wharmby, P, 1993, (Letter re: Development at Prestwich Hospital).

Description

This forms part of the Roman Road from Manchester to Ribchester. The road leaves the fort in Manchester heading North. It passes Strangeways prison and on toward Radcliffe following the Bury New Road. (1). Linear running from SD 8081 0476, (SD 80 SW). Shown on the 1848 map. (3) Almost entire length of Road through study area been built over. (2) Excavation by Prestwich Archaeological Group found the line of the 18th century road in a line immediately east of Park Close, but no trace of the Roman Road, which may lie immediately to the west (3).

Assessment

The route of the road is uncertain, and may be affected by the development.

Site Name	Manchester to Ribchester Roman Road – Excavation at Starling
Site number	11
NGR	SJ 7790 0960
SMR no	14.1.4 – GM23
Site Type	Monument
Period	Roman
Source	(1) Tyson 1980, 23-8

Description

The threatened section of the Manchester to Ribchester Roman military road was excavated in 1966 – 1967 by B.A.G. Although the road is shown on O.S. maps, the excavation was aimed at confirming its presence and investigating its structure. Principle structure revealed include the foundations, ditches, berm and surface metalling (1).

Assessment

This part of the road is outside the site and will not be affected by the development.

Site Name	Church of St. Mary and St. Bartholomew
Site number	12
NGR	SD 7969 0758
SMR no	9450.1.0 – GM10590
Site Type	Listed building
Period	Medieval
Source	(1) Bibliographic reference: DOE, 1985, Bury. (List of Buildings of Arch/Hist., Interest). 14 (2) Bibliographic reference: Pevsner, N (n/d), (The buildings of England: South Lancashire). (3) Serial: Farrer, W, and Brownbill, J, 1908 (4) Serial: 1989, (Trans. Lancs. Ches. Antiq. Soc.). 280-284

Description

14th, 15th, 17th and 19th century builds. Chancel arch of decorated period. 2-bay nave probably late-Perpendicular period: arcades with 4 broad shafts and four broad diagonal hollows; big bosses to renewed roof; end clerestory window with uncusped arches to lights. North transept: some medieval masonry. Former south transept demolished on construction of south aisle by JM and H Taylor, 1870-73, when most of the extension was designed. Chancel, vestry rebuilt 1817. Tower probably 15th century, “1665” (possible restoration). Vestry, 1903. Seats at west end of nave bear panels, some with inscription, date “1665”, others from 1606 pulpit. Stained glass windows in south aisle by Kemps 1906. Alabaster slab with effigies of James de Radcliffe and his wife, early 16th century, under alter (1) (2) (3). 15th century Chantry chapel “Sun Chapel” in south transept, 1889 (4).

Assessment

The church lies outside of the site, and will not be affected by the development.

Site Name	Radcliffe Tower and site of Hall
Site number	13
NGR	SD 7957 0750
SMR no	354.1.0 – GM520
Site Type	Monument
Period	Medieval
Source	(1) Serial: Walker, JSF and Tindall, AS, 1985, Country Houses of Greater Manchester. (GMAU The Archaeology of Greater Manchester). 102-103 (2) Serial: Tindall, AS, 1985, Excavations at Radcliffe Tower. (The Greater Manchester Archaeological Journal). 39 – 53 (3) Bibliographic reference: DOE, 1985, Bury. (List of Buildings of Arch/Hist., Interest). 21 (4) Serial: Harrison, W, 1910, Ancient forests, chases and deer parks in Lancashire. (Trans. Lancs. Ches. Antiq. Soc.). 73 (5) Serial: France, RS, 1940, An index of Lancashire heraldry. (Trans. Lancs. Ches. Hist. Soc.). 104-109 (6) Scheduling record: English Heritage, 1996, Radcliffe Tower and site of Hall 100m SW of parish church in Radcliffe.

Description

Manor of Radcliffe dates from c11 Domesday Survey, when held by King Edward as part of royal manor of Salford (1). After the Norman conquest, Baron de Mersey gave

manor to Nicholas Fitz-Gilbert de Talbois, who adopted the place name as his family name. Manor house enclosed on the north side by ditch, 7 metres wide by 1.5m deep (2). Although the site has been excavated no precise date for the original manor house can be established, as much evidence has been destroyed in the later construction. Mentioned in 1358 through Richard Radcliffe of Radcliffe Tower (4) (5). Built 1403. By 1781 the tower had been converted to farm outbuildings (no evidence known). All sides have doors, some windows bricked up and blocked. Interior shows remains of three fireplaces. Site includes a stone built tower house of the medieval period and the buried remains of a contemporary timber hall to the west of the monument. Stone tunnel vault to ground floor. Walls are from 1.5 to 1.9m thick, in the eastern wall are two openings with a deep splay for windows, a central fire place and flue. Opposite is a central doorway with decorative style arch and roll moulded surround. Larger windows set in N and S walls with a fireplace below each. The present tower height is 8.5m but evidence suggests that it originally stood to three storeys. Timber Hall used as a farm building until demolished c1830. Excavations of 1979-80 showed that the hall and tower were contained within a ditched enclosure on the N side which was later reinforced by a rubble wall to form a courtyard (6).

Assessment

The tower lies outside of the site, and will not be affected by the development.

Site Name	East Lancashire Paper Mill
Site number	14
NGR	SD 7915 0735
SMR no	6381.1.0 – GM7436
Site Type	Building
Period	Post-medieval
Source	(1) Cartographic materials: OS 1850 map (2) Cartographic materials: OS 1891 map (3) Cartographic materials: OS 1929 map (4) Cartographic materials: OS 1937 map (5) Monograph: Ashmore, 1982, 121

Description

Site occupied by a barracks and print works on map (1); paper mill on maps (2-4). First reference 1860, on site of former calico print works and barracks. Part of the c19 expansion of the paper industry in Bury area. Six paper-making machines by Bentley and Jackson and Walmsleys of Bury, 1908. Formerly had 2500 hp horizontal compound steam engine by Musgrove of Bolton, driving 800 KV generator, used as a standby.

Assessment

The proposed work is inside the footprint of this building and will be affected by it.

Site Name	Pioneer Mills
Site number	15
NGR	SD 7920 0713
SMR no	3890.1.0 – GM4749
Site Type	Building
Period	Post-medieval

Source Aerial Photograph: (n/d), SF 3187 36-39.
 (1) Cartographic materials: OS 1910 map
 (2) Cartographic materials: OS 1937 map
 (3) Monograph: Arrowsmith, Peter, 1991, An Archaeological Assessment: Addendum. (Burke, Tom G.M.W. and N. Relief Road – M62-M66 Section). 13
 (4) Unpublished document: Williams, Mike, 1986, The Greater Manchester Textile Mill Survey

Description

Marked on map (1) as a cotton mill. Early c20 textile mill with an unusual layout. The two original spinning mill buildings survive intact. No. 1 is brick built with steel and concrete internal structure. It has 3 storeys and 40 x 3 bays. Rectangular windows with stone lintels and sills. A single storey office block is incorporated into the N end of the mill. Very few embellishments. No power features are visible on the site, except for a chimney attached to the rear of No. 1 mill. Mill building no. 2 is attached to the NE end of no.1 and is also brick built with steel and concrete internal structure. Of 3 storeys and 12 x 3 bays. Windows and roof very similar to no.1. There are extensive 1 storey sheds to rear of both mill bldgs (3) (4). 1500 looms in 1904

Assessment

The mill lies outside of the site, and will not be affected by the development.

Site Name Wilton Mill (site of)
Site number 16
NGR SD 7905 0725
SMR no 3894.1.0 – GM4753
Site Type Monument
Period Post-medieval
Source Aerial Photograph: (n/d), SF 3193 1-4.
 Photograph: (n/d), 1809, 10 and 11
 (1) Cartographic materials: OS 1910 map
 (2) Cartographic materials: OS 1937 map
 (3) Monograph: Ashmore 1982, 121
 (4) Unpublished document: Williams, Mike, 1986, The Greater Manchester Textile Mill Survey
 (5) Photograph: 1989, Bury MBC. (Batch 1: Slide 15. Batch 6 : Slide 18-20).

Description

Marked as cotton mill (1) (2). Large cotton-spinning mill of 1907, originally driven by Galloway triple expansion steam engine, taken over by Lancs. Cotton Corp., 1929. 4 storeys, 36 x 4 bays, brick built, rectangular windows in threes, yellow brick decoration, corner pilasters, 6x4 bay engine house to S, circ. brick chimney on square ornamental plinth, domed water tower (3). Early c20 buildings have largely replaced original brick late c19 buildings erected when site was used as bleach and print works. In use by James Halsteads Ltd (4). Engine built 1907 and had a 63 rope drive. In 1916 the mill contained 89000 mule and 20000 ring spinning spindles. Engine developed around 1500 HP (5). Site now mainly cleared (A. Townley, pers. Comm 1996). Building here 1785. The mill was demolished in the 1990s.

Assessment

The site of the mill lies outside of the site, and will not be affected by the development.

Site Name Rectory
Site number 17
NGR SD 7905 0725
SMR no GM7712.1.0
Site Type Building (site of)
Period Medieval

Source

Tithe map 1841

Description

Site of former rectory, built over by Wilton Mill.

Assessment

The building lies outside of the site, and will not be affected by the development.

Site Name Radcliffe Station
Site number 18
NGR SD 7885 0745
SMR no GM675
Site Type Building
Period Post-medieval

Source

1850 OS map

Description

Radcliffe railway station

Assessment

The station lies outside of the site, and will not be affected by the development.

Site Name Withins reservoir
Site number 19
NGR SD 7900 0700
SMR no GM347
Site Type Archaeological site
Period Prehistoric

Source

Water rights owned by the East Lancashire Paper Mill

Description

Neolithic and Bronze Age site at Withins reservoir near Radcliffe cemetery, partially excavated in 1951. Defined by a large bank.

Assessment

The archaeological area lies outside of the site, and will not be affected by the development.

Site Name Smithing Hearth
Site number 20
NGR SD 7957 0750
SMR no 354.2.0
Site Type Hearth
Period Unknown

Source

Excavated by Bury Archaeological Group

Description

Smithing hearth

Assessment

The hearth lies outside of the site, and will not be affected by the development.

Site Name Tower Works
Site number 21
NGR SD 7970 0765
SMR no 3909.1
Site Type Works (site of)
Period Post-medieval

Source

1909 OS map

Description

Early 20th century bleach and dye works, mainly demolished

Assessment

The works lie outside of the site, and will not be affected by the development.

Site Name Cock Clod
Site number 22
NGR SD 7901 0745
SMR no 7711.1
Site Type Settlement (site of)
Period Medieval

Source

Tithe map 1841

Description

Shown as a settlement on the tithe award

Assessment

The settlement lies outside of the site, and will not be affected by the development.

Site Name Croft
Site number 23
NGR SD 7929 0762
SMR no 7710.1
Site Type Building (site of)
Period Medieval

Source

Unknown

Description

Croft shown on the tithe map, built over by 1910.

Assessment

The croft no longer stands and therefore not be affected by the development.

Site Name Cross mill

Site number 24

NGR SD 7942 0781

SMR no 3895.1.0

Site Type Building (site of)

Period Post-medieval

Source

1909 OS map

Description

A weaving mill, although little is left of the original complex. The site is currently used by a fencing manufacturer.

Assessment

The building lies outside of the site, and will not be affected by the development.

Site Name Radcliffe village cross

Site number 25

NGR SD 7942 0783

SMR no 93.1.0

Site Type Monument (site of)

Period Medieval

Source

Unknown

Description

Site of former village cross.

Assessment

The cross no longer stands, and therefore will not be affected by the development.

Site Name Bealey's Mill

Site number 26

NGR SD 7982 0784

SMR no 7705.1.0

Site Type Building

Period Post-medieval

Source

1841 Tithe map

Description

Shown on the tithe map as a mill, later became a bleach works.

Assessment

The building lies outside of the site, and will not be affected by the development.



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0 5000
metres

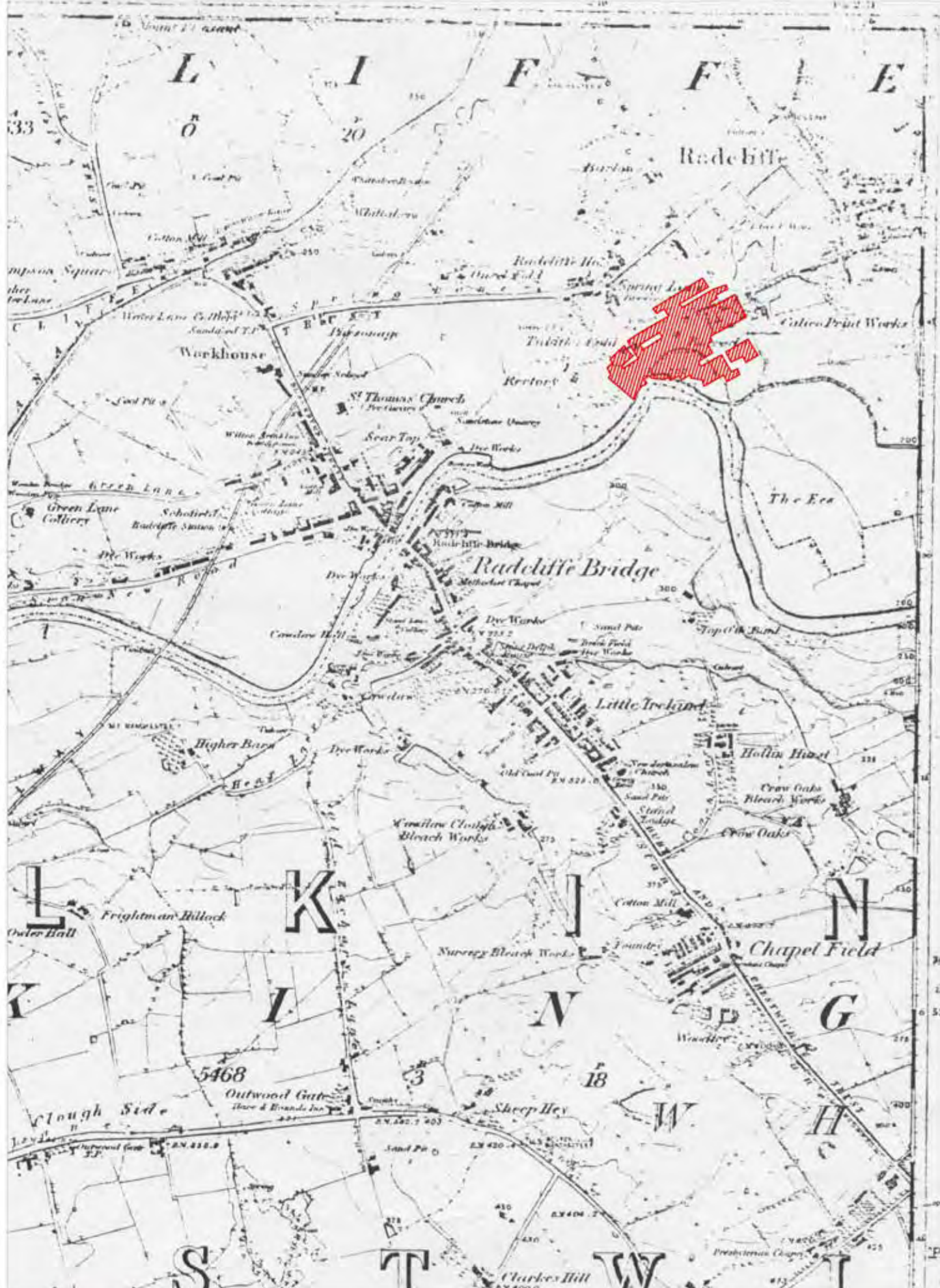
Figure 1: Location Map



Scale 1:2500



Figure 2: Plan of an Estate belonging to Messrs Hutchinson in the Parish of Radcliffe, 1860





N



approximate location of site



0 200m

Scale 1:10000 (approx)



Figure 4: Ordnance Survey 6": 1 Mile Map, 1850

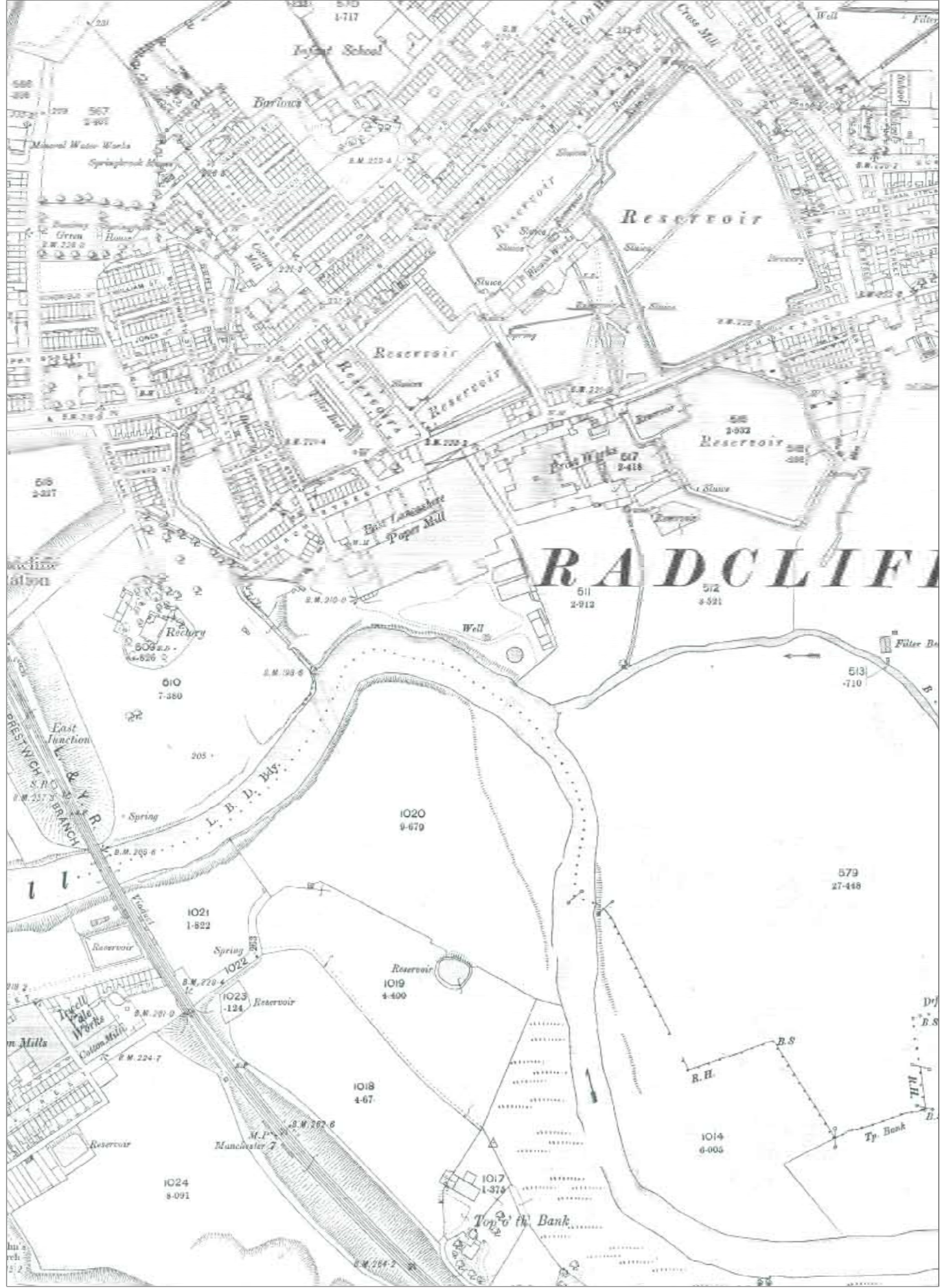
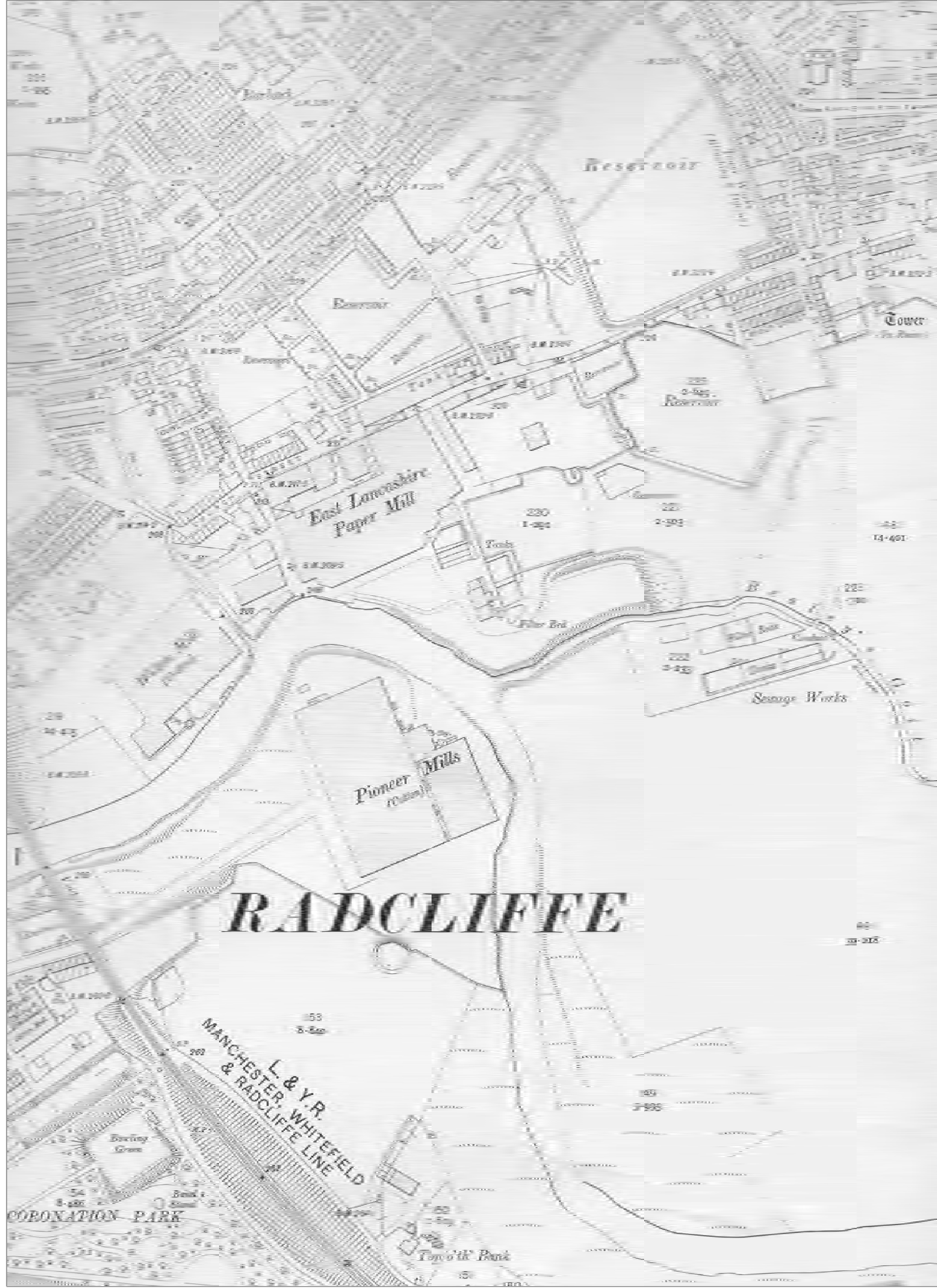


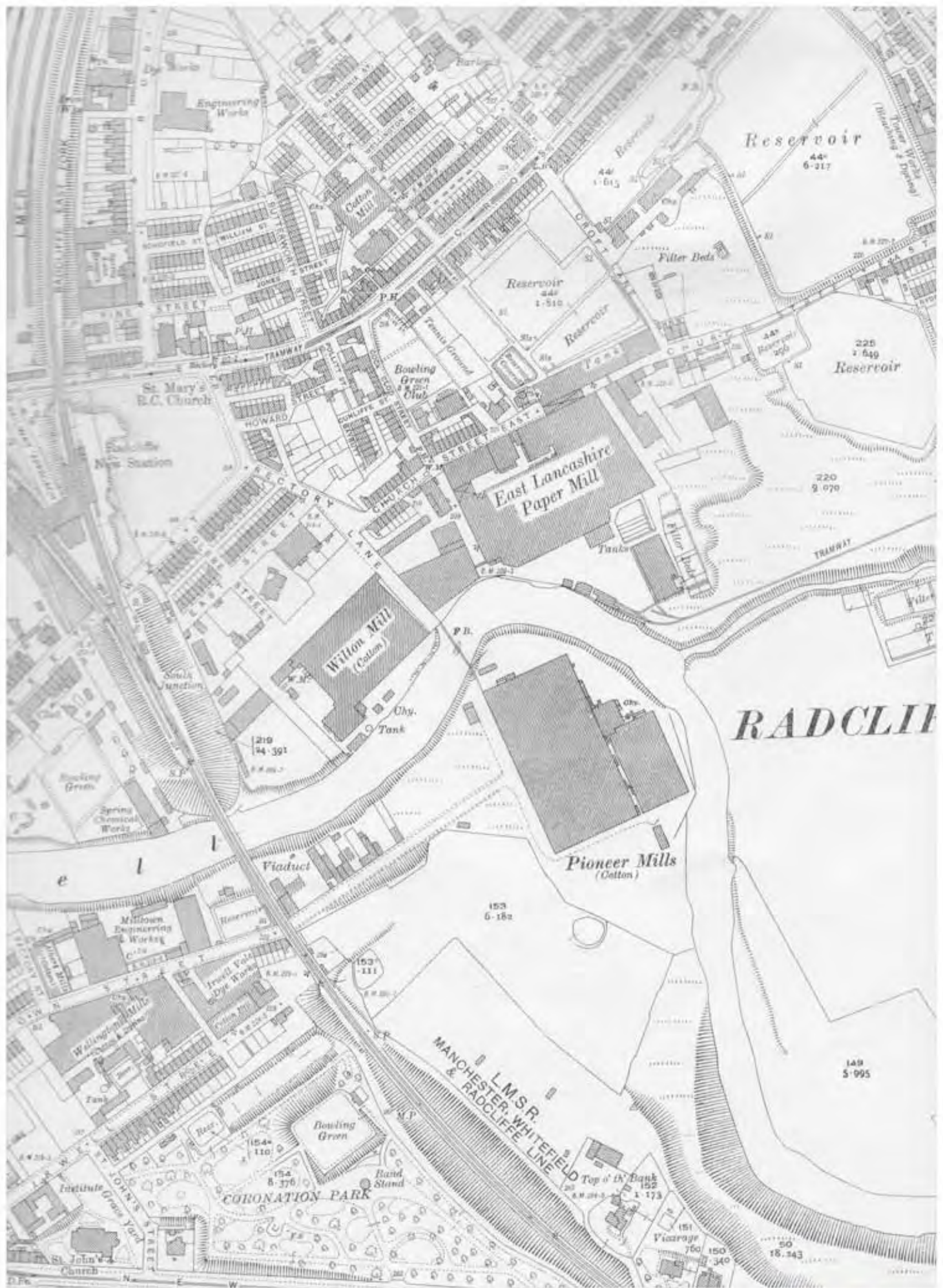
Figure 5: Ordnance Survey 25": 1 Mile Map, 1893



0 100m
Scale 1:4000 (approx)



Figure 6: Ordnance Survey 25": 1 Mile Map, 1910

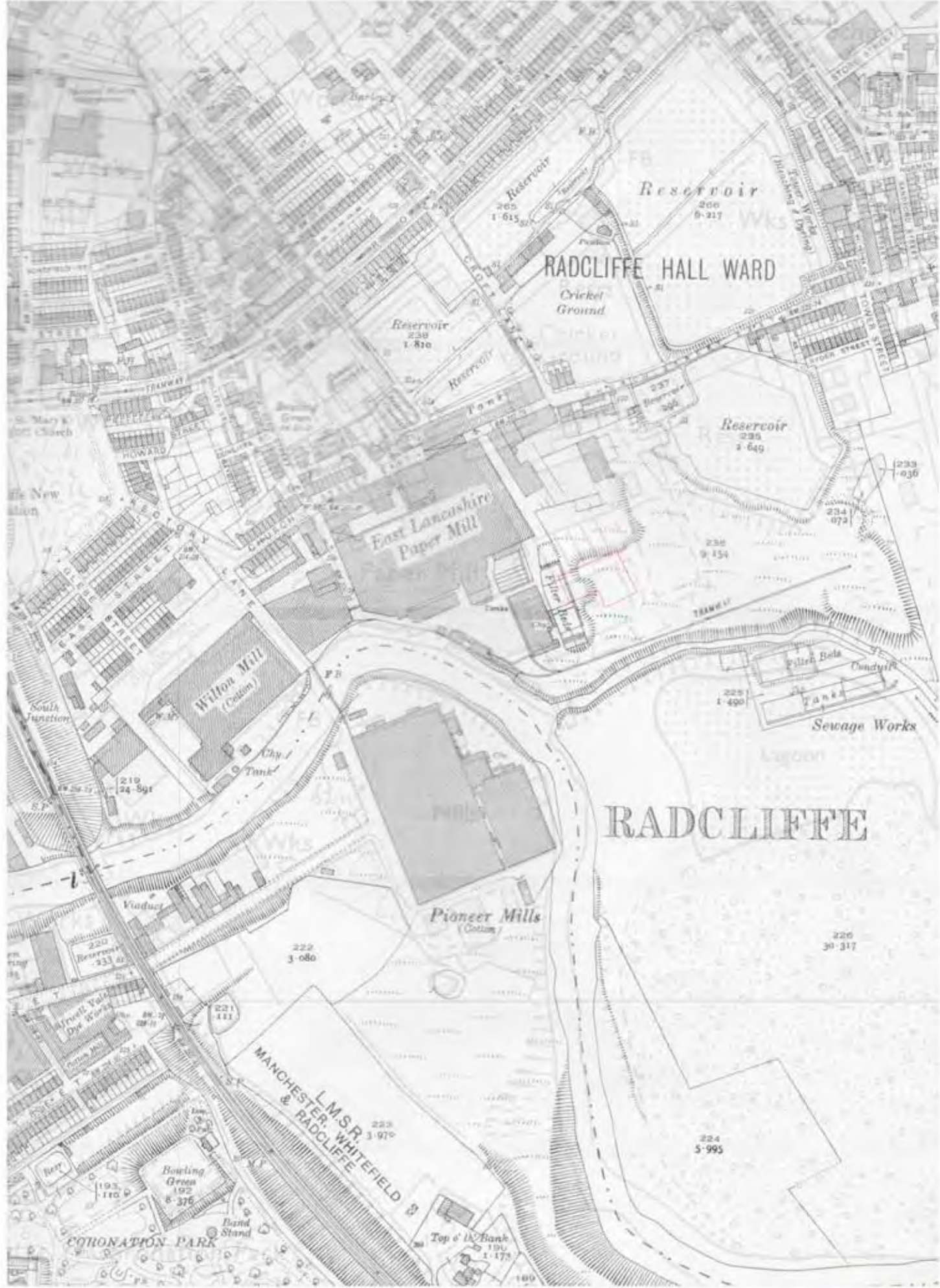


0 100m

Scale 1:4000 (approx)



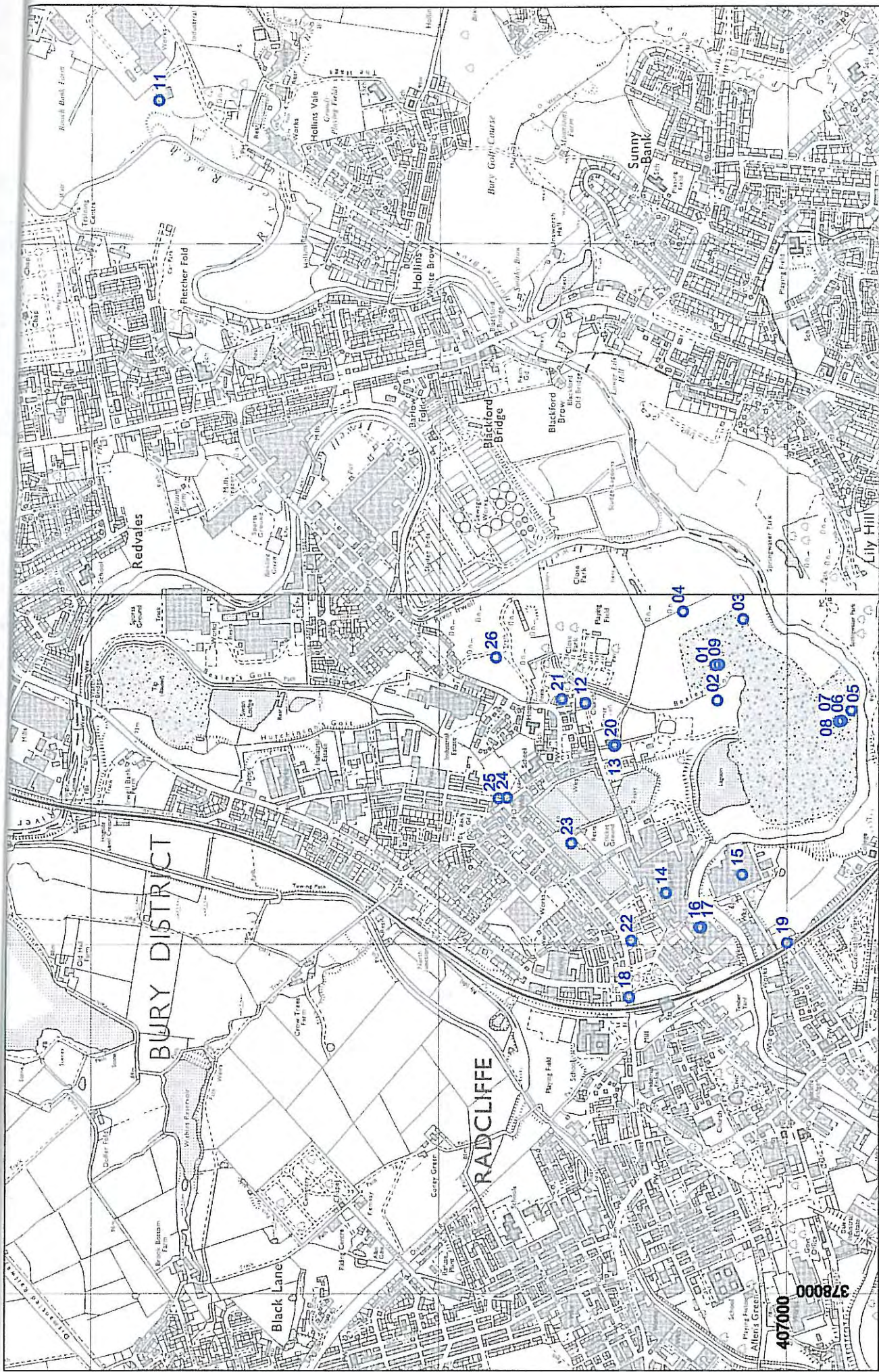
Figure 7: Ordnance Survey 25": 1 Mile Map, 1929



0 100m
Scale 1:4000 (approx)



Figure 8: Ordnance Survey 25": 1 Mile Map, 1937



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Scale 1:15000
 0 250m



Figure 9 : Gazetteer Sites Plan



Plate 1: Aerial view of the East Lancashire Paper Mill, showing the course of the River Irwell and Radcliffe E's (courtesy of GSMR F5-11, 27/03/1996)