

Dew Way, North Moor, Oldham

Greater Manchester

Archaeological Investigation



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Rok

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SUMMARY

Rok is carrying out a scheme of redevelopment of a site at Dew Way in the North Moor area of Oldham, Greater Manchester (centred on SD 91775 05342). The site is one of several areas that are to be redeveloped as part of the Gateways to Oldham Scheme, which aims to provide new and refurbished social housing on five sites across the borough.

As an initial stage in the development process, Oxford Archaeology North (OA North) carried an archaeological desk-based assessment of the site, which concluded that whilst there was little potential for the survival of any archaeological remains of prehistoric, Roman, medieval or post-medieval date, it was considered likely that the buried remains of ancillary buildings associated with the former West End Mills would survive *in-situ*. In the light of the conclusions drawn by the desk-based assessment, the Assistant County Archaeologist for Greater Manchester, who provides planning advice on archaeological issues to Oldham Council, recommended that a scheme of intrusive archaeological investigation of the site was carried out in advance of development.

In March 2010, OA North devised a Written Scheme of Investigation for the required programme of work, which allowed for the excavation of three trial trenches. These were targeted on features of interest depicted on historical mapping, and were intended to establish the presence or absence of buried remains of archaeological significance. Following the formal approval of the Written Scheme of Investigation, the evaluation trenching was carried out between July and August 2010.

Whilst excavation of two of the trenches revealed that buried remains of archaeological interest had been largely destroyed, the third trench contained the wellpreserved structural remains of a series of buildings depicted on historical mapping, and seemingly representing a sequence of power-related features associated with the former West End Mills. Following consultation with the Greater Manchester County Archaeologist, further excavation was carried out in this trench to allow a record of the remains to be compiled in advance of their ultimate destruction.

The archaeological investigation at Dew Way has allowed a detailed record to be generated of the buried remains pertaining to elements of the former West End Mills in Oldham. These structural remains represented buildings associated with functions ancillary to the principal manufacturing processes of spinning cotton yarn. Such buildings represented an important component of textile mill complexes, but are infrequently studied in any detail and are poorly represented in the current archaeological record. It is considered unlikely that the site will contain any further remains of archaeological interest.

ACKNOWLEDGEMENTS

Oxford Archaeology North (OA North) would like to thank Jim Morris, Chris Taylor and Simon Fretwell of Rok for commissioning and supporting the project. Thanks are also expressed to Norman Redhead and Andrew Myers of the Greater Manchester Archaeological Unit, for their advice and guidance.

The fieldwork was carried out by Graham Mottershead, assisted by Charlotte Vallance, Lewis Stitt and Phil Cooke. The report was compiled by Charlotte Vallance, and the illustrations were produced by Graham Mottershead and Marie Rowland. The report was edited by Ian Miller, who was also responsible for project management.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF PROJECT

- 1.1.1 Rok is carrying out a scheme of redevelopment of a site at Dew Way in Oldham, Greater Manchester (centred on SD 91775 05342). The site is one of several areas that are to be redeveloped as part of the Gateways to Oldham Scheme, which aims to provide new and refurbished social housing on five sites across the borough.
- 1.1.2 In November 2009, as an initial stage in the development process, Oxford Archaeology North (OA North) was commissioned to undertake a desk-based assessment of the site. This study concluded that whilst there was little potential for the survival of any archaeological remains of prehistoric, Roman, medieval or post-medieval date, it was considered likely that the buried remains of buildings associated with the former West End Mills would survive *in-situ*. The first element of the West End Mills complex had been erected on the north side of Chadwick Street by 1861. By 1873, the mill complex had been extended with the addition of a new mill block on the south side Chadwick Street, elements of which lie within the proposed development area.
- 1.1.3 In the light of the conclusions drawn by the desk-based assessment, the Assistant County Archaeologist for Greater Manchester, who provides planning advice on archaeological issues to Oldham Council, recommended that a scheme of intrusive archaeological investigation of the site should be carried out in advance of development. In accordance with this recommendation, the Local Planning Authority attached a condition to planning consent for the proposed scheme which required 'the implementation and completion of a programme of archaeological works to be undertaken in accordance with a written scheme of investigation approved by the Local Planning Authority.'
- 1.1.4 In March 2010, OA North was commissioned to devise an appropriate scheme of archaeological investigation (*Appendix 1*). This allowed for a targeted archaeological evaluation using machine-assisted trenching to identify and characterise the surviving evidence for the range of targets identified in the desk-based study; this required the excavation of three evaluation trenches. It was intended that the results would allow an informed decision to be reached regarding the need for further excavation to record any buried remains that may be destroyed during the course of development groundworks. Following the formal approval of this Written Scheme of Investigation, OA North was commissioned to undertake the programme of works.
- 1.1.5 During the course of the evaluation, buried structural remains of archaeological interest were exposed in one of the trenches. Following consultation with the Greater Manchester County Archaeologist, more detailed excavation was carried out in order to compile a complete record of the remains in advance of their ultimate destruction.

1.2 LOCATION, TOPOGRAPHY AND GEOLOGY

- 1.2.1 The study area (centred on SD 91775 05342) lies to the south-west of Dew Way in the North Moor area of Oldham (Fig 1). The proposed development area comprises a roughly rectangular shaped plot, bounded to the east by Oldham Way (the A627 heading southwards from Oldham), to the north by a supermarket, to the west by Dew Way and a car park associated with Anchor Mill, and to the south by Hilda Street (Plate 1). The study area occupies land at a height of c 170m above Ordnance Datum. The site was developed in the later nineteenth century as a reservoir associated with West End Mills; the retaining walls associated with this reservoir survive as extant structures along the northern and western parts of the study area.
- 1.2.2 Topographically, Oldham 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 (Countryside Commission 1998, 121). The underlying drift geology of the area comprises alluvial sand, gravel and till. The solid geology consists of the Pennine lower coal measures and Millstone Grit comprising sandstone, siltstone and mudstone (British Geological Survey 2007).



Plate 1: Recent aerial view of the study area, looking east

2. METHODOLOGY

2.1 INTRODUCTION

2.1.1 The fieldwork undertaken followed the method statement detailed in the approved Written Scheme of Investigation (*Appendix 1*), and was consistent with the relevant standards and procedures provided by the Institute for Archaeologists (IfA), and their code of conduct.

2.2 FIELDWORK

- 2.2.1 The uppermost levels were excavated by a machine fitted with a toothless ditching bucket. The same machine was then used to define carefully the extent of any surviving walls, foundations and other remains, after which all excavations were undertaken manually.
- 2.2.2 All information was recorded stratigraphically with accompanying documentation (plans, sections and photographs, both of individual contexts and overall site shots from standard view points). Photographic records were also maintained on special photographic *pro-forma* sheets.

2.3 FINDS

- 2.3.1 *Artefactual procedures:* all finds recovered during the excavations were lifted, cleaned, bagged and boxed in accordance with the United Kingdom Institute for Conservation (UKIC) *First Aid For Finds* (1998). Recovery and sampling programmes were in accordance with best practice (current IfA guidelines) and subject to expert advice.
- 2.3.2 *Environmental procedures:* a targeted programme of palaeo-environmental sampling was implemented in accordance with the Oxford Archaeology's *Environmental Guidelines and Manual* (OAU 2000), and in line with the English Heritage guidance paper on *Environmental Archaeology* (2001).

2.4 ARCHIVE

2.4.1 A full professional archive has been compiled in accordance with the Written Scheme of Investigation, and in accordance with current IfA and English Heritage guidelines (English Heritage 1991). The paper archive will be deposited with Oldham Local Studies and Archives; a copy of the digital archive will be deposited with the Greater Manchester Historic Environment Record on completion of the project.

3. BACKGROUND

3.1 HISTORICAL BACKGROUND

- 3.1.1 Up to the late eighteenth century, Oldham essentially comprised a scattering of small settlements spread across the moorland, with a population of approximately 12,000 (Tindall 1981). By 1901, this figure had increased to a staggering 137,000, as a direct consequence of the town's industrialisation (McNeil and Nevell 2000). In the words of one twentieth-century historian, 'if ever the Industrial Revolution placed a town firmly and squarely on the map of the world, that town is Oldham' (Frangopulo 1977, 154).
- 3.1.2 In his late eighteenth-century description of the area, Aiken (1795, 236-7) commented that Oldham 'is pleasantly situated on a high eminence commanding an extensive and delightful prospect, and is inhabited by a number of respectable families', noting that the manufacture of hats and strong fustians for the Manchester market were trades of particular importance locally. He also noted that 'a considerable number of machines are worked in the cotton and woollen manufactories', in water-powered mills situated on tributaries of the rivers Irk and Irwell. The movement of goods at this time was facilitated by a turnpike road from Manchester to Huddersfield, which took a route through Oldham, and another from Mumps that ran through Lees and Saddleworth to join the Huddersfield road at Standedge.
- 3.1.3 Oldham rose to dominate the region's cotton-spinning industry during the second half of the nineteenth century. In 1851, over 30% of Oldham's population was employed within the textile sector (Foster 1974). The workers in Oldham's cotton mills became noted for their productivity and, by 1841, they were earning the highest gross pay in Lancashire (Williams with Farnie 1992, 35). As a result of a mill building boom in the 1860s, the town supplanted Manchester and Bolton as the nation's principal cotton-spinning centre; a further boom in the 1870s cemented this position (McNeil and Nevell 2000, 29-30). Five textile mills (Anchor Mill, Gresham Mill, Ashley Mill, West End Mills and Highfield Mill) were operational within the immediate vicinity of the study area in the nineteenth and twentieth centuries.
- 3.1.4 A final massive expansion of the local industry occurred during the early Edwardian period, which saw the erection of mills of an unprecedented size by companies taking advantage of new laws on limited liability (Gurr and Hunt 1998, 7-8). The completion of Elk Mill in 1928, the last mill to be built in Oldham, represented the peak of the town's spinning industry; the closure of Elk Mill in 1998 represented the end of cotton spinning in the town.
- 3.1.5 Since the mid-twentieth century, Oldham has seen the demise of its textile industry, and the troubled integration of new cultural traditions and religions. With respect to the ensuing depression that followed Oldham's slump in textile manufacture, one author remarked that 'when the fall finally came, it was the town that crashed the hardest' (Hyde *et al* 2004,117).

3.2 WEST END MILL

- 3.2.1 The study area is dominated by the footprint of West End Mills, a sizeable cotton-spinning factory for which there is little available documentary evidence. However, it seems that the first element of the mill complex was built by John Robinson & Son, occupying a site on the north side of Chadwick Street, and beyond the boundary of the present study area; it was erected sometime between 1852 and 1861 (Gurr and Hunt 1998, 106). This mill was extended in 1871, and a new block was erected on the south side of Chadwick Street in 1873, ancillary elements of which lie within the present study area (Plate 2). The whole mill complex was purchased by the West End Mills Co Ltd in 1873.
- 3.2.2 In 1878, Woolstenhulme & Rye, a local firm of steam-engine manufacturers, supplied the West End Mill Company with a new 800hp engine. This firm began producing steam engines for textile mills in the 1860s, although their principal period of production was in the 1870s and 1880s. However, the firm encountered financial difficulties during the later 1880s, and was liquidated in 1888. An additional steam engine, an 800hp model manufactured by George Saxon, was installed at the mill in 1885 (*ibid*).
- 3.2.3 The West End Mill Company Ltd on Chadwick Street is listed in a trade directory for 1891, which accredits the mill with housing 118,540 spindles to produce 208/348 twist and 328/508 weft yarns (Worrall 1891, 145). West End Mills (Cotton) are named on the Ordnance Survey first edition 1:2500 map of 1894, which was surveyed in 1891 (Plate 2). Those elements of the mill complex that lie within the study area included a range of buildings fronting onto Chadwick Street, a reservoir to supply the mill's steam-power plant, and another range of buildings along the south-eastern side of the reservoir that seemingly included a chimney. The latter range of buildings apparently comprised six adjoining rooms of varying lengths, although that at the southern end was also slightly narrower than the others.
- 3.2.4 The mill complex was extended again in 1901 and, in 1906, Buckley & Taylor supplied the West End Mill Company with a new 1200hp steam engine (Gurr and Hunt 1998, 106). It is unknown precisely where this new engine was installed, although it is likely to have been in the main part of the mill complex on the northern side of Chadwick Street.
- 3.2.5 The detail provided by the Ordnance Survey second edition 25": 1 mile map of 1909 (Plate 3) shows the mill complex to have been remodelled slightly relative to 1894. In particular, the range of buildings along the south-eastern side of the reservoir had been extended slightly to the north with the addition of a new room adjacent to the chimney, and the room at the southern end of the block had been widened, suggesting an episode of remodelling. The resultant layout of the buildings is replicated on subsequent revisions of Ordnance Survey mapping.
- 3.2.6 The mill ceased production in 1928, and all of the buildings except a warehouse were demolished; the warehouse was destroyed by fire in 1973.

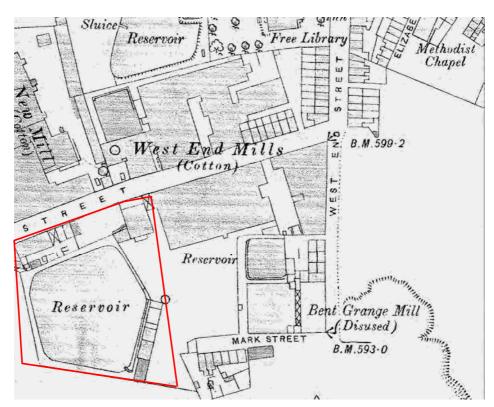


Plate 2: Extract from the Ordnance Survey map of 1894

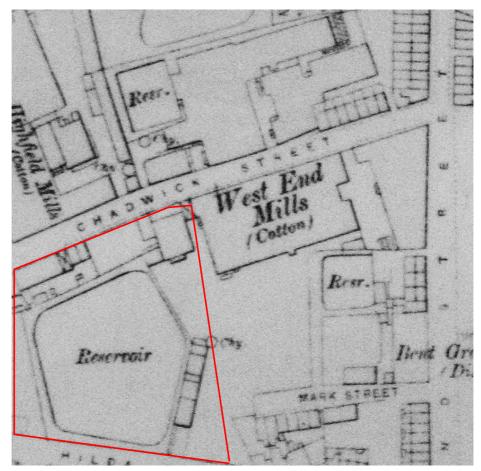


Plate 3: Extract from the Ordnance Survey map of 1909

4. RESULTS

4.1 INTRODUCTION

4.1.1 In the first instance, the archaeological investigation comprised the excavation of three trenches, targeted on structures depicted on historical mapping, in accordance with the approved Written Scheme of Investigation (*Appendix 1*). The trenches were intended primarily to establish whether any buried remains of archaeological significance survived within the study area.

4.2 **TRENCH 1**

- 4.2.1 Trench 1 was aligned east/west across the northern part of the study area (Figs 2 and 3). The trench measured 20 x 2m, and was excavated to a maximum depth of 0.75m below the modern ground surface. No buried remains were exposed within the excavated trench, and no artefacts were recovered. The results obtained from the evaluation demonstrated that the northern part of the study area has no potential to contain any remains of archaeological interest.
- 4.2.2 A deposit of mid-brown boulder clay, clearly representing the natural geology,
 - was exposed along the base of the excavated trench, at a depth of 0.75m. The clay was overlain by a thick deposit of mixed rubble, presumably representing the demolition of West End Mill. The demolition rubble appeared to have been cut by a narrow linear trench, which was aligned broadly northwest/south-east across the western end of the trench; investigation of this feature concluded that it was a modern service trench. The service trench was filled with demolition rubble. clearly of modern origin, and was sealed beneath a thin layer of topsoil that formed the current ground surface (Plate 4).



Plate 4: Looking east along Trench 1

4.3 **TRENCH 2**

- 4.3.1 Trench 2 was aligned east/west across the north-eastern corner of the excavation area (Fig 2). It measured 15 x 10m, and was excavated to a maximum depth of 1.5m. The trench was intended to investigate two buildings situated adjacent to the main mill block, and immediately to the north-east of the reservoir, as shown on the Ordnance Survey map of 1894 (Plate 2). Whilst some structural remains were encountered in the trench, these were fully recorded during the course of the evaluation, and did not merit any further investigation; no artefacts were recovered from the excavated trench.
- 4.3.2 A deposit of mid-brown clay (215), representing the natural geology, was exposed at the base of the trench. The natural geology was cut in the western part of the trench by a north-west/south-east-aligned wall (211) of stone construction, the location of which corresponded to the position of the north-eastern wall of the reservoir (Fig 4). Wall 211 was exposed for a length of 2.80m and to a depth of 0.5m. Situated along the upper course of masonry was a brick wall (210), which was probably part of the same structure as wall 211. Wall 210 comprised hand-made, mould-thrown bricks, each measuring 230 x 110 x 70mm, bonded with a lime-based mortar. It is probable that walls 211 and 210 represented the surviving elements of the mill reservoir.
- 4.3.3 The western side of wall **211** was abutted by a thick deposit (**214**) of compacted clay, which contained frequent inclusions of stone and brick fragments (Fig 4). Deposit **214** is likely to have represented an impermeable layer, intended to prevent water seepage from the reservoir.
- 4.3.4 The eastern side of wall **210** was abutted by another brick wall (**209**), which similarly comprised hand-made, mould-thrown bricks, bonded with a lime-based mortar (Plate 5). The wall was exposed for a length of 6m and measured 0.5m wide, incorporating two strings of bricks. The bottom two courses of the wall stepped out towards the south-east, representing an offset foundation. This incorporated the remains of an iron pipe, aligned broadly east/west, which had almost certainly been connected originally with the reservoir.
- 4.3.5 Built into the fabric of walls **210** and **209**, thereby indicating it to be of a contemporary date, was a flagged floor (**208**). Floor **208** was exposed across an area measuring $5.2 \times 1.2m$, but extended beyond the north-western edge of the excavated trench (Plate 6). Floor **208** almost certainly represented the internal floor of a small building depicted on historical mapping (Plate 2).
- 4.3.6 Walls 207 and 206 were exposed in the south-east corner the trench, and appeared to be of a single build. The exposed dimensions of wall 207 measured 2.8 x 0.50m, and wall 206 measured 2 x 0.24m. Both walls comprised hand-made, mould-thrown bricks, each measuring 240 x 115 x 80mm, and bonded with a lime-based mortar. These walls represented the corner of another small building depicted on historical mapping.
- 4.3.7 The latest feature in Trench 2 was a large intrusion (*212*), which had been cut through reservoir walls *211* and *210*. The feature was filled with a deposit of modern rubble (*213*) containing large fragments of concrete and rebar.



Plate 5: Looking north-east across Trench 2, showing walls 209, 207 and 206



Plate 6: Walls 209, 210, 211, flagged surface 208, and cast-iron pipe exposed in Trench 2

4.4 **TRENCH 3**

4.4.1 Trench 3 was aligned approximately north-east/south-west across the southeastern part of the study area (Figs 2 and 3). The trench measured 40 x 10.50m, and was excavated to a maximum depth of 2.72m (173.05m aOD). It was targeted on a range of buildings associated with West End Mill, as depicted on historical mapping (Plates 2 and 3). The well-preserved footprint of this building range was exposed, and was seen to incorporate six distinct rooms, with a combined length of 37.25m and a width of 7.50m (Plate 7). In addition, the remains of a chimney were revealed abutting the north-eastern corner of the building range; the location of the chimney corresponded with the position of a circular feature depicted on historical mapping (Plate 2).



Plate 7: Looking south-west along Trench 3.

4.4.2 A deposit of mid-brown sandy clay containing abundant small rounded stones, representing the natural geology, was exposed at the base of the excavated trench at a depth of 1.07m below the modern ground surface. The earliest structural remains revealed in the trench comprised the foundations of the exterior walls (303) of the building range, the top of which were exposed at a depth of 0.52m below the modern ground surface; the north-western component also probably formed a structural element of the reservoir. The walls were cut into the natural geology, and were all of stone construction. The stone elements of the wall survived to a maximum height of 0.40m, and comprised two courses, including a single course of foundations. Each of the component stone blocks above the level of the contemporary ground surface were of a uniform size, and the outer edges of each block was chamfered and the faces were rusticated; the blocks forming the foundation course were not dressed, and varied in size.



Plate 8: Looking south-east across Trench 3, showing Rooms 1-4



Plate 9: Looking south-west across the southern end of Trench 3, showing Rooms 1 and 2

- 4.4.3 In many places along wall **303**, hand-made bricks survived *in-situ* atop the stone foundation courses, suggesting that the demolished buildings had been largely of brick construction. In addition, a slightly wider string course of bricks survived along parts of the internal edge of the wall. These bricks carried the original flagstone floor, the remains of which were visible in parts.
- 4.4.4 Rooms 2 and 3: the central section of the building range was divided into two rooms (Rooms 2 and 3) by a partition (330) largely of stone construction (Plate 10). Room 2 measured 10.72 x 6.m, and Room 3 measured 6.85 x 5.50m (Fig 5). Access between these rooms was afforded via a 1.60m wide doorway situated at the north-western end of partition 330 (Fig 5). This doorway was blocked subsequently by a three-course wide wall (309) composed of hand-made bricks (Plate 10).



Plate 10: Wall 330 with blocked entrance exposed in Trench 3, looking east

- 4.4.5 A linear feature (308) cut into the natural clay geology and aligned northeast/south-west was exposed between Room 2 and Room 3 (Fig 5). Feature 308 contained abundant fragments of brick and small stones in a matrix of black clayey loam (307). It is likely that 308 represented a drain running under the flagstone flooring of Rooms 2 and 3. Another drain (326), constructed from hand-made bricks with a stone capping, was exposed immediately to the south-east of wall 303, and outside the former building. This did not continue into the building, and may have been connected to downpipes from the roof gutters.
- 4.4.6 In the centre of Room 2 was a single, roughly dressed stone block (305), measuring 0.60 x 0.60m. The upper surface of the block retained a ring of iron staining, indicating that it had been the foundation base for a cast-iron column. A row of three, regularly spaced, dressed stone blocks (306, 323 and 324)

were also exposed in Room 3 (Fig 5). The central block (305) was similarly intended as a foundation for a cast-iron column, whilst the blocks on either side (306 and 324) each incorporated four cast-iron bolts. These had been set into the stone blocks with molten lead, and may have formed the bases for small machines.

4.4.7 A fourth, linear-shaped stone block (325) with a wide V-shaped channel incised along its centre was exposed in the northern part of Room 3 (Plate 11). This may have acted as a drain, which would have originally run along the south-eastern side of the two machines located upon stone blocks 306 and 328.



Plate 11: Wall 303, cladding 310, stone block 325 and drain 308, exposed in Trench 3

- 4.4.8 **Room 4:** this was the narrowest room in the building complex, measuring 5.60 x 2.20m (Plate 12). It incorporated a surface of hand-made bricks (**311**), which was set at a level slightly lower than the floors Rooms 2 and 3. The bricks were set on their side with no evidence for mortar bonding. The surface had a notable slope towards the reservoir to the west. The internal elevations of the external walls (**303**) were clad with hand-made bricks (**310**), which had been laid on top of surface **311**, suggesting that they were a later addition. A ceramic drain sat within the south-west wall of the room, which appeared to have been connected with stone **325** in Room 3.
- 4.4.9 **Room 5:** this large room measured 7.60 x 5.60m, which had seemingly been partitioned subsequently with the insertion of stone partition walls (**313** and **314**). Both partitions were roughly built with little structural integrity, although wall **314** had clearly been keyed into the north-western face of wall (**303**). At the north-western end of **313** was a possible doorway, which measured approximately 2m wide, although it had been largely destroyed by the construction of a modern service trench. The doorway had been blocked subsequently with a wall (**327**) composed of hand-made bricks.



Plate 12: Looking east along Rooms 4 and 5 exposed in Trench 3



Plate 13: Looking north-east along Trench 3, showing Rooms 5 and 6

- 4.4.10 Unlike Rooms 2 and 3, the flagstone floor in Room 5 had not been founded directly onto the natural clay. Instead, a disturbed mixed clay floor (321) was exposed, into which a large, north/south-aligned linear feature (317) had been cut at the northern end of the room. Feature 317 was filled with a homogeneous deposit of dark loam (318). The intended function of feature 318 remains uncertain, although it may have represented the route of an original flue to chimney 319 (Section 4.4.17 below), which was replaced subsequently.
- 4.4.11 A stub of a wall (312) composed of hand-made bricks continued northeastwards from the south-eastern end of wall 313. Wall 312 ran parallel to external wall 303, but was separated from it by a gap of 180mm, which was filled with a loose deposit of ash and clinker. Adjacent to wall 312 were two stone pads, both measuring 0.3 x 0.3m. These appeared to respect a 0.80m wide entrance, which afforded access to Room 5 from the yard to the rear of the mill block (Plate 14), and may thus have represented the foundations for a wooden door frame. The doorway had been used subsequently as a route for a modern service pipe, which had presumably been laid following the demolition of the building (Plate 14).



Plate 14: Possible doorway exposed along eastern wall 303 in Room 5

4.4.12 An indication for Room 5 having originally contained a flagstone floor was provided by a brick string course running along the inside of wall **303**. However, the floor appeared to have been lowered subsequently, a remodelling which may have been associated with the construction of partition walls **313** and **314**.

4.4.13 *Room 6:* this room measured 6.30 x 3.30m, and comprised stone walls *316* and *334*, which formed the northern end of the building range (Plate 15). It was situated adjacent to a chimney (*319*), suggesting that Room 6 may have been intended as a boiler or engine room. However, walls *316* and *334* clearly represented a complete rebuilding of the room, suggesting a change in its original function. It seems likely that this may have been associated with the remodelling of the building between 1894 and 1909 noted on the historical mapping (*Section 3.2.5 above*). The build of these walls was considerably rougher than that in the other surviving stone walls of the building range. In the north-east corner of the room, wall *329* curved round to respect chimney *319*. Elements of this wall comprised hand-made bricks, each measuring 240 x 115 x 70mm.



Plate 15: Looking north-west along Rooms 5 and 6, showing stone walls 329 and 316

- 4.4.14 Room 6 was filled with a deposit (322) of mixed clay and rubble, presumably representing the demolition of the original building prior to its remodelling. Deposit 322 was overlain in the central part of the room by a surface (315) that measured 3.15 x 1.79m and 50mm thick and comprised eight stone slabs, each with an incised decoration, mimicking tile patterns, and perhaps intended to form a non-slip surface (Plate 16). Surface 315 was level with the upper surviving courses of walls 316 and 334, creating a floor that was at a higher level to those in any of the other rooms.
- 4.4.15 Situated a short distance to the north of surface *315*, and built into wall *316*, was a single iron bolt. This may have represented a tie-down bolt for an item of machinery. No other physical evidence for fixtures or fittings survived in this room.



Plate 16: Looking east across Rooms 5 and 6, showing surface 315 and chimney 319

- 4.4.16 A brick-built structure (*319*) exposed partially in the north-eastern corner of the excavated area almost certainly represented the remains of a chimney; the position of this structure corresponded with the circular feature situated adjacent to the north-eastern corner of the building range depicted on historical mapping (Plate 2). The entire footprint of the chimney could not be exposed as it continued beneath a public footpath to the east of the excavation area. The exposed remains comprised a single course of hand-made bricks.
- 4.4.17 **Room 1:** this was the latest element of the building complex, its construction resulting in the truncation of the original south-western end of the building and external stone-capped drain (**304**). The room measured 3.28 x 5m, and was 2m deep (Plate 17). The main structure consisted of a three-course wide brick wall (**301**), which comprised machine-pressed frogged bricks, bonded with a very dark grey mortar, indicative of a late nineteenth- or early twentieth-century construction date.
- 4.4.18 The room contained a concrete floor, into which were cut two brick-lined square pits with a central dividing wall of brick construction. This may have housed a gas/diesel engine, or a pump intended to supply the boilers of fire-sprinkler system with water from the reservoir.
- 4.4.19 Three modern intrusions were present in Trench 3. Two of these were drains, running approximately north-west/south-east (Plate 18) and east/west across the trench. The third was a possible trial pit, exposed in Room 5.



Plate 17: Looking east across Room 1, showing stone capped drain 304



Plate 18: Modern intrusion running north-west/south-east across Room 3

4.5 FINDS

- 4.5.1 A very small assemblage of 12 artefacts was recovered from the archaeological investigation. The bulk of the assemblage dates to the nineteenth century, with lesser amounts dating to the twentieth century. Pottery (nine fragments) dominated the assemblage, with lesser amounts of clay tobacco pipe (1), and a fragment of ceramic building material (1). The bulk of the assemblage was derived from demolition layers in Area 2 and Area 3 and, as such, is considered as unstratified. Most of the objects were domestic in function and of relatively low status.
- 4.5.2 In conclusion, the small finds assemblage is of limited archaeological significance. In all probability, the finds represent the dumping of domestic refuse on the site during the later nineteenth and twentieth centuries.

5. DISCUSSION

5.1 INTRODUCTION

- 5.1.1 In total, three trenches targeted on structural elements of the nineteenthcentury West End Mills complex were excavated during the archaeological investigation at Dew Way. The results obtained from the excavation of Trench 1 demonstrated that no archaeological remains survived in-situ along the northern edge of the site. Similarly, the former buildings in the north-eastern corner of the site, exposed in Trench 2, had been largely destroyed, leaving only fragmentary remains; these buildings can be identified with structures depicted on the Ordnance Survey map of 1894. The intended function of these buildings remains unresolved, although the absence of any evidence for internal fixtures and fittings, such as sockets cut into the flagstone floor to house machinery, suggest that it may have been used for storage purposes rather than for manufacturing processes. The width of wall 209 suggests that it had been designed to have a load-bearing capacity, and is likely to have been more than a single storey in height. It also seems likely that the excavated element incorporated an entrance, at least 1.5m wide, represented by a gap in wall 209 that was infilled with flagstones 208. This entrance opened out into the yard adjacent to the reservoir at the rear of the mill block, and was potentially wide enough to permit access by horse-drawn carts.
- 5.1.2 The excavation of Trench 3 exposed the complete footprint of a range of buildings, which had a period operation spanning the later nineteenth and early twentieth centuries. The position of the excavation walls largely correspond to structures depicted on the sequence of Ordnance Survey mapping, with the exception of the late addition of Room 1 and the small structure added to the north-eastern end of the building as shown on twentieth-century mapping (Plate 3); physical evidence for this latter building was lacking entirely, suggesting that it had been an insubstantial structure. Six rooms were identified within the building, which appeared to incorporate three distinct chronological phases of development. A description of these development phases is outlined below.

5.2 PHASE 1

- 5.2.1 This initial phase comprised the construction of the building range, represented by the erection of exterior wall **303** and the series of stone partitions to create six rooms. The western section of wall **303** formed an integral element of the mill reservoir, suggesting that the building was constructed at the same time as the reservoir, together representing a significant planned expansion of the West End Mill complex.
- 5.2.2 Chimney **319** similarly appeared to have been an original feature, contemporary with the reservoir and adjacent building range. The presence of this chimney implies strongly that the excavated building had originally contained its own steam-power plant, indicating that it had also housed

powered machinery. The type of machinery that may have been installed, and the intended function of the building, could not be ascertained with confidence from the evidence provided by the surviving remains, although its location on the periphery of the mill complex suggests that it was associated with ancillary processes. The building may have been used, for instance, as an engineers' and mechanics' workshop, although firm evidence is lacking. It is clear from the remains of the cast-iron columns that were identified in Rooms 2 and 3, however, that elements of the building range, if not the entire block, was at least two-storeys in height. The stone blocks in Room 3 also suggest that this room housed powered machinery.

5.2.3 Whilst the surviving physical remains provided insufficient evidence to allow the various components of the putative steam-power plant to be identified with confidence, it would seem possible that this had been located at the northern end of the building range, in Rooms 5 and 6, adjacent to the chimney. This may have housed a small steam engine and associated boiler, although again firm evidence was lacking. It is also likely that Room 1, at the opposite end of the building, contained large machinery. The physical relationship of this room with drain *304* raises the possibility that it may have housed a pump that delivered water from the reservoir to the rest of the mill complex; water will have been required to supply the steam engine for condensing purposes, the steam-raising plant, and also for the fire-sprinkler system, which were universally installed in cotton mills during the later nineteenth century.

5.3 **PHASE 2**

5.3.1 The mill was remodelled during the final years of the nineteenth century, or early years of the twentieth century; the remodelling had been completed by 1909, based on the evidence provided by Ordnance Survey mapping. This seemingly included the remodelling of the putative engine room at the north-eastern end of the building complex, and the room at the southern western end. This remodelling perhaps allowed for the replacement of the steam engine at the northern-eastern end with a gas or diesel internal combustion engine, which may have been installed at the south-western end. At broadly this date, internal partitions *313* and *314* were added in Room 5, representing a change of function in this part of the building.

5.4 PHASE 3

5.4.1 At a slightly later date in the early twentieth century, Room 4 was lined internally with bricks. The rationale for this addition is unclear, although it may have been associated with the use of water in the room; a ceramic pipe that led off from run-off **325** continued directly into Room 4, and seemingly discharged onto the floor of the room. In addition, the brick surface forming the floor in the room had a clear downward slope towards the reservoir, and a layer of slate had been placed between the brick-clad walls and the floor surface, probably to form an impervious membrane.

6. CURATION AND CONSERVATION

6.1 **RECIPIENT MUSEUM**

6.1.1 Oldham Local Studies and Archives has been nominated as the ultimate repository for the archive upon completion of the project:

84 Union Street Oldham OL1 1DN Tel: 0161 770 4654

6.2 CONSERVATION

6.2.1 There are no conservation requirements.

6.3 STORAGE

6.3.1 The complete project archive, which will include written records, plans, photographs, and artefacts, will be prepared for long-term storage following the guidelines set out in *Environmental standards for the permanent storage of excavated material from archaeological sites* (UKIC 1984, Conservation Guidelines 3), and *Guidelines for the preparation of excavation archives for long-term storage* (Walker 1990).

6.4 **DISSEMINATION**

6.4.1 The complete results obtained from the archaeological investigations carried out at Dew Way as part of the Gateways to Oldham Project are incorporated in this final excavation report. In addition to Rok, copies of the report will be forwarded to Oldham Local Studies and Archives, Oldham Metropolitan Borough Planning Department, and the Greater Manchester Historic Environment Record.

7. CONCLUSION

7.1 CONCLUSION

- 7.1.1 The archaeological investigation at Dew Way has allowed a detailed record to be generated of the buried remains pertaining to elements of the former West End Mills in Oldham. These structural remains represented buildings associated with functions ancillary to the principal manufacturing processes of spinning cotton yarn. Such buildings represented an important component of textile mill complexes, but are infrequently studied in any detail and are poorly represented in the current archaeological record.
- 7.1.2 The archaeological investigation at Dew Way has allowed a detailed record of the buried remains on the site to be compiled. It is considered unlikely that the site will contain any further remains of archaeological interest.

BIBLIOGRAPHY

CARTOGRAPHIC AND PRIMARY SOURCES

Maps

Butterworth, Map of Oldham, 1817

Dunn, Map of Oldham, 1829

Map of Oldham, 1804

Ordnance Survey First Edition 6":1 mile, 1844, Sheet 97

Ordnance Survey First Edition 25":1 mile, 1894, Sheets 97.5 and 97.6

Ordnance Survey 25":1 mile, 1909, Sheet 97.5 and 97.6

Ordnance Survey 25":1 mile, 1922, Sheet 97.5 and 97.6

Ordnance Survey 25":1 mile, 1932, Sheet 97.5 and 97.6

Ordnance Survey 1:1250, 1953

Yates, W, 1786 Map of the County Palatine of Lancaster

SECONDARY SOURCES

Aiken, J, 1795 A Description of the Country from Thirty to Forty Miles Round Manchester, London

Bateson, H, 1949 A Centenary History of Oldham, Oldham

British Geological Survey, 2007, Geoindex, www.bgs.ac.uk/geoindex/index.htm, accessed 12 November 2009

Brownbill, J, and Farrer, William, 1911 A History of the County of Lancaster, 5, London

Countryside Commission, 1998 Countryside Character; the Character of England's Natural and Manmade Landscape, vol 2: the North West, Cheltenham

English Heritage, 2006 Management of Research Projects in the Historic Environment, London

Foster, J, 1974 Class Struggle and the Industrial Revolution - Early Industrial Capitalism in Three English Towns, London

Frangopulo, NJ, 1977 Tradition in Action: The Historical Evolution of the Greater Manchester County, Wakefield

Gurr, D, and Hunt, J, 1998 The Cotton Mills of Oldham, 3rd edn, Oldham

Hyde, M, O'Rourke, A, and Portland, P, 2004 Around the M60: Manchester's Orbital Motorway, Altrincham

Institute for Archaeologists, 2008 Standard and Guidance for Archaeological Deskbased Assessments, Reading

McNeil, R, and Nevell, M, 2000 A Guide to the Industrial Archaeology of Greater Manchester, Manchester

Tindall, A, 1981 Oldham - Areas of Archaeological Interest, unpubl rep by GMAU

Williams, M, and Farnie, DA, 1992 Cotton Mills of Greater Manchester, Preston

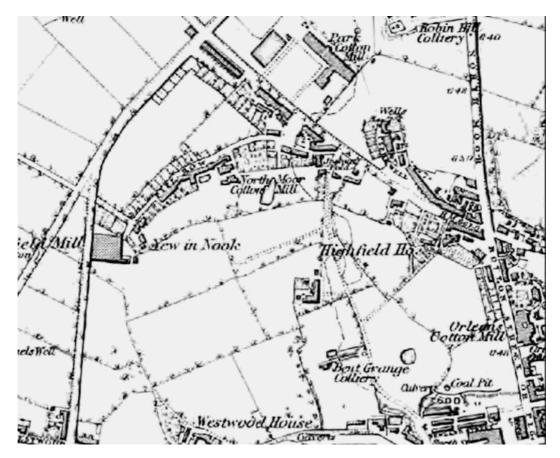
APPENDIX 1: WRITTEN SCHEME OF INVESTIGATION

March 2010

Oxford Archaeology North

DEW WAY,

OLDHAM



ARCHAEOLOGICAL EVALUATION

WRITTEN SCHEME OF INVESTIGATION

Proposals

The following Written Scheme of Investigation is offered in response to a request from Mr J Wilmot, of Rok Construction, for an archaeological evaluation in advance of the proposed development of land at Dew Way in Oldham.

1 BACKGROUND

1.1 CIRCUMSTANCES OF PROJECT

- 1.1.1 Rok Construction is carrying out a scheme of redevelopment of a site at Dew Way in Oldham, Greater Manchester (centred on SD 91775 05342). The site is one of several areas that are being considered for redevelopment as part of the Gateways to Oldham Scheme, which aims to provide new and refurbished social housing on five sites across the borough.
- 1.1.2 In November 2009, as an initial stage in the development process, Drivers Jonas LLP, acting on behalf of Rok Construction, commissioned Oxford Archaeology North (OA North) to undertake an archaeological desk-based assessment of the site. This study concluded that whilst there was little potential for the survival of any archaeological remains of prehistoric, Roman, medieval or post-medieval date, it is likely that the buried remains of buildings associated with the former West End Mills will survive *in-situ*.
- 1.1.3 The first element of the West End Mills complex had been erected on the north side of Chadwick Street by 1861. By 1873, the mill complex had been extended with the addition of a new mill block on the south side Chadwick Street, elements of which lie within the proposed development area. These elements are shown on the Ordnance Survey first edition 25": 1 mile map of 1894, and included a reservoir to supply the mill's steam-power plant, a range of buildings along the south-eastern side of the reservoir that seemingly included a chimney, and another range of buildings fronting onto Chadwick Street.
- 1.1.4 In the light of the conclusions drawn by the desk-based assessment, the Assistant County Archaeologist for Greater Manchester, who provides planning advice on archaeological issues to Oldham Council, recommended that a scheme of intrusive archaeological investigation of the site is carried out in advance of development. In accordance with this recommendation, a condition has been attached to planning consent which states:

'No development should be undertaken until the applicant has secured the implementation and completion of a programme of archaeological works to be undertaken in accordance with a written scheme of investigation approved by the Local Planning Authority.'

1.1.5 This document provides the required written scheme of investigation, and allows for a targeted archaeological evaluation using machine-assisted trenching to identify and characterise the surviving evidence for the range of targets identified in the desk-based study. The results obtained from this phase of works will allow an informed decision to be reached regarding the need for further excavation to record buried remains that may be destroyed by the proposed development.

1.2 OXFORD ARCHAEOLOGY

- 1.2.1 Oxford Archaeology is an educational charity under the guidance of a board of trustees with over 35 years of experience in archaeology, and can provide a professional and cost-effective service. We are the largest employer of archaeologists in the country (we currently have more than 300 members of staff), and can thus deploy considerable resources with extensive experience to deal with any archaeological obligations you or your clients may have. OA is an Institute for Archaeologists Registered Organisation (No 17). We have offices in Lancaster and Oxford, trading as Oxford Archaeology North (OA North) and Oxford Archaeology South (OA South) respectively, enabling us to provide a truly nationwide service. All work on the project will be undertaken in accordance with relevant professional standards, including:
 - If A's Code of Conduct (1999); Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology (1999); Standard and Guidance for Archaeological Evaluations (1999);
 - English Heritage's *Management of Archaeological Projects*, 1991;
 - The European Association of Archaeologists *Principles of Conduct for Archaeologists Involved in Contract Archaeological Work* (1998).
- 1.2.1 OA North has unrivalled experience in the assessment, evaluation and excavation of former industrial sites, particularly in the context of Greater Manchester. We have an extensive portfolio of excavating the buried remains of former textile mills in Manchester, including Salvins' Factory, New Islington Mill, and Waller's Mill as part of the New Islington Millennium Village, Moore's Mill on the New Islington Wharf development, Peter Drinkwater's Mill and Shepley Street Mill in Piccadilly, and the Bengal Street Mill in Ancoats to name but a few.

2 AIMS AND OBJECTIVES

2.1 ACADEMIC AIMS

2.1.1 The main research aim of the investigation, given the commercial nature of the development, will be to establish the presence or absence of buried archaeological remains on the site and, if present, characterise the level of preservation and significance, and provide a good understanding of their potential.

2.2 **OBJECTIVES**

- 2.2.1 The objectives of the project may be summarised as follows:
 - to determine the presence, character, and extent of the buildings in the northern part of the site, shown on the Ordnance Survey map of 1894;
 - to determine the presence, character, and extent of the buildings in the north-eastern corner of the site, shown on the Ordnance Survey map of 1894;
 - to determine the presence, character, and extent of the range of buildings in the south-eastern part of the site, shown on the Ordnance Survey map of 1894;
 - to inform a decision as to whether further archaeological investigation will be required in advance of development ground works.

3 METHOD STATEMENT

3.1 The following work programme is submitted in line with the aims and objectives summarised above, and in accordance with the requirements of the Greater Manchester County Archaeologist.

3.2 EVALUATION

- 3.2.1 *Trench Rationale:* it is proposed that the site be investigated initially via three targeted trenches:
- 3.2.2 *Trench 1:* will be placed along the north boundary of the site, and will measure 20 x 5m. The trench will be targeted on a range of buildings situated along the southern side of Chadwick Street.
- 3.2.3 *Trench 2*: will be placed in the north-eastern corner of the site, and will measure 15 x 10m. The trench will be targeted on two buildings adjacent to the main mill block;
- 3.2.4 *Trench 3:* will be placed in the south-eastern part of the site, and will measure approximately 40 x 10m. The trench will be targeted on the range of buildings situated immediately adjacent to the former reservoir, including a circular feature that may represent the position of a chimney;
- 3.2.5 *General Methodology:* excavation of the modern ground surface, which comprises tarmac externally and concrete internally, will be undertaken by a machine of appropriate power using a toothed bucket and, where necessary a breaker. The uppermost levels of overburden/demolition material will then be removed using the same machine, but fitted with a toothless ditching bucket, to the top of the first significant archaeological level. The work will be supervised closely by a suitably experienced archaeologist. Spoil from the excavation will stored adjacent to the trench, and will be backfilled upon completion of the archaeological works.
- 3.2.6 Machine excavation will then be used to define carefully the extent of any surviving foundations, floors, and other remains. Thereafter, structural remains will be cleaned manually to define their extent, nature, form and, where possible, date. It should be noted that no archaeological deposits will be entirely removed from the site. If the excavation is to proceed below a depth of 1.2m, then the trenches will be widened sufficiently to allow the sides to be stepped in.
- 3.2.7 All information identified in the course of the site works will be recorded stratigraphically, using a system adapted from that used by the Centre for Archaeology Service of English Heritage. Results of the evaluation will be recorded on *pro-forma* context sheets, and will be accompanied with sufficient pictorial record (plans, sections and both black and white and colour photographs) to identify and illustrate individual features. Primary records will be available for inspection at all times.

- 3.2.8 **Context Recording:** all contexts will be recorded using *pro-forma* sheets, and details will be incorporated into a Harris matrix. Similar object record and photographic record *pro-formas* will be used. All written recording of survey data, contexts, photographs, artefacts and ecofacts will be cross-referenced from *pro-forma* record sheets using sequential numbering.
- 3.2.9 *Photography:* a full and detailed photographic record of individual contexts will be maintained and similarly general views from standard view points of the overall site at all stages of the evaluation will be generated. Photography will be undertaken using 35mm cameras on archivable black and white print film as well as colour transparency, and all frames will include a visible, graduated metric scale. Extensive use of digital photography will also be undertaken throughout the course of the fieldwork for presentation purposes. Photographs records will be maintained on special photographic *pro-forma* sheets.
- 3.2.10 *Planning:* the precise location of the evaluation trenches, and the position of all archaeological structures encountered, will be surveyed by EDM tacheometry using a total station linked to a pen computer data logger. This process will generate scaled plans within AutoCAD, which will then be subject to manual survey enhancement. The drawings will be generated at an accuracy appropriate for 1:20 scale, but can be output at any scale required. Sections will be manually drafted as appropriate at a scale of 1:10. All information will be tied in to Ordnance Datum.
- 3.2.11 Human remains are not expected to be present, but if they are found they will, if possible, be left *in situ* covered and protected. If removal is necessary, then the relevant Home Office permission will be sought, and the removal of such remains will be carried out with due care and sensitivity as required by the *Burials Act 1857*.
- 3.2.12 Any gold and silver artefacts recovered during the course of the excavation will be removed to a safe place and reported to the local Coroner according to the procedures relating to the Treasure Act, 1996.
- 3.2.13 *Finds policy:* finds recovery and sampling programmes will be in accordance with best practice (following current Institute for Archaeologists guidelines) and subject to expert advice in order to minimise deterioration. OA North employs in-house artefact and palaeoecology specialists, with considerable expertise in the investigation, excavation, and finds management of sites of all periods and types, who are readily available for consultation. Finds storage during fieldwork and any site archive preparation will follow professional guidelines (UKIC). Emergency access to conservation facilities is maintained by OA North with the Department of Archaeology, the University of Durham. Samples will also be collected for technological, pedological and chronological analysis as appropriate. OA North employs palaeoecology and soil micromorphology specialists with considerable expertise in the investigation, excavation and analysis of sites of all periods and types, who are readily available for consultation.

3.3 HEALTH AND SAFETY

- 3.3.1 Full regard will be given to all constraints during the course of the project. OA North provides a Health and Safety Statement for all projects and maintains a Safety Policy. All site procedures are in accordance with the guidance set out in the Health and Safety Manual compiled by the Standing Conference of Archaeological Unit Managers.
- 3.3.2 OA North undertakes to safeguard, so far as is reasonably practicable, the health, safety and welfare of its staff and of others who may be affected by our work. This applies in particular to providing and maintaining suitable premises, ensuring the safety of all equipment supplied by the Company, and providing all reasonable safeguards and precautions against accidents. OA North will also take all reasonable steps to ensure the health and safety of all persons not in their employment, such as volunteers, students, visitors, and members of the public (this includes trespassers). OA North will ensure that no one suffers injury because of dangers arising from the state of the premises, or things done, or omitted to be done, on the premises.
- 3.3.3 OA North is fully familiar with and will comply with all current and relevant legislation, including, but not limited to:
 - The Health and Safety at Work Act (1974);
 - Management of Health and Safety at Work Regulations (1999);
 - Manual Handling Operations Regulations 1992 (as amended in 2002);
 - The Construction (Design and Management) Regulations (2007);
 - The Control of Asbestos Regulations (2006);
 - The Workplace (Health, Safety and Welfare) Regulations (1992);
 - Construction (Health, Safety and Welfare) Regulations (1996);
 - The Health and Safety (Miscellaneous Amendments) Regulations (2002);
 - The Work at Height Regulations (2005);
 - The Control of Substances Hazardous to Health Regulations (2002);
 - The Health and Safety (First-Aid) Regulations (1981);
 - The Regulatory Reform (Fire Safety) Order (2005);
 - The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (1995),
 - The Provision and Use of Work Equipment Regulations (1998);
 - Lifting Operations and Lifting Equipment Regulations (1998).
- 3.3.2 OA North has professional indemnity to a value of £2,000,000, employer's liability cover to a value of £10,000,000 and public liability to a value of £15,000,000. Written details of insurance cover can be provided if required.
- 3.3.3 Normal OA North working hours are between 9.00 am and 5.00 pm, Monday to Friday, though adjustments to hours may be made to maximise daylight working time in winter and to meet travel requirements. It is not normal practice for OA North staff to be asked to work weekends or bank holidays and should the Client require such time to be worked during the course of a project a contract variation to cover additional costs will be necessary.

3.4 OTHER MATTERS

- 3.4.1 Access to the site will be arranged via the Client/main contractor.
- 3.4.2 The trenches will be backfilled upon completion of the archaeological works.
- 3.4.3 The Client/main contractor is asked to provide OA North with information relating to the position of live services on the site. OA North will use a cable detecting tool in advance of any machine excavation.

3.5 POST-EXCAVATION AND REPORT PRODUCTION

- 3.5.1 *Archive:* the results of the archaeological investigation will form the basis of a full archive to professional standards, in accordance with current English Heritage guidelines (*The Management of Archaeological Projects, 2nd edition, 1991*) and the *Guidelines for the Preparation of Excavation Archives for Long Term Storage* (UKIC 1990). 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. As part of the archiving process, the on-line OASIS (On-line Access to Index of Archaeological Investigations) form will be completed.
- 3.5.2 The paper and finds archive for the archaeological work undertaken at the site will be deposited with the nearest museum which meets Museums' and Galleries' Commission criteria for the long term storage of archaeological material (MGC 1992). This archive can be provided in the English Heritage Centre for Archaeology format, both as a printed document and on CD (as appropriate). The archive will be deposited with the museum within six months of the completion of the fieldwork. Except for items subject to the Treasure Act, all artefacts found during the course of the project will be donated to the receiving museum.
- 3.5.3 *Report:* four copies of a bound and collated final report will be submitted to the Client within six weeks of the completion of the fieldwork. Further copies will be sent to the Local Planning Authority, the Assistant County Archaeologist, and the Greater Manchester Sites and Monuments Record. The final report will include a copy of this written scheme of investigation, and indications of any agreed departure from that scheme. It will include an historical and archaeological background to the study area, an outline methodology of the investigation, and present, summarise, assess, and interpret the results of the programme of archaeological works detailed above. It will also include an assessment of the finds, which will be accompanied by relevant proposals for detailed finds analysis and conservation with costs. In addition, recommendations for any further mitigation works and details of the final deposition of the project archive will also be made.

- 3.5.4 A summary of the results produced from the archaeological investigation will be published in the CBA North West magazine, although a more detailed article will be provided should the results be of sufficient merit.
- 3.5.4 *Confidentiality:* the final report is designed as a document for the specific use of the Client, and should be treated as such; it is not suitable for publication as an academic report, or otherwise, without amendment or revision. Any requirement to revise or reorder the material for submission or presentation to third parties beyond the project brief and project design, or for any other explicit purpose, can be fulfilled, but will require separate discussion and funding.

4 WORK TIMETABLE

- 4.1 A two-week period should be allowed to excavate, record and backfill the evaluation trenches.
- 4.2 A report will be submitted within six weeks of the completion of the fieldwork.
- 4.3 OA North can execute projects at very short notice once an agreement has been signed with the Client.

5 STAFFING PROPOSALS

- 5.1 The project will be under the overall charge of Ian Miller BA FSA (OA North Senior Project Manager) to whom all correspondence should be addressed. Ian has over 20 years experience of commercial archaeology, and has a particular interest in the archaeology of the Industrial Period, and particular that of Greater Manchester and Lancashire. Ian has been managing industrial archaeology projects since 1993, when he directed the excavation and survey of the Netherhall Iron Works in Maryport, and undertook the subsequent analysis and publication of the results. He has also edited a monograph dedicated to the alum industry of north-east Yorkshire, which arose from the results of the survey excavation of Carlton Alum Works. More recently, Ian managed the excavation of the Percival, Vickers & Co flint glass works in Manchester, and the excavation of the River Street Iron Works in Rochdale. He was also responsible for managing the archaeological elements of the Murrays' Mills Major Repairs Project in Manchester, which culminated in the production of an academic monograph of the steam-powered mills in the Ancoats area of Manchester. He has also managed many other evaluations and excavations of former industrial sites in Manchester.
- 5.2 His role will be to ensure that the project design is implemented within the framework of the Project Objectives. He will be responsible for all aspects of staff and resource logistics, ensuring the smooth running of the project programme. He will liase with the Client and County Archaeologist with regard to progress, and will maintain relationships with other contractors.
- 5.3 The evaluation is likely to be undertaken by **Sean McPhillips BA** (OA North Project Officer). Sean is an highly experienced field archaeologist, who has a

particular interest in Industrial Archaeology, and especially that of Manchester. He recently directed the archaeological investigation of a complex of textile mills as part of the New Islington Millennium Village Scheme in Manchester, and Moore's Mill at New Islington Wharf. Sean also played a key role in the excavations at Calprina Works, Stalybridge, and Macintosh Mill, Manchester.

- 5.4 It is not possible to provide details of specific technicians that will be involved with the fieldwork at this stage, but all shall be suitably qualified archaeologists with proven relevant experience. It is anticipated that up to three technicians will be required during the course of the fieldwork.
- 5.5 Assessment of any finds recovered from the evaluation will be undertaken by OA North's in-house finds specialist **Christine Howard-Davis BA** (OA North Finds Manager). Christine has extensive knowledge of all finds of all periods from archaeological sites in northern England, and is a recognised expert in the analysis of post-medieval artefacts.

6 MONITORING

6.1 Monitoring meetings will be established with the Client and the archaeological curator at the outset of the project. Monitoring of the project will be undertaken by the Greater Manchester Assistant County Archaeologist, or his representative, who will be afforded access to the site at all times.

ILLUSTRATIONS

FIGURES

- Figure 2: Trench location
- Figure 3: Trench location superimposed on the Ordnance Survey first edition 25": 1 mile map of 1894
- Figure 4: Detail plan of Trench 2
- Figure 5: Detail plan of Trench 3

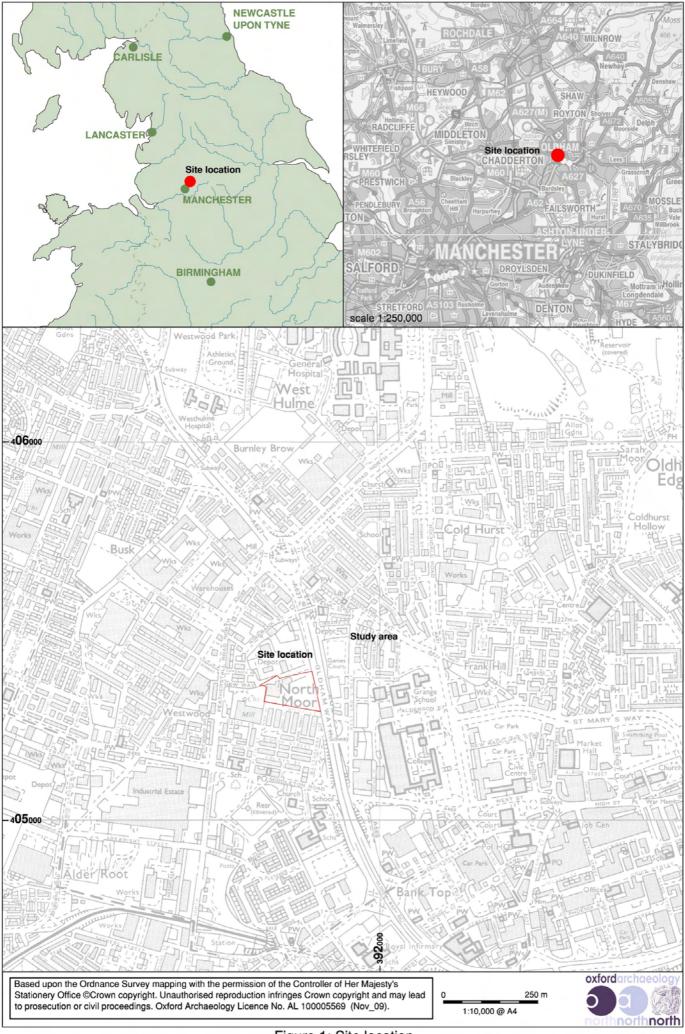


Figure 1: Site location

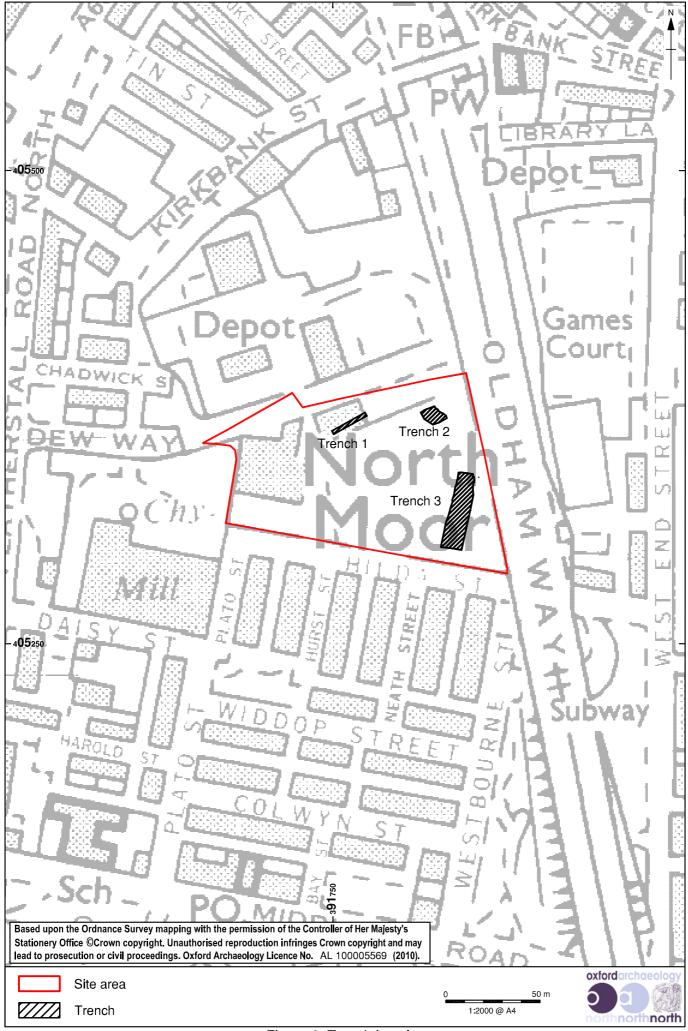


Figure 2: Trench location

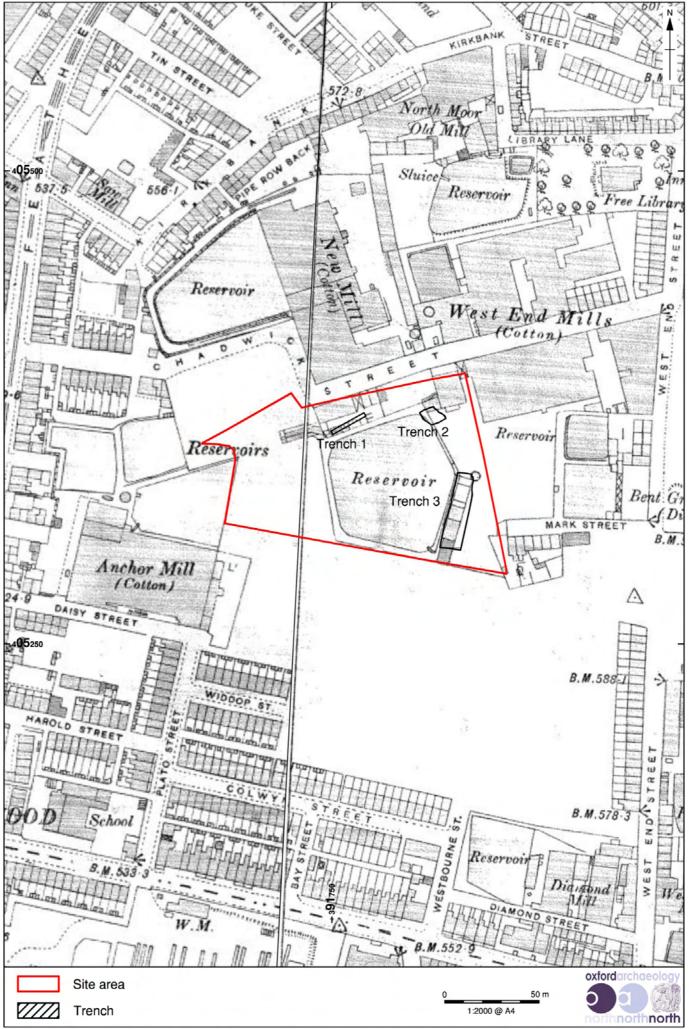


Figure 3: Trench location overlying the Ordnance Survey map of 1894

