



**WALLER'S MILL,
NEW ISLINGTON,
ANCOATS,
MANCHESTER**
Greater Manchester

Archaeological Evaluation



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SUMMARY

In September 2004, Oxford Archaeology North (OA North) was commissioned by Mr Richard Hattan of Urban Splash Ltd to carry out an archaeological evaluation in advance of the proposed development of land at New Islington, Ancoats, Manchester (centred on SJ 8525 9867).

Documentary research has indicated that a textile mill occupied the site by 1800, which, following on from the results of a desk-based assessment (UMAU 2002), had been recommended by the Assistant County Archaeologist for Greater Manchester for archaeological evaluation in advance of development. The evaluation comprised the excavation of five targeted trial trenches, and was undertaken by OA North during September 2004. This was coupled with an archaeological watching brief, which monitored the excavation of a series of test pits within the footprint of the mill to inform the site remediation programme, and was undertaken in October 2004.

There are few archive sources pertaining to the construction and operation of the mill, although those available have demonstrated its origins to be associated with the initial burst of factory-based textile manufacture in the area during the late 18th/early 19th centuries. It seems likely that the mill was steam-powered from its inception, although there is no evidence within the archive sources to confirm this. Map regression analysis has indicated that the mill had been dismantled by the 1840s, and therefore any surviving buried remains would have a potential to inform a greater understanding of the early period of steam-powered textile production.

The evaluation trenches investigated c40% of the footprint of the mill that lies within the development area. The results have demonstrated the main structural elements of the mill to survive, and that they are well-preserved. Within the south-eastern part of the site, basement walls were encountered at depths in excess of 1m below the modern ground surface, although no internal features were revealed. This factor, combined with the paucity of demolition material, suggested that the mill had been subjected to comprehensive dismantling during the mid-19th century. Within the north-western part of the site, however, *in situ* remains were encountered at depths of less than 1m below the modern ground surface. Of particular interest were the foundations of a probable boiler, and a largely intact flue system. The route of the flue was excavated for 3.6m beyond the north-western gable wall of the mill, although its terminus and associated chimney were not exposed.

It is recommended that any ground-reduction works within the north-western part of the site is monitored by an archaeological watching brief, which should be targeted at providing a record of the flue terminus and the associated chimney, any surviving internal floors, and clarifying the mechanisms of water supply to the boiler. It is also recommended that, where possible, any future design proposal allows for the *in situ* retention of surviving walls.

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Oxford Archaeology North would like to express its thanks to Richard Hattan and Jo Fallon of Urban Splash Ltd for commissioning and supporting the work, and to Norman Redhead, the Assistant County Archaeologist for Greater Manchester, for his support and advice throughout the course of the project. Thanks are also due to Stephen Coultard of Martin Stockley Associates for considerable logistical support during the course of the works, and to Gary Robinson, Terry Driffield, and Stuart Newby of Volker Stevin.

The archaeological evaluation was carried out by Ian Miller, Chris Healey, Sophie Pullar and Chris Wild. The report was written by Ian Miller and Chris Healey, and Mark Tidmarsh prepared the drawings. Andrew Bates examined the worked animal bones recovered from the evaluation. Ian Miller edited the report, and was responsible for project management.

The project was funded entirely by Urban Splash Ltd.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 During September 2004, Oxford Archaeology North (OA North) undertook a programme of archaeological evaluation of a site in New Islington, Ancoats, Manchester (centred on SJ 8525 9867), on behalf Urban Splash Ltd. The site was occupied formerly by an historic textile mill, and currently lies within an area that is the focus of a major new development, which is being delivered by a partnership between Urban Splash Ltd, English Partnerships, New East Manchester, and Manchester City Council.
- 1.1.2 The archaeological evaluation was required to inform the planning process in advance of the remediation of the site, which chemical sampling has demonstrated to be contaminated, and any future redevelopment. In particular, the evaluation was intended to ascertain the level of preservation and significance of the archaeological remains relating to this early textile mill.

1.2 LOCATION, GEOLOGY AND TOPOGRAPHY

- 1.2.1 The study area is situated within Ancoats (centred on SJ 8525 9867), on the north-east side of Manchester city centre (Fig 1). The site is currently wasteland, bounded by New Union Street to the south-west, St Vincent Street to the south-east and the Rochdale Canal to the north. The centre of the site lies at a height of c49.50m, although the land falls gently to the south and east, and rises to the north-west.
- 1.2.2 The solid geology comprises Carboniferous sedimentary material and a series of Permo-Triassic rocks, consisting mainly of New Red Sandstone. The overlying drift incorporates Pleistocene boulder clays of glacial origin, and sands, gravels, and clays of fluvial/lacustrine origin (Hall *et al* 1995, 8).
- 1.2.3 Topographically, the Manchester Conurbation as a region is within an undulating lowland basin, which is bounded by the Pennine uplands to the east and to the north. The region comprises the Mersey river valley, which is dominated by its heavily meandering river within a broad flood plain (Countryside Commission 1998, 125). The topography of the study area, however, reflects the shallow valley of Shooters Brook, a rivulet that flows westwards from Newton Heath, through Ancoats and into the river Medlock (Ashworth 1987, 22). Shooters Brook was culverted during the early 19th century, and the topography of the valley has since been masked considerably by urban expansion.

1.3 HISTORICAL BACKGROUND

- 1.3.1 **Introduction:** the site lies within the Ancoats area of Manchester, which was one of the key industrial areas in Britain. By the beginning of the 13th century, Ancoats was known as *Elnecot*, derived from the Old English *ana cots* which means 'lonely cottage' (Cooper 2002, 13). Ancoats retained a semi-rural aspect until the late 18th century, but by 1800 the area had been transformed into an effective industrial suburb.
- 1.3.2 This transformation began in the 1770s, when land owned by the Leigh family was sold to Thomas Bound, a builder, who then sold it on to others for development. William Green's *Map of Manchester and Salford*, surveyed between 1787 and 1794, shows the focus for initial development to have been at the corner of Great Ancoats Street and Oldham Road, and depicts the main elements of the existing street plan laid out on former fields of the area. Building speculation then drove further expansion, with plots of land within a grid-iron pattern of streets being sold for development. The principle driving force of development was the national demand for textiles, particularly cotton, and the introduction of steam-powered spinning mills (Williams and Farnie 1992, 3).
- 1.3.3 Several water-powered mills had, however, already been erected along Shooters Brook, situated to the south of Union (now Redhill) Street. The proposed line of the Rochdale Canal ran between Shooters Brook and the new focus of development, offering the potential of cheap and reliable transport for goods and materials. The completion of the canal in 1804 coincided broadly with the introduction of efficient steam engines capable of producing rotative power. A small number of enterprising firms seized the opportunity presented by this combination of factors, resulting in the creation of a new breed of mill building in Ancoats. The net result was the creation of 'the World's first industrial suburb'; an edge-of-town industrial estate with associated housing, community facilities and related businesses.
- 1.3.4 **Waller's Mill:** an historical overview of the mill has been compiled largely from cartographic sources, although some valuable information has also been obtained from contemporary commercial trades directories. Entries within these directories have indicated that the mill was operated during the early 19th century by members of the Waller family, and it upon this information that the mill is referred to as 'Waller's Mill'; there are no contemporary documents referring specifically to the mill by this name.
- 1.3.5 **Cartographic evidence:** the earliest map to depict the mill is that published in 1800, upon which it is shown to comprise a rectangular building along the south side of the New Islington (Fig 2). The detail provided by this map suggests that an enclosed yard existed to the south of the mill building, which was a common feature of mills of this period.
- 1.3.6 A subsequent map of the area, published in 1808, similarly depicts the mill to have comprised a single rectangular range situated along the south side of New Islington. The building does not appear to have been modified relative to the map of 1800, although the enclosed area to the south is shown to have

been extended with a slight expansion in the south-east corner, forming an L-shaped yard.

- 1.3.7 An annotated plan of the mill, dated to c1822, identifies the building as comprising a factory and machine-makers shop of four storeys at the north-western end, and the remainder of the factory being of six storeys with a loft. This plan depicts small square projections against the south elevation at either end of the six storey block, and at the south-west corner of the four storey block. The function of these projections is not alluded to, although it has been suggested that they may represent privy or stair towers (UMAU 2002, 13). The plan of c1822 also names the occupiers of the mill as T, R and S Waller, confirming entries listed in contemporary trades directories (1.3.14 below).
- 1.3.8 A map published by Thornton in 1824 (Fig 3) shows further modifications to the site. The courtyard area seems to have been expanded again, forming a rectangular area. The mill building also appears to have been extended, with a small rectangular extension appended to the south elevation at the south-eastern end. The north-western end of the building also appears to have been expanded, as it is shown to continue beyond the yard enclosure wall.
- 1.3.9 A later map, published by Bancks and Co in 1831, marks the site as a cotton mill, and depicts another extension to have been added on to the north-western part of the main building, forming an L-shaped complex (Fig 4). Much of the enclosed yard appears to have been subsumed by this extension, although a wall aligned parallel to New Islington, and butting the north-western elevation of the extension, may represent the boundary of a new yard (Fig 4). The 1831 map also shows a small rectangular building to have been erected in the south-eastern corner of the site, seemingly forming part of the mill complex. A gap between this ancillary building and the main body of the mill may represent the entrance to the complex from Pott Street. Assuming Bancks and Co's map to be an accurate survey, the mill measured some 48m by 8m, with a 9m by 6m extension to the north-western side. These dimensions suggest that the mill was not an inconsiderable concern at this time.
- 1.3.10 A large-scale map produced by Pigot and Slater in 1841 depicts a different layout to the site. Whilst the detail is not particularly clear, the mill is shown as a rectangular block situated along the south-western side of New Islington, with a small extension appended to the south-eastern end, again forming an L-shaped complex. The extension to the north-west, as shown on Bancks and Co's map, does not appear.
- 1.3.11 The 60": 1 mile Ordnance Survey map of 1851 depicts the much of the site of the mill as vacant land, with the north-western part of the site having been redeveloped as a '*machine manufactory*' (Fig 5). The configuration of this factory, however, does not resemble its predecessor in the slightest, implying the mill to have been demolished by the time the map was surveyed in 1849.
- 1.3.12 The subsequent Ordnance Survey map of the area, published in 1893, shows New Union Street to have been built across the eastern part of the mill site, with some redevelopment of the area in the angle between New Islington and New Union Street (Fig 6). The Ordnance Survey maps of 1905 and 1915 show

further development within the site, and complete redevelopment depicted upon the 1931 map. None of these maps label the buildings shown within the study area, although considerable detail is provided by the 1928 revision of Goad's insurance plans (Fig 7). This shows the site to have been occupied by E Taylor, a builder and contractor. The angle between New Islington and New Union Street, in the eastern extremity of the site, is shown to have been occupied by a stable block. A two storey timber shed was placed across the western end of the original mill block, with a large single storey workshop to the west.

- 1.3.13 *Commercial trades directories*: the earliest entry for the mill within the available trades directories appears in an edition for the year 1815, where S and R Waller are listed as cotton spinners at New Islington (Wardle and Bentham 1815, 152). The Wallers are not listed in any earlier editions, and neither are any specific references to the mill.
- 1.3.14 A subsequent directory (Pigot and Dean 1817) contains an entry for T, R and S Walker (presumably a misspelling of Waller), cotton spinners and manufacturers at New Islington. The inclusion of the term 'manufacturers' implies that the Wallers were engaged in textile processes additional to spinning, such as weaving or finishing.
- 1.3.15 Baines (1825, 313) lists T, R and S Waller as cotton spinners based at Bridgewater Buildings, providing no specific reference to the mill at New Islington. Baines states that the Waller's specialised in the production of damask, a rich and highly patterned coloured fabric. It originated in Damascus, Syria, and silk damask was imported into Britain during the 17th century, although during the 18th and 19th centuries, cotton imitations were produced in this country (Jones 1996, 105).
- 1.3.16 Trades directories for 1830 confirm the information provided by Baines, and similarly list the firm of Thomas, Ralph and Samuel Waller as cotton spinners and manufacturers based at 8, Bridgewater Buildings (Pigot 1830, 291), implying that they had vacated their New Islington premises. The same directory lists the firm of Welch and Sells, '*cotton spinners and manufacturers by power*' at New Islington (*op cit*, 296). The exact address for this firm is not given, although it seems that their mill was located at the junction of New Islington and Pot Street, which is consistent with the location of Waller's Mill. The same details are provided by a directory of 1833, whilst a directory of 1838 refers to John Welch as a calico manufacturer on Pot Street (Pigot 1838). However, the mill is not referred to subsequent editions of commercial trades directories, suggesting that it was not in production during the 1840s.
- 1.3.17 There are few references within contemporary trades directories for the machine manufactory depicted on the Ordnance Survey map of 1851. One entry refers to a Matthew Leech, who is described as a machine-maker on Union Street (Collinson and Co 1855). The exact address is not given, although it is quite possible that Leech's premises were those within the study area.

1.3.18 Entries within commercial trades directories for the year 1905 indicate the site to have been occupied during the early 20th century by a wheelwright, a machine broker, a blacksmith, and George Percival, a bricklayer and contractor (Slater 1905, 399). It is uncertain, however, whether these are residential or business addresses. Entries within a directory for 1926 imply the site to have been vacant (Kelly 1926, 451), but by 1932 Edward Taylor, a contractor, had established his business premises there (Kelly 1932, 508), which is corroborated by the detail shown on the 1928 revision of Goad's insurance plans (Fig 7). Taylor is listed there throughout the 1940s and 1950s, but the site appears to have been vacant in 1961 (Kelly 1961, 550). By 1965, E Batley Ltd, portable buildings manufacturers, occupied the site (Kelly 1965, 535), and it is this firm who may have been responsible for the ground contaminants identified within the north-western part of the site.

2. METHODOLOGY

2.1 PROJECT DESIGN

2.1.1 In response to a request from Mr Richard Hattan of Urban Splash Ltd, OA North submitted a project design for an archaeological evaluation of Waller's Mill, New Islington, Ancoats (*Appendix 1*). Following the acceptance of the project design by the Assistant County Archaeologist for Greater Manchester, OA North was commissioned to undertake the work.

2.1.2 The fieldwork was undertaken during September 2004, and comprised the excavation of five evaluation trenches (Fig 8). On completion of the evaluation, a series of test pits were excavated for chemical sampling purposes. Some of these lay within the footprint of the mill, and were monitored by an archaeological watching brief. All work was consistent with the guidelines provided by the Institute of Field Archaeologists.

2.2 EVALUATION TRENCHING

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 both colour slide and black and white print photographs, both of individual contexts and overall site shots from standard view points). Photography was undertaken with 35mm cameras on archivable black-and-white print film as well as colour transparency, all frames including a visible, graduated metric scale. Digital photography was extensively used throughout the course of the fieldwork for presentation purposes. Photographic records were also maintained on special photographic *pro-forma* sheets.

2.3 FINDS

2.3.1 **Artefacts:** all finds recovered were bagged and recorded by context number, processed and stored according to current standard practice based on guidelines set by the Institute of Field Archaeologists. The finds have been analysed by an OA North in-house specialist. The finds are discussed in *Section 3.3*, and a summary finds catalogue is presented in *Appendix 3*.

2.3.2 **Environmental Samples:** samples were not collected for palaeoenvironmental analysis as it was not deemed appropriate.

2.4 ARCHIVE

2.4.1 A full professional archive has been compiled in accordance with the project design (*Appendix 1*), and in accordance with the current IFA and English Heritage guidelines (English Heritage 1991). The paper and digital archive will be deposited in the Manchester Museum within six months of completion of the project.

3. EVALUATION RESULTS

3.1 INTRODUCTION

3.1.1 In total, five targeted evaluation trenches were excavated across the study area to provide an assessment of the archaeological potential and character of the site. In particular, the evaluation aimed to establish the level of survival of external walls and internal features, and to elucidate information of the former engine and boiler houses.

3.2 TRENCHING RESULTS

3.2.1 **Trench 1:** the trench was aligned north-north-west/south-south-east, and was placed across the north-western end of the mill complex as shown on Bancks and Co's map of 1831 (Fig 8). The trench measured 10m in length, and was excavated to a maximum depth of 2.20m. It was extended subsequently along the line of the north-western gable wall of the extension shown on Bancks and Co's map of 1831 (Fig 8).

3.2.2 A thick deposit of clay (**104**) was exposed within the north-western part of the trench, at a height of 48.23m above Ordnance Datum (aOD). This deposit did not contain any visible coarse inclusions, and appeared to represent the natural subsoil, presumably of glacial origin.

3.2.3 Within the south-eastern part of the trench, subsoil **104** had been cut by a structure of brick and stone composition. This feature was resolved to be part of a flue that was exposed fully within Trench 5, and is described in that section (3.2.35 below).

3.2.4 The flue was sealed by a 0.20m thick deposit of compacted brick set in a clay matrix (**103**), seemingly representing an attempt at levelling the site. This was overlain by a deposit of demolition rubble (**102**), which had an average depth of 0.58m (Plate 1).

3.2.5 A brick wall (**101**) had been constructed above rubble layer **102** (Plate 1). Wall **101** comprised a mixture of hand-made and machine-pressed bricks, the latter component indicating a date no earlier than the late 19th century; map regression analysis has indicated that wall **101** probably represented the development of the site during the early 20th century. It was aligned broadly north/south, and had a width of 0.24m, with two offset foundation courses (Fig 9). The top of the wall was encountered at a depth of 0.18m below the modern ground surface, and survived to a maximum height of 0.80m.

3.2.6 Wall **101** was encased in a deposit of loose brick rubble (**105**), and sealed by the existing tarmac surface and associated hardcore foundation. Rubble **105** contained various artefacts of modern date (not retained), included numerous fragments of iron-working debris. These may have been derived from the foundry shown on the 1851 Ordnance Survey map to have occupied the plot of land on the north side of New Islington.

- 3.2.7 **Trench 2:** the trench was aligned north-west/south-east, and was placed along the northern side of the former mill as shown on Bancks and Co's map of 1831 (Fig 8). The trench measured 21m long, and was excavated to a maximum depth of 2.61m.
- 3.2.8 The northern wall (**205**) of the mill was encountered along the south-west facing section of the trench, at a depth of 1.10m below the modern ground surface (Fig 9). The wall comprised hand-made bricks, seemingly mould-thrown and bonded with a lime-based mortar. The wall survived to a maximum height of 1.28m, in an English Garden Wall bond, and the upper course of the original part of the wall (see 3.2.9 below) had a maximum width of 0.35m (Plate 2). The two basal courses comprised irregularly-coursed, offset foundations, with no clear evidence surviving for the use of mortar (Plate 3). The foot of the foundations were exposed some 2.38m below the modern ground surface, at a height of 45.75m aOD, indicating that wall **205** had formed the edge of a basement.
- 3.2.9 Wall **205** incorporated three relieving arches within its original construction (Plate 3), implying this part of the wall had been designed to support increased loading. The arches had a maximum span of 1.70m, and were set 1.54m apart. The wall had clearly been subject to some structural modification, presumably as a result of internal rearrangement. In particular, the wall had been widened with the erection of an internal skin, some 0.24m wide, increasing the width of wall **205** to 0.59m. This was not keyed into the fabric of the original wall, but respected the curve of the relieving arches, indicating that these had been retained within the modification.
- 3.2.10 Two of the relieving arches had also been modified, perhaps at a later date, with the insertion of a course of sloping bricks, implying that the arches had been converted into cellar lights. The north-western arch did not retain any evidence for its conversion to a cellar light, although it had been damaged by the insertion of a manhole (**208**) as part of a modern drainage system (Plate 4).
- 3.2.11 A single course of hand-made bricks (**207**) was exposed along the base of the excavated trench, lying parallel to wall **205** and set 1.06m to the south-west. These had been laid on top of the clay subsoil, and were situated at the same height as the wall footings (45.74m aOD). Whilst there was no physical evidence for a floor of the basement surviving *in situ*, it seems likely that bricks **207** may have represented a support for flagstones or timber planks.
- 3.2.12 A wall (**204**) aligned north-east/south-west was exposed at a distance of 7.25m from the south-eastern end of the trench (Fig 9). This wall was of similar construction to wall **205**, and incorporated hand-made bricks bonded with a lime-based mortar. The wall was butted by the inner skin of wall **205**, but appeared to be keyed into the fabric to the rear, suggesting that wall **204** was a component of the original build. The position of wall **204** implied it to represent the dividing wall between the spinning mill and the machine-maker's shop referred to in archive sources (1.3.7 above).
- 3.2.13 The line of wall **205** was continued to the north-west of wall **204** by wall **206**. This was again of a similar construction to the other walls, comprising hand-

made bricks set in a lime-based mortar, forming an English Garden Wall bond with three courses of stretchers to one course of headers. However, wall **206** had not been widened with the addition of a skin wall against the internal face. The top of the wall was exposed at a depth of 0.25m below the modern ground surface, and the offset foundations were revealed some 0.71m above the level of the footings for wall **205**, at a height of 46.46m aOD. This demonstrated that the north-western end of the mill, thought to have been used by machine-makers during the 1820s, had not incorporated a basement.

- 3.2.14 A second north-east/south-west aligned cross wall (**209**) was exposed at a distance of 4.40m to the north-west of wall **204** (Fig 9). This wall was bonded to wall **206**, and was similarly composed of hand-made bricks set in a lime-based mortar. It measured 0.22m wide across the uppermost exposed course, but widened to 0.33m at its base with the incorporation of a single offset foundation course.
- 3.2.15 The north-eastern extent of wall **209** was butted by wall **210**, which was aligned north-west/south-east, forming an extension to wall **206** (Fig 9). The butt joint implied wall **210** to have been an addition to the original build. Whilst this could not be corroborated by other physical evidence, it is tempting to associate this with the putative extension to the mill apparent upon Thornton's map of 1824 (*1.3.8 above*). The wall was again composed of hand-made bricks, laid in an English Garden Wall bond, with a single offset foundation course. The upper surface of this wall was encountered at a height of 48.33m aOD, and its foundations were exposed at a height of 47.53m. The wall measured 5.63m long, and was butted by wall **212** at its north-western end (Fig 9).
- 3.2.16 Wall **212**, aligned south-west/north-east, formed a return to the building and was again composed of hand-made bricks set in a lime-based mortar. The position of this wall corresponds with the north-western gable, as shown on Bancks and Co's map of 1831 (Fig 8). Situated between walls **209** and **212** was a small surface composed of hand-made bricks (**211**), which was three courses thick and overlaid the offset foundation of wall **210** (Plate 5). The function of surface **211** could not be ascertained with confidence, although it perhaps represented a solid foundation for an item of machinery.
- 3.2.17 The north-western end of wall **210** was butted by wall **213**, which was clearly of a later construction. Wall **213** was similarly on a north-west/south-east alignment, forming a continuation of wall **210** (Fig 9). The wall was composed of hand-made bricks, but had been bonded with a dark grey mortar. The position and alignment of wall **213** corresponded with an apparent boundary wall along the southern edge of New Islington, as shown on Bancks and Co's map of 1831 (Fig 8). The north-western end of the wall had been damaged by the insertion of a cast iron service pipe (**214**).
- 3.2.18 Many of the structural remains of the mill were sealed beneath a deposit of clay (**203**), of varying depth, which appeared to be redeposited subsoil. This was overlain by compacted lenses of material (**202**), which provided a foundation for modern surfacing of the site.

- 3.2.19 **Trench 3:** the trench measured 25m in length, and was placed across the body of the mill, immediately to the south-east of the extension as shown on Banks and Co's map of 1831 (Fig 8). It was intended to evaluate the level of survival of internal features within the original mill building.
- 3.2.20 The northern end of the trench was excavated beyond the northern wall of the mill, and exposed a layer of stone setts (**304**) at a height of 48.06m aOD. Each of the setts were 0.16m high, and had been laid to form a cohesive surface, which undoubtedly represented the vestiges of New Islington street (Plate 6).
- 3.2.21 Wall **205** (Trench 2) lay within Trench 3, at a distance of 1.59m to the south of New Islington street (**304**). No other structural remains associated with the mill were exposed within the trench to the south of wall **205**, indicating that no internal features, including floor surfaces, survived. The trench exposed a sequence of backfilled material, including redeposited clay subsoil (**306**) and various lenses of compacted layers (Plate 7), reflecting the uppermost stratigraphy encountered within Trench 2 (3.2.18 above). The relative paucity of demolition material beneath clay **306** was particularly noticeable; few fragments of bricks or other building materials were recovered from the lower levels of the trench, suggesting that the mill had been dismantled with some care, perhaps with a view to reusing materials, rather than having been subject to wholesale demolition. This was corroborated during the watching brief that monitored the excavation of test pits within the footprint of the mill, and provides some explanation for the apparent lack of internal features within the basement.
- 3.2.22 A surface composed of stone setts (**303**) exposed within the vertical section at the southern end of the trench was similar to surface **304** (Plate 8). This clearly represented the original surface of New Union Street, which documentary sources indicated to have been laid after the demolition of the mill.
- 3.2.23 **Trench 4:** this trench was aligned north-west/south-east along the projected line of juncture between the original mill and the extension shown on Banks and Co's map of 1831 (Fig 8). The trench was intended to evaluate the remains of any power system features within this part of the mill, and was widened out in several places to maximise the recovery of information.
- 3.2.24 A north-west/south-east aligned wall (**416**), exposed at the south-eastern end of the trench, lay parallel to wall **205** (Trench 2), some 7.3m to the south (Fig 9). Wall **416** was 0.25m wide, and comprised hand-made bricks bonded with a lime-based mortar (Plate 9). It seems probable that this wall represented the south-western wall of the original mill building, and whilst health and safety considerations precluded excavation to the foundations, wall **416** had almost certainly formed part of a basement.
- 3.2.25 Wall **416** was butted on its northern elevation by wall **417**, which was aligned broadly north/south (Plate 9). This wall was similarly composed of hand-made bricks with a lime-based mortar, and laid in an English Garden Wall bond. Its position suggested that this wall represented an internal partition wall, and it is likely to have been the southerly continuation of wall **204** (Trench 2).

- 3.2.26 Aligned parallel to wall **417**, and set 4.3m to the north-west, was wall **406**. This comprised hand-made bricks, and appeared to form a south-westerly continuation of wall **209** (Trench 2). The wall was not, however, completely linear, and contained a 1.1m long section that was stepped slightly to the north-west, perhaps in an attempt to house a specific item of machinery.
- 3.2.27 It seems likely that walls **406** and **417** formed the end walls of a room within the north-western part of the mill. Two distinct patches of laid bricks (**405** and **413**) were exposed along the northern edge of the trench between these two walls. These may have represented the vestiges of an internal floor surface.
- 3.2.28 Immediately adjacent to the north-west of wall **417** was wall **404** (Fig 9). This measured some 0.32m wide, and was composed of hand-made bricks set in a lime-based mortar. It formed the south-eastern end of a flue system (3.2.29 *below*), and may have represented the foundations for a boiler.
- 3.2.29 The area to the west of wall **404** contained a complex sequence of structures that provided the only physical remains of the mill's power systems. These were dominated by a flue (**402**), which was exposed along the base of the excavated trench and parallel to the northern face of wall **416** (Plate 10). The entrance to the flue at its south-eastern terminus (**412**) comprised a rectangular aperture that measured 1.1m by 0.4m and lay broadly at the same height as the exposed surface of wall **417**. The flue sloped steeply down to the north-west (Plate 11), to a level lower than the foundations within this part of the mill. The component bricks were all hand-made, and were heavily sooted. At the foot of the slope, the flue extended to the north-west, below an iron lintel, which carried a 0.36m wide brick wall (**411**). Beyond lintel **411**, a short section of the flue had collapsed, but was intact beyond where it comprised two parallel brick walls, set 0.30m apart and covered by large stone slabs. The flue continued along the same alignment to the end of the trench, passing beneath two walls (**407** and **101/408**) of a late 19th/20th century date (Plate 12). In places, the flue retained a refractory brick lining, although for the most part it was of standard brick construction. Towards the north-western end of the trench, a large stone block bridged the flue walls, and acted as a support of the flagstone capping. At this point, the walls of the flue stepped out by 0.12m on each side (Plate 12), perhaps representing an access point into the flue.
- 3.2.30 For much of its length, the channel of flue was 0.85m deep. The lower 0.15m of the flue channel was filled with an homogeneous black silt (**403**). Deposit **403** yielded the only stratified artefacts recovered from the evaluation, which included three small fragments of pottery. However, these have been ascribed a broad 19th to 20th century date range (3.3.5 *below*), and are unable to furnish a specific date for the deposition of **403**.
- 3.2.31 The remains of the flue and other structural elements of the mill in this area were sealed by a deposit of dumped material (**401**). The principle constituents of **401** included brick rubble and fuel ash/clinker, which may have represented the waste from boilers. Layer **401** also yielded an interesting group of finds, which included worked animal bones and worked stones (see 3.3 *below*).

- 3.2.32 **Trench 5:** the trench was excavated along the route of the flue, and the wall to the north-west of the mill as shown on Banks and Co's map, resulting in a T-shaped intervention. The northern end of the trench connected with the north-western end of Trench 4, and the south-eastern end of Trench 1 (Fig 8).
- 3.2.33 A north-west/south-east aligned wall (**503**) was exposed within the northern part of the trench. This was 0.25m wide, and was composed of hand-made bricks bonded with a lime-based mortar. The position and alignment of this wall suggested it to be a continuation of wall **416** (Trench 4), representing the southern wall of the original mill building. Wall **503** terminated within the area exposed by the trench, although a short wall stub projecting from the north elevation may have represented the vestiges of a return wall, which would have formed the north-western gable of the mill (Fig 9).
- 3.2.34 Also within the northern part of the trench was a surface (**502**) composed largely of flagstones of various sizes, although also incorporated some fragments of brick. Whilst only a portion of the entire surface lay within the confines of the trench, it seemed that the exposed elements included the northern and eastern edges; there were no remains of this surface within Trench 1, which was placed to the north-east (Fig 9). Surface **502** flanked the northern edge of the flue, and probably represented a yard area external to the mill.
- 3.2.35 The flue (**402**) within Trench 4 continued into the northern end of Trench 5, where it turned sharply to the west, at an angle of approximately 100° (Fig 9). The turn appeared to mark the point at which the flue extended beyond the north-western gable of the mill. This section of the flue then continued along a south-westerly direction beyond the end of the excavated trench. The composition of flue was identical to that recorded within Trench 4, comprising two parallel walls with fragmentary survival of a flagstone capping (**501**).
- 3.2.36 A short wall (**525**) was exposed across the channel of the flue, at a distance of 2.86m from the sharp bend. It was two courses thick, and survived to a height of nine courses. Wall **525** was not bonded to the side walls, and appeared to have been a later insertion that had been intended to block the flue (Plate 13).
- 3.2.37 A short series of structures were exposed along the south-eastern side of flue **501**, beyond blocking wall **525**. At the south-western end of the trench, an insubstantial, narrow channel (**521**) connected with the flue (Plate 14). The channel was 0.20m wide, comprised heavily-sooted bricks, and sloped up from the flue. A short distance to the south-west degraded traces of an iron housing was noted to cross the channel of flue **501**. This may have represented a mechanism to control flue gases.
- 3.2.38 A similar additional flue channel (**524**) was revealed at the end of the trench. However, this structure was poorly preserved, precluding a detailed understanding of its form.
- 3.2.39 Situated between side channels **521** and **524**, but at a higher level, was a north-west/south-east aligned brick wall (**523**). This measured 0.24m wide, and was composed of hand-made bricks bonded with a lime-based mortar. It butted the

wall of flue **501**, implying it to have been of a later date. It appeared to be of a contemporary build to a fragmentary surface (**522**) composed of flagstones, which lay immediately to the north (Plate 14). It is uncertain whether wall **523** and associated surface **522** had been part of the mill complex, as they lay beyond the north-western gable wall shown on historic mapping, and would therefore have been external to the mill. It is perhaps more likely that these structures were elements of a later building, such as the machine manufactory shown on the 1949 Ordnance Survey map.

- 3.2.40 Situated to the west of the blocking wall within the flue, but at a higher level, was structure **520**. This comprised two parallel walls, set 0.70m apart, and extended some 3m north-west from the flue (Fig 9). The area between the walls had been lined carefully with bricks, forming a well-made surface (Plate 15). The precise relationship between structure **520** and flue **501** was unclear, as the eastern extent of **520** had been obliterated by later activity. However, the walls forming the sides of the flue were notably lower at this point, suggesting that **520** may originally have continued across the top of the flue.
- 3.2.41 The northern wall of **520** corresponded closely with a wall shown on Bancks and Co's map of 1831 (Fig 8). It would therefore seem likely that **520** had been part of the mill complex, and perhaps represented an entranceway.
- 3.2.42 Situated immediately to the north of **520** was an apparently similarly aligned wall (**506**), although this terminated within the trench section, and therefore only a limited portion of fabric was available for recording. It comprised hand-made bricks, bonded with a lime-based mortar, and overlay the edge of the flagstone capping of flue **501**.

3.3 FINDS

- 3.3.1 **Quantification:** in total, 450 fragments of artefacts were recovered from the evaluation. The bulk of the assemblage in terms of fragment count comprised worked animal bone (391 fragments). The remainder of the assemblage comprised ceramic vessels (28 fragments), other ceramic objects (three fragments), clay tobacco pipe (four fragments), glass vessels (14 fragments), glass manufacturing debris (five fragments), iron (one object), lead (one object), and worked stone (three objects). All finds were treated in accordance with standard OA North practice, and a summary catalogue of the artefacts has been included in *Appendix 3* in Context Number order.
- 3.3.2 In broad terms, the finds were in good condition, although many of the fragments of pottery were small and abraded, implying an element of post-depositional disturbance. However, the bulk of the assemblage was recovered from the demolition rubble within the various trenches, and may therefore be considered as unstratified.
- 3.3.3 **Pottery:** the pottery assemblage comprised 21 fragments of stoneware bottles, and 22 small fragments of domestic kitchen and tableware vessels. All fragments were of a late 19th or early 20th century date, and were likely to have been deposited after the mill had been dismantled.

- 3.3.4 Some of the stoneware bottles had the manufacturers name printed or stamped on the vessel body. Manufacturers represented included '*Richard Nichols*' and '*J Pratt & Son*', providing the most reliable dating evidence within the entire pottery assemblage. '*J Pratt & Son*' are listed in a trade directory of 1879 as ginger beer makers based at 58 Leigh Street, Manchester (Slater 1879, 308). A directory for the year 1895 lists the firm as '*mineral water makers*', again based at 58 Leigh Street, suggesting that they had expanded their range of products (Slater 1895, 500). The firm is listed as such in subsequent directories until issues for the 1909, which seems to be when they ceased trading. The firm of '*R Nichols*' was established in c1901, and produced '*botanic beer*' at Irlam Street in Newton Heath (Slater 1901, 1479). The firm is not listed in trades directories for the year 1919 or subsequently, implying that they had ceased trading by that date.
- 3.3.5 The remainder of the pottery assemblage comprised low counts of industrial slipwares, transfer-printed wares, tea wares, and white and red-bodied earthenwares. The bulk of the pottery assemblage was recovered from the uppermost deposit of rubble within the various trenches, with the single exception of three sherds recovered from the fill (403) of the flue within Trench 4, but these cannot be closely dated. The assemblage as a whole was consistent with a domestic environment, although the stoneware bottles are of a type frequently recovered from industrial sites in the area.
- 3.3.6 **Other ceramic objects:** this category included four fragments of clay tobacco pipes and three fragments of ceramic electrical insulators. All objects were recovered from rubble deposits (201 and 401) within Trenches 2 and 4, and may be considered as essentially unstratified.
- 3.3.7 **Glass:** for the most part, the glass assemblage was well-preserved and in good condition, although some fragments were slightly dulled and showed surface deterioration in the form of visible patina showing as iridescent layers, as a result of depositional conditions.
- 3.3.8 The fragments of glass recovered from the evaluation trenches may be divided into two main categories: vessels and manufacturing waste. The group of glass vessels (14 fragments) for the most part comprised mineral water bottles, some of which were complete. The group of glass manufacturing waste included five fragments of glass, which included two paraison ends, fragments of moils, and a lump of molten blue glass, which probably represented cullet. This material had almost certainly been imported to the site from one of the nearby glassworks, either the Jersey Street Flint Glassworks on the opposite side of the Rochdale Canal, or the Manchester Flint Glassworks on Kirkby Street.
- 3.3.9 **Animal bone:** a total of 391 fragments of animal bones were recovered from the evaluation. The vast majority of these appear to have been associated with the manufacture of mouthpieces, perhaps for smoking pipes, with a smaller number bones discarded as the waste products of food consumption (Table 1).

Species	Description	Mouth-piece	Total Number
401			
Cattle	Unfused distal metapodial epiphysis.	Waste	1
Cattle	Sawn off proximal metapodial ends. Four metacarpals and 2 metatarsals.	Waste	6
Cattle	Metacarpal proximal shaft cylinders, sawn through on both sides, maximum of 14mm thick	Waste	2
Cattle	Proximal metapodial shaft segment, from the posterior surface, with enthesopathy. This pathology is the result of trauma to the ligaments caused by repeated use.	Waste	1
Large Mammal	Thin sections of bone sawn on all four sides.	Waste	2
Cattle	Cattle metapodial shaft fragments, showing internal division, sawn on all four sides. Tapered longitudinally to some degree. Typically around 44mm in length. All appear to be from the posterior surface of the bone	Waste	204
Cattle	Metapodial shaft segments sawn at both ends and longitudinally, includes at least five metatarsals and six metacarpals. A maximum of 55mm long including both anterior and posterior segments	Stage 1	16
Cattle or Cattle?	Metapodial fragments sawn on all four sides, typically 43-45mm in length and 7mm wide. Removed from around the edges and anterior parts of the bone where it is thickest.	Stage 2	56
Cattle or Cattle?	Stage 2 fragments, but one end has been tapered forming a blunt point. 27 of these fragments have a shallow hole in the opposing end. These fragments could therefore be fitted to a lathe.	Stage 3	37
Cattle	Metapodials. The same as above, with no hole, but taken from the centre of the posterior surface. This part appears often to have been discarded as waste, but an attempt to fit them to a lathe has been made here.	Stage 3	2
Large Mammal	Stage 3 fragments turned on a lathe to form a cylindrical shape.	Stage 4	3
Large Mammal	Stage 3 fragments partly made into a pipe mouthpiece. The bone is tapered, slightly flattened at one end, and polished.	Stage 5	1
Large Mammal	Partially worked and polished mouthpieces. Three are cylinders, not tapered, with beginnings of raised lip at the rim where it fits in the mouth. One of these evidently has had one end broken off, possibly while attempting to create the screw thread or tenon. A second example evidently broke in half. The other two examples are is flattened at one end, with part of the rim present and tapered towards this end. One	Stage 5	5

	with decorative grooves at the opposing end. None have screw threads cut into them.		
Large Mammal	Completed mouthpiece, tapered and flattened at one end, with a raised lip. A screw thread is cut into the bone at the opposing end to fix it to the pipe, and hole drilled down its length. The mouth piece is chipped, and therefore possibly discarded.	Stage 5	1
Cattle	One femur, a distal shaft cylinder sawn though at both ends; two first phalanxes; one distal radius shaft splinter, sawn on three sides, and four carpal bones (cuniform).		8
Sheep or Goat	One metacarpal, one proximal radius, and one distal humerus		3
Pig	Fibula		1
Rabbit	Humerus		2
Cattle/ Red Deer	Rib fragments. All but two sawn.		13
Domestic Goose	Two tibio-tarsus fragments and one coracoid. Tibio-tarsus fragments possibly from same bone, but fragments incomplete		3
Bird	Pelvis and radius fragments		2
Large Mammal	Unidentified. Includes one likely cattle metapodial shaft splinter sawn on all four sides, which but includes most of the length of the shaft, and a second sawn fragment.		4
Medium Sized Mammal	Vertebra fragments		4
Medium Sized Mammal	Rib fragments		3
Medium Sized Mammal	Skull fragments		2
Unidentified	Bone fragments		6
201			
Cattle	One very thin metatarsal cylinder only millimetres thick and one posterior metapodial fragment sawn on all four sides.	Waste	2
105			
Cattle	One posterior metapodial fragment sawn on all four sides.	Waste	1
Total			391

Table 1: Animal bones by spices with comments on the manufacture of mouth pieces.

3.3.10 *Pipe Mouthpieces*: although not all of the fragments could be individually identified as cattle metapodials, it seems clear that these two bones, the metacarpal and metatarsal, are being used exclusively in this process. Several stages could be identified in the working of this bone.

- Stage 1: the ends of the bones have been sawn off and the shaft cut into segments, a maximum of 55mm in length, with the thinner posterior surface of this segment removed and discarded. The most numerous bone fragment in Table 1 is this posterior shaft fragment. Approximately three of these segments could be removed from a single bone.
- Stage 2: these segments have been sawn into, possibly six, elongated fragments typically 7mm wide.
- Stage 3: they have then been tapered into a blunt point, with a hole formed in one end, to be turned on a lathe.
- Stage 4: represents where these fragments have been tuned to form a cylindrical shape
- Stage 5: includes mouth pieces at various stages of completion, all polished to some degree. They are typically tapered and flattened in shape, with the beginnings or a completed raised lip where the mouth piece would have fitted between the teeth. One example has a screw thread where it would have been attached to a pipe. There are no examples where a tenon would have been used for this purpose. All of these examples appear to have been broken or damaged in some way, and therefore discarded.

3.3.11 Given the figures presented above a rough estimate can be suggested for the number of metapodials represented in the assemblage, and the number of mouth pieces manufactured. The most numerous fragments represented are the 204 posterior shaft segments, presumably discarded for being too thin. Three of these fragments could be obtained from a single metapodial, giving a minimum of 612 metapodial. If a six further fragments, for every discarded posterior segment, could be obtained from the bone (three from each side), then this waste may represent the manufacture of potentially 1224 mouth pieces.

3.3.12 There are not 612 proximal and distal ends, which are first removed from the shaft of the bone, suggesting these were removed and discarded elsewhere. These metapodials would have been brought to the site from where the animal are being butchered for consumption.

3.3.13 **Metalwork**: a single iron object and a single lead object were recovered from the evaluation. The iron object was too corroded for positive identification, although may have been a door latch. The lead object was affixed to a threaded iron bar, suggesting it to have been part of an item of machinery. Both objects are of little archaeological significance.

3.3.14 **Worked stone**: three objects of worked stone were produced from the evaluation. All were discs or drums of coarse-grained sandstone, and all were

recovered from layer **401**, Trench 4. The smallest object had a diameter of 185mm, a thickness of 70mm, and a central circular hole of 70mm diameter. Two shallow rebates worn into the surface around the periphery suggested that this object may have been used as a pulley connected to a line shaft, used to power an item of machinery.

- 3.3.15 The second object had a diameter of 305mm (1ft), a thickness of 100mm, and a central hole of 80mm diameter. This object had a series of six U-shaped grooves, each some 9mm wide and 7mm deep, incised into the peripheral surface. Again, it seems that this object had been connected to a line shaft, and had been associated with the power transfer to an item of machinery.
- 3.3.16 The third object was of a similar nature, but considerably larger (Plate 16). It had a diameter of 340mm, a thickness of 328mm, and a square-shaped central hole that measured 0.91mm by 0.91mm. It contained 22 U-shaped grooves incised into its peripheral surface, again suggesting that it had been used as a pulley associated with power transfer to machinery.
- 3.3.17 Pulleys of this nature were normally constructed of wood, until the later 19th century when iron was used predominantly. These materials would clearly have been considerably lighter than stone, which would seem to be far too heavy for application as a power transfer pulley. The number of grooves incised in the surface of the two larger objects is also intriguing as these suggest multiple rope drive, as opposed to the single belts that are frequently associated with textile machinery. However, the use of stone as opposed to wood or metal would have provided driving surface with greatly increased friction properties, thereby preventing drive rope slippage. The multiple driving ropes suggested by the number of grooves may have been connected to machinery smaller than that used in textile manufacture, such as those required to produce wooden spindles. In this respect, it is of interest to note that a spindle manufacturer occupied the premises on the opposite side of New Union Street during the mid-19th century.
- 3.3.18 **Conclusions:** in general terms, the artefact assemblage does not offer any potential to inform the development of the site, and particularly Waller's Mill, although it does contain some objects of interest. In particular, the large group of worked animal bone, and the objects of worked stone. The latter appeared to be associated with the transmission of power to small machinery, possibly non-textile related, whilst the animal bones seemed to represent the production of tobacco pipes.

4. DISCUSSION

4.1 RESULTS OF ARCHAEOLOGICAL INVESTIGATION

- 4.1.1 The programme of evaluation trenching has revealed that considerable sub-surface remains of Waller's Mill survive across the proposed development area, and the results have allowed several phases in the development of the mill complex to be identified, which may be related broadly to cartographic evidence. The phases identified are outlined below, although it should be noted that this has been based on the physical evidence encountered during the evaluation, which has examined only a small percentage of the whole mill complex; much of the footprint of the factory lies beneath New Union Street, and was presumably dismantled in advance of this road being laid.
- 4.1.2 *Phase 1:* the earliest structural remains excavated included wall **205**, replete with relieving arches, wall **204** (Trench 2), and walls **416** and **417** (Trench 4). These walls formed a basement, with a floor level some 2.3m below the contemporary ground surface (New Islington street). The incorporation of relieving arches within **205** suggest that the wall was designed to support an increased load. Parallels for this design may be drawn from engine houses associated with other textile mills of this period in the area. Those at Murrays' Mills on Union Street, for instance, incorporate relieving arches that were used to support the weight of a beam engine, and whilst it is tempting to suggest a similar function for wall **205**, the supporting evidence is slight. Indeed, the position of the engine within Waller's Mill is unclear, although other known mills of the period usually had the engine house situated within the main building (Williams and Farnie 1992, 74), frequently lying transversely across the factory.
- 4.1.3 The archive sources consulted have provided no indication as to the original power source for the mill. Its position relative to the nearest water source (Shooters Brook), suggests that it is extremely unlikely to have been water-powered, thereby implying that it had been either horse- or steam-powered from its inception, although it is not inconceivable that the textile machinery was originally hand-powered. Other large late 18th century mills in the area are documented to have contained spinning mules that were entirely hand-operated (Williams and Farnie 1992, 52). Peter Drinkwater's Piccadilly Mill, for instance, is accredited with being the first mill in Manchester to have utilised a Boulton and Watt rotary beam engine in 1789 (Lee 1972, 5), although this was applied initially to drive preparation machinery only and the spinning was undertaken by hand (Hills 1970, 161). However, the evaluation and associated documentary research has not produced any evidence for Waller's Mill having been equipped with hand-powered machinery, and any such suggestion must remain entirely conjectural. Moreover, the presence of the flue system encountered during the evaluation implies that the mill had been steam-powered at some point, although the means by which water was supplied is unclear.
- 4.1.4 It would seem logical that water was obtained from the Rochdale Canal, which lies some 27m to the north-west of the mill, although the Ancoats section of

the canal was not completed until 1804, and could not have supplied water until after this date. However, the Rochdale Canal Company only allowed steam engines 'within 20 yards [21.89m] of the canal to condense by its waters' (Rees 1819, 389), implying that the mill was too far from the line of the canal to use its waters. During the excavation of the test pits, a thick deposit of black silt was observed in the area to the north-west of the mill. The origins of this material are as yet uncertain, although it may have been associated with a water feed channel from the canal to the mill's boiler. Clarification of this issue should remain a priority for further investigation.

- 4.1.5 Boilers installed into mills of this period were usually of a wagon type. At small sites, boilers were frequently located outside the mill, either free-standing or attached to the mill. Boilers of larger mills were more frequently situated internally, either in the ground floor or basement. The evidence obtained from the evaluation suggests that the boiler at Waller's Mill was installed internally, adjacent to the southern wall of the factory. The surviving foundations would appear to be consistent with those required for a wagon boiler.
- 4.1.6 Most early 19th century mills had attached or internal chimneys, frequently of square or rectangular section (Williams and Farnie 1992, 68). However, the evaluation has demonstrated that the chimney associated with Waller's Mill was free standing at some distance from the factory building. Parallels to this may be drawn from the late 18th century Shudehill and Garratt mills, which similarly had free-standing chimneys. The position and form of chimney was not established during the evaluation, and this should remain a priority for further investigation.
- 4.1.7 It is likely that walls **206**, **209** (Trench 2) and **406** (Trench 4) were also components of the original mill, and formed the building at the north-western end. These walls formed a room that measured internally some 6.2m by 3.2m and, unlike the adjoining area to the south-east, did not incorporate a basement. It seems probable that brick surface **413** represented a floor level within this building.
- 4.1.8 *Phase 2*: the apparent extension shown on the 1824 map may be represented by walls **210** and **212** (Trench 2), and **503** (Trench 5). These walls formed a 3.8m wide extension to the north-western end of the mill, but not the L-shaped addition shown on Bancks and Co's map of 1831. It is probable that the flue was modified, and perhaps extended, at this time.
- 4.1.9 *Phase 3*: wall **213**, encountered at the north-western end of Trench 2, had evidently been added on to the Phase 2 extension. This wall is likely to have represented the boundary wall that is shown in this position on Bancks and Co's map of 1831, which may have enclosed a large yard (Fig 8). It is possible that flagstone and brick floor **502** (Trench 5) represented the surface of this yard. This appeared to have been crudely laid. The southern edge of the yard may have been formed by the northern wall of **520** (Trench 5), which also seems to have provided an access route into the mill during this late phase. Few mills of this period had the main entrance in the front elevation, often as a

security measure, and it was normal practice to incorporate an enclosed yard from which the principal buildings were entered.

4.1.10 The evaluation did not provide any evidence for the L-shaped extension shown on Bancks and Co's map. Such L-shaped plans were quite usual for mill buildings of the period. The wings were often used for warehousing, or for processes ancillary to the spinning operations.

4.1.11 *Phase 4*: the relative paucity of demolition material associated with the mill was notable. This implied that the mill had been dismantled with some care, presumably with a view to reusing the materials. The absence of any structural elements of the former power systems remaining *in situ* was particularly noticeable.

4.1.12 *Later Activity*: Goad's insurance plans clearly show the site to have been occupied by a building contractor during the early part of the 20th century. Archaeological evidence has demonstrated that this had little impact upon the surviving structural elements of the mill.

4.2 SIGNIFICANCE OF THE SITE

4.2.1 The Greater Manchester Textile Mill Survey highlighted the fact that in 1991 only 11 cotton spinning mills dating wholly or in part from 1800 to 1825 survived in Manchester and Salford, together representing less than 20% of Manchester's early cotton spinning industry (Williams and Farnie 1992, 53). In this respect, the surviving sub-surface remains of Waller's Mill may be seen to be of some significance in terms of informing an understanding of this key period in development of textile mills.

4.2.2 Williams and Farnie (1992, 53) considered early 19th century mills to measure between 25m and 56m long, with the internal widths ranging from 11.5m to 15.3m. The dimensions of the Waller's Mill, as shown on Bancks and Co's map of 1831 combined with evidence produced from the evaluation, indicate the main mill building measured some 48m long with an internal width of 7m. In this respect, the mill may be seen to have been somewhat narrower than other Manchester factories of the period, and more typical of the design associated with Arkwright mills of the late 18th century.

4.2.3 The use of the building for both cotton spinning and for machine-making, as implied from the details provided by the plan of c1822, suggests sub-letting of factory space, which was widespread during this period. However, the phenomenal growth of the cotton industry during the late 18th/early 19th centuries has tended to obscure the great development and expansion in engineering, which was a necessary parallel to it. Indeed, the growth of the cotton, and particularly the spinning, trade would not have been possible without the development of engineering (Lee 1972, 16). In this respect, the machine-maker's shop which is documented to have occupied a portion of Waller's Mill in c1822 is of some significance, despite the lack of surviving physical evidence.

5. IMPACT AND RECOMMENDATIONS

5.1 IMPACT

- 5.1.1 The results of the evaluation demonstrate that well-preserved archaeological remains of Waller's Mill survive across the site. It would therefore seem probable that, in general terms, any ground-reduction works associated with the future development of the study area would have a severe negative impact. This is particularly the case within the north-western part of the site, where elements of a complex flue system survive *in situ* at a depth of less than 1m below the modern ground surface. However, whilst these remains are largely intact, they are fragile and liable to collapse during any earth-moving works, and preservation *in situ* may therefore not be a practical option.
- 5.1.2 The archaeological remains to the south-east are more deeply buried. Moreover, these remains represent the shell of the former mill with little, or no, survival of internal features. Hence, ground-reduction works within the footprint of the mill are unlikely to have a significant negative impact, providing that the external walls of the former building are not damaged in the process.

5.2 RECOMMENDATIONS

- 5.2.1 It is recommended that a watching brief be undertaken during any earth-moving works within the study area in order to record any structural remains that may survive *in situ*. In particular, a watching brief should be targeted at compiling a record of the western extent of the flue and its associated chimney, any surviving floor surfaces within the two room at the north-eastern end of the mill, and any structural elements of the L-shaped extension adjacent to New Union Street. Confirmation of a water channel between the mill and the canal should also be sought, with clarification of the origin of the black silt identified to the north-west of the mill providing an initial focus.
- 5.2.2 It is further recommended that, where possible, any future design proposal for the redevelopment of the site should allow for the surviving structural elements that represent the shell of the former mill to be retained *in situ*.

6. BIBLIOGRAPHY

CARTOGRAPHIC SOURCES

Map of Manchester and Salford, drawn from a survey by William Green, begun in 1787 and completed in 1794

A Plan of Manchester and Salford, by Bancks and Thornton, 1800

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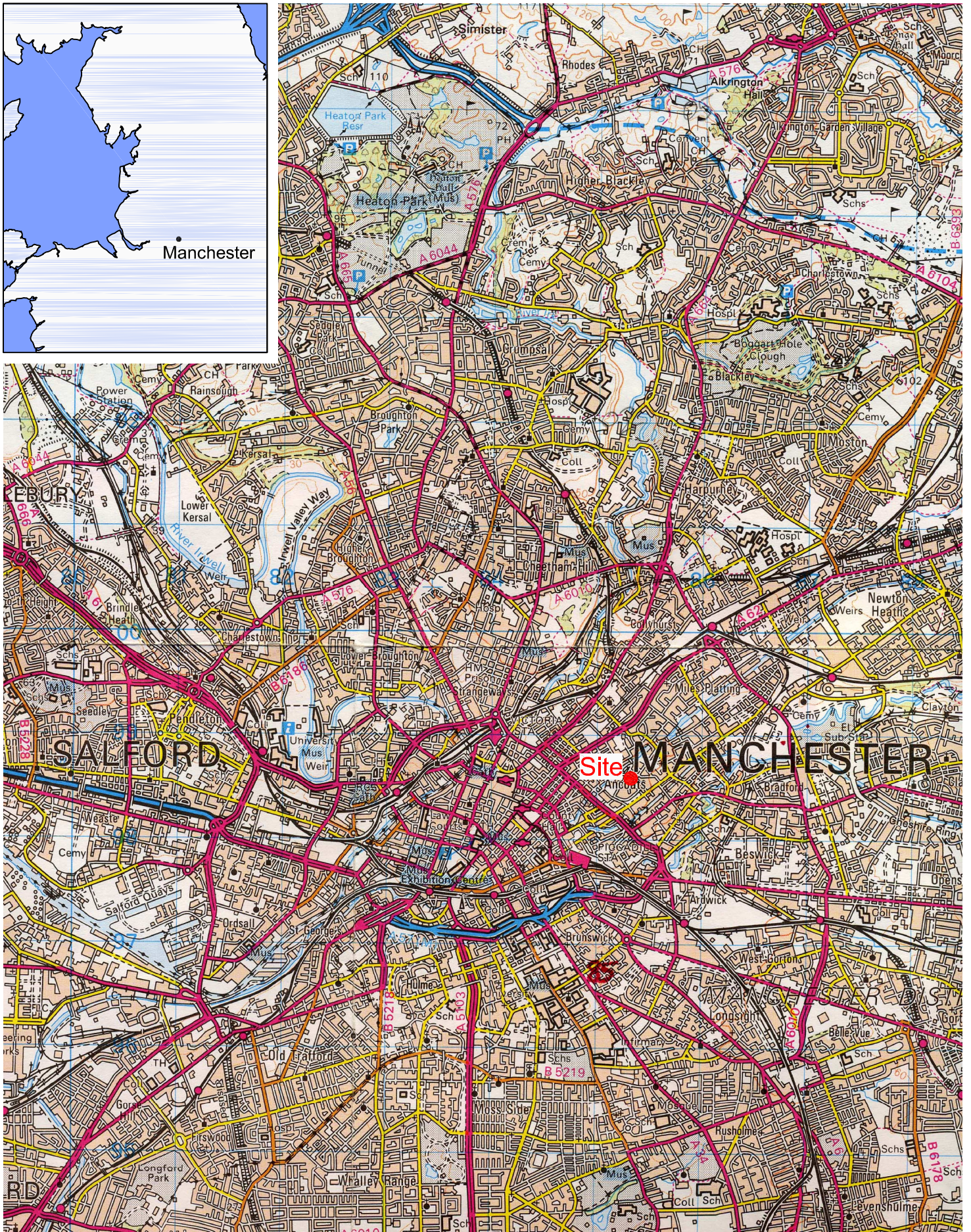
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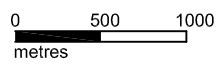


Figure 1: Location map

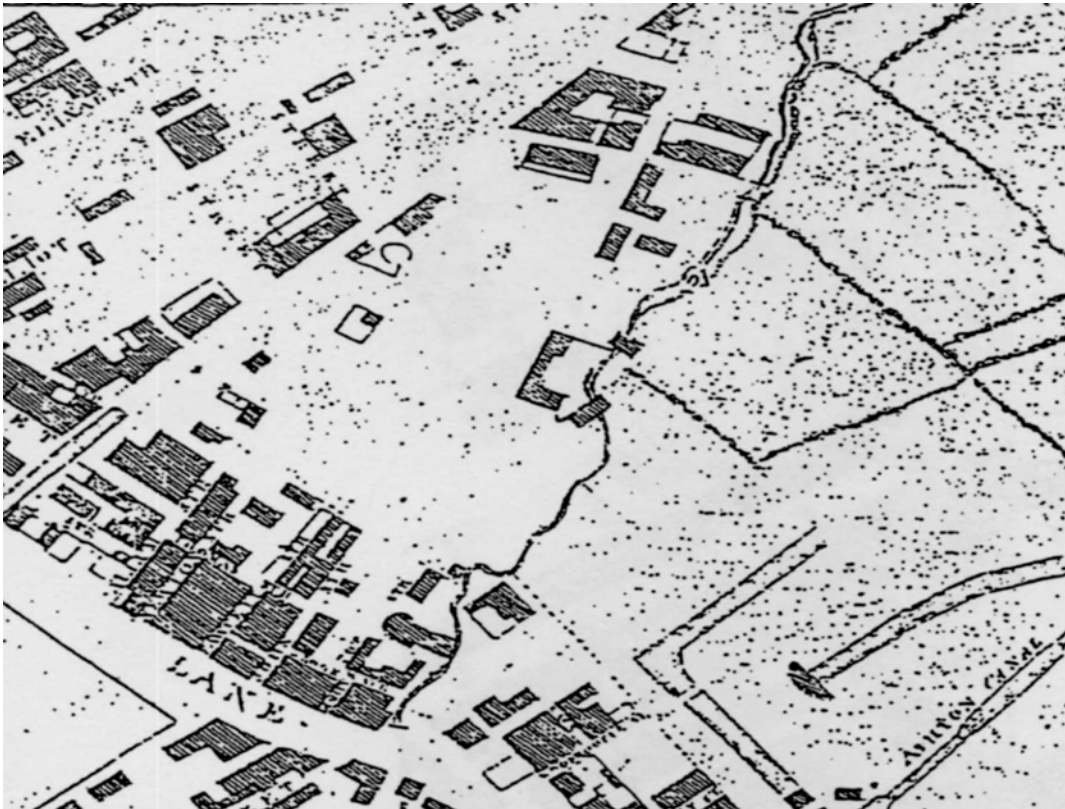


Figure 2: Extract of 'A Plan of Manchester and Salford', 1800, showing Waller's Mill (top centre) as a single rectangular range of buildings

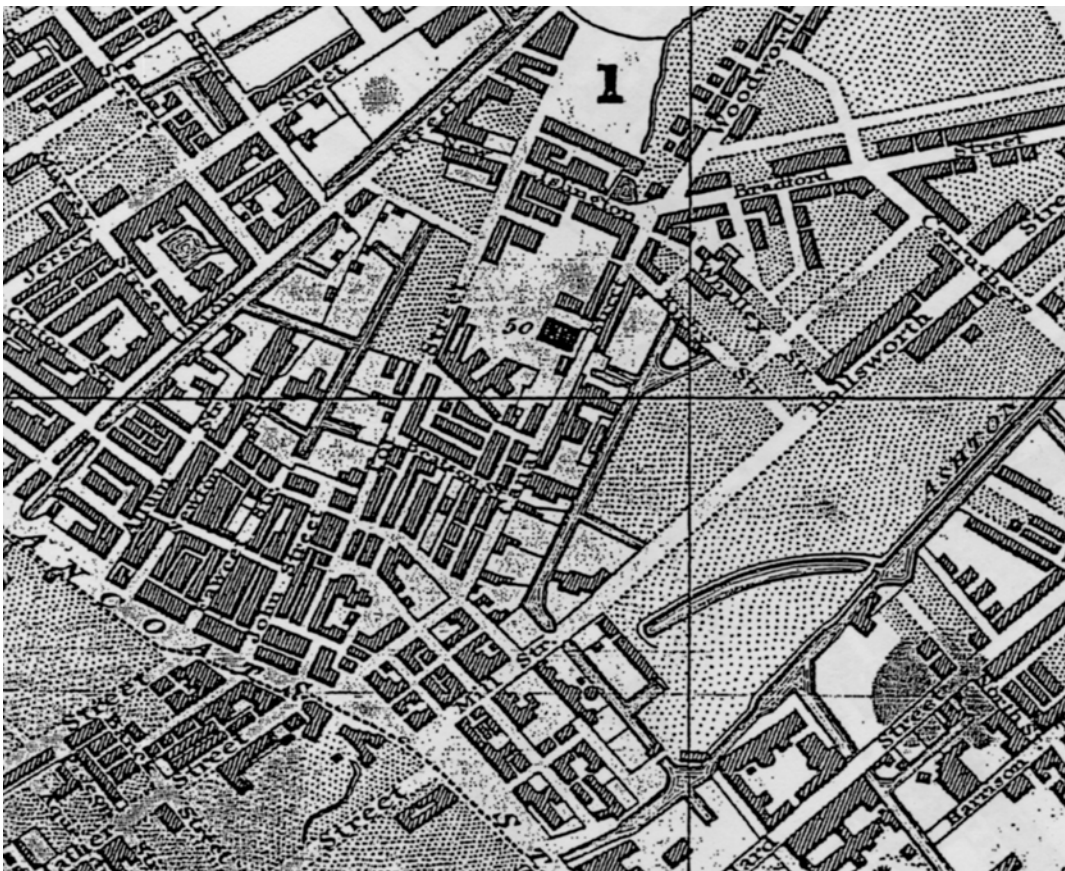


Figure 3: Extract of Thornton's 'Map of Manchester and its Environs', 1824

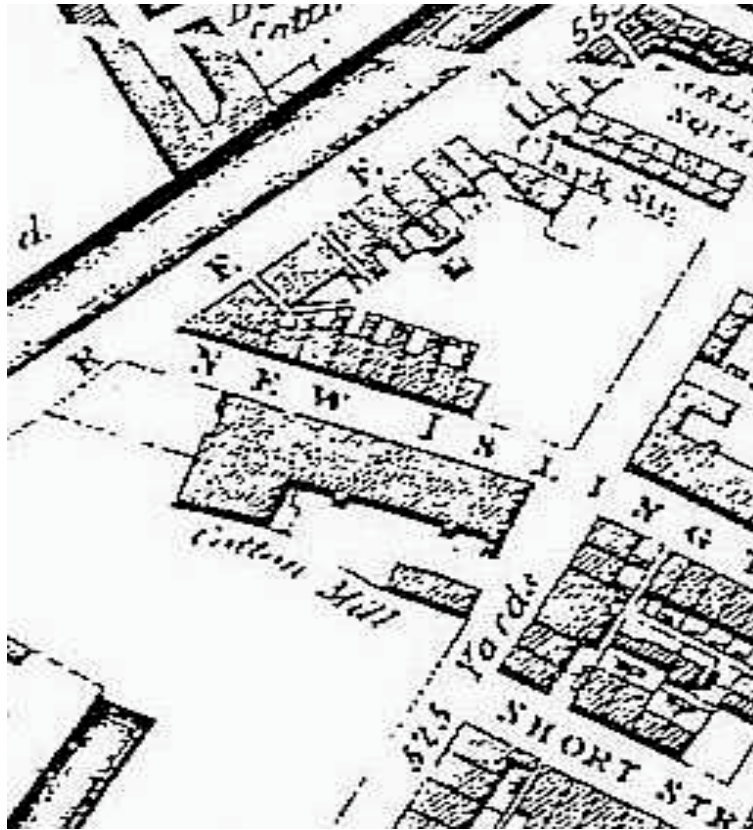


Figure 4: Extract of Bancks and Co's 'Map of Manchester and Salford' 1831, showing the extension to the north-western part of the mill. Another small rectangular building is shown to have been erected within the south-eastern part of the site

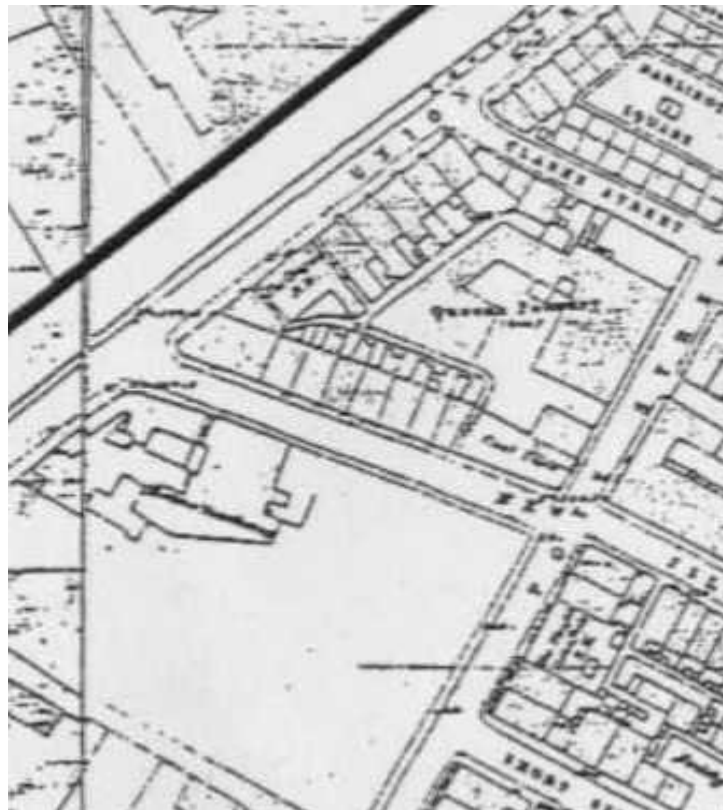


Figure 5: Extract of Ordnance Survey 6'' : 1 mile map, Manchester sheet 24, 1851



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Scale 1:300 at A4



Figure 8: Trench locations, superimposed on Bancks and Co's map of 1831 and modern topographic survey

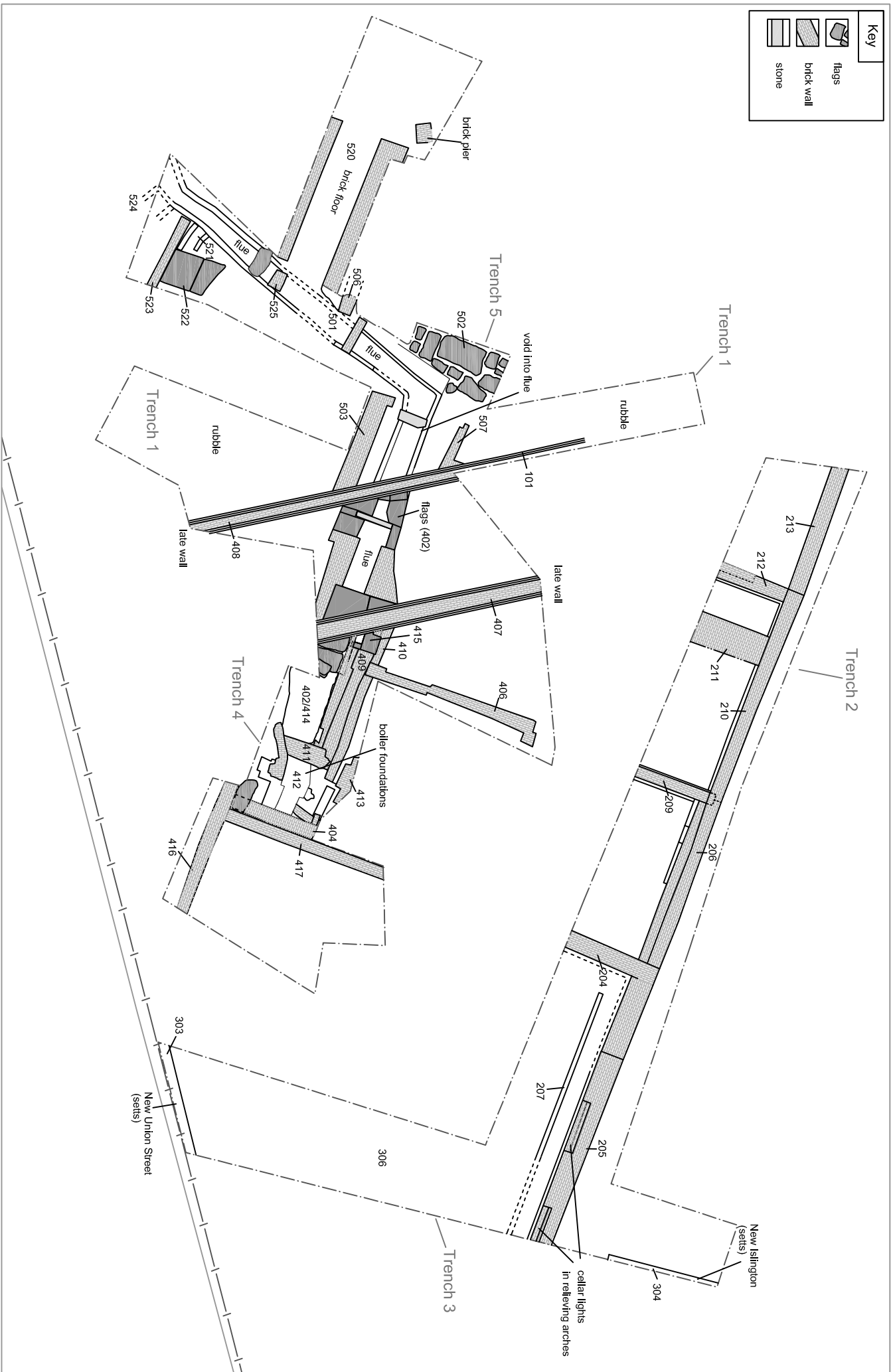
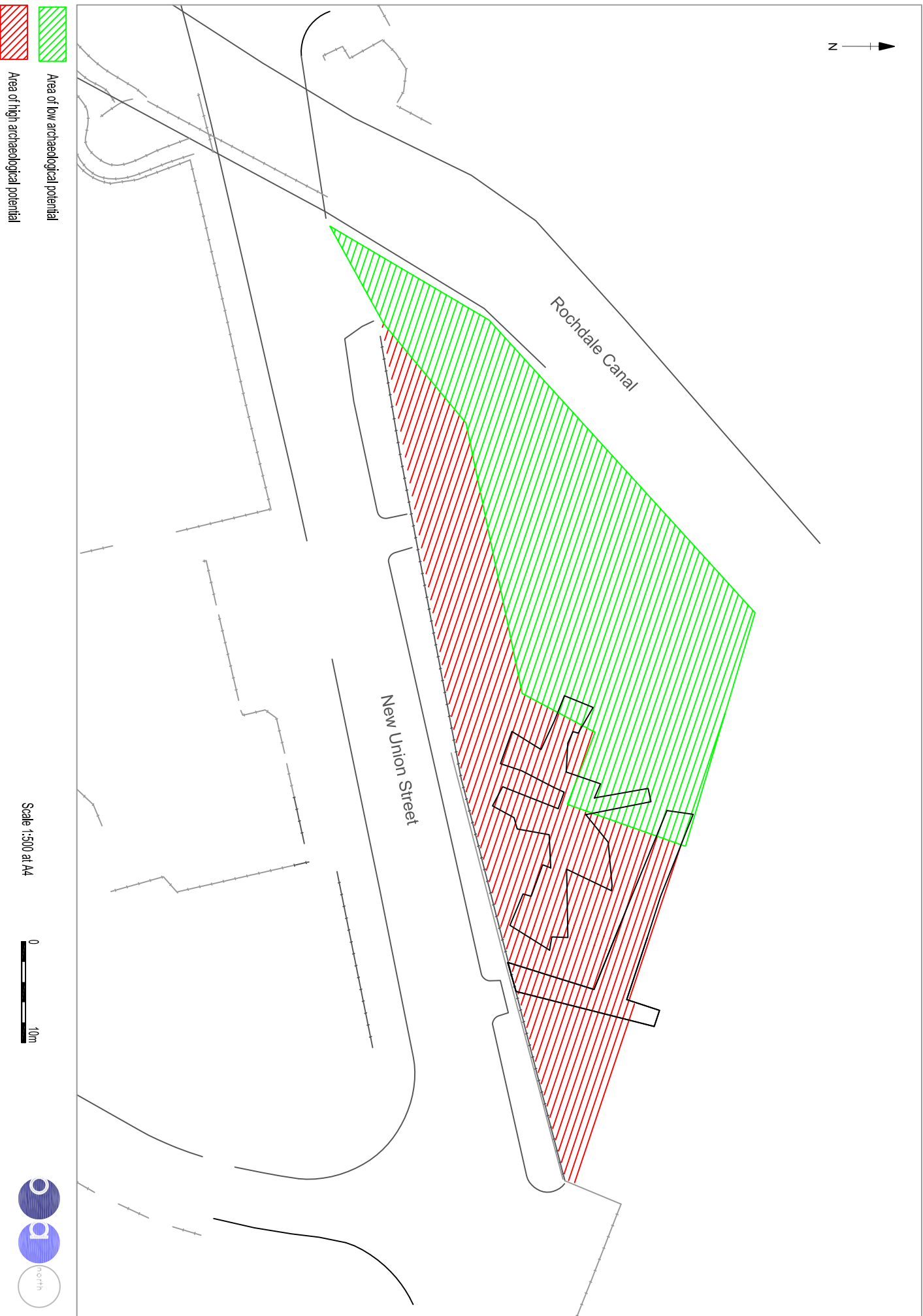




Figure 9: Detail of evaluation trenches

Scale 1:100 at A3





 Area of low archaeological potential
 Area of high archaeological potential

Scale 1:500 at A4



Figure 10: Zoning of archaeological potential within study area



Plate 1: Wall *101* and underlying deposits *102*, *103* and *104*, in the west-facing section of Trench 1



Plate 2: South-eastern end of wall *205* within Trench 2



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Plate 4: The north-western relieving arch within wall **205**, damaged subsequently by the insertion of manhole **208**



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Plate 11: Feature **412**, Trench 4



Plate 12: Flue **402** within the north-western end of Trench 4, showing wall **407** and **408**. The putative access point into the flue may be seen in the centre.



Plate 13: Flue blocking wall 525, Trench 5



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Plate 15: Putative entranceway *520*, with flue *501* in the foreground



Plate 16: Large stone object

APPENDIX 1: PROJECT DESIGN

Oxford
Archaeology
North

August 2004

WALLER'S MILL, NEW ISLINGTON, MANCHESTER



Extract from Bancks and Co's Map of Manchester and Salford, 1831

ARCHAEOLOGICAL EVALUATION PROJECT DESIGN

Proposals

The following project design is offered in response to a request from Mr Richard Hattan, of Urban Splash Ltd, for the archaeological evaluation of Waller's Mill in advance of the proposed development of land at New Islington, Ancoats, Manchester.

1. BACKGROUND

1.1 CIRCUMSTANCES OF PROJECT

1.1.1 This project design is for one element of a programme of archaeological work that is required as part of the New Islington development within the Ancoats area of Manchester, and has been formulated to meet the requirements of a specification provided by Norman Redhead, the Assistant County Archaeologist for Greater Manchester. The development is being delivered by Urban Splash Ltd as part of the redevelopment of land between the Rochdale and Ashton Canals, on the north-east side of Manchester city centre.

1.2 HISTORICAL BACKGROUND

1.2.1 The earliest cartographic depiction of the mill is upon a map of the area published in 1800, where it is shown to comprise a rectangular building along the south side of the New Islington area of Ancoats. By 1815 S and R Waller, who are listed in a contemporary trades directory as cotton spinners (Wardle and Bentham 1815, 152), occupied the mill. A subsequent directory (Pigot and Dean 1817) contains an entry for T, R and S Waller, cotton spinners and manufacturers at New Islington.

1.2.2 A plan of the mill, dated to c1822, identifies the building as comprising a factory and machine makers shop of four storeys at the western end, and the remainder of the factory being of six storeys with a loft. A later map, published by Bancks and Co in 1831, marks the site as a cotton mill, and depicts an extension to have been added on to the south-western part of the main building, forming an L-shaped complex. However, trades directories for 1832 list the firm of T, R and S Waller as cotton spinners at Albion Buildings, and there are not other entries for cotton spinners occupying their former premises in New Islington. Similarly, the site is shown as vacant on the Ordnance Survey map of 1851, suggesting that it had gone out of use by that date. The subsequent Ordnance Survey map of the area, published in 1891, shows New Union Street to have been built across the eastern part of the mill site.

1.3 OXFORD ARCHAEOLOGY

1.3.1 Oxford Archaeology has over 30 years of experience in professional 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 200 members of staff) and can thus deploy considerable resources with extensive experience to deal with any archaeological obligations you or your clients may have. We have offices in Lancaster and Oxford, trading as Oxford Archaeology North (OA North), and Oxford Archaeology (OA) respectively, enabling us to provide a truly nationwide service. Watching briefs, evaluations and excavations have taken place within the planning process, to fulfil the requirements of clients and planning authorities, to very rigorous timetables. OA is an Institute of Field Archaeologists Registered

Organisation (No 17), and is thus bound by the IFA's Code of Conduct and required to apply the IFA's quality standards.

- 1.3.2 Given the geographical location of Manchester, it is intended to co-ordinate the project from our northern office in Lancaster, though the project team will use the most appropriate resources from both offices. Between our two offices our company has unrivalled experience of working on post-medieval sites, and is recognised as one of the leading archaeological units in the country with regard to dealing with Industrial Period projects.
- 1.3.3 OA North has considerable experience of the assessment, evaluation and excavation of sites of all periods, and has particular experience of industrial archaeology in the North West having undertaken in recent years excavation, survey, building recording and post-excavation projects in both urban and rural environments; *inter alia* (locally to Manchester) the survey, excavation, recording, analysis, consolidation, publication and consultancy relating to the 'Hotties' continuous glass tank furnace at St Helens (Krupa and Heawood 2002); the excavation of the former Calprina textile works in Stalybridge (OA North 2002a); the excavation and survey of the Macintosh Mill in Manchester (OA North 2002b); and a continuing programme of archaeological investigation at the Torrs complex of textile factories in New Mills, Derbyshire. OA North is also currently engaged in a comprehensive programme of detailed survey and excavation of the Murrays' Mills complex of cotton-spinning mills in Ancoats, and has evaluated several early cotton factories within Ancoats as part of the New Islington development. In particular, OA North recently completed an archaeological evaluation of New Islington Mill (OA North 2004), which lies on the opposite side of New Islington to Waller's Mill.

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 characterise the level of preservation and significance of the archaeological remains relating to this early textile mill, and to provide a good understanding of their potential. Investigation will be focused upon the remains of the western part of the mill, as the eastern extent lies beneath New Union Street.

2.2 OBJECTIVES

- 2.2.1 The objectives of the project may be summarised as follows:
- to expose and determine the presence, character, and level of survival of the external walls of the mill and establish any evidence for phasing;
 - to expose and determine the level of survival of floors within the mill;

- to establish the presence, character, and level of survival of the engine and associated boiler houses;
- to establish the presence, character, and level of survival of any flues associated with the boiler house;
- to inform a decision as to whether further excavation 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 a verbal project brief supplied by the Greater Manchester Assistant County Archaeologist.

3.2 FIELDWORK

3.2.2 ***Evaluation Trenching:*** it is proposed that the site be investigated via four trenches, with a combined total length of 45m. All trenches will be at least 2m wide, but may be widened to allow the sides to be stepped in if necessary. Trench 1 will measure 10m in length, and will be placed across the western end of the original mill block in order to establish if this part of the building had contained the mill's power system. The trench will also investigate the survival of the external walls, evidence of internal phasing, and the engine and boiler houses. Trench 2 will measure 12m in length and will be placed at right angles to the first trench. The trench will aim to investigate the level of survival of internal features within the original building, and provide additional evidence for the engine and boiler house. Trench 3 will measure 13m in length and will be placed across the original mill. This trench will aim to investigate the level of survival of internal features within the original building. Trench 4 will measure 10m in length, and will investigate the extension to the mill, as shown on the 1831 map of the site. The proposed positions of the trenches are shown in Figure 1.

3.2.3 Excavation of the uppermost levels of modern overburden/demolition material will be undertaken by a machine fitted with a toothless ditching bucket to the top of the first significant archaeological level. The work will be supervised by a suitably experienced archaeologist. Spoil from the excavation will be stored adjacent to the trench, and will be backfilled upon completion of the archaeological works.

3.2.4 Machine excavation will then be used to define carefully the extent of any surviving walls, foundations, 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.

- 3.2.5 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.
- 3.2.6 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.
- 3.2.7 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 14, 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.
- 3.2.8 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*.
- 3.2.9 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.
- 3.2.10 ***Finds policy:*** finds recovery and sampling programmes will be in accordance with best practice (following current Institute of Field Archaeologists guidelines) and subject to expert advice in order to minimise deterioration. OA has close contact with Ancient Monuments Laboratory staff at the University of Durham and, in addition, 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.
- 3.2.11 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.

3.3 HEALTH AND SAFETY

- 3.3.1 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 (3rd Edition, 1997). OA North will liaise with the Client/main contractor to ensure all current and relevant health and safety regulations are met.
- 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 Client/main contractor will be responsible for the provision of a secure enclosed area for the archaeological work to take place within.
- 3.4.3 OA North will provide all the necessary PPE to protect field staff from the contaminants known to be present across the site, but anticipate that staff will be free to use the main contractor's welfare facilities for washing purposes.
- 3.4.4 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.
- 3.4.5 The site currently requires some clearance work, including the removal of syringes, prior to the commencement of the evaluation. It is envisaged that this will be undertaken by the main contractor, and has not been costed for as part of the archaeological evaluation.

3.5 POST-EXCAVATION AND REPORT PRODUCTION

- 3.5.1 **Archive:** the results of the fieldwork 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.

- 3.5.2 The paper and finds archive for the archaeological work undertaken at the site will be deposited with the Manchester Museum, as this is 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 computer disks as ASCII files (as appropriate). The archive will be deposited with the Manchester Museum within six months of the completion of the fieldwork.
- 3.5.3 Except for items subject to the Treasure Act, all artefacts found during the course of the project will be donated to the receiving museum.
- 3.5.4 A synthesis (in the form of the index to the archive and a copy of the publication report) will be deposited with the Greater Manchester Sites and Monuments Record. A copy of the index to the archive will also be available for deposition in the National Archaeological Record in London.
- 3.5.5 **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 Manchester Planning Department and the Greater Manchester Assistant County Archaeologist. The final report will include a copy of this project design, and indications of any agreed departure from that design. It will include an historical 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 any finds recovered from the evaluation trenching. In addition, recommendations for any further mitigation works and details of the final deposition of the project archive will also be made.
- 3.5.6 A summary of the results produced from the archaeological investigation will be published in the CBA North West magazine.
- 3.5.7 **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 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** (OA North Project Manager) to whom all correspondence should be addressed. Ian has considerable experience and particular research interests in Industrial Archaeology and, amongst numerous other projects, was involved in the excavation recording, analysis and publication of the Netherhall blast furnace site in Maryport, Cumbria, the excavation, recording and publication of work at Carlton Bank alum works in North Yorkshire, and the excavation of Macintosh Mill in Manchester. Ian is currently managing the programme of detailed survey and excavation at the Murray's Mills complex of cotton spinning mills in Manchester, and has been responsible for several evaluations as part of the New Islington development.
- 5.2 The evaluation will be undertaken by **Sean McPhillips BA** (OA North Project Supervisor). Sean is an highly experienced field archaeologist, who has a particular interest in Industrial Archaeology, and especially that of Manchester. Sean recently directed the archaeological investigation of a complex of textile mills at the Torrs in New Mills, and played a key role in the excavations at the Calprina textile works, Stalybridge, and Macintosh Mill, Manchester. Sean also directed the evaluation and excavation of the Percival, Vickers and Co Ltd flint glass works in Manchester. Sean will be assisted by at least two technicians.
- 5.3 Assessment of any finds from the excavation 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 study 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, who will be afforded access to the site at all times.

APPENDIX 2: CONTEXT LIST

Context No	Trench	Description	Height (aOD)
101	1	Wall - 20th century origin (same as 408)	49.81m
102	1	Rubble layer	c49.01m
103	1	Compacted brick and clay layer	48.43m
104	1	Natural clay subsoil	48.23m
105	1	Rubble layer	49.81m
201	2	Rubble layer	-
202	2	Tarmac surface and associated hardcore	c49.50m
203	2	Redeposited clay layer	47.90m
204	2	Wall - partition wall within original mill	48.47m
205	2	Wall - northern wall of mill	47.03m
206	2	Wall - north-westerly continuation of 205	48.25m
207	2	Brick support for basement floor	45.75m
208	2	Modern manhole structure	48.90m
209	2	Wall - partition wall	48.40m
210	2	Wall - north-westerly continuation of 206	48.33m
211	2	Brick surface	47.73m
212	2	Wall - north-western gable wall	47.63m
213	2	Wall - north-western boundary wall	48.03m
214	2	Modern service pipe	47.67m
301	3	Modern ground surface	c49.50m
302	3	Compacted levelling horizon	c49.10m
303	3	Surface of New Union Street	48.90m
304	3	Surface of New Islington Street	48.06m
305	3	Deposit of broken flagstones	47.95m
306	3	Redeposited clay subsoil	47.93m
307	3	Rubble layer	-

Context No	Trench	Description	Height (aOD)
401	4	Rubble layer	-
402	4	Structure - flue	48.35m - 48.68m
403	4	Soft silt fill of 402	-
404	4	Wall - possible boiler foundations	48.74m
405	4	Brick surface - floor	48.68m
406	4	Wall - partition wall	48.96m
407	4	Wall - late 19th/20th century	49.12m
408	4	Wall - late 19th/20th century	49.45m
409	4	Wall -	48.64m
410	4	Wall -	48.59m
411	4	Metal lintel supporting arch of flue	
412	4	Structure - south-eastern terminus of flue	
413	4	Brick surface - floor	48.68m
414	4	Structure - boiler housing	
415	4	Flue control mechanism	
416	4	Wall - southern wall of mill	48.54m
417	4	Wall - partition wall within original mill	
501	5	Flagstone capping of flue 402	48.31m
502	5	Flagstone and brick surface north of 501	48.30m
503	5	Wall - northern wall of mill	48.80m
504	5	Wall	48.80m
505	5	Wall -	48.78m
506	5	Wall -	49.15m
507	5	Brick floor	48.59m
508	5	Rubble layer	-
509	5	Wall -	48.59m
520	5	Structure - ?entranceway	50.26m
521	5	Structure - ancillary flue channel	50.05m

Context No	Trench	Description	Height (aOD)
522	5	Flagstone floor	50.65m
523	5	Wall -	50.20m
524	5	Structure - ancillary flue channel	
525	5	Wall - flue blocking	50.03m

APPENDIX 3: FINDS CATALOGUE

Context	Material	Category	Quantity	Description	Date
105 (Tr 1)	Ceramic	Vessel	1	Stoneware bottle stamped ' <i>J Pratt & Son</i> '	Late 19th/20th century
105 (Tr 1)	Glass	Vessels	4	Mineral water bottles, two of which are stamped (' <i>J Pratt & Son</i> ', ' <i>M Morris, Swinton</i> ').	Late 19th/20th century
105 (Tr 1)	Glass	Industrial debris	2	Fragments of glass manufacturing debris	Late 19th/20th century
201 (Tr 2)	Ceramic	Vessels	9	Five small fragments of stoneware, one sherd of Blackware, one sherd of white glazed earthenware, one transfer-printed tea-pot lid	Late 19th/20th century
201 (Tr 2)	Ceramic	Clay pipe	3	Fragments of clay tobacco pipe stem	19th/early 20th century
201 (Tr 2)	Glass	Industrial debris	3	Fragments of glass manufacturing debris	Late 19th/20th century
201 (Tr 2)	Bone	Animal	2	Worked bone	Undated
401 (Tr 4)	Ceramic	Vessels	15	13 fragments of stoneware bottles, three with identifiable trade marks (two ' <i>R Nichols</i> ', and one ' <i>J Pratt & Son</i> ', and 17 fragments of assorted table and kitchenwares	Late 19th/20th century
401 (Tr 4)	Ceramic	Object	3	Small fragments of a ceramic electrical insulator	Late 19th/20th century
401 (Tr 4)	Ceramic	Clay pipe	1	Clay tobacco pipe stem, with mouth piece	19th/early 20th century
401 (Tr 4)	Glass	Vessels	10	One complete mineral water bottle (stamped ' <i>John Dyson, Ardwick</i> '), a fragment of a mineral water bottle, and seven other small bottle fragments. One purple lid fragment, possibly manufacturing debris.	Late 19th/20th century
401 (Tr 4)	Iron	Nail	1	Corroded object. ?Door latch	Undated
401 (Tr 4)	Lead	Object	1	Unidentified lead object	Undated
401 (Tr 4)	Bone	Animal	391	Worked bone fragments	Undated
401 (Tr 4)	Worked stone	Objects	3	Three large, complete, grooved stone drums. ?Machine parts	19th/20th century
403 (Tr 4)	Ceramic	Vessels	3	Two small fragments of stoneware, and transfer-printed ware dish	19th/20th century

APPENDIX 4: COMPLETED PROJECT SUMMARY FORM

PROJECT NAME: Waller's Mill

PROJECT LOCATION County: Greater Manchester NGR: SJ 8525 9867
District: Manchester
Parish: Ancoats

TYPE OF PROJECT: Trial Trenching

RESPONSIBLE ORGANISATION: Oxford Archaeology North PROJECT CODE: L9439

PROJECT OFFICER(S): Ian Miller, Chris Healey,

COMMISSIONED/FUNDED BY: Urban Splash Ltd

REASON(S) FOR WORK: Development

DATE PROJECT STARTED: September 2004

DATE FINISHED: November 2004

SUMMARY OF RESULTS: (Industrial Period)

The report presents the results of an archaeological evaluation, combined with historical research, at the site of Waller's Mill, New Islington, Ancoats, Manchester. The mill was erected in the late 18th century, as part of the initial phase of development in Ancoats.

The archaeological work comprised the excavation of five targeted evaluation trenches, coupled with a watching brief which monitored ground-reduction works.

REPORT REFERENCE: OA North 2004-05/xxx

PROPOSED ARCHIVE REPOSITORY:

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