NEW ISLINGTON WHARF, ANCOATS, MANCHESTER
Greater Manchester

Archaeological Investigation

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A proposal to redevelop a large plot of land in the Ancoats area of Manchester, currently being devised by Isis, allows for the erection of a hotel, an office block and retail outlets, and is focused on land bounded by Great Ancoats Street, Old Mill Street and the Ashton under Lyne Canal (centred on SJ 8530 9825). A desk-based assessment of the site concluded that there was a high probability for buried archaeological remains to survive within the study area, which are likely to be impacted upon by the proposed development (Coxah and Gardner 2003). In particular, the desk-based assessment identified the site of an early 19th century textile mill, associated industrial structures, and worker’s housing.

In order to assess the extent, nature and preservation of buried remains on the site, Oxford Archaeology North (OA North) was commissioned by CgMs Consulting, acting on behalf of Mace Ltd and ISIS Waterside Regeneration Ltd, to carry out an archaeological evaluation in advance of the proposed development. This comprised the excavation of six targeted trial trenches, which was undertaken by OA North during October 2005.

Following on from the evaluation, three areas of the site that were likely to be disturbed by the proposed development were recommended for archaeological excavation. This targeted two back-to-back dwellings along the western edge of the site, the engine and boiler rooms associated with a former textile mill, and a foundation plan of a former timber warehouse along the south edge of the site. In addition, a Level II survey of a brick building thought to date to the early 19th century located at the site entrance along Old Mill Street was required. The work was undertaken during October and November 2005. In total, 5.7% of the proposed development area was examined.

There are few archive sources pertaining to the construction and operation of the mill, although research has indicated that it had been established in 1804, representing an early stage in the area’s steam-powered textile production. Excavation was targeted upon the mill’s steam-power plant, and revealed considerable remains of the boiler house. Whilst the remains of the steam engine had been destroyed by redevelopment during the late 19th century, considerable in situ remains of the boiler house survived.

The excavation of the back-to-back houses furnished valuable evidence for the nature of cellar dwellings in Ancoats during the early 19th century. The cellars were latterly used as storage prior to their demolition in the late 20th century. The investigation of the former timber warehouse provided a foundation plan of a mid-19th century building, which contained elements of late 18th century origin.
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The archaeological investigations were carried out by Sean McPhillips, Chris Healey, Caroline Bulcock, Pascal Eloy, Andy Lane, Alistair Vannen and Chris Ridings, who also undertook the building survey. All other survey requirements were completed by Chris Wild. The report was written by Sean McPhillips and Ian Miller, the finds were examined by Jo Dawson, and the drawings were compiled by Mark Tidmarsh, Christina Clarke and Caroline Bulcock. Ian Miller edited the report, and was responsible for project management.
1. INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

1.1.1 A desk-based assessment of the proposed development site, undertaken during September 2003, concluded that there was a probability for buried remains of archaeological significance to survive in situ (Coxah and Gardner 2003). In particular, several structures associated with the industrialisation of the area during the early 19th century were identified. It was recommended that an archaeological evaluation be undertaken to establish the presence or absence of these buried remains, and provide an assessment of their potential.

1.1.2 In accordance with an instruction from CgMs Consulting in October 2005, Oxford Archaeology North (OA North) undertook the recommended programme of archaeological evaluation, which was completed in advance of any ground-works associated with the proposed development. The evaluation comprised the excavation of six targeted trial trenches, which revealed well-preserved buried structural remains across the site. In particular, the remains of the steam-power plant associated with a former cotton-spinning mill, a block of back-to-back houses, and a warehouse were exposed. Following consultation with the archaeological curator, it was recommended that these remains merited a programme of further investigation. An updated project design was devised (Appendix 1), and the work specified was undertaken by OA North between October and November 2005.

1.2 LOCATION, GEOLOGY AND TOPOGRAPHY

1.2.1 The study area is situated within the Ancoats area of Manchester, which lies on the north-eastern side of the city centre (Fig 1). The site is currently wasteland, bounded by Old Mill Street to the north, Vesta Street to the west, Great Ancoats Street to the south-west, and the Ashton under Lyne Canal to the south-east (centred on SJ 8530 9825). An arm of the canal, known as the Islington Branch, crosses the eastern part of the study area, and is used currently as a depot by British Waterways. The centre of the site lies at a height of c48m, although the land falls gently to the south and east.

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 fluviatile/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 as a whole comprises the Mersey river valley (Countryside Commission 1998, 125), although the topography of the study area reflects the shallow valley of Shooter’s Brook, a rivulet that flows westwards from Newton Heath, through Ancoats and into the river Medlock (Ashworth 1987, 22). Shooter’s 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 Development of Ancoats: the proposed development site is situated within the Ancoats area of Manchester. By the beginning of the 13th century, it was known as *Elnecot*, derived from the Old English *ana cots* which means ‘*lonely cottage*’ (Cooper 2002, 13). A 14th century document refers to Ancoats as one of eight hamlets within the township of Manchester, itself forming part of the Salford Hundred (Tait 1904). 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 (Little 2002, 31). 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 The earliest textile factories in the area included several water-powered mills erected along Shooter’s Brook, to the south of Union (now Redhill) Street. There is some evidence to suggest, for instance, that New Islington Mill and Salvin’s Factory originated in the late 1780s as water-powered textile mills situated on the bank of Shooter’s Brook (OA North 2005). However, this was a small watercourse, and in seeking a solution to the inadequate power supplied to their waterwheels from the brook, some manufacturers experimented with steam power. Notably, John Kennedy is reputed to have first applied steam power to one of his spinning mules whilst renting space at Salvin’s Factory in 1793 (Lee 1972, 9).

1.3.4 It was on the basis of a breakthrough in the application of steam power, and the national demand for textiles, particularly cotton, that created the explosion of factory building in Ancoats (Little 2002, 31). This was fuelled by the potential of cheap and reliable transport for goods and materials offered by the construction of the Rochdale and Ashton under Lyne canals, and led to the creation of a new breed of mill building in Ancoats (Williams 2002, 35). These were built on an unprecedented scale, many depending upon the developing network of short branch canals for transport and a source of water for their steam-power plants.

1.3.5 Numerous trades ancillary to textile manufacturing were also established in Ancoats during the 19th century, and large areas were developed for worker’s housing. In an age when walking was the only viable means of travelling to work, these were built with little regulation around the industrial units. The net result was the creation of the world’s first true industrial suburb: an edge-of-town industrial estate with associated housing, community facilities (churches, pubs and charitable refuges) and related businesses.
1.3.6 **The Study Area:** the following historical overview of the study area has been compiled largely from cartographic sources, although some valuable information has also been obtained from commercial trades’ directories. In particular, some directories have provided information pertaining to the former textile mill within the northern part of the study area. Further research could undoubtedly furnish details of other buildings in the area, although this is beyond the scope of the present report.

1.3.7 The earliest reliable map that shows the study area at a reasonable scale is William Green’s *Map of Manchester & Salford*, which was published in 1794. This shows the area to have formed a focus for the initial phase of development to the south of Shooter’s Brook. Back Street (later to become Back Mill Street), Woodroffee Street (subsequently Mill Street), and Bradley Street are all named and laid out in a grid pattern, creating series of regular plots, most of which had been developed. The nature of the buildings depicted is uncertain, although they are likely to have comprised a mixture of commercial and domestic properties. The site that was to be occupied by Moore’s Mill subsequently is shown to have been the only undeveloped plot within the study area, and contained a large pond. The route of the Ashton under Lyne Canal is marked as ‘Intended’, and whilst the surrounding streets are shown, these were probably speculative at the time of the survey.

1.3.8 There are several maps of the area that were published during the first decade of the 19th century, although most are of a small scale and cannot be relied upon for analysing individual buildings. They do, however, provide a good indication of the extent of development, and the proportion of streets in the area that were built-up. A survey published by Cole and Roper in c1801, for instance, shows the main line of the Ashton under Lyne Canal to have been completed, together with several short branch arms, including the Islington Branch that crosses the eastern part of the study area. Maps produced by Johnson and Pigot, both published in 1819, show the study area to have developed further. Several large structures are shown to have been erected along the western side of the Islington Branch canal, which had been...
extended to the north-east, beyond the present study area. It would seem likely that these buildings were associated with the canal wharf. One building in particular is shown to straddle the canal, close to its junction with the main line. These maps also show the outline of Moore’s Mill, which is depicted as a rectangular building with a narrow rectangular projection against its eastern corner. The position and configuration of this projection suggests that it may have represented the steam-power plant for the mill.

1.3.9 The Islington Branch is shown to have been extended further to the north-east on Bancks and Co’s Plan of Manchester and Salford, published in 1831. Another short canal arm is depicted within the study area, extending north-eastwards from the Islington Branch and terminating at what was to become Vesta Street. Bancks and Co’s map also shows more buildings to have been erected, particularly along Mill Street adjacent to Moore’s Mill, and to the south of Bradley Street. The mill also appears to have been remodelled, particularly the putative steam-power plant.

1.3.10 Detailed plans of the study area are provided by Adshead’s ‘Map of the Township of Manchester’, published in 1850, and the Ordnance Survey 60”: 1 mile map published in 1850. These maps show both sides of the Islington Branch canal within the study area being used as coal wharfs, although the short arm extending to the north-east appears to have been in-filled. The Bradley Street area is shown to have been occupied by housing and small industrial premises, with commercial properties including two taverns fronting onto Great Ancoats Street.

1.3.11 Trades’ directories for the 1850s list John Gibson & Co and Jonah Harrop & Co as coal merchants occupying the wharf on the western side of the Islington Branch canal (Kelly 1858, 1344). The only commercial premises listed for Bradley Street, however, is William Royston, registrar of births and deaths, suggesting that the other properties were domestic. Similarly, the only business listed on Back Mill Street is George Barnes, a wheelwright (ibid).

1.3.12 The 1893 Ordnance Survey 25”: 1 mile map indicate a spindle works to have been erected on the eastern side of the wharf, and some slight remodeling of the layout of buildings on both sides of the wharf. Moore’s Mill is shown to have been replaced by an Industrial School.

1.3.13 The site is unchanged on the 1908 Revision of the Ordnance Survey 25”: 1 mile map. By 1922, the spindle works had been converted to a toy balloon works, and a chain works is shown to have been constructed immediately to
the north. Some of the buildings on the western side of the branch canal are also shown to have been remodeled.

1.3.14 The 1955 Ordnance Survey map shows the eastern wharf occupied largely by an engineering works, with the toy balloon factory to the south-east and houses fronting Mill Street to the north-west. A small engineering works had been constructed at the southern end of Sweden Street, and a number of buildings demolished across the study area. Bradley Street is shown to have been renamed Bradfield Street. This layout is replicated on the Ordnance Survey map published in 1969. The majority of the buildings occupying the site were demolished piecemeal between the early 1970s and the mid-1990s.

1.3.15 Aspects of housing conditions in Ancoats: the rapid industrialisation of Manchester from the last quarter of the 18th century was accompanied with an explosion in the population; a local census in 1774 estimated a total of 22,481 inhabitants within the township of Manchester, whilst the census of 1801 recorded over 70,000 people, of which 11,039 resided in Ancoats (Lloyd-Jones and Lewis 1993). By 1851, the total number of residents within Ancoats alone had risen to 53,737, representing a local population far larger than other entire towns in Lancashire, such as Burnley, Blackburn, Rochdale or Wigan, and yet lacked the basic amenities and institutions of self-government.

1.3.16 Swindells (1908, 236) identified Thomas Bound as a pioneering force in the early development of Ancoats during the 1770s, after acquiring part of the estate of the Legh family and then land belonging to the Grammar School. It seems that Bound divided his newly-acquired land into small plots, which were then sold individually for development. He is listed in a trades’ directory of that decade as a ‘builder’ (Raffald 1777), but in Bancks’ directory for 1800 Thomas Bound is registered as a ‘gentleman’, suggesting that he had generated considerable wealth from property dealing.

1.3.17 The earliest dwellings for the new breed of factory worker were erected with little legislative control. The Manchester Police Commissioners had sought to apply a rudimentary form of building regulations as early as 1792, including a requirement to provide party walls between properties. However, in the absence of any practical way of enforcement, the regulations were largely ignored (Hylton 2003, 152).

1.3.18 It is widely believed that the majority of Ancoats’ inhabitants were migrants seeking work, with a substantial proportion of Irish origin (Rushton 1977, 166). This is corroborated by the responses given by Samuel Moore to the questionnaire set by the Central Board of Commissioners to Manufacturers in 1834, in which he stated that a large proportion of the children employed in his
factory were of Irish extraction, who lived in ‘miserable abodes of the most loathsome kind’ (PP(HC) 1834 [167] XX).

1.3.19 There are several descriptions of the Manchester housing stock during the 19th century that are available within surviving documentary accounts. One such description is provided by Dr J Farriar in the proceedings of the Board of Health in 1805, who noted that ‘the number of damp and very ill-ventilated cellars inhabited in many parts of the town is a most extensive and prominent evil...’. Farriar goes on to describe the average Manchester workers’ dwelling as consisting of ‘two rooms, the first of which is used as a kitchen, and though frequently noxious by its dampness and closeness, is generally preferable to the back room. The latter has only one small window, which, through on a level with the outer ground, is near the roof of the cellar’ (quoted in Aspin 1995, 130).

1.3.20 A major step forward in housing improvement was provided by a local Act of 1844, whereby all new houses were to be provided with a properly built privy, and all existing houses were to have one installed. The important effect of this Act was that it effectively outlawed the building of back-to-back houses, and none were built in Manchester after this date (Lloyd-Jones and Lewis 1993). Unlike earlier legislation, the 1844 Act was enforced by a dedicated committee, which investigated some 9,400 dwellings in the first year alone, and by 1850 over one third of Manchester’s dwellings had been ‘reconditioned’ (Hylton 2003, 153).

1.3.21 Further legislation introduced in 1853 had sought to address specifically the problems of cellar dwellings. Investigations completed in preparation for the legislation discovered 65 people living in eight cellars in one workers’ tenement in Ancoats. However, organised opposition from the property owners, united as the Home Owners’ Guardian Association, ensured that action against this class of dwelling was largely ineffectual (op cit, 154). Renewed efforts commenced in 1868, when Manchester Council introduced a Medical Officer of Health, who largely eradicated cellar dwelling by 1874.

1.3.22 In 1901, Manchester City Council bought 238 acres of land at Blackley with a view to erecting affordable housing and addressing the problem of sub-standard dwellings. Nearly 25,000 sub-standard houses were demolished during the following 18 years, and back-to-back housing was ‘virtually eliminated by 1913’ (Hylton 2003, 184). Nevertheless, the problem of poor quality housing persisted, and by 1954, when Manchester City Council renewed efforts at slum clearance, there were an estimated 70,000 homes unfit for human habitation.

1.3.23 Moore’s Mill: several archive sources in addition to the sequence of historic maps have yielded information pertaining to the development and infrastructure of Moore’s Mill. An examination of the available trades’ directories has indicated that Samuel M Moore was a cotton merchant during the early 19th century, based on Cross Street (Pigot and Dean 1818, 173). He is first listed in connection with the factory on Mill Street two years later, where the firm of ‘Moore and Welch’ is entered as cotton-spinners (Pigot and Dean 1820, 187). However, a useful source is a questionnaire completed by Samuel
M Moore in 1834 for the Central Board of Commissioners to Manufacturers, which concerned the employment of children in factories (PP(HC) 1834 [167] XX). In response to one question, Moore stated that the mill was erected in 1804, indicating that he was not the original occupier. He also stated that the mill had some ‘small additions’ in 1824 and 1826, and that it been used for the fine spinning of cotton. The mill was powered by steam, and gas lighting had been installed, which was used in the morning and evening during ‘the lighting-up season’. Moore does not allude to the supply of the gas, although the possibility that this had been produced in gas retorts within the mill complex should not be discounted.

1.3.24 Entries within trades’ directories for the mid-1820s indicates that Moore’s partnership with Welch was short-lived, as Samuel M Moore is listed as a cotton-spinner at Mill Street in his own right (Pigot and Dean 1825, 214). By the mid-19th century, Samuel Moore’s son had become a partner in the firm, and they continued their occupation of the mill until the 1870s. However, entries within trades’ directories for the 1850s (eg Kelly 1858), lists SM Moore & Son as cotton spinners and doublers at 8 Mill Street, Ancoats.

1.3.25 The final entry for SM Moore and Son as cotton-spinners at 8 Mill Street occurs in Slater’s directory for 1876. Subsequent directories identify the firm as cotton-spinners and ‘manufacturers of every description of lace thread’, based in Manchester but with two factories in Derbyshire (Slater 1879, 66). This directory makes no reference to any commercial activity at 8 Mill Street, suggesting that the mill was vacant at this time.

1.3.26 Warehousing: Manchester had a large number of warehouses, which catered for all manner of goods, and may be divided into several categories. Amongst the earliest type were the carriers’ warehouses, which developed from the mid-18th century, and were associated closely with Manchester’s growth as the first industrial city (Taylor et al 2002, 5). Their development was connected to improvements in the transport infrastructure, notably the canals and later the railways, hence a concentration of these structures in the Castlefield area of Manchester. Most were of considerable proportions, representing some of the largest buildings erected in the town at the time (op cit, 6).

1.3.27 The purpose-built merchants warehouse was introduced during the 1820s, and development took two forms: the home-trade warehouse stored goods for wholesale purchase by local shopkeepers, and the shipping warehouse stored large quantities of goods for sale at the Exchange (Wilkinson 1982, 9). These early warehouses were generally plain and of utilitarian design, containing all the necessary service facilities, but little or no embellishment (Taylor et al 2002, 24). Such premises on Cannon Street were described as four-storied buildings with low rooms that were ‘extremely uninteresting and somewhat depressing in their aspect but internally fairly well fitted for the purpose of the trade’ (Robb 1877, 31). They did, however, incorporate new design features. Larger windows, for instance, became more common, and fewer loading points were fitted to the main elevations (Taylor et al 2002, 6). Typically, the internal floors were carried on wooden joists and cross beams, the beams supported by the external walls without the intermediate support of timber posts or cast-iron columns (Schofield 1902).
1.3.28 **Goolden’s Buildings**: a trades’ directory for the year 1817 contains an entry for James Goolden, a timber merchant based at 59 Great Ancoats Street (Pigot and Dean 1817, 98). The same entry appears in a directory published some eight years later (Pigot and Dean 1825, 66). This may be identified with the warehouse building within the southern part of the study area. Subsequent entries within trade directories are elusive, and other archival sources such as the Poor Rate Assessments have not been examines, although these would undoubtedly furnish additional information.
2. METHODOLOGY

2.1 EVALUATION TRENCHING

2.1.1 The uppermost levels of each trench 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.

2.1.2 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).

2.1.3 All structures encountered during the course of the evaluation were recorded three-dimensionally by EDM tacheometry using a total station linked to a pen computer data logger, the accuracy of detail generation being appropriate for a 1:250 output. The resultant digital plan was enhanced by manual survey on site using AutoCAD software within a pen computer, whilst selected components of the works were hand-drawn at a scale of 1:20. The positions of the trenches were located with respect to surrounding landscape features, and were also recorded using the total station.

2.1.4 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 maintained on special photographic pro-forma sheets.

2.2 EXCAVATION

2.2.1 Following on from the evaluation, and the Assistant County Archaeologist’s recommendation for further work, an updated project design (Appendix I) was submitted in advance of targeted excavation. The academic objectives of this programme of work were redefined thus:

- to examine in more detail the extent and character of the engine and boiler houses associated with Moore’s Mill, in order to provide an understanding of the sequence of steam-power plant within the mill;
- to expose and record the character of the boiler flues and chimney, and its relationship with the engine and boiler houses;
- to expose and record a single block of back-to-back terraced houses, and identify any evidence for phasing;
- to determine the presence, character, and extent of the structure shown at the southern end of Back Mill Street and to the north of the Ashton under Lyne Canal on historic mapping, and generate a plan of the surviving foundations.
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.

2.3.2 Sampling: none of the deposits or structures excavated during the evaluation were deemed appropriate for palaeo-environmental or technological sampling, and no samples were therefore taken.

2.4 ARCHIVE

2.4.1 A full professional archive has been compiled in accordance with the current IFA and English Heritage guidelines (English Heritage 1991). The paper, material, and digital archive will be deposited in the Museum of Science and Industry in Manchester within six months of completion of the project.
3. SUMMARY OF EVALUATION RESULTS

3.1 INTRODUCTION

3.1.1 The programme of archaeological fieldwork on the site comprised, in the first instance, the excavation of six targeted evaluation trenches across the five discrete elements of the proposed development area to the west of the Islington Branch canal (Fig 2). The trenches were intended to provide an assessment of the archaeological potential and character of any buried remains, particularly the survival of external walls and internal features associated with former back-to-back houses, ‘Goolden’s Buildings’, a steam-powered textile mill, and other unspecified structures shown on historic mapping. In addition, a Level II-type building survey was required for an extant structure of early 19th century origin situated at the northern end of the site.

3.1.2 The programme of evaluation trenching revealed significant buried archaeological remains within three areas of the site, which were recommended for further detailed investigation; the results obtained from that element of the project are presented in Section 4. The following section presents a summary of the results obtained from the programme of archaeological evaluation, which is described by area.

3.2 AREA 1 – MOORE’S COTTON-SPINNING MILL

3.2.1 In the first instance, two trenches (Trenches 1 and 2) were placed across the northern part of the study area, targeted upon Moore’s Mill and a rectangular range of buildings situated to the east (Fig 2). Trench 1 was aligned north/south, and was placed across the eastern edge of Moore’s Mill complex as shown on the 60": 1 mile Ordnance Survey map of 1851. The trench measured 20m in length, and was excavated to a maximum depth of 1.35m.

3.2.2 Several walls surviving to a considerable depth were exposed within the trench, some of which represented structures associated with the mill’s steam-power plant. In particular, walls within the southern part of the trench clearly represented the remains of the boiler house (Plate 1). This had evidently been sub-divided by two east/west-aligned partition walls, each measuring 0.40m wide and butting the external walls, suggesting that they may have been added to the original build. However, all of the component walls were composed of hand-made, wire-cut bricks set in a lime-based mortar, typical of the first half of the 19th century.

3.2.3 The southern partition wall formed a room measuring 7m by 6.8m, which contained a stone-flagged floor at a depth of 1.06m below the upper surviving course of the partition wall. The floor survived for a distance of 2.5m by 1.3m running along a north/south alignment, and was bordered by a complex arrangement of flues, some of which survived to a height of 0.63m above the floor (Plate 2). The western edge of the floor was overlain by a deposit of fuel ash and clinker that probably derived from the boilers. The flues in this area extended beyond the edge of the excavated trench and presumably connected
to a chimney, although no physical evidence of the structure was encountered. However, the possibility of a chimney in locality was suggested by the sharp-angled south-east corner of the building’s exterior wall, which had evidence of scorched bricks along the walls inner face (Plate 3).

3.2.4 The exterior wall of the boiler house had been cut into natural clay, which was exposed at a depth of 1.4m below the upper course of the wall. The wall comprised hand-moulded bricks bonded with yellow lime mortar to a maximum width of 0.65m at the north and south corners, gradually thinning to 0.32m along the western edge. The thinner areas bordered what appeared to be rectangular-shaped cells filled with rubble, which at this stage served an unknown function. The northern wall of the boiler room bordered another room that possibly granted access to the engine room. A stone-flagged floor (Plate 4) was exposed at a depth of 1.41m below the top of the boiler house north wall. The floor was sealed by a thick deposit of burnt slate and survived over a distance of 2m², extending beyond the edge of the excavated trench. Each stone measured 1m by 0.5m, and was bordered in the north by the vestiges of a refractory brick wall extending east/west across the trench.

3.2.5 Another east/west-aligned wall butting the edge of the refractory wall at the northern edge of the trench comprised machine-made bricks bonded with dark grey/black mortar, and probably represented a structure of a late 19th century date.

3.2.6 Remains of a similar date were exposed in the central part of the trench, along the northern edge of the boiler room, and at the junction between Trenches 1 and 2 (Fig 2). These comprised a rectangular-shaped room that had overall dimensions of 6m by 5m. The floor and walls of the room comprised white glazed bricks that sloped toward a drain in the south-western corner. A level sandstone slab raised 50mm above the floor was exposed along the western edge of the trench. Oral evidence has indicated that this room had formed part of a butcher’s shop, and it seems possible that the sandstone slab had been used for meat preparation (Plate 5).

3.2.7 The position of the butcher’s shop corresponded with the estimated site of the engine house. However, limited removal of the butcher’s shop floor revealed it to overlie a substantial layer of concrete, which could not be taken out to assess the survival of features associated with the former engine house.

3.2.8 Trench 2 was placed east/west across the former mill and a range of buildings situated to the east, as shown on 1851 Ordnance Survey map. The trench measured 42m long, and was excavated to a maximum depth of 3m (Plate 6).

3.2.9 The eastern wall of the boiler house was encountered within the central part of the trench. An additional brick skin had been applied to the wall’s eastern edge that was associated with the later construction of the butcher’s shop (3.2.6 above). A layer of rubble was observed butting the western wall of the boiler house. This appeared to be a dump that filled a gap between the walls of the boiler house and the western wall of the butcher’s shop.
3.2.10 Adjacent to the western external wall of the boiler house were two rows of
five rectangular-shaped cells. The cells were observed over a distance of 4m,
each measuring 2.3m by 1.2m, and filled with rubble. These were composed
of hand-made bricks set in a lime-based mortar, suggesting that they were
associated with the mill.

3.2.11 The eastern wall of the mill was exposed to a depth of 3m, and bounded a
stone-flagged floor that was interpreted as an open-plan basement. The wall
comprised hand-made bricks, surviving to 23 courses in height, set in a lime-
based mortar and laid in an English Garden Wall bond. Many of the bricks
were blackened as though exposed to heat, and several small-sectioned iron
rods were observed protruding through random sections of the wall face. The
bottom five courses of the wall comprised an offset foundation laid in an
unusual pattern of half edge stretchers and headers laid side on. The floor
comprised Yorkstone flags, and was exposed along the base of the trench to
the western wall of the mill, which lay adjacent to Back Mill Street (Fig 2).
This clearly represented the well-preserved basement of the former cotton
mill, although no internal features such as column bases were identified within
the confines of the trench. The basement was filled with loose rubble.

3.2.12 Natural yellow clay was encountered at the eastern end of the trench at a depth
of 1.4m below the modern ground surface. The clay in this area had been cut
by a north/south-aligned culvert, which measured 1m wide. The eastern wall
of the culvert was two courses high, and was composed of machine-pressed
bricks of a probable late-19th century date. The western part of the culvert was
capped with sandstone flags, measuring on average 0.5m by 0.3m (Plate 7).
The precise function of the culvert was not resolved, although it was clearly of
a late-19th century date, and of little archaeological significance.

3.2.13 An extensive spread of concrete at the eastern end of the trench provided a
foundation for a row of shop units that were erected during the 1960s, and
demolished subsequently (pers comm British Waterways employee). The
concrete was exposed at a depth of 0.6m below the road surface, and was
sealed by gravel hardcore levelling that was used for the present road surface.

3.2.14 The evaluation trenches placed across this part of the study area demonstrated
that considerable remains of the mill survived in situ, particularly those
pertaining to the boiler house. These remains were considered worthy of
further investigation and detailed recording in advance of their ultimate
destruction.

3.3 AREA 2 – EASTERN

3.3.1 A single trench (Trench 3) measuring 18m in length was excavated to a
maximum depth of 1.20m across the eastern part of the study area (Plate 9).
The trench was aligned north-east/south-west across a narrow range of
buildings that are shown on Bancks and Co’s 1831 map (Fig 2), and aimed to
assess the level of survival of internal features associated with these buildings.

3.3.2 Natural clay was exposed in the central part of the trench at a depth of 1.15m
below the present ground surface (Fig 3). The clay was revealed at a higher
level within the southern part of the trench, where it was overlain by a thick spread of degraded coal and clinker. This appeared to have been deposited as a levelling horizon for a flagstone surface. The flagstones were laid in a circular arrangement and were bordered by kerbstones (Plate 9), which seemingly represented the edge of School Street as marked on the 1851 Ordnance Survey map. The centre of the flagstone surface was filled with a mixture of loose and compacted gravel inclusions, suggesting this to have been the foundation for a machine such as a small crane.

3.3.3 The surface was associated with a wall that was encountered along the northern edge of the trench (Plate 10). The wall was aligned north/south, and had a width of 0.70m, suggesting it to have been a load-bearing external wall of one of the buildings forming the narrow range shown on the 1851 Ordnance Survey map. The wall survived to a height of three courses and comprised hand-made bricks bonded with pale buff coloured sandy lime mortar, indicative of early 19th century date.

3.3.4 Immediately to the west of the wall was a stone slab that appeared to be *in-situ*. The slab measured 0.8m by 0.35m, and had a 0.08m diameter circular hole bored within the upper surface. A second slab of similar dimensions was observed within the eastern section of the trench.

3.3.5 Another east/west-aligned wall extended across the central part of the trench (Fig 3). This wall similarly comprised hand-made bricks, although was bonded with an ash-rich mortar, suggesting it to have been constructed during the mid- to late 19th century. The bricks were laid in an English Garden Wall bond, surviving to a height of seven courses. A wall of similar components and alignment was observed some 5m to the south. The remains of two square-shaped chambers survived along the northern face of the wall (Plate 11). These were both a single brick wide, surviving to six courses in height, and were bonded with a sand and lime-based mortar. No obvious function for the chambers was determined during the evaluation.

3.3.6 An east/west-aligned wall of similar fabric was observed at the northern edge of the trench, comprising well-made moulded bricks set in a dark grey mortar. The type of brick and bonding suggests a mid- to late 19th century date for the construction of this wall. It appeared to truncate the alignment of the earlier wall encountered in the vicinity, and may have represented part of an internal structure associated with the Industrial School that appears on the 1893 Ordnance Survey map. All the structures in the trench were sealed by sand and 20th century demolition debris.

3.3.7 The structures and deposits revealed within this trench were not considered worthy of further investigation. It was recommended that no additional archaeological work was undertaken within this part of the site.
3.4 AREA 3 – BACK-TO-BACK HOUSING ON BACK MILL STREET

3.4.1 The central part of the site was investigated initially by a single evaluation trench (Trench 4), which was aligned east/west across the back-to-back houses located to the east of Back Mill Street, as shown on Bancks and Co’s 1831 map (Fig 2).

3.4.2 Few structural remains of the dwellings survived within the trench, although a single wall revealed along the southern edge of trench may have represented an external boundary wall for the houses. The wall was exposed over a distance of 12m, aligned east/west, and was butted in the south-west corner of the trench by another wall that lay parallel to Back Mill Street (Fig 4). Little evidence of the wall’s original fabric had survived other than a probable re-use of material. This was demonstrated by the apparent removal of the wall sometime in the late 19th or early 20th century with the insertion of a basement (Plate 12). Evidence of this removal was suggested by a probable rebuild of the wall with the bottom 14 courses comprising brown and red glazed bricks laid above a stone floor, sealed by 16 courses of hand-made bricks that were probably re-used from demolished structures. The entire northern face of the wall was split into equidistant bays, set 1m apart, resembling shower or toilet cubicles. Further evidence of the structure used for this purpose was observed within a partition wall along the west wall, which had plastered render attached to its surface. Below this partition wall was a square trough encircled by a gully that was possibly used as a foot-bath.

3.4.3 The southern edge of the wall was bordered by sandstone flags, which were exposed directly below the modern ground surface. These had evidently served as a yard or alley behind the structure. The southern edge of the flagstones bordered an east/west-aligned wall that survived as a two-course footprint over a distance of 4m (Fig 4). The wall comprised machine-pressed bricks bonded with dark grey mortar, suggesting it to have been constructed around the same time as the shower block wall. Two large ceramic pipes, cut into natural clay, were identified beneath the foot of the wall, and had presumably been intended for drainage purposes.

3.4.4 The eastern part of the trench was dominated by a large brick-floored cellar, which was square in plan and measured an estimated 8m² (Plate 13). The walls were two bricks thick, and comprised 17 courses of hand-made bricks that appeared to have been bonded originally with sand and lime mortar, indicative of an early to mid-19th century date. At some stage, the walls had been re-pointed with a dark grey ash mortar, which was particularly evident at the eastern edge of the wall in the vicinity of a thin partition wall. The partition wall butted the south wall and sub-divided the room for a distance of 6m. The eastern face of the wall was rendered with cement mortar, and overlaid a stone-flagged floor with a modern drain contained within the wall junction. The cement rendering and the drain suggests a 20th century date for the sub-division. The western wall survived to a length of 8m with identical fabric components. The floor was exposed at a depth of 1.27m below the upper course of the perimeter walls, and comprised hand-made bricks bonded with loose ash mortar.
3.4.5 Butting the top course of the south wall immediately below the present ground surface, was a spread of sandstone flags (Plate 13). The flags were observed over a distance of 2.5m by 1.2m, aligned east/west, and represented a pavement associated along the western edge of Bradley Street.

3.4.6 Another small cellar or chamber was observed attached to the western wall of the cellar (Plate 14). The chamber measured 4.5m by 2.5m and was aligned east/west across the trench. A brick floor was observed at a depth of 1.31m below the south wall. Remains of a possible vaulted roof sealing demolition debris was observed in the western edge of the room extending for a distance of 2.5m by 0.45m. The east edge of the room contained a deposit of redeposited natural clay, some 2m thick, that provided bedding for a series of brick steps that ran down the inside face of the south wall. The wall components comprised hand-made bricks bonded with sand and lime mortar, which suggests an early 19th century date of construction.

3.4.7 This trench revealed structural remains that probably dated to the early 19th century. However, the remains of this date were fragmentary, and had been remodelled or partially destroyed during the 19th and 20th centuries. It was therefore recommended that no further archaeological work was undertaken in this area.

3.5 AREA 4 – BACK TO BACK HOUSING ON BRADLEY STREET

3.5.1 The single trench (Trench 5) within the western part of the study area was aligned north-west/south-east across the projected line of back-to-back houses located to the south of Bradley Street (Plate 15), as shown on Bancks and Co’s 1831 map (Fig 2). Well-preserved remains of the former houses were exposed at the western end of the trench, which was extended subsequently to maximise the recovery of information. The original trench (Fig 5) to the east of Back Mill Street, measured 25m long and was excavated to a maximum depth of 0.70m to the top of natural clay (Plate 16), and the extended section measured 7m by 4m, and was excavated to a maximum depth of 2m.

3.5.2 Few remains pertaining to dwellings survived within the main part of the trench, although the extended western section revealed remains of a cellar associated with a back-to-back dwelling (Plate 17). The exposed remains incorporated a room that was rectangular in plan and measured 7m by 4m, aligned north/south along the southern edge of Bradley Street. The two-string thick walls survived to a height of 2m, and comprised hand-made bricks bonded with sandy-lime mortar. The bricks were in a fragile condition and were easily broken along the upper courses. The room contained physical evidence for fireplaces along the northern and western elevations (Plate 18), and a floor that comprised a random pattern of Yorkstone flags and hand-made bricks, many of which were fragmented and burnt. This probably reflected the demolition of the building during the late 1970s.

3.5.3 The original entrance into the dwelling had probably been from Bradley Street, evidence for which survived in the centre of the northern elevation of the exposed room. However, this entrance had been replaced subsequently with a fireplace, which had been inserted in the centre of the wall, and
comprised brick piers that supported a projecting, thin stone slab. At some stage during the latter half of the 19th century, the fireplace had been blocked, and replaced by brick in-fill comprising machine-made bricks bonded with ash mortar, and sealed by vertically-positioned stone slabs. The second fireplace, built within the western wall, measured 1.8m in height and 0.50m in width (Plate 18).

3.5.4 A two-string wide wall bordering Back Mill Street at the western end of the main trench represented an adjacent dwelling. The wall was identical in fabric to those in the cellar, and survived to a height of 0.70m. The installation of a water pipe and the roots of a tree in immediate proximity had disturbed the wall. Remains of other dwellings were observed to the east of Back Mill Street, represented by the vestiges of two walls cutting natural clay. The walls survived over a distance of 2m by 1m surviving to a height of 0.25m, and continued beyond the northern end of the excavated trench.

3.5.5 A wall observed at the eastern edge of the trench may have represented a remnant of another dwelling. The wall followed an east/west alignment for a distance of 2.4m, extending beyond the trench section in the south and survived to a height of 0.5m. The wall was four string thick and comprised hand-made bricks bonded with sand and lime mortar, mirroring the type of construction identified within the western part of the trench.

3.5.6 A 1.8m wide cambered road surface representing Back Mill Street was located running north/south along the western edge of the trench. The surface comprised rectangular cobbles set in rows bounded along the eastern edge with vertically set stone kerbs. To the immediate east of the kerbstones were the fragmented remains of flagstones, which appeared to represent the remains of a pavement.

3.5.7 Traces of a cobbled surface observed directly below the modern ground level, was exposed along the eastern edge of the trench. The cobbles were set in concrete that formed an east/west-aligned camber over a distance of 0.90m². The cobbles may represent remains of School Street as marked on the 1851 Ordnance Survey map.

3.6 AREA 5 – GOOLDEN’S BUILDINGS

3.6.1 A single trench (Trench 6) was aligned east/west across the site of a former warehouse, which is shown on Bancks and Co. map of 1831 to have been situated along the eastern edge of Back Mill Street and adjacent to the towing path of Ashton Canal (Fig 2). The trench measured 30m long, and was excavated to a maximum depth of 1.6m. It was characterised by spreads of cobbled surfaces exposed directly below a layer of concrete (Plate 19), which appeared to represent access roads or alleys for individual units within the warehouse.

3.6.2 A single two-string wide wall extending east/west was observed over a distance of 13m, representing an external wall of the warehouse (Plate 20). The upper surface of the wall was exposed directly below the modern ground surface, and was butted along this level by the cobbled surface. The wall was
bordered in the west the well-preserved surface of Back Mill Street, which was exposed over a distance of 3.5m. A two-string wide wall, aligned north-west/south-east, was bonded to the western edge of the wall close to Back Mill Street, which may represent the western wall of the former warehouse. The bonding level was at the same height as the upper surviving course of the north wall, which suggests a contemporary build. The wall was cut into natural clay, which was exposed at a depth of 1.6m below the top course of the wall. The western edge of the wall was butted by a mixed clay and shingle layer that created an interface between the wall and Back Mill Street. An east/west-aligned stone drain, built into the base of the wall, extended across the trench, and was observed running through a partition wall. This partition wall was observed in the mid-section of the trench, butting the north wall. A corner was observed within the confines of the trench extending 2.5m to the south and surviving to a depth of 1m. Remains of an extension to the eastern end of the warehouse were exposed across the trench, giving a 4m added width to the structure. The wall was four strings wide, suggesting it to have been load-bearing. The fabric differed to that of the other warehouse walls in that it comprised frogged bricks bonded with dark grey mortar, indicative of a later 19th century date.

3.6.3 A small brick-floored structure within the warehouse was exposed across the central part of the trench (Plate 20). The structure measured 2.5m in width and 1.21m in depth from below the upper surviving course of the warehouse wall. The western wall of the structure was not exposed, as it was obscured by a stretch of cobbles that appeared to butt the structure’s western edge, although a free-standing brick column (17) observed in the south-western corner possibly represented a gateway or door jamb. The column extended to a depth of 1.40m below the cobbles, and comprised a mixture of hand- and machine-made bricks bonded with a pale buff mortar.

3.6.4 A spread of cobbles observed along the eastern edge of the trench probably represented the southern edge of School Street. The surface was exposed over a distance of 4m, although no obvious camber was recorded, which suggests that the end of the road that may have been used as a yard or loading area. The pattern of the cobble surface varied considerably throughout the trench. The largest area was concentrated close to the western edge of the warehouse, comprising a 5m stretch of rectangular-shaped granite and Millstone sets with average size of 25mm by 0.14m that were separated by stone gullies. The cobbles appeared to extend to the south in the direction of the canal, and possibly represented access from the wharf.

3.6.5 The results obtained from this trench demonstrated that the buried remains of a series of 19th century structures survived in situ within the southern part of the study area. Those pertaining to the early 19th century warehouse were of particular interest, and merited further investigation.
4. SUMMARY OF EXCAVATION RESULTS

4.1 INTRODUCTION

4.1.1 The programme of archaeological evaluation trenching provided an indication of the nature and extent of buried remains across the proposed development area to the west of the Islington Branch Canal. Three elements of the site in particular were revealed to contain extensive buried remains pertaining to the industrialisation of the area during the early 19th century. Following consultation with the Client and the Assistant County Archaeologist for Greater Manchester, it was recommended that these were areas were subjected to further archaeological investigation. The following section presents the results obtained from this programme of further work, which was targeted on Moore’s Cotton Mill, a block of back-to-back dwellings on Bradley Street, and a former timber warehouse within the southern part of the study area. Broad phasing have been ascribed to the deposits and structures encountered within each excavated area, and the results are presented below in chronological order.

4.2 MOORE’S MILL

4.2.1 A single trench was placed across the eastern part of the former mill which was targeted on the site of the engine and boiler houses. The trench measured 22.5m by 9m, and was excavated to a maximum depth of 3.1m into natural clay (Fig 6). Several phases of construction was observed across the area, some of which had been determined during the evaluation. These included a boiler room (Room 26) that had probably originated as an extension to the mill during the early part of the 19th century, and a room that had almost certainly housed a steam engine (Room 28). Further developments included a room at the northern end of the trench (Room 27) that incorporated a sunken floor. The area to the south and west of the boiler room demonstrated the apparent removal of internal structures during its conversion to an Industrial School in the late 19th century, although several walls survived in this area that pertained to the former mill.

4.2.2 Phase 1: there was no evidence of activity on this part of the site prior to the erection of the mill in 1804. The layout of the mill is depicted on a map published in 1819 by Pigot, which shows the outline of a rectangular building with a narrow rectangular projection against its eastern corner (1.3.8 above). Physical remains observed along the southern, eastern, and western edges of the trench possibly represented remnants of the mills external walls (45, 77, and 81). Other features pertaining to this period include a drain (51) located beneath the mill at the north end of the site, and remnants of a brick platform (50).

4.2.3 A north/south-aligned wall (45) represented the western range of the original mill. The wall survived for a distance of 22m along the western edge of the trench. An east/west-aligned wall (77) that bordered the southern edge of the trench survived for a distance of 6m, and was exposed to a maximum depth of 0.82m cutting natural clay (80). The wall was well-preserved, and comprised
11 courses of hand-made bricks laid in an English Garden bond. Remnants of a north/south-aligned structure (81) that had extremely fragile brick components, represented the original eastern wall of the mill. Much of the wall had been badly damaged sometime during the last century by concrete and ceramic drains. The wall survived for a distance of 1.5m and depth of 0.5m. All the walls were bonded with pale cream lime mortar.

4.2.4 A cast iron drain (51) aligned north/south was observed below the Room 27, cutting natural clay at a depth of 3.1m below the ground surface. The backfill of the drain (102) comprised dark grey sticky silty-clay that contained fragments of late 18th century pottery, and ribs from a large animal.

4.2.5 Sealing the natural clay along the south edge of Room 27 (Phase 4, 4.2.28, below) was a linear brick feature (50) aligned east/west. The feature comprised a two-course brick thick platform or wall foundation bordered along its east and west edges with projected bricks that seemingly functioned as terminals. The structure measured 1.2m by 0.3m and 0.3m in depth. The platform comprised randomly-laid half size bricks bonded with pale yellow lime mortar, and resembled the base of a disused culvert.

4.2.6 The vestiges of a brick column survived along the western part of the mill, located 3m east of wall 45 and 4m north of wall 77. The column (79) measured 0.9m by 0.6m and comprised hand-made bricks bonded with grey sandy mortar. Its function was unclear though it was perhaps used to support a floor.

4.2.7 **Phase 2:** the mill was thought to have expanded during the early half of the 19th century by the inclusion of some ‘small additions’ in 1824 and 1826 (1.3.24, above). The map produced by Bancks and Co. in 1831 shows this development along the western area of the mill extending along Back Mill Street, and in the north fronting Old Mill Street. Physical remains from this period comprised a single building (82) that housed the boiler (Room 26) and engine (Room 28) rooms. Several internal structures were identified within the building, including as boiler bases and a flue.

4.2.8 Building 82 was rectangular in plan with overall dimensions of 12.5m by 6.6m (Fig 6). The eastern wall (29) was four brick strings in width (0.6m), comprising 21 courses of hand-made brick bonded with pale red sandy mortar, exposed to a depth of 1.7m in the south-eastern part of the room cutting natural clay (58). The western wall (30) was exposed to a depth of 1.56m, and comprised hand-made bricks with similar bonding material to that within wall 29. The wall was presumably rebuilt in the late 19th century (Phase 3), although a stepped foundation survived from its original build that was butted by the flue floor (62). The northern wall (36) was 0.54m wide and overlaid the original northern wall (35) of Room 28 to a depth of 0.70m. The southern wall (32) survived to a depth of 2m, and had a maximum thickness of 0.5m with identical components to walls 29 and 30. A partition wall (31) exposed to an overall depth of 2m along the south face, was aligned east/west across the width of the building and separated the two rooms. The wall measured three brick thick and probably functioned as a gearing wall.
4.2.9 Room 26 was located at the southern end of building 82, and had overall dimensions of 7m by 5.5m. The room contained remnants of two split-level boiler bases (one of which contained a probable fuel waste pit beneath), and a flue located south of the bases that presumably connected to a chimney.

4.2.10 A substantial wall (66) that ran 3.9m north/south along the eastern edge of the room represented the eastern wall of one boiler base. The wall measured five skins thick (0.73m), comprising largely hand-made bricks with a single skin of refractory brick attached to the western face. The bricks were bonded with speckled red sandy mortar. The southern edge of the wall butted the eastern edge of a flue (62). The western wall (65) of the boiler base had a maximum width of 0.9m, and comprised hand-made bricks bonded with pale cream lime mortar, with two skins of refractory bricks lining the eastern face, giving a total of seven strings in thickness. The boiler base (64, Plate 21) measured 3.45m by 0.98m, and comprised a split-level floor lined with a mixture of hand-made and refractory brick on the upper level and refractory brick on the lower level (1.5m). A bedding course of hand-made bricks was observed below the lower level giving a maximum thickness of the base as three courses. A small rectangular hole was observed in the centre of the upper level. The hole measured 0.36m by 0.24m and was sunk to a depth of 0.10m, perhaps forming a housing for part of the boiler apparatus.

4.2.11 The south wall (60) of the flue survived to a height of 1.2m, which equated to 14 courses of bricks. The wall comprised hand-made brick lined along the inside north face with refractory bricks. The western edge of the wall dog-legged to the south to form a wider channel along its face that measured 0.67m in width. The dimensions of the wall measured 4.8m in length, 0.23m in width with an attached inner refractory wall giving an overall width of 0.77m. The wall had seemingly undergone two phases of construction, which was observed clearly along the southern face by an area of repair measuring 1.1m by 0.82m. The bricks used in the repair were probably re-used from the original wall as identical pale yellow and cream speckled gritty sandy mortar was used to bond the section. The repair may have been associated with remodelling of the flue wall caused by the installation of a cast iron pipe (59).

4.2.12 The cast iron pipe (59) was placed along the base of wall 60 and attached to its southern face. The pipe was supported by a layer of clay, that in turn overlaid the natural clay horizon. The pipe (59) had two flange collars separating 2.6m sections, and an upright valve that was attached to the wall. The pipe ran for a length of 4.8m, and had a diameter of 0.20m with an internal diameter of 0.14m. The valve diameter measured 0.20m and 0.08m internal. The eastern and western edges of the pipe had been damaged, probably caused by the insertion of wall 30 (Phase 3.4.2.25, below).

4.2.13 The north wall of the flue (61) measured 2.4m long and survived to a height of 1.3m. The wall demonstrated several phases of construction inferred by the installation of an ash pit (68) immediately to the north. An extra two skins of refractory bricks had been attached to the north face of wall 61 and a single skin down the west face, measuring 0.47m long and 0.55m high. The core of the wall measured 2m long, with a maximum thickness of six strings (0.9m). The bricks were bonded with speckled red hard sandy mortar. An entrance was
positioned at the south-east corner of the wall, demonstrated by bull-nosed refractory bricks surviving to eight courses in height (Plate 22). The entrance measured 0.4m across, and was situated at the base of a ramp (63) along the eastern face of the wall. The east edge of the entrance was bordered by a wall (75), that survived to a height of 0.43m, and comprised five courses of refractory bricks. The brick-lined ramp (63) descended along a 45 degree angled slope toward the floor of flue 62 and was probably part of the flue which connected directly to the boiler. The ramp was four-string brick thick, and butted the west edge of wall 75. Immediately behind the ramp was a vertically-positioned rectangular socket that was cut into the walls east face. The socket measured 0.60m by 0.3m, and was one brick skin deep. A function for the socket was not determined fully, although it may have housed part of a mechanism to control the draught. Built into the south face of wall 61 was a gap that had been blocked subsequently with five refractory bricks that had been laid vertically (Plate 23). The base of the gap coincided with a step in the floor level of flue 62. The gap could have housed a metal shutter, such as an iron damper across the flue floor.

4.2.14 Flue floor 62 comprised a random pattern of hand-made and refractory brick bordered by walls 60 and 61. The upper surface of the floor was heavily scorched, indicative of exhausted hot gases. The floor ran along a level horizon from the western edge of wall 66 for 2.5m where it began an upward gentle ascent spiralling between walls 60 and 61 on an approximate gradient of < 20˚ for a distance of 1.5m. Evidence of an earlier floor foundation was observed beneath the base of wall 60, where a level element within the base of the sloping floor was observed running west beyond wall 60 for a distance of 0.36m. The top edge of the flue floor stepped onto a single brick course that formed level platform. The platform survived for a distance of 1.2m and width of 0.67m along the western edge of walls 60 and 61. The floor seemingly carried on to the west, but had been truncated by the modifications to wall 30. Traces of soot were observed along the lower five courses of the wall that suggest the flue was functional after the wall modification and perhaps indicated that the flow of exhaust gases was diverted elsewhere through the room.

4.2.15 A possible indication of this diversion of gases was observed along the north edge of wall 61, by the installation of two flues within a wide chamber (68, Plate 24). The chamber was lined with refractory bricks and measured 2.2m by 2.1m and 1.28m deep. The chamber was originally used as an ash pit for a single boiler, although at some stage the floor was subdivided by a one skin wide refractory brick wall (72). The partition wall survived to a depth of 1.28m and ran along a north-east alignment for 1m, then diverted to the north for 1.2m. The east and west walls of the chamber (71 and 69) sloped to the floor along an approximate angle of 70˚. The sloping walls were each retained by single skin wide hand-made brick walls (70 in the west and 82 in the east). The installation of the partition wall suggests that gases were diverted through two channels. The east channel was blocked at the northern edge by a two skin wide sloping brick wall that was attached to the inner face of wall 71. The wall (74) survived to a height of 0.70m comprising eight courses of refractory and hand-made bricks. The base of the wall did not extend to floor leaving a gap of
0.28m suggesting that gases could still be passed through it. The retaining wall in the west was not fully exposed, however, the east wall (82) butted the corner of wall 61 and was butted by the west wall of the lower boiler base (65). The entire chamber was filled with 1m thick deposit of ash and chamfered refractory bricks, sealed by a single course of rectangular flags. The flags were observed over a distance of 2.5m by 2.2m, and probably provided foundation for a second wagon boiler.

4.2.16 Room 28 was aligned east/west across the northern half of building 82 (Plate 25), and comprised four contiguous walls (31, 34, 35 and 52) that gave an internal floor plan of 5m by 4.2m. No internal structures survived in the room, although traces of scorch marks across two walls suggest it was possibly used to house a steam engine.

4.2.17 Remains of a brick platform and degraded wall (53) that overlaid natural clay were observed along the eastern edge of the room at a depth of 2.15m below the upper course of the external walls. Structure 53 survived as a single course footprint of randomly-patterned hand-made and refractory bricks aligned north/south for an overall distance of 2.2m. The northern edge formed a small free-standing square platform measuring 0.70m² and five brick string thick. The south-eastern edge of the platform was bordered by a two brick string wide wall that extended south for 1.4m. The bricks were bonded with poorly-preserved buff coloured lime mortar, suggesting the structure possibly originated to the early 19th century. No function for the platform was determined, although it may have served as a brick foundation beneath a steam engine base.

4.2.18 The south wall (31) measured 4.2m by 0.39m with three brick skins width surviving to a depth of 2m. The west wall (34) measured 5m by 0.8m with at least six strings of brick in thickness, suggesting a load-bearing function. The north wall (35) measured 3.5m by 0.35m with three brick skins exposed, butted along its western edge by wall 34. The wall was exposed to a depth of 2.2m revealing 24 brick courses laid in an English Garden bond, with a stepped foundation of 0.37m formed by four courses of stretchers along the base. The east wall (52) measured 4.3m by 0.42m with two brick strings width exposed. The wall was exposed to a depth of 1.5m revealing 17 brick courses that were butted along the base by residues of concrete (55, Phase 4, 4.4.32, below). All the walls were bonded with pale yellow lime mortar and had an average hand-made brick size of 230mm by 120mm by 80mm.

4.2.19 The inner brick face of the south and west walls showed evidence of scorch marks that were probably caused by continual friction. The marks (Plate 26) were localised diagonally down the south wall (31) over a distance of 2.15m to the top of the stepped foundation, and 2m across the west wall (34). The marks would suggest that an angled sloping edged apparatus of approximate dimensions of 4m² was positioned in the south-west corner of the room. A 0.7m gap between wall 34 and the west curtain wall (30) of building 82 may represent the location of the flywheel pit alongside the apparatus. However, the gap was not excavated due to a dense concentration of concrete that filled the slot that upon removal may have tested the integrity of the walls. As such the supposition of the gap’s function is one of speculation.
4.2.20 **Phase 3:** the Ordnance Survey Map from 1851 shows a rectangular projection attached to the eastern wall of building 82 that marked the position of a boiler. During the excavation much of the projection had seemingly been destroyed by concrete in-fill, except for a small section of wall (108) that survived along the southern edge. The map also depicted the location of a chimney built into the south-western corner of building 82. No direct evidence of the chimney was encountered, although putative remains along the edge of the flue floor (62) suggested its close proximity. The absence of the chimney may be accounted for an apparent modification to building 82 and in the area to its immediate west. A row of four rectangular shaped cells (44) of unknown function, were inserted between the modified west wall (30) of building 82 and wall 45.

4.2.21 The putative physical remains of the boiler projection was represented by a short east/west-aligned wall (108) that survived for a distance of 1m, and depth of 0.8m cutting natural clay. The western edge of the wall butted wall 29 at a depth of 0.38m below the walls surviving course (Plate 27). The wall was two-string brick thick, and comprised hand-moulded bricks bonded with lime mortar. The eastern edge of the wall had been badly damaged by redevelopment during the later 19\textsuperscript{th} century and specifically the laying of a thick concrete surface (Phase 4, 4.2.33, below). No other remains relating to the projection were encountered.

4.2.22 The modifications to building 82 comprised the insertion of angled north and south corners along the western wall (30). The angled corners were seemingly added in order to strengthen the western side of the building. The western edge of wall 32 had an angled corner aligned north-west/south-east that butted the southern edge of wall 30. The northern wall (36) was 0.54m wide and overlaid the original northern wall (35) of room 28 to a depth of 0.70m. The western edge of the wall had a 1m long corner angle aligned north-east/south-west that butted the north-eastern edge of wall 30. The west wall (30) seemingly cut through the flue floor 62 in the area where the chimney was located, suggesting a possible remodelling of the chimney structure along the walls eastern face. The east wall of the building (29) was breached along its western face by three concrete-filled sockets that housed ceramic water pipes, aligned east/west across the south room. Two of the sockets were positioned along the north edge of the wall set 3m apart with identical dimensions of 0.4m by 0.2m. A larger socket was observed below the upper surviving course at a depth of 0.6m, and 0.7m south of the dividing wall between the rooms (wall 31). The socket measured 0.9m\textsuperscript{2} and probably contained a larger pipe although none was encountered.

4.2.23 A row of four rectangular-shaped cells (44) were exposed within the central part of wall 30. The cells were observed over an area measuring 6.15m by 2.25m. Each cell was formed by two string wide brick walls measuring 2.43m by 0.86m that were bordered by four-string wide walls in the north and south (40 and 43), and a two-string wide wall (33) in the west. One of the cells in the west was mechanically excavated to a depth of 3m, and was observed to be filled with large amounts of rubble mixed with coal and sludge that sealed natural clay. This suggests they may have been used as fuel storage areas.
4.2.24 **Phase 4:** sometime during the late 19th century the mill was abandoned. This is shown on the Ordnance Survey Map from 1893, which depicts an Industrial School across the site of the former mill. A room (27) located at the northern end of the trench, and a wall (78) encountered at the southern edge, probably derived from the school occupation. Other post-mill structures include a butcher’s shop that was erected in the 1960s.

4.2.25 Room 27 was located to the immediate north of building 82. Four adjoining walls formed a rectangular-shaped room aligned east/west that had overall dimensions of 6.25m by 3.5m. All the external walls (35, 37, 38 and 39) were constructed from machine-made bricks bonded with dark grey cement mortar, although the upper surface of the south wall of the room (35), was coated with bitumen. Wall 35 was predominantly constructed from hand-made bricks with the upper seven courses machine made. The four walls were exposed to a depth of 1.6m above a stone-flagged floor (41). The west wall (39) was breached by a ceramic drainpipe housed within a two-string thick brick arch measuring 1.4m wide. The drain was located 0.4m below the upper surviving wall course. A similar depth pipe was observed breaching the north wall (38) that entered the room along the western edge. Both drains were probably installed during the last century and represented the latest development of the room. It would appear by the nature of the wall components that the room was added to the north of the former mill sometime during the late 19th century.

4.2.26 The room was defined by a single course spread of Yorkstone flags (41) that extended throughout much of the room’s interior. The flags were supported by two parallel brick walls (42 and 46), set 1.6m apart, that extended east/west across the room. The south wall (42) survived to a depth of 0.5m sealing structure 50, and comprised seven hand-made brick courses bonded with ash rich mortar. The brick courses were laid with a single course of stretchers along the upper level directly below the flags, with the rest laid in a diagnostic English Garden bond. The northern wall (46) survived as a single course footprint with identical bonding components to that of wall 42.

4.2.27 A thick deposit of ash (48) measuring 0.5m thick was observed butting the inside face of walls 42 and 46, and directly below the flags. The ash was in turn overlaid a layer of churned clay (48) that sealed the natural clay. Both deposits were seemingly used for levelling purposes during the floor construction. The ash possibly derived from a dump discarded after the removal of the engine and boiler rooms.

4.2.28 An east/west-aligned wall (78) located along the southern edge of the trench represented a later phase of the mill development, and quite possibly was associated with the Industrial School construction. The wall was observed for a distance of 5.5m, and comprised machine-cut bricks bonded with grey-brown sandy mortar.

4.2.29 A butcher’s shop (56) installed in the latter half of the 20th century represented the last occupation of the site. The shop was placed across the former engine room (28) with three of the walls sealing the original engine room walls, and extended east butting wall 30. A skin of white-glazed brick had been inserted within each wall of the original room and wall 30, that gave structural
dimensions of the shop as 6.4m by 5m. Wall 34 was overlaid by the north wall (36) of the butcher’s shop which extended the wall to a height of 0.7m. Wall 52 was sealed by the northern and eastern walls of the butcher’s shop (36 and 57). The original dividing wall (31) within building 82 was overlaid by the southern wall (67) of the shop. The construction of the shop seemingly robbed the original room of its internal structures. The entire room was filled with crushed brick and concrete measuring 2m thick, which provided a foundation for the shop floor. The northern edge of Room 26 had also been damaged by the installation of the butcher’s shop foundation. The concrete (55) was aligned east/west across the northern edge of the boiler bases for an overall width of 0.5m.

4.2.30 The concrete foundation encountered during the evaluation within Trench 2 was observed across the eastern edge of the trench for a distance of 5m by 3m. The foundation was installed in preparation for a row of shop units located across the northern edge of the site during the late 1960s.

4.3 BRADLEY STREET DWELLINGS

4.3.1 Following on from the evaluation, a larger area was subjected to archaeological investigation, which comprised the excavation of two rectangular-shaped back-to-back cellar structures located at the western end of Trench 5. The structures represented two dwellings within a row of terraced buildings that lay along the southern edge of Bradley Street (Fig 2). A congested area of buildings within the south-west corner of the site is depicted on Aston’s plan of 1804, and on subsequent maps such as Pigot’s plan from 1819, Bancks and Co’s map from 1831, and the 1851 Ordnance Survey map. Similar-shaped units as the buildings investigated are illustrated on the same maps east of Back Mill Street, however by 1893 some of the buildings in this area had been converted into larger units. Speculation could be addressed that the people who lived in these buildings in 1804, quite possibly worked within industries in proximity, such as Moore’s Mill.

4.3.2 Each investigated building was aligned north/south bordering the southern edge of Bradley Street, and measured 6.6m by 3.6m, providing an overall excavated area of 13.2m by 7.1m. The floor levels were observed 1.79m below the extrapolated original Back Mill Street level (47.21m OD). The structures and deposits encountered during the investigation represented three main phases of archaeological activity. The evidence obtained from the investigation are presented below in chronological order.

4.3.3 Phase 1: this phase relates to the construction of the earliest housing on site. Aston’s plan of 1804 depict the site as an empty plot, although a range of buildings are shown on Pigot’s map of 1819, which suggests that the structures were completed between these dates. The north wall (111) seemingly extended east toward Back Mill Street and west toward Great Ancoats Street, thus providing the north external wall for all the buildings within the range south of Bradley Street.

4.3.4 The north (111) and south (114) walls of both dwellings extended for a distance of 13.2m. The east (115) and west (116) walls were exposed for a
distance of 7.1m. The north and east walls had identical widths of three brick thick. The south wall was two-string thick, and the west wall was a single brick thick wide. All walls were exposed to a depth of 1.79m above the cellar floor, and comprised hand-made bricks with an average size of 230mm by 120mm by 70mm, bonded with buff coloured sand and lime mortar.

4.3.5 The building was originally divided into four rooms, with the north rooms of both dwellings presumably used as parlours, and the kitchens in the rear. The sub-division was represented by a single brick thick wall (105), aligned north/south across the dwellings, and an east/west-aligned wall (103). Wall 103 was in poor condition and was removed during the excavation as a health and safety precaution. The surviving height of both walls measured 1.30m in the area where they butted the external walls.

4.3.6 The main entrance into both dwellings was presumably accessed via the northern wall from Bradley Street, although no evidence of access into Dwelling 1 from this period was encountered. Almost all the internal features were mirrored within each dwelling, such as the positioning of fireplaces within the western wall of each cellar.

4.3.7 The floors (109 and 110) in the northern rooms of both dwellings comprised well-preserved stone flags and brick laid in an indistinct random pattern. The floor in the southern room of the west dwelling (Dwelling 1) had been mostly removed except for isolated flags, revealing a loose friable dark brown bedding soil. The paucity of floor surfaces in the southern room of the east dwelling (Dwelling 2), such as stone flagging and partial remains of brick, suggests that the south room of each dwelling was robbed or deliberately unsurfaced.

4.3.8 Dwelling 1 (89): remnants of a threshold (104) between the northern and southern rooms was represented by a single flagstone that lay along the eastern edge of wall 103. The flagstone had been laid flush with the brick foundation, and measured 0.80m in length and 0.40m in width. No doorjambs or features relating to door fittings survived.

4.3.9 The vestiges of a cellar light window were observed along the northern wall of Dwelling 1. The window (117) comprised a horizontal stone flag that measured 1m long located at the top of the wall’s surviving course. The flag had a maximum thickness of 0.08m, and sealed two courses of brick in-fill.

4.3.10 The inside face of each wall retained patches of lime-based plaster rendering, with evidence of blue paint decoration surviving along the north wall elevation. Each internal wall elevation survived to a depth between 1.30m-1.79m, and retained features indicative of domestic function and requirements in each room. The entire west elevation in Dwelling 1 contained six recesses formed by five walls. Wall 103 divided three recesses within each room. Each recess measured one brick thick wide, although some were partially destroyed. The undamaged recesses protruded 0.48m into the room and survived to identical depths as the surviving western wall. The central recess within each room presumably contained fireplaces, although only the south room fireplace
survived (Phase 2, 4.3.20, below). The other recesses in the room had no obvious structural purpose other than for storage.

4.3.11 **Dwelling 2:** evidence of a blocked stairway (124) was observed within the centre of the northern wall elevation accessed from Bradley Street. A single horizontal stone flag recessed in the centre of the wall represented remnants of a stair tread. The flag was supported by two courses of partially-bonded, handmade bricks keyed into the wall. Remnants of vertically-positioned sandstone flags that sat directly above the stone floor possibly represented the remains of lower staircase uprights.

4.3.12 A similar doorway threshold as that encountered through Dwelling 1, survived within the footprint remains of wall 103. The threshold was largely removed with vestigial remains of a sandstone flag surviving along its eastern edge.

4.3.13 A horizontal flag located along the western area of wall 111 represented the remains of a window light sill (120). The sill measured 0.05m thick, and was sealed by several courses of brick that were used to block the feature (Phase 2, 4.3.23, below). Remains of a cellar window (122) were also observed along the south elevation at a similar height and location as the window in Dwelling 1. The remains comprised a stone sill with a similar blocking episode to the infilling of the north window. Disturbance caused by tree roots along the northeast corner of wall 115 possibly obscured the position of a window light (119). However, vestigial remains of a disturbed stone flag near the top of the brick collapse may have represented part of a sill.

4.3.14 The remains of a possible sink recess were observed directly below window 120 within the north wall. The recess was located six courses below the window, and measured 0.6m long and one brick course in height and 0.11m depth.

4.3.15 The western elevation contained recesses that were located along identical positions to the west wall in Dwelling 1. The remains of a probable fireplace in the former north room had largely been removed, with only the uprights remaining within the bay. There was also some evidence of scorched bricks along the wall foundation within the stone uprights. A fireplace at the southern end of the elevation contained vertical elements of a hearth. These comprised vestiges of two brick pillars that measured 0.45m in height, which sat either side of a central aperture. The aperture was sealed by a flagstone, that bridged the top of the pillars (Plate 28).

4.3.16 **Phase 2:** the phase relates to modifications undertaken to the cellars during the mid-19th century. The modifications comprised the installation of two drains across the north and south rooms of both dwellings, a doorway along the west wall of Dwelling 1, a staircase along the north wall into Dwelling 1, and two windows along the southern wall of both dwellings. Other modifications included the installation of a range within the original fireplace in the south room of Dwelling 1, and blocked windows along the eastern, southern and western walls. By this time wall 103 that subdivided Dwelling 2 had been removed, creating an open-plan room.
4.3.17 A brick and stone constructed east/west-aligned drain (107) was located across the floor in the northern part of both dwellings. The drain was sealed by rectangular-shaped flagstones, similar to the stone floor component. The eastern and western edges of the drain truncated the external walls of both dwellings. A drain (113) with similar structural component was installed across the southern wall of both dwellings, probably around the same time. Both drains were possibly installed as a response to persistent flooding.

4.3.18 **Dwelling 1**: the main entrance into Dwelling 1 during this period was provided via the northern wall from the Bradley Street road level by three stone and brick-built steps (106, Plate 29) that were laid upon a stone element of the cellar floor (109). The steps survived to a height of 0.77m and had a width of 0.82m, and comprised two brick courses sealed by a sandstone tread. Each tread was recessed into the brickwork, and measured 1m by 0.30m and 0.08m thick accordingly. The stair structure were built independently of the northern wall with the base sitting snugly with the wall at the bottom, but leaned away 0.08m at the top. It is probable that the steps were added at a later date, and most likely replaced an earlier staircase which had to be removed in order to build drain 107 (4.3.17 above).

4.3.19 The northernmost recess in the southern room had part of its wall removed to form what appeared to be a doorway (121). The brickwork around the edges of the door was not finished with terminals or a jamb, but had been formed fairly roughly by knocking the bricks of the wall in half where necessary.

4.3.20 The fireplace (123) in the southern room had seemingly been modified with the insertion of two 1m high single skin brick pillars within the inside edge of the structure. The pillars sat either side of a central flue which had a scorched sandstone surround. The structural components comprised moulded brick bonded with a pale cream hard lime mortar. It is possible that a range was installed over the existing hearth sometime during the mid-19th century.

4.3.21 A window (118) was located within the central part of the southern wall, at an identical height to the window in the northern room. The window measured 0.5m by 0.24m and retained similar structural components such as a thin horizontal stone ledge.

4.3.22 **Dwelling 2**: a window of identical dimensions to 118 was located along the western edge of wall 114. The remains comprised a stone sill that measured 0.08m thick.

4.3.23 It would appear that window 119 within the eastern wall (115) was blocked during this period. The blocking comprised three courses of disturbed moulded brick bonded with lime mortar. Other windows blocked at this time were located along the western wall (120) and the southern wall (122), that had similar brick in-fill components as window 119.

4.3.24 **Phase 3**: the phase comprises the later alterations to the structure and is broadly dated from the late 19th century to the late 20th century, when the structure was probably demolished. Modifications included the installation of a dry brick built wall that was inserted within the northern face of wall 114, a
redesigned fireplace within the original entrance to Dwelling 2, and the blocking of windows and access into both dwellings.

4.3.25 Two windows (117 and 118) were blocked along northern and southern walls of Dwelling 1. Window 118 was sealed by three courses of brick in-filling and rubble packing. Window 117 was blocked with machine-made, extruded brick, bonded in a sooty black cement mortar.

4.3.26 It would appear that the entrance (124) into Dwelling 2 via the northern wall was converted into a fireplace. Evidence for this was represented by areas of scorching around the loose sandstone uprights that were easily removed. The area behind the uprights revealed an area of machine-made brick in-fill, suggesting the entrance was blocked during the last century.

4.3.27 Further attempts to improve drainage in both dwellings was represented in the southern rooms by the insertion of a second brick wall (112). The one skin wide wall sealed the south wall of drain 113 and acted as a membrane seemingly installed to protect the integrity of the south wall. However, no bonding was observed between the walls, which suggests the wall may represent an early attempt of cavity wall insulation. The new skin comprised machine-made bricks married with dark grey cement mortar and butted the internal face of the eastern and western external walls.

4.3.28 The backfill (91 and 92) of both dwellings largely contained material deriving from 20th century demolition debris, such as a cigarette sign (Plate 30), metal saucepans and plastics. However, several items that suggested occupation at least from the 19th century were recovered including chamber pots, locally-made mineral and ginger beer bottles and finewares such as glazed white earthenwares.

4.4 GOOLDEN’S BUILDINGS

4.4.1 Following on from the evaluation, a programme of further work aimed to provide a foundation plan of the former timber warehouse. An area measuring 15m by 6.1m was investigated primarily to establish the origin of the warehouse, and its subsequent development. This was observed by a process of modification sometime during the late 19th century, represented by a degree of wall phasing. Further excavation was undertaken in the vicinity of the brick column encountered during the evaluation. A sondage measuring 3m by 2m was excavated to a depth of 1.16m below the foundation of column (17) in order to establish its relationship and function within the warehouse.

4.4.2 The site of the warehouse was occupied previously by a building illustrated on Green’s map of Manchester and Salford published in 1794 (Fig 8). No walls associated with this building were encountered, although it is probable that the timber warehouse sealed the 18th century building foundation. The development of the site during the early to mid-19th century is demonstrated by Bancks and Co map of 1831, which shows the building sub-divided into narrow rectangular units bordered by a row of three square-shaped units along its eastern edge. By 1849 the structure had a similar layout to that in 1831, by which time the plot was occupied by James Goolden (1.3.28 above).
Subsequent maps from 1893, 1922 and 1955 show the buildings changed little from the original design. Putative walls associated with the warehouse were fully exposed to the upper surviving course in order to gain an understanding of the buildings original outline and dimensions. Few walls pertained to the original structure and as such many of the walls encountered during the investigation possibly originate to this later design. The physical building remains represented four main phases of archaeological activity, these are described below in chronological order.

4.4.3 **Phase 1:** this phase represents the building construction as shown on Green’s map of 1794. The western external wall (13) possibly derived from this period, although it is probable that the external walls of the later building (Phase 2) overlaid the original building foundation.

4.4.4 The western wall (13) of the building extended over a distance of 6.1m along a north-west/south-east alignment (Fig 8). The bricks differed slightly in comparison to the brick of wall 14 (Phase 2), in that they were slightly smaller (230 by 120 by 70mm). The bonding material comprised pale yellow lime mortar suggesting a slightly early phase of construction.

4.4.5 **Phase 2:** the building does not appear on Aston’s plan of 1804, which suggests it may have been derelict at this time, although it is shown on Pigots map of 1819 as a rectangular-shaped structure bordering Back Mill Street. Walls associated with this phase comprised elements of the southern (14) and eastern (20) external walls, and two partition walls (18 and 19).

4.4.6 The southern external wall (14) of the building was observed for a distance of 13m, aligned north-west/south-east. The wall was three strings thick, and had maximum width of 0.35m. The wall comprised predominantly hand-made bricks with a few machine-cut bricks that were probably inserted for an attempt of repair to the wall during the last century. The bricks had an average size of 250 by 110 by 70mm, bonded with dark grey speckled ash mortar.

4.4.7 Wall 20, described as a partition wall during the evaluation, was seemingly positioned along the same line as the original east external wall of the timber warehouse, but at some point during the later 19th century was modified, and extended to the north for a distance of 15m. This extension was presumably incorporated into the construction of a row of units that are shown on the 1851 Ordnance Survey map along the eastern edge of the building. The wall comprised machine and hand-made bricks bonded with pale white sandy mortar that at some stage had been repointed with bitumen/ashy mortar. The wall butted the northern edge of wall 14, and was butted by an angled extension of wall 14 in the south-east corner.

4.4.8 A two-string wide north-west/south-east-aligned partition wall (18) was observed extending from the southern external wall 14 to the northern wall 19. The wall had a total length of 6.1m and width of 0.25m, and comprised hand-made bricks bonded with sandy-lime mortar, suggesting a construction of comparable date to the erection of the building.
4.4.9 The northern wall of the building (19) ran parallel to wall 14 along an identical alignment and distance of 13m. The original fabric comprised hand-made bricks bonded with lime mortar. The wall construction was only two skins thick, which suggests the wall possibly functioned as a partition wall within the original building.

4.4.10 **Phase 3:** walls associated with this phase are depicted on Bancks and Co’s map published in 1831, and the Ordnance Survey map produced in 1851. During this phase the building was extended to the north and comprised partition walls across the centre of the structure, part of a degraded floor, brick columns, and walls associated with the extension along the eastern edge of the warehouse.

4.4.11 Evidence of the building extension was observed along the eastern edge of the trench by the location of a wall that ran parallel to wall 20 for an identical distance of 15m set 4.5m apart. The wall (24) was three strings thick, with a maximum width of 0.42m. The wall comprised hand-made bricks bonded with yellow sandy-lime mortar. The northern edge of wall 24 was bonded to an east/west aligned wall (23) that bridged the gap between walls 20 and 24, thus forming a long, aisled-shaped building range with dimensions of 15m by 4.5m. Wall 23 was partially exposed for a distance of 5m with a maximum thickness of 0.30m. The components of the wall comprised hand-made bricks bonded with lime mortar (identical to that of wall 24).

4.4.12 A sondage excavated between a row of four brick columns (17) exposed a degraded yellow sandstone floor. The floor was observed for a distance of 0.59m by 0.3m, encountered at a depth of 1.16m below the upper surviving course of the south column. The floor was sealed by an east/west-aligned single skin wide brick wall (Plate 31). The wall survived to a height of six courses, comprising hand-made bricks bonded with pale yellow lime mortar, and was exposed below 0.7m of demolition debris. The wall bordered the north-western column base and seemingly sub-divided the floor between the columns. A scorched brick floor was observed around the base of the column bordered by a north return of the same wall. A function of the wall was not fully determined, although its position suggests an earlier phase of the warehouse subdivision prior to the installation of the columns.

4.4.13 Another three brick columns identical in size to column 17 encountered during the evaluation (Trench 6) were observed in proximity. The columns were positioned 2m apart giving overall dimensions of 4m². The surviving north face of each column comprised 12 brick courses bonded with lime-based mortar laid in an English Garden bond. The north-west column was exposed to a similar depth. It seems likely that the columns may have supported a floor, or possibly marked the position of an access into the warehouse.

4.4.14 The upper surface of two brick columns (17) along the south row were bordered by two short north-west/south-east-aligned walls (15 and 16). The walls were each single brick thick and extended from the northern edge of wall 14 for a distance of 0.90m. These comprised hand-made bricks bonded with friable ash-rich mortar. The inside edges of both walls were butted by a deposit of ash and clinker, which had been compacted to form a hard surface.
The width of the surface measured 2.5m, and resembled the appearance of an entrance (possibly for a cart) into the warehouse from the canal side.

4.4.15 **Phase 4:** this phase represents later modifications to the building during the late 19th century and the installation of cobbled surfaces between each unit within the warehouse.

4.4.16 An area of modification was observed within the top two courses of the northern wall (19). The modification comprised frogged bricks bonded with ash mortar.

4.4.17 An obtuse angled wall extension (25) placed along a north-east/south-west alignment was observed for a distance of 4.45m butting the east edge of wall 14 and the south edge of wall 24. The wall was constructed largely with brick however, along the west edge of the upper surface were two fractured sections of sandstone representing a threshold entrance from the canal side. The sandstone was observed over a distance of 1.45m and width of 0.26m. The rest of the extension comprised machine-made bricks bonded with ash-rich mortar consistent with a late 19th century date.

4.4.18 The deposit of ash and clinker provided bedding material for a series of cobbled surfaces encountered during the evaluation. The cobbles butted the north and south walls of the warehouse and sealed many of its partition walls, thus indicating a change of use for the building.
5. BUILDING SURVEY

5.1 INTRODUCTION

5.1.1 The extant remains consisted of a single storey, rectangular structure, which measured 10.34m long and 4.46m wide, and was aligned north/south (Plate 32). It comprised hand-made brick (0.24m long by 0.1m by 0.07m) and lime mortar in a five to one English Garden Wall bond. A boundary wall of comparable materials extended east from the north east corner. The roof is modern, shallow pitched and finished with regular-coursed Cumbrian slate. A plan and a section through the building is shown graphically as Figures 9 and 10.

5.1.2 At present there are only two entrances, both of which are heavy iron doors, located on the east elevation. These are raised, possibly to accommodate the basement below, and as a result each has a single slab of concrete serving as a step. Similarly, there are now only two windows, both of which are simple timber casements covered with iron shutters. These are again located on the east elevation.

5.1.3 The building is arranged internally into a confined roof space and three simple, rectangular rooms. As there are no corridors, the room to the south is accessed directly from the external door at the south end of the east elevation. In a similar fashion, the remaining two rooms are entered from the door at the north end. Although the building is now little more than one storey, it is likely that there was originally a basement, but this has been blocked subsequently.

5.1.4 Access was available to all three of the rooms within the structure, but the entrance to the basement is no longer visible. Similarly, the roof space has been left un-recorded due to considerations of safety. A cursory inspection through a hole in the lath and plaster ceiling was made in order to confirm the modernity of the roof, but nothing more substantial than this was undertaken.

5.2 EXTERNAL FEATURES

5.2.1 The exterior of the building is plain and functional red brick with few, if any, concessions to embellishment. On the east elevation, the brick has been rendered with concrete, and this has been scored subsequently in order to give an ashlar stone effect (Plate 33). In addition, there are modern brick repairs below the gable on the north elevation (Plate 34), as well as extensive repointing on this elevation, and the west wall of the building. The two access points into the building, are on the east elevation and are plain sheets of iron with a pair of diagonal braces on their internal faces. Similarly, the only windows in the building are also on this elevation. These are three timber casement windows, which are covered with iron shutters. Each window has a concrete sill, and the dimensions of the central sill, suggest that the window has been reduced in width prior to the concrete render being applied to the elevation.
5.2.2 All other apertures have been blocked, although evidence for their original position was visible. On the south gable end, a small brick-blocked aperture at the base of the wall presumably representing an access hatch between the structure and the demolished buildings to the south (Plate 35). Similarly, at the north extent of the west elevation, there is a blocked aperture, likely to be a door, which has a voussoir cambered brick arch (Plate 36), and which is infilled with red brick and ash mortar. In addition, there is a further blocked window on the north elevation, which is identifiable from the timber lintel within the brick infill.

5.2.3 Moreover, there are several scars on the south elevation, which relate to a gable roof and chimney breast associated with the demolished buildings to the south of the existing structure (Plate 37). There is also a butt joint in the brickwork at the south end of the west elevation. The joint appears half way up the elevation, suggesting that this end of the building was originally comparable in height to the demolished buildings and has been raised subsequently. In addition, at the north end of the same elevation, there are ephemeral traces of a demolished building, the most obvious of which is a horizontal roof scar.

5.3 **INTERNAL FEATURES**

5.3.1 The building is divided into three simple rooms, which are spartan in character and have little variation between them (Plate 39). The walls are red brick with lime mortar, and these have been rendered with lime plaster and finished with emulsion paint. In addition, there are patches of modern brickwork and cement plaster, which are mostly confined to the areas around the inserted casement windows and above the external doors. There is also a brick partition, which has been inserted into the south-east corner of the building, in order to create a small storage space or possible toilet. In keeping with the rather austere decor of the walls, the floors are plain concrete and the ceilings are lath and plaster, finished with white emulsion.

5.3.2 Despite the generally plain decoration of the interior, there are some small concessions to style. There are shouldered architraves around the doors, and the walls are dressed with moulded picture rails and skirting-boards (Plate 38). These decorative features appear to be Victorian in style if not in date, and have for the most part been removed. There is only one internal door, a plain modern door with letterbox, which is located between the north and central rooms. A further door was originally located on the east side of the central chimney breast, allowing internal access from one end of the building to the other. It has been blocked subsequently on its south side, and now acts as a mount for several fuseboxes.

5.3.3 The windows on the east elevation are modern, timber casements, which have been inserted to replace the original sash or casement windows. These later additions have four lights each, in a two-over-two arrangement. There are no sills, nor are the sills of the original windows visible, but the discreet splayed embrasures of the original windows are still evident. Although there were
originally three windows on this elevation, the third window, which is located within the small partitioned room, has been blocked subsequently with brick.

5.4 **DISCUSSION**

5.4.1 It is evident that the building has been drastically changed in extent and plan since it was originally built. In synthesising the evidence obtained from the building investigation and the cartographic sources, it is possible to identify three phases in the development of the building.

5.4.2 **Phase 1a:** cartographic sources clearly show that the extant building was part of a larger series of structures built during the decade between Pigot’s map of 1819 and Banck’s and Co’s map of 1831. These were a range of sheds, which ran parallel to the western wharf of the canal, and were most likely used for the storage of coal. From the map of 1831, the shed would not appear to have been the simple rectangular shape that remains today. It shows that the shed had an annex or outshut appended to its north-west corner, which is evident from discreet scarring. This annex would reasonably explain the lack of any windows on the west elevation of the present structure. Similarly, the cartographic sources suggest that the shed would appear to have been reduced on its eastern side. The boundary wall appears to have been part of the original structure and the shed was built as a dog-leg shaped building. This would certainly account for the use of comparable materials in the construction of the wall and the appearance of a seamless build between the two. The subsequent application of a concrete render on the east elevation of the shed has unfortunately obscured any evidence of scarring, which would confirm this.

5.4.3 **Phase 1b:** the structure was evidently built with functional considerations in mind, but it is apparent that it was not used for storage as intended, but as office premises. The presence of the fireplaces and, more significantly, the skirting boards and picture rails confirm this assessment. This early, if not almost immediate, change in function would also explain the early blocking of the access hatch, which had obviously become surplus to requirements. This first phase is rather uncertain but it undoubtedly ended by 1893 (Ordnance Survey 25": 1 mile map). By this date, the buildings to the south had been demolished, and it is possible that the scars of the gable and chimney breast on the south elevation relate to this period. Similarly, the annex had been demolished leaving only a discreet scar or two on the west elevation, and subsequently, the internal voussoir cambered door was blocked. In addition, the use of comparable materials would suggest that the window on the north elevation was blocked with hand-made brick. The remaining building retained its dog-leg shape, which occupied the site of the present structure and extended eastward along the line of the current boundary wall.

5.4.4 **Phase 2:** over the next 15 years the building does not appear to have undergone any significant changes. However, the cartographic sources demonstrate that between 1908 and 1955 (Ordnance Survey maps 1:2500 and 1:1250 respectively), the building was reduced from its original dog-leg shape to the rectangular shed that remains today. Undoubtedly, this partial demolition coincided with the application of the ashlar-effect render on the
eastern elevation, in order to mask any cosmetic damage. Although this part of
the structure was mostly demolished, the north elevation of the building was
repaired and retained, and remains standing as the boundary wall to the east of
the shed.

5.4.5  **Phase 3:** the shed appears to have changed little since, with the only evident
work involving the repairing of the brickwork around the apex of the north
gable and the re-slating of the roof. In addition, the window at the south end of
the east elevation was blocked and possibly at the same time, the casement
windows were inserted, again on the east elevation.
6. FINDS

6.1 INTRODUCTION

6.1.1 In total, 565 finds were recovered, and a catalogue has been included in the project archive. A summary of the types of finds from the different contexts is shown in Table 1, below. The single largest category of finds was pottery, with glass and ceramic bottles and jars, clay tobacco pipe, metal objects, and bone and shell food waste also comprising numerous fragments. The finds were dated to between the late 17th and the mid- to late 20th century, with the majority being dated to the late 19th to mid-20th century.

<table>
<thead>
<tr>
<th>Context</th>
<th>Clay tobacco pipe</th>
<th>Pottery</th>
<th>Ceramic building material</th>
<th>Ceramic bottles and jars</th>
<th>Glass bottles and jars</th>
<th>Glass vessels</th>
<th>Glass building material</th>
<th>Cuttle and slag</th>
<th>Ceramic toys and ornaments</th>
<th>Glass toys and ornaments</th>
<th>Metal building material</th>
<th>Other metal</th>
<th>Plastic toys</th>
<th>Other plastic</th>
<th>Writing slates and slate pencils</th>
<th>Clothing, including all buttons</th>
<th>Bone and shell (food waste)</th>
<th>Bone toothbrush</th>
<th>Coins</th>
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Table 1: Types of finds recovered from different contexts
6.2 **BOTTLES AND JARS**

6.2.1 These included several drinks bottles with the drinks manufacturers named (see Table 2, below). The identified bottle manufacturers, in addition to those shown in the right-hand column of the table below, comprised the National Glass Works (York) Ltd (glass bottle manufacturer; Toulouse 1971, 371), Kilner (?), of Dewsbury, London (glass jar manufacturer), and Pearson and Co, Whittington (stoneware flagon, bottle, and jar manufacturer).

<table>
<thead>
<tr>
<th>Company name and address</th>
<th>Vessel and context</th>
</tr>
</thead>
<tbody>
<tr>
<td>C. Wilhelm, 47 Temperance St, Ardwick, Manchester</td>
<td>Three stoneware bottles from deposit 91, and one from context 95</td>
</tr>
<tr>
<td>C. Wilhelm, 16 Fairfield St, Manchester</td>
<td>Two stoneware bottles from deposit 91</td>
</tr>
<tr>
<td>W.P. Hartley (jam/marmalade manufacturer)</td>
<td>One stoneware jar from deposit 92</td>
</tr>
<tr>
<td>P. Dowd, Manchester</td>
<td>One glass bottle from deposit 92 and one from deposit 100, manufactured by Nuttall &amp; Co, St Helens, 1872 - 1913 (Toulouse 1971, 380)</td>
</tr>
<tr>
<td>P. Dowd, Manchester</td>
<td>One glass bottle from deposit 92 and one from deposit 95, manufactured by Cannington Shaw &amp; Co, St Helens, 1875 - 1913 (<em>op cit</em>, 147)</td>
</tr>
<tr>
<td>P. Dowd, Hillkirk Street, Ashton New Road, Manchester</td>
<td>One stoneware bottle from deposit 92</td>
</tr>
<tr>
<td>Daddies’ (sauce brand)</td>
<td>One glass bottle from deposit 92</td>
</tr>
<tr>
<td>Martell cognac</td>
<td>One glass bottle from deposit 91, marked ‘Depose’</td>
</tr>
<tr>
<td>A. Heald Ltd, Ford Bank Farm, Didsbury</td>
<td>One glass bottle from deposit 100, manufactured by CBC?</td>
</tr>
<tr>
<td>P. H. Cort, Manchester</td>
<td>One stoneware bottle from deposit 91</td>
</tr>
<tr>
<td>A. Craven, Hulme</td>
<td>One glass bottle, manufactured by Nuttall &amp; Co, St Helens, 1872 - 1913 (<em>op cit</em>, 380)</td>
</tr>
<tr>
<td>Heywood &amp; Co (Royton) Ltd, Botanical Brewers, Summit, Royton (marked 1912)</td>
<td>One stoneware flagon from deposit 96</td>
</tr>
</tbody>
</table>

Table 2: Bottles with manufacturers identified

6.3 **POTTERY, GLASS VESSELS, AND CUTLERY**

6.3.1 The earliest pottery fragments were residual within later contexts, and comprised mottled ware and slip-coated earthenware dated to the late 17th to early 18th century. The remainder of the pottery vessels comprised large quantities of coarsewares (principally black-glazed red earthenware kitchenware vessels, such as crocks and pancheons, and stoneware bowls and storage jars), and tablewares (creamware, pearlware, white earthenware, and bone china). The patterns represented on the white earthenware and pearlware included ‘Willow’, ‘Asiatic Pheasants’, ‘Broseley’, and ‘Cracked Ice and Prunus’ transfer-prints, and blue painted and relief-moulded shell edge. Other forms of decoration were also present (sponge-printing, painting, relief moulding, factory-produced slip decoration). The types of creamware, pearlware, and white earthenware represented were mainly dinnerware and teaware, with little identifiable bedroomware. Very small quantities of press-moulded glass and a single silver-handled table knife were also present.
6.4 CLAY AND PLASTIC TOBACCO PIPE

6.4.1 Of the tobacco pipe fragments recovered, 81 were ceramic, and only two were plastic. The former category included three decorated bowls, including one in the form of a bird’s claw, and another with a shield on the front with the initials ‘IB’, presumably for the maker. Other than these initials, no manufacturers’ marks were present on any of the fragments. The plastic tobacco pipes were both black mouthpieces, and were recovered from the backfilled material (91) within Dwelling 1, Area 4.

6.5 CERAMIC, GLASS, AND METAL BUILDING MATERIAL

6.5.1 This included windowpane fragments, bricks, tiles, and chimney pots. In addition, fragments of sanitary ware (toilets and sinks) were recovered, as were many nuts, bolts, washers, nails, and tacks. An electric light switch and a blue glass door handle were also recovered.

6.6 TOYS, LEARNING AIDS, AND ORNAMENTS

6.6.1 The majority of the toys comprised glass and ceramic marbles, of many different colours, patterns, and sizes. They were recovered from deposits 87, 91, and 92, and the most unusual amongst them included three white porcelain marbles with painted coloured stripes, imitating similarly decorated carpet bowls. The other toys were plastic, and comprised a small figure of a scuba diver and a tipper truck from deposit 91, and there were, in addition, three blue glass beads recovered from the same context. Part of a Welsh slate writing slate with incised lines was recovered from deposit 95, and the tips of two slate pencils were retrieved from deposits 87 and 91. There were also two ornaments - a female painted earthenware figurine, and a painted porcelain pug dog.

6.7 CLOTHING AND PERSONAL GROOMING

6.7.1 For the purposes of this report, ‘clothing’ is taken to include buttons, boots, and shoes, as well as pins and needles, and ‘personal grooming’ includes hair curlers, razors, and toothbrushes. In total, seven buttons were recovered (see Table 3, below), two of which were copper alloy, two bone, and three plastic. Four of the seven buttons were recovered from deposit 87, the fill of brick-lined chamber 86 in Area 3. One of the bone buttons was recovered from fill 95 of coal bunker 94, and one of the plastic buttons was retrieved from backfill 92 of Dwelling 2, and another from backfill 100 of cellar 99.

<table>
<thead>
<tr>
<th>Button type</th>
<th>Context</th>
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<tbody>
<tr>
<td>Copper alloy with loop</td>
<td>87</td>
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<tr>
<td>Copper alloy with moulded attachment</td>
<td>87</td>
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<tr>
<td>Turned brown bone with four central drilled holes</td>
<td>87 and 95</td>
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<tr>
<td>Cast cream-coloured plastic with two central holes</td>
<td>87 and 100</td>
</tr>
<tr>
<td>Turquoise plastic with mother of pearl effect on upper surface, with two central holes</td>
<td>92</td>
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Table 3: Buttons
6.7.2 The footwear recovered comprised a leather shoe sole from general backfill 88, and seven possible boot fragments, dated to the twentieth century, from fill 95 of coal bunker 94. In addition, three iron dressmaking pins and one possible iron needle were recovered from general backfill 88. The items of personal grooming comprised a copper alloy razor handle from fill 87 of brick-lined chamber 86, a cylindrical pink plastic hair curler from backfill 91 of dwelling 1, and a bone toothbrush also from deposit 91.

6.8 FOOD WASTE

6.8.1 The food waste comprised mammal and bird bone, and marine shell. Sheep was the most commonly occurring mammal, with bones from sheep-sized mammals also identified (sheep/goat/roe deer). One cow/red deer bone fragment was recovered, as were several medium and large mammal fragments, and part of a horse bone. Types of birds represented amongst the bone assemblage included a large duck or small goose, and a non-domestic unidentified species. The marine shells were almost exclusively oysters, with only occasional mussels and cockles present.

6.9 COINS

6.9.1 Of the seven coins recovered, only one was clearly legible (a 1942 three pence from the backfill (91) of Dwelling 1, which also produced a corroded halfpenny). However, a Queen Victoria halfpenny was recovered from deposit 87, a possible King George V penny and a severely corroded halfpenny were recovered from Dwelling 2 (92) and a corroded penny was retrieved from deposit 93. Finally, a pieced token, tag, or coin was retrieved from the surface of Bradley Street (97), with a shield motif on one side.

6.10 MISCELLANEOUS METAL OBJECTS, CULET, AND SLAG

6.10.1 The remaining metal objects were mainly corroded fragments, for which a function could not be identified. The exceptions included an iron hook, a copper alloy bullet case, and lead sheet funnel, and an iron fire brush. Two small lumps of possible cullet and one lump of slag were also recovered.
7. DISCUSSION

7.1 INTRODUCTION

7.1.1 The programme of archaeological investigation has provided a valuable opportunity to investigate the physical remains of the initial development and expansion of part of Ancoats during the 19th century. Ancoats is widely acknowledged as the world’s first industrial suburb, and the present study has facilitated an examination of the key elements: a steam-powered cotton mill, a warehouse, and worker’s housing. The following section presents a summarised, phased account of the development of the site, based on the results of the archaeological investigation. It has been compiled in advance of further historical research, which would undoubtedly enhance the results obtained.

7.2 PHASE 1 - (LATE 18TH CENTURY)

7.2.1 William Green’s map of 1794 shows the initial stages of development, with several buildings having been erected within the study area by this date. However, the excavated physical remains of buildings from this period were fragmentary. Traces of the building that was to be occupied subsequently by James Goolden as a timber warehouse were identified within the southern part of the study area. Similarly, the vestiges of insubstantial walls located within the central part of Trench 5 may be identified with late 18th century dwellings that bordered the southern edge of Bradley Street, and two walls exposed within Trench 4 represented early 19th century dwellings along Back Mill Street. The walls survived mostly as single courses of brickwork, but nevertheless represented the remains of the earliest dwellings for factory workers within this part of Ancoats.

7.2.2 The material culture associated with this period was similarly scant within the investigated areas. However, the back filled material within a drain (51) across the northern part of the site yielded fragments of slipware decorated pottery, to which a late 18th century date may be ascribed.

7.3 PHASE 2 - (C1804 - C1820)

7.3.1 The site experienced considerable development during the early 19th century, as shown on Pigot’s plan of 1819. This map provides the earliest cartographic depiction of Samuel Moore’s cotton-spinning mill, and also shows an increased number of back-to-back dwellings along Bradley Street. Significant structural evidence for all these buildings was encountered during the investigation.

7.3.2 Whilst there were few surviving remains that could be firmly ascribed to the original build of Moore’s Mill, it seems probable that the engine and boilers were housed in a purpose-built structure situated against the south-eastern corner of the main mill block. This is a slightly unusual layout for an early 19th century mill, which frequently incorporated the steam-power plant within the main block, such as at McConnell and Kennedy’s Old Mill and Sedgwick Mill in Ancoats. The power plant will almost certainly have comprised a
single-cylinder beam engine, a wagon-type boiler and a controllable flue and chimney. Whilst the firm of Boulton and Watt is frequently associated with supplying the most efficient steam engines of the period, they did not dominate the Manchester market for such equipment, as several local engine manufacturers were engaged in furnishing an ever-increasing demand from textile mill owners. This was particularly the case following the expiry of Boulton and Watt’s patent on the separate condenser in 1800, which allowed other engine manufacturers to capitalise on this ground breaking innovation. It is likely that the engine fitted to Moore’s Mill had been built locally, and is reinforced by the absence of any correspondence between Samuel Moore and Boulton and Watt within the latter’s extensive archive in Birmingham. However, very little is known about the design, installation and distribution of the early steam engines manufactured by Manchester firms.

7.3.3 The three-storey dwellings along the south edge of Bradley Street were largely completed by during this phase, although the plot to the immediate east of the excavated dwellings seemingly remained vacant in 1819. Physical evidence for this was provided by a cellar light window (122) within the eastern wall of Dwelling 2, which was blocked when an adjacent property was erected subsequently. The cellars of these properties were used as dwellings during this period, represented by the fireplaces in each room, and were probably accessed by wooden steps via Bradley Street.

7.4 **Phase 3 - (c1820 - c1831)**

7.4.1 During this period, the mill’s power systems were remodelled as part of the expansion of the factory complex. The archaeological investigation has demonstrated that new boiler and engine rooms were constructed, which were again housed in a building separate from the body the mill. The available evidence suggests that the remodelled steam-power plant supplanted the original system, leaving few physical remains.

7.4.2 The external walls of the remodelled engine house were well-preserved, although physical remains for the engine were scant, seemingly having been destroyed by late 19th century activity. However, considerable remains of the boiler house associated with this engine house were exposed immediately to the north. This contained the foundations for two wagon-type boilers and their associated flues.

7.4.3 During the early 19th century, mills began to be built with a full-height internal cross-wall, segregating the engine house from the main part of the mill (Williams and Farnie 1992, 69). This served as a fire barrier and provided a solid mounting for the gearing of the power transmission system. This appears to have been adopted at Moore’s Mill, as represented by the substantial wall between the boiler and putative engine house. Questions remains as to how the boilers were supplied with water. The absence of a reservoir implies that water was drawn from the canal, probably via an underground culvert.

7.4.4 Most early 19th century mills had attached or internal chimneys, and it seems likely that Moore’s Mill conformed to this principle. These were frequently of square-or rectangular-section, and incorporated several mechanisms to control
the draught, and thereby the rate at which the steam was produced. Physical evidence for such mechanisms have been identified at Moore’s Mill, in the form of an iron damper across the flue from the boiler.

7.4.5 The increased demand for housing during this period reflected the requirements of workers to live close to the factories. Typical workers dwellings in Ancoats were frequently provided by sub-dividing property into long blocks so that as many as four houses could be constructed within the width of the block (Lloyd-Jones and Lewis 1993). The cellars of these houses were notorious for being damp, which was compensated for slightly by the inclusion of fireplaces and window lights within each room. The original layout of the excavated cellars incorporated these features. It is of interest that access into the cellars during this period was probably via a trap door or ladders from the ground floor level of the building. By this time an alley had been incorporated along the western wall of Dwelling 1.

7.4.6 During the early- mid-19th century, a row of buildings on the canal wharf was erected along the north-eastern edge of the study area. These appear to have been associated with commercial activity on the coal wharf, namely the distribution of coal to business and domestic properties. The single extant building at the northern end of the range was the sole survivor of these structures, and had clearly been occupied by a series of coal merchants. Remnants of a wall associated with the adjacent building were exposed along the northern edge of Trench 3.

7.5 **Phase 4 - (c1831 - c1851)**

7.5.1 Moore’s Mill does not appear to have been subjected to any major alterations during this period, although a small rectangular structure was added to the eastern wall of the boiler house. Whilst the walls of this structure were exposed during the excavation, no internal features survived. The structure is marked as ‘boiler’, yet its dimensions (4m by 1.5m) are insufficient to have contained a Lancashire-type boiler, introduced by Fairbairn and Hetherington in 1844. Many mills in the area updated their boilers to the Lancashire type, that was capable of producing much higher steam pressures (and considerable less prone to explosion) than the earlier wagon-types.

7.5.2 Further modifications of the dwellings were also undertaken with the removal of the alleyway alongside Dwelling 1, and a courtyard located along the southern wall of the dwellings. A survey of the area undertaken by doctors in 1832, motivated by the cholera epidemic, determined that the workers’ houses were ‘often dilapidated, badly drained, and damp’, which stimulated the new Borough Council into action (Roberts 1993). Over the next ten years, attempts to improve the conditions were undertaken, although houses remained sub-standard and overcrowded. A cellar in Ancoats was described in 1842 as ‘damp and very dark with a floor area not more than twelve square yards’ contained nine individuals (*ibid*). These atrocious conditions were addressed in housing legislation passed during the mid-1840s and 1850s, the physical effects of which may be represented in the excavated physical remains. The Bradley Street dwellings, for instance, incorporated two drains that were placed across the northern and southern rooms of both dwellings. These were
probably intended to reduce the amounts of water entering the cellars and eased sanitation, but dampness will inevitably have remained to be a problem.

7.6 **PHASE 5 - (c1851 - c1893)**

7.6.1 It would appear that many of the buildings on the site were demolished or converted during the second half of the 19th century. The Ordnance Survey map published in 1893 shows the Industrial School to have been established across the site of the former mill, and the buildings on the coal wharf were largely removed. Documentary evidence has indicated that the cotton mill remained in operation until the mid-1870s, whilst the physical evidence has suggested that the power plant was not remodelled during this period. In particular, there was no evidence for a Lancashire boiler having been installed, suggested that the mill continued to use the out-dated wagon-type and therefore an engine of comparatively small power.

7.6.2 Renewed attempts to recondition workers’ housing in the area was undertaken in the 1880s as a response to increased mortality rate (Roberts 1993). It seems likely that the partition wall within the cellar of Dwelling 2 was removed during this period to create a single room. Similarly, a membrane wall across the southern wall of both dwellings appears to have been inserted at this time. Some of the dwellings that border the northern edge of Bradley Street had been demolished to at least ground level, with remnants of cellars left intact. The cellars exposed along within Trench 4 and had been modified with cement and ash-rich mortar, indicative of a later 19th century date.

7.6.3 The warehouse within the southern part of the study area appears to have continued in use throughout this period, although the addition of cobble surfaces represent the last phase remodelling. These highlight the relationship between the building and the canal. Access into the building at this time was via the southern elevation, which fronted onto the canal side.

7.7 **PHASE 6 - (c1893 - 1970s)**

7.7.1 This phase represents the building of shops along the northern edge of the site, the later use of the former coal merchants office between 1908 and 1955, and the demolition of the dwellings and warehouse during the 1970s.

7.7.2 During the early- mid-20th century, the condition of the dwellings had barely improved since the end of the 19th century. However, the blocking of the cellar windows and entrances during the last century suggests a change of use, which is likely to have been their demise as dwellings. By 1962, the Bradley Street dwellings were accessed via a three-tread stone staircase, with a small backyard (Plate 40). Finds recovered from the backfill of the cellars suggest these dwellings were demolished within the next ten years.

7.7.3 The butcher’s shop coincided with the latest development of the northern part of the site during the late 20th century. An extensive concrete layer observed within Trench 2, and across the eastern edge of the former mill, provided foundation for other commercial units adjacent to the shop.
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NEW ISLINGTON WHARF,
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ARCHAEOLOGICAL INVESTIGATION PROJECT DESIGN

Proposals
The following project design is offered in response to a request from Mr Rob Bourne, of CgMs, acting on behalf of Isis, for a programme of archaeological investigation in advance of the proposed development of land at New Islington Wharf, Ancoats, Manchester.
1. BACKGROUND

1.1 CIRCUMSTANCES OF PROJECT

1.1.1 This project design is for a programme of archaeological work that is required as part of the proposed development of New Islington Wharf, Ancoats, 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 Isis, and concerns the redevelopment of land between the Ashton under Lyne Canal, Great Ancoats Street and Old Mill Street, on the north-east side of Manchester city centre.

1.1.2 An evaluation of the site undertaken recently by OA North has exposed buried remains of archaeological significance, which require further investigation in advance of their ultimate destruction. In particular, the steam-power plant associated with an early 19th century cotton mill, a block of back-to-back terraced housing, and a former warehouse merit detailed archaeological recording.

1.1.3 In addition, the small building adjacent to New Islington canal wharf has been recommended for a Level II-type survey.

1.2 OXFORD ARCHAEOLOGY

1.2.1 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.

1.2.2 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.

1.2.3 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-exavcation 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 a programme of archaeological evaluation and excavation of historic textile mill within the New Islington development in Ancoats.
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 buried archaeological, and to provide a good understanding of their potential.

2.2 OBJECTIVES

2.2.1 The objectives of the archaeological work may be summarised as follows:

- to expose and record the extent and character of the engine and boiler house associated with Moore’s Mill, in order to provide an understanding of the sequence of steam-power plant within the mill;

- to expose and record the character of the boiler flues and chimney, and its relationship with the engine and boiler houses;

- to expose and record a single block of back-to-back terraced houses, and identify any evidence for phasing;

- to determine the presence, character, and extent of the structure shown at the southern end of Back Mill Street and to the north of the Ashton under Lyne Canal on historic mapping, and generate a plan of the surviving foundations;

- to complete a Level II-type survey of the extant structure situated to the east of Moore’s Mill.
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 - EXCAVATION**

3.2.2 *Excavation of Moore’s Mill:* it is proposed that the site be investigated via a single trench that will measure some 25m by 10m, but may be widened to allow the sides to stepped in if necessary. The trench will be targeted on the mill’s steam-power plant, comprising the engine and boiler houses and associated chimney, together with any evidence of internal phasing. The proposed position of the trench is shown in Figure 1.

3.2.3 *Excavation of Houses on Back Mill Street:* it is proposed that the site be investigated via a single trench that will measure some 10m by 10m, but may be widened to allow the sides to stepped in if necessary. The trench will be targeted on a single block of back-to-back terraced housing, comprising two former dwellings, and will aim to identify the plan form of the two properties, internal features and any evidence for phasing. The proposed position of the trench is shown in Figure 1.

3.2.4 *Excavation of the Warehouse on Back Mill Street:* the remains of this structure will be investigated via a single trench that will measure some 15m by 10m. This trench will aim to provide a plan of the foundation footprint of this building, and elucidate any evidence for internal phasing. It is not envisaged that the entire building will be excavated beneath its uppermost level, although selective investigation will be undertaken to resolve specific questions of chronology. The proposed position of the trench is shown in Figure 1.

3.2.5 *Methodology:* 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 stored adjacent to the trench, and will be backfilled upon completion of the archaeological works.

3.2.6 Machine excavation will then be used to define carefully the extent of any surviving 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.

3.2.7 All information identified in the course of the site works will be recorded stratigraphically, using a system adapted from that used by the Centre for Archaeology Service of English Heritage. Results of the evaluation will be recorded on *pro-forma* context sheets, and will be accompanied with
sufficient pictorial record (plans, sections and both black and white and colour photographs) to identify and illustrate individual features. Primary records will be available for inspection at all times.

3.2.8 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.

3.2.9 The precise location of the evaluation trenches, and the position of all archaeological structures encountered, will be surveyed by EDM tacheometry using a total station linked to a pen computer data logger. This process will generate scaled plans within AutoCAD, which will then be subject to manual survey enhancement. The drawings will be generated at an accuracy appropriate for 1:20 scale, but can be output at any scale required. Sections will be manually drafted as appropriate at a scale of 1:10. All information will be tied in to Ordnance Datum.

3.2.10 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.

3.2.11 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.

3.2.12 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.

3.2.13 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 FIELDWORK – BUILDING SURVEY

3.3.1 Manual Survey: this technique is typically applied to furnish additional architectural detail to existing drawings and is appropriate for the editing of
plans and elevations. Paper plots of existing drawings will be produced from the digital copy for enhancement in the field. Detail from the completed field drawings will be digitised to allow the correction of the digital copy.

3.3.2 **Reflectorless Total Station:** (RTS) this is an economic, and precise tool for the recording of plans, cross-sections and elevations. A reflectorless EDM generates a laser beam and is able to extract a distance measurement by reflection from wall surfaces. The distance measurement is accurate to $\pm$ 6mm and has a working range of up to 50m. The recording methodology involves tracing the laser beam around individual architectural features, and thereby generates large amounts of 3D data, which is stored within a data-logger. Using this technique it is possible for one surveyor to generate up to 2000 survey points a day, and is considerably faster than a conventional total station which requires two surveyors and has a typical maximum of 600 points per day (in a building context). The technique is particularly invaluable for the recording of detail from inaccessible locations or in areas where the safety of staff may be compromised by working, for instance, on an unstable wall face.

3.3.3 **CAD System:** the drawings will be manipulated in AutoCAD. The advantage of a CAD system is that it allows for efficient manipulation and editing of drawings. The adoption of a layering system has significant benefits during the analysis stage as it allows for the display of information such as feature types, fabric and phasing as necessary to the requirements of the analysis, without the necessity to produce further drawings. Finished drawings can be plotted at the required scale or sheet sizes.

3.3.4 **Written description:** this will comply with RCHME level II-type standard, which is a detailed and analytical record and will present the evidence on which the analysis is based. It will serve to present an overview of the layout and fabric of the building, identify the principal architectural elements, discuss the surviving historic fittings and finally, provide evidence for the phasing and function of the structure.

3.3.5 A features gazetteer will be compiled as part of the written description, and will be a combination of single feature and feature-type recording. This method of recording allows for detail and accuracy at the analysis stage, for improved accuracy in phasing and for a thorough and close inspection of features on site. The written record methodology will be applied to all historical phases of the buildings internally and should include all levels of the buildings as appropriate. The feature record will be compiled using OA North building *pro-forma*.

3.3.6 **Photographic record:** an annotated photographic record will be produced. Photographs will be taken utilising a combination of 35mm camera fitted with colour slide film and monochrome medium format. It is anticipated that the former will be used for general shots and the latter for the capture of detail. In addition, a high resolution digital camera will be used.
3.4 **HEALTH AND SAFETY**

3.4.1 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. A risk assessment will be compiled in advance of any on-site works.

3.4.2 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.

3.4.3 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.

3.5 **OTHER MATTERS**

3.5.1 Access to the site will be arranged via the Client/main contractor.

3.5.2 OA North will provide all the necessary welfare facilities and PPE to protect field staff from the contaminants known to be present across the site.

3.5.3 The Client/main contractor is asked to provide OA North with information relating to the position of live services on the site. OA North will use a cable-detecting tool in advance of any machine excavation.

3.6 **POST-EXCAVATION AND REPORT PRODUCTION**

3.6.1 Following completion of the fieldwork, the results obtained from the excavations will be collated and the site archive completed in accordance with English Heritage MAP 2, Appendix 3. A post-excavation assessment of the archive and the resource implications of the potential further analysis will be undertaken. The stratigraphic data and the finds assemblage will be quantified and assessed, and the environmental samples processed and a brief assessment of their potential for further analysis made. The assessment results will be presented within a post-excavation assessment report, which will make recommendations for a schedule, timescale and programme of analysis in accordance with MAP 2, Appendix 4.

3.6.2 A provisional programme of post-excavation analysis is anticipated. The extent of the programme, however, can only be reliably established on completion of the post-excavation-assessment report. The proposed programme anticipates both analysis of the site stratigraphy and the artefactual/ecofactual evidence leading to the production of a final report.
3.6.3 **Building Survey Report:** it is envisaged that a separate report presenting the results of the building survey will be produced. This report will include a copy of this project design, and indications of any agreed departure from that design. It will include an historical and archaeological background to the building, an outline methodology of the investigation, and present, summarise, assess, and interpret the results of the programme of archaeological works detailed above. It will provide an account of the building’s past and present use, with supporting archaeological and historical evidence, provide an assessment of the relative significance of the various rooms and appurtenances within the complex, and place the mill in its local and regional context. The report will also include a gazetteer of key architectural features, and a complete bibliography of sources from which data has been derived.

3.6.4 **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.

3.6.5 The paper and finds archive for the archaeological work undertaken at the site will be deposited with the Museum of Science and Industry in Manchester, 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 museum within six months of the completion of the fieldwork.

3.6.6 Except for items subject to the Treasure Act, all artefacts found during the course of the project will be donated to the receiving museum.

3.6.7 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.

3.6.8 A summary of the results produced from the archaeological investigation will be published in the CBA North West magazine.

3.6.9 **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 The programme of archaeological investigation will require a 16 days period in the field to complete.

4.2 An assessment 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 Officer). 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: SUMMARY CONTEXT LIST

<table>
<thead>
<tr>
<th>Context</th>
<th>Area</th>
<th>Description</th>
<th>Final Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>4: TR 5</td>
<td>Drain at western end of trench.</td>
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</tr>
<tr>
<td>02</td>
<td>4: TR 5</td>
<td>Back Mill Street</td>
<td>2</td>
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<td>03</td>
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<td>Drain back fill at western end of trench between the kerbstones of 02 and wall 12</td>
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<tr>
<td>04</td>
<td>4: TR 5</td>
<td>Footprint remains of dwelling within the western area of the trench</td>
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<tr>
<td>05</td>
<td>4: TR 5</td>
<td>Footprint remains of partition walls within dwelling west of 04</td>
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<tr>
<td>06</td>
<td>4: TR 5</td>
<td>Drain aligned north/west-south/east across the trench</td>
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</tr>
<tr>
<td>07</td>
<td>4: TR 5</td>
<td>Clay layer within eastern part of the trench.</td>
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</tr>
<tr>
<td>08</td>
<td>4: TR 5</td>
<td>Short section of brick wall running north/east-south/west across the trench</td>
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<tr>
<td>09</td>
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<td>A concentration of brick walls and stone slab flooring occupying the eastern end of the trench</td>
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<td>10</td>
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<td>Drain 1.</td>
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<td>11</td>
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<td>Natural clay</td>
<td>-</td>
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<td>13</td>
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<td>Western exterior wall dwelling</td>
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<td>14</td>
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<td>South external wall</td>
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<td>Single skin wall extending NW/SE from 14</td>
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<td>Single skin wall extending NW/SE from 14</td>
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<td>Group number for two rows of brick piers, along north edge of 15 and 16</td>
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<td>NW/SE Partition wall</td>
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<td>North exterior wall</td>
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<td>5: TR 6</td>
<td>East external wall</td>
<td>2 and 4</td>
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<td>Short N/S wall parallel to 20 below cobbles</td>
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<td>Cobbled surface</td>
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<td>23</td>
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<td>East - West wall butting north edge of 24</td>
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<td>24</td>
<td>5: TR 6</td>
<td>North-South wall butting the east extension of 14</td>
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<td>Angled extension connecting walls 14 and 24</td>
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<td>Group number for boiler room</td>
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<td>West wall of building 82</td>
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<td>Context</td>
<td>Area</td>
<td>Description</td>
<td>Phase</td>
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<td>West wall of 44</td>
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<td>5 course wide, original western wall of 28</td>
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<td>3 course wide, original North wall of 28</td>
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<td>East-west Brick wall below 41</td>
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<td>Wall below 41 in room 27</td>
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<td>Brick floor below 41</td>
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<td>Fuel waste below 41</td>
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<td>Re-deposited natural clay below 48</td>
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<td>Crushed brick and concrete within 28</td>
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<td>Butchers shop</td>
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<td>Flue between walls 60 and 61</td>
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<td>Angled ramp along east edge of 61</td>
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<td>64</td>
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<td>Boiler base</td>
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<td>1</td>
<td>West wall of 64</td>
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<td>East wall of 64</td>
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<td>67</td>
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<td>Context</td>
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<td>Description</td>
<td>Phase</td>
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<td>-------------</td>
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<tr>
<td>68</td>
<td>1</td>
<td>Chamber/ash pit for boiler</td>
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<tr>
<td>69</td>
<td>1</td>
<td>West wall of 68</td>
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<td>Retaining wall behind 69</td>
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<td>South wall of original mill</td>
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<td>Single building that housed rooms 26 and 28</td>
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<td>Fill of flue 62</td>
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<td>Back fill of room 27</td>
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<td>86</td>
<td>3: TR 4</td>
<td>Chamber (brick lined) at eastern area of trench</td>
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<td>87</td>
<td>3: TR 4</td>
<td>Fill of 86</td>
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<td>88</td>
<td>3: TR 4</td>
<td>Back fill (general)</td>
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<td>Dwelling 2</td>
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<td>91</td>
<td>4</td>
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<td>4</td>
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<td>1</td>
<td>Demolition backfill of Moore’s Mill</td>
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<td>94</td>
<td>3: TR 4</td>
<td>Coal Bunker</td>
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<td>95</td>
<td>3: TR 4</td>
<td>Fill of 94</td>
<td>5</td>
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<td>Backfill of trench</td>
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<td>3</td>
<td>Bradley Street</td>
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<tr>
<td>98</td>
<td>5: TR 6</td>
<td>Cobbled surface at south end of trench</td>
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<tr>
<td>99</td>
<td>3: TR 4</td>
<td>Cellar at east end of trench</td>
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<td>100</td>
<td>3: TR 4</td>
<td>Backfill of 99</td>
<td>6</td>
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For the use of CgMs Consulting © OA North: December 2005
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<td>Partition wall across Dwelling 1</td>
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<td>Threshold along the east edge of wall 103</td>
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<td>Brick wall dividing Dwellings 1 and 2</td>
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<td>106</td>
<td>4</td>
<td>Steps into Dwelling 1</td>
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<td>107</td>
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<td>Drain aligned east/west across both dwellings</td>
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<td>Wall that projected east/west along the east edge of building 82</td>
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<td>Floor in Dwelling 2</td>
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<td>‘Membrane’ wall within the south wall of Dwellings 1 and 2</td>
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<td>Drain aligned east/west across both dwellings</td>
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<td>120</td>
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<td>North cellar window in Dwelling 2</td>
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<td>Modified fire-place in Dwelling 1</td>
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<td>Entrance into Dwelling 2 via the north wall</td>
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ILLUSTRATIONS

LIST OF FIGURES

Figure 1: Location map
Figure 2: Location plan of the evaluation trenches, excavation and areas on 1831 map
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