



# **NOMA Public Realm, Redfern Street, Manchester**

**Archaeological  
Excavation**



**Oxford Archaeology North**

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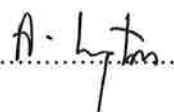
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## SUMMARY

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The Co-operative Group has devised proposals for a scheme of public realm works as part of the NOMA Regeneration in the Shudehill area of central Manchester. The proposals allow for the development of a new public square on Redfern Street (centred at NGR 384175, 398930), together with associated landscaping works. The creation of the new square will necessitate substantial earth-moving works that will reduce the existing ground levels up to a maximum depth of *c* 3m.

The archaeological potential of the site was highlighted in a desk-based assessment, produced by Oxford Archaeology North in March 2014. This demonstrated that the study area lay on the fringe of the medieval town, and developed rapidly during the late eighteenth century as part of the early industrial expansion of Manchester. The assessment concluded that any surviving buried remains of these heritage assets would be of local significance, and would merit preservation by record. In the light of these conclusions, the Greater Manchester Archaeological Advisory Service recommended that the impact of the development should be mitigated via a programme of archaeological investigation, in line with the advice embodied in the National Planning Policy Framework, Paragraph 128.

The archaeological investigation was carried out between March and June 2014, and comprised close archaeological monitoring during the removal of the concrete foundation slab for the modern building that occupied the site until recently. This was coupled with the targeted excavation of those parts of the site that had not been disturbed during the twentieth-century redevelopment of the site.

The discovery of asbestos fragments across much of the excavated area precluded a detailed investigation of the whole site. Nevertheless, it was clear that the redevelopment of the site during the twentieth century had destroyed all buried remains of the early nineteenth-century buildings depicted on historical mapping. However, an layer of soil exposed across the central part of the site evidently represented the natural ground surface prior to urban expansion in the late eighteenth century. Whilst detailed excavation of this layer was restricted by the presence of asbestos, a small group of pottery was recovered, which has been ascribed a date range spanning the first half of the eighteenth century.

## ACKNOWLEDGEMENTS

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Oxford Archaeology North (OA North) would like to thank John Luddington, Construction Project Manager for the Co-operative Group, for commissioning and supporting the project. OA North is also grateful to Norman Redhead, the Heritage Management Director with the Greater Manchester Archaeological Advisory Service (GMAAS), for his support and advice.

The excavation was directed by Graham Mottershead, who was assisted by Lewis Stitt, Sarah Mottershead and Phil Cooke. The report was written by Sarah Mottershead and Graham Mottershead, and Mark Tidmarsh prepared the illustrations. The project was managed by Ian Miller, who also edited the report.

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## 1. INTRODUCTION

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### 1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 The Co-operative Group has devised proposals for a scheme of public realm works as part of the NOMA Regeneration in the Shudehill area of central Manchester. The proposals allow for the development of a new public square on Redfern Street, together with the re-surfacing of the surrounding streets and associated landscaping works. The construction works required for the proposed new square will necessitate considerable earth-moving works, which will inevitably have a negative impact on any buried archaeological remains. In order to facilitate the planning process, the Co-operative Group commissioned Oxford Archaeology North (OA North) to carry out an archaeological desk-based assessment of the study area. This was intended to establish, as far as possible, the nature and significance of the sub-surface archaeological resource within the area, and to establish the impact of any future development upon this resource. The data generated from the assessment was intended to provide an informed basis regarding the significance of any archaeological heritage assets within the site.
- 1.1.2 The desk-based assessment concluded that the site potentially contained heritage assets of local significance, which merited preservation by record in the event of their damage or destruction during the course of the proposed development. In particular, it was considered likely that the site may retain physical remains of late eighteenth- and early nineteenth-century buildings, including back-to-back workers' housing (OA North 2014a).
- 1.1.3 In the light of the conclusions drawn by the desk-based assessment, the Greater Manchester Archaeological Advisory Service (GMAAS), which provides archaeological advice to Manchester City Council, recommended that a scheme of intrusive archaeological investigation should be implemented. This was intended to determine the extent, depth, character and relative significance of any buried archaeological remains that survive, in line with the National Planning Policy Framework, Paragraph 128.
- 1.1.4 In March 2014, Oxford Archaeology North (OA North) was commissioned by the Co-operative Group to undertake the required scheme of archaeological investigation. This comprised close archaeological monitoring during the removal of the concrete foundation slab for the modern building that occupied the site until recently, coupled with the targeted excavation of those parts of the site that had not been disturbed during the twentieth-century redevelopment of the site.

## 1.2 SITE LOCATION AND GEOLOGY

- 1.2.1 The study area (centred on NGR 384175, 398930) is situated in Shudehill, on the northern fringe of the city centre (Fig 1). It is bounded by Redfern Street, Hanover Street, and New Century House (Plate 1).

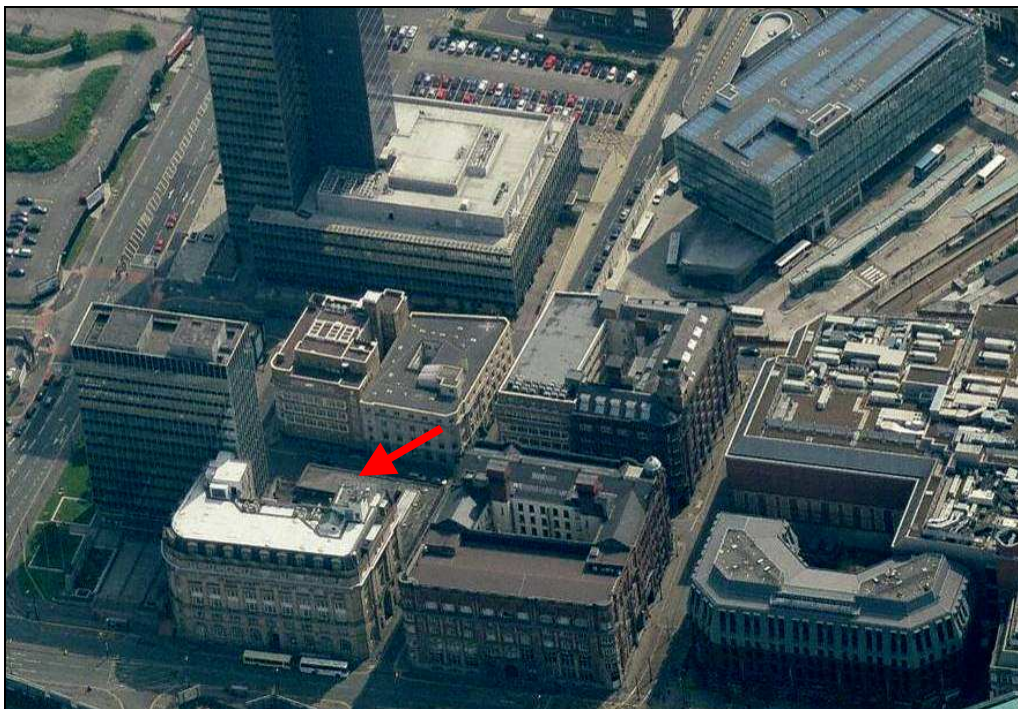


Plate 1: Recent aerial view of the study area, with arrow marking the position of the proposed new square

- 1.2.2 **Topography:** 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, whilst the rivers Irwell, Medlock, and Irk represent the principal watercourses in Manchester (Countryside Commission 1998, 125). The study area lies on the east side of the valley of the River Irk, and across the area ground level appear to fall gradually from east to west towards the river.
- 1.2.3 **Geology:** the solid geology of the area comprises Carboniferous sedimentary material and a series of Permo-Triassic rocks, consisting mainly of New Red Sandstone. The overlying drift incorporates Pleistocene boulder clays of glacial origin, and sands, gravels, and clays of fluvial/lacustrine origin (Hall *et al* 1995, 8).

### 1.3 HISTORICAL BACKGROUND

- 1.3.1 **Introduction:** the following section summarises the historical development of the study area, and is intended to place the excavated remains in their wider context. The historical information is drawn largely from the desk-based assessment of the site (OA North 2014a).
- 1.3.2 **Contextual background:** the study area lay on the north-eastern fringe of the medieval settlement of Manchester, on the east side of Long Millgate. This was one of the town's longest and most populous streets, which extended along the south side of the River Irk to Manchester's manorial corn mill. Millgate is documented from the early fourteenth century, but the mill is referred to in documents dating to the first half of the twelfth century. Long Millgate also led to Scotland Bridge over the River Irk, one of the principal routes into Manchester, and to Ashley Lane, another main route into the town from the north-east. Long Millgate was superseded in the 1850s when Corporation Street was extended from Withy Grove to Ducie Bridge.
- 1.3.3 Long Millgate is shown on the earliest known map of Manchester, dating to c 1650, which shows a continuous line of properties along the east side of the street (Plate 2). This map also shows several properties along Miller Street and Shudehill. Miller's Lane, the forerunner of Miller Street, is documented from the 1580s, and may have originated as a convenient link between the manorial corn mill and the eastern approach to the town via Shudehill and what is now Swan Street.
- 1.3.4 In 1621, Edward Mayes of Manchester bequeathed money for the purchase of land to be used for the benefit of the poor of the town. His trustees bought four acres on the south side of Miller's Lane in 1635, which were rented out and the profits distributed to the poor. The charity also owned a row of cottages on the north side of this land in which they housed 20 poor families. These almshouses are shown clearly on a map produced by Casson and Berry in 1741, which also shows the west side of Shudehill lined with buildings as far as the junction with Miller's Lane and buildings of the north side of Miller's Lane (Plate 3). However, most of the study area is shown to have been undeveloped land.
- 1.3.5 In 1731, it was proposed to establish a new workhouse in Manchester, and a bill to advance the scheme was submitted to Parliament, but was aborted due to disagreements among the townspeople. However, the lord of the manor had proceeded to erect part of the workhouse on Miller's Lane, which was earliest building of this type in Manchester. The original plan was for a set of buildings arranged around a quadrangle, but only one was actually completed. This measured 34 yards (31m) long, 6 yards (5.5m) wide inside, and was four storeys high. The ground floor was intended to contain broad looms, the first floor was to have a dining hall, a parlour for the governor, kitchens and other offices, the second floor lodging rooms, and the third floor housed Dutch looms for weaving smallwares. However, it seems that the workhouse was a short-lived venture, and William Green's detailed map of 1794 annotates the building as more almshouses.



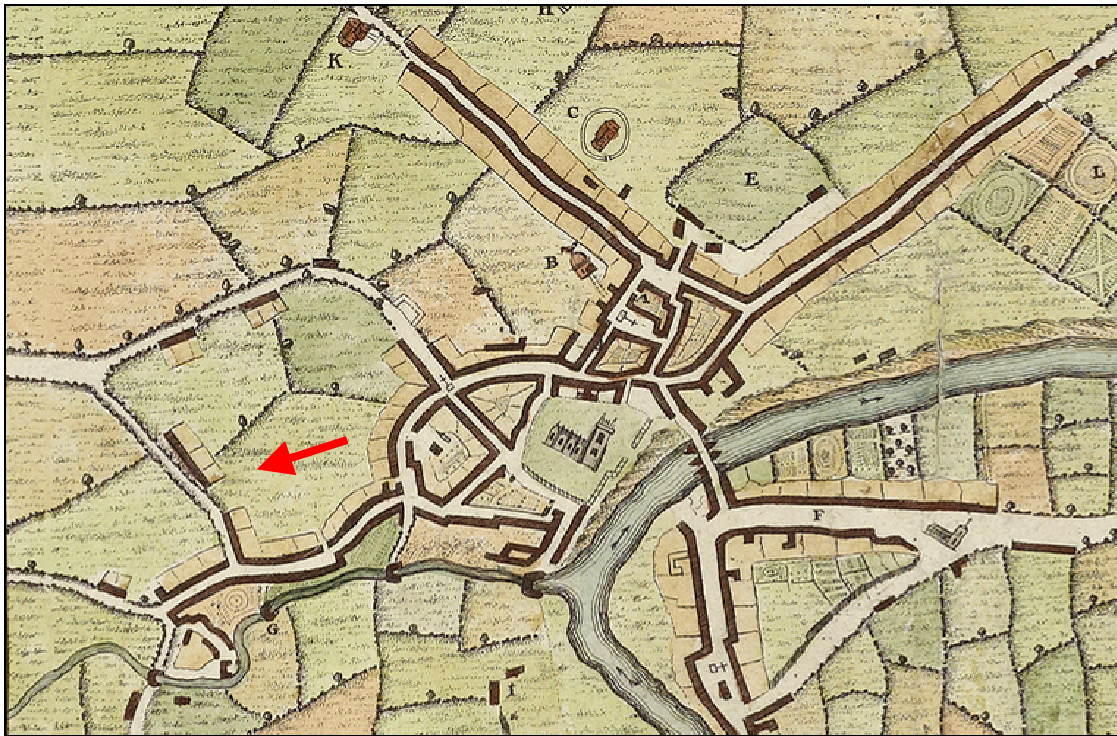


Plate 2: Plan of Manchester dating to c 1650, with arrow marking approximate location of the present study area

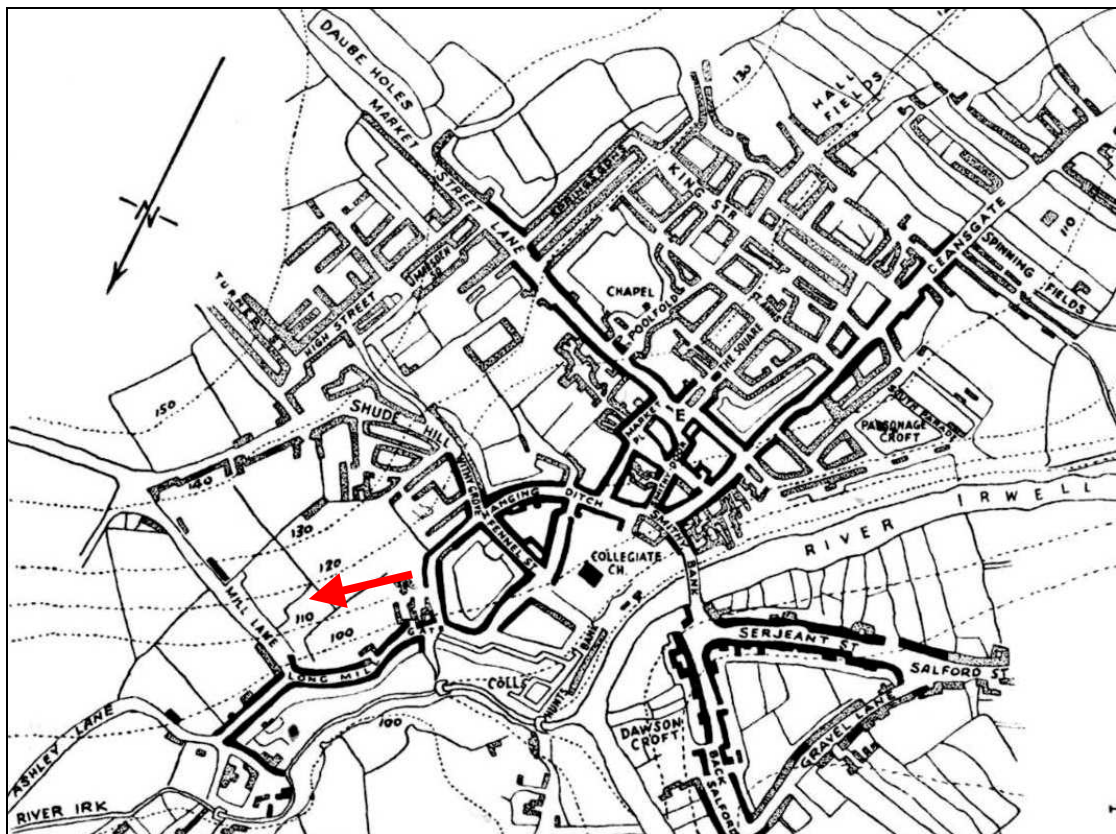


Plate 3: Copy of Casson and Berry's map of 1741, with arrow marking approximate location of the present study area

- 1.3.6 **Industrial period:** the onset of the rapid industrialisation centred on Manchester from the late eighteenth century resulted in a massive expansion of the town's population. The development of the study area at the end of the eighteenth century is captured on detailed plans produced by William Green in 1787-94 and Charles Laurent in 1793 (Plate 4). These maps show new streets to have been laid out across the area, including Balloon Street and Hanover Street, and numerous buildings erected in the vicinity of the study area. Hanover Street was named in deference to the coronation of King George III and Queen Charlotte in 1761. It was originally a residential street, although industry had become established by the final decade of the eighteenth century.
- 1.3.7 The study area itself extends between Miller Street and Balloon Street, and encompasses part of the Mayes Charity land, where development was prevented until 1794, when the trustees obtained an Act of Parliament allowing them to sell it off on leases of 99 years. Consequently, much of the study area remained undeveloped at that date, although both Laurent and Green depict a row of double-depth houses along the north side of Hanover Street. On the opposite side of Miller Street to the Mayes Charity land lay Arkwright's cotton mill, Manchester's first large-scale cotton mill, which was erected in 1780-3 on the site of a former brick yard (Fitton 1989, 63).
- 1.3.8 Subsequent development in the nineteenth century transformed the area into a mixed residential and industrial zone. Among the earliest houses in Shudehill were artisans' dwellings of three storeys and a basement, although the area also included inferior, and generally later, housing in the form of back-to-backs, twin rows of one-up one-down houses sharing a common rear wall (OA North 2011). In the course of the first half of the nineteenth century, houses of all types within the area became notorious for their overcrowding and insanitary conditions. Engels famously described the squalid state of Long Millgate and its neighbouring courts, an area containing dwellings from the pre-industrial town as well as more recent workers' houses (Engels 1973).

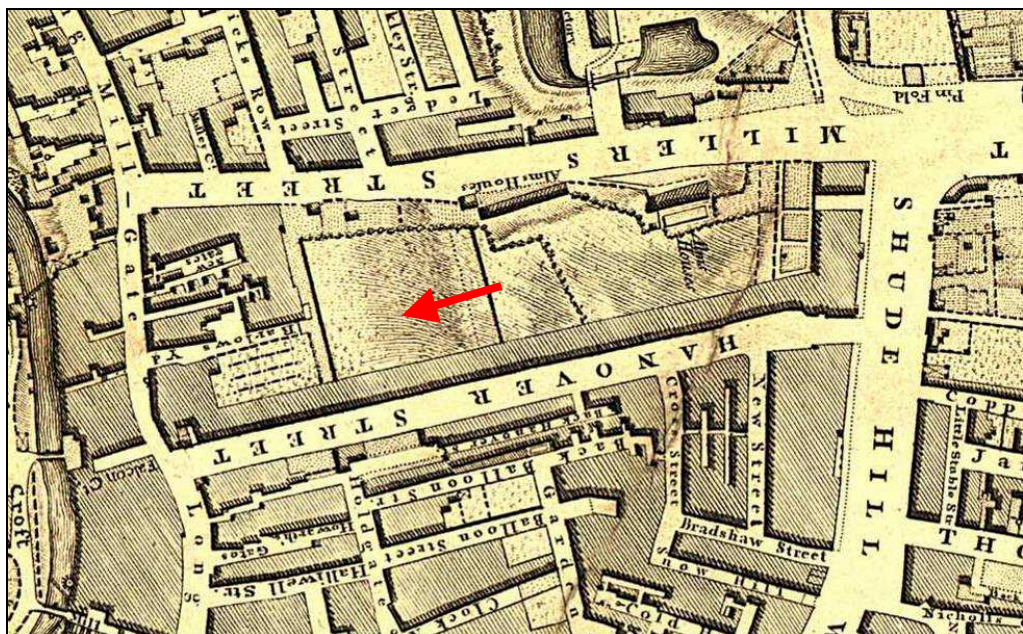


Plate 4: Extract from Laurent's map of 1793, marking the study area

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## 2. METHODOLOGY

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### 2.1 EXCAVATION

2.1.1 All work was carried out in accordance with the Written Scheme of Investigation (WSI), and was consistent with the relevant standards and procedures provided by the Institute for Archaeologists (IfA), and generally accepted best practice. The WSI allowed for the excavation of an area along the southern edge of the proposed new square, and a block of land in the central part of the development area (*Appendix 1*). During the archaeological monitoring of the foundation slab for the modern building, it was revealed that the installation of twentieth-century services, coupled with the construction trench for New Century House, has resulted in the loss of buried archaeological remains in the northern part of the site, and along a strip in the southern part of the area

### 2.2 FINDS

2.2.1 All finds recovered during the excavations were lifted, cleaned, bagged and boxed in accordance with the United Kingdom Institute for Conservation (UKIC) *First Aid For Finds* (1998). Recovery and sampling programmes were in accordance with best practice (current IfA guidelines) and subject to expert advice.

### 2.3 ARCHIVE

2.3.1 A full archive of the work has been prepared to a professional standard in accordance with current English Heritage guidelines (1991) and the *Guidelines for the Preparation of Excavation Archives for Long Term Storage* (UKIC 1990). The archive will be deposited with the Museum of Science and Industry in Manchester on completion of the project. In addition, a copy of the report will be forwarded to the Greater Manchester Historic Environment Record (HER).

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## 3. RESULTS

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### 3.1 INTRODUCTION

- 3.1.1 As an initial stage of the fieldwork programme, an archaeological watching brief was maintained during the removal of the modern ground surface, which included a concrete foundation slab for the twentieth-century building that had occupied the site until recently. This work concluded that the area of archaeological interest was limited to a strip along the southern edge of the proposed new square, and an area in the central part of the development site. The installation of twentieth-century services, coupled with the construction trench for New Century House, has clearly resulted in the loss of buried archaeological remains in the northern part of the site, and along a strip in the southern part of the area. It was also concluded during the watching brief that the south-western 11.85m of the study area had been truncated by modern disturbance down to a maximum depth of 3.2m (Plate 5).



*Plate 5: Depth of twentieth-century disturbance in the south-western part of the study area, showing the remains of a modern wall*

## 3.2 THE EXCAVATION

- 3.2.1 Following on from the results obtained from the watching brief, a single area adjacent to Redfern Street was subject to open-area excavation. The excavation trench measured 23.5 x 16.5m, with a 10 x 8.5m extension projecting north-west from its south-western side (Fig 2). The trench was excavated to a maximum depth of 3.2m. The entire site was overlain by a uniform layer of mixed demolition rubble (*01*).
- 3.2.2 The area that retained potential remains of archaeological interest was bounded by the foundations for the twentieth-century building that had occupied the site until recently. These foundations included a concrete ring beam that was aligned north-west/south-east along the western edge of the excavated area, with an associated row of reinforced concrete piles that lay parallel to the ring beam at a distance of 5m to the north-east. This foundation trench was aligned north-east/south-west, and was 0.85m wide (Fig 2). Beyond this foundation trench to the north-west, all below-ground remains had been destroyed in the second half of the twentieth century by the foundations for New Century House.
- 3.2.3 A further area of modern disturbance was revealed in the centre of the study area, comprising a 4.3m diameter cut that contained mixed demolition rubble (Plate 6). This feature had been the location of a large concrete base, which formed the foundation for a single concrete column that supporting the roof of the twentieth-century building; the base had been grubbed out during the demolition programme.



*Plate 6: Large circular feature representing the foundation cut for a modern concrete column, looking west*

- 3.2.4 A thick layer of mixed sands and gravels (**09**) was revealed at a depth of 1.75m below the modern ground surface along the southern edge of the excavated area (Fig 2). This layer was devoid of any archaeological remains, and clearly represented the natural geology.
- 3.2.5 The natural geology was overlain across the central part of the excavated area by a layer (**08**) of light to mid-brown friable sandy-silt, which was exposed at a depth of *c* 1.02m below the modern ground surface (Plates 7 and 8). This layer was up to 0.65m thick, and appeared to follow a natural shallow slope in the ground, rising by *c* 200mm from the east to the west. Layer **08** lay beneath the course of the former Pilgrim Street and the back-to-back workers' houses that are shown on historical mapping along the northern side of the street. The survival of layer **08** demonstrates that the back-to-back houses did not incorporate any cellars, and that there was no drainage or water pipes beneath the street, suggesting that these houses had not been subject to any of the improvements to sanitation that were implemented across Manchester during the later nineteenth century.
- 3.2.6 Layer **08** almost certainly pre-dated the development of the area from the late eighteenth century, and represented an agricultural or garden soil to the rear of houses that had lined Mill Lane and Long Millgate since the late medieval period, as shown on the map of *c* 1650 (Plate 2). Similar layers have been excavated archaeologically elsewhere in the area, such as Chapel Wharf in Salford, where a significant assemblage of post-medieval pottery was discovered (UMAU 2007). A small assemblage of pottery was recovered from layer **08**, although full excavation of the entire deposit was precluded by the presence of asbestos.



*Plate 7: Layer 08 exposed in the south-western part of the site, looking south*



*Plate 8: Layer 08 in the north-eastern part of the site, looking south-west*

- 3.2.7 The fragmentary remains of several brick walls were exposed in the eastern part of the site (Fig 2). These lay at a depth of *c* 600mm below the modern ground surface, and represented the remains of three brick-built structures, which were all cut into a 0.25m thick levelling layer of compact ash, cinders and brick (**07**). The largest was a 3.9 x 1.6m rectangular brick chamber (**06**), with a single-course wide wall of hand-made bricks bonded with lime-based mortar, consistent with an early nineteenth-century construction date. The north-eastern corner of the structure had been removed by later redevelopment of the site. The chamber was filled with a mixed deposit of black ash that contained fragments of bricks, stone and slate, but could not be excavated due to the presence of notifiable asbestos pressed thermal board and chrysotile cement sheeting.
- 3.2.8 A second, small structure lay 1.4m to the north-west of chamber **06**, and comprised a 0.7 x 0.45m remnant of a brick wall (**04**). The fabric of structure **04** similarly comprised hand-made bricks with white lime-based mortar. A second wall fragment (**05**) of identical construction lay 2.1m to the south-west of structure **06** (Fig 2).
- 3.2.9 The position of structures **04** and **05** correspond with features to the rear of the double-depth houses fronting onto Hanover Street as depicted on the Ordnance Survey map of 1850 (Fig 2). Structure **04** is likely to represent the remains of the privy in the rear yard of one of the houses, whilst **05** may have formed part of the boundary wall with the adjacent property. Chamber **06**, however, does not correspond closely with any features depicted on the historical mapping, although the fabric of this structure suggested that it was broadly contemporary with **04** and **05**.

3.2.10 Two parallel brick walls (**02** and **03**), exposed along the north-western edge of the excavated trench, represented a later phase of activity on the site. The walls were aligned north-east/south-west, and were both 0.24m wide with stepped foundations, and survived to a depth of 1.6m (Plate 9). The fabric of both walls comprised machine-made bricks, bonded with hard dark grey cement, indicative of a twentieth-century construction date. The area between the two walls was filled with demolition rubble (**01**) to a depth of 1.6m, below which lay a deposit of sand and gravel (**09**), clearly representing the natural geology.



*Plate 9: Walls 02 and 03, looking south-west*

3.2.11 The position of these walls corresponded broadly with the location of several large commercial buildings that are depicted on the Ordnance Survey map of 1922. These commercial buildings replaced workers' housing that lay along the former Pilgrim Street and Carter Street, which are shown on the sequence of historical mapping from 1831 to 1908 (OA North 2014a).



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## 4. FINDS

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### 4.1 INTRODUCTION

4.1.1 A small group of 15 fragments of artefacts were recovered from the excavation. These were all discovered in layer **08**, and form a quite closely-dated group. The assemblage was dominated by fragments of pottery (14 sherds), together with a single fragment of clay tobacco pipe. Other common material classes, such as metalwork, animal bone and glass, were absent.

### 4.2 THE POTTERY

4.2.1 The fragments of pottery were all in very good condition, and included several large sherds. The assemblage comprised 11 fragments of prosaic dark-glazed red earthenwares, a single fragment of a fine Blackware vessel, and a single fragment of slip-coated ware. Common late eighteenth- and nineteenth-century pottery types, such as white earthenwares, creamwares and transfer-printed wares, were absent from the assemblage.

4.2.2 The earliest fragment present in the assemblage is likely to be a body sherd of a thin-walled Blackware vessel. Whilst the precise form of this vessel could not be elucidated due to the relatively small size of the sherd, it could potentially have derived from a cup, and is likely to be of a late seventeenth- or early eighteenth-century date.

4.2.3 The single fragment of slip-coated ware derived from a tableware form, possibly a small dish. It comprises a once-fired earthenware, with a buff fabric that is characterised by a brown or dark red slip coat beneath a lead glaze. In its heyday, this ware was produced in Staffordshire, between the 1720s and 1740, although this type of pottery has also been found in domestic groups dating up to the 1770s (Barker 2008). This type of pottery has been recovered in small quantities from other excavations in the area, including Chapel Wharf in Salford, where it formed 5% (by sherd count) of the assemblage (UMAU 2007), and Greengate Towers in Salford, where it constituted 13.43% of the assemblage (OA North 2014b).

4.2.4 The dark-glazed earthenwares all had a reddish-pink, medium to coarse fabric with medium to large gritty inclusions. The identifiable forms included fragments of large bowls or pancheons and tall, cylindrical storage jars with lug handles close to the rim, typical of the forms produced in a number of centres within the south Lancashire coalfields from the eighteenth century onwards. For a while these potteries flourished and multiplied, their market increasing as the population rose during the eighteenth century. In response, there was corresponding rise in the number of relatively small-scale country potteries, many appearing in the later eighteenth and early nineteenth centuries (Brears 1971, 56-8).



*Plate 10: Fragment of a slip-coated ware dish from layer 08*



*Plate 11: Fragments of dark-glazed earthenware from layer 08*



Plate 12: Rim forms of the dark-glazed red earthenware vessels from layer 08

### 4.3 THE CLAY TOBACCO PIPE

- 4.3.1 A single small fragment of a clay tobacco pipe stem was recovered from layer 08. This did not retain any distinguishing features, although the width of the stem and its bore that was slightly off-centre, were not inconsistent with an early eighteenth-century date.

### 4.4 DISCUSSION

- 4.4.1 Although the finds assemblage from the site was neither large or wide ranging, it still presents glimpses of the social status of the inhabitants of the site. Pottery from the site is, for the most part, practical and unadorned, perhaps deriving from the cheaper end of the mass-produced market.
- 4.4.2 The lack of chronological precision in the assemblage is a reflection on the longevity of the dark-glazed earthenwares, which have a long life-span and are notoriously difficult to date, unless accompanied by other pottery types that can be dated more precisely. However, in all probability, and based to some degree on the absence of common wares that typically characterise late eighteenth-century and later groups, the pottery assemblage recovered from the excavation spans the period from c 1720-70.

## 4.5 ENVIRONMENTAL SAMPLING

- 4.5.1 **Introduction:** a single environmental bulk sample was taken from layer **08** for the assessment of charred and waterlogged plant remains. It was hoped that the sample would yield information about the environment and economy of the site. The number of samples recovered from the site was restricted by fragments of asbestos that were identified across most of the excavation area.
- 4.5.2 **Methodology:** the sample was hand-floated and the flots were collected on 250 micron mesh and air dried. The flots were scanned with a Leica MZ6 stereo microscope and the plant material was recorded and provisionally identified. Botanical nomenclature follows Stace (2001). Plant remains were scored on a scale of abundance of 1-4, where 1 is rare (less than 4 items) and 4 is abundant (more than 100 items). The components of the matrix were also noted.
- 4.5.3 **Results:** low numbers of plant remains were recorded in layer **08**. The sample mainly contained coal and clinker, with low quantities of charcoal in some. There was some slight evidence of industrial waste, together with abraded large mammal bones.
- 4.5.4 It has been concluded that there were so few plant remains preserved in the sample that their assessment has not contributed to an understanding of the site. There is no potential, therefore, for any further palaeo-environmental work on this site, due to the low numbers of plant remains recorded.

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## 5. DISCUSSION

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### 5.1 INTRODUCTION

5.1.1 The archaeological investigation has provided a valuable opportunity to investigate the physical remains of the initial development and urbanisation of Shudehill during the eighteenth century.

### 5.2 OVERVIEW OF PHASING

5.2.1 The earliest phase of activity on the site is represented by the pre-industrial agricultural or garden soil **08**. This has parallels with similar material found at a number of previous sites across Manchester and Salford, many of which contained late medieval and early post-medieval artefacts. Although the material recovered from the deposit within the trench dates back to the second quarter of the eighteenth century, it is nevertheless possible that the layer has earlier origins, being developed over a long period of time. Because of the difficult nature of excavation due to contaminants, only a small surface sample of artefacts was able to be recovered.

5.2.2 The second phase of activity appears to be the fragmentary remains of the brick-built structures **04**, **05** and **06**, and associated levelling layer **07**. The fabric of these structural remains is consistent with an early nineteenth-century construction date, and they are likely to represent the remains of the workers' houses that fronted onto Hanover Street. Only these structures had survived, with the rest being removed by later development.

5.2.3 Walls **02** and **03** represent a third phase of construction within the area and are likely, based on the construction materials, to date to the early twentieth century. The map regression suggests that these walls are part of a building complex erected on the plot following the demolition of the workers' housing between 1908 and 1922.

5.2.4 The map evidence shows that the plot once again altered between 1922 and 1951, with commercial properties being built on the site. These buildings were demolished during the late 1950s or early 1960s, and an office block was erected in their place during the 1960s. This was demolished in early 2014.

### 5.3 CONCLUSIONS

- 5.3.1 The construction of the buildings shown on the Ordnance Survey map of 1922 had evidently removed all buried remains of earlier buildings from the south-western part of the study area, and had also reduced all the uncellared buildings in the north-eastern part of the site to slightly below foundation level. However, whilst almost all traces of the buildings that had occupied the site after the late eighteenth century had been destroyed by the construction of the office block during the 1960s, the original ground surface had been preserved beneath those buildings that did not contain a cellar.
- 5.3.2 Excavation conditions and health and safety concerns precluded a large sample being taken from the original ground surface. However, the presence of layer **08** to the rear of the late medieval burgage plots, on which buildings are shown on the mapping of *c* 1650, suggests that the study area may have been used as arable fields in pre-industrial times. Similar deposits excavated across the city have had much larger samples of material recovered from them, and have proved on several occasions to span the period the medieval/early post-medieval through to the mid-eighteenth century. At Chapel Wharf and Greengate in Salford, for instance, small amounts of medieval material were recovered during archaeological excavation, in addition to significant groups of early post-medieval material. Given this, and the present study area's proximity to the medieval core and burgage plots it is possible that the lack of early material is due to the excavation conditions, and that layer **08** resulted from land improvement during the late medieval period.
- 5.3.3 Walls **02** and **03** were the only surviving remains of early twentieth-century buildings that were erected on the site after the demolition of the earlier workers' housing.

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## 6. CURATION AND CONSERVATION

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### 6.1 RECIPIENT MUSEUM

- 6.1.1 The Museum of Science and Industry in Manchester has been nominated as the ultimate repository for the finds:

Museum of Science and Industry in Manchester,  
Liverpool Road,  
Manchester

### 6.2 CONSERVATION

- 6.2.1 There are no conservation requirements.

### 6.3 STORAGE

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

### 6.4 DISSEMINATION

- 6.4.1 The complete results obtained from the archaeological investigation are incorporated in this final excavation report. In addition to the Co-operative Group, copies of the report will be forwarded to the Museum of Science and Industry in Manchester, Manchester City Council Planning Department, and the Greater Manchester Historic Environment Record.
- 6.4.2 The issue of the publication of archaeological reports and public accessibility to data has been stressed in the North West Region Archaeological Research Framework (Brennand 2007). Whilst this is a problem for the entire archaeological community, the visual nature of industrial period remains, and its link to the present population, increases the significance of prompt publication of studies of this nature. A summary of the results obtained from the excavation has been forwarded to *Post-Medieval Archaeology* for inclusion in their annual published compilation of fieldwork carried out on post-medieval sites in Britain and Ireland.

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## APPENDIX 1: WRITTEN SCHEME OF INVESTIGATION

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June 2014

Oxford  
Archaeology  
North

**NOMA PUBLIC REALM,  
REDFERN ANNEX,  
REDFERN STREET,  
MANCHESTER**



### ARCHAEOLOGICAL EXCAVATION

### WRITTEN SCHEME OF INVESTIGATION

#### *Proposals*

*The following Written Scheme of Investigation is offered in response to a request from Mr John Luddington, acting on behalf of the Co-operative Group, for an archaeological excavation in advance of the proposed development of a reduced-level public square on Redfern Street as part of the NOMA Regeneration in Manchester.*

# 1. BACKGROUND

## 1.1 CIRCUMSTANCES OF PROJECT

1.1.1 The Co-operative Group has devised proposals for a scheme of public realm works as part of the NOMA Regeneration in the Shudehill area of central Manchester. The proposals allow for the development of a new public square on Redfern Street (centred at NGR 384175 398930), which will necessitate substantial earth-moving works to reduce the existing ground levels up to a maximum depth of *c* 3m. Beyond the proposed new square, sections of Hanover Street, Dantzic Street, Federation Street and Mayes Street are to be re-surfaced, although the anticipated depth of ground-reduction beneath the line of these streets is minimal.

1.1.2 The archaeological potential of the site has been highlighted by a desk-based assessment produced by OA North in March 2014. This study identified a total of 15 non-designated heritage assets within the boundary of the proposed development, several of which will require further archaeological investigation where these will be directly affected by development. In particular, any buried remains of late eighteenth- and early nineteenth-century buildings within the footprint of the proposed new square will be of sufficient interest to warrant preservation by archaeological record.

1.1.3 Following on from the production of the desk-based assessment, an archaeological watching brief was maintained during the mechanical removal of a concrete floor slab for a mid-twentieth-century building that had occupied the site until recently. During these works, whilst modern disturbance to below-ground levels was apparent in the northern part of the site, the upper surface of the buried foundations of late eighteenth- and early nineteenth-century buildings were seen to survive *in-situ*. Based on the conclusions drawn by the desk-based assessment and watching brief, the Greater Manchester Archaeological Advisory Service (GMAAS), which provides archaeological advice to Manchester City Council, recommended that a programme of further archaeological investigation of the site was merited in advance of development, in accordance with the National Planning Policy Framework, Paragraph 128. It was recommended that the following wording was attached as a condition to planning consent:

*‘No development shall take place until a programme of archaeological works has been undertaken in accordance with a Written Scheme of Investigation (WSI), prepared by the appointed archaeological contractor. The WSI should be submitted to and approved in writing by the local planning authority.’*

1.1.4 This Written Scheme of Investigation (WSI) has been formulated in consultation with GMAAS, and provides for an appropriate scheme of intrusive archaeological investigation. It allows for the full excavation of buried remains of archaeological interest that lie within the footprint of the proposed new square.

## 1.2 OXFORD ARCHAEOLOGY

- 1.2.1 Oxford Archaeology is an educational charity under the guidance of a board of trustees with over 35 years of experience in archaeology, and can provide a professional and cost-effective service. We are the largest employer of archaeologists in the country (we currently have more than 300 members of staff), and can thus deploy considerable resources with extensive experience to deal with any archaeological obligations you or your clients may have. OA is an Institute for Archaeologists Registered Organisation (No 17). We have offices in Lancaster and Oxford, trading as Oxford Archaeology North (OA North) and Oxford Archaeology South (OA South) respectively, enabling us to provide a truly nationwide service.
- 1.2.2 All proposed works will be compliant with existing heritage management documents, specifically EH's *Management of Research Projects in the Historic Environment (MoRPHE)* (EH 2006) and *Management of Archaeological Projects (MAP 2, EH 1991)*, the Institute for Archaeologist's (IfA's) *Standards and Guidance for Archaeological Excavation* (IfA 2007), and, for the purposes of archiving, the guidelines prepared by the Museums and Galleries Commission (1992), the United Kingdom Institute for Conservation (Walker 1990) and the Archaeological Archives Forum (2007).
- 1.2.3 OA North has unrivalled experience in the assessment, evaluation and excavation of former industrial and associated residential sites, particularly in the context of Manchester. Of particular relevance, OA North has recently undertaken a series of evaluations and excavations of former workers' housing in Manchester, including those at New Islington Mews, Bengal Street, George Leigh Street and Bradley Street in Ancoats, Piccadilly Place in Piccadilly, and a large area in Shudehill in advance of the new Headquarters Building for the Co-operative Group. Most recently, OA North carried out the excavation of nineteenth-century workers' housing on Booth Street East for the University of Manchester, and on Higher Cambridge Street for Manchester Metropolitan University, both situated in the historic township of Chorlton-upon-Medlock.

## 2. AIMS AND OBJECTIVES

### 2.1 ACADEMIC AIMS

2.1.1 The main research aim of the investigation, given the commercial nature of the proposed scheme, will be to expose and record the buried remains of archaeological interest within the specified area, and generate a complete record of the remains to mitigate their ultimate loss as part of the proposed development.

### 2.2 OBJECTIVES

2.2.1 The following programme has been designed to preserve by record any archaeological deposits or features that may be present that will be impacted on by the proposed development. The information will be finally disseminated through the deposition of the archive at The Museum of Science and Industry in Manchester, and a final report at the Greater Manchester Historic Environment Record. In addition, a permanent information board installed in the new square will explain the history and heritage of the site, and present a summary of the findings obtained from the archaeological investigation.

2.2.2 The work will be carried out in line with current IfA guidelines, and in line with the IfA Code of Conduct. The principal objectives of the project may be achieved via the following stages:

- **Archaeological Excavation:** the excavation of the targeted area, which will investigate the buried remains of archaeological interest that were exposed during the removal of the concrete slab for the modern building. The areas of archaeological interest include a strip along the southern edge of the proposed new square, and a block of land in the central part of the development area. The installation of twentieth-century services, coupled with the construction trench for New Century House, has resulted in the loss of buried archaeological remains in the northern part of the site, and along a strip in the southern part of the area (Figure 1);
- **Historical research:** a limited programme of historical research will be carried out to supplement the information gathered during a desk-based assessment for the site;
- **Post-excavation and Report Production:** the site records, finds and any samples from the excavation programme outlined below will form a checked and ordered site archive as outlined in the English Heritage guideline document *Management of Archaeological Projects* (2nd edition, 1991). Following compilation of the project archive a report will be produced;

- **Archive Deposition:** the results of the excavation will form the basis of a full archive to professional standards, in accordance with current English Heritage guidelines 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;
- **Dissemination:** in addition to the deposition of the project archive and a copy of the final report with the Greater Manchester Historic Environment Record, the results obtained from the archaeological excavation will be disseminated to the wider public in a manner proportionate to their significance, in accordance with Paragraph 141 of the *National Planning Policy Framework*.

2.2.3 It is anticipated that the archaeological investigation will address several of the initiatives for archaeological research of the industrial and modern periods stated in the current *Archaeological Research Framework for North West England* (Newman and McNeil 2007; McNeil and Newman 2007). In particular:

- *Initiative 7.6:* ‘A study of the development of workers’ housing in Greater Manchester should be undertaken to examine the development of different housing types...’ (McNeil and Newman 2007, 139);
- *Initiative 7.7:* ‘Study the material culture of industrial workers’ households...’ (*ibid*);
- *Initiative 7.41:* ‘The retention of later period artefacts and their routine analysis as part of all archaeological excavation projects’ (*op cit*, 156).

2.2.4 In addition, the investigation may address the following research objectives:

- establish the plan form, chronology, and dating for a group of urban workers’ cottages;
- examine the material culture associated with urban workers’ cottages.

2.2.5 In order to address the aims and objective outlined above, it is proposed that a single will be targeted for excavation (Figure 1).

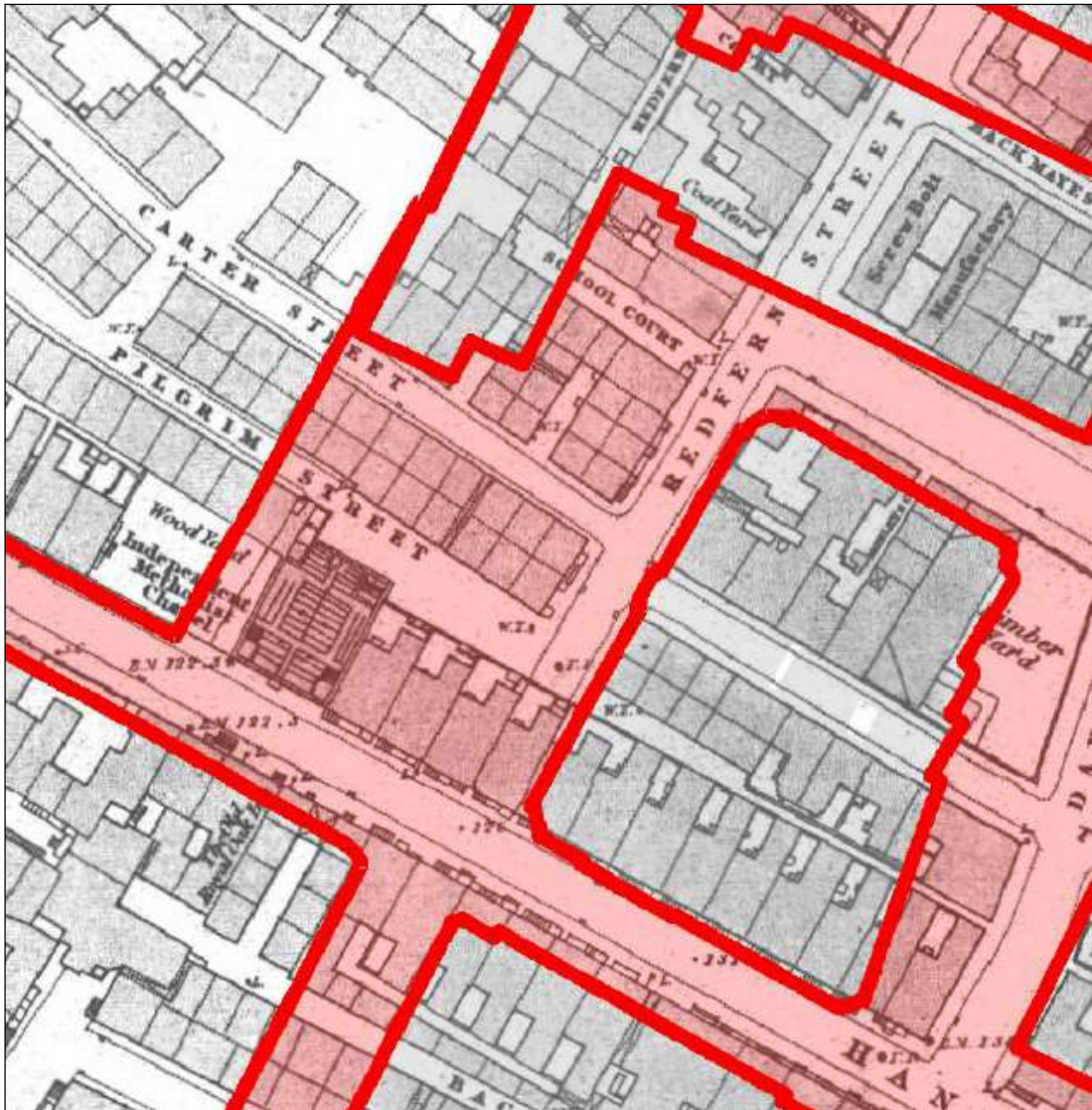


Figure 1: Location of the proposed development area (marked in red), superimposed on the Ordnance Survey map of 1851. The boundary of the area of archaeological interest is marked in green, with areas shaded in light blue showing areas that have been subject to development previously with resultant loss of buried archaeological remains

### 3. METHOD STATEMENT

#### 3.1 SITE SET-UP

- 3.1.1 The following work programme is submitted in line with the aims and objectives summarised above. As an initial stage in the programme of works, the area targeted for excavation will be marked out, and CAT-Scan will be carried out to locate any services present within the excavation area.
- 3.1.2 The excavation area is currently enclosed by Herras fencing, providing a secure working area. Basic welfare facilities are available in the adjacent building, which is owned and occupied by the Co-operative Group.

#### 3.2 FIELDWORK

- 3.2.1 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. It is envisaged that a c 15-tonne tracked excavator will be employed for this purpose. The work will be supervised closely by a suitably experienced archaeologist. Spoil from the excavation will be stored in a stockpile adjacent to the excavation area, and will ultimately be removed from site.
- 3.2.2 Machine excavation will then be used to define carefully the extent of any surviving structures and other remains. Thereafter, structural remains will be cleaned manually to define their extent, nature, form and function.
- 3.2.3 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 excavation will be recorded on *pro-forma* context sheets, and will be accompanied with sufficient pictorial record (plans, sections and high-resolution digital photographs) to identify and illustrate individual features. Primary records will be available for inspection at all times.
- 3.2.4 **Context Recording:** all contexts will be recorded using *pro-forma* sheets, and details will be incorporated into a Harris matrix. Similar object record and photographic record *pro-formas* will be used. All written recording of survey data, contexts, photographs, artefacts and ecofacts will be cross-referenced from *pro-forma* record sheets using sequential numbering.
- 3.2.5 **Photography:** a full and detailed photographic record of individual contexts will be maintained and similarly general views from standard view points of the overall site at all stages of the excavation will be generated. Photography will be undertaken using high-resolution digital cameras. All frames will include a visible, graduated metric scale. Photographs records will be maintained on special photographic *pro-forma* sheets.

- 3.2.6 **Planning:** the precise location of the excavated area, 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.
- 3.2.7 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*.
- 3.2.8 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.
- 3.2.9 **Finds policy:** finds recovery and sampling programmes will be in accordance with best practice (following current Institute for Archaeologists' guidelines) and subject to expert advice in order to minimise deterioration. OA North employs in-house artefact and palaeoecology specialists, with considerable expertise in the investigation, excavation, and finds management of sites of all periods and types, who are readily available for consultation. Finds storage during fieldwork and any site archive preparation will follow professional guidelines (UKIC).

### 3.3 HEALTH AND SAFETY

- 3.3.1 Full regard will be given to all constraints during the course of the project. OA North provides a Health and Safety Statement for all projects and maintains a Safety Policy. All site procedures are in accordance with the guidance set out in the Health and Safety Manual compiled by the Standing Conference of Archaeological Unit Managers.
- 3.3.2 OA North undertakes to safeguard, so far as is reasonably practicable, the health, safety and welfare of its staff and of others who may be affected by our work. OA North will also take all reasonable steps to ensure the health and safety of all persons not in their employment, such as volunteers, students, visitors, and members of the public (this includes trespassers).
- 3.3.3 OA North is fully familiar with and will comply with all current and relevant legislation, including, but not limited to:
- The Health and Safety at Work Act (1974);
  - Management of Health and Safety at Work Regulations (1999);
  - Manual Handling Operations Regulations 1992 (as amended in 2002);
  - The Construction (Design and Management) Regulations (2007);
  - The Control of Asbestos Regulations (2006);
  - The Workplace (Health, Safety and Welfare) Regulations (1992);



- Construction (Health, Safety and Welfare) Regulations (1996);
- The Health and Safety (Miscellaneous Amendments) Regulations (2002);
- The Work at Height Regulations (2005);
- The Control of Substances Hazardous to Health Regulations (2002);
- The Health and Safety (First-Aid) Regulations (1981);
- The Regulatory Reform (Fire Safety) Order (2005);
- The Provision and Use of Work Equipment Regulations (1998);
- Lifting Operations and Lifting Equipment Regulations (1998).

3.3.4 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 OTHER MATTERS**

3.4.1 *Project Monitoring:* the aims of monitoring are to ensure that the archaeological works are undertaken within the limits set by the Written Scheme of Investigation, and to the satisfaction of the curatorial archaeologist at the Greater Manchester Archaeological Advisory Service (GMAAS). The curatorial archaeologist will be given at least five days' notice of when work is due to commence, and it is anticipated that there will be at least one formal monitoring meeting during the course of the excavation.

### **3.5 POST-EXCAVATION**

3.5.1 Post-excavation work will comprise the following:

- checking of drawn and written records during and on completion of fieldwork;
- production of a stratigraphic matrix of the archaeological deposits and features present on the site, if appropriate;
- cataloguing of photographic material, which will be mounted appropriately;
- cleaning, bagging and labelling of finds according to the individual deposits from which they were recovered. Any finds requiring specialist treatment and conservation will be sent to an appropriate Conservation Laboratory. Finds will be identified and dated by appropriate specialists;
- assessment of any palaeo-environmental material and/or technological residues recovered will be undertaken, providing recommendations for further analysis.

### 3.6 ARCHIVE/REPORT

3.6.1 **Archive:** the results of all archaeological work carried out will form the basis for a full archive to professional standards, in accordance with current English Heritage guidelines (*Management of Archaeological Projects*, 2nd edition, 1991), and in accordance with the *Guidelines for the Preparation of Excavation Archives for Long-Term Storage* (Walker 1990). The project archive represents the collation and indexing of all the data and material gathered during the course of the project. This archive will be provided in the English Heritage Centre for Archaeology format and a synthesis will be submitted to the CSMR (the index to the archive and a copy of the report).

3.6.2 The Arts and Humanities Data Service (AHDS) online database project *Online Access to index of Archaeological Investigations* (OASIS) will be completed as part of the archiving phase of the project.

3.6.3 **Report:** a draft copy of a written synthetic report will be submitted for comment to the archaeological curator (GMAAS) for comment within eight weeks of completion of the fieldwork. The report will include:

- a title page detailing site address, NGR, author/originating body, client's name and address;
- full content's listing;
- a non-technical summary of the findings of the fieldwork;
- a description of the archaeological background;
- a detailed account of the historical development of the site, accompanied with map regression analysis;
- a description of the topography and geology of the study area;
- a description of the methodologies used during the fieldwork;
- a description of the findings of the fieldwork;
- detailed plans of the excavated trenches, showing the archaeological features exposed;
- an overall phased plan with sections of the excavated archaeological features;
- interpretation of the archaeological features exposed and their context within the surrounding landscape;
- specialist analysis reports on the artefactual/ecofactual/industrial remains from the site;
- appropriate photographs of specific archaeological features;
- a consideration of the importance of the archaeological remains present on the site in local, regional and national terms.

### 3.7 DISSEMINATION

- 3.7.1 The history and archaeology of the site will form part of future interpretative and engagement tools, notably digital, that are being designed as part of the wider NOMA Regeneration. This will enable the rich heritage of the site, and its setting amidst the adjacent listed buildings, to be disseminated to a wide range of people via a range of innovative techniques. The precise format will be devised in consultation with GMAAS once the results of the excavation are known, although may include audio walking tours and engagement events with local interest groups.

## 4. WORK TIMETABLE

- 4.1 A three-week period should be allowed to excavate and record the buried remains of archaeological interest within the targeted area. On the first day of the fieldwork, OA North will accurately locate through measured survey the exact position of the excavation area, which will then be scanned for live services with a CAT prior to any mechanical excavation.
- 4.2 A report will be submitted within eight weeks of the completion of the fieldwork.

## 5. STAFFING PROPOSALS

- 5.1 The project will be under the overall charge of **Ian Miller BA FSA** (OA North Senior Project Manager) to whom all correspondence should be addressed. Ian has over 20 years experience of commercial archaeology, and has a particular interest in the archaeology of the Industrial Period, and particular that of Greater Manchester and Lancashire. His role will be to ensure that the Written Scheme of Investigation is implemented within the framework of the Project Objectives. He will be responsible for all aspects of staff and resource logistics, ensuring the smooth running of the project programme. He will liaise with the Client and GMAAS with regard to progress, and will maintain relationships with other contractors.
- 5.2 The fieldwork is likely to be undertaken by **Graham Mottershead BA** (OA North Project Supervisor). Graham is an highly experienced field archaeologist, with over 20 years continuous experience of field archaeology. It is not possible to provide details of specific technicians that will be involved with the fieldwork at this stage, but all shall be suitably qualified archaeologists with proven relevant experience. It is anticipated that up to two technician will be required for the initial stage of the fieldwork.
- 5.3 Assessment of any finds recovered 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 analysis of post-medieval artefacts.

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## ILLUSTRATIONS

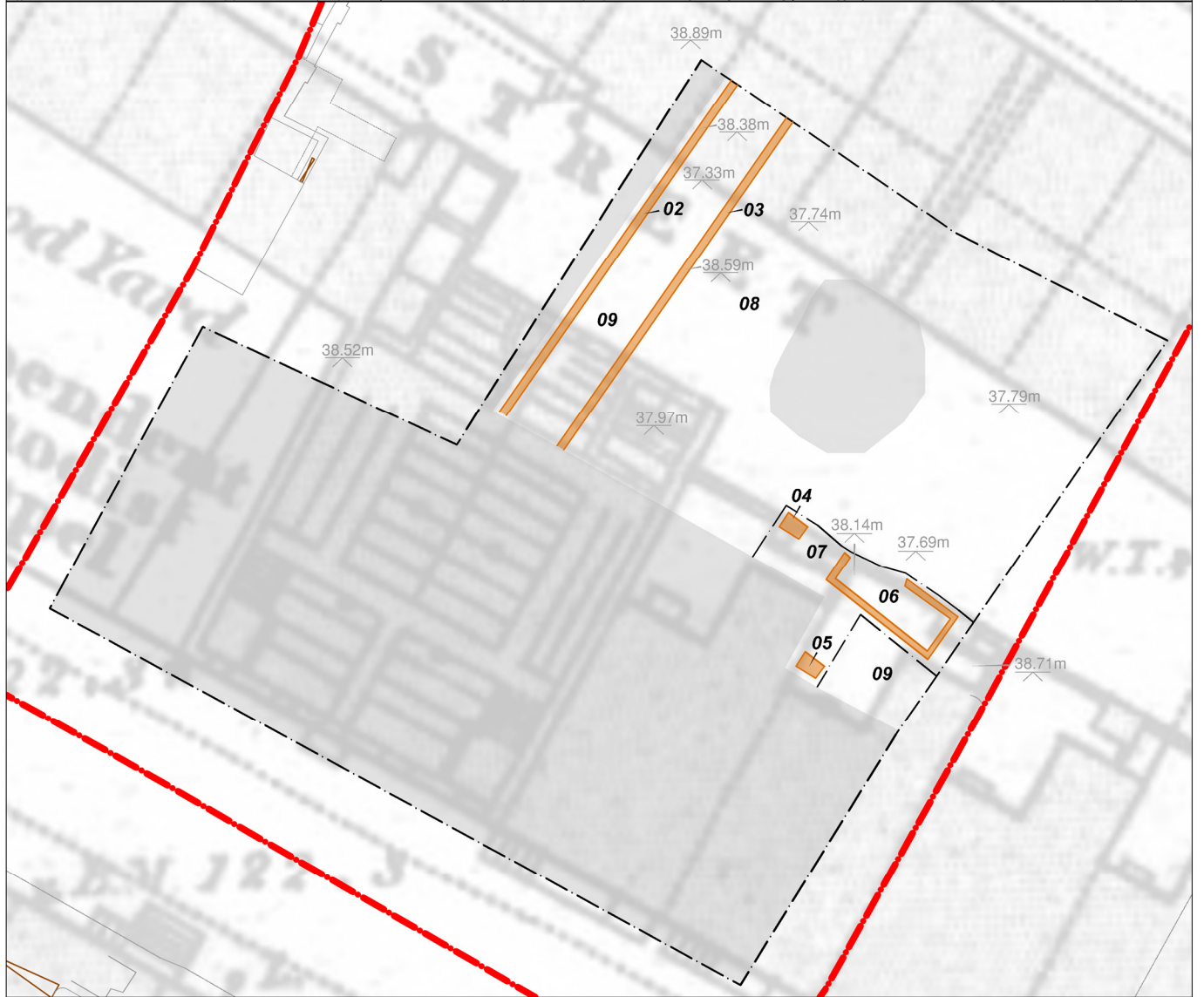
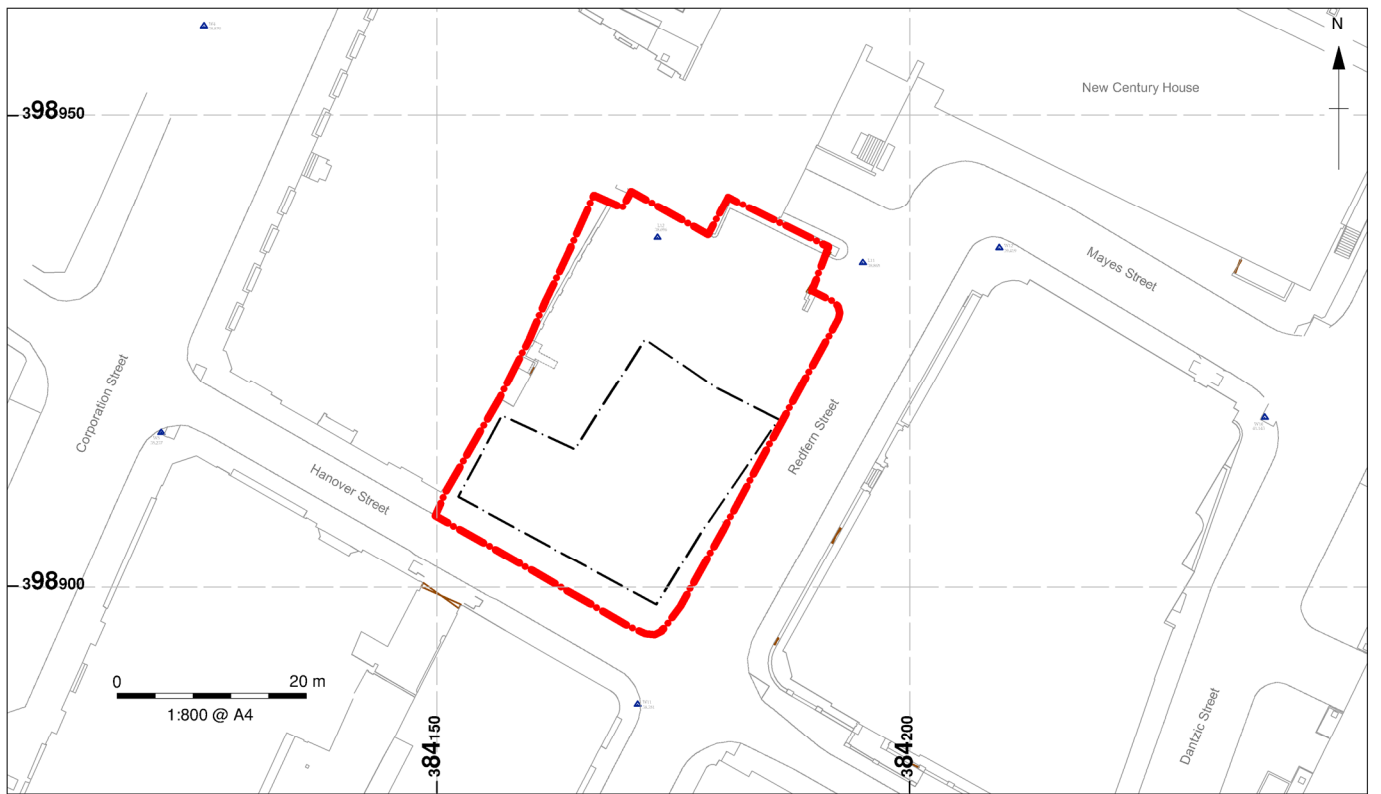
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Figure 1      Site location

Figure 2      Excavation area superimposed on the Ordnance Survey 5': 1 mile map  
of 1850



Figure 1: Site location



- Limit of excavation
- Site Boundary
- Brickwall
- Disturbed Ground

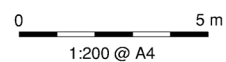


Figure 2: Excavated area superimposed on the Ordnance Survey 5':1 mile map of 1850