

Whitworth Art Gallery, Oxford Road, Manchester

Greater Manchester

Archaeological Excavation Final Report



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SUMMARY

In March 2012, Oxford Archaeology North (OA North) was commissioned by the University of Manchester to carry out a programme of archaeological investigation in advance of a proposed development at the Whitworth Art Gallery, a Grade II listed building on Oxford Road in the Chorlton-on-Medlock area of Manchester (centred on NGR SJ 8488 9597). In the first instance, a desk-based assessment of the site was carried out. This was coupled with an archaeological building survey of the Art Gallery, and a geophysical survey of land immediately to the rear of the building. This preliminary work identified the sites of several features of archaeological interest, which were tested subsequently by the excavation of several evaluation trenches in Whitworth Park to the rear of the Art Gallery.

The results obtained from the evaluation trenches demonstrated that some buried remains of archaeological interest survived on the site. In particular, well-preserved structural remains of glasshouses and associated outbuildings to the rear of the Art Gallery were exposed at a shallow depth in most of the trenches. Following consultation with the Greater Manchester Archaeological Advisory Service, which provides archaeological advice to Manchester City Council, it was recommended that two areas of the site were targeted for further excavation in advance of the proposed development. The principal aim of the excavation was to compile a detailed record of any buried remains to mitigate their ultimate damage of destruction during the works associated with the proposed development. In addition, given the nature of the archaeological remains, it was recommended that the University capitalised on the opportunity to facilitate a community-led excavation, and commissioned Oxford Archaeology North (OA North) to provide the required supervision.

The principal area of excavation exposed a largely intact cobbled courtyard, together with the foundations for several ancillary structures. The remains of a building on the north side of the yard were possibly a stable, and another on the east side is likely to have housed an office, storage and welfare facilities. Glasshouses were located on the east side of the yard, with a probable boiler room at their northern end. A substantial wall, with a small structure of unknown function, ran along the southern edge of the courtyard. A double portal gateway was set in the southern wall and was directly opposite a similar sized gateway in the extant north wall that afforded access to Denmark Road.

Excavation of the second area provided archaeological evidence for a series of land drains, flower beds, a former pathway, and an in-filled water course, which was probably the original course of the Rusholme Brook. Ordnance Survey mapping, aerial photographs and archaeological evidence show that this area had been an extension of the courtyard complex, perhaps serving as a preparation area for plants for the park flower beds and borders.

The project actively engaged 49 volunteers in the fieldwork, and numerous visitors to the site, including a group of students from a local school. In addition, a considerable number of people passing the site showed some interest in the excavation, and the heritage of the area.

ACKNOWLEDGEMENTS

Oxford Archaeology North (OA North) would like to thank Jon Satow, of Cragg Management Services, for facilitating the excavation on behalf of the University of Manchester. Thanks are also due to Norman Redhead, of Greater Manchester Archaeological Advisory Service (GMAAS), for his support and advice. OA North would also like to thank all the volunteers and members of the local community who gave their time, information and memories of the area so freely in order to make the excavation in Whitworth Park possible. In particular, Roger Ashby, Kerry Beeston, Danielle Cree, Dorothy Ennis-Hand, Donna McDermott, Andrew McGuire and Margaret Wells are thanked for their support and unstinting efforts.

Thanks are also expressed to the staff of the Whitworth Art Gallery, with special thanks due to Lucy Davies, Steven Roper and Francis Waller for their help in organising volunteers. OA North is also grateful to members of the Friends of Whitworth Gallery, the Friends of Whitworth Park and the South Manchester Archaeological Research Team (SMART), who all participated in the excavation.

The archaeological excavation was directed by David Maron, assisted by Phil Cooke, Graham Mottershead and Lewis Stitt. The report was compiled by David Maron and Ian Miller, and the finds were examined by Christine Howard-Davis. The survey was carried out by Graham Mottershead and Lewis Stitt. The survey data was manipulated in a CAD system by Graham Mottershead, and the final illustrations were produced by Mark Tidmarsh. The report was edited by Ian Miller, who was also responsible for project management.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF PROJECT

- In March 2012, Oxford Archaeology North (OA North) was commissioned by the University of Manchester to carry out a programme of archaeological investigation in advance of a proposed development at the Whitworth Art Gallery, a Grade II listed building in the Chorlton-on-Medlock area of Manchester. In the first instance, a desk-based assessment of the site was carried out. This was coupled with an archaeological building survey of the Art Gallery, and a geophysical survey of land immediately to the rear of the building. Based on the results obtained from the desk-based assessment and the geophysical survey, a series of evaluation trenches were excavated to the rear of the Art Gallery. The results obtained from the evaluation trenches demonstrated that some buried remains of archaeological interest survived on the site. In particular, well-preserved structural remains that were thought to represent elements of the glasshouses and associated buildings were exposed at a shallow depth in most of the trenches. In addition, possible remains of a garden path associated with the nineteenth-century Grove House were uncovered, together with negative features that might represent an altogether earlier phase of activity on the site.
- 1.1.2 Following consultation with the Greater Manchester Archaeological Advisory Service (GMAAS), which provides archaeological advice to Manchester City Council, it was recommended that an open-area archaeological excavation of the site was carried out in advance of development. The scope and extent of an appropriate scheme of works was outlined in a Written Scheme of Investigation (*Appendix 1*).
- 1.1.3 The Written Scheme of Investigation allowed for the open-area excavation of two targeted areas within the study area (Fig 1). Area 1 was focused on the footprint of the outbuildings depicted on the Ordnance Survey map of 1908, together with elements of a glasshouse, and garden paths shown on the Ordnance Survey map of 1850. This area formed the focus of the community-led excavation. Area 2 was focused on two paths shown on the Ordnance Survey map of 1850, and further investigated a linear feature discovered during evaluation trenching.
- 1.1.4 Excavation of Area 1 revealed the well-preserved remains of the glasshouses and outbuildings grouped around a cobbled courtyard. Area 2 revealed land drains, flower beds and a pathway that formed an integral part of the courtyard complex, being a preparation area for bedding plants for the park. The negative feature identified in the evaluation Trench 4 proved to be an in-filled water course that may have been the original course of the Rusholme Brook. The archaeological work involved participants from the local community in a range of archaeological tasks. These included excavation, site recording and the processing of finds.

2. METHODOLOGY

2.1 Introduction

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

2.2 EXCAVATION

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

2.3 FINDS

- 2.3.1 Artefactual procedures: all finds recovered during the excavations were lifted, bagged and boxed in accordance with the United Kingdom Institute for Conservation (UKIC) First Aid for Finds (1998). Recovery and sampling programmes were in accordance with best practice (current IfA guidelines) and subject to expert advice.
- 2.3.2 *Environmental procedures:* no environmental samples were obtained during the course of this excavation.

2.4 ARCHIVE

2.4.1 A full professional archive has been compiled in accordance with the Written Scheme of Investigation (*Appendix 1*), and in accordance with current IfA and English Heritage guidelines (English Heritage 2006). The digital archive will be deposited with the Greater Manchester Historic Environment Record on completion of the project, with a synthesis (in the form of an index to the archive and the report) deposited with the Greater Manchester SMR. The project archive will be deposited ultimately with the Manchester Museum. It is anticipated that the results obtained from the excavation will form the basis for a temporary display in the Whitworth Art Gallery.

3. BACKGROUND

3.1 Introduction

3.1.1 An understanding of the archaeological and historical background of a site provides the local context within which the buried remains can be assessed archaeologically. The following section provides an outline of the natural setting of the study area, and summarises the historical development of Chorlton-on-Medlock, although the early periods of the area's history are largely omitted as they are of little direct consequence to the present study. The historical background has been drawn largely from the desk-based assessment of the site compiled during the initial stage of the project (AP Heritage Ltd 2012).

3.2 LOCATION, GEOLOGY AND TOPOGRAPHY

- 3.2.1 *Location:* the study area (centred on NGR SJ 8488 9597) is situated alongside Oxford Street, in the Township of Chorlton-on-Medlock, on the southern side of the city centre (Fig 1). The site is bounded by Oxford Street to the east and Denmark Road to the north, and lies within the north-east corner of Whitworth Park (Plate 1).
- 3.2.2 The Whitworth Art Gallery and Park lie in the historic township of Chorlton-on-Medlock. Manchester has the largest urban higher-education precinct in Europe, and Chorlton-on-Medlock is the see of the majority of the academic institutions: the University of Manchester; the Institute of Science and Technology (UMIST); Manchester Metropolitan University (MMU); and the Royal Northern College of Music (RNCM). The University of Manchester lies to the immediate north of Whitworth Park, to the east of Oxford Road (Hartwell 2001, 105).
- 3.2.3 *Geology:* the solid geology of the area comprises Carboniferous sedimentary material and a series of Permo-Triassic rocks, consisting mainly of New Red Sandstone (Hall *et al* 1995, 8). The overlying drift incorporates Pleistocene boulder clays of glacial origin, and sands, gravels, and clays of fluviatile/lacustrine origin (Ordnance Survey Geological Survey 1970).
- 3.2.4 *Topography:* the Manchester Conurbation as a region lies within an undulating lowland basin, which is bounded by the Pennine uplands to the east and to the north. The region comprises the Mersey river valley, which is dominated by its heavily-meandering river within a broad flood plain (Countryside Commission 1998, 125). Other river valleys, including those of the Irwell, Irk, Medlock, Tame, and Goyt, form important tributaries. The local stone is purplish-red sandstone, but by the nineteenth century the predominant building materials were well-made red brick and buff sandstone (Hartwell 2002, 3).



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

3.3 HISTORICAL BACKGROUND: DEVELOPMENT OF CHORLTON-ON-MEDLOCK

- 3.3.1 The following background is drawn largely from the research carried out during the compilation of the desk-based assessment of the study area (AP Heritage Ltd 2012). This has been enhanced with information gleaned during the course of the excavation via further research and contributions made by the local community in the form of original photographs and other primary documentation.
- 3.3.2 The development of Chorlton-on-Medlock as a suburb of Manchester commenced in the late eighteenth century, coinciding with the opening of Oxford Road in 1790. Prior to this time the area was rural in nature, as depicted on Yates' map of 1786. Chorlton-on-Medlock is referred to as Chorlton-row, and interestingly, Yates shows a large building in the location of Rusholme House, in what became the south-east corner of Whitworth Park.
- 3.3.3 The earliest development in the proposed development area was Grove House, which is referred to a trade directory of 1841. At that date, it was occupied by James Wood, a manufacturer (Pigot and Slater 1841). Wood died in April 1849, and Grove House appears to have been occupied subsequently by Henry Micholls, a merchant (Whelan & Co 1853).
- 3.3.4 The building is shown on the Ordnance Survey map of 1850 as being square in plan, with a single wing protruding to the west, and a tree-lined carriageway leading from Oxford Road. The map also depicts formal gardens and several outbuildings immediately to the north and west (Plate 2); the most north-westerly of these structures lies within the development area (Fig 2).

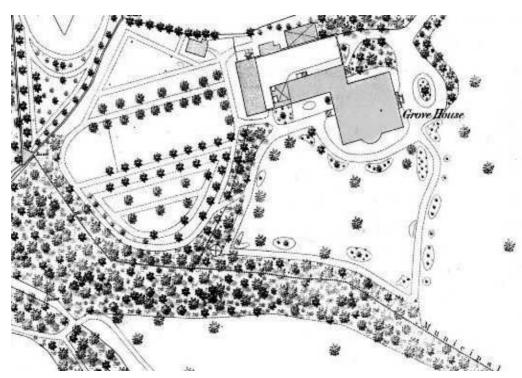


Plate 2: Extract from the Ordnance Survey map of 1850

- 3.3.5 The transformation of Grove House to the Whitworth Gallery can be traced to Joseph Whitworth, the eminent engineer and entrepreneur, who died in January 1887. Whitworth left the very substantial sum of £1,227,000 for his trustees to use educational purposes, a sum that which included over £130,000 towards the Whitworth Institute for Art and Industry (*Daily News*, 1888). His bequest was administered by legatees, including his wife Mary and close friend Robert Darbishire. Amongst other projects, they bought Grove House and its grounds. In 1888, Manchester City Council was asked to sanction and materially support the Whitworth Scheme. The *Daily News* (Friday, June 1st, 1888) reported that the whole scheme represented a capital outlay of £300,000. Towards this the Whitworth legatees offered in land, buildings and money £136,000 to be supplemented by other donations.
- 3.3.6 Initial plans for the Whitworth Institute included not only an art museum and a park, but also a museum of the industrial arts, and an art school and technical school. However, for practical and financial reasons only the art gallery and park went forward, and did so under the guidance of a board of governors (AP Heritage Ltd 2012). The Whitworth Park and Institute were opened in 1890, with Grove House being used as a temporary museum at that time.
- 3.3.7 Grove House is shown on the next edition of Ordnance Survey mapping, published in 1893, to have been extended to the south, between the main section and the west wing, and a number of large glasshouses (or possibly hothouses) had been erected to the west (Plate 3). One of these glasshouses projected from the rear of the house, and is likely to have been a conservatory. This was almost certainly the work of Alderman John Hopkinson, who is known to have resided at Grove House from at least 1879 (Slater 1879). One of these glasshouses subsumed the structure that lies within the study area depicted on the earlier mapping.

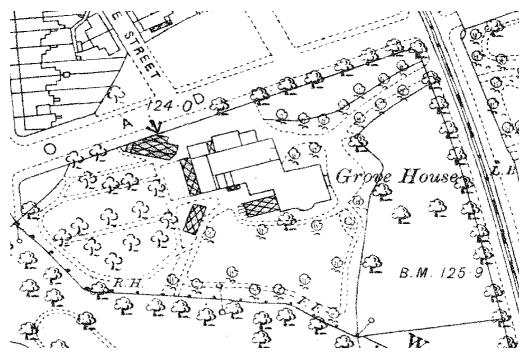


Plate 3: Extract from the Ordnance Survey map of 1893

3.3.8 Both the gallery and the park flourished in the early 1900s. Several contemporary photographs show the lakeside was popular with children, and the park drew large crowds in summer. The formal layout of Whitworth Park is shown in detail on the 1908 Ordnance Survey map (Plate 4). Grove House had become the Art Gallery Museum by that date, although not in its final form. The footprint of the former Grove House has been extended to the north and south with the addition of north, central and southern galleries. The outbuildings and glasshouse had been replaced with an alternative arrangement of similar buildings, aligned inside the park wall, and alongside Denmark Road. Most of these lie within the proposed development area.

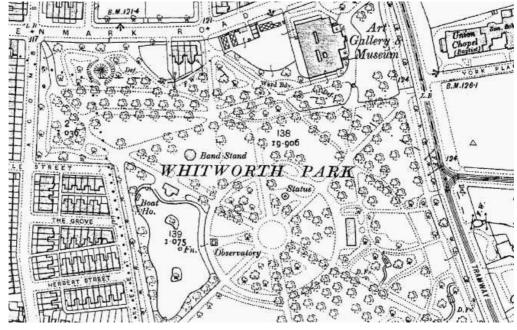


Plate 4: Extract from the Ordnance Survey map of 1908

3.3.9 The layout of the park, and the structures within the study area, are visible in aerial photographs dating to 1922 (Plates 5 and 6). These shows several single-storey buildings and two large glasshouses arranged around a central courtyard.

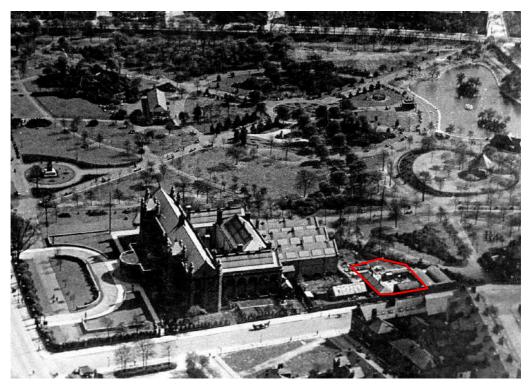


Plate 5: Aerial photograph of 1922 looking south, with study area marked in red

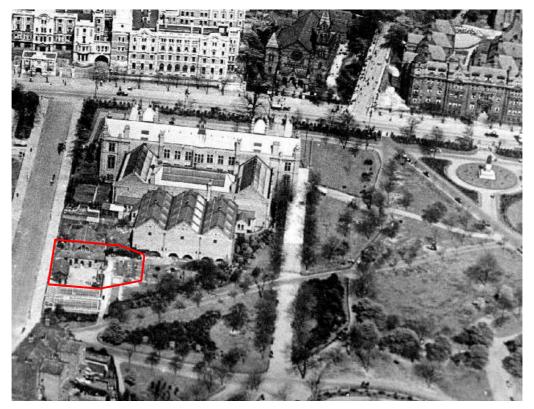


Plate 6: Aerial photograph of 1922 looking east, with study area marked in red

4. FIELDWORK RESULTS

4.1 Introduction

4.1.1 The archaeological fieldwork comprised the excavation of two targeted areas, Areas 1 and 2 (Figs 2 and 3). Area 1, located immediately to the south of the boundary wall along Denmark Road, was the principal focus of the excavation. It was targeted on the projected position of a former courtyard and associated features surrounding this area. Area 2 was a smaller trench, excavated mainly by OA North staff, and was targeted on a possible ditch identified during the evaluation, and the projected position of former garden paths depicted on historical mapping. The excavation of the targeted areas revealed a cobbled courtyard surrounded by associated structures (Area 1), and an area of plant beds and associated pathways (Area 2).

4.2 AREA 1

- 4.2.1 Area 1 was located across the northern part of the proposed development area, and measured 25 x 15m (Fig 3). It was extended in two places, to the west and the north to maximise the archaeological dataset recovered from the site. The western extension targeted the site of a glasshouse, and the northern extension targeted a building, both being shown on the Ordnance Survey map of 1908.
- 4.2.2 Following the removal of the turf and initial cleaning of the site, it was revealed that a surface of granite setts covered the footprint of the courtyard (1007). The setts ranged in size from 0.24 x 0.20m to 0.16 x 0.16m, with an average depth of 0.16m. The setts lay on medium orangey-brown silty-sand (1030) that provided a compact bedding deposit up to 0.35m deep. The rectangular-shaped courtyard was crossed by two diagonals of setts that were aligned north-west to south-east (1070) and north-east to south-west (1071). This produced four triangular areas in which the setts were arranged in rows orientated east to west in the northern (1073) and southern (1074) triangular areas, and north to south in the eastern (1075) and western (1076) triangles.
- 4.2.3 The courtyard sloped in from all sides towards the centre, where a drain was located. This drain comprised a well-finished, square stone (1072) with a central hole in which a cast-iron cover (1067) was set (Plate 7). In the northeast corner of the courtyard was a Yorkshire stone slab (1039) 0.64m long by 0.47m wide and 80mm thick that covered a drain (1092). Stone slab 1039 was set flush with a brick wall (1005) and also acted as a doorstep. Immediately adjacent to stone slab 1039 was an area of subsidence 2.5m long by 1.3m wide in cobbled surface 1075. Excavation showed this to have been repaired and levelled on three occasions. A light yellowish-brown layer of concrete (1013) 90mm thick formed the initial repair and, above this, was a 20mm thick layer of fine-grained tarmac (1012). The final repair was a layer of loose, coarse-grained tarmac (1040) that was 20mm thick.



Plate 7: The iron drain cap in the centre of courtyard 1007

- 4.2.4 Several east/west-aligned features were set in the cobbles along the northern edge of the courtyard. The easternmost feature (1021) was a rectangular brick structure measuring 0.36 x 0.33m (Plate 8), and was directly in line with a slot for a beam in the northern wall of the courtyard. To the west of 1021 was a square-shaped brick feature (1024), measuring 0.48m square, which was directly in line with a rectangular-shaped painted area on the northern wall. A diamond-shaped brick feature (1023), measuring 0.6 x 0.46m, lay to the west of feature 1024. At the western end of the alignment was a rectangular-shaped brick feature (1022), measuring 0.45 x 0.33m, which was in line with a groove cut into the coping stones of the northern wall. It seems most likely that features 1021, 1022, 1023 and 1024 were the bases for vertical supports or columns.
- 4.2.5 A series of concrete settings, placed where granite sets had been removed were also part of the east/west alignment of features. Concrete setting 1027, measuring 0.25 x 0.2m with two slots measuring 0.1m square, was located between pillar bases 1021 and 1024. Another concrete setting (1026), measuring 0.33 x 0.28m with a single slot 0.1m square, was located between pillar bases 1024 and 1023. A third concrete feature (1068), measuring 0.36 x 0.26m with a slot 0.15m square that contained part of a rotted wooden post (1058), was set against the eastern side of pillar base 1022. Concrete settings 1026, 1027 and 1068 were clearly intended to provide slots for wooden posts. Completing the alignment was a glazed ceramic drain, 0.33m square with a central drainage hole of 0.28m diameter, which was set against the southern side of pillar base 1024.



Plate 8: Feature 1021

- 4.2.6 Extending the excavation to the north revealed a series of structural features. Courtyard cobbles 1073 continued for an additional area 0.7m long by 1.0m wide (Fig 3). An area of glazed ceramic bricks (1060) 0.4m square was set against the northern edge of the cobbles. Adjacent to cobbles 1007 and bricks 1060 was a deposit of unused coke fuel (1059). Set against the northern edge of bricks 1060 was a rectangular brick feature (1057), a pillar base, which measured 0.5 x 0.4m and was directly in line with pillar base 1021 (Fig 3). A cobbled area (1036) continued to the north of pillar base 1057, and was set flush with the northern wall of the courtyard. The foundations of a brick wall (1037) were located on the western side of the trench extension (Plate 9), and these were parallel with cobbles 1036. In the north-west corner of the trench extension an unbounded, semi-circular, structure of bricks (1062) was unearthed, together with part of a pipe or flue lining that was 0.18m in diameter (1063).
- 4.2.7 The foundations of a brick wall (1034), which was 0.24m wide was aligned with the southern edge of the courtyard. The wall comprised machine-pressed bricks bonded with a cement-based mortar. A sondage excavated in the southwest corner of the courtyard exposed the foundations of brick wall 1034, which were splayed and four courses in depth (Fig 4). Wall 1034 had a gateway at its eastern end. This gateway was formerly aligned with the main gateway to Denmark Road at the northern side of the courtyard. A brick plinth (1053) at the east side of the gateway was set against a brick structure (1005) and another plinth (1056) was in line with the western side of the main gateway. Excavation revealed that plinth 1056 had been demolished at some point, along with a short section of wall 1034.



Plate 9: Foundations of wall 1037

- 4.2.8 The remains of demolished plinth 1056 were covered with a thin layer of concrete (1054), which was chamfered. Between the original brick plinths 1053 and 1056 were two large kerbstones (1042). Another kerbstone (1055) had seemingly been aligned with them following the demolition of plinth 1056, seemingly abutted replacement plinth 1052. This plinth, in turn, abutted the eastern end of some brick foundations (1008). These were rectangular, being 2.25m long by 1.05m wide. Excavation showed the foundations of this structure were splayed and two courses in depth. The foundations of brick structure 1008 were set against, but not bonded, to brick wall 1034. The foundations of structure 1008 were out of line on the west side and excavation showed this to be a brick infill (1077) of a purpose-made gap. Behind brick infill 1077 was a mid-brown, compact silty-sand (1011) that contained fragments of refractory bricks.
- 4.2.9 On the eastern side of the courtyard, brick wall foundations (1005) were exposed. These were 10.7m long by 4.6m wide with double thickness walls and splayed foundations that were four-courses deep. Three cells of this structure were revealed, and a trench was excavated in the central cell, along the length of an internal partition wall (1046). Partition 1046 was 4.25m long by 0.24m wide, with two courses of splayed foundations (Plate 10). The foundations of two brick buttresses (1044, 1045) were located along its length. The bricks of 1005, 1044, 1045 and 1046 were all machine-pressed and bonded with a cement-based mortar. Brick buttress 1045 was 0.6m long and 0.5m wide and buttress 1044 was 0.5m long by 0.36m wide. The buttresses had splayed foundations two-courses deep, and abutted partition 1046. Excavation of the trench alongside partition 1046 exposed medium whitish-yellow clay (1001), which was clearly glacial till of natural origin.



Plate 10: Partition 1046 and buttresses 1044 and 1045

- 4.2.10 A sondage excavated between buttresses 1044 and 1045 exposed a brick-lined land drain (1047) that was cut (1077) into natural clay 1001. Along the sides and on top of land drain 1047 was a layer of ash and clinker (1048). The backfill above ash 1048 was re-deposited natural discoloured by ash (1051).
- 4.2.11 In the southern cell of structure 1005, a large fragment of concrete (1092) was left in place during machining and this was probably debris from the demolition of the courtyard complex. A doorstep (1038) in the south-west corner of structure 1005 allowed access to a pathway. Doorstep 1038 was a 0.9m long by 0.45m wide by 80mm thick piece of Yorkshire paving stone.
- 4.2.12 A concrete platform (1006), 6.6m long by 2.6m wide and 0.2m thick, was set flush with the eastern wall of 1005 for part of its length. The surface of the concrete base had possible tamping marks (1078) in a regular pattern over parts of its surface. A sondage was excavated at the south-east corner of concrete platform 1006 to locate evidence of remaining foundations of a glasshouse shown in this location on historical mapping. Foundations were not uncovered, but a rectangular arrangement of unbounded bricks (1064) 0.6m long by 0.48m wide by 0.24m deep, housed a lead water pipe (1065) with a stop tap. The brick foundations (1043) of a structure were uncovered immediately to the south-east of feature 1064. Structure 1043 was 2.0m long by 1.0m wide, with walls 0.24m wide and footings that were a single course deep (Plate 11). It seems possible that this represented the remains of a cold frame. A circular ceramic drain (1066) was situated at the north-west corner of the cold frame, together with two fragments of iron strapping (1085), which had probably supported a gutter directing water to the drain.



Plate 11: Cold frame 1043 and structure 1064

- 4.2.13 The natural clay (1001) in the north-east corner of the excavated area had been cut by three foundation trenches (1079, 1080 and 1081), which each contained land drains (1002, 1050 and 1051).
- 4.2.14 Trench 1079 was 1.8m long by 0.7m wide, and accommodated land drain 1002 which was constructed of unbounded bricks on a stone slab base with bricks covering the drainage channel (Plate 12). Trench 1080 measured 0.9m long by 0.4m wide, and contained cylindrical ceramic drainage pipes (1050) set on natural clay 1001. Trench 1081 measured 0.9m long by 0.4m wide, and accommodated land drain 1051 which was constructed in a similar manner to 1002. The point of intersection (1083) of the three land drains was covered with a large fragment of re-used paving stone (1082), which measured 0.6 x 0.5m and was 20mm thick. Each of the foundation trenches were 0.3m deep, with flat pieces of stone, possibly re-used from a fireplace surround (1084), forming the bases of drains 1002 and 1051.
- 4.2.15 Removal of the topsoil (1000) revealed a surfaced path (1085), which was aligned east/west and was parallel to the southern sides of courtyard wall 1034 and structure 1005. The path was surfaced with tarmac for most of this section. The path turned at a right angle, becoming north/south-aligned, and running parallel with the east wall of structure 1005. In this section of path, the 0.6m thick substrate (1087) comprised demolition rubble that included fragments of brick, sandstone and mortar. A flower bed separated path 1085 from the eastern and southern walls of structure 1005. The east-facing flower bed was edged with ceramic tiles (1009) with roll-top edging, and had 0.12m of a dark brownish-black coarse sandy-silt (1010) laid on substrate 1087.



Plate 12: Land drains 1002 and 1050

- 4.2.16 Cultivation deposit 1010 contained frequent small pebbles, stones, fragments of flower pots and domestic pottery, which was probably 'crocking' from bedding plants. The south-facing bed was edged with ceramic tiles (1030) with roll-top edging. Deposit 1010 was laid on a dark greyish-black silty-clay (1088) with inclusions of mortar and fragments of brick that was 0.25m deep. Deposit 1088 lay in the cut (1089) for a flower bed, which was in path substrate 1087. At the junction of flower beds 1009 and 1030 there was a circular earthenware drain (1090), 0.28m in diameter. Adjacent to drain 1090 and cut 1091 was a circular hole, 0.25 in diameter, which was filled with cultivation deposit 1010. This was probably a former drainage hole from which a pipe had been removed.
- 4.2.17 Extending the excavation area to the west exposed the full length of the courtyard. A trench 1.0m wide and 2.9m long revealed cobbles 1076 for a further 1.66m to the west. They were aligned with a brick wall (1035), which marked the course of the east wall of a former glasshouse, shown on Ordnance Survey mapping. The wall was 0.24m wide with a splayed base of two courses. The bricks were wire-cut and bonded with a lime-based mortar. A sondage 1.0m square and 0.98m deep was excavated to the immediate west of wall 1035, to determine the depth of fill 1032, but this continued beyond the excavated depth of 1.2m.

4.3 AREA 2:

- 4.3.1 Trench 2 was located across the central part of the proposed development area, and measured 12.0 x 10.0m (Fig 5). The excavation revealed land drains, probable flower beds and a possible path, all of which were associated with the preparation of plants for the public spaces.
- 4.3.2 A backfilled channel (2009) was identified in the south-west corner of the excavated area. This measured 4.0 x 2.2m, and was filled with light brown gravel. A land drain (2004) had been cut into the northern side of the channel. It seems likely that the channel represented the original course of the Rusholme Brook, which was diverted when the area was landscaped as a formal garden for Grove House in the mid-nineteenth century.
- 4.3.3 Land drain 2004 was accommodated in trench 2013, which was a filled with gravel. The drain was aligned east/west, and was covered with a line of bricks. This evidently formed part of a wider drainage system, as another land drain (2005) was revealed some 3m to the north of drain 2004 (Fig 5). The backfill of land drain 2005 included a deposit (2010) of oyster shells and fragments of pottery, beneath which a ceramic drainage tile was exposed (Plate 13). A third land drain (2006) that was aligned north/south, joined land drain 2005 at the western edge of Area 2 (Fig 5). This drain appeared of cruder construction than land drains 2004 and 2005, making use of slate, stones and brick, and was set in a wider foundation trench (2011).



Plate 13: Land drain 2005 exposed after removal of 2010

4.3.4 The foundations of an east/west-aligned flower bed (2007), and almost parallel with land drains 2004 and 2005, were visible along the northern edge of Area 2. The flower bed foundation was a single line of bricks, 10.7m long by 0.12m wide and 80mm deep.



Plate 14: Flower bed 2007

4.3.5 In the east-facing section of the excavated trench, the line of a probable gavel path (2014) was visible. Path 2014 was 2.0m long by 20mm deep, and was aligned east/west. This may have represented one of the garden paths depicted on the Ordnance Survey map of 1850.

5. THE FINDS

5.1 Introduction

5.1.1 In total, 335 artefacts were recovered from the excavation to the rear of the Whitworth Art Gallery. The assemblage was dominated by fragments of ceramic vessels, the majority of which derived from domestic wares and plant pots. Other classes of material present included some metal work, glass, plastic, bone and shell. The date range of the artefacts spanned the late eighteenth to twentieth centuries. Finds from topsoil *1000* were the most numerous, perhaps indicating that most of the finds had been deposited, or redeposited, following the demolition of the excavated structures.

5.2 POTTERY

- 5.2.1 A total of 209 fragments of pottery were recovered from the excavation. The assemblage was dominated by fragments of white-glazed earthenware, underglaze transfer-printed refined white earthenwares, and utilitarian red earthenware vessels. There is a marked absence of seventeenth- and early eighteenth-century types, such as blackwares, mottled wares, and tin-glazed earthenwares, which may be expected had there been any significant occupation of the site prior to the mid-eighteenth century. The assemblage also included fragments of shell and feather-edged plates, which were produced in the mid- to late- eighteenth century and into the early nineteenth (Hume 1969, 115-16, Barker 2008).
- 5.2.2 Most of the transfer-printing is executed in blue which, in general terms, was used from the late eighteenth century to the present day (Coysh and Henrywood 1982). Two patterns in particular, 'Pompeii' and 'Florence', are unlikely to have been produced any later than c 1840. Much of the refined white earthenware is plain and utilitarian and cannot be dated with any precision, similarly, plain white china and porcelain cannot be dated with any precision. There are small fragments of industrial slipwares, but again these are likely to be late in date, probably not before the end of the nineteenth century, and it should be noted that the more utilitarian vessels decorated in this manner did not go out of production until the 1930s (Rickard 2006).
- 5.2.3 Most of the pottery assemblage comprises small sherds, in many cases precluding the firm identification of the vessel forms represented. Amongst those forms that could be readily identified were a range of tablewares and teawares, including plates, cups and bowls, with a single example of a chamber pot.
- 5.2.4 Fragments of stoneware vessels were also present in the assemblage, represented in the main by bottle forms from the later nineteenth century. These included Nottingham-type stoneware. Utilitarian kitchenwares, such as earthenware and stoneware jars, were also present in the assemblage, together with numerous small fragments of earthenware plant pots.

5.3 GLASS

- 5.3.1 The majority of the assemblage of glass objects comprised fragments of colourless machine-blown bottles, dating to the late nineteenth and twentieth centuries. The base of a Hamilton bottle was found in *1011*, and a complete Hamilton in *1014*, marked 'C.Wilhelm, 47 Temperence Street, Ardwick' and made by 'Redfearn bros, Bottle makers, Barnsley'. A small, machine blown, colourless glass bottle of a late nineteenth-century date was found in demolition deposit *1003*.
- 5.3.2 The assemblage of glass objects also included fragments of window glass. Much of this group almost certainly originated from the glasshouses that occupied the site. Some of the window glass was wire reinforced, and is likely to have been derived from buildings surrounding the site.

5.4 METALWORK

- 5.4.1 Some 16 items of metalwork were recovered, coming from nine contexts excavated during the excavation. All of the metal objects dated to the late nineteenth and twentieth centuries. Four coins, all discoloured through deposition, were recovered from topsoil *1000*. This group included a 1949 George VI two shilling dating to 1949, French Franc of 1969; a 1981 Elizabeth II two pence piece dated 1981, and a Elizabeth II twenty pence piece dated 1982.
- 5.4.2 A small brass hinge was also found in topsoil 1000. A small, brass cabinet door handle was found in backfill 1011 and the brass centre piece of a door knob in cultivation deposit 1010. An aluminium sign, painted green, and bearing the figures '.30 PM' was unearthed in demolition deposit 1004. This had almost certainly formed a part of a park notice board. Perhaps the most interesting iron object was a cast-iron square gulley top (1067), measuring 0.33m square, with drainage holes. This was set in a cut and grooved stone (1072) in the centre of courtyard (1007), and was removed for safekeeping. The remaining items were rusted iron nails, a bolt and a wall hook.

5.5 STONE

5.2.1 Two fragments of well-finished worked stone were found in the substrate for pathways, one piece being a coping stone and the other a cylindrical section of red sandstone. This had a dowel hole suggesting that it was a part of a column from an earlier building. It seems possible that this originated from Grove House, which was demolished *c* 1906. However, mapping shows the courtyard complex was erected prior to the demolition of the front facade of Grove House where columns flanked the main entrance.

5.6 OTHER MATERIAL

5.6.1 Other materials: 10 pieces of bone with butchery marks were found in 1014, these being domestic debris. A single oyster shell was found in contexts 1014 and 1018 with 7.42Kg of oyster shells excavated from the fill of 2010, above

land drain 2005, dating from the late C19th. A shoe was found in 1004 and it was suggested by one participant that the shoe may have been deliberately buried as a lucky 'charm', however, a plastic flower pot was found in the same context and this was demolition backfill from the 1970s. Two marbles, a glass example (1002) and a ceramic one (1010) are probably reused mineral-water stoppers. These marbles, used by children as toys, were reflected by a child's toy, a small plastic 'A' Team bus c 1980s, being found in the topsoil (1000).

5.7 CONCLUSION

5.7.1 The artefact assemblage recovered from the excavation is of limited archaeological interest which, in all probability, represents the dumping of domestic refuse on the site during the later nineteenth and twentieth centuries.. It is recommended that the material is discarded.

6. DISCUSSION

6.1 Introduction

- 6.1.1 OA North facilitated the archaeological investigation of the former courtyard and associated buildings as a community excavation for members of local archaeological societies, the Friends of Whitworth Park, local residents, and other interested members of the public. The work undertaken by these participants successfully uncovered the buried remains of the former cobbled courtyard, buildings, flower beds, pathways and land drains in the targeted areas, and facilitated the compilation of an appropriate archival record.
- 6.1.2 The foundations of the buildings shown on Ordnance Survey mapping were located, and several sondages were excavated to investigate the depth of made-ground on which the courtyard and structures stood. Several phases in the developments of the courtyard complex became apparent from the excavations, and these could be related to cartographic and photographic sources. The following section presents a discussion of the archaeological evidence obtained from the excavation, drawing upon information gleaned from documentary sources.

6.2 AREA 1

- 6.2.1 The cobbled surface of the courtyard was not apparent from cartographic or photographic sources. The courtyard surface sloped in towards a central drain with the division of the rectangular space into four triangles. This design would have allowed the cleaning of the courtyard and the swilling away of waste water as well as the drainage of rainwater. The cobbled surface was in a remarkably good condition, although there was an area of subsidence that was related to a drain running beneath the surface. There was no indication of the cobbles having been lifted to repair the cause of the subsidence, but evidence for several to the surface were evident.
- 6.2.2 The main entrance to the courtyard was via a double portal gateway to the north, affording access from Denmark Street. It was anticipated that the cobbled surface would be evident beneath the turf at this gateway, but investigation showed it to be concrete, complete with dog paw prints. However, there appeared to be the trace of cobble outlines beneath the concrete surface and this could represent a similar repair to the drain-related subsidence. Indeed, the area of subsidence was not only over a drain, but was in line with the main gateway and the route to the southern gateway. It thus seems possible that the movement of vehicles could have been the cause of the subsidence and damage to the cobbled surface. There were several anomalies to the cobbled surface, and these were related to modifications to the southern gateway and to a building at the northern side of the courtyard.

- 6.2.3 The southern gateway had originally been constructed in line with the northern gateway. However, at some point it had been widened, necessitating the demolition of the original western gatepost, which was moved *c* 1.0m to the west. A replacement kerb stone and cement that was chamfered over the remaining foundations of the original gatepost bore testimony to the widening of this gateway. The earlier Ordnance Survey mapping does not show a southern gateway but the 1950 map does. However, the gateway is visible in aerial photographs from the 1920s. It is probable that the widening of the gateway took place, along with a number of other developments, sometime in the period between 1930 and 1950. The gateway formed the eastern end of the southern wall to the courtyard and the quality of the southern wall foundations with a splayed base four courses in depth reflected the high quality of the workmanship and materials used in the construction of the courtyard complex.
- 6.2.4 A small structure stood at the junction of the wall and gateway. This structure is shown on Ordnance Survey mapping, and is visible in historical photographs, although its intended function remains uncertain. The discovery of several refractory bricks in this area, however, raises the possibility that the structure may have been a boiler house to provide heating in the greenhouses. Whilst a productive garden was an economic and social necessity for all wealthy households in the eighteenth and nineteenth centuries, the most celebrated gardens incorporated hot-houses in order to cultivate exotic fruit, such as melons. In order for a hot-house to function correctly, it was essential to have a controllable heating system so that minimum temperatures could be maintained. This was achieved through the installation of a boiler (Plate 15); evidence for a boiler in the study area would suggest that some of the greenhouses had probably been hot-houses.

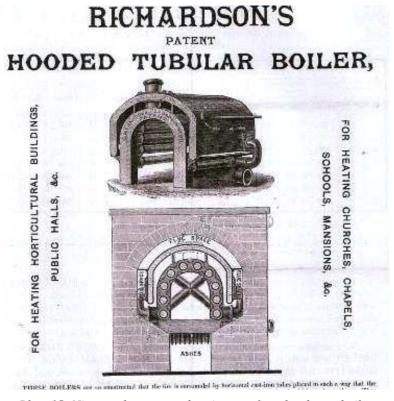


Plate 15: Nineteenth-century advertisement for a hot-house boiler

- 6.2.5 Several features that were set in the cobbled surface were revealed during the excavation of the northern edge of the courtyard. Investigation showed these to include an east/west alignment of bases for brick pillars. Set between and alongside the pillar bases were concrete settings with slots for posts, with the stump of one wooden post remaining *in-situ*. Whereas the pillar bases were contemporaneous with the cobbles, the post bases had required the removal and replacement of setts with concrete. Completing the alignment was a ceramic drain cover abutting a pillar base, which would have provided drainage for a downpipe. The pillar bases were seemingly associated with several features in the extant northern wall of the park, including a series of putlocks to house roof beams (Fig 6).
- 6.2.6 Excavation also revealed part of another cobbled surface, probably representing an internal floor which abutted the extant north wall. Ordnance Survey mapping show a building in this location, and historical photographs show it to have been relatively substantial (Plates 5 and 6). The archaeological evidence indicated this to have been an open-fronted building set on pillars for half its width, with brick or wooden walls for the rear portion adjoining the north wall. The western section appears to have been two-storeys high, with the eastern part possibly a single storey. The floor of the building was cobbled, both in the open fronted section and in the enclosed rear section. This may have been a stable building, with the upper storey of the west end perhaps serving as a hay loft. Ordnance Survey mapping does not furnish any indication as to the function of this building, although oblique aerial photographs appear to support the open-fronted interpretation (Plates 5 and 6).
- 6.2.7 Area 1 was extended to the north wall to investigate the extent of the courtyard surface, and the footprint of a building shown in this location on Ordnance Survey mapping. The cobbled surface continued for a further 1.26m to the north, where the setts appeared to have been removed and replaced with a 0.2m square glazed brick surface, and a rectangular area 0.56m by 0.4m that proved to be a deposit of unused coke fuel. This deposit abutted a corner of the brick foundations of a wall that extended north to the northern wall and west to the edge of the trench extension. Where this wall abutted the northern wall there was a possible drain and a flue pipe that was part of a debris deposit. A lagged iron pipe with a valve was set in the northern wall at this point. It is possible that this was a boiler house for heating two greenhouses that are shown on Ordnance Survey mapping, and which are identifiable on aerial photographs. The well-preserved buried remains of these greenhouses were revealed during the archaeological evaluation of the site, although they were not investigation as part of the excavation as they lie beyond the area that will be developed as part of the extension to the Art Gallery. However, the excavation of these former greenhouses could provide an interesting objective for any future archaeological investigation in Whitworth Park. In particular, it would be of considerable interest to establish where there was any physical evidence for the structures having contained a boiler or heating system, which may suggest that they had been hot-houses, and that exotic fruits were being cultivated.

- 6.2.8 The excavation area was also extended to the west of the courtyard in order to locate the western limit of the cobbled surface and the foundations of a glasshouse shown on the Ordnance Survey map of 1908 (Plate 4). The cobbled surface was revealed for a further 1.66m to the west, where it abutted the foundations of a brick wall. These foundations were double-brick thickness, with footings that were splayed two courses in depth. This would have been sufficient to support a superstructure of wood or metal and glass. Mapping and aerial photographs show two glasshouses connected by a glass-roofed corridor to the west of the courtyard, and putlocks in the north wall support this (Fig 6).
- 6.2.9 Excavation revealed a rectangular structure along the east side of the courtyard. This was divided by internal partitions into three cells with separate doorways to the yard. In the central cell the bases of two buttresses were uncovered, and these probably supported a fireplace and chimney. The foundations of the main walls had splayed footings four-courses deep with the internal walls and pillars having footings two-courses deep. A sondage revealed a brick-lined land drain to have been cut into the natural clay in this area. Ordnance Survey mapping shows a three-celled structure in this location, seemingly with a narrow corridor at its northern end. Photographs show the building to have a pitched roof with gable ends and two chimneys. The structure was single storied, and close examination of historical photographs supports the interpretation of each cell having a separate access. The building probably provided offices, mess facilities and storage for equipment.
- 6.2.10 A sondage excavated in the north-east corner of Area 1 uncovered three land drains. These were all at the same depth and converged in a 'Y' shaped junction and were contemporaneous. The method of construction varied but made use of materials from building demolition, as well as mass-produced ceramic tile pipes. Records show that £69,000 was spent in 1888/89 on the park's layout and drainage, with the land drains uncovered probably dating from this phase of development.
- 6.2.11 Between the excavated sondage and structure *1005* was a rectangular concrete platform. The platform's surface was pitted or scarred in places, and these may have been tamping marks from the laying of the concrete. Conversely, it may have been intended to provide a crude non-slip surface in what may have been a potting shed. The marks appeared to delineate a walkway between rectangular areas that may have been shelves. The location of the platform corresponds to a pathway shown on mapping between structure *1005* and a glasshouse. A small structure is shown adjoining the park wall to the immediate north of the platform, and it is possible that this was an extension to the earlier structure. However, no structure is shown on mapping in the location of the concrete platform, and neither does it appear on available aerial photographs.

- 6.2.12 The greenhouse to the immediate east of structure *1005* shown on mapping and in photographs was not located. The 1907 Ordnance Survey map shows a glass-roofed structure in this location, and aerial photographs dating to the 1920 show a substantial structure that seems to be higher than the others in the complex, with tall windows in the west end gable. Excavation did not locate any foundations, although a rectangular arrangement of unbounded bricks was found to house a length of lead pipe with a stop tap and tap attached to it. This tap probably stood inside the former greenhouse, and may have been left *insitu* for continued use following demolition of the building prior to 1950.
- 6.2.13 The foundations of the western end of a narrow structure to the immediate south of the above greenhouse were uncovered. The walls varied in width and type of brick used, with footings surviving to only one course in depth. Ordnance Survey mapping of 1907 does not show this structure, but the 1922 map shows a long, narrow structure alongside the greenhouse. The 1950 map shows the long, narrow structure remaining with the greenhouse omitted. Structure 1043 is therefore likely to have been built later than greenhouse. Its shape indicates that it may have been a cold frame, and photographic evidence supports this interpretation. A drain and iron strapping, probably a support from a gutter, remained at the western end of the cold frame.
- 6.2.14 An east/west-aligned pathway ran parallel to the south wall of the courtyard before turning north between building 1005 and cold frame 1043. It ended flush with the southern end of the concrete platform. The pathway had a layer of tarmac remaining in places over a substrate of demolition rubble. A flower bed lay alongside the southern end of building 1005 and this was continued alongside the eastern end of the building, terminating at the concrete platform. The flower bed had roll-top edging tiles of different sizes alongside its two lengths, with the east-facing bed having a planting deposit placed directly on the pathway substrate, whereas the south-facing bed was dug into the substrate. It is possible that the east-facing flower bed was contemporaneous with the concrete platform. Frequent small stones and small pieces of pottery were found in the planting deposit, and this may be crocking from bedding plants.

6.3 AREA 1

6.3.1 Area 2 was a smaller trench, and was targeted on the projected position of former garden paths depicted on historical mapping, and a possible ditch that was exposed in the initial evaluation trenches. It was excavated primarily by OA North staff with the assistance of a volunteer. Three land drains were identified, and these were cut into the natural clay geology. Two of the land drains were aligned east/west. A third land drain was aligned north/south, and joined an east/west-aligned drain. As with the land drains located in Area 1, they were constructed of a range of materials, including bricks, roofing slates and ceramic drainage tiles. The backfill above one of the drains was particularly distinctive, and yielded a quantity of oyster shells and most of a blue and white willow pattern plate. The land drains were probably part of the system of drainage laid in 1888/9, and contemporaneous with the land drains uncovered in Area 1.

6.3.2 The single-course brick foundations excavated in this area indicated the course of a former flower bed. The surface of a possible pathway, also aligned east/west, was visible in the north-facing section of the excavated trench. Ordnance Survey mapping does not indicate any formal lay-out of flower beds or pathways in this area, although a boundary is indicated that separates it from the main park. Photographic evidence appears to show a series of small, rectangular structures with a labyrinth of pathways.

6.4 COMMUNITY INVOLVEMENT

- 6.4.1 The archaeological excavation elicited considerable interest amongst local groups and residents with a number of people from the immediate community actively involved in the fieldwork. In total, 49 volunteers participated in the excavation (Plates 16-19), with an additional 28 people visiting the site to view the excavated remains and to talk with the archaeologists. The excavation also attracted attention from passers-by, with a considerable number stopping to read the information banner, look at finds displayed on a table and talk to OA North staff and volunteers.
- 6.4.2 Staff and representatives of a wide range of organisations volunteered or visited the site: Friends of Whitworth Gallery; Friends of Whitworth Park; a Home Education Group; Manchester City Council; Manchester University Museums Association; South Manchester Archaeological Research Team; South Trafford Archaeological Group; University of Leicester; University of Manchester; and Whitworth Art Gallery.



Plate 16: Ken Shone, Chair of the Friends of Whitworth Park, at work



Plate 17: Volunteer Dorothy Ennis-Hand with a park sign recovered from the excavation



Plate 18: Volunteers Margaret Wells and Roger Ashby completing the cleaning courtyard 1007



Plate 19: Andy Coutts from SMART excavating on the drains in Area 1

6.4.3 The excavation coincided with the half-term holiday for local schools and a reading week for students at the University. Coupled with the short notice and time of year, this had a negative impact on the participation of educational groups, although members of a Home Education Group that meet at the Whitworth Art Gallery participated in the excavation and a number of school children visited the site (Plate 20).



Plate 20: Local school students participating in the excavation of Area 1

6.5 CONCLUSIONS

- 6.5.1 Area 1 was targeted on the location of a yard and associated buildings, and excavation area uncovered a cobbled courtyard. The attractively designed and well-made surface was virtually intact, with little disturbance of the component setts. It elicited considerable interest from visitors, volunteers and stakeholders in the proposed development.
- 6.5.2 The superficial geology of glacial till was uncovered in two slots and evidence of the land drainage associated with the development of Whitworth Park was found. Overlying this drainage were levelling deposits on which the buildings and cobbled surface were constructed.
- 6.5.3 The foundations of the majority of the buildings shown on Ordnance Survey mapping were located. The foundations were of brick, and were well constructed with, it would appear, little expense spared. The structure on the north side of the courtyard was particularly interesting as the front of it was supported on pillars with the floor surface being cobbled. This may have been a stable block while the structure on the east side of the yard probably served as offices for the management of the park. A glasshouse, cold frame, flower beds and the base of a possible potting shed were located.
- 6.5.4 The probable location of a boiler house for heating the greenhouses was identified at the north side of the courtyard, although a small structure built against the yard south wall yielded evidence associated with a hearth.
- 6.5.5 Phases of development were evident from the excavations. A gateway in the south wall had been widened, and a concrete platform may have been associated with or replaced a small structure adjoining the probable offices. A greenhouse shown on the Ordnance Survey map of 1907, but absent from the 1950 edition, was not located, although a cold frame associated with it and a water pipe was found that indicated its former position. A flower bed, concrete post settings and repairs to the courtyard all testified to the evolving nature of the complex.
- 6.5.6 Area 2 targeted the route of several pathways and a possible ditch. A pathway and flower beds were located. These are just visible on oblique aerial photographs, and Ordnance Survey mapping shows a triangular area separated from the main park by a boundary. Area 2 would have provided space for the preparation of plants for the main park and was an extension of the courtyard complex. Infilled water course was also identified, and this may have been the former course of the Rusholme Brook.
- 6.5.7 Finds in the topsoil bore testimony to the use of Areas 1 and 2 as a public space following the demolition of the courtyard buildings and the grassing over of the area. Four coins, including a French Franc and a child's toy car were reminders of the people who used the park. The late twentieth-century toy car and a child at play were echoed by two marbles, scavenged from Codd bottles, found in the flower bed area. Demolition debris and domestic waste used to level the site prior to the building of the courtyard complex provided small clues as to life in nineteenth-century Manchester.

6.5.8 The participation of volunteers and visitors to the site contributed to a successful and informative excavation. The range and numbers of participants was encouraging given the time of year, and continued the use of the Whitworth Park and Art Gallery as places of public recreation and education.

7. CURATION AND CONSERVATION

7.1 ARCHIVE

7.1.1 The digital archive will be deposited with the Greater Manchester Historic Environment Record. The paper archive and finds will be transferred to Whitworth Art Gallery. Most of the finds recovered from the excavation, however, are of little or no archaeological or historical interest, and merit discard.

7.2 Conservation

7.2.1 There are no conservation requirements.

7.3 STORAGE

7.3.1 The complete project archive, which will include written records, plans, colour photographs, 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).

7.4 DISSEMINATION

7.4.1 The complete results obtained from the archaeological investigation at the Whitworth Art Gallery are incorporated in this final excavation report. In addition to the University of Manchester, copies of the report will be forwarded to the Whitworth Art Gallery, Manchester City Council Planning Department, and the Greater Manchester Historic Environment Record.

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APPENDIX 1: WRITTEN SCHEME OF INVESTIGATION



Whitworth Art Gallery,
Oxford Road,
Manchester

Archaeological Excavation

Revised Written Scheme of Investigation



Oxford Archaeology North

October 2012

Proposals

The following Written Scheme of Investigation is offered in response to a request from Mr J Satow, of Cragg Management Services acting on behalf of the University of Manchester, for an archaeological excavation in advance of a proposed development at the Whitworth Art Gallery on Oxford Road in Manchester.

1. BACKGROUND

1.1 CIRCUMSTANCES OF PROJECT

- 1.1.1 In March 2012, Oxford Archaeology North (OA North) was commissioned by the University of Manchester to carry out a programme of archaeological investigation in advance of a proposed development at the Whitworth Art Gallery, a Grade II listed building in the Chorlton-on-Medlock area of Manchester (centred on NGR SJ 8488 9597). In the first instance, a deskbased assessment of the site was carried out. This was coupled with an archaeological building survey of the Gallery, and a geophysical survey of land immediately to the rear of the building. Based on the results obtained from the desk-based assessment and the geophysical survey, a series of evaluation trenches were excavated to the rear of the Gallery. The principal aim of the evaluation trenching was to establish the presence or absence of any buried remains of archaeological interest, and assess the impact of the proposed development on the remains to enable an appropriate strategy to be formulated to mitigate the damage or destruction to the buried archaeological resource.
- 1.1.2 The results obtained from the evaluation trenches demonstrated that some buried remains of archaeological interest do survive on the site. In particular, well-preserved structural remains that are likely to represent elements of the glasshouses and associated outbuildings to the rear of the Gallery were exposed at a shallow depth in most of the trenches. In addition, possible remains of a path associated with the nineteenth-century Grove House were uncovered, together with negative features that might represent an altogether earlier phase of activity on the site.
- 1.1.3 Following consultation with the Greater Manchester Archaeological Advisory Service (GMAAS), which provides archaeological advice to Manchester City Council, it is recommended that an open-area archaeological excavation of the site is carried out in advance of development. The excavation will be targeted on the remains of archaeological interest that were identified in the evaluation trenches, and will mitigate the damage or destruction of these remains during the construction programme through 'preservation by record'. In addition, it is intended to actively engage the local community and interest groups in part of the excavation programme.
- 1.1.4 Amongst the groups that have expressed a keen interest in participating in the excavation are members of the South Manchester Archaeological Research Team (SMART), the local Young Archaeologists' Club, the Friends of Whitworth Park, and local residents. In addition, staff from the Whitworth Art Gallery and the Archaeology Department at the University of Manchester have also indicated that they will offer support.

1.2 OXFORD ARCHAEOLOGY NORTH

- 1.2.1 Oxford Archaeology North is an educational charity (Registered Charity No 285627), and is Institute for Archaeologists Registered Organisation (No 17). OA North, formerly Lancaster University Archaeology Unit, has been serving the archaeological needs of the North West since 1979, and this has included close involvement with amateur groups on projects throughout the region. This latter work has included professional support and also the provision of expertise, training, and resources for archaeological excavation, survey, and documentary studies.
- 1.2.2 As an educational charity, public education and training are central to the very fibre of the organisation, and we have developed an impressive track record in all aspects associated with community training and public presentation, as outlined below.
- 1.2.3 Training and Community Archaeology: OA North has considerable experience of working with, and providing training to, local communities and amateur groups on archaeological projects. These projects can range from surveys, which incorporate training for the local groups, to major training excavation projects aimed at volunteer groups. The following are some examples of community-based projects undertaken by OA North:
 - Greenside Lime Kiln: the successful excavation and restoration of Greenside Lime Kiln, Kendal combined the leading expertise of OA North with resources from the local community including Young Archaeology Clubs, school children aged 8-15 years and local masons and artists. The result of this project raised awareness of the presence of a listed Ancient Monument and united a community in an appreciation of their heritage;
 - *Ingleton:* OA North, in conjunction with the Ingleborough Archaeology Group, undertook excavation and survey of a Roman settlement at Ingleton, North Yorkshire. During this investigation OA North offered training and supervision for upward of a core of 10 people, and more general training for 30 people from the local area. This allowed for an intensive archaeological investigation, which culminated in a high-profile excavation of this complex Roman settlement;
 - *Skipwith Common:* OA North is presently working with the Friends of Skipwith Common, to undertake a survey of Skipwith Common, to the south of York. The work is funded by Natural England;
 - Muncaster Fell: OA North undertook a survey of Muncaster Fell, West Cumbria, and an integral part of this work included training members of the Eskdale Local History Society in techniques of archaeological survey. Following the field survey a publication was produced detailing the results of the work:

- Duddon Valley Cairn: OA North, in conjunction with the Lake District National Park Authority, undertook a community-training project involving the excavation and survey of two ring cairns at Duddon Valley, Cumbria;
- Lathom House: OA North undertook an archaeological and historical at Lathom Park, Lancashire, in conjunction with the Lathom Trust. This project involved training members of the community to undertake documentary research and building survey. OA North is presently undertaking a follow-on project evaluating and excavating the site of the former Lathom House fortified palace;
- Holcombe Moor: OA North undertook a community project surveying Holcombe Moor, South Lancashire, which was funded by the Ministry of Defence. The project was extremely successful and, in consequence, it won an MOD award;
- **Dunham Massey:** in July 2010, OA North provided archaeological training and supervision for The National Trust and The South Manchester Archaeological Research Team (SMART) in support of a series of community archaeological training events at Dunham Massey in Trafford, Greater Manchester. This project met with considerable success.
- Quarry Bank House: building on the success of the Dunham Massey excavation in 2010, The National Trust commissioned OA North to facilitate another community-based project at one of their properties in 2011. The site chosen was a former glasshouse in the Upper Garden of Quarry Bank House, which was carried out over a two-week period in July 2011.
- 1.2.4 Working with children: as an educational charity, training and education are central to OA North, and the organisation has significant experience of working with children in a variety of situations. Of particular relevance to this project is the design and preparation of teacher's packs on Medieval Carlisle, undertaken for Tullie House Museum, Carlisle, and the Liverpool Docks for the Liverpool One development's museum.

2. AIMS AND OBJECTIVES

2.1 ACADEMIC AIMS

2.1.1 The principal aim of the project is to provide a detailed record of the buried archaeological remains that exist to the rear of the Gallery to mitigate their damage or destruction during the proposed development of the site. A second aim of the excavation is to engage members of the local community in an archaeological excavation, and to raise the historical profile of the site locally.

2.2 OBJECTIVES

- 2.2.1 The objectives of the project may be summarised as follows:
 - to compile a detailed record of those buried archaeological remains that are known to exist to the rear of the Gallery and lie within the footprint of the proposed new development;
 - to offer an enjoyable learning opportunity for members of the local community who wish to become involved in an archaeological excavation;
 - to undertake any post-excavation works required and create an appropriate site archive;
 - to produce a full excavation report that can be passed on in digital format to all stakeholders at the end of the project;
 - to carry out an appropriate level of dissemination of the results.

3. METHOD STATEMENT

3.1 THE PROPOSED ARCHAEOLOGICAL PROGRAMME

- 3.1.1 The programme of works will comprise the open-area excavation of two targeted areas (Figs 1-3), which were found during the evaluation trenching to contain buried remains of local interest.
 - Area 1: will be placed across the northern part of the proposed development area, and will measure 25 x 15m. It will incorporate evaluation Trench 2, and will examine the footprint of the outbuildings depicted on the Ordnance Survey map of 1908, together with part of the glasshouse shown immediately to the east, and garden paths shown on the Ordnance Survey map of 1850. The entire footprint of the glasshouse shown on historic mapping has not been targeted, as the initial evaluation trenching indicated that the portion of the building within the yard area immediately to the east of the park has been largely destroyed. This area will form the focus of the community-led excavation;
 - *Area 2:* will be placed in the central part of the proposed development area, and will incorporate evaluation Trench 4. It will measure 15 x 12m, and will examine two of the paths shown on the Ordnance Survey map of 1850, and further investigate the linear feature discovered during the evaluation trenching.
- 3.1.2 It should be noted that a flexible approach will be taken to the precise location and extent of the trenches. The discovery of *in-situ* buried remains that extend beyond the edge of the excavated area, for instance, may require the targeted areas to be extended slightly to maximise the archaeological dataset recovered from the site.
- 3.1.3 The archaeological programme will involve, and train where required, participants from the local community who have registered to take part in the project. It is hoped that the excavation will directly involve up to 15 volunteers per day with ranging levels of archaeological experience. These volunteers may also include participants who might have physical limitations. One of the primary aims of this excavation will be to be to guide, encourage, train, and nurture the volunteers in the techniques of archaeological excavation, and a particular emphasis will be placed on the quality of experience for those taking part. The techniques that participants will engage in will include excavation and all aspects of site recording. Following the completion of the fieldwork, a full site report and archive will be produced.

3.2 METHODOLOGY

- 3.2.1 **Excavation Methodology:** the uppermost levels of topsoil and overburden will be removed using a mechanical excavator of appropriate power (c 15 tons), fitted with a toothless ditching bucket, to the top of the first significant archaeological level. The work will be supervised closely by a suitably experienced archaeologist. Spoil from the excavation will be stockpiled in a convenient location. Thereafter, all excavation will be carried out using manual techniques.
- 3.2.2 Pits and postholes will be subject to a 50% by volume controlled stratigraphic excavation. Linear cut features, such as ditches and gullies, will be subject to up to a maximum of 25% by volume controlled stratigraphic excavation, with the excavation concentrating on any terminals and intersections with other features which would provide important stratigraphic information. Linear features will be subject to 10% excavation.
- 3.2.3 Extensive linear deposits or homogeneous spreads of material will be sample excavated by hand to a maximum of 10-20% by volume (the size of the sample to be agreed following consultation with GMAAS). If features/deposits are revealed which need to be removed and which are suitable for machine excavation, such as large-scale dump deposits or substantial linear cut features, then they would be sample excavated to confirm their homogeneity before being removed by machine.
- 3.2.4 Structural remains will be excavated manually to define their extent, nature, form and, where possible, date. Any hearths and/or internal features will be 100% sample excavated to provide information on their date and function, and the extent of any associated floor surfaces will be determined. It should be noted that no archaeological deposits will be entirely removed from the site unless their excavation is necessary to reveal other features and/or deposits. If the excavation is to proceed below a depth of 1.2m then the sides will be stepped in. Cut features identified against the edges of the excavation will not be excavated below a safe working limit of 1.2m unless it is confirmed by the archaeological curator with GMAAS that they are of exceptional importance.
- 3.2.5 **Recording:** all information identified in the course of the site works will be recorded stratigraphically, with sufficient pictorial record (plans, sections and both black and white and colour photographs) to identify and illustrate individual features. The trenches and features will be located by use of high accuracy differential GPS equipment or total station; altitude information will be established with respect to Ordnance Datum. Archaeological features within the trenches will be planned using manual techniques or by means of a total station. All information identified in the course of the site works will be recorded stratigraphically, with sufficient pictorial record to illustrate individual features.
- 3.2.6 Results of all field investigations will be recorded on *pro-forma* context sheets. The site archive will include both a photographic record and accurate large-scale plans and sections at an appropriate scale (1:50, 1:20 and 1:10).

3.2.7 *Finds policy:* OA North employs in-house artefact and palaeoecology specialists, with considerable expertise in the investigation, excavation, and finds management of sites of all periods and types, who are readily available for consultation. Finds storage during fieldwork and any site archive preparation will follow professional guidelines (UKIC). Emergency access to conservation facilities is maintained by OA North with the Department of Archaeology, the University of Durham.

3.3 POST-EXCAVATION WORK, ARCHIVE PRODUCTION AND REPORTING

- 3.3.1 An archive for the project will be prepared during and immediately following the fieldwork programme for deposition in an appropriate repository. The results of the excavation will form the basis of a full archive to professional standards, in accordance with current English Heritage guidelines (*Management of Archaeological Projects*, 2nd edition, 1991). The project archive represents the collation and indexing of all the data and material gathered during the course of the project. The deposition of a properly quantified, ordered, and indexed project archive in an appropriate repository is an essential and integral element of all archaeological projects. The project archive will be deposited ultimately with the Manchester Museum.
- 3.3.2 An appropriate programme of analysis will be undertaken to prepare a research archive, as detailed in Appendix 6 of *Management of Archaeological Projects* (English Heritage 1991). A provisional programme of post-excavation analysis is proposed, on the basis of the anticipated recovery of material from the excavation; however, the extent of the programme can only be reliably assessed on completion of the fieldwork. The proposed programme anticipates analysis of the artefactual evidence and of the site stratigraphy, and may also involve palaeoenvironmental assessment, leading to the production of a final report. It is not anticipated that radiocarbon dates will be required and these have not been costed.
- 3.3.3 The report will present, summarise, and interpret the results of the archaeological work, and will incorporate specialist reports on artefact assemblages and environmental reports, as appropriate. It will include an index of archaeological features identified in the course of the project, with an assessment of the site's development. It will incorporate appropriate illustrations, including copies of the site plans and section drawings, all reduced to an appropriate scale. The report will consist of a statement of acknowledgements, lists of contents, executive summary, introduction summarising the brief and project design, methodology, interpretative account of the site and associated structures, gazetteer of features, a complete bibliography of sources from which data has been derived. All digital survey information will be supplied in a CAD compatible format as a .dwg file, and all digital photographs will also be supplied as individual jpegs.
- 3.3.4 At the start of project, an OASIS on-line record will be initiated and key fields completed on Details, Location and Creators forms. All parts of the OASIS on-line form will be completed for submission to the HER. This will include an uploaded pdf version of the final report.

3.3.5 **Dissemination:** it is anticipated that the results obtained from the excavation will form the basis for a temporary display in the Whitworth Art Gallery, and summaries can be made available for posting on web sites.

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).
- 3.4.2 At the commencement of the work, all project team members will undergo a site induction, whereby they will receive instructions on relevant issues, and will also include an introduction to site health and safety procedures. All participants will be asked to read the relevant OA North documentation covering the risk assessment for the site. All participants will also be required to sign an induction form, acknowledging that they have read and understood the health and safety documentation. A signing in and out book will be maintained daily by OA North for the duration of the works.
- 3.4.3 All attendance of volunteers will be strictly by prior arrangement. It is anticipated that all participants will be over the age of 16; volunteers between the ages of 8 and 16 may participate, but must be supervised at all times by a parent of guardian. No visitors will be allowed to participate in the archaeological survey without the permission of the senior OA North member of staff. All visitors will be required to adhere to site safety rules, will be escorted by an OA North team member at all times.
- 3.4.4 All OA North staff will wear PPE at all times while on site; volunteers will be required to wear clothing appropriate to the task undertaken, including sturdy shoes or boots. The project team will be provided with information on the clothing requirements in advance of the fieldwork. Any volunteers wearing inappropriate clothing may be excluded from participating in certain tasks on site. All work will be supervised by two OA North staff members.
- 3.4.5 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 will be provided in advance of commencement.

3.5 OTHER MATTERS

- 3.5.1 *Community Participation:* the excavation will be a combination of 'commercial' and community-led archaeology. Following the mechanical stripping of the two targeted sites, Area 1 will be excavated by local residents and special interest groups, working under the supervision and guidance of professional staff from OA North. Amongst the groups that has expressed a keen interest in participating in the excavation are members of the South Manchester Archaeological Research Team (SMART), the local Young Archaeologists' Club, and Friends of Whitworth Park. Area 2, however, will be excavated entirely by professional archaeologists, as the nature of the remains, and the potential depth of the trench, make it potentially unsuitable for excavation by volunteer groups.
- 3.5.2 *Open Day:* a public open day will be held on a Saturday at the end of the excavation. The open day will be intended to allow interested members of the public to view the excavated remains, any finds that have been recovered, and talk to the archaeologists. There will also be an opportunity for people who are unavailable during the week to carry out some excavation work.
- 3.5.3 *Timetable:* a two-week period should be allowed to fully excavate and record the excavation areas. It is proposed that the mechanical stripping of the two areas in preparation for the excavation is carried out on Friday 26th October. The excavation of Area 1 will be carried out during the week commencing 29th October, and is timed to coincide with the school half-term period. The excavation of Area 2 will be completed the following week, and will be carried out by OA North staff.
- 3.5.4 A report will be submitted within four 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 north-west England.
- 5.2 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 Planning Archaeologist with regard to progress, and will maintain relationships with other contractors.
- 5.3 The excavation is likely to be undertaken by **Graham Mottershead** (OA North Supervisor). Graham is an highly experienced field archaeologist, who has a particular interest in the archaeology of Manchester. He directed the initial evaluation trenching on the site, and played a key role in the recent community-led excavation at Birley Fields in Manchester.

- 5.4 It is not possible to provide details of specific technicians that will be involved with the fieldwork at this stage, but all shall be suitably qualified archaeologists with proven relevant experience. It is anticipated that two technicians will be required during the course of the fieldwork.
- 5.5 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.

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 Archaeological Advisory Service (GMAAS), who will be afforded access to the site at all times.

APPENDIX 2: CONTEXT REGISTER

CONTEXT NO	DETAIL	DIMENSIONS (BGL)	DESCRIPTION
1000	Topsoil	25m by 15m by max depth 0.30	Dark greyish-brown, firm clayey-silt with occasional small stones.
1001	Natural	2.1m long by 1.7m wide by 0.3m exposed depth.	Medium whitish-yellow clay.
1002	Land drain	1.8m long by 0.3m wide by 0.25m deep.	A land drain comprised a base of flat stones with brick sides and top.
1003	Demolition rubble above 1002	2.1m wide by 1.7m wide by 0.6m depth.	Light whitish-brown friable silty-sand with 80% inclusions of plaster, mortar, fragments of brick, stone, and decorated masonry.
1004	Upper demolition rubble in <i>1005</i>	0.1m depth	Layer of medium red, coarse crushed brick and mortar, used as a levelling deposit.
1005	Brick wall structure east side of courtyard	10.7m long by 4.6m long	Double thickness brick wall with splayed foundations four courses deep. Rectangular shaped structure.
1006	Concrete platform	6.6m long by 2.6m wide by 0.2m deep	Rectangular shaped concrete platform for a structure.
1007	Cobbled surface	Sample 0.2m by 0.2m by 0.16m	Cuboid granite sets. Range from 0.24m by 0.16m by 0.15m to 0.16m by 0.16m by 0.15m.
1008	Brick foundations	2.25m long by 1.05m wide by 0.6m deep.	Double thickness wall foundations, four courses deep with splayed foundations two course deep.
1009	Flower bed ceramic tiles	0.24m long by 0.2m wide by 30mm depth	Glazed ceramic flower bed edging tiles with a rolled top. Medium reddish-brown.
1010	Layer in flower bed	0.12m depth	Dark brownish-black, compact, coarse sandy-silt with 10% small stones/'crocking'.
1011	Backfill in 1008	1.76m long by 0.2m wide by 0.5m deep.	A mixed backfill deposit of mid brown, loose to dense, silty-sand with 50% inclusions 0f bricks, fragments of bricks, flue liner, shell, glass and pottery.
1012	Fine tarmac repair to courtyard	2.5m by 1.3m by 20mm depth	Repair patch of fine tarmac, dark greyish-black, concreted, 90% fine gravel inclusions.

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1013	Concrete repair to courtyard	2.5m long by 1.3m wide by 90mm depth	Repair patch of light yellowish-brown concrete.
1014	Lower demolition rubble in <i>1005</i>	0.3m depth	Demolition layer of loose, silty sand with 90% brick and cement fragments.
1015	Layer beneath 1014	0.1m to 0.15m depths	Construction deposit of dark greyish-black, compact clayey silt with 25% small fragments of mortar, brick and sandstone.
1016	Layer of ash below 1011	0.47m long by 40mm to 80mm depth.	A bedding layer of dark brownish-black, compact, granular ash and clinker.
1017	Bedding layer below 1015	0.15m depth	Dark brownish-black, clayey-silt, a bedding layer.
1018	Platform fill below 1016	1.0m long by 0.47m wide.	Medium brown to dark grey compact sandy-silt mixed fill deposits with inclusions of ash, clinker, pieces of firebricks and rubble.
1019	Platform fill below 1018	0.6m long by 0.4m wide and 0.18m thick	A lens deposit of light brown compact silty-sand with 60% rounded pebbles within deposit <i>1018</i> .
1020	Demolition rubble substrate for paths	4.5m long by 2.6m wide by 0.6m deep	Light whitish-brown friable silty-sand with 80% inclusions of plaster, mortar, fragments of brick, stone, and decorated masonry.
1021	East rectangular brick feature in cobbled surface	0.36m long by 0.33m wide	Rectangular shaped brick foundations for a pillar.
1022	West rectangular brick feature in cobbled surface	0.45m long by 0.33m wide	Rectangular shaped brick foundations for a pillar.
1023	Diamond shaped brick feature to immediate east of 1022	0.6m long by 0.46m wide	Diamond shaped brick foundations for a pillar.
1024	Square brick feature to immediate west of <i>1021</i>	0.48m long by 0.48m wide	Square shaped brick foundation for a pillar.
1025	Ceramic drain adjacent to 1023	0.33m square with 0.28m diameter central drain	Glazed, dark reddish brown ceramic drain.
1026	Concrete setting for post between 1023 and 1024	0.33m long by 0.28m wide	Concrete setting for post, set in place of two removed sets.
1027	Concrete setting for post by 1021	0.25m long by 0.2m wide	Concrete setting for two posts, set in place of two removed sets.

1028	Central drain in courtyard	0.66m square.	Central drain, functioning, deposit of fine sandy-silt removed with inclusions of ring pulls. Drain acted as a sump, base broken due to past cleaning.
1029	Demolition rubble below <i>1000</i> west of courtyard	1.05m long by 0.85m wide by 0.33m depth.	Medium orangey-brown, friable sandy silt with 70% inclusions of brick, glass and pottery.
1030	Flower bed ceramic tiles	0.31m long by 0.18m wide by 35mm depth	Glazed ceramic flower bed edging tiles with a rolled top. Light yellowish-brown.
1031	Levelling deposit for cobble sets 1007	0.8m long by 0.6m wide by 60mm	Light orangey brown, firm, silty-fine sand with occasional small rounded pebbles.
1032	Levelling deposit	0.8m long by 0.85 wide by 0.48m depth.	Levelling deposit forming part of fill platform. Dark reddish-brown, friable silty-sand with 20% half and part brick fragments and occasional small stones.
1033	Fill platform deposit below 1030	0.6m long by 0.4m wide and 0.16m depth.	Mid brown, compact silty-sand with 20% layers of cemented clinker, pebbles, pieces of sandstone and fragments of brick.
1034	Brick foundations of courtyard south wall	0.24m wide	Double thickness brick foundations with a splayed base four courses in depth.
1035	East wall of greenhouse	1.0m long by 0.24m wide by 0.6m depth	Double thickness brick foundations with a splayed base two courses in depth.
1036	Cobble surface	Sample 0.24m by 0.2m by 0.16m	Cuboid granite sets that range from 0.24m by 0.2m by 0.16m to 0.2m by 0.16m by 0.16m.
1037	Brick foundations of possible boiler house	2.8m long by 0.24m wide by 0.5m deep.	Double thickness brick wall foundations, 'L' shaped.
1038	Doorstep	0.9m long by 0.45m wide by 80mm depth	Yorkshire stone doorstep, slightly roughly tooled finish.
1039	Drain cover	0.64m long by 0.47m wide by 80mm deep	Yorkshire stone drain cover, possibly also acting as a doorstep.
1040	Tarmac repair to courtyard	2.5m long by 1.3m wide by 20mm depth	Repair patch of coarse tarmac, dark greyish-black, loose with 90% gravel inclusions.
1041	Concrete layer at north gateway	1.0m square, unknown depth	Concrete layer, with three dog's paw imprints, located at north gateway entrance to courtyard.

1042	Kerbstones in south gateway	1.07 x 0.33 x 0.18m	Two kerbstones, Yorkshire stone, aligned north to south in yard southern gateway.
		1.07 x 0.35 x 0.18m	
1043	Cold frame	2.0m long by 1.0m wide by 0.25m deep.	The foundation walls of a cold frame with shallow footings one brick in depth.
1044	West buttress base in <i>1005</i>	0.5m long by 0.36m wide	Rectangular shaped foundations of a buttress, probably supporting a fireplace.
1045	East buttress base in 1005	0.6m long by 0.5m wide	Rectangular shaped foundations of a buttress, probably supporting a fireplace.
1046	Foundations of partition wall in 1005	4.25m long by 0.24m wide by	The foundations of a brick internal cell division wall.
1047	Brick land drain beneath 1015	1.0m long by 0.24m wide	A brick lined land drain cut into natural clay.
1048	Ash backfill deposit	0.7m long by 0.2m wide and 0.35m deep	Dark brownish-black ash and clinker placed alongside and above land drain <i>1047</i> .
1049	Ash backfill deposit	0.7m long by 0.2m wide and 0.35m deep	Dark brownish-black ash and clinker placed alongside and above land drain <i>1002</i> .
1050	Ceramic tile drainage pipe	0.3m diameter	A medium reddish-brown ceramic tile drainage pipe.
1051	Re-deposited clay above drain 1047	1.0m long by 0.3m wide by 0.3m deep.	Re-deposited natural clay discoloured with dark greyish-brown silt and ash.
1052	West plinth foundation, south gateway	0.7m long by 06.m wide.	Brick foundations of rectangular shaped gate post.
1053	East plinth foundation, south gateway	0.6m long by 0.36m wide.	Brick foundations of rectangular shaped gate post.
1054	Cement chamfer, south gateway	0.8m long by 0.42m wide by 30mm depth	Cement with a chamfered edge placed over 1056.
1055	South gateway extension kerbstone	0.92m long by 0.35m wide	A Yorkshire stone kerbstone, aligned north to south in yard southern gateway used in widening works.
1056	Original west plinth foundation, south gateway	0.42m long by 0.34m wide.	Brick foundations of original rectangular shaped gate post.

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1057	Brick plinth	0.5m long by 0.4m wide	Rectangular shaped brick foundations for a pillar, in line with and to the north of <i>1021</i> .
1058	Wooden post	0.15m square	The rotted stump of a wooden post located in a slot in concrete setting <i>1068</i> .
1059	Deposit of coke fuel	0.5m long by 0.4m long by 0.5m deep	A deposit of unused coke fuel located against the southern wall of possible boiler house <i>1037</i> .
1060	Glazed bricks	0.4m long by 0.4m wide.	Glazed bricks used as a possible repair to cobbled surface <i>1007</i> .
1061	Cut for 1045	0.3m long by 0.2m wide	Cut for buttress base 1045
1062	Arrangement of bricks, possible drain	0.36m long by 0.36m wide by 0.34m depth.	A semi circular arrangement of unbounded bricks forming the top of a possible drain adjacent to structure <i>1061</i> .
1063	Possible pipe/flue	0.18m diameter by 0.3 long.	A pipe or possible flu adjacent to structure 1037.
1064	Arrangement of bricks to house 1065	0.6m long by 0.48m wide by 0.24m deep	Arrangement of unbounded bricks forming a rectangular structure to house <i>1065</i> .
1065	Water pipe and stop tap	1.0m approx. In length	A piece of lead water pipe with a stop tap and a tap at the end. Coiled inside structure <i>1064</i> .
1066	Ceramic circular drain by cold frame 1043	0.28m diameter.	Earthenware, circular drain by cold frame <i>1043</i> . Two pieces of iron strapping indicated support for a gutter linked to the drain.
1067	Cast iron drain top of 1028	0.33m square.	Decorative cast iron drain top, square shaped with a circular inset with drainage holes.
1068	Concrete post setting adjoining 1022	0.36m long by 0.26m wide.	Concrete setting for a wooden post, stump still in place, set in place of two removed sets.
1069	Deposit of pitch beneath sets 1007	10mm depth	Occasional evidence of use of pitch between sets and brick structures.
1070	Diagonal of cobbles aligned north-west to south-east	16.0m long by 0.2m wide	A diagonal of sets aligned north-west to southeast.
1071	Diagonal of cobbles aligned north-east to south-west	13.5m long by 0.2m wide	A diagonal of sets aligned north-east to southwest.
1072	Central drain stone	0.66m square and 0.2m deep	A square stone with a central drainage hole 0.33, square with grooves carved to accommodate iron cover <i>1067</i> .

1073	North triangle of courtyard sets	8.5m long by 3.6m wide	Cuboid granite sets in the northern triangular shaped segment of the courtyard pattern.
1074	South triangle of courtyard sets	13.75m long by 6.0m wide.	Cuboid granite sets in the southern triangular shaped segment of the courtyard pattern.
1075	East triangle of courtyard sets	10.1m long by 7.2m wide	Cuboid granite sets in the eastern triangular shaped segment of the courtyard pattern.
1076	West triangle of courtyard sets	10.1m long by 5.6m wide	Cuboid granite sets in the western triangular shaped segment of the courtyard pattern.
1077	Cut for land drain 1047		
1078	Possible tamping marks on concrete platform 1006		
1079	Cut for land drain 1002	1.8m long by 0.7m wide by 0.3m deep	A cut for a land drain aligned north to south.
1080	Cut for land drain 1050	1.7m long by 0.4m wide by 0.3m deep	A cut for a land drain aligned north-west to south-east.
1081	Cut for land drain 1051	0.9m long by 0.4m wide by 0.3m deep	A cut for a land drain aligned east to west.
1082	Stone paving slab	0.6m long by 0.5m wide by 20mm thick.	A large, irregular four sided piece of a paving slab re-used to cover drain intersection <i>1083</i> .
1083	Intersection of land drains 1002, 1050, 1051.	0.4m long by 0.3m wide by 0.3m deep	The point of intersection of land drains 1002, 1050, 1051.
1084	Re-used stone for bases of drains 1002 and 1051		Re-used flat, polished pieces of stone, probably from a domestic fire surround.
1085	Tarmac pathway		
1086	Iron strapping	0.45m long by 55mm wide by 10mm thick	Two pieces of iron strapping embedded in the ground and probably gutter supports.
1087	Substrate for pathway		
1088	Flower bed base	3.5m long by 0.35m wide by 0.25m deep	Dark greyish-black silty-clay with 30% inclusions of mortar and fragments of brick.
1089	Flower bed cut	3.5m long by 0.35m wide	A cut into substrate 1087 and alongside southern wall for a flower bed.

1090	Ceramic drain	0.28m diameter	An earthenware, circular drain set in substrate 1087.
1091	Possible cut for a drain	0.3m diameter	A circular cut in 1088 that was a possible drain.
2001	Thick turf	0.2m thick	Thick turf and topsoil
2002	Subsoil	0.24m thick	Gravelly loam subsoil
2003	Subsoil	0.3m thick	Mixed grey subsoil, 0.3m deep at west edge of trench, on the surface at the eastern side.
2004	Land drain	6.0m long by 0.6m wide	A brick lined land drain cut into the northern edge of the Rusholme Brook.
2005	Land drain	4.0m long by 0.4m wide	East to west aligned land drain.
2006	Land drain	3.3m long by 0.4m wide by	Gully drain comprised slate, stone and brick lined.
2007	Brick flower bed edge	10.7m long by 0.11m wide by 80mm deep	Line of single course deep flower bed.
2008	Layer of clay	10.7m long by 10.0m wide	Mid greyish-brown stoney-clay.
2009	Rusholme Brook	4.0m long by2.2m wide	Line of Rusholme brook, filled with light brown gravel.
2010	Deposit of oyster shells and pottery	1.0m long by 0.4m wide by 0.25m deep	A deposit of oyster shells and pottery as part of the backfill above land drain 2005.
2011	Cut for land drain 2006	6.0m long by wide 0.6m	Cut for land drain 2004.
2012	Cut for land drain 2005	4.0m long by 0.4m wide	Cut for land drain 2005.
2013	Cut for land drain 2004	4.0m long by 0.4m wide	Cut for land drain 2005 following back filled Rushholme Brook.
2014	Gravel pathway	2.0m long by 20mm deep	Gravel pathway visible in east-facing section of Trench 2.

ILLUSTRATIONS

FIGURES

Figure 1: Location map

Figure 2: Plan showing location of the two excavation areas

Figure 3: Plan of Area 1

Figure 4: Area 1 sections

Figure 5: Plan of Area 2 excavation

Figure 6: Whitworth Park perimeter wall, south-facing elevation

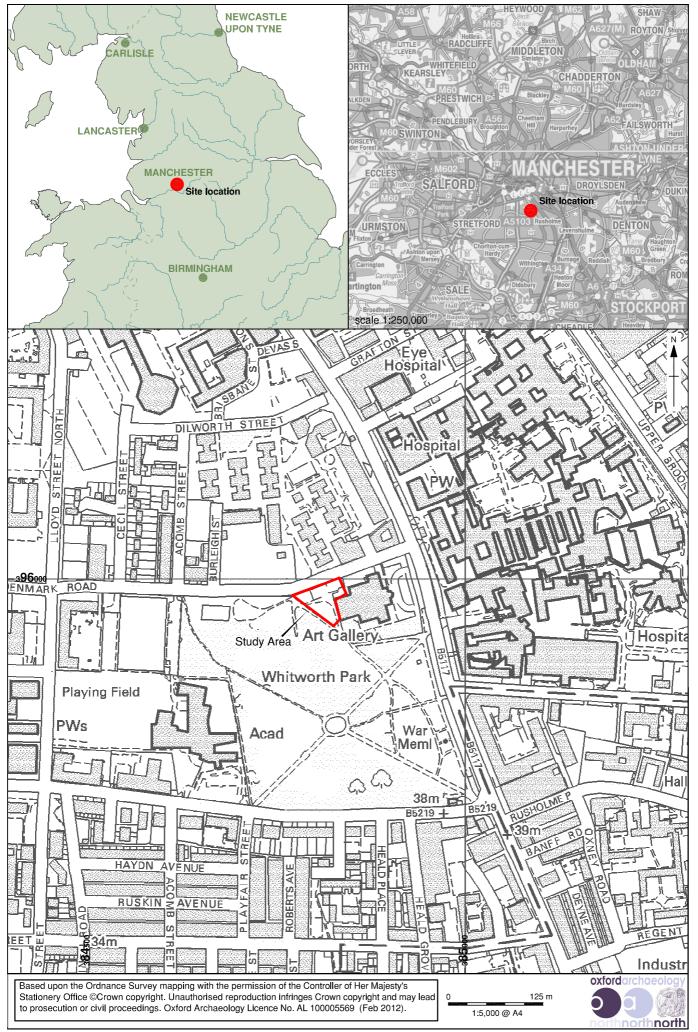


Figure 1: Site location



Figure 2: Plan showing location of the two excavation areas

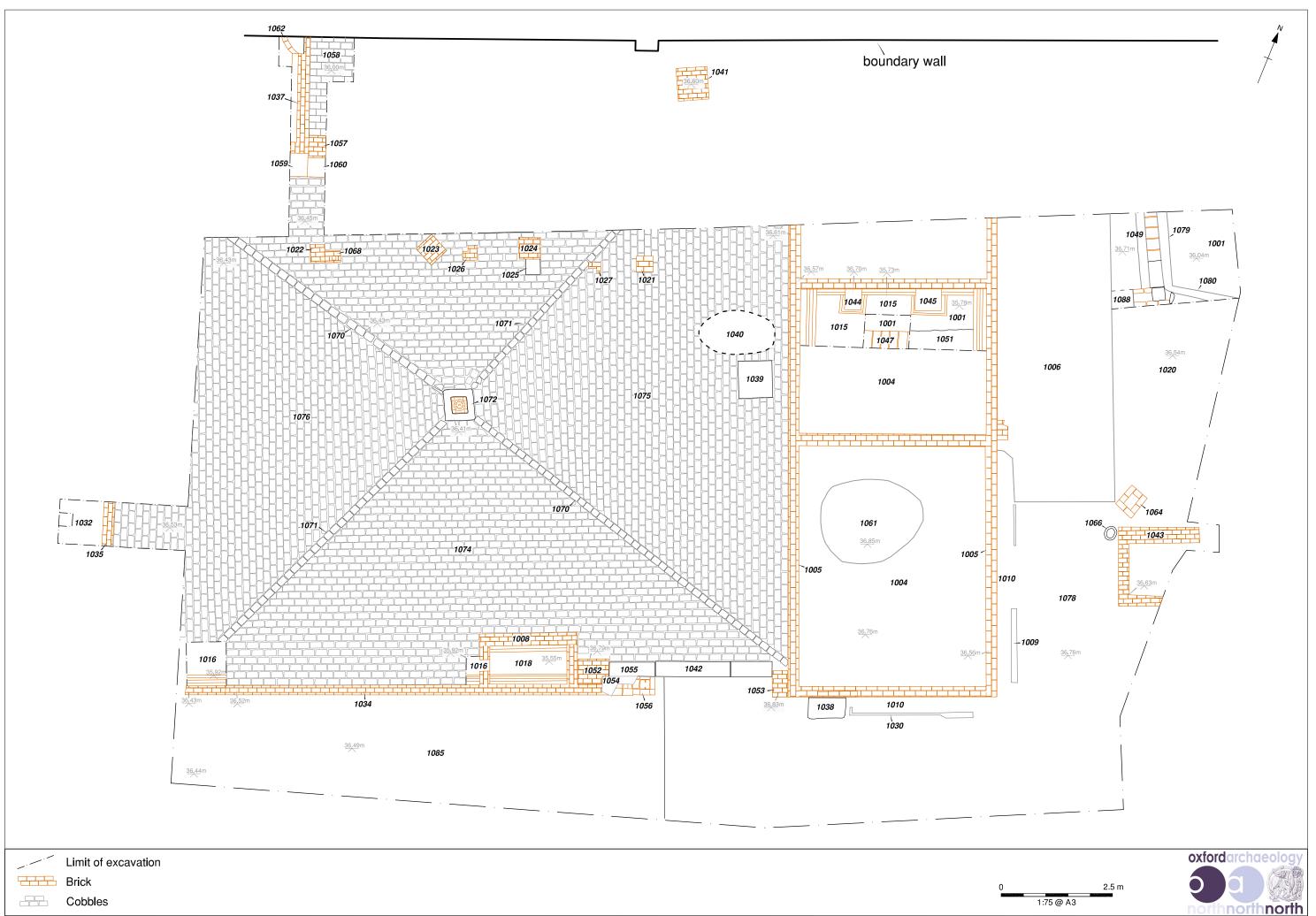
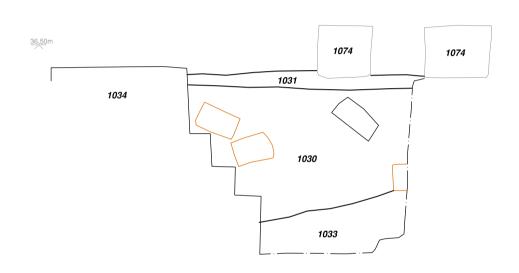
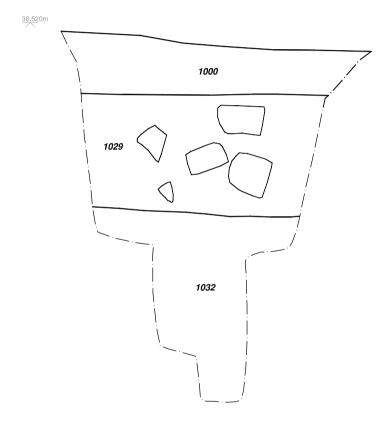


Figure 3: Plan of Area 1



East-facing section of sondage in south-west corner of Area 1



East-facing section of sondage in west extension to Area 1





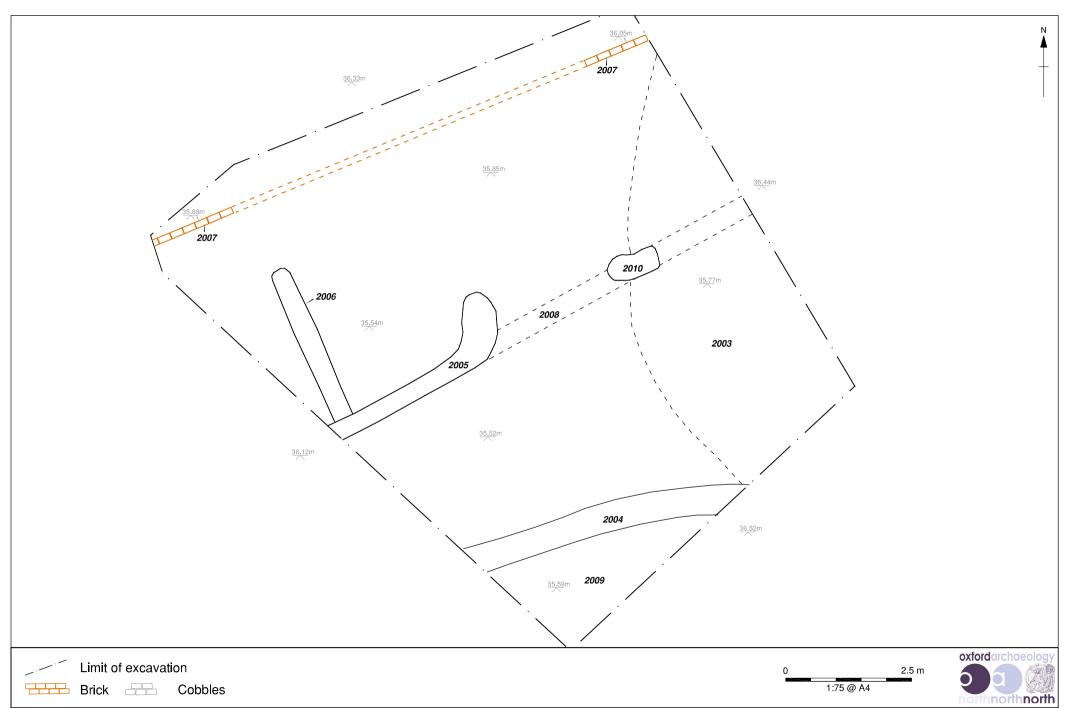


Figure 5: Plan of Area 2 excavation

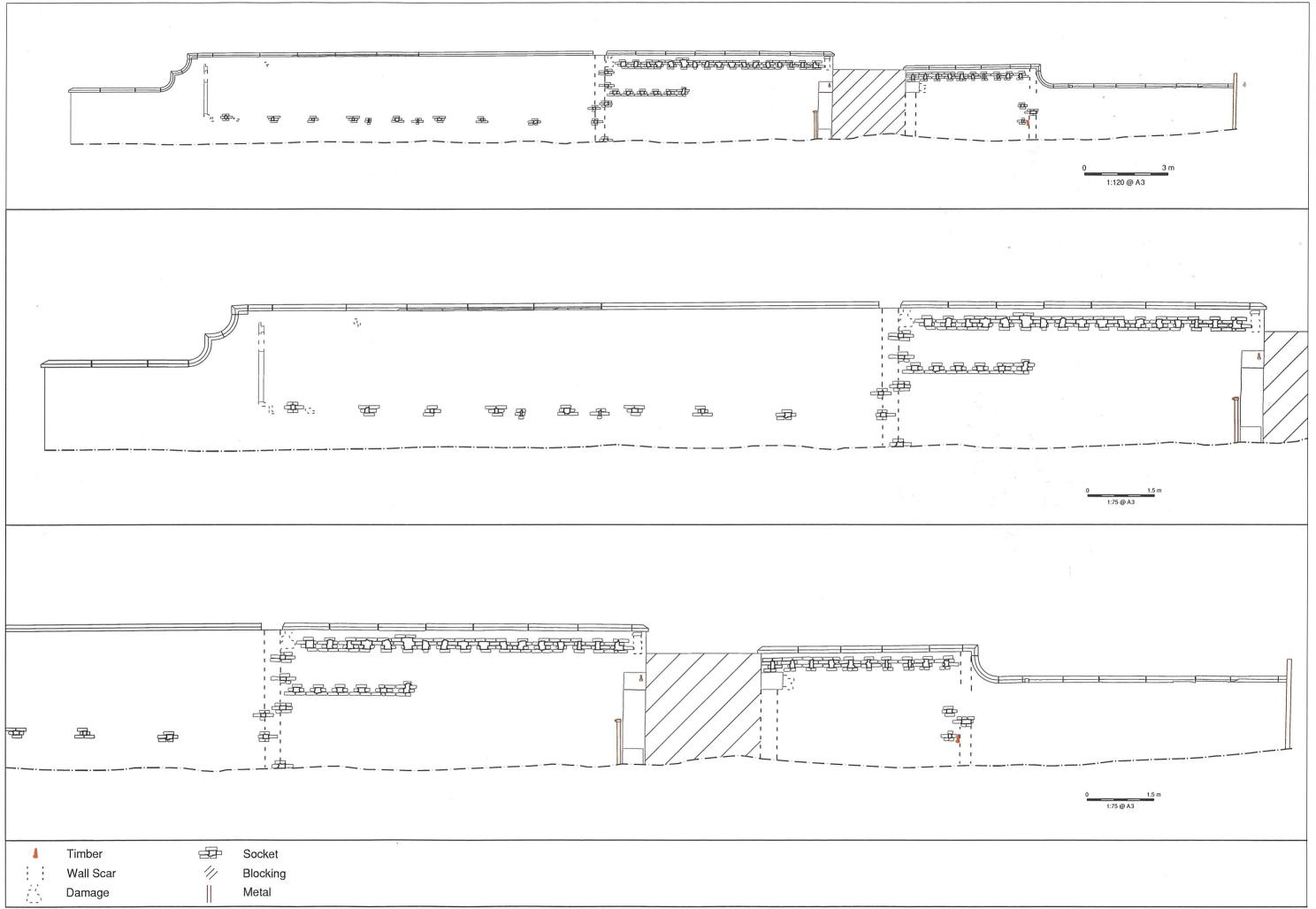


Figure 6: Whitworth Park Perimeter Wall, south-facing elevation