



Woolwich Riverside, Phase 9/10, A Blocks Archaeological Strip, Map and Record Report

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Woolwich Riverside, Phase 9/10, A Blocks

Archaeological Strip, Map and Record Report

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Contents

Summary	vii
Acknowledgements	viii
1 INTRODUCTION.....	1
1.1 Scope of work.....	1
1.2 Location, topography and geology.....	1
1.3 Archaeological and historical background.....	1
2 PROJECT AIMS AND METHODOLOGY.....	4
2.1 Aims	4
2.2 Methodology.....	4
3 RESULTS	5
3.1 Introduction and presentation of results	5
3.2 Ditch 16 – Roman?	5
3.3 Early to mid-18th century.....	5
3.4 Late 18th to mid-19th century.....	5
4 DISCUSSION	7
APPENDIX A CONTEXT INVENTORY	8
APPENDIX B FINDS REPORTS.....	13
B.1 Roman Pottery	13
B.2 Post-Roman Pottery	13
B.3 Clay Tobacco Pipes	15
B.4 Ceramic Building Material	16
B.5 Flint.....	17
B.6 Stone.....	18
B.7 Glass.....	18
B.8 Metal.....	18

APPENDIX C	ENVIRONMENTAL REPORTS.....	20
C.1	Animal Bone.....	20
APPENDIX D	BIBLIOGRAPHY	22
APPENDIX E	SITE SUMMARY DETAILS.....	24

List of Figures

Figure 1	Site location
Figure 2	Plan of 'punch-out' area
Figure 3	Selected sections
Figure 4	Historic maps: (a) Roque 1746 (top); (b) OS 1869; (c) OS 1957 (bottom)

List of Plates

Plate 1	Ditch 16, view SE
Plate 2	Pit 23, view S
Plate 3	Wall 6 and earlier brick-lined pit 9, view ENE
Plate 4	Walls 3 and 4, view N

Summary

Archaeological work, comprising strip, map and record excavation was undertaken to the west of The Royal Arsenal site at Woolwich during redevelopment by Berkeley Homes Ltd (Riverside Phase 9/10, A Blocks). A ditch of possible Roman date was recorded together with pits and brick-lined latrines of 18th and 19th century date. Several brick-built walls, probably elements of the mid-19th century Woolwich Bath and Lecture Hall and the 1950s extension to the Woolwich Power Station were also revealed. A deep basement pertaining to the power station had removed all earlier evidence across most of the development site.

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The project was managed for Oxford Archaeology by David Score. The fieldwork was directed by Dan Sykes, who was supported by Adam Rapiejko. Survey and digitizing was carried out by Conan Parsons and Gary Jones. Thanks is also extended to the teams of OA staff that cleaned and packaged the finds under the management of Leigh Allen and prepared the archive under the management of Nicky Scott.

1 INTRODUCTION

1.1 Scope of work

- 1.1.1 Oxford Archaeology (OA) was commissioned by Berkeley Homes Ltd to undertake an archaeological strip, map and record investigation on Phase 9/10 (Riverside) of the development to the west of The Royal Arsenal site at Woolwich. This proposed phase of development entailed the construction of residential blocks with associated landscaping sited over a large basement car park. The archaeological work was undertaken in two phases, between February-March 2018 and November-December 2018.
- 1.1.2 The work was undertaken as a condition of Planning Permission (planning ref. 16/3025/MA). The archaeological work was undertaken in agreement with the Local Planning Authority as advised by Mark Stevenson, Greater London Archaeology Advisory Service (GLAAS). Discussions with Mark Stevenson established the scope of work that was required in order to satisfy the planning condition. A Written Scheme of Investigation (WSI) outlined how OA would implement the archaeological works (OA 2017).
- 1.1.3 All work was undertaken in accordance with local and national planning policies.

1.2 Location, topography and geology

- 1.2.1 The Phase 9/10 site area is centred on National Grid Reference TQ 4347 7927. Phase 8 of the Riverside Development (B Blocks) is immediately to the east with the current western boundary of the Historic Royal Arsenal at Woolwich approximately 150m to the east (Fig. 1). The Woolwich ferry terminal on the south bank of the River Thames lies some 200m from the western limit of the Phase 9/10 area. The site is bounded to the south by Woolwich High Street, to the west by Bell Water Gate and to the north by the River Thames.
- 1.2.2 The majority of the site area currently consists of a low-lying asphalt-surfaced car park at approximately 5.5m aOD. There is a flood defence wall along the northern boundary of the site and a cycle way along the eastern edge where the ground rises to approximately 7.5m aOD.
- 1.2.3 The geology of the site is Terrace Gravels and Thanet Sand Formation overlying London Clay. (BGS Sheet 1SW).

1.3 Archaeological and historical background

- 1.3.1 The archaeological and historical background to the site is presented in the desk-based assessment for the Riverside development as a whole (OA 2014a).
- 1.3.2 The current site was partially developed by the beginning of the 17th century with wharves, warehouses and small cottages to the north of Woolwich High Street but there are also likely to have been earlier medieval structures. Most of this phase of the Riverside Development was occupied more recently by the Woolwich Power Station which was an imposing structure until its demolition in the 1980s. A low level car park now occupies in the foot print of this building.

- 1.3.3 Much of the area encompassed by the main Arsenal complex to the east was included in a programme of extensive archaeological investigations undertaken by Oxford Archaeology on behalf of English Partnerships (now the London Development Agency) during 1999 and 2000 (OA 2002). Subsequently further archaeological works have been undertaken for various developers, the leading one being Berkeley Homes, on sites across the Arsenal as development of that area has progressed. Information on the archaeological and historical background to the Warren and Teardrop sites is to be found in the Desk Based Assessment for that development (OA 2004) and is not reproduced here.
- 1.3.4 In addition to the extensive evidence relating to the military use of the site the previous works to the east within the Arsenal revealed Roman burials with a significant cemetery excavated in the area of Dial Arch approximately 200m to the south east.
- 1.3.5 Also found about 100m to the south east was a well-preserved tile-built kiln of 14th century medieval date, the first production site of the well-known London Ware pottery to be identified. A number of medieval pits were also recorded close to this kiln.
- 1.3.6 Oxford Archaeology undertook excavations on the Teardrop site immediately to the south east of the current development on the south side of Warren Lane in 2007-8 (OA 2008).
- 1.3.7 Excavations on the Teardrop site revealed further evidence of pottery manufacture, two further London Ware kilns, a Tudor kiln and a post medieval example. Medieval habitation was also confirmed in that area. The Teardrop site also presented evidence of significant Iron Age activity in the form of a substantial north south orientated ditch confirming Iron Age activity.
- 1.3.8 Prior to the work described above archaeological excavations were carried out on the Phase 5 site in 1986 and 1987 by the Kent Archaeological Rescue Unit (Philp 2010). A substantial ditch (presumed to be the continuation of the feature later excavated on the Teardrop site) was recorded and found to have a related smaller ditch running parallel on its eastern side. These ditches are dated to the Iron Age and also contained significant quantities of Roman domestic material in their upper fills. The ditches run directly through the Phase 5 site area. Within the Phase 6 area presumed to be enclosed by the large ditch a further excavation area revealed evidence of Iron Age habitation including ring ditches and pits. These excavations also confirmed that there had been extensive truncation of the earlier deposits by post medieval activity.
- 1.3.9 Excavation of the Phase 5 site area (OA 2014b) revealed significant made ground and landscaping deposits overlying the significant archaeological horizon at 1.5-2m. The survival of deposits relating to the large Iron Age ditch previously noted was established and it was investigated together with a smaller parallel ditch on its eastern side. Quantities of Roman material were retrieved from the mid-level fills of the major ditch. Both ditches appear to terminate within the site some 20m or so from the river. Evidence for medieval activity was noted including a chalk block walled structure and cellars in the northern part of the site. Structures relating to post medieval use of the site including wall foundations, intact brick floors, machine bases and industrial deposits were revealed. Evidence for pottery and clay pipe kilns from this period was

also recorded. Natural gravel was recorded generally at about 2m with possible small areas surviving slightly higher. However, significant truncation from modern features and construction of structures relating to the former gas works was also recorded. Made ground was of notably greater depth closer to the river as might be expected and no evidence was seen for wharf structures to a depth of 3m although they may well survive at greater depth.

- 1.3.10 Excavation of the Phase 6, 7 and 8 site areas immediately to the east of the current site (OA 2015, OA 2016) revealed natural gravels at approximately 5.5m aOD. Archaeological features included a presumed in situ Mesolithic flint scatter, probable enclosure ditches of prehistoric date, a Roman period pit and post hole containing painted wall plaster and a Saxon period cemetery containing 77 inhumation burials. There were also medieval and post-medieval negative features and structures relating to activity on the riverside wharf and in the streets set back from the river. Features relating to a Victorian gas works on the site were also recorded.

Potential

- 1.3.11 The evidence of the surrounding sites would indicate that there is significant potential for this site to contain evidence of post medieval domestic and industrial use. Medieval habitation and both medieval and post-medieval pottery and clay pipe production sites are recorded close by. The area close to the river may contain the remains of wharves and early riverside structures or revetments. Prehistoric and Roman activity has also been demonstrated in the immediate area.
- 1.3.12 However, the construction of the modern power station which occupied the majority of the site before it's demolition will certainly have caused significant truncation. The current car park at a lower level (c 5m aOD) than the surrounding ground is estimated to be at approximately the horizon where archaeology might be anticipated but geotechnical data indicates fairly consistent solid obstructions presumed to relate to the power station at up to 4-5m bgl which would imply that earlier archaeological deposits are unlikely to survive.
- 1.3.13 There is a greater chance of preservation around the edges of the site and possibly to the eastern side where there will be some reduction of the higher ground.

2 PROJECT AIMS AND METHODOLOGY

2.1 Aims

2.1.1 The project aims and objectives were as follows:

- i. To establish the presence or absence of archaeological remains within the proposed development area and excavate and record them to an appropriate level.
- ii. To record the extent, condition, nature, character, quality and date of any archaeological remains which may be affected by the proposed works.
- iii. To establish the ecofactual and environmental potential of archaeological deposits and features within the site and to take samples where appropriate.
- iv. To make available the results of the investigation.
- v. To record evidence for the power station and establish the degree to which this structure has truncated any earlier remains.
- vi. To establish if there is any evidence to indicate that the large prehistoric ditch recorded to the east returns through the current site as postulated by Philp.
- vii. To establish if any further remains relating to medieval occupation or pottery production exist in the site area.

2.2 Methodology

2.2.1 The first phase of archaeological work encompassed the monitoring of the breaking out of the existing concrete foundations including the northern flood defence wall, a large deeply-founded basement and the reduction of the raised cycle area to the east. The basement covered almost all the site area and removed any archaeological deposits within its footprint. Monitoring of the basement removal was confined to its eastern and northern extents within the site area. After agreement with Mark Stevenson (GLAAS) the remaining part of the basement did not require archaeological mitigation.

2.2.2 The remaining part of the site that required further archaeological mitigation comprised a small 'punch-out' area extending from the south-east corner of the site measuring approximately 410 square metres. Reduction within this area (second phase of archaeological work) was undertaken after its extents were secured by sheet piling.

2.2.3 Removal of soft overburden was undertaken under close archaeological supervision using a machine fitted with a toothless bucket to the surface of natural, which revealed a number of archaeological features.

2.2.4 All features were then hand-excavated and recorded as set out in the WSI.

3 RESULTS

3.1 Introduction and presentation of results

3.1.1 The results of the project are presented below and include a stratigraphic description of the trenches that contained archaeological remains. The full details of all contexts can be found in Appendix A. Finds reports are reproduced in Appendix B and the animal bone report in Appendix C. Figure 2 presents a plan of all features with representative sections illustrated in Figure 3. A selection of plates is also presented.

3.2 Ditch 16 – Roman?

3.2.1 V-shaped ditch 16 was located in the south-eastern corner of the area and survived for a length of 4.5m before being truncated to the south by sheet piles and to the north by modern machining. It survived to a depth of 0.62m and had likely been truncated by a Victorian-era cellar, that had previously been recorded overlying this area of site. It was up to 1.5 metres wide and contained two fills. The earliest (17), a sterile, gravel-rich fill slumped in from the east side, potentially indicating the position of a lost bank; and (18), the upper, siltier fill, which contained several sherds of Roman pottery, the latest dated to c AD 300-400 together with a few bones from a cow, sheep/goat and a pig. However, this fill also contained a bowl fragment from a clay tobacco pipe dated to after c 1847 together with a small fragment of peg-tile and a possible roofing tile, likely medieval or post-medieval in date. It is possible that this later material is intrusive.

3.3 Early to mid-18th century

3.3.1 Located towards the west of the area were a group of inter-cutting pits. Most of the pits were oval and shallow measuring no more than 1.2m across and 0.22m in depth. Pits 43, 47, 51 and 55 and 59 contained pottery, wine bottle and clay pipe fragments that suggest an early-mid 18th century date. The largest pit (43) was approximately square measuring 1.50m across and 0.50m depth. It may have served as a cesspit, as its primary fill (44) comprised a cassy sandy silt. This pit may have been slightly later in date as upper fill (64) contained part of the base from a tea bowl in early English porcelain, dated to 1745-80.

3.4 Late 18th to mid-19th century

3.4.1 To the west were a number of brick-lined pits that are likely to have served as latrines or soakaways. Five of the pits were circular (9, 20, 23, 26 and 40) with exterior diameters of between 1.2m-1.85m and were excavated to depths in excess of 0.35-0.90m. All but pit 20 were constructed with unmortared, unfroged red bricks suggesting a date prior to the mid-19th century. Pit 20 utilised both yellow and red froged bricks suggesting a later date. Most were filled with sandy soil and rubble and pottery dating to c 1820-50 was recovered from the fill of pit 40. A clay pipe bulb with the mark of Michael Martin (MM) was also recovered from pit 40, dating to after c 1847.

3.4.2 Wall 6 cut across brick-lined pit 9 on an approximate E-W alignment. It was constructed on off-set foundation with yellowish froged bricks with English bonding with

yellowish sandy-lime mortar. Pottery dated to c 1820-50 was recovered from its construction trench. A rectangular structure (34), possibly a cesspit, abutted it south face at an acute angle. It was constructed with unfrosted red brick utilising English Bond and excavated to a depth of 0.90m. Only its upper fill produced dating evidence, pottery dated to 1820-50 that included fragments from a sugar bowl and a Wedgwood vase.

- 3.4.3 Three further walls (3, 4 and 5) were also recorded, all of which were aligned north-south and all apparently later than wall 6. Wall 3, constructed with unfrosted red bricks, formed the west wall of a cellar and was seemingly abutted by wall 4 on its east side that was constructed with frosted/unfrosted yellow bricks. The third wall (5) ran parallel to the east side of wall 4 and was constructed with red unfrosted bricks.

4 DISCUSSION

- 4.1.1 A deeply founded basement, presumably associated with the former power station, had removed all archaeological deposits across the majority of the site. Survival was limited to a small area to the south-east that was situated outside this basement.
- 4.1.2 Ditch 16, which is thought to be possibly Roman in origin, is substantive enough to represent a boundary or possibly to have served as drainage, possibly for an adjacent north-south aligned thoroughfare. However, too little of it was exposed to ascertain its purpose with any certainty. Excavations undertaken immediately to the east of the site during Phase 8 of the development (OA 2016) revealed evidence for Roman occupation, potentially associated with a high-status building. This comprised a substantial posthole and a pit containing roofing and floor tiles, opus signinum and painted wall plaster, the former also containing a possible 'Cenotaph' deposit of 102 coins of 3rd to 4th century date. The presence of 4th century pottery in the ditch would suggest that it was contemporary with the posthole and therefore may have delimited the western extent of the precinct to which the postulated building was situated. Evidence from the infilling of the ditch, which indicated a bank existed on its eastern side, could support this argument.
- 4.1.3 The presence of a number of shallow pits along the western side of the excavated area suggests that during the 18th century this area was external and set aside for rubbish disposal. Rocque's map (1748) depicts the north frontage of Woolwich High Street as being built up with houses by this time with gardens to their rear, within which these pits are likely to have been situated (Fig. 4a). All evidence of the houses that were presumably located to the south did not survive subsequent truncation. This area appears to have remained external well into the 19th century as attested by several brick-lined pits that were possibly used as latrines serving the houses to their south.
- 4.1.4 The Ordnance Survey map of 1869 (Fig. 4b) shows two new streets were added to the north side of the High Street within the vicinity of the site. This included Nelson Street situated immediately to the west of the excavated area and Globe Lane further to the west. The Woolwich Bath and Lecture Hall occupied a large part of the eastern frontage of Nelson Street and its southern part extended into the site. Wall 6 constructed 1820-50, as attested from pottery recovered from its construction trench, corresponds fairly closely with the southern side of the building depicted on the 1869 map.
- 4.1.5 The three north-south aligned walls (3-5) that subsequently cut across wall 6 were presumably constructed after the demolition of the Woolwich Bath and Lecture Hall which occupied the site to at least 1916 as attested by the Ordnance Survey map of this date. By the early 1950's the Woolwich Power Station that originally stood on the west side of Globe Street was extended into the excavated area. Walls 3-4 correspond closely with a small auxiliary structure attached to the main east wall of the power station as depicted on the Ordnance Survey map of 1957 (Fig. 4c).

APPENDIX A CONTEXT INVENTORY

Context	Type (m)	Width (m)	Depth (m)	Description	Comment	Pot Date	Clay pipe date	Glass date
1	Masonry			Reinforced concrete	Flood defences			
2	Void				Not used?			
3	Masonry	0.24-0.33		Red unfrogged bricks 8 1/2 x 4 x 2 5/8 inches), English Bond, whitish sandy-lime mortar	Cellar wall			
4	Masonry	0.36-0.54		Yellow frogged bricks 9 1/4 x 4 3/8 x 2 1/2 inches), English bond, yellowish sandy-lime mortar	Victorian wall			
5	Masonry	0.34		Red unfrogged bricks 8 1/2 x 4 1/8 x 2 3/8 inches), whitish sandy-lime mortar	Georgian? Wall			
6	Masonry	0.73		Yellow frogged bricks 9 1/2 x 4 1/4 x 2 1/2 inches), English bond, yellowish sandy-lime mortar	Victorian wall			
7	Cut	1.72	0.37		Construction cut for wall 6			
8	Fill	1.72	0.37	Mid brown/grey sandy silt	Fill of construction cut 7	1820-1850	L18-19C	
9	Masonry		0.49+	Red bricks 8 1/2 x 3 3/4 x 2 1/2 inches, irregular bond, no mortar	Cesspit? Lining			
10	Layer				Natural			
11	Cut	1.85	0.49+		Construction cut for wall 9			
12	Fill		0.48+	Mid yellowish-brown gravelly sand	Fill of cesspit 9	1780-1840	L17C	
13	Fill		0.49+	Light yellowish-brown gravelly sand	Fill of construction cut for cesspit 9			

Context	Type (m)	Width (m)	Depth (m)	Description	Comment	Pot Date	Clay pipe date	Glass date
14	Cut	0.48	0.37	Oval, steep sides, flat base	Pit			
15	Fill	0.48	0.37	Soft mid grey sandy silt with flint and chalk	Fill of pit 14		L18-19C	
16	Cut	1.44	0.62	SE-NE, steep sided V-Shaped ditch.	Ditch			
17	Fill	0.92	0.3	Mid orangey grey-brown sandy gravel, frequent small pebbles	Primary fill of ditch 16 (from bank on E-side??)			
18	Fill	1.4	0.36	Mid orangey grey-brown gravelly sand	Upper fill of ditch 16	AD300-400	1847+	
19	Fill			Compact whitish-yellow lime mortar	Basal fill of cesspit 9			
20	Masonry			Yellow/red frogged bricks (8 1/4 x 4 x 2 1/4 inches), unmortared	Cesspit? lining			
21	Cut	1.2	0.35+		Construction cut for wall 20			
22	Fill		0.35+	Mid brown/grey sandy silt	Fill of cesspit 21			
23	Masonry			Red unfrogged bricks (8 3/4 x 4 3/4 x 2 1/4 inches), unmortared	Well?			
24	Cut	1.29			Construction cut for 23			
25	Fill	1.29		Solid mid grey with stone, chalk and limestone mortar (unex)	Fill of well? 23		17C	
26	Masonry			Red unfrogged bricks (4 1/4 x 4 x 2 1/2 inches), unmortared	Cesspit? Lining			
27	Cut	1.34	0.74+		Construction cut for 26			
28	Fill	1.34	0.24	Soft mid orange sandy silt with flint, chalk, bricks	Upper fill of cesspit? 26			
29	Fill	1.34	0.5	Solid mid grey sandy silt with	Lower fill of cesspit? 26			

Context	Type (m)	Width (m)	Depth (m)	Description	Comment	Pot Date	Clay pipe date	Glass date
				stone, chalk and limestone mortar				
30	Cut	0.5		Oval, steep sides, flat base	Pit			
31	Fill	0.5		Soft dark greyish black sandy silt	Fill of pit 30			
32	Cut	1.94	0.90+		Construction cut for 34			
33	Fill	1.94	0.90+	Mottled greyish-orangey brown silty sand	Fill of construction cut 32			
34	Masonry			Unfrogged red brick (9 1/2 x 4 3/4 x 3 1/8 ins, English bond	Cesspit? Lining			
35	Fill	0.6	0.64	Mid brown/grey silty sand, freq chalk	Fill of cesspit 34			
36	Fill	0.84	0.3	Mid grey brown silty ashy fill, freq pebbles	Fill of cesspit 34			
37	Fill	0.83	0.22	Dark yellowish brown grey gravelly silty sand with much rubbish	Fill of cesspit 34			
38	Fill	1.23	0.48	Dark grey-brown silty sand, freq pebbles	Fill of cesspit 34	1820-1850		
39	Cut	1.83	0.5		Construction cut for 40			
40	Masonry			Unfrogged red brick (8 3/4 x 4 1/4 x 2 1/2 ins	Cesspit? Lining			
41	Fill		0.5	Soft mid greyish-black sandy silt	Fill of construction cut 39			
42	Fill	1.83	0.5	Soft mid grey sandy silt with tile and chalk frags	Fill of cesspit 40	1820-1850	1847+	
43	Cut	1.5	0.5	Square, vertical sides and flattish base	Cesspit?			
44	Fill	1.5	0.5	Cessy dark orangey-brown grey gravelly silty sand, freq pebbles and CBM	Fill of cesspit? 43	1700-1780		

Context	Type (m)	Width (m)	Depth (m)	Description	Comment	Pot Date	Clay pipe date	Glass date
45	Cut	0.48	0.2	Oval, steep sides, flat base	Pit			
46	Fill	0.48	0.2	Firm light-mid yellowish-brown sand	Fill of pit 45			
47	Cut	0.97	0.18	Sub-rectangular. Steep sides, flat base	Pit			
48	Fill	0.97	0.18	Firm mid brownish-yellow grey sand	Fill of pit 47	1680-1780 ?	E18C	18-E19C
49	Cut	1.2	0.12	Oval, steep sides, flat base	Pit			
50	Fill	1.2	0.12	Firm mid brownish-yellow grey sand	Fill of pit 49	1650-1850 ?		
51	Cut	0.88	0.23	Irregular, steep sides, flat base	Pit			
52	Fill	0.88	0.23	Firm mid brownish-yellow grey sand	Fill of pit 51	1670-1800	1700-1720	E18C
53	Cut	0.62	0.23	Oval, stepped sides, flat base	Pit			
54	Fill	0.62	0.23	Firm light-mid yellow grey brown sand	Fill of pit 53			
55	Cut	0.44	0.16	Oval, moderate sides, rounded base	Pit			
56	Fill	0.44	0.16	Firm mid-dark greyish brown sand	Fill of pit 55	1650-1850 ?	1700-1750?	18C
57	Cut	1.22	0.26	Irregular, steep sides, concave base	Pit			
58	Fill	1.22	0.26	Friable mottled mid orangey brown silty sand, freq charcoal	Fill of pit 57			
59	Cut	0.93	0.14	Irregular oval with flat base	Pit			
60	Fill	0.93	0.14	Friable mottled mid purplely brown silty sand	Fill of pit 59	1650-1800		
61	Cut	0.47	0.24	Square, steep sides and flat base	Pit			
62	Fill	0.28	0.08	Soft light orange/yellow sandy silt	Upper fill of pit 61			
63	Fill	0.47	0.24	Soft dark greyish block sandy silt	Lower fill of pit 61	1730-1780	18-E19C	

Context	Type (m)	Width (m)	Depth (m)	Description	Comment	Pot Date	Clay pipe date	Glass date
64	Fill	1.5	0.37	Friable mid brownly-orange gravelly sand, frequent pebbles	Upper fill of pit 43	1745-1780	1700-1720	

APPENDIX B FINDS REPORTS

B.1 Roman Pottery

By John Cotter (with identifications by Edward Biddulph)

Introduction and methodology

- B.1.1 The site produced 10 sherds of Roman pottery weighing 55g from two contexts. The Estimated Number of Vessels (ENV) was 10.
- B.1.2 All the pottery was examined, spot-dated and fully catalogued (see Excel spreadsheet in archive). This was catalogued using the fabric codes of the Museum of London (MoLA 2014a). For each context and fabric, the total pottery sherd count and weight were recorded. Vessel form, if identifiable, was also recorded together with ENV (minimum vessel count). Vessel part, decorative details, condition and traces of use are recorded in the comments field.

Pottery Fabrics

- B.1.3 The range of pottery fabrics is presented in Table 1 below.

Fabric	Common name	E Date	L Date	Sherds	Weight	ENV
GLAUC	glauconite-tempered (greensand) ware	400BC	AD50	1	3	1
GROG	unsourced grog-tempered ware	50BC	AD70	1	12	1
MAYEN	Mayen ware	AD300	AD410	1	3	1
OXCC	Oxfordshire colour-coated ware	AD240	AD410	2	8	2
PATCH	Patchgrove grog-tempered ware	AD43	AD200	1	1	1
SAND	unsourced sand-tempered ware	AD43	AD410	3	15	3
TSK	Thameside Kent ware	AD150	AD300	1	13	1
TOTAL				10	55	10

Table 1. Breakdown of Roman pottery fabrics in alphabetic order (by code)

Summary and recommendations

- B.1.4 The sherds are mostly small and abraded suggesting (along with the high ENV) they are residual in their contexts. The single sherd of Fabric TSK occurs in a 19th-century context 8. The nine other sherds are all from context 18 and give an over-all pottery spot-date of c AD 300-400.

B.2 Post-Roman Pottery

By John Cotter

Introduction and methodology

- B.2.1 The site produced a total of 54 sherds of post-Roman pottery weighing 1964g from 12 contexts. The Estimated Number of Vessels (ENV) was 44. A small assemblage of Roman pottery recovered is reported on elsewhere.
- B.2.2 All the pottery (Roman and post-Roman) was examined, spot-dated and fully catalogued during the present assessment stage (see Excel spreadsheet in archive). This was catalogued using the fabric codes of the Museum of London (MoLA 2014b). For reasons of economy and easier presentation some of the more ephemeral/interpretative data fields have been omitted from the catalogue here although all those essential for the assessment and potential publication of the assemblage have been retained. For each context and fabric, the total pottery sherd count and weight were recorded. Vessel form, if identifiable, was also recorded together with ENV (minimum vessel count). Vessel part, decorative details, condition and traces of use are recorded in the comments field.

Pottery Fabrics

- B.2.3 All the pottery is of post-medieval date (ie. after c 1480). A detailed breakdown of the fabrics is presented in Table 1 below.

Fabric	Common name	E Date	L Date	Sherds	Weight	ENV
BBAS	Black basalt stoneware	1770	1900	1	13	1
BLACK	Blackware	1600	1900	1	7	1
CHPO	Chinese porcelain	1580	1900	1	6	1
CREA DEV	Creamware with developed pale glaze	1760	1830	2	13	1
ENPO	English porcelain	1745	1900	1	29	1
LONS	London stoneware	1670	1926	3	116	3
MATB	Martabani stoneware	1500	1800	2	222	1
NIMS	North Italian marbled slipware	1600	1750	3	264	2
NOTS	Nottingham stoneware	1700	1800	1	15	1
OLIV	Spanish olive jar	1550	1750	1	102	1
PEAR TR	Pearlware with underglaze transfer-printed decoration	1770	1840	3	204	2
PMR	London area post-medieval redware	1580	1900	13	489	11
PMSRG	London area post-medieval slipped redware with green glaze	1480	1650	1	110	1
RBOR	Surrey-Hants border redware	1550	1900	5	137	4
STSL	Staffordshire-type combed slipware	1660	1870	4	27	3
SUND	Sunderland-type coarseware	1800	1900	1	17	1
TGW	English tin-glazed ware	1570	1846	5	64	4
TPW	Transfer-printed refined whiteware	1780	1900	2	88	2
YELL	Plain yellow ware	1820	1900	2	2	1
YELL SLIP	Yellow ware with industrial slip decoration	1820	1900	2	39	2
TOTAL				54	1964	44

Table 1. Breakdown of post-medieval pottery fabrics in alphabetic order (by code)

Summary and recommendations

- B.2.4 The assemblage comprises post-medieval fabrics and vessel forms common to the London area and beyond. The condition is variable, generally good but mostly very fragmentary, though with many large fresh pieces present. The high ratio of ENV counts (44) to sherd counts (54) underlines the fragmentary nature of the assemblage and suggests many pieces may be residual or redeposited in their contexts. Ordinary domestic pottery is represented. A range of (late?) 17th- to 19th-century wares are present.
- B.2.5 As usual for an assemblage of this date range, the commonest fabric is post-medieval glazed redware (PMR, 13 sherds). Items of note, in other wares, include two bowls in North Italian marbled slipware (NIMS) from contexts 38 and 44. The bowl from 38 has a footring base and much of the lower wall surviving, but is residual in a 19th-century context. These attractive and colourful vessels probably came from a fairly well-to-do household. In Britain they mainly come from coastal sites (Hurst *et al* 1986, 33-37). A rim from a rare Martabani stoneware jar (MART), with horizontal lug handle, was recovered from another 19th-century context 42. Martabani jars were produced in many centres throughout south-east Asia from the 15th to the 19th century, including Burma and south China (*ibid.*, 10-11). They were sometimes imported for their contents (eg. ginger or pickles), or as novelty items to display alongside costly Chinese porcelain. The jar here may be as late as the 18th century but is still a good example of this fairly rare type. The latest pottery recovered includes common 19th-century tablewares and a chamberpot in Staffordshire-type Pearlwares and transfer-printed wares (PEAR TR and TPW) alongside a few contemporary vessels in Yellow ware (YELL, YELL SLIP). Further details of the pottery may be consulted in the catalogue. As the assemblage has been fully catalogued no further work will be required.

B.3 Clay Tobacco Pipes

By John Cotter

Introduction and methodology

- B.3.1 The site produced a total of 21 pieces of clay pipe weighing 92g, from 11 contexts. These have been spot-dated and fully catalogued (in Excel) in accordance with the standards of the Museum of London (MoLA 2007). These include a series of pipe bowl form codes based on Atkinson and Oswald's (1969) London pipes typology with bowl types assigned to an abbreviated code (eg. AO22). The catalogue records, per context, the quantity of stem, bowl and mouth fragments, the overall fragment count and weight as well as the minimum number of bowls present. Other fields record details of decoration, milling, use, and any makers' marks. Additional information is provided in a comments field. Full catalogue details are available in the project archive.

Summary and recommendations

- B.3.2 The condition of the material is fairly good, but fragmentary, with slight wear visible on just a few pieces and several fairly long fresh pieces of stem up to 85mm long. A minimum of five pipe bowls was recovered of which three are complete. Sixteen pieces of stem were also recovered, but no mouthpieces. The earliest bowls date from the early 18th century and the latest are probably mid-19th century. A small group of eight fresh clean stems from context 15 are clearly of 17th century date but the same context also produced a small piece of (intrusive?) late 18th- or 19th-century stem, but no pottery. The following pipe bowl types were identified:

1700-1780

- B.3.3 AO25: A common type nationally and usually assigned a very broad 18th-century dating - unless other attributes are present to refine this. Three examples were identified. Two examples with 'bottered' (internally trimmed) rims and makers' marks probably date to c 1700-1720. One of these, from context 52, has generic moulded crown symbols on either side of the heel - in place of the maker's initials; the other (64) has the maker's initials 'I/E' on the sides of the heel. This maker cannot be identified with any certainty as several London makers had these initials around this time. The third AO25 bowl (56) is tentatively spot-dated to c 1700-1750 and has a blundered maker's mark ('C/E?') which also cannot be identified.

1780-1845

- B.3.4 AO27: Two examples, both with vertical ribbed decoration and apparently identical (18 and 42). One is complete (42) and both have the same maker's mark 'M/M' on the spur. The latter can be identified as Michael Martin of Woolwich who is listed in a local directory for 1847 (Oswald 1975, 141). This date is at the very end of the range usually assigned to this bowl form - so perhaps the maker was using an old mould?
- B.3.5 As the pipes have been fully catalogued no further work will be required.

B.4 Ceramic Building Material

By John Cotter

Introduction and methodology

- B.4.1 The site produced a total of 12 pieces of ceramic building material (CBM) weighing 1378g, from six contexts. This is probably all post-medieval (after c 1480). No Roman CBM was noted. The assemblage is generally in a very fragmentary and abraded condition and of very little interest aside from its limited use for dating purposes.
- B.4.2 All the CBM was catalogued in some detail in Excel and using the fabric codes of the Museum of London, and a duplicate reference collection of the commonest fabrics (housed at Oxford Archaeology). The catalogue has a column for each broad functional

type or category of CBM (eg roof tile, brick, floor tile and ‘other’ or miscellaneous types). For each context and fabric, the functional types were recorded by sherd (or fragment) count and weight, each functional type being treated as a separate record. Complete bricks or tiles were treated as separate records. A comments field provides additional details including measurable dimensions of all the more complete items. A brief description of fabric colour, condition and anything else of interest was also noted for most items. An approximate spot-date was assigned to the latest material in each context. Given the conservatism of CBM production techniques and fabrics over time, however, plus the poor condition of the material, spot-dates assigned to individual contexts are usually quite broad - and even these should be treated with a degree of caution. Besides this there is also the likelihood of re-use and particularly of redeposition. Pottery spot-dates (where present) usually provide a more accurate estimate of context date.

Summary and recommendations

- B.4.3 All the material appears to be post-medieval (mainly 17th to 19th century), although a single piece of roof tile from context 52 could perhaps be late medieval or early post-medieval. Most items are in oxidised fabrics and all typical of the London area during this period. Eight pieces are from flat roof tiles (probably peg tile), there are two brick fragments and two fragments of miscellaneous CBM.
- B.4.4 The best-preserved item, from context 15, is the complete lower end of a peg tile with a width of 140mm and a thickness of 12-14mm. One other peg tile corner has traces of a nailhole (15). A single crudely made brick end, also from 15, is of early appearance - possibly 17th or early 18th century? The other possible brick is a shapeless scrap. One of the two ‘other’ or miscellaneous items is a fresh fragment from the edge of gently curved tile - probably a pan tile (58). The second miscellaneous item (18) is very abraded and of uncertain form but might be from something like a mathematical tile (used for renovating the facades of timber-framed buildings)? As the CBM has been fully catalogued no further work will be required.

B.5 Flint

By Michael Donnelly

- B.5.1 A single flint flake was recovered from these works. One flake was recovered from context 46. The flake is a squat example with a hard-hammer or metal hammer bulb, cortical platform, slightly complex flaking pattern and is relatively fresh. There is some chance that this flake is later prehistoric in date, but it would appear more likely to be a waste flake from either the shaping of flint nodules for use as building material or from damage to flint-built foundations in this area. Therefore, a late medieval/post-Medieval date seems most likely for this flake.

Context	type	sub-type	notes	date
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46	Flake	Distal trimming	Very hard-hammer or metal hammer struck flake with cortical platform. Possibly MBA-LBA but Med/Post Med building material waste flake seems most likely	?Med/P-med
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B.6 Stone

By Ruth Shaffrey

- B.6.1 A single piece of stone was retained and submitted for analysis. This is a crudely made sphere of very hard stone, probably a flint nodule (with only cortex visible). It measures 90mm diameter and weighs 1004g (37). This was presumably used as a stone cannonball.
- B.6.2 A decision about the retention of the ball should be made in consultation with the receiving museum.

B.7 Glass

By Ian Scott

- B.7.1 There are four pieces of vessel glass, two sherds from wine bottle(s) from context 48, and single sherds from the heel of a bottle or flask in green glass from context 56, and almost complete neck and finish of a wine bottle of early 18th-century form from context 52.

Catalogue

Context 48	(1)-(2)	Wine bottle. 2 x non-refitting sherds. Probably 18th- or early 19th-century. Green glass. Probably 18th- or early 19th-century
Context 52	(3)	Wine bottle. Short strongly tapered neck with cracked-off rim and hand-applied horizontal string rim. Green glass. Early 18th-century. Extant Ht: 66mm.
Context 56	(4)	Wine bottle or flask. Sherd from the heel of a vessel possibly with flowerpot shaped body. Green glass. Probably 18th-century but could be later in date.

B.8 Metal

By Ian Scott

- B.8.1 There are just four metal objects. These include a label made from sheet copper alloy and small copper alloy nail from context 8. The nail may well have been used secure the label. The other metal finds are nails, one from context 25 and the other from context 54. None of the objects is closely datable.

Catalogue

Context 8	(1) Label formed from rectangular piece of cu alloy sheet with angle cut corners and single piercing at one end. No sign of any punched or engraved inscription/writing. L: 52mm; W: 25mm. (2) Nail small with broad square head tapering to a thin point. Cu alloy. L: 29mm.
Context 25	(3) Nail with small slightly domed head and tapered square section stem. Fe. L: 65mm.
Context 54	(4) Nail with flat or slightly domed circular head and tapered but encrusted stem. Hand forged. Fe. L: 50mm.

APPENDIX C ENVIRONMENTAL REPORTS

C.1 Animal Bone

By Lee G. Broderick

Introduction

C.1.1 A total of 13 animal bone specimens were recovered from the site (Table 1), all of which were collected by hand. The assemblage was recorded in full, with the aid of the Oxford Archaeology skeletal reference collection and standard identification guides, using a diagnostic zone system (Serjeantson 1996).

Description

C.1.2 Preservation on the site was moderate to good (Behrensmeyer 1978, stages 2-3). The earliest phase on the site was possibly Roman, represented in the assemblage by seven specimens from a single context (18). This included single specimens of each of the principal domesticated mammals – caprine (sheep [*Ovis aries*] and/or goat [*Capra hircus*]), domestic cattle (*Bos taurus taurus*) and pig (*Sus domesticus*) (Table 1).

C.1.3 The post-medieval material included part of a large pig humerus (Bd=47.6), which had been gnawed by a rodent. Four caprine specimens were from the undated context 58. Based on their condition they are also likely to be post-medieval. Three of the specimens had butchery marks – cuts and chops – and these are likely to be kitchen waste.

Conclusions

C.1.4 Little can be read into such a small assemblage. Of most note is the large pig humerus. Livestock ‘improvement’, whereby animals were bred to be larger, became of increasing significance from the sixteenth century onwards and the specimen recorded here is likely to be part of that phenomenon. The gnawing by rodents could indicate the presence of rats on the site at that time.

Recommendations regarding the conservation, discard and retention of material

C.1.5 The assemblage should not be considered a priority for retention.

Table 1: Total NISP (Number of Identified SPecimens) and NSP (Number of SPecimens) figures per period from hand-collected material from the site

	Roman?	c1650-1800	c1730-1780	Undated
domestic cattle	1			
caprine	1			4
pig	1		1	
medium mammal		1		
large mammal	4			
Total NISP	7	1	1	4
Total NSP	7	1	1	4

Table 2: NSP observed with non-species information

	Butchery marks	Pathologies	Gnawed	Ageing data	Biometric data
caprine	4	1		3	2
pig		1	1	1	1
Total	4	2	1	4	3

Table 3: Total NSP and mass per context

Context	NSP	Mass (g)
18	7	28
58	4	65
60	1	9
63	1	52

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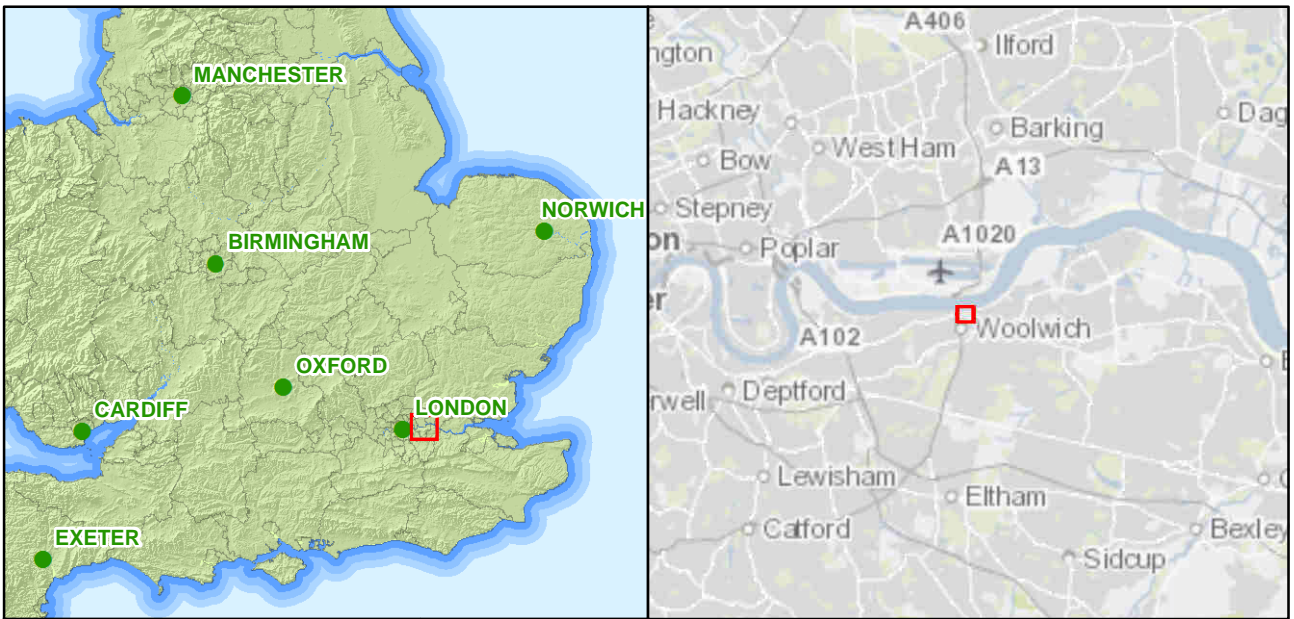
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APPENDIX E SITE SUMMARY DETAILS

Site name:	Woolwich Riverside, Phase 9/10, A Blocks
Site code:	WWV 18
Grid Reference	NGR TQ 4347 7927
Type:	Strip, map and record
Date and duration:	February-March 2018 and November-December 2018
Area of Site	0.77ha
Location of archive:	The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with Museum of London in due course, under the following accession number: WWV 18.
Summary of Results:	Archaeological work, comprising strip, map and record excavation was undertaken to the west of The Royal Arsenal site at Woolwich during redevelopment by Berkeley Homes Ltd (Riverside Phase 9/10, A Blocks). A ditch of possible Roman date was recorded together with pits and brick-lined latrines of 18th and 19th century date. Several brick-built walls, probably elements of the mid-19th century Woolwich Bath and Lecture Hall and the 1950s extension to the Woolwich Power Station were also revealed. A deep basement pertaining to the power station had removed all earlier evidence across most of the development site.



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Figure 1: Site location

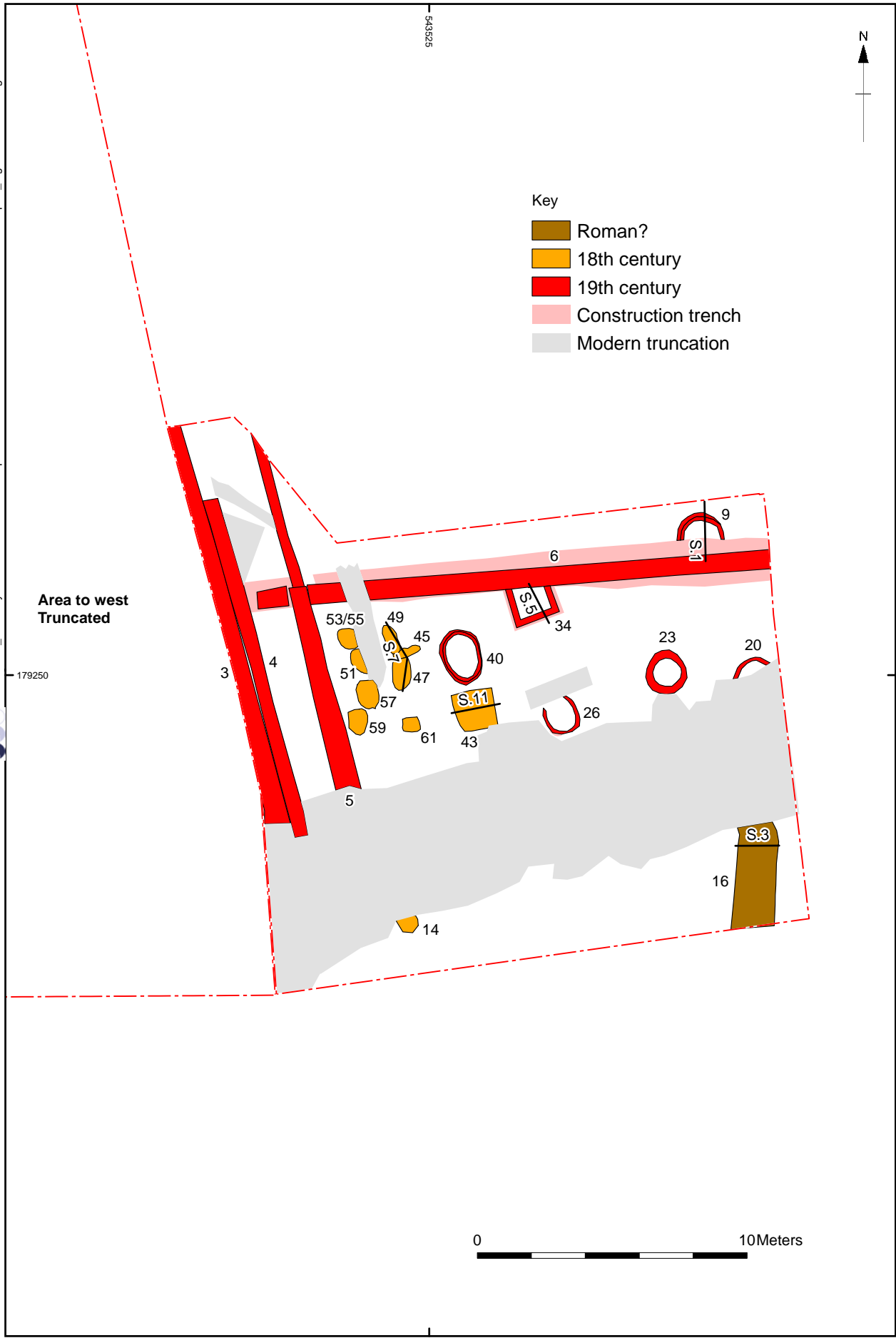


Figure 2: Plan of 'punch-out' area

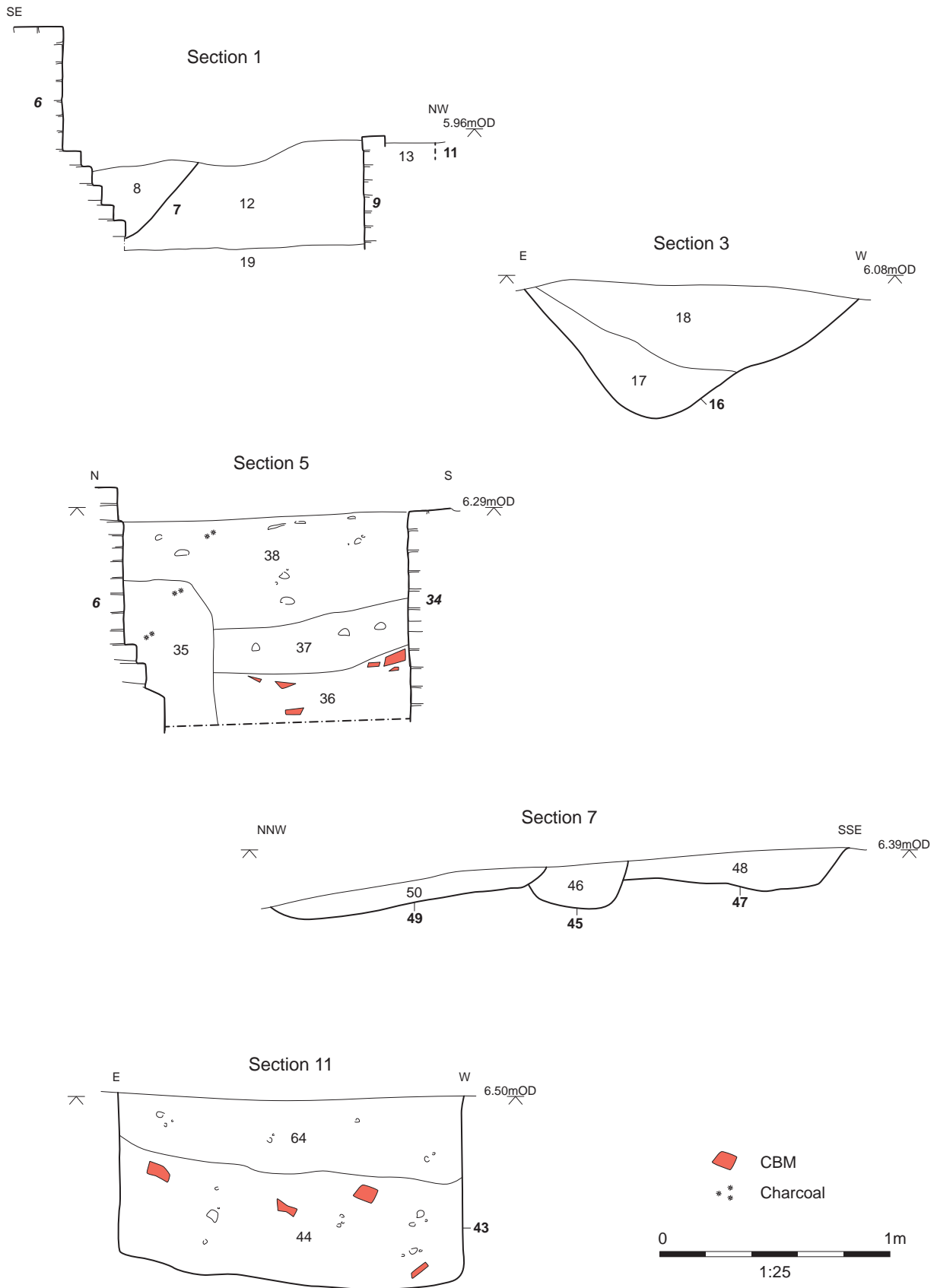


Figure 3: Selected sections

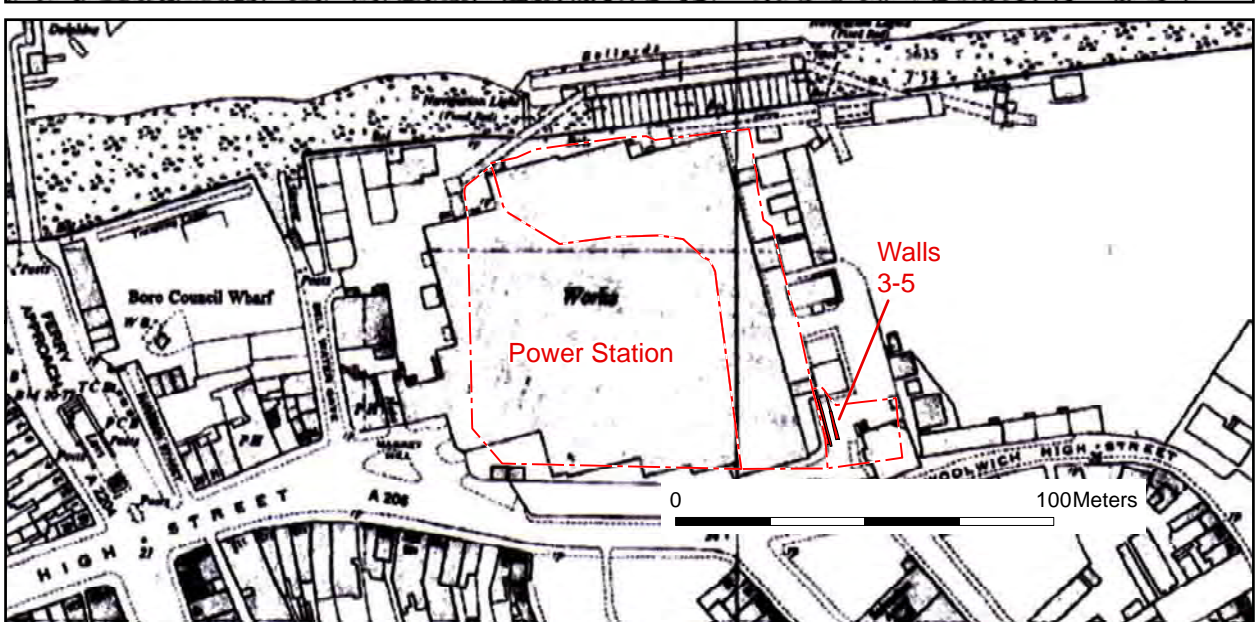
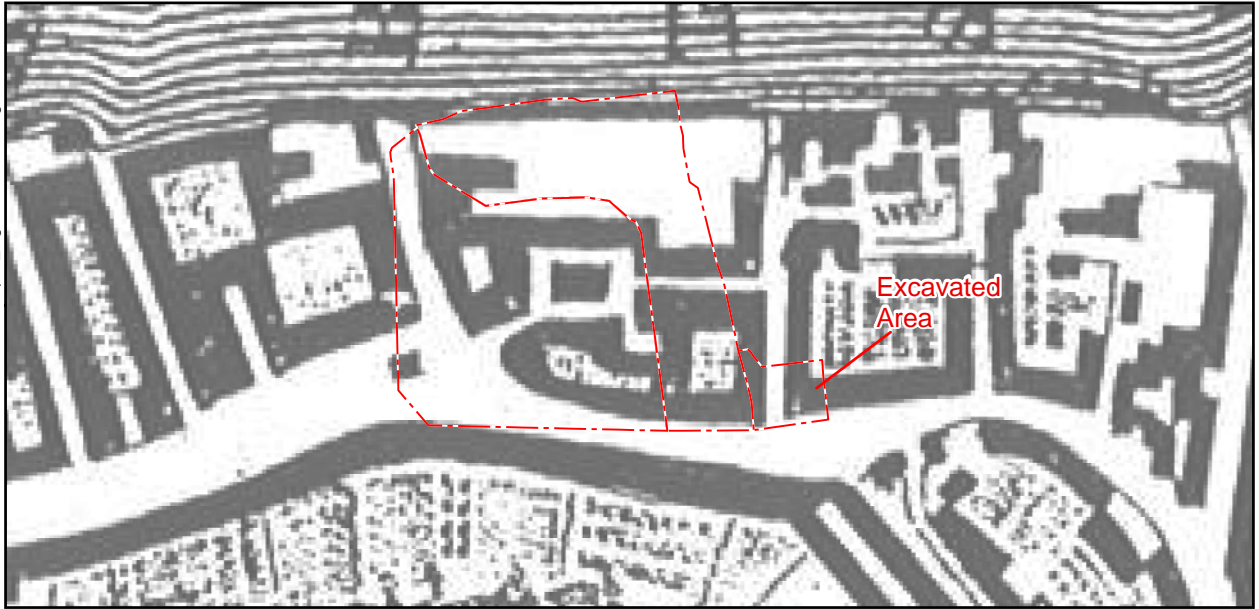


Figure 4: Historic maps: (a) Roque 1746 (top); (b) OS 1869; (c) OS 1957 (bottom)



Plate 1: Ditch 16, view SE



Plate 2: Pit 23, view S



Plate 3: Wall 6 and earlier brick-lined pit 9, view ENE



Plate 4: Walls 3 and 4, view N



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