Roman and Civil War Remains at the Oxford University Physics Building: Summary Report on Archaeological Investigations

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with contributions by Katie Marsden and E.R. McSloy

SUMMARY

Excavation at the site of the new Oxford University Physics Building revealed several Roman quarry pits and Roman field boundary ditches. A further, substantial, ditch was almost certainly part of the 1640s Civil War defences and seems to have remained partially visible at least into the eighteenth century. Features revealed within a service tunnel excavated close to the projected extent of a Neolithic henge remain undated but are most likely prehistoric.

Between May 2015 and March 2016, Cotswold Archaeology (CA) undertook excavations at the request of Parsons Brinckerhoff at the site of the new Oxford University Physics Building, Parks Road, Oxford. The site (centred at NGR 45137 20705; Fig. 1) is located in North Oxford, between Parks Road and the University Parks. Prior to the redevelopment, it consisted of a tarmac car park with areas of soft landscaping and extended partially into the University Parks to the north. The site lies at approximately 63 metres above Ordnance Datum (OD) on the Second (Summertown-Radley) Terrace sands and gravels, and the River Cherwell is 600 metres to the east.

ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

Excavations south-west of the site at St John's College revealed part of a late Neolithic henge.[1] Observations elsewhere suggest that this had a diameter of *c.*150 metres and extended to within 30 metres of the site (Fig. 1). North of the site, cropmarks within the University Parks include what has been interpreted as an extensive Bronze-Age barrow cemetery, a ritual and funerary landscape no doubt influenced by the location of the earlier henge.

The nearest traces of Roman occupation were found at Mansfield College, 300 metres south-east of the site, although these seem to have been on the periphery of any settlement.[2] These remains and the occasional discovery of Roman ditches, dispersed burials and unstratified Roman finds,[3] suggest that the site lay within a rural landscape on the edge of an as yet undefined area of settlement during the Roman period.

[1] S. Wallis, *The Oxford Henge and Late Saxon Massacre with Medieval and Later Occupation at St John's College, Oxford*, TVAS Monograph, 17 (2014).

[2] P. Bradley et al., 'Prehistoric and Roman Activity and a Civil War Ditch: Excavations at the Chemistry Research Laboratory, 2–4 South Parks Roads, Oxford', *Oxoniensia*, 70 (2005), p. 194.

[3] T. Hassall, 'Roman Finds from the Radcliffe Science Library Extension, Oxford, 1970–71', *Oxoniensia*, 37 (1972), pp. 48–50 (the Radcliffe Library site included nine graves located within *c.*130 metres south of the Oxford Physics site); Oxford Archaeology, Land Adjacent to the Pitt Rivers Museum, Oxford: Archaeological Evaluation (2005).

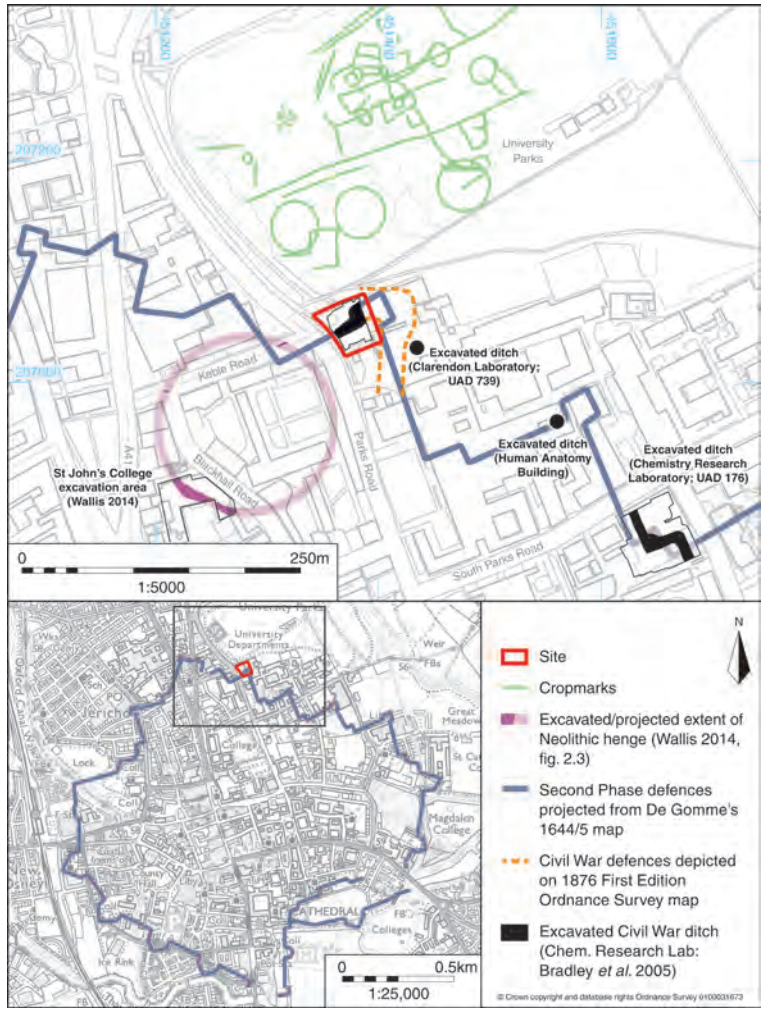

Fig. 1. Site location plan, showing the location of the Neolithic henge and the second phase Civil War defences (1:25,000 and 1:5,000 scale).

Oxford's origins were probably during the middle Anglo-Saxon period as a settlement close to a crossing point over the Thames. More formal town planning was undertaken in the late ninth or early tenth century at a settlement focused 900 metres south of the site.[4] The closest recorded early medieval remains to the site comprise a mass grave, possibly of massacred Vikings, deliberately sited within the Neolithic henge,[5] indicating that the henge remained visible into the tenth century. Oxford expanded during the later-medieval period, although the site remained beyond the core of the settlement. During the sixteenth and seventeenth centuries, the site lay on the northern edge of the city, which served as the Royalist capital during the Civil War. The site lies along the projected northern circuit of the latest (second phase) Civil War defences as shown on Sir Bernard de Gomme's 1644/5 map of the city

[4] A. Dodd, *Oxford Before the University: The Late Saxon and Norman Archaeology of the Thames Crossing, the Defences and the Town* (2003), p. 21.
[5] Wallis, *The Oxford Henge.*

(transcribed on Figure 1).[6] The first edition Ordnance Survey 1:2,500 map of 1876 shows that a section of the defences, annotated as '*Intrenchments (track of)*', survived at that time to the immediate east of the site (Fig. 1).

EXCAVATION METHODOLOGY

Four evaluation trenches excavated within the site by CA in 2010 suggested the presence of Roman and post-medieval remains. Based on these findings, and the possible presence of the Civil War defences, an excavation within the footprint of the New Physics Building was requested by David Radford, archaeologist for Oxford City Council, with a watching brief to monitor the excavation of infrastructure works extending beyond this.

The excavation methodology was constrained by the contractor's working methods and by health and safety considerations, restricting the extent to which some deposits could be investigated. Nonetheless, key archaeological deposits and sequences were successfully recorded. Pits were sampled by hand excavation of up to 50 per cent of each pit by area; ditches were sampled by hand excavation to a maximum of 10 per cent of their length. Within a feature interpreted as a Civil War ditch, the main hand-excavated sondage was widened and stepped by machine to allow safe access. Where possible (in between services left in situ), the putative Civil War ditch was further excavated by machine. These machined parts were unsafe to enter, but were recorded from the surface.

The watching brief included an area of topsoil removal to the top of the underlying subsoil within the southern part of the University Parks, through which several service trenches were subsequently excavated into the natural substrate. No archaeological deposits were observed within this area. To the north-east of the excavation area, a feature exposed within the excavation area and interpreted as a Civil War ditch was traced within an open service trench, although the ditch edges were not seen. To the south-west of the excavation area, the excavation of a service tunnel was monitored as it extended towards the henge ditch as projected to the south-west of the site. This tunnel could not be entered by the archaeologists, but ground workers provided measurements, photographs and descriptions of the remains encountered (two ditches), as well as recovering finds and environmental samples from the ditch fills, although the records from these deposits are necessarily approximate.

The findings from the site form the basis of this summary report and are fully detailed within an archive report which is available online via the CA website (http://reports.cotswoldarchaeology.co.uk/, report no. 16707).[7]

RESULTS AND DISCUSSION

Possible Prehistoric Remains

A possible north–south-aligned ditch (604) was recorded within the service tunnel (Fig. 2). Its upper and lower surfaces were not exposed but it was at least 1.5 metres wide and 1.2 metres deep within the tunnel, with a further *c*.2.5 metres depth above to the base of the subsoil, although this was necessarily unclear. It contained a sequence of reddish-brown to greyish-brown silty sand/sandy silt fills which produced a flint flake and a clay tobacco-pipe fragment, although these might easily have been residual or intrusive finds; samples from these fills produced no material suitable for radiocarbon dating but did contain molluscs indicative of open grassland interspersed with woodland; these are fully reported on within the online

[6] OHC, MC3, pocket 3, folder 3.

[7] Cotswold Archaeology, 'Oxford University Physics Building, Parks Road, Oxford: Post-Excavation Assessment and Updated Project Design', unpublished report, 16707 (2017).

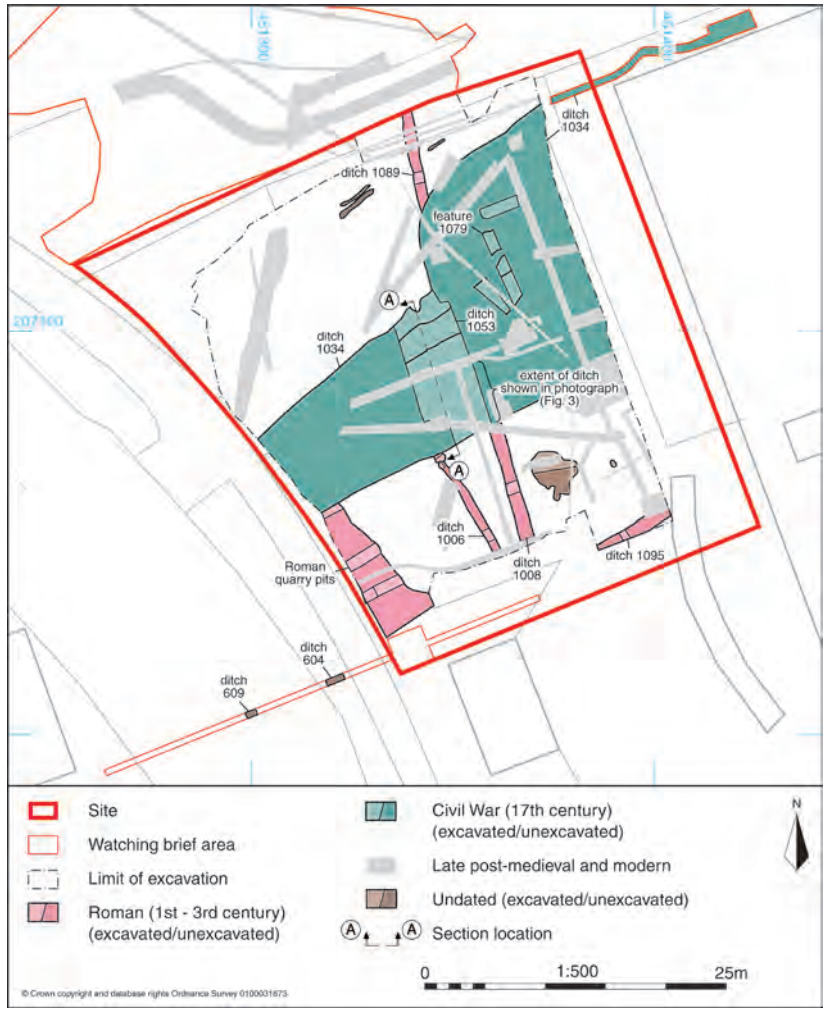

Fig. 2. Site plan with phasing (1:500 scale).

archive report. A second possible ditch (609) with a reddish-brown fill found within the tunnel produced no finds. The location of these ditches as compared to the projected extent of the henge means that they could have been associated with the henge, although not as part of the ditch circuit itself. The base of ditch 604 was at *c.*63 metres above OD, which compares well with the upper surface of the henge ditch, encountered at 62.27 to 62.41 metres above OD.[8] The depth of ditch 604 is therefore suggestive of possible prehistoric dating, particularly when compared to the shallow depths of the Roman ditches and to the location of the Civil War defences which are projected to have lain to the north, whilst the reddish-brown fills within ditches 604 and 609 are consistent with the fills of prehistoric ditches recorded elsewhere across the gravel terrace.

[8] Wallis, *The Oxford Henge.*

Roman

Roman remains included six intercutting quarry pits, field boundary ditches (1006, 1008, 1089 and 1095), and residual finds retrieved from later deposits (Fig. 2). The pottery assemblage includes earlier and mid Roman wares from local potteries; later products of the Oxfordshire potteries, dateable to after the mid third century AD, are absent. The assemblage is characterised by fairly unabraded sherds, suggesting that these derive from Roman features rather than having been deposited during manuring. A single *imbrex* tile was also recovered as a residual item but, as a lone find, is insufficient to suggest a Romanised building in the vicinity, and the remains are characteristic of the rural landscape suggested for the locality by previous discoveries in this part of the city.

Medieval

Medieval remains were restricted to a few small and abraded pottery sherds and a few glazed ridge and floor tiles, all residual within later deposits, suggesting that the site lay within fields on the northern side of Oxford during this period.

Civil War

The most significant discovery was of a substantial ditch (1034) likely to have been part of the 1640s Civil War defences. It was pre-dated by a smaller ditch, 1053, which crossed the site on a north-east/south-west alignment and was 2.25 metres wide and 0.5 metres deep. It is possible that this ditch was associated with the Civil War defences evidenced by ditch 1034 (see below), although its precise function is uncertain. Its single fill, 1048, produced fourteen sherds of mid seventeenth- to eighteenth-century pottery, clay tobacco-pipe fragments dateable to between 1640 and 1670, and a trader's token. The latter item is dateable to 1648–1673 and so must either be intrusive, or would indicate that there was some post-Civil War disturbance within this part of the site that was not otherwise apparent in the archaeological record.

Ditch 1034 entered the site from the west on a north-east/south-west alignment, turning to run northwards for 10 metres, after which it turned again to resume its north-east/south-west alignment continuing beyond the site, where it was traced within a service trench (Fig. 2). It was substantial, 9.5 metres wide and 2.9 metres deep, with a steep outer (northern) edge and a more gently sloping inner (southern) edge leading to a narrow base (Fig. 3). It contained a number of backfills which seem to have been cast in from the ditch's southern edge and might relate to the deliberate slighting of a former rampart along this side, although no in situ rampart deposits were found. Finds from these ditch fills include pottery of the mid sixteenth to seventeenth centuries, an early seventeenth-century bottle glass fragment, and two or perhaps three Charles I farthings dating to 1636–44. Clay tobacco-pipe fragments from the ditch fills are broadly dateable to the seventeenth century; later finds came from the upper ditch fills (see below).

Ditch 1034 ran close to where the (then surviving) second phase Civil War defences were recorded on the 1876 Ordnance Survey map. The ramparts of these second phase defences were previously mapped by Sir Bernard de Gomme. His map of Oxford's Civil War defences is considered the most reliable historical source for the defensive lines; indeed, in his role as an engineer, de Gomme himself may have designed the defences[9] although it has yet to be proven archaeologically that the completed defences matched this design. There is some debate over the date of de Gomme's map since a date mark of 1645 on the map was altered to 1644. Kemp considers that the 1645 date is correct and that the second phase defences had not been built by 1644.[10] The alternative possibility is that the map does date to 1644 and is a design plan for the second phase defences rather than a drawing of them as built.[11]

[9] A. Kemp, 'The Fortification of Oxford During the Civil War', *Oxoniensia*, 42 (1977), pp. 240, 244.
[10] Ibid. pp. 243–4.
[11] F.J. Varley, 'Further Notes on de Gomme's Plan of Oxford, 1644', *Oxoniensia*, 3 (1938), p. 175.

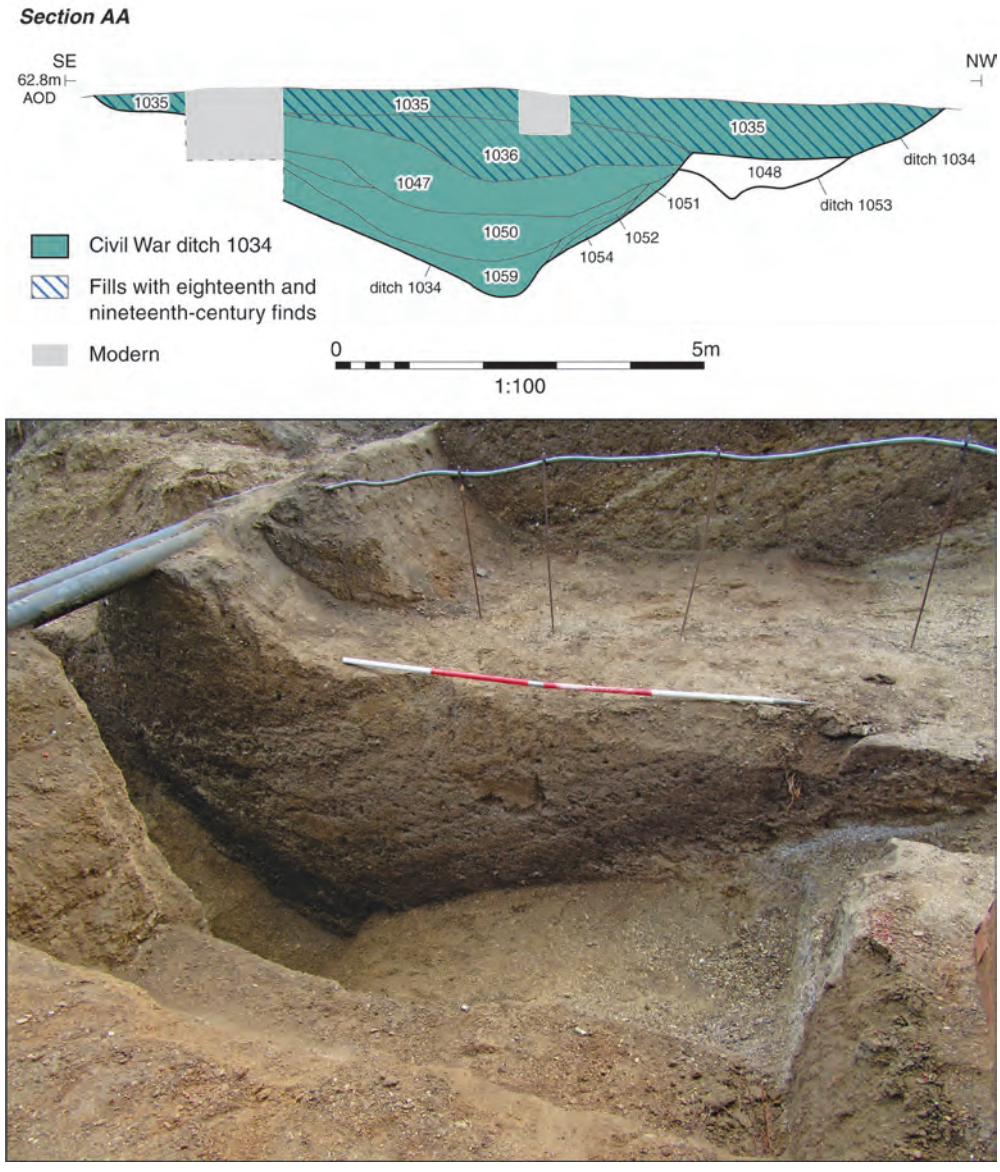

Fig. 3. Section drawing (1:100 scale) and photograph of Civil War ditch 1034 (1 m and 2 m scale).

An initial (first phase or inner) line of defence along the northern side of the city, beyond the medieval city walls, was constructed in the summer of 1642 but failed to prevent a short-lived Parliamentarian occupation from September through to mid October. Charles I arrived in Oxford on 29 October 1642 following the inconclusive battle of Edgehill, and the city became his headquarters and the garrison of his field army, thereby requiring improved defences built to prevailing standards. Initially, this comprised rebuilding the first phase defences which, although stronger than previously, were not constructed to the then current standards. These standards were a response to the use of gunpowder artillery in sieges from the fifteenth century, resulting in defences with a low profile fronted by, or built from, earth banking

which absorbed shot. These were built using a zig-zag pattern, known as a *tenaille trace*, of alternating projecting points (salients) and recesses (re-entrants), evident on de Gomme's map (transcribed onto Fig. 1), which would have enabled defenders to bring enfilading fire to bear upon those assaulting the defences. This was the design basis for the second phase defences, which were constructed outside those of the first phase. Although these were built to a modern design, they were a temporary response to an immediate military threat and were never intended to be permanent. To some extent, they also represented the best that could be achieved under the pressure of time, since a Parliamentarian siege was expected imminently following the Royalist defeat at Naseby on 14 June 1645. Given these considerations, the second phase defences are likely to have been built with readily available materials, and to have comprised earth banks, possibly with timber revetments and including wooden gun platforms.[12] A royal proclamation of 1642 required all adult males to work on a section of the Oxford defences for one day per week, with the aim of producing eight hundred labourers per day.[13] Predictably, this was not achieved and both men and women who refused to dig were subject to fines. The civilian nature of these work groups, albeit presumably under the direction of military engineers, suggests that different sections of the defences may have varied as built, despite the likely uniformity of the original design. Similar variation is evident in the Second World War Home Defence structures of Britain where, despite the provision of War Office blueprints, considerable local variation is recorded, stemming from the use of civilian contractors, the variable availability of materials, the precise requirements of local defence,[14] and perhaps even personal whim.

The archaeological and cartographic evidence for the alignment of the northern section of the second phase defences was summarised in 2005 following the discovery of a section of the defensive ditch at the Chemistry Research Laboratory, 200 metres south-east of the Physics Building.[15] There, a large ditch, 11 metres wide and 2.4 metres deep, was interpreted as the outer ditch of the second phase defences, and it was suggested that the rampart lay along its southern edge. At that location, the defences would have formed the angle of one of three similar re-entrants along the north-eastern edge of the defences (Fig. 1). Moving westwards, a ditch found in 1958 beneath the Human Anatomy Building[16] may have been associated with one of the angled bastions (Fig. 1) whilst the next angled bastion to the west is that recorded as earthworks on the 1876 Ordnance Survey map and within the Oxford Physics site. The defences as mapped by de Gomme in 1644/5 have been transcribed onto Fig. 1 using common topographical features as reference points and based on a similar transcription undertaken by the Oxford City Urban Archaeological Database. Transcribing historic mapping onto modern mapping is imprecise and the projections shown should be regarded as indicative rather than definitive, but it is notable that the change in alignment of ditch 1034 reflects the angle in the defences as shown by de Gomme at this point, suggesting that the ditch was part of the second phase of the Civil War defences, and that de Gomme's map is reasonably accurate. It is also worth noting that a ditch recorded in 1872 at the former Clarendon Laboratory was some 9 metres wide and 3 metres deep and may represent the southern continuation of ditch 1034, although its precise location is uncertain (UAD 739; Fig. 1).

As at the Chemistry Research Laboratory site, the fills tipping into ditch 1034 suggest that there was a rampart along the ditch's southern edge, implying that it was an outer ditch, forming both a quarry for the rampart and an additional barrier. A painting of the siege of Oxford by Jan de Wyck (Fig. 4) provides a good impression of the outer defences, looking

[12] Kemp, 'The Fortification of Oxford', p. 238.

[13] R. Kelly, 'A City Parish in the English Civil War: St Aldate's, Oxford, 1642–6', *Oxoniensia*, 76 (2011), pp. 45–6

[14] B. Lowry (ed.), *20th-Century Defences in Britain. An Introductory Guide* (1995), p. 79.

[15] J. Munby and E. Simons, 'Oxford's Civil War Defences: The Northeast Sector', in Bradley et al., 'Chemistry Research Laboratory', pp. 196–201.

[16] Oxford City Urban Archaeological Database, no. UAD 176.

Fig. 4. Depiction of the siege of Oxford by Jan de Wyck. Dartmouth Heirloom Trust (Museum of Oxford).

southwards from Marston, with the defences running through the site clearly visible. The painting almost certainly post-dates the siege, but de Wyck seems to have used de Gomme's map as a basis[17] and, although much of the rest of the painting is stylised, the second phase defences themselves reflect those depicted on de Gomme's 1644/5 plan. The first phase defences are visible behind these, with the medieval defences shown by the artist as a red line.

As expected by the defending Royalist army, Oxford was besieged in 1646 following the battle of Naseby, surrendering to the Parliamentarian forces in June of that year. Although the city's Civil War defences were partially slighted soon after the Parliamentarian victory,[18] finds from the upper fills of ditch 1034 include pottery and vessel glass of the seventeenth to eighteenth centuries, and a bone comb dateable to the seventeenth to nineteenth centuries, with the latest finds from the ditch fills comprising Pearlware plates dateable to *c.*1780–1830, indicating that, in places, the defences survived as earthworks into the later eighteenth/early nineteenth centuries. The line of the defences, presumably the remnants of the ditch, described as '*Intrenchment*', is recorded on the 1876 1:2,500 Ordnance Survey map within and to the immediate east of the site (Fig. 1), but is shown schematically and it is uncertain to what extent the defences near the site survived into the later nineteenth century. Certainly, finds of this date were absent from the ditch fills.

[17] Kemp, 'The Fortification of Oxford', p. 242; J. Munby, 'The Siege of Oxford and the Revolution of 1688', *Oxoniensia*, 53 (1988), p. 346.
[18] Kemp, 'The Fortification of Oxford', p. 238.

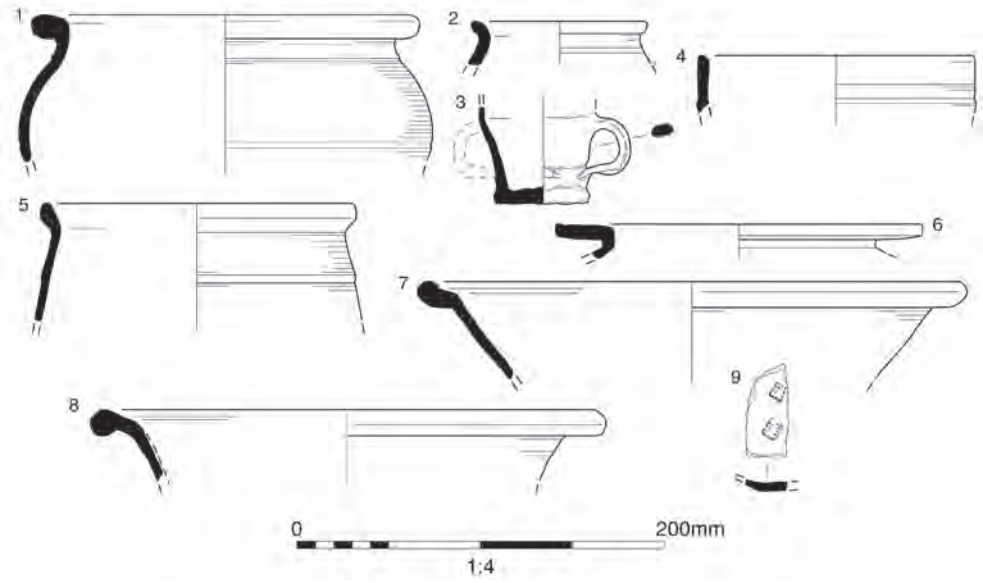

Fig. 5. Selected pottery sherds (1:4 scale).

Catalogue of Illustrated Pottery (Fig. 5):
Roman

1. Fabric GW1. Necked jar; medium/wide mouth. Quarry pit 1031 (fill 1033).
2. Fabric GW1. Necked jar; medium mouth. Quarry pit 1031 (fill 1033).

Post-Medieval

3. Fabric CIST multi-handled cup. Feature 1079 (fill 1081).
4. Fabric BORD porringer with ribbing to girth. Ditch 1034 (fill 1035).
5. Fabric BORD chamber pot or bowl. Single cordon at girth. Ditch 1034 (fill 1035).
6. Fabric BORD chamber pot? Ditch 1034 (fill 1035).
7. Fabric BORD flanged dish. Ditch 1034 (fill 1035).
8. Fabric BORD flanged dish. Ditch 1034 (fill 1035).
9. Fabric BORD dish base sherd with stamped decoration. Ditch 1034 (fill 1035).

POTTERY by E.R. McSLOY

The pottery assemblage amounts to 660 sherds (8,215 grams). Fabric codes utilised for recording are defined in Table 1 which includes concordances matching types to type series devised for Roman and medieval pottery from the area.[19]

Roman

Roman pottery was recorded from eleven deposits. The condition of this group is good, with little abrasion. Reduced coarsewares and white-firing types predominate, all probably from the Oxfordshire potteries south of Oxford.[20] Identifiable vessel forms are limited to necked jars among the grey and oxidised types (Fig. 5, nos. 1–2). The narrow range of types/forms

[19] Unpublished OA report by P. Booth; M. Mellor, 'A Synthesis of Middle and Late Saxon, Medieval and Early Post-Medieval Pottery in the Oxford Region', *Oxoniensia*, 59 (1994), pp. 17–217.
[20] C.J. Young, *The Roman Pottery Industry of the Oxford Region*, BAR BS, 43 (1977).

represented permits only broad dating, although an absence of the common late products of the Oxford industry may imply dating before the mid third century AD.

Medieval

Medieval pottery was recorded as residual finds within post-medieval features. The sherds are small and abraded. The majority are glazed types dateable to after 1300/1350, the single most common type being Brill/Boarstall glazed wares (fabric OXAM) originating from the Oxfordshire/Buckinghamshire border. This type spans the high medieval to early post-medieval period (1225–1625) and the majority of sherds represented probably come from jugs. The remainder of the medieval group consists of a few unglazed sandy wares of local manufacture (OXY) and dateable across the eleventh to thirteenth centuries. Featured sherds are restricted to a (simple, everted) jar rim in fabric OXY and a base sherd from a jug in Midlands type whiteware.

Civil War

In total, 498 sherds were recovered from Civil War ditch 1034. The composition of this group shows an assemblage drawn from a range of local, regional and imported sources, and representative of the established patterns of supply for this period in Oxford. The identified vessel forms comprise mainly utilitarian bowls and dishes/plates, with fewer jugs and drinking forms. Of the pottery from the earliest fills, local redwares, Border wares and Bartmann-type jugs in Frechen stonewares could be contemporaneous with construction/initial use the Civil War defences. Vessel forms among the Border ware, including flanged plates, chafing dishes, porringers and handled jars (Fig. 5, nos. 4–8), would suit dating across the seventeenth century.[21] Feature 1079, possibly part of the ditch, produced a multi-handled cup of seventeenth-century type (Fig. 5; no. 3).

Pottery from the upper ditch fills include elements post-dating the mid/later seventeenth century. The majority comprise white-firing earthenware classes mass-produced in Staffordshire and other centres (CREAM; PEARL; REF WH) from the mid eighteenth century onwards. Smaller quantities of stonewares, mainly from English sources and mostly eighteenth-century in date, also occur (WSALTGL; ENGSTO; BLKBAS).

THE COINS, TOKEN AND JETTON by KATIE MARSDEN

A small assemblage of coins, a token and a jetton was recovered. Ditch 1053, which pre-dated Civil War ditch 1034, yielded a trader's token issued by Edward Prince, an Oxford chandler. Such tokens were issued between 1648 and 1673 to make up for the lack of low denomination coins. Given the context in which it was found, the token must have been intrusive. Civil War ditch 1034 produced two, possibly three farthings of Charles I dateable to 1633–44 as well as, from an upper fill, a Cartwheel penny of George III (reigned 1760–1820) and a Nuremburg jetton of rose/orb type broadly dateable to the post-medieval period.

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[21] J. Pearce, *Post-Medieval Pottery in London, 1500–1700: Volume 1, Border Wares* (1992), pp. 95–101.

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