Excavations at Abingdon West Central Redevelopment: Iron Age, Roman, Medieval, and Post-medieval Activity in Abingdon

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SUMMARY

Investigations to the south of Ock Street and to the west of West St Helen's Street carried out by Oxford Archaeology in 2002–3 have revealed new evidence for the development of Abingdon from the Iron Age to the post-medieval period. The outer late Iron Age/early Roman settlement boundary ditch identified in previous investigations was traced through the site, and new evidence for a recut of this ditch was found. The remains of the medieval building that later became The Lamb Inn on the southern side of Ock Street were revealed and appear to have been occupied at some point by a leather worker and possibly a tanner. Tenements uncovered fronting West St Helen's Street were also found to have been the site of small-scale industrial activity. Parts of a medieval building in the centre of the development area, discovered during an evaluation in 1996–7, were further exposed, including the discovery of a garderobe, strengthening evidence that it was the vicarage of St Helen's rather than the Chapel of St Edmund as was once suggested.

Clay-pipe manufacture appears to have occurred at the site of the Lamb Inn from the early seventeenth century, with the end of this industry coinciding with the end of the Ely occupancy of the Inn in the early eighteenth century. The excavations revealed evidence for the destruction of buildings during the English Civil War in the seventeenth century, and a small cemetery in the south of the development area may also belong to this period.

Between November 2002 and December 2003 Oxford Archaeology carried out a series of evaluations, excavations, and watching briefs within the centre of Abingdon (NGR SU 4962 9702) in advance of a residential development by Lovell Partnerships Ltd. The development site was bounded by St Edmund's Lane to the south and Ock Street and The Square to the north, and covered an area of approximately seven hectares (Fig. 1). The site lies on the first gravel terrace of the river Thames at a height of approximately 54 m ordnance datum (OD). It slopes down gently to the south towards the river Ock.

BACKGROUND

In 1996 and 1997 Oxford Archaeological Unit (now Oxford Archaeology) carried out a field evaluation in advance of the development of the present site. The results of this evaluation have been previously published elsewhere,¹ but are particularly relevant to the discussion of this site and so are incorporated in some detail.

The evaluation revealed several large defensive ditches from the late Iron Age/early Roman *oppidum*, in addition to what was almost certainly one of the ditches that marked the limit of the

¹ T. G. Allen, 'Abingdon: West Central Redevelopment Area', *SMidlA*, 27 (1997), pp. 47–54.



Fig. 1. Site location

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Fig. 2. Overall plan of archaeological investigations, north of St Edmund's Lane

medieval town of Abingdon. A large medieval building was identified within the centre of the site, and a series of medieval and post-medieval pits were revealed further west. In the south of the site was a small cemetery, probably dating to the Civil War. Three areas beneath upstanding buildings were inaccessible during the 1996–7 evaluation. These were evaluated (post-demolition) in 2002 by machine trenching to determine their archaeological potential. The areas (Fig. 2) comprised the former Southern Electricity Board (SEB) building to the south-east of the site fronting West St Helen's Street, the former Neave House to the west fronting Winsmore Lane, and the former Regal Cinema to the north of the site fronting Ock Street. In the light of the evaluation results, both the SEB and the Cinema site were subject to full area excavation, while the better preserved parts of the Neave House site were also excavated.

A limited excavation was carried out in the previously defined area of the possible Civil War cemetery to the south of the site. The cemetery was carefully uncovered in order to define its extent and to record and extract the burials.

An archaeological watching brief was maintained in the area towards the centre of the site and involved the observation of machine trenching for services, ground reduction for car parking, and the digging out of an area of Japanese knotweed. The 1996–7 evaluation had identified the area as being archaeologically sensitive, with the well-preserved structural remains of a medieval building, possibly a vicarage or remains associated with St Edmund's chapel (thought to be sited nearby; see discussion below). Detailed excavation of this area was not required, due to the use of piled foundations, which have a limited impact on surviving archaeological remains.

All of the work was undertaken in accordance with advice and a written brief issued by Hugh Coddingdon, Deputy County Archaeologist for Oxfordshire County Archaeological Services (OCAS), archaeological adviser to the Vale of White Horse District Council. A written scheme of investigation, prepared by OA, outlined proposals to mitigate the effect of the development on the surviving archaeological remains.

ARCHAEOLOGICAL AND HISTORICAL CONTEXT

Prehistoric. The location of Abingdon at the confluence of the river Thames and the river Ock is likely to have been the most significant factor in the establishment of a substantial middle Iron Age settlement, a late Iron Age to early Romano-British *oppidum* or proto-town, and eventually a medieval abbey town. In the late Iron Age coin finds suggest that this water course was also utilized as a political boundary, forming the division between the lands of the Catuvellauni (to the east), the Atrebates (to the south), and the Dobunni (to the west).²

Lambrick³ outlines several broadly contemporary (*c*.100 BC–AD 43) major earthwork sites in the stretch of the Thames Valley either side of Abingdon that were also located on this natural and political boundary. Furthest north, the massive North Oxfordshire Grim's Ditch (near Woodstock and Charlbury) enclosed an area that expanded from 13 sq. km to 80 sq. km. Romano-British villas were later situated within the boundary. Near Eynsham, the smaller Cassington Big Ring was situated on the banks of the Thames. The next site south-east along the Thames is the *oppidum* at Abingdon (the archaeological background of which is discussed below), while situated further south was Dyke Hills, Dorchester. This was very similar to the *oppidum* at Abingdon, perhaps with a similar function, but within a different tribal territory. Furthest south, near Wallingford, was the site of the South Oxfordshire Grim's Ditch, a linear earthwork which at least partially enclosed a large loop in the Thames.

The results of a long-running programme of archaeological work in Abingdon suggest that it has been occupied quite intensively since at least the early Iron Age, with earlier prehistoric activity indicated through finds of flint and pottery.⁴ The densely populated status of the settlement in the middle Iron Age was indicated by the discovery of more than a dozen house sites beneath the abbey house and its car park.⁵ Excavations at sites such as Abingdon Vineyard⁶ have shown that before the Roman period Abingdon was already a thriving riverside market centre. It was defined by two or three huge ditches to the north and west, and the river Thames to the south and east (Fig. 3). These ditches have been revealed in the north of the town⁷ and to the west in the 1996–7 evaluations and the current excavations (see below).⁸

Romano-British. Early Roman Abingdon existed within the same boundary ditches as the Iron Age settlement (Fig. 3) and was densely occupied. It had an internal rectilinear layout and high-status finds, including fineware pottery. Three Roman masonry buildings have been identified in Abingdon, one in East St Helen's Street,⁹ parts of one or more under the Railway Inn,¹⁰ and a third under Abbey House and gardens.¹¹

By the early second century AD some of the defensive ditches had been deliberately backfilled as the town expanded over them.¹² Roman ditches, pits, ovens, and graves have all been found,

² George Lambrick, 'Frontier territory along the Thames', *British Archaeology*, 33 (1998), pp. 12–13; Paul Booth et al., *The Thames through Time: the Archaeology of the Gravel Terraces of the Upper and Middle Thames: the Early Historical period: AD 1–1000* (Oxford, 2007), pp. 368–71.

³ Ibid.

⁴ T. G. Allen, 'Abingdon, Vineyard redevelopment', SMidlA, 20 (1990), pp. 73-8.

⁵ Ibid., n. 4; T. G. Allen, 'Abingdon, Vineyard development', *SMidlA*, 19 (1989), pp. 44–7; idem, 'An "oppidum" at Abingdon, Oxfordshire', *SMidlA*, 21 (1991), pp. 97–9.

⁶ Allen, 'Abingdon, Vineyard redevelopment', n. 4; idem, 'The Vineyard, Abingdon', unpublished client report (1995).

⁷ R. A. Chambers and J. Moore, 'Abingdon: Vineyard redevelopment, archaeological assessment', *SMidlA*, 18 (1988), p. 72; T. G. Allen, 'Abingdon, Abingdon Vineyard 1992: areas 2 and 3, the early defences', *SMidlA*, 23 (1993), pp. 64–6

³ Ibid., n. 1.

⁹ J. Y. Ackerman, 'Note', Proceedings of the Society of Antiquaries, ser. 2, 3 (1867), pp. 145, 202–3.

¹⁰ John Moore, personal communication.

¹¹ Allen, 'Abingdon, Vineyard redeveloment', n. 5.

¹² Ibid., n. 6; Chambers and Moore, 'Abingdon, Vineyard redevelopment', n. 7.



Fig. 3. Known extent of late Iron Age/early Roman ditches in Abingdon (after T. G. Allen, 'Abingdon: West Central redevelopment area', SMidlA, 27 [1997])

dating from the second to fourth centuries AD.¹³ During the excavation of trenches across the abbey, in 1922, Roman finds were recovered from throughout the abbey gardens, suggesting that Roman occupation covered the whole of this area.¹⁴ Roman ditches were also found just south of the abbey gardens, in Checker Walk.¹⁵

Anglo-Saxon and medieval. The Romano-British settlement continued into the post-Roman period without an apparent break. The nature of early Saxon settlement is not well understood, although the main focus is thought to be in the western part of the town.¹⁶ As yet there is almost no archaeological evidence for the mid- or late Saxon period in Abingdon, but it seems likely that it was the site of both an early minster and a high-status centre, possibly that of a local sub-king, with the minster probably standing on the site of the present St Helen's Church.¹⁷ In 955 a site some 500 m north-east of St Helen's was granted by King Eadred to St Æthelwold for the foundation of Abingdon Abbey (Fig. 4), a house of reformed Benedictine monks, and this seems to have had the effect of shifting the focus of settlement north-eastwards.

There is far more archaeological evidence for occupation at Abingdon from the later eleventh and twelfth centuries onwards. The line of one of the late Iron Age/early Roman *oppidum* ditches

- ¹⁴ Martin Biddle, 'The excavations at Abingdon Abbey, 1922', Medieval Archaeology, 12 (1968), pp. 60-9.
- ¹⁵ R. Thomas, 'Abingdon: Checker Walk', CBA Group 9 Newsletter, 11 (1981), p. 112.
- ¹⁶ Allen, 'Abingdon, Vineyard redevelopment', n. 4; Booth et al., *Thames through Time*, pp. 140–1, n. 2.
- ¹⁷ John Blair, Anglo-Saxon Oxfordshire (Stroud, 1994), pp. 54-6, 64.

¹³ Allen, 'Abingdon, Vineyard redevelopment', nn. 1, 4, 5, 6; R. Wilson,'Excavations in Abingdon: a Romano-British cremation, an inhumation, a medieval kiln and lead weights at 56–86 The Vineyard, Abingdon, Oxon.', Abingdon Area Archaeological and Historical Society Occasional Paper 1 (1984).



Fig. 4. Map of Abingdon in the 1840s, based on J. Munby, in Gabrielle Lambrick and C. F. Slade, eds, Two Cartularies of Abingdon Abbey, OHS, ns 33 (1992), p. lxvii, Fig. 5

may be preserved in the medieval references to the 'town ditches' and in the post-medieval Shitebourne ditch (Fig. 4). This single ditch may be all that remains of a system of multiple defences, perhaps covering the full width of the vicarage garden plot. The 1996–7 evaluation of the West Central Development Area site revealed substantial evidence of later reuse of the most easterly (inner) Iron Age/Roman defensive ditch during the medieval and post-medieval periods. The northern abbey precinct boundary also follows the line of the prehistoric boundary.

West St Helen's Street is mentioned in documents as early as 1250, and a number of medieval pits have been revealed in and around the area. The chapel of St Edmund and its associated buildings had been thought possibly to occupy the western part of the West Central Redevelopment Area (see Fig. 4 and discussion below), and there is also documentary evidence for a burial ground within the chapel complex.¹⁸ There are uncorroborated reports of former residents of St Edmund's Lane finding skeletons in their back gardens.¹⁹

Post-medieval. After the dissolution of the monasteries, the Ock Street frontage of the West Central Redevelopment Area was occupied by the Lamb Inn, which was held by the Ely family from 1553 until 1720 and continued until 1851 (Fig. 4). During the Civil War, Abingdon was a Parliamentary garrison (although it was originally a Royalist town), and was regularly under attack from the Royalists of Oxford. A small cemetery located about 10 m to the south of the medieval building complex during the 1996–7 site evaluation could well be of this date (see below).

The Christ's Hospital map of Abingdon (1844) shows the site belonging to the Borough and other institutions, mostly inherited from Abingdon Abbey at the dissolution of the monasteries

¹⁸ Allen, 'Abingdon, Vineyard redevelopment', n. 1.

¹⁹ Ibid.



Fig. 5. Plan showing approximate position of Iron Age and Roman ditches across the site

in 1538. It also shows a large ditch still existing, running along the back of the properties along the west side of West St Helen's Street, south of St Edmund's Lane, known as the Shitebourne Ditch (Fig. 4).

DISCUSSION OF THE EXCAVATION RESULTS

A detailed archaeological description of the excavated site can be found in Appendix 1. What follows is a summary of the archaeological results, along with a discussion of their significance within the context of the development of Abingdon.

Iron Age and Roman Occupation

Excavations at the West Central Redevelopment site revealed further evidence for the extensive Iron Age and Roman occupation at Abingdon (Fig. 5). The earliest features recorded so far within the town comprised small pits of early Iron Age date in the Vineyard excavations.²⁰ Further traces of settlement were hinted at by a large N-S ditch (4 m wide, 1.35 m deep) revealed in the 1996–7 evaluation on the current site, which contained small quantities of early Iron Age pottery.²¹ A crouched inhumation burial (236) within the ditch may be of similar date (see Fig. 5).²²

Previous investigations, mainly to the north and east of the present site, have revealed intensive occupation from the later middle Iron Age right through to the late Roman period, although

²⁰ Ibid., p. 73, n. 4.
 ²¹ Ibid., p. 50, n. 1.

²² Ibid.

the exact nature and development of the settlement remains unclear.²³ The early phase of the site is usually classified as an 'enclosed *oppidum*' or 'valley fort', essentially a high-status low-lying settlement of late Iron Age date, characterized by substantial enclosing earthworks. Other examples located nearby - also at the junction of the Thames and its tributaries - are at Dorchester Dyke Hills²⁴ and Cassington.²⁵ It has been suggested that their development during this period was stimulated by the growth of regional trade,²⁶ and must surely also have been associated with the increasing centralization of power within the Upper Thames region during the late Iron Age.²⁷

The current area of archaeological work lay on the western side of the *oppidum* and revealed parts of the substantial defensive ditch system which is known to have enclosed at least 15 ha in an arc from the river Ock to the Thames (Fig. 3).²⁸

The oppidum Ditches

In total three approximately parallel ditches were revealed within the 1996–7 evaluation, although only the outer ditch was exposed within the 2002–3 excavation, within the Cinema site (Fig. 5). A similar triple ditch arrangement was noted in excavations at the Vineyard to the east, and shares broadly similar characteristics.²⁹ The inner ditch revealed in the West Central evaluation was largely cut by a medieval ditch, which was presumably the same as the post-medieval Shitebourne ditch (see below). This inner ditch was over 12 m wide, up to 2.5 m deep and was recut several times, corresponding closely with the dimensions of the inner ditch excavated at the Vineyard.³⁰ Pottery probably dating to the later middle Iron Age (first century BC) was recovered from the fills of the earliest cut in the West Central site, while radiocarbon dates from waterlogged deposits and cattle bone at the base of the ditch at the Vineyard were dated 200 BC–AD 65³¹ and 105 BC–AD 55.³² A later middle Iron Age origin for this first major defensive ditch is therefore likely.

The outer ditch lay over 10 m from the inner one in the southern part of the West Central site, though they appeared to converge to only around 6–7 m apart further north (Fig. 5). At the Vineyard these ditches were almost 20 m apart.³³ The outer ditch showed at least one recut and was up to about 9 m wide and about 2 m deep. Dating evidence from the West Central site comprised sherds of early Roman pottery from the lowest fills, with early and middle Roman pottery coming from subsequent waterlogged layers. Radiocarbon samples from the waterlogged layers within the Vineyard outer ditch gave dates of AD 5–120 and 365–10 BC.³⁴ On balance a late Iron Age to early Roman date for this defensive ditch seems most likely, and it is probable that both the inner and outer ditches were open contemporaneously, even if they were not constructed at the same time. This is supported by the environmental evidence, where the presence of beetles and molluscs of flowing water habitats indicates that both ditches were linked to the natural drainage system, and were flooded on occasions by the Thames.³⁵ It must be noted, however, that the limited

²³ Ibid., nn. 1, 4, 5, 7.

²⁴ Martin Henig and Paul Booth, Roman Oxfordshire (Stroud, 2000).

²⁵ H. J. Case, 'Cassington, 1950–2: late Neolithic pits and the big enclosure', in H. J. Case and A. W. R. Whittle, eds, *Settlement Patterns in the Oxford Region: Excavations at the Abingdon Causewayed Enclosure and Other Sites*, CBA Research Report, 44 (London, 1982), pp. 118–51.

²⁶ T. Allen, 'The Iron Age background', in Henig and Booth, Roman Oxfordshire, pp. 22-6.

²⁷ P. Booth, A. Dodd, M Robinson, and A. Smith, *The Thames through Time: the Archaeology of the Gravel Terraces of the Upper and Middle Thames: the Early Historical Period: Rome and the Anglo-Saxons in the Thames Valley AD 1–1000, Thames Valley Landscapes Monograph (Oxford, 2007).*

²⁸ Allen, 'Abingdon, Vineyard redevelopment', p. 50, n. 1.

- ²⁹ Ibid., n. 7.
- ³⁰ Ibid., p. 64.
- ³¹ Cal 95%, 2080 <u>+</u> 55, OxA–4518.
- ³² Cal 95%, 2140 ± 55, OxA-4517.
- ³³ Allen, 'Abingdon, Vineyard redevelopment', fig. 5.
- ³⁴ Cal 95%, 1935 <u>+</u> 30, Q–2354.
- ³⁵ Tim Allen, personal communication.

environmental evidence from the outer ditch in the Cinema site showed little evidence for open water, although this would not preclude occasional flooding.

Traces of a third, smaller ditch lying parallel between the two described above were revealed within two of the 1996–7 evaluation trenches, with a human skull (901), along with a complete late first-century AD pot and a paste melon bead recovered from the base of one section, and Iron Age pottery from another (Fig. 5). The exact relationship between this feature and the inner ditch remains uncertain, but they are unlikely to have been contemporary, as they appear to converge towards the south. A slightly smaller middle ditch was also located in the Vineyard excavation, and produced mid- to late first-century AD pottery.³⁶ This ditch lay 2.5 m from the outer and 6–7 m from the inner ditch, and it is therefore possible that a triple-ditched arrangement did exist in at least some areas of the site, but not in others.

The subsequent infilling of the Abingdon *oppidum* ditches occurred on a piecemeal basis over a period of time, but it appears that the two main ditches remained open until at least the end of the first century AD. The outer ditch in the West Central Development site then appears to have been deliberately filled in through a series of gravel dumps during the second century AD, with much of the material probably deriving from an adjacent bank. The inner ditch from the Vineyard site was similarly infilled at this time, with the backfill layers being cut into by features of second to fourth century AD date.³⁷ The inner ditch appears to have survived for much longer in the West Central area, as it showed multiple recuts and was eventually cut by a medieval ditch which ran along the same alignment, indicating that the earlier ditch was still a notable feature at this time.

The overall evidence from both the West Central and Vineyard excavations points to the construction of huge, apparently defensive earthworks round the northern and western sides of a settlement lying near the junction of the river Thames and its tributary the Ock. The first ditch and bank may have been constructed in the later middle Iron Age (first century BC) and then have been elaborated by one or possibly two more large ditches during the late Iron Age (early first century AD), when settlement appears to have become more intense. This arrangement continued until the end of the first century or start of the second century AD, when large sections of the ditches were deliberately infilled, probably using the torn-down bank material. Settlement appears to have expanded beyond the defended circuit from this point on, and despite the late Roman levels being severely truncated, the quantity of pottery and coins from the town suggests fairly intensive occupation until well into the fourth century, although its nature at this late date remains unclear. Two mid- to late Roman pits were excavated in the West Central excavations, one lying within the inner ditch and the other just beyond the outer ditch (Fig. 5).

MEDIEVAL

Abingdon was clearly a thriving town during the medieval period, as the many buildings and features of this date being excavated demonstrate. The earliest medieval activity on the West Central site is represented by pits scattered across the area, dating from the eleventh to twelfth centuries (Fig. 6). Such pits have been excavated across Abingdon and were probably related to medieval tenement boundaries.³⁸ They may well have been dug for gravel extraction, after which they were used to deposit domestic refuse such as animal bone and pottery, associated with settlement nearby. On the Neave House site these early medieval pits were situated alongside Winsmore Lane, also noted in the 1996–7 evaluation.³⁹ The pits identified on the Cinema site were probably to the rear of a property fronting Ock Street, to the north. Although little evidence

³⁶ Allen, 'Abingdon, Vineyard redevelopment', p. 65, n. 7.

³⁸ Rebecca Devaney et al., The Excavation of Iron Age, Roman, Medieval, and Civil War Features South of the Vineyard, Abingdon, Oxfordshire', pp. 73–106 above.

³⁹ Allen, 'Abingdon, Vineyard redevelopment', n. 1.

³⁷ Ibid.



Fig. 6. Composite plan of trenches and medieval features north of St Edmund's Lane

of this early building remains, subsequent extensions to the south were identified and dated. A robbed-out wall trench aligned N-S probably represents one of the original walls of the building, while parts of the rear yard remain, within which the pits were situated. An E-W aligned wall and a cobbled surface dating from the eleventh to thirteenth centuries may represent the back of the property at this time.

Excavations at the Cinema area provided evidence of hide preparation for tanning and leatherworking. Leather-working waste and shoes of fourteenth- to fifteenth-century date were found in pits to the rear of the building (see Mould below), at the back of a yard that had been extended at some point during the fourteenth to sixteenth centuries. This may have been when the building ceased to be just a house and also became a work space. This suggests that the processing of skins into leather and the use of that leather took place side by side. Several shoes of fourteenthcentury style and manufacturing trimmings were also found, suggesting that there may have been a cobbler or shoemaker working here.

Vicarage of St Helen's? Additional parts of the late twelfth- to thirteenth-century building that was previously uncovered in the 1996–7 evaluation were identified in the central watching-brief area. The probable rear (north) wall of the property included a garderobe and a tiled surface to the interior of this wall. These newly revealed areas were located to the east of the cellar previously recorded.⁴⁰ This area of the building was probably used for storage, waste disposal, and latrines, which is consistent with the cluster of rubbish pits previously found to the north of the property.⁴¹ A short western continuation of the wide wall previously identified as the north wall of the building was revealed. This wall is probably the main back wall of the building, but may have had smaller 'utility' rooms behind it.

⁴⁰ Ibid.

⁴¹ Ibid.

The building was situated immediately outside the medieval town ditch, and could well be the vicarage of St Helen's, which was recorded by Amyce's survey of 1554 as lying in West St Helen's Street and described in a terrier of 1634 as 'A vicarage house in West St Helen's with orchards and a garden mounted round with a stone wall compassed with a lane on the south and west.⁴² General documentary evidence (St Helen's Church records) states that the vicarage of St Helen's was destroyed during the Civil War,⁴³ thereby relating to the 1996–7 evaluation, which revealed that the structure was overlain with dumps of demolition rubble dating to the seventeenth century. No features post-dating this were encountered.

It is also known that the chapel of St Edmund was built in the town in 1288, and is supposed to have stood near to St Edmund's Lane, which lay about 50 m to the south of the building.⁴⁴ The property containing the chapel included much of the West Central Redevelopment site, and also contained a number of additional buildings, including two cottages.⁴⁵ Opinion is still divided as to the exact site of the chapel itself; the authors of the recent publication of the cartularies of Abingdon Abbey place the chapel close to Ock Street (see Fig. 4),⁴⁶ while the Oxfordshire Historic Towns Survey places it further south, within the former SEB depot site.⁴⁷ One medieval reference to part of Edmund Rich's property states that it lay on West St Helen's Street 'beside the town ditches'.⁴⁸ Amyce's survey of 1554 includes a record of rents paid to the Abbey by tenants of Ock Street and West St Helen's Street. One entry states, 'A close containing one acre pasture on which once stood St Edmund's chapel, now in tennure of Henry Harper, glasier.²⁴⁹ Listed from west to east along the south side of Ock Street, this land was at least eleven plots to the west of the Lamb Inn, and therefore St Edmund's chapel must have been considerably further west than the building revealed in the 1996–7 evaluation and later watching brief.

This combined evidence confirms that the building identified by these investigations was not St Edmund's chapel, as it both lay in the wrong place, and was not even standing by 1554. The excavated building is therefore either the vicarage of St Helen's or one the domestic buildings associated with St Edmund's chapel. The descriptions of the vicarage of St Helen's and St Edmund's chapel domestic buildings place the structures in approximately the same area. It is possible that the records refer to the same complex of buildings and that over time the names have been used interchangeably. Perhaps the chapel itself was not standing in 1554, but the domestic buildings associated with it remained and were demolished during the Civil War. It is, therefore, still not possible to identify conclusively the building previously identified as part of the chapel of St Edmund's complex or the vicarage of St Helen's.

Other buildings. A structure probably divided into two tenements fronting West St Helen's Street was revealed in the SEB area. This was built in the late twelfth to early thirteenth century and also had garderobes and rubbish pits to the rear. Activity in this building was initially purely domestic, with the usual pottery and animal-bone finds from the pits.

During the fourteenth to sixteenth centuries other activities were practised in or around the building. Evidence from later pits to the rear of the building includes the possible by-products of the horn-working or glue-making industries. This was found alongside domestic rubbish, suggesting craftsmen were living and working on the site.

⁴⁵ G. M. Lambrick and C. F. Slade, *Two Cartularies of Abingdon Abbey*, 2 (Oxford, 1991), fig. 5; W. J. H. Liversidge, *Abingdon Essays: Studies in Local History* (Abingdon, 1989), p. 9.

- ⁴⁶ Ibid.
- ⁴⁷ Rodwell, *Historic Towns*, n. 39.
- ⁴⁸ Liversidge, Abingdon Essays, n. 45.

⁴⁹ Roger Amyce's Survey of Abingdon, 1554, Records of Christ's Hospital Abingdon, Abingdon Borough Archives; Land Revenue Misc. Books (PRO), no. 187, fols 196–221.

⁴² Ibid., p. 53.

⁴³ Ibid., n. 1.

⁴⁴ K. Rodwell, ed., *Historic Towns in Oxfordshire: a Survey of the New County* (Oxford, 1975), p. 35.

Medieval town ditch. The medieval town ditch was revealed within a number of the 1996–7 evaluation trenches, but not within any of the 2002–3 excavation areas (Fig. 6).⁵⁰ The ditch recut the inner *oppidum* ditch and had a probable wood-lined culvert along the bottom. The eastern edge of the ditch appears to have had masonry revetment walls, the line of which is followed by the backs of the properties all the way along West St Helen's Street. The ditch must represent one the town ditches mentioned in medieval documents as marking the limits of the town and is identified south of St Edmund's Lane in a map of 1844 as the Shitebourne ditch (Fig. 4).⁵¹

Industry. The finds from this excavation strongly suggest that from the later medieval period this part of the town was a focus for industrial activity, including iron working, horn-working or glue-making, tanning and leather-working (see discussion of the leather below). This is likely to be a reflection of the economic growth of the town. The buildings uncovered were also altered in this period, with the yard to the rear of the Cinema site building being extended and plot divisions laid out to the rear of the building in the SEB area. The possible horn-working or glue-making activity took place right on the edge of the town boundary, with the rear wall of the plot sitting right along the edge of the medieval ditch identified in the 1996–7 evaluation. The foul-smelling hide processing and possible tanning activity took place outside the town ditch.

POST-MEDIEVAL

Documents relating the early post-medieval period⁵² show that Abingdon was a thriving market town. In the SEB area pits continued to be dug to the rear of the building in the very early post-medieval period, and horn cores and butchery waste continued to be deposited in them (Fig. 7). General documentary sources for the town refer directly to the trades of tanners and leather workers, with laws particularly referring to them, including one stating, 'Shoemakers ought to make their Shoes and Bootes of good and well tanned Leather, and well licoured, curred and sowed, to keep men drye in their Legges and Feet.'⁵³ Similarly, tanners were not allowed to sell leather that had not been 'well dryed, marked and sorted'.⁵⁴

Investigations have provided evidence of significant changes in the use of the buildings in the post-medieval period. The changes most likely coincided with the period of the Civil War (1642–51), known to have had a great impact on Abingdon. Robbed walls and dumps of rubbish and rubble over the buildings and in features such as garderobes and wells suggest that buildings were demolished. Building material, including thirteenth-century ridge tile, was found dumped in these features, along with pottery of sixteenth- to seventeenth-century date, providing further evidence of upheaval at this time.

The fifteenth- to sixteenth-century pits to the rear of the tenements in the SEB area were covered by successive layers of garden soil, which was then levelled by dumps of material in the seventeenth to eighteenth centuries. This suggests that the small industry practised here during the medieval and early post-medieval period did not survive the ravages of the Civil War. Garden plots may have been established in the early part or the aftermath of the war, perhaps to help cope with the collapsing economy or demonstrating the early phases of recovery. In the seventeenth or eighteenth century a brick stairway was constructed into the basement of the tenement building, demonstrating that it had not been completely destroyed and was rebuilt.

⁵⁰ Allen, 'Abingdon, vineyard redevelopment', p. 50, n. 1. *Note:* The ditch was not excavated in the 2002–3 watchingbrief area.

⁵¹ Ibid.

⁵² B. Challenor, *Selection from the Records of the Borough of Abingdon 1552–1897* (Abingdon, 1898), pp. 27–31; Amyce's Survey of Abingdon.

⁵³ Ibid.

⁵⁴ Ibid.



Fig. 7. Composite plan of trenches and post-medieval features north of St Edmund's Lane

Walls in the Cinema area were also robbed in the early post-medieval period, possibly during the Civil War, while the remains of part of a substantial masonry building (probably sixteentheighteenth century) were revealed (Fig. 7). Documentary evidence tells us that a large courtyard inn, called the Lamb Inn, occupied the site and was run by the Ely family from 1553 until 1720.55 The excavated remains at the Cinema site must surely have been part of the Lamb Inn, which was one of a series of buildings fronting Ock Street, the main road west out of town. The building itself was extended in the late eighteenth century and occupied the site until 1851. Drinking vessels and many wine-bottle fragments were recovered from the area of the Lamb Inn, mainly of seventeenth- to eighteenth-century date, contemporary with the many well-dated clay pipes that were also recovered. Clay-pipe production took place on the site in the period immediately succeeding the Civil War and towards the end of the Ely occupancy. The large assemblage was recovered from dumps over the cobbled surfaces, and in pits, including the garderobe in the south-east corner of the property (see Higgins below). The assemblage mostly dated to 1660 to 1710 and included kiln debris and broken new pipes, suggesting that production and sale of pipes also took place at the inn. These dumps are less likely to be just the result of discarded pipes from patrons of the inn, as the large number of pipes dating to this period is strikingly different from the small number of pipes from the rest of the eighteenth century, which are more representative of general discarding by the customers. Interestingly this change coincides almost exactly with the end of the Ely occupancy. The Ely family were fairly important people in the town, and records show that in 1599 a Richard Ely was one of the couple of dozen men allowed to vote on town affairs.56

55 Ibid.

⁵⁶ Ibid.

The cemetery in the south of the development area was probably not fully revealed and may have been part of the parish cemetery associated with St Helen's church to the south (see Fig. 4). However, the lack of intercutting graves and dating of the small number of finds recovered suggests that it was short-lived, and may have originated from around the time of the Civil War.

FINDS AND ENVIRONMENTAL SUMMARIES

Summary accounts and discussions of the finds and environmental material are presented here, while detailed reports and illustrations are presented in Appendices 2 to 13 below.

LATE IRON AGE AND ROMAN POTTERY by EDWARD BIDDULPH (See Appendix 2)

The ceramic assemblage spanned the late Iron Age and entire Roman period. The early and late Roman periods were particularly well represented, while the late Iron Age component made a relatively small contribution to the assemblage overall. The condition of the pottery was good, given its mean sherd weight of 17 g. However, the proportion of residual pottery was substantial, and it is clear that context groups contained chronologically mixed and redeposited material. From the 2002–3 excavation, some 40 per cent of the late Iron Age and Roman-period assemblage by weight was recovered from post-Roman deposits. Examining the remaining 60 per cent is particularly instructive, as it reveals a crucial difference in the chronology of the assemblage, compared with the impression gained from context groups studied in isolation. It can be seen in Table 1 that the mid-Roman period is now much better represented, while the early and late Roman periods are poorly represented, while the late Iron Age is not present at all. This suggests that activity at the site (or at least the infilling of the main ditches and pits) was largely confined to the second and third centuries, and that the other material includes a significant residual element, having come from outside the area of occupation.

Phase	Weight (g)	% wt
AD 43–130	795	9%
AD 43–250	375	4%
AD 130–250	5206	61%
AD 130-410	261	3%
AD 250–410	638	8%
Roman	1230	14%
Total	8505	-

TABLE 1. CHRONOLOGICAL DISTRIBUTION OF POTTERY FROM ROMAN PERIOD DEPOSITS

The pottery from the 2002–3 stratified sequence was recovered mainly from ditch fills, accounting for 77 per cent of assemblage by weight. A further 22 per cent was collected from pits, while a very small amount came from posthole fills and a layer. Comparing ditch and pit assemblages, context groups were of broadly similar size, weighing an average of 168 g in ditches and 134 g in pits; pottery from ditches had a mean sherd weight of 13 g, while that from pits was 15 g. As the character of the two groups is more or less identical, it is likely that they share a history of (re)deposition, and that the pottery from both features was used and discarded near to or in the area of excavation. However, a difference in the functional composition of the two groups can be detected. Jars are better represented in ditch assemblages (71 per cent by estimated vessel equivalent [EVE] compared with 52 per cent in pits) as are bowls (7 per cent compared with 4 per cent). In

contrast, the proportion of drinking-related forms, beakers, flagons, and cups, is higher in pits (32 per cent), compared with ditches (13 per cent). It is tempting to ascribe this to deliberate selection linked to feature type, perhaps on the lines suggested by Martin Pitts,⁵⁷ who has detected a drinking and eating emphasis in relation to some late Iron Age pit and well assemblages in south-eastern Britain, which, he argues, replicate aspects of funerary groups. However, a chronological reason for the difference is more likely. The pit assemblage, mainly dating to the mid-Roman period, contained white-ware flagons, samian cups, and assorted beakers; in the late Roman period, which is better represented in the ditch assemblage, these types have largely disappeared, with the gap being met by Oxfordshire colour-coated ware bowls and coarse-ware jars.

The position of Roman Abingdon as a significant local centre has long been suspected, and the discovery of masonry buildings, at the Railway Inn and East St Helen's Street,⁵⁸ for example, points to a settlement of relatively high status. Ceramic evidence does much to support this view. Surveys of ceramic assemblages in Warwickshire and the Upper Thames Valley have demonstrated that assemblages from higher status settlements tend to include a higher proportion of fine and specialist wares - samian wares, amphorae, mortaria, white wares, white-slipped wares, and fine wares - compared with lower status sites, where coarse, locally produced grey wares were more prevalent.⁵⁹ In the case of the pottery from Abingdon's redevelopment area, 14 per cent of the pottery by sherd count from context groups dating to the first and second centuries were fine and specialist wares. This compares with the pottery from the villa at Barton Court Farm, Abingdon, which included more than 15 per cent fine and specialist wares, and the small towns of Alchester and Asthall, which each yielded about 8 per cent.60 The proportion of such wares increased at most settlements in the late Roman period, thanks to the expansion of the Oxfordshire industry, but, despite this having the effect of levelling assemblages out, differences remain. Some 26 per cent of late Roman pottery can be attributed to fine and specialist wares, placing Abingdon in between Alchester (about 20 per cent) and Dorchester (30 per cent). Assemblages from low-status settlements, such as Yarnton, tended to contain 15 per cent or less.⁶¹

Although other Roman sites are known in Abingdon, there are few quantified ceramic assemblages which can be compared with that from the redevelopment site. Those that are available offer a mixed picture. Fine and specialist wares accounted for 13 per cent of the mainly early and mid-Roman assemblage by sherd count from the Railway Inn site. By contrast, just 5 per cent of the Roman assemblage from Wyndyke Furlong included such material;⁶² however, the material was recovered from a field system away from the main settlement focus. Another index of status is broadly consistent with the trend presented by the fine and specialist wares at the redevelopment site: *amphorae* accounted for 0.6 per cent of the assemblage, a proportion that places the site alongside some small towns and villa sites.⁶³ However, the amount of decorated samian is rather low and suggestive of a lower status site.⁶⁴ More ceramic data is required to resolve these ambiguities.

⁵⁹ Paul Booth, 'Quantifying status: some pottery data from the Upper Thames Valley', *Journal of Roman Pottery Studies*, 11 (2004), pp. 39–52.

⁶² J. Timby, 'The pottery', in Jeff Muir and Mark Roberts, *Excavations at Wyndyke Furlong, Abingdon, Oxfordshire,* 1994, Thames Valley Landscapes Monograph, 12 (Oxford, 1999), pp. 31–40, table 3.4.

⁶³ J. Evans, 'Material approaches to the identification of different Romano-British sites types', in Simon James and Martin Millett, eds, *Britons and Romans: Advancing an Archaeological Agenda*, CBA Research Report, 125 (York, 2001), pp. 26–35, fig. 11.

⁶⁴ Cf. S. H. Willis, 'Samian pottery in Britain: exploring its distribution and archaeological potential', *Archaeological Journal*, 155 (1998), pp. 82–133.

⁵⁷ M. Pitts, 'Pots and pits: drinking and deposition in late Iron Age south-east Britain', *Oxford Journal of Archaeology*, 24 (2005), pp. 143–61.

⁵⁸ Ackerman, 'Note'; Chambers and Moore, 'Abingdon, Vineyard redevelopment', n. 10.

⁶⁰ Ibid., fig. 2.

⁶¹ Ibid., fig. 3.

Some evidence for vessel use was noted. An Oxfordshire white-ware *mortarium* (Young type M2) was burnt in patches on its external and internal surfaces. This recalls similarly burnt *mortaria* from Oxford and Appleford, among other sites, and may point to its use as a cooking vessel, as well as a vessel for grinding and mixing.⁶⁵ The base of a coarse white-ware flagon, again from context 2, was burnt and appears to have been used to heat liquids. Two graffiti were encountered. A fine grey-ware beaker base from mid-Roman context 1005 (1996–7 evaluation) was inscribed with a faint, complex x-graffito. The base may have been trimmed and used as a gaming counter. A sherd in late Iron Age or early Roman fabric E20 had been lightly scored with lines resembling the letters I, I, N – possibly [...]EN[...] or [...]NE[...]. The interpretation (and, indeed, the identification of the graffito) is tentative, while the sherd is residual in post-medieval context 6088. Nevertheless, the fabric is handmade and suggests a degree of literacy in first-century Abingdon.

MEDIEVAL AND POST-MEDIEVAL POTTERY by CAROLE WHEELER (See Appendix 3)

The pottery finds from three main areas of the site are discussed separately below since they potentially represent different activity areas: Neave House, near to a possible chapel and later vicarage, the SEB area characterized by medieval pits associated with tenement housing, and the Cinema site where the Lamb Inn was located.

Neave House – Trenches 15 and 16 (Table 2)

TABLE 2.	VESSEL	OCCUR	RENCE	PER 1	PHASE	EXPRES	SED A	AS PE	RCEN	ГАGE
	OF '	THE EVE	E PER P	HASE	FROM	NEAVE	HOU	JSE		

-		Century	
Vessel type	Late 12th–13th	Mid 13th-14th	16th-17th
Jar	57	100	
Jug	32		
Dish/bowl	11		100
drinking			
EVE Total	0.47	0.19	0.12

This very small assemblage of 105 sherds (2054 g), 92 per cent of which date from the late twelfth to fourteenth centuries, produced predominantly jars (OXAC, AW, WA38, OXAQ) with the occasional jug (OXAW/AM) (see Fig. 15, no. 2) and dish (OXAG). All are domestic in nature and probably associated with the nearby properties. The cesspit (8036) produced pottery of late twelfth- to early fifteenth-century date, whilst the pottery accompanying the smithing waste (8026) dated from about the mid-thirteenth century.

SEB Site (Table 3)

The SEB site is characterized by a large number of inter-connecting pits, dating mainly from the late twelfth to sixteenth centuries, although an earlier Saxon presence is apparent from the few early to mid-Saxon and late Saxon (OXR) sherds retrieved. The assemblage is the largest, with 2,977 sherds (47898 g.). Variably sized jars (OXAW, OXAQ, Wallingford-type, and a few OXY) predominate in the medieval period, together with shallow and thumb-rimmed dishes (OXAG,

⁶⁵ E. Biddulph, 'Roman pottery', in P. Bradley, B. Charles, A. Hardy and D. Poore, 'Prehistoric and Roman activity and a Civil War ditch: excavations at the Chemistry Research Laboratory, 2–4 South Parks Road, Oxford', *Oxoniensia*, 70 (2005), pp. 155–67.

	Century							
	114 124	Mid	Late	Late 12th-	Mid	Late	164h 174h	1741 1041
	11tn-12tn	11th-15th	12th-15th	early 15th	15tn-14tn	14tn-10tn	16tn-17tn	1/m–18m
Jar	100	64.6	61.4	100	35	86	50.9	14
Jug		11.8	19.4		45.9		27.8	26
Dish/bowl		23.6	19.2		8.3	14	3.2	52
drinking					10.8		5.4	
Pancheon							12.6	
Colander								0.1
EVE Total	0.18	2.54	5.26	0.39	9.21	0.5	2.77	1.3

TABLE 3. VESSEL OCCURRENCE PER PHASE EXPRESSED AS PERCENTAGE OF THE EVE PER PHASE FROM THE SEB AREA

OXAW, OXAQ), a rarely found Brill/Boarstall spouted pitcher (Fig. 16, no. 6) and highly decorated Ashampstead jugs (Fig. 15, no. 5 and Fig. 16, no. 7). Pit 6384 (fill 6389) had a typical selection of vessels dating from late twelfth to early thirteenth centuries, including an OXAG clear-glazed tripod pitcher, the rim and shoulder from an AQ-cooking pot (Fig. 15, no. 4) and an OXAG shallow dish with external sooting. Local wares are represented by a Wallingford-type thumbed cooking-pot rim (6390) (Fig. 15, no. 3). Of particular note are pit groups 6707, 6697, and 6688 dated to the mid-thirteenth century, where a range of highly decorated jugs occur (Fig. 17, no. 9), including a spectacular Brill/Boarstall anthropomorphic example (see below, Fig. 17, no. 8). In the later period pit 6470 contained a group of sixteenth- to seventeenth-century vessels, including a Cistercian-type mug.

The anthropomorphic jug (6684) (Fig. 16, no. 8)

This large thirteenth-century Brill/Boarstall dark-green jug, with its beautifully executed humanface design, is a splendid example of the medieval sense of humour. Two eyes are fixed either side of the tubular spout, which is held in place by a pair of hands on the end of arms (one missing) projecting from just below the rim. A beard juts out from below the spout, and the rim of the jug has been slightly raised above the eyes to represent eyebrows. Face-masks have been attached either side of the neck, just below the rim, and pellets of red clay decorate the body. The plaited strap handle with leaflike tendrils either side may symbolize hair or be associated with the myth of the 'green man', an aspect of medieval imagery often seen in churches.⁶⁶ A thirteenth- or early fourteenth-century Rouen-style face jug from Abingdon is now in the British Museum.⁶⁷

The garderobe fill (6137) of Building 6038 produced a range of interesting tablewares (for example, Fig. 17, nos 11–12). An OXAG-type cauldron rim (Fig. 17, no. 11) is decorated with incised v-shaped 'stitching' to imitate leather-work detail from the outer rim to the shoulder, and a shallow dish with a socketed handle is made in the same reduced fabric.⁶⁸ There were two Abingdon AB7 jars, one with two handles placed at right-angles to the rim (Fig. 17, no. 12), this time copying a metal vessel.⁶⁹ In this same fabric there was a shallow dish, with a simple rounded rim, green-wash internal glaze, and a convex base. The Brill/Boarstall industry was represented by a small round bottle, glazed mottle green from shoulder to belly, dating from the mid-thirteenth to fourteenth centuries and perhaps used for oils or sauces for culinary use, as well as two jugs, one

⁶⁹ Ibid., fig. 27.4.

⁶⁶ Kathleen Basford, *The Green Man* (Ipswich, 1978).

⁶⁷ D. Hinton, 'Two medieval anthropomorphic pots', Oxoniensia, 38 (1973), pp. 387–9.

⁶⁸ See Maureen Mellor, in T. G. Allen et al., 'A medieval grange of Abingdon Abbey, Dean Court Farm, Cumnor, Oxon', *Oxoniensia*, 64 (1994), fig 26.10 for similar.

being a large baluster-shaped jug with a rod handle. Two sherds from a Brill/Boarstall aquamanile (6156/6132) in animal form, a type of vessel used to pour water during the washing of hands at table were also found (Fig. 17, no. 10). These are usually regarded as high-status table wares and often associated with the wool or cloth trade.⁷⁰

Cinema Site (Table 4)

	Mid	Late	Late 12th-	Mid	Late			
	11th–13th	12th-13th	early 15th	13th–14th	14th–16th	16th–17th	17th–18th	18th+
Jar	100	82.3	86	66	89	18.6	25	
Jug		13.3			11	13.6		
Dish/bowl		4.4	14	34		58	49	27.2
drinking						9.8	6	44.5
Pancheon								4.7
Flatware							8	7.9
Chamberpot							12	15.7
EVE Total	0.5	1.13	0.37	0.15	0.66	0.81	2.37	4.45

 TABLE 4. VESSEL OCCURRENCE PER PHASE EXPRESSED AS PERCENTAGE

 OF THE EVE PER PHASE FROM THE CINEMA SITE

This assemblage comprised 1,440 sherds (32,236 g) of largely thumb-rimmed jars (OXAW, OXBB, OXAQ, AB6), some dishes, and a tripod skillet (OXBB). The number of jugs is under-represented by rim percentages. The vessel repertoire expands in the post-medieval period to include small jugs and drinking vessels (OXAM, OXBN, OXST, REW), a slipware cup, bowls (OXBG, OXAM, REW), a London-made charger (OXCE) (Fig. 18, no. 16), and chamber pots (REW). The late medieval building to the north of the probable site of the Lamb Inn produced a small amount of late medieval pottery from below the floor surface (7137). The cesspit (7657) associated with the square building (7588), dating to the early eighteenth century, again thought to be associated with the inn, produced the most interesting assemblage of vessels. They included a splendid early to mid-seventeenth-century Bartmann jug (7601), complete apart from a missing handle, bearing the commonly used Amsterdam heraldic motif, dated from about 1613–50,⁷¹ which was probably imported into England empty to be filled here, usually with wine (Fig. 17, no. 13). This pit also produced a Westerwald stoneware mug (7600) with foliate design, a late seventeenthto early eighteenth-century Staffordshire or Bristol trailed slipware cup (7833), a mid- to late seventeenth-century Surrey/Hampshire border-ware bowl, and a number of eighteenth-century chamber pots.

Several of the pits indicate industrial activity on the site. Pit 7597, containing horn cores dated to the seventeenth or early eighteenth century, and those with leather waste (7744 and 7823) have an early to post-medieval date, although typologically the leather shoes deposited within have been given a late fourteenth-century date. This, together with the cross-fits of the Surrey/Hampshire border-ware domed lid⁷² in contexts 7810/7842 and the tin-glazed ointment jar (7658/7521/7608) suggests a level of disturbance to these post-medieval contexts. Other drinking vessels were produced from disturbed contexts (for example, Fig. 17, no. 14), most notably a

⁷⁰ Paul Blinkhorn, 'Late Saxon, medieval and post-medieval pottery', in Alan Hardy, Anne Dodd, and Graham D. Keevil, *Ælfric's Abbey. Excavations at Eynsham Abbey, Oxfordshire, 1989–1992* (Oxford, 2003), p. 181.

⁷¹ David Gaimster, German Stoneware 1200–1900: Archaeology and Cultural History (London, 1997), p. 361.

⁷² Jacqueline Pearce, Border Wares. Post-Medieval Pottery in London, 1500–1700 (London, 1992), pp. 41–2, 91–5.

Westerwald globular tankard or jug (7521/7579) depicting a seventeenth-century gentleman with staff (of office?) in relief on oval medallions (Fig. 18, no. 15), a previously unknown design.⁷³

Conclusions

The pottery assemblage from the heart of this flourishing medieval town supports the view of a south to south-west bias to trade in Abingdon, certainly up to the fourteenth century. The influence behind this remains a subject for future debate. The occupants of the tenements in the SEB site were demanding highly decorated table wares in unusual forms that may indicate their aspirations to a higher social standing. The Cinema site has a more limited range of medieval vessels, again predominately domestic. The vessel diversity expands in the post-medieval period, displaying some notable stoneware drinking vessels. However, overall the number of drinking vessels is small in number, and one assumes other materials, such as wood, were more commonly in use at the inn.

METALWORK by LEIGH ALLEN (See Appendix 4) (Roman coin identified by Paul Booth)

A total of 341 metal objects was recovered from the site, which – excluding unidentifiable miscellaneous fragments of sheet and strip – comprises 35 copper alloy objects (including 20 fine wire pins), 254 iron objects (including 98 coffin nails and 129 structural nails), and 1 lead object. The assemblage dates to the medieval or post-medieval period, with the exception of a single residual fourth-century Roman coin (AD 364–78). The general status of the assemblage is low, with the majority deriving from post-medieval pits dug to the rear of the tenements. There are no objects that can be associated with possible use of the site for leather-working, tanning, or as a public house.

FLINT by KATE CRAMP

A total of seventeen struck flints and nine pieces (108 g) of burnt unworked flint was recovered during excavations. The assemblage is largely composed of un-retouched debitage and contains few chronologically distinctive types. The thin distribution of the flintwork and its variable condition does not support evidence for extensive prehistoric activity in the area. Both gravel flint and chalk flint sources appear to have been used for the production of the tools and debitage in the assemblage.

CLAY TOBACCO PIPES by DAVID A. HIGGINS (See Appendix 5)

The excavations produced a total of 2,319 fragments of pipe, comprising 498 bowl, 1,689 stem, and 132 mouthpiece fragments (examined in Appendix 5). This is by far the largest assemblage of pipes ever to have been recovered from the town, and it ranks alongside some of the largest excavated groups to have been recovered nationally. This group is particularly significant since there does not appear to have been any previous work on pipes from Abingdon, and apart from the towns of Oxford and Reading there has been very little work on pipes from the counties of Oxfordshire or Berkshire (of which Abingdon was formerly a part) in general.

The pipes were recovered in very different quantities from the various areas of the site. Excavations in the area of the former Neave House produced only four plain stems and only one plain stem was recovered from the former SEB site. The watching brief recovered 26 bowls, 95 stems, and 5 mouthpieces, but it was the former Cinema site that produced the bulk of the finds: 472 bowls, 1,589 stems and 122 mouthpieces, giving a total of 2,188 fragments in all (94 per cent

⁷³ David Gaimster, personal communication (2006).

of the total Abingdon assemblage). Despite this, it is sometimes the mere presence or accurate dating of the pipe fragments that can prove to be as significant as their overall numbers. The four plain stems from Neave House, for example, were all recovered from one piece of wall fabric (8025). These include large joining fragments of a late seventeenth-century stem, and all of the fragments would be consistent with a late seventeenth-century or early eighteenth-century date, thus providing a probable date for the wall construction itself. Similarly, the earliest bowl from the site, dating from about 1610–40, came from the infill of a garderobe (5056) in the watching-brief area, where it may provide an important clue to the dating of this event.

This is an important assemblage of pipes, not only because of the size of the group, but also because it has provided the first opportunity to assess the pipe styles that were being produced and used in Abingdon. There does not appear to have been any previous work on the pipe-making industry at Abingdon, but the report in Appendix 5 demonstrates that pipe-making was probably established in the town by the mid-seventeenth century, and that it flourished until at least the early eighteenth century. The names of eight manufacturers have been brought together with the artefactual evidence to show how local styles emerged and developed during this period.

This study has produced not only the first actual kiln waste from the town, but also evidence for the earliest and latest use of a distinctive 'fine sandy' fabric. This fabric can now be shown to have been exploited in the Oxford/Reading area from at least the start of the seventeenth century, right through to at least the second half of the eighteenth century, and it was certainly being used by the Abingdon makers. The first artefactual evidence for the use of serrated trimming-knives has also been recovered as well as a new and early technique for the production of decorative stem borders.

In terms of the bowl forms, it has been possible to illustrate typical local styles of both heel and spur forms from about 1610 to 1720. During this period marked differences could be observed from neighbouring centres such as Reading and Oxford. The differences in styles and finish from Oxford, where burnishing was much more common, are particularly surprising and suggest that the two adjacent towns had their own pipe-making communities, able to provide for the needs of each town and develop their own distinctive styles.

In terms of marking, some particularly interesting and unusual designs were found. 'Imported' pieces show that goods and services were probably being drawn from twenty to thirty miles away and include a very unusual ship mark, probably from Oxford. The local marks include a large bowl mark for the previously unknown mid-seventeenth-century maker Thomas Burt, who may well have established a fashion for heart-shaped marks in the town. These were often placed on the stem in a West Country manner, but using relief lettering and motifs to create a distinctive local style. It appears that the town supported a very interesting and vibrant industry during this period that clearly warrants further work.

CERAMIC BUILDING MATERIALS by JOHN COTTER and KATE BRADY (See Appendix 6)

The site produced a total of 2,121 fragments of ceramic and stone building materials weighing 16.19 kg. Two or three small fragments of Roman roofing tiles are present on the site, but residual. The rest of the building materials, mainly ceramic roofing tiles, date from the thirteenth to the nineteenth centuries, with a strong emphasis on the early post-medieval period, particularly the sixteenth to seventeenth centuries, although the medieval period (thirteenth to sixteenth centuries) is also well represented. Two fragments of particular interest comprised ridge tile in a medieval green-glazed fabric, possibly of Brill/Borstall type. This type has not been encountered before in the Oxford region by the authors, and is probably of thirteenth-century date.

THE LEATHER by QUITA MOULD (See Appendix 7)

Leather was recovered from three pits (7823, 7831, and 7744) located at the rear of the properties fronting Ock Street within the Cinema site. The material is dominated by primary waste, indicating

that the leather is waste from the initial stages of whatever leather-working activity was taking place. The waste from at least two of the leather-working trades was disposed of in the same pits (7744 and 7823).

While a very small amount of secondary waste from shoemaking or cobbling was found along with the primary waste, it occurred in insufficient quantity to suggest that the waste material was debris deriving exclusively from a workshop of either of these trades. Traditionally leather was sold by weight, and the tanner would be keen to sell his tanned hides and the currier to sell his finished leather with these unusable areas still attached. Conversely, the leather-worker would be reluctant to buy leather with these unusable areas still present and pay for material that could not be used. The waste leather assemblage found here may have resulted from any one of a number of different workers in the leather trades. The primary waste may be unusable areas of hides trimmed off by the tanner or, later, trimmed off the finished leather by the currier. More likely, perhaps, it could be the debris from a leather seller, who cut away the unusable areas of the hide before selling pieces of trimmed leather to the leather-workers. It is also possible that the leather-worker bought pieces of untrimmed leather directly from the currier and cut these unusable areas of the hide away and disposed of them as the first step in the manufacturing process, although one might expect a higher proportion of secondary waste from the cutting and trimming of pattern pieces if that were the case. The stamp, if it was a mark attesting the quality of the leather, would be retained as long as possible and would be the last thing to be cut off and thrown away before the leather was used. The tanner's marks would be cut off and thrown away as soon as the hides were sold.

Whatever trade or trades were responsible for the waste leather found here, it does provide direct evidence for the leather-working trades in Abingdon and should be seen alongside the other possible evidence for tanning recovered during these investigations. Large deposits of cattle-horn cores were found in two pits (7597 and 7670), located close to the pits containing waste leather, while deposits containing high percentages of cattle-horn cores and lower-leg bones of sheep or goats were found in features of medieval and early post-medieval date at the southern end of the site. Traditionally, cattle hides and calf, sheep, and goatskins were bought from the butcher with the horns and hooves attached. They were removed by the tanner or tawyer and sold on prior to processing. Deposits of horn cores and the lower-leg bones of sheep or goats are most likely to represent waste material from horn working, glue-making or allied trades being undertaken in the locality. These trades, along with the heavy leather trades, all linked with butchery, were often closely located on the outskirts of a town. This site is well located for the tanning trade and these other occupations being close to a source of water and just outside the town ditch.

Previous excavations in the town have found similar evidence for these related trades that has been well summarized by Wilson and Wallis.⁷⁴ Deposits with relatively high proportions of cattle-skull debris, including horn cores, and of foot bones have been found in features of fourteenth-to fifteenth-century date at the rear of Twickenham House.⁷⁵ Sheep foot bones were similarly well represented in samples of early post-medieval date from that site and in earlier dumps of waste between the Twitty Almshouses and Winsmore Lane that derived from the late medieval town.⁷⁶ The area to the north of the river and to the west of Bridge Street, significantly known as Butcher Row from the mid-sixteenth to the mid-nineteenth century. The presence of a warehouse in this area in 1805 belonging to Thomas Knight & Son, recorded as soap-boilers and

⁷⁴ B. Wilson and J. Wallis, 'Prehistoric activity, early Roman building, tenement yards and gardens behind Twickenham House, Abingdon', *Oxoniensia*, 56 (1991), pp. 1–15.

75 Ibid.

⁷⁶ Ibid., p. 14; R. Wilson, 'Trade, industrial and domestic activity at the Old Clothing Factory site, Abingdon', *Oxoniensia*, 54 (1989), pp. 279–86.

⁷⁷ John MacGowan, The Origins of the Street Names of Abingdon (Abingdon, 1988), p. 2.

tallow chandlers, indicates that complimentary activities continued in the area into the succeeding century.⁷⁸

Little direct evidence for the various leather trades has been found previously. It has been suggested that rectangular pits backfilled during the construction of the Old Gaol may have been tanning pits.⁷⁹ This is the first leather to be found at Abingdon in recent years. If leather has been found previously it has not been published or made available to a wider audience. Contemporary leatherwork assemblages have been found in Oxford and Reading, with primary waste leather being a component of fourteenth- and fifteenth-century dumps of leatherwork, along with debris from cobblers' workshops at Reading.⁸⁰

	Medieval	Post-medieval	18th century	Unstratified	TOTAL
Roof-stones	4	3	1		8
Whetstones	1		1		2
Building stone and blocks	1 block	1 slab	1 slab, 1 ashlar block		4
Other	1 mortar, 1 lamp holder	1 hammerstone	1 decorated chalk 'shell', 1 column shaft	1 chalk ball	6
TOTAL	8	5	6	1	20

TABLE 5. THE WORKED STONE

WORKED STONE by PETER DAVENPORT and RUTH SHAFFREY (See Appendix 8)

The worked-stone assemblage includes a lampholder, a mortar fragment, a hammerstone, two whetstones, a chalk sphere, and a piece of chalk carved into the form of a shell. There are also fragments from at least eight stone roof tiles, building blocks, and a Purbeck-marble column shaft. All the stone was retrieved from medieval or later contexts and is summarized in Table 5. The fragment of a three-quarter column shaft of Purbeck marble was found in a drain backfilled in the eighteenth century (7578 SF 154), so presumably refers to the demolition of the building at or just before that period. The column face is finely polished, and the rear is roughly worked. Such shafts were commonly used from the late twelfth to the early fourteenth centuries in attached shafting to door openings, windows, and arcades. It would be expected that this fragment is from a high-status ecclesiastical or secular building.

In addition to the structural stone are several portable stone artefacts, mostly typical of medieval urban assemblages, including a possible lampholder. Neither the simple design of the lamp nor the mortar, with its crude finish, were of very high quality, perhaps suggestive of a medium-status household.

WOOD by STEVE ALLEN

Three timbers had been deposited within an otherwise undated stone-lined well (7123) on the Cinema site. It is suggested that the pieces are derived from a late medieval building, part or all of which was modified or demolished, and some of whose component timbers were reused.

⁷⁸ Wilson and Wallis, 'Prehistoric activity', n. 74.

⁷⁹ Ibid., p. 13.

⁸⁰ Quita Mould, 'Leather', in John W. Hawkes and P. J. Fasham, 'Excavations on Reading Waterfront sites, 1979–1988', Wessex Archaeology Report 5 (Salisbury, 1997), pp. 108–9; idem, 'The leather from the Reading Oracle Project' (OAU TS report, 2003).

GLASS by HUGH WILLMOTT (See Appendix 9)

A reasonable-sized assemblage of vessel glass, consisting of over 300 fragments, was recovered from the excavations. Some was relatively recent in nature, being late nineteenth or twentieth century in date (examined in assessment only). The majority of the remainder of the assemblage is eighteenth century in date and derives from ordinary domestic activities occurring on site. However, a small amount of residual Roman and medieval material was also recovered. The bulk glass (bottles and window) has been categorized and recorded in tabular format within the site archive, whilst the finewares are individually catalogued.

Roman Glass

A very small assemblage of Roman glass was found during the excavations, although none appears to be in primary contexts. The assemblage included fragments of a first-century AD pillar-moulded bowl and first- to second-century prismatic bottles.

Medieval Glass

A small quantity of late medieval glass included small oval bottles, dating primarily to the late fifteenth century, and fragments of medieval window glass dating any time between the twelfth and sixteenth centuries.

Post-medieval Tablewares

Only four post-medieval tablewares of note were found: two wine glasses, a small clear-glass jug or cruet, and a final piece of unknown form, decorated with opaque white *vetro a fili* (trailing threads), and probably eighteenth century in date.

Post-medieval Storage Vessels

The largest category of glass recovered was storage vessels, and of these a few are jars. The most unusual is the rim and upper body from a vertical-sided jar with out-folded rim, dating to the mid-seventeenth century. A number of fragments of phials were found, but by far the most common vessel found at Abingdon is the wine bottle, with at least forty being recovered in total. This is typical for a post-medieval site, as from the late seventeenth century onwards wine bottles were produced in huge numbers in regional centres all over England.⁸¹ Four broad designs of wine bottle, dating to between the seventeenth and eighteenth centuries, were found.

Post-medieval Window Glass

A small quantity of post-medieval window glass was also recovered from the excavations.

IRON SLAG by LYNNE KEYS

Just under 4 kg of material described as slag was examined for this report, with most slag (just over 2.9 kg) deriving from medieval contexts. Both the former SEB building and Neave House sites produced the greatest amounts of slag for this phase. Pit 8026 containing fill (8027) on the Neave House site is of immediate interest, since it contains four smithing hearth bottoms, a quantity of undiagnostic slag, and a small amount of vitrified hearth lining. The pit dated from the twelfth to thirteenth centuries and was situated to the rear of the remains of a building of twelfth- to fourteenth-century date. The finds suggest a smith had been working, and hence the siting of a forge somewhere in the immediate vicinity.

Pit fills from the SEB site contained slag, including one smithing hearth bottom. These pits were

⁸¹ H. Willmott, A History of English Glassmaking, AD 43–1800 (Stroud, 2005), pp. 108–44.

associated with the use of tenement buildings, and their dates ranged from the late twelfth century to the sixteenth century, which probably reflected the time span of the use of the buildings.

OTHER FINDS by ROSEMARY GRANT and KATE BRADY (See Appendix 10)

A total of four worked bone objects were recovered from the excavations, comprising two decorated casket strips and two pieces of worked antler. The decorative casket strips are most likely to be medieval in date. Other finds include 37 fragments (518 g) of undiagnostic fired clay, 12 fragments of plaster (most likely from the Lamb Inn), and 6752 g of shell. The bulk of the shell is oyster, but small quantities of clam (1 g), landsnail (8 g), mussel (23 g), scallop (5 g), and whelk (26 g) were also recovered, mainly as waste deposits recovered from pits. A few of these pits were medieval in date, but most dated from the sixteenth century onwards.

THE HUMAN BONE by CERIDWEN BOSTON (See Appendix 11)

The human bone assemblage from both the 1996–7 evaluation⁸² and the 2002–3 excavations comprised 29 articulated skeletons and a small quantity of disarticulated bone. One crouched adult male skeleton (236) and the articulated leg bones of a severely truncated crouched adult male (948) are thought to date to the Iron Age (see Fig. 5 above). A young, possibly female, skeleton (266, not shown on the plan) was also recovered during the 1996–7 evaluation, found face-down in a medieval pit, to the south. Her ignominious end suggests that she had been a victim of foul play.⁸³ The remaining 26 skeletons comprised part of an early post-medieval cemetery assemblage (see Appendix 1, Fig. 9). Most disarticulated bone was recovered from medieval and post-medieval contexts and appeared to be residual. An exception was a cranium (901) deliberately placed within an early Roman ditch.

Assemblage Composition

Iron Age skeleton 236 and severely truncated skeleton 948 (possibly Iron Age) were both adult males. The isolated medieval skeleton 266 was a young adult (aged 20 to 25 years), possibly female.

The bone of the cemetery assemblage was well preserved, and most of the twenty-six skeletons were nearly complete. There was a high proportion of young individuals in the population, which comprised eleven adults and fifteen sub-adults (seven children, aged 2 to 12 years, and five adolescents). There was an absence of infants below two years of age, and the elderly (over 50 years). There was a preponderance of males (seven males, two possible males, four females, and one possible female). Zoning of the cemetery by age and sex may explain this demography.

Average adult stature was 1.59 m (5 ft 2 in.) for the five females and 1.70 m (5 ft 6 in.) for the seven males. These correlate with mean stature estimates for the post-medieval period.⁸⁴ At 1.67 m (5 ft 5 in.), skeleton 266 was markedly taller than the 1.59 m average for the medieval period.⁸⁵ The pathology of the human bone is detailed in Appendix 11.

Discussion of Burial Practices

Iron Age and Roman skeletal remains. Placement of human remains within Iron Age ditches and other features was not uncommon in the Iron Age of southern central England,⁸⁶ local examples

82 Allen, 'Abingdon, Vineyard redevelopment', n. 1.

⁸⁴ Charlotte Roberts and Margaret Cox, *Health and Disease in Britain: from Prehistory to the Present Day* (Stroud, 2003), p. 396.

⁸³ Ibid., p. 53.

⁸⁵ Ibid.

⁸⁶ R. Whimster, Burial Practices in Iron Age Britain, BAR BS 90 (Oxford, 1981).

including Ashville Trading Centre, Abingdon,⁸⁷ and Barton Court Farm, just north of Abingdon.⁸⁸ The presence of crouched inhumations 236 and 498 within such features is thus not surprising. This treatment of the dead continued well into the Roman period in the Upper Thames Valley.⁸⁹ In evaluation Trench 5 an adult skull (901) had been deliberately placed in the base of an early Roman ditch (906), the skull accompanied by a complete late first-century pot and a paste melon bead (see Fig. 5 above).⁹⁰ Other local examples of human bone within Roman features are known from Castle Hill, Little Wittenham,⁹¹ and Gill Mill, Oxfordshire,⁹² the latter having been subject to a modified post-mortem.

The medieval skeleton. The young adult, possibly female, skeleton (266) had been placed or thrown face down into a large medieval pit. Her legs were extended, her left arm bent beneath her body, and her right arm flexed and bent back. This manner of disposal of human remains is atypical for the medieval period, which is characterized by W-E orientated supine extended burials within a churchyard. The casual disposal of the skeleton within a pit suggests foul play. However, no perimortem trauma or other suspicious pathological condition was visible on the skeleton.

The post-medieval burial ground. The main assemblage of twenty-six inhumations had been buried within a small, formally laid out burial ground, comprising three rows of W-E orientated graves and a small group of N-S burials. The southern limit of the burial ground is not known. Lack of intercutting graves and regular spacing suggests a very limited duration of use. Pottery dates from grave fills ranged from the eleventh to the thirteenth centuries (residual in the medieval garden soil into which the graves were dug) and the sixteenth to eighteenth century. Burial practices are in keeping with this date, with a high proportion of individuals interred within unadorned wooden coffins, completely lacking in coffin furniture (commonly seen from the early eighteenth century).⁹³ Whilst most burials were orientated W-E or E-W, four graves were on a N-S alignment. The latter orientation is known from early Nonconformist burials (for example, Civil War burials at the Vineyard, Abingdon),⁹⁴ the different grave orientation being used to distinguish them from those of the despised Church of England and of papists.

Most skeletons lay supine and extended, but skeleton 3008 had his knees flexed, probably a practical measure to fit the lower body within the confines of a defunct and infilled medieval well (3041), into which the grave had been accidentally cut.

While most were single inhumations, four graves (846, 972, 987, and 3015) contained multiple burials of two or three individuals, either an adult with sub-adults, or two or three sub-adults buried together. The single grave cut and the close proximity of the bodies within the grave indicated that they must have died soon after one another and were buried in one event. It seems probable that they died of acute disease that left no traces on the bone. There was no evidence of peri-mortem trauma.

⁹² S. Clough and L. Loe, 'Modified bone from Gill Mill Romano-British site', poster presentation at British Association for Biological Anthropology and Osteoarchaeology Conference (2006).

93 Julian Litten, The English Way of Death: the Common Funeral since 1450 (London, 1991), p. 90.

⁸⁷ M. Parrington, 'The excavation of an Iron Age settlement, Bronze Age ring ditches and Roman features at the Ashville Trading Estate, Abingdon, Oxon. 1974–76', OAU Report 1, CBA Research Report 28 (London, 1978).

⁸⁸ Philip Armitage and David Miles, 'Archaeology at Barton Court Farm, Oxon.', OAU Report 3, CBA Research Report 50 (Oxford, 1986).

⁸⁹ R. Philpott, Burial Practices in Roman Britain, BAR BS 219 (Oxford, 1991).

⁹⁰ Allen, 'Abingdon, Vineyard redevelopment', p. 50, n. 1.

⁹¹ T. Allen, K. Cramp, and L. Webley, 'Excavations at Castle Hill, Little Wittenham, Oxon.' (OA report in preparation, 2006).

⁹⁴ Allen, 'Abingdon, Vineyard redevelopment', n. 6.

Discussion and Conclusions

Although this is an interesting and well preserved assemblage, the assemblage size was too small to come to meaningful conclusions about the palaeodemography and palaepathology of this population. Iron Age human remains are seldom found in large quantities on any one site, and the remains from this site should be considered alongside other contemporary burials known from the area – for example, Wittenham Clumps, Little Wittenham;⁹⁵ Queen's Street, Abingdon,⁹⁶ and Ashville trading estate, Abingdon.⁹⁷

The small, early post-medieval assemblage comprised a young population with a high proportion of children and adolescents, but no infants and few older individuals. There was also a preponderance of adult males. As such, it does not represent a normal burial population of the medieval or pre-industrial periods. Zoning in the undisturbed southern part of the burial ground may be responsible, but it is unlikely that the cemetery extended far beyond the excavation limits. Whilst deficiency diseases were present, only skeleton 3042 showed evidence of severe chronic ill health. It is probable that many of the young were carried off by acute infections, so prevalent in towns of this period.⁹⁸ Social disruption during and following the Civil War may also have exercised a deleterious effect on the general health of this population.

ANIMAL BONE by LENA STRID

The animal bone assemblage can be divided into three chronological phases: late Iron Age to Roman, medieval, and post-medieval (Table 6). The assemblage consisted of 9,537 fragments, of which 3,465 (36.3 per cent) could be determined to species. This report provides a summary of the major findings. A full report and details of the assemblage can be found with the site archive.

Cattle and sheep or goat dominate the three phases. Due to the size difference, cattle is likely to have been the main meat provider for the inhabitants. The skeletal distribution indicates that cattle, sheep or goat, and pig were slaughtered, butchered, and eaten on the site. Most cattle in the medieval and post-medieval assemblages were slaughtered as adults (4 to 8 years). There were, however, a fairly large number of post-medieval calf remains. Most of the calf bones are metapodials, which were found in possible tannery deposits. It is possible that the slaughtering of young calves may be linked to dairy production, since the culling of young calves enables milk to be used instead for human consumption. The main focus of cattle husbandry was, however, meat, dairy products, and traction.

The medieval sheep were mainly slaughtered at 2 to 4 years of age, whereas those in the postmedieval centuries were mainly slaughtered at 4 to 6 years of age. This may seem surprising, as the substantial medieval woollen industry promoted the slaughter of older sheep, whereas in the post-medieval centuries the increasing focus on mutton would promote the slaughter of younger sheep of prime meat-bearing age. There was, however, a large trade in live sheep in these two periods.⁹⁹ It is possible that what we see in Abingdon during the medieval period are surplus sheep being sold for mutton and post-medieval sheep that were past their wool-yielding prime. During the post-medieval centuries younger sheep may have been driven on the hoof to the meat markets in London.

The medieval and post-medieval pig assemblages at the Abingdon West Central Redevelopment site show similar slaughter patterns, with the majority of the pigs being slaughtered before the age

⁹⁶ M. Parrington, 'A human burial from Queen's Street, Abingdon', Oxoniensia, 40 (1975), pp. 102-3.

98 Roberts and Cox, Health and Disease, p. 296, n. 84.

⁹⁹ P. J. Bowden, *The Wool Trade in Tudor and Stuart England* (London, 1962), pp. 8–11; N. J. Sykes, 'From Cu and Sceap to Beffe and Motton: the management, distribution and consumption of cattle and sheep, AD 410–1550', in D. Serjeantson and T. Waldron, eds, *Food in Medieval England: Diet and Nutrition* (Oxford, 2006).

⁹⁵ Allen, Cramp, and Webley, 'Excavations at Castle Hill', n. 84.

⁹⁷ Ibid., n. 80.

	Late Iron Age – Roman	Medieval	Post-medieval
Cattle (Bos taurus)	18	431	945
Sheep/goat (Ovis aries / Capra hircus)	12	395	617
Sheep (Ovis aries)		68	153
Goat (Capra hircus)		6	7
Pig (Sus domesticus)	4	135	117
Horse (Equus caballus)	2	19	72
Dog (Canis familiaris)		3	17
Cat (<i>Felis catus</i>)		18	83
Red deer (Cervus elaphus)	1	1	2
Fallow deer (Dama dama)		2	1
Hare (Lepus europaeus)		2	
Rabbit (Oryctolagus cuniculus)		2	9
Rodents and shrews (<i>Rodentia</i> and <i>Sorex</i> sp.)		40	164
Amphibians (Anura)		33	15
Domestic fowl (Gallus gallus)		189	42
Goose (Anser anser / Anser domesticus)		40	10
Duck (Anas sp.)		2	3
Snipe (Gallinago gallinago)			1
Pigeon (<i>Columba</i> sp.)		1	
Godwit (<i>Limosa</i> sp.)		2	
Small passerine		4	3
Small wader			1
Indeterminate birds		285	199
Indet. micromammals / amphibians		13	2
Small mammal	1	27	85
Medium mammal	22	556	467
Large mammal	30	509	992
Indeterminate	830	1163	1402
TOTAL	183	3946	5408

TABLE 6. NUMBER OF IDENTIFIED BONES BY MAJOR CHRONOLOGICAL PHASE IN THE ABINGDON CINEMA ASSEMBLAGE

of 3. This is a logical slaughter pattern, as the lack of secondary pig-products makes it pointless to keep any non-breeding pigs after they reached their full size, at the age of 2 to 3 years.

With the exception from a few juvenile bones in the post-medieval assemblage, all horse bones derive from adult horses, which is consistent with comparative Roman, medieval, and post-medieval assemblages. Horses were usually not used for food, but contemporary sources mention the use of horse meat for dog and cat food.¹⁰⁰ It is likely that the horse remains mainly represent working horses that had reached the end of their useful life.

Red deer and fallow deer are equally present in few numbers in both the medieval and postmedieval assemblages, while absent in the Roman one. Fallow deer are thought to be a Norman introduction. With the exception of an antler tine, all deer bones derived from meat-rich parts of the body. The skeletal distribution, as well as the presence of butchering marks, indicates the deer remains to be kitchen waste. The sawn-off red-deer antler tine suggests it was waste from an antler workshop in the area.

The small amount of dog, cat, hare, and rabbit bones in the medieval and post-medieval assemblages can be considered to be normal. Many of the cat bones in the assemblage were articulated juvenile or sub-adult remains, whereas almost all the dog bones were disarticulated adult remains.

There is a small variation in bird species present and in their intra-phase percentages in the medieval and post-medieval phases, but not enough to be considered significant. Domestic fowl

¹⁰⁰ William J. Gordon, The Horse-world of London (London, 1893), p. 187.

is by far the most common bird, with goose coming second. This relationship is found in most medieval and post-medieval assemblages. Chickens and geese would have provided both eggs and meat and would have been kept in back yards. The pigeon in the medieval assemblage may have been a domestic dove, but it is not possible to discern this from the single bone.

There is very little difference in butchering patterns between medieval and post-medieval phases of the assemblage, or between large and medium-sized mammals. The carcasses were usually suspended and divided in half, using a heavy knife. The head and the meat-poor lower legs were separated, and the meat-rich parts of the upper body were divided into smaller pieces. Usually the legs were dismembered at the joints, and the ribs were divided into two or more parts. The final part of the butchering process consisted of cutting these parts into pieces suitable for the consumer.

The presence of a possible tannery on or near to the site provides a context for deposits of cattle and sheep or goat foot bones (metapodials and phalanges) and horncores, which probably represent the waste from processing hides brought to the site with these bones attached.¹⁰¹

FISH REMAINS by REBECCA NICHOLSON (See Appendix 12)

Over 1,200 fish bones were recorded (Table 13, Appendix 12), excluding the thousands of tiny fish bones present in the fine residues from samples 21, 24, and 29 in particular. The fish assemblage derives almost exclusively from medieval and post-medieval pit fills, which in many cases were clearly filled with cess. The assemblages included bones from a range of marine and freshwater taxa, demonstrating the variety of fish available to inland markets at this time. Many fills contained a rich assemblage of tiny fish bones, with cyprinids and eels particularly numerous within the residue fractions less than 2 mm. The concentration of these bones suggests that tiny minnows, dace, sticklebacks, and other fish now considered inedible were commonly eaten.

THE CHARRED, MINERALIZED, AND WATERLOGGED PLANT REMAINS by RUTH PELLING (See Appendix 13)

Samples were taken of charred and waterlogged plant remains from the Iron Age or Roman *oppidum* ditch and medieval or post-medieval pit, garderobe, and well fills. In both the Roman and the medieval period the archaeobotanical deposits are dominated by cereal remains which are typical of the periods. The major difference between assemblages of the two periods is the representation of cereal processing waste, which dominates the Roman deposits, while the medieval and post-medieval deposits appear to contain fully processed grain with contaminants. This is in large part a reflection of the crop types and the way they tend to be stored. The Roman period deposits were dominated by spelt wheat, a hulled wheat in which the grain is held tightly in adhering glumes, and which is usually stored in spikelet form, with glumes still in place. The medieval deposits are dominated by free-threshing wheat, which is easily separated from its chaff, and therefore tends to enter sites, particularly non-agrarian settlements such as towns, as processed grain. In both periods the grain may have entered the settlement in a condition ready for storage, as reflected by the relatively small number of weed seeds. A similar pattern was seen at the Roman period Ashville site.¹⁰² The medieval period charred assemblages are typical of urban or semi-urban sites

¹⁰¹ See D. Serjeantson, 'Animal remains and the tanning trade', in D. Serjeantson and T. Waldron, eds, *Diet and Crafts in Towns: the Evidence of Animal Remains from the Roman to the Post-Medieval Periods*, BAR 199 (1989), pp. 129–46.

¹⁰² M. K. Jones, 'The plant remains', in M. Parrington, 'Excavation of an Iron Age settlement', n. 80; C. Stevens, 'An investigation of agricultural consumption and production models for prehistoric and Roman Britain', *Environmental Archaeology*, 8 (2003), pp. 61–76.

of this period, such as Oxford, where grain tends to dominate assemblages, and pulses and chaff are rare additions.¹⁰³

The mineralized remains are suggestive of sewage-type deposits which include a range of fruits. Some fruits represented are typical of the medieval periods, such as fig, grape, plum, and apple, while a much rarer fruit, mulberry, is also represented. The dried waterlogged deposits of the medieval and post-medieval period are also interpreted as containing sewage-type material. The deposits suggest that access to imported and rare foods in medieval Abingdon may not have been significantly different from that in the larger town of Oxford. With the exception of mulberry, there is little difference in access to such fruits between the thirteenth to fifteenth centuries and the seventeenth to eighteenth centururies. The Roman period waterlogged deposits conversely are dominated by ruderal and arable species, most of which are likely to represent plant matter growing on the muddy banks or edges of the partially silted *oppidum* ditch. There is no evidence for open water in the ditch, though periodic flooding is possible. Some waste of cereal-processing activity may also have entered the deposits, although generally the species present are such that seeds may have simply fallen in from surrounding plants.

APPENDIX 1: STRATIGRAPHIC NARRATIVE BY AREA

SEB SITE (Fig. 8)

Romano-British

The earliest features were represented by a few discrete pits and postholes, containing pottery dating to the mid to late Roman period. Residual Roman pottery was also retrieved from later medieval and post-medieval contexts, suggesting that further evidence of Roman activity may have been lost to truncation. Only one pit (6299) could be conclusively dated to the period, representing late Roman activity inside the inner late Iron Age or Roman ditched boundary.

Medieval

Two phases of pit digging were separated by the construction of a tenement building (6038).

Pits. The first phase of pit digging took place between the eleventh and thirteenth centuries. A total of 27 pits was identified, containing pottery of eleventh- to thirteenth-century date. These pits were scattered across the site, occasionally intercutting. The pits pre-date the construction of building 6038, discussed below.

Tenements. Several N-S and E-W aligned walls formed the remains of a building (6038) of medieval date, which would have fronted West St Helen's Street to the east. Some of these walls cut through the eleventh- to thirteenth-century pits discussed above. The structure had an internal area of 5.5 m in width (E-W) and at least 10 m in length (N-S) and was probably divided into two tenements. The main walls (6002, 6034, 6035, 6036, 6004, and 6003) measured 0.9 m in width and survived to a height of between 0.1 m and 0.7 m. The walls were constructed of roughly hewn limestone blocks with a silty clay bonding material. The eastern wall (6034, 6002) was aligned N-S and measured at least 11 m in length, but continued beyond the limits of excavation to the south. The wall appears to have been divided by two entrances and a doorjamb (6033). The E-W aligned northern wall (6035/6) was 6.5 m in length, with its north-western extent being partially robbed. The western N-S wall (6004) extended for 10.25 m, continuing beyond the southern limits of excavation. An internal wall (6003) divided building 6038, abutting the east and west walls. The southern part of the building formed a cellar, with walls rendered with lime mortar.

In the north-western corner of the building were two stone-lined garderobe pits. One (6098) abutted the northern wall, while the other (6139) abutted an addition (6037/6138) to the western wall. Garderobe 6098 is thought to be the earlier of the two, with 6139 being added at the same time as the western wall addition. A gap between this addition and the western wall (6004) formed a drainage chute connected to the main building. The lower fills of this garderobe pit contained cessy material and lenses of charcoal, presumably relating to its use. The

¹⁰³ P. Hinton, 'The charred plant remains from ovens 166 and 167, in P. Andrews and L. Mepham, 'Medieval and post-medieval extra-mural settlement on the site of the Ashmolean Museum forecourt, Beaumont St, Oxford', *Oxoniensia*, 62 (1997), pp. 179–223; R. Pelling, 'The charred plant remains', in Z. Kamash, D. R. P. Wilkinson, B. M. Ford, and J. Hiller, 'Late Saxon and medieval occupation: evidence from excavations at Lincoln College, Oxford, 1997–2000', *Oxoniensia*, 67 (2002), pp. 199–286; M. Robinson, 'Plant and invertebrate remains from the Priory drains', in G. H. Lambrick, 'Further excavations on the site of the Dominican Priory, Oxford', *Oxoniensia*, 50 (1985), pp. 196–201.



Fig. 8. Composite plan of trenches and features excavated on the SEB site

main fill (6230) was a more deliberate backfill. Pit 6127 (probably a drainage pit or soakaway) cut through the later garderobe and contained pottery of sixteenth- to seventeenth-century date.

Pits. A series of pits dating to the thirteenth and fourteenth centuries was situated to the rear of the building, many of which cut through the twelfth- to thirteenth-century pits. Eleven pits were clearly identifiable and contained dumps of general domestic rubbish, including a large pottery assemblage and animal bone, including tanning waste. One pit (6384) belonging to this phase was probably dug along with the first use of the building, as the lowest fills yielded pottery of twelfth- to thirteenth-century date, but it continued in use for a substantial amount of time. It contained an animal-bone assemblage suggestive of waste products associated with tanning, horn working, or glue-making. These included large numbers of horn cores and metapodials, which would have been kept in the hide after skinning. The pit was particularly large, measuring 1.9 m in diameter and 2 m in depth. Many successive dump deposits, including several early deposits of charcoal-rich material, filled the pit. The upper four fills yielded large amounts of thirteenth- to fourteenth-century pottery. The animal-processing waste was distributed fairly evenly throughout the fills.

A thin, patchy layer of garden soil (6284, not on the plan) covered some of the pits in the eastern part of the site. It contained thirteen sherds of pottery (418 g) of eleventh- to thirteenth-century date. Other finds included worked bone strips and metal artefacts.

Later pits of fourteenth- to sixteenth-century date had cut through those dating to the thirteenth and fourteenth centuries. Fifteen pits dating to this next phase were identified. These contained more domestic and small-scale industrial waste, including large amounts of pottery, animal bone (and more processing waste), and metal finds.

Well. The heavily disturbed remains of a stone-lined well (6681) were revealed in the far west of the site. Very little remained of the structure, as it had been cut through by several pits of thirteenth- to fourteenth-century date. Consequently its true size and form could not be discerned, but an estimate of 2 m in diameter seems likely. The few limestone fragments that remained did not appear to be worked. No finds were recovered from this feature, and it has been phased as medieval purely by its stratigraphic position.

Post-medieval

The use of the tenement building continued into the post-medieval period. This was demonstrated by the presence of more pits to the rear of the building, cutting through those of medieval date, and the addition of plot divisions to the rear.

Pits (sixteenth to seventeenth century). Twenty pits and two wells dated to this period. Again, these were almost certainly associated with the continued use of the building. The pits were distributed evenly across the site and contained more animal-processing waste, butchery waste, pottery, and other small finds. Pit 6551, adjacent to the

west wall of the tenement building, contained a large amount of animal bone and was lined with lime. This seems to have been a tanning pit, although its proximity to the tenement building may argue against this interpretation.

Wells. Two stone-lined wells were found to the rear of the building, one of which (6205) was backfilled with material, including pottery of sixteenth- to seventeenth-century date. The other (6008) did not yield datable finds, but cut a cesspit of sixteenth- to seventeenth-century date and was cut by a pit of seventeenth- to eighteenth-century date.

Other features. Overlying the early post-medieval pits to the rear of building 6038 were layers of garden soil (6270/6271/6272, not shown on plan), overlain by midden dumps and levelling layers. The garden soil was not well dated, but lay between the sixteenth- to seventeenth-century pits and a levelling layer (6218, not shown on plan) dated by pottery to the seventeenth to eighteenth century. A small drainage ditch (6102) was aligned north-east to south-west, just outside the back wall of the building. Its fill dated to the seventeenth and eighteenth centuries. Subsequently walls 6007, 6250, 6100, and 6116 were constructed. Wall 6007 extended E-W from an addition (6006) to the southern part of wall 6004 and cut drainage ditch 6102. A small section of wall (6250) was probably part of a westward extension from the middle part of the building. Approximately 8 m from the rear wall of building 6038, two N-S aligned walls were identified (6100, 6116), which may have marked the western extent of these plots. The walls measured approximately 1 m in width and were constructed of unfinished limestone blocks bonded with a sandy lime mortar. To the east and west of these walls, a layer of garden soil had accumulated.

Brick stair. A brick stairwell (4029) was built into the basement of building 6038, through wall 6003. This structure was of seventeenth- to eighteenth-century date, at least broadly concurrent with the levelling of the land to the rear of the building, and its division into plots.

The 1996–7 evaluation¹⁰⁴ revealed a stone revetting wall (2010/2022) to the rear of building 6038, along the eastern edge of the medieval town ditch. This wall was not dated, but Allen stated that 'the line of these walls is followed by the backs of properties all the way along West St Helen's Street.'¹⁰⁵ It is not known whether this marked the full extent of the medieval plot or was the back wall of the plot delineated in the post-medieval period.

CEMETERY SITE (Fig. 9)

The cemetery site was discovered during the 1996–7 evaluation (Trenches 5 and 9).¹⁰⁶ Eighteen inhumations were exposed and recorded but left *in situ*. The south, east, and western limits of the cemetery had been established, but the northern limit had not been identified. The cemetery was interpreted as dating from the mid-seventeenth century, possibly to the period of the Civil War. The excavation area was extended in 2002 so as to define the northern limits of the cemetery. This work revealed a further eight inhumations within the eastern and northeastern parts of the cemetery.

Roman. Underlying the cemetery was the western (outer) late Iron Age or Roman *oppidum* ditch, although this was not excavated within this trench.

Medieval. The seventeenth-century cemetery cut through medieval garden soil. A medieval stone well (3041) also cut through the garden soil and contained pottery of eleventh to thirteenth century date.

Post-medieval. The excavation revealed eight further burials within the cemetery, a combined total of twenty-six individuals (see Boston above). The majority of the graves were aligned W-E and were not intercut, with very little residual human bone recovered. The graves appeared to respect one another, being evenly spaced within neat rows. The dating evidence from the earlier evaluation suggested that the burials were from the mid-seventeenth century, although residual medieval pottery and eighteenth-century pottery was also recovered during the 2002 excavations. However, this is almost certainly due to disturbance caused by the uncovering and then backfilling of the graves after the earlier investigation.

WATCHING-BRIEF AREA (Fig. 10)

The watching-brief area, situated in the centre of the site, comprised a service trench to the west and an excavation to mitigate the removal of invasive knotweed roots to the east.

Service trench. Archaeological deposits were observed in the service trench. Two pits (5033 and 5032) dated from the fourteenth to sixteenth centuries, but also contained material of eleventh- to thirteenth-century date. The area was overlain by several layers of eighteenth-century garden soil, which was cut by a modern wall (5003).

¹⁰⁴ Allen, 'Abingdon, Vineyard redevelopment', n. 1.

¹⁰⁵ Ibid., p. 53.

¹⁰⁶ Ibid.



Fig. 9. Composite plan of trenches excavated on the Cemetery site



Fig. 10. Composite plan of trenches and features on the watching-brief area and the Neave House site

Knotweed area. The excavation in the area of knotweed revealed structural remains and a glazed-tile floor surface (5069), dating from the thirteenth to fourteenth centuries. The earliest walls (5046, 5047), constructed of tightly packed bonded limestone blocks, were over 0.7 m in width and aligned W-N-W to E-S-E. A later wall (5045) on a N-N-E to S-S-W alignment (on the western edge of the medieval town ditch) dated from the sixteenth to seventeenth century, an indication that the structure had been repaired at this time. A piece of window arch, retrieved from the infilling of a medieval cellar to the south, may have originated from this structure. A garderobe (5046) was attached to one of the walls (5056) and was backfilled with material containing a small amount of sixteenth- to seventeenth-century pottery and a large assemblage of eighteenth-century pottery, suggesting that the building went out of use at this time.

Layers of garden soil had accumulated over the area. These layers were eighteenth century in date, but also contained pottery of Roman, medieval, and earlier post-medieval date. A modern W-N-W to E-S-E aligned wall (5037) cut through the garden soil over the line of the medieval town ditch, but was not thought to have been part of any building.

Evidence from the 1996-7 Evaluation

A complex of medieval stone buildings had been found during the 1996–7 evaluation to the north of St Edmund's Lane (Trenches 3, 9, 10, 11, and 12), in the area of the 2002 watching-brief area (Fig. 10). The trenches did not reveal a full plan of the building, but significant information was revealed.

The north-west corner of the building was found in the western part of Trench 3. In this corner a cellared room was identified, the walls of which had holes for a suspended floor near to the top. The cellar had been infilled with debris in the seventeenth century.¹⁰⁷ The east end of the building was found in Trench 12. A gravel mortar floor was found in the east room, and earlier floors were identified beneath. In Trenches 9 and 10 the south-west corner of an additional room was identified, while another room was added outside this in the sixteenth century. To the south of this, cobbled surfaces, gullies, wall slots, and a hearth were revealed. The 2002 work has revealed more of the north-east part of this building, including the garderobe attached to the northern wall. Unfortunately the evidence remains insufficient to give a good indication of the plan of the building.

The 1996–7 evaluation (Trench 3) also revealed part of the medieval town ditch, which cut through the inner late Iron Age or Roman ditch of the *oppidum* (see discussion above). This ditch was not excavated during the 2002 watching brief.

NEAVE HOUSE (Fig. 10)

Following the demolition of the former Neave House, two evaluation trenches (Trenches 15 and 16) were positioned in a cross shape through the centre of the site. The evaluation revealed a number of medieval pits, a ditch, and a wall. Much of the site had been truncated by the former house, and no further work was deemed necessary. The archaeological features exposed were situated in the north of the trench.

Medieval

Ditch. Ditch 8004 was aligned N-S. Only a short section of the ditch was identified, measuring 1.28 m in width and 0.33 m in depth. The main fill contained a small amount of pottery of late twelfth- to early fifteenth-century date. It cut through undated ditch 8006.

Pits. Eleven pits were located across the area, some were intercutting. One pit (8008) was particularly large and contained several burnt dumps and an assortment of finds. This included a moderate amount of pottery of late twelfth- to early fifteenth-century date. Other finds included animal bone, ceramic building materials (CBM), fragments of fired clay, an iron nail, and an iron strip. Another pit (8026) contained a blue-black waterlogged fill and pottery of mid-thirteenth-century date. Also recovered was a large amount of smithing hearth bottom (1,564 g) and a small amount of vitrified hearth lining (see Keys below). Several pits contained burnt dump deposits, including pit 8047, which dated from the fourteenth to sixteenth centuries. Other pits containing these blue-black fills were not dated. Three of the pits were waterlogged and contained black-and-green cess fills. One such pit (8036) dated from the eleventh to twelfth century. Another (8065) was not dated, but was cut by pit 8026.

Post-medieval

Only one pit post-dated the medieval period. Pit 8016 was particularly large, measuring 1.23 m in diameter and 2.6 m in depth. It contained a mixture of fills, some suggesting the presence of organic material, and one (8022) a blue clay indicating standing water. Quantities of burnt material had also been deposited within this pit. The fills contained pottery of seventeenth- to eighteenth-century date.

¹⁰⁷ Ibid.



Fig. 11. Composite plan of trenches and features on the Cinema site





Fig. 12. Section through *oppidum* ditch on the Cinema site

One wall (8025) was found, aligned N-S in the northern part of the site, and was constructed of roughly hewn limestone blocks and rubble. It survived to two or three courses deep (0.33 m) and was three courses wide (0.75 m). It was faced on the west side and cut through pit 8026.

Unphased

A large V-shaped E-W aligned ditch (8006) extended across the site. It measured 2.2 m in width and 0.6 m in depth. No dating evidence was recovered, although it did cut through a much smaller, shallower ditch (8052) on the same alignment.

CINEMA SITE (Figs 11–12)

Late Iron Age to Early Roman

Oppidum ditch. A large ditch (7804), aligned N-N-E to S-S-W across the Cinema site, was stratigraphically among the earliest features excavated, and almost certainly represents the outer *oppidum* ditch revealed in the 1996–7 evaluation trenches further south.¹⁰⁸ The full extent of the initial cut was not present, as it was traced for 1.5 m before it was recut by 7799. The ditch measured over 1 m deep, with a slightly irregular shallow slope to the cut.

The earliest deposit within the ditch was a compacted reddish sand-and-gravel material, which included several large lumps of limestone at the base of the ditch. This fill was the first in a sequence of alternating sandy gravel and bluish waterlogged silt layers that filled the lower 0.3 m of the ditch. The earliest four of these fills did not contain any pottery. Next in the sequence, fill 7895, contained small quantities of pottery with an early Roman or broad Roman date. Above this, fill 7897 was 60 mm thick with compacted sandy gravel, concreted by iron panning. The sequence of wet silting was identified in the next 0.3 m of the ditch up to a depth of 0.6 m.

Ditch 7804 was cut by a much more substantial ditch on its south-eastern side. This ditch (7799) was 1.6 m deep and at least 5–6 m wide – probably more like 6.5–7 m if it was the same dimensions as the *oppidum* ditch located further south.¹⁰⁹ The lowest fill of the recut was a gravelly material that yielded sherds of early Roman pottery and animal bone. Above this, several mottled clay layers containing pottery of early and middle Roman date may have been the result of a partially waterlogged environment within the ditch. This lower 0.3 m was succeeded by a series of gravelly fills, interspersed with silting episodes, all together, 0.5 m deep. The sheer amount of this gravel and the high density of finds within it (mainly pottery of middle Roman date, animal bone, and shell), suggest that it was deliberately deposited. A small recut (7768) appears to have been made in the mid- to late Roman period, when the ditch had largely filled up, possibly to aid drainage.

Pit 7820. The only pit in the Cinema area that could be securely dated as Roman was pit 7820 (which contained a small amount of middle Roman pottery), which probably lay just outside the *oppidum* ditch. It had been cut on all sides by medieval pits, so its full extent was not seen.

¹⁰⁸ Ibid., n. 1, fig. 3.

¹⁰⁹ Ibid., p. 50.

Medieval

Sunken structure (possible cold cellar). In the far north of the Cinema site, a square limestone sunken structure (7070), possibly a cold cellar, was revealed. The sides were lined with roughly hewn limestone blocks, making up the walls of the structure. The floor consisted of a thin bedding layer of clay (7137, not on plan), which contained fifteen sherds of pottery, of thirteenth- to fourteenth-century date, and animal bone. The stone floor itself consisted of laid limestone slabs. The structure had been backfilled with stone (7069, not on plan) at some point, but no datable material was recovered from this fill.

Building. In the northern half of the site the walls of a medieval building (7561) survived to a height of 0.5 m. Wall 7562/3 was aligned E-W and was constructed of roughly hewn bonded limestone blocks. It was 0.75 m wide and 3.2 m of its length remained. At the eastern end of the wall a stone foundation (7560) could be seen. This consisted of densely packed stone in a rectangular shaped cut, bonded with clay. Four sherds of pottery dating from the mideleventh to thirteenth centuries were recovered from within the foundation cut. Within it the packed stones were roughly finished and in part pitched on their side.

At the western end of the wall, abutting it on the north side, were the remains of a well-laid surface (7565), constructed of limestone cobbles laid on edge. A layer of burnt silty material directly overlying it yielded three sherds of pottery dating from the mid-eleventh to thirteenth centuries.

Other walls. Just to the south of the possible cold cellar described above, a north-north-west to south-south-east aligned robber cut (7078) was revealed, suggesting the previous existence of a wall aligned with the cold cellar. The cut was backfilled with rubble, which contained one sherd of thirteenth- to fourteenth-century pottery. Not much of this building remained, but the walls and robber cut identified suggest a N-N-W to S-S-E aligned structure, with a cold cellar at the front of the property, and a cobbled yard and back wall to the rear.

Ditch. In the northern part of the Cinema site a section of ditch (7076) aligned N-N-E to S-S-W was revealed. It contained pottery ranging from middle Saxon to fourteenth or fifteenth century in date.

Pits. Eighteen pits and one posthole of medieval date were situated across the Cinema site. These pits dated from the twelfth to fourteenth centuries. Pit 7831 measured 2.25 m in diameter, and 0.70 m in depth, and was largely truncated by the construction of wall 7592 and the post-medieval yard with which it was associated. It was filled by silty clays with a high proportion of organic material. Consequently, wood and leather were well preserved. Pottery of fourteenth- to sixteenth-century date was also recovered, placing it slightly later than the other pits.

One pit in the centre of the Cinema site (7540) yielded pottery of twelfth- to thirteenth-century date. In the northern part of the Cinema site a group of sub-circular and irregular shaped pits were medieval in date. Of these, several yielded pottery of exclusively eleventh- to thirteenth-century date. The remainder contained pottery ranging in date from the twelfth to fifteenth centuries. Pit 7518 was particularly large, with a diameter of 3 m and a depth of 1 m. Pottery of eleventh- to thirteenth-century date was evenly distributed throughout its twenty fills. Several of these pits also contained residual pottery of Roman date.

Wells. Four stone-lined wells were situated in the north-east of the site, to the east of the remains of the medieval building and pits. Only one of these (7067) could certainly be dated to the medieval period, as its single cess fill contained pottery of thirteenth-century date. It was constructed within a cut (7065, not shown on plan) of unshaped limestone pieces and survived to a depth of 0.6 m. Only the western half of the well remained, the rest having been disturbed by modern building work. Another stone-lined well (7123) was similar in construction and contained three timbers broadly dated to the medieval or early post-medieval period (see Steve Allen below). The two remaining wells (7120 and 7106) contained pottery of seventeenth- to eighteenth-century date in the backfill and so could be much later.

Later Medieval

Wall 7592 in the southern part of the Cinema site sealed a pit of fourteenth- to fifteenth-century date (7827, not shown on plan), and was aligned with the medieval walls (7070, 7078) located further north (north-north-west to south-south-east). The surviving portion of the wall was 7 m long and 0.53 m wide, and eight courses survived to a height of 0.67 m. The wall was constructed of roughly hewn limestone blocks, faced on the eastern side.

An L-shaped wall, made up of foundations 7530 and 7533, was situated to the south of medieval wall 7562/7563, and on the same north-north-west to south-south-east alignment. The mortar from wall 7530 yielded pottery with a fourteenth- to sixteenth-century date range.

Post-medieval

Several pits of fifteenth- to seventeenth-century date were dug to the east of the medieval wall (7592), which was probably still standing, at least in part. An intercutting group of such pits included two (7744 and 7823), rich in leather waste and containing pottery of sixteenth- to seventeenth-century date. Pit 7752 in the south-east corner of the site also dated from the sixteenth to seventeenth century. Pit 7597, to the west of wall 7592, dated from the seventeenth to eighteenth centuries and contained horn cores.
Building. These pits were overlain by the walls of a substantial masonry structure, the main parts of which lay further to the east. Wall foundation 7535 abutted the fourteenth- to sixteenth-century wall to the north (7530/7533), but was slightly misaligned with it, demonstrating a different phase of construction. This wall had been robbed, and the backfill contained pottery of an eighteenth-century date. In the south of the site, walls 7656 and 7587 were aligned E-W and N-S respectively. Wall 7656 was 5.5 m long and 0.35 m wide, and its western end had been robbed. The southern extent of wall 7587 (7832) had a yellow bonding material and may have been a blocked doorway. This is further suggested by the remains of two small sections of wall (7884 and 7883, not shown on plan) extending east from 7587, which may have formed a corridor on that side.

A later, post-medieval addition took the form of an L-shaped wall (7588), which formed a rectangular structure in the south-east corner of the yard with walls 7656 and 7587. Together they formed the upper part of a cesspit or garderobe (7657), excavated down through the fills of the earlier *oppidum* ditch. The wall did not include mortar and was of inferior quality compared with the walls that formed the main part of the building. At the eastern end, eleven courses survived to a height of 1.2 m. This refuse pit was backfilled with mixed dumps of material, including pottery of eighteenth-century or later date and a very large assemblage of clay tobacco pipes, the vast majority of which dated from the late seventeenth to the early eighteenth centuries (see Higgins below).

A cobbled surface (7583) abutted wall 7588 of the garderobe, as well as the lowest course of medieval wall 7592 to the west indicating that it was at least partially standing at this time. This southernmost area was probably an exterior cobbled yard, and was of slightly irregular shape, formed by walls from two different phases of building. The cobbled surface covered several of the sixteenth- to seventeenth-century pits, including those containing leather waste.

Modern

A series of N-S aligned stone walls, possibly eighteenth or nineteenth century, was traced beyond the northern limit of the site, projecting beneath the footpath on the Ock Street frontage.

APPENDIX 2: IRON AGE AND ROMAN POTTERY by EDWARD BIDDULPH

A total of 1,638 sherds, weighing 28 kg, was recovered from the 1996–7 evaluation and 2002–3 excavations, and both will be reported on here. The pottery spanned the late Iron Age and Roman period, though the emphasis was on the first century AD and mid-Roman period. With an average sherd weight of 17 g, the condition of the assemblage was good overall, although it included a considerable amount of residual pottery. The assemblage has been divided into broad ceramic phases (late Iron Age, and early, mid- and late Roman) based on the dating of context groups. The assemblage was recorded to standard Oxford Archaeology guidelines.¹¹⁰

Assemblage composition

IV EVE % EVE
0.69 3%
0.75 3%
0.2 1%
0.25 1%
ó

TABLE 7. LATE IRON AGE AND ROMAN POTTERY. QUANTIFICATION BY SHERD COUNT, WEIGHT (G), MINIMUM NUMBER OF VESSELS (MV), AND ESTIMATED VESSEL EQUIVALENT (EVE)

¹¹⁰ P. Booth, 'Oxford Archaeology Roman pottery recording guidelines' (unpublished, revised 2006).

к95 B10	4	<1%	202 35	1%0 < 1%	2	1%	0.18	1% <1%
R95	127	0%0	20/2	2170	15	1%	0.18	10%
K3/ R90	127	<1%) 80%	5870	<1%) 210/2	12	60%	1 56	60%
КЭЭ D 27	4	<1%	28	<1%	2	1%	0.25	1%
K3U	652	40%	/100	25%	91	43%	0.25	46%
R21	44	3%	440	2%	6	3%	0.49	2%
R20	135	8%	2136	8%	12	6%	1.54	6%
KII D20	44	3%	417	1%	6	3%	0.76	3%
KIU D11	53	3%	470	2%	1	3%	0.57	2%
U80	2	<1%	108	<1%	7	20/	0.57	20/
021	3	<1%	78	<1%	2	1%	0.22	1%
020	1/	1%	260	1%	2	10/	0.22	10/
017	2	<1%	260	<1%				
017	10	1%	134	<1%	5	2%	0.4	2%
010	50 10	∠% 104	122	<1%	1	<1%	0.4	204
£00	79 30	3%0 20%	1927	/ %0	1	<1%	0.19	1 %0
E00 F80	1 70	<1%0 50%	1027	<1%0 70%	1	<10%	0.19	10%
E30 E60	/	<1%	372	1%0	1	<1%0		
E40 E50	7	<1%	00 372	<1%0 10%	1	<10%		
E30 E40	00 7	J%0 <10%	10/0	/ %0	У	4%0	0.70	3%0
E20 E30	00 99	4%0 50%	13/3	3%0 70%	9	4%	0.76	0%0
E15 E20	1	×1 %0	13	<170 50%	٥	40%	1 3/	60%
Q20 F13	1	<1%	12	<1%				
Q21	5	<1%	58 7	<1%				
Q20 Q21	1	<1%	2	<1%				
VV 50	1	<1%	3	<1%				
W20	1	<1%	2	<1%	1	<1%	0.11	<1%
VV 22	00	4%	1052	4%0	ð 1	4%0	0.11	⊃%0 <104
₩20 ₩22	1/	1 %0	1052	1%0	ے و	1 %0	1.17	1 %0
W20	10	1 %0	2/3	1%0	3	1 %0	0.37	270 104
W11	16	10%	273	1%	1	<1%0 10%	0.10	1 %0
W10	19	1%	180	1%	1	<10%	0.18	10/2
W10	19	10%	4 183	1%				
M41	11	1%	658	2%0	5	2%	0.45	2%
M20	1	<1%	16	<1%	-	20/	0.45	20/
M20	1	<10%	16	<10%				

The following wares were encountered (NRFRC codes in bold in parentheses) (Table 7):

- S20. (LGF SA). South Gaulish samian ware.
- S30. (LEZ SA 2). Central Gaulish samian ware.
- S31. (LEZ SA 1). Central Gaulish samian ware, first-century micaceous fabric.
- S40. East Gaulish samian ware.
- F01. Miscellaneous colour-coated fine ware, possibly imported.
- F35. Oxidized mica-dusted ware.
- F51. (OXF RS). Oxfordshire red colour-coated ware.
- F52. (LNV CC). Nene Valley colour-coated ware.
- A11. (BAT AM 1–2). South Spanish amphora fabric.
- A13. (GAL AM 1). South Gaulish amphora fabric.
- M20. Miscellaneous white-ware mortarium fabric.
- M22. (OXF WH). Oxfordshire white-ware mortarium fabric.
- M41. (OXF RS). Oxfordshire red colour-coated mortarium fabric.
- W10. Miscellaneous fine white ware.
- W11. (OXF PA). Oxfordshire parchment ware.
- W12. (OXF WH). Oxfordshire fine white ware.
- W20. Miscellaneous sandy white ware.
- W22. Oxfordshire sandy white ware.
- W23. Oxfordshire burnt white ware.
- W30. Fine white ware, possibly imported.
- Q20. Miscellaneous white-slipped oxidized wares.
- Q21. (OXF WS). Oxfordshire white-slipped oxidized ware.
- Q26. Moderately sandy oxidized fabric, with off-white slip.
- E13. Late Iron Age/early Roman organic and grog-tempered wares.
- E20. Late Iron Age/early Roman fine sand-tempered wares.
- E30. Late Iron Age/early Roman medium/coarse sand-tempered wares.
- E40. Late Iron Age/early Roman shell-tempered wares.
- E50. Late Iron Age/early Roman limestone-tempered wares.
- E60. Late Iron Age/early Roman flint-tempered wares.
- E80. (SOB GT). Late Iron Age/early Roman grog-tempered wares.
- O10. Miscellaneous fine oxidized ware.
- O11. Oxfordshire fine oxidized ware.
- O17. Fine oxidized ware, probably of local origin.
- O20. Miscellaneous sandy oxidized ware.
- O21. Oxfordshire sandy oxidized ware.
- O80. Miscellaneous coarse-tempered wares.
- R10. Fine grey ware.
- R11. (OXF FR). Oxfordshire fine grey ware.
- R20. Miscellaneous coarse sandy grey wares.
- R21. Oxfordshire coarse sandy grey ware.
- R30. Miscellaneous medium/fine sandy grey wares.
- R35. North Wiltshire medium/fine sandy grey ware.
- R37. Medium/fine sandy grey ware, occasional iron and grog inclusions.
- R90. Miscellaneous coarse-tempered reduced wares.
- R95. (SAV GT). Savernake ware.
- B10. Handmade black-burnished ware.
- B11. (DOR BB 1). Dorset black-burnished ware.
- C10. Miscellaneous shell-tempered wares.

Context groups containing wares of late Iron Age tradition only were given a late Iron Age date, although it should be acknowledged that the use of such wares continued some decades beyond the Roman conquest. This material accounted for 8 per cent of the assemblage by weight. Late Iron Age groups were dominated by grog-tempered ware (E80) and coarse sand-tempered ware (E20), each taking a 38 per cent share of the period assemblage by weight. No grog-tempered forms were recognized; only body and base sherds were recorded, but sand-tempered forms included a bead-rimmed jar, medium-mouthed, necked jars, and a bowl (Table 8). Other fabrics were represented, shell and grog-tempered fabrics among them, but these formed minor components of the late Iron Age assemblage.

The second half of the first century AD saw the use of late Iron Age-style wares alongside 'Romanized' wares, although the division between the two groups, particularly among the reduced wares was not always obvious, and a certain degree of overlap must be admitted. This is in part resolved by fabric E20, a fine sandy reduced ware that may be regarded as a transitional fabric between the coarser E30 and 'Romanized' sandy grey ware (R30). The fabric retained its share of the assemblage after the conquest (in contrast to grog-tempered ware and other

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Vessel type	LIA-AD 100 AD 43-130 AD 130-250		30–250	AD 13	30-410	AD 250-410				
	EVE	%	EVE	%	EVE	%	EVE	%	EVE	%
Flagon, small (BA)					0.4	4%			0	
Flagon, large (BB)					0.49	4%			0	
Jar, unspecified (C)			0.73	11%	1.55	14%	0.11	7%	0.34	18%
Jar, barrel-shaped (CB)			0.05	1%	0.06	1%			0	
Jar, narrow-mouthed (CC)			0.51	8%	2.15	20%	0.13	9%	0.28	7%
Jar, medium-mouthed (CD)	0.27	53%	0.73	11%	1.17	11%	0.27	18%	0.73	14%
Jar, high-shouldered (CE)			0.78	12%	0.28	3%			0	
Jar, carinated (CF)					0.36	3%			0	
Jar, globular (CG)			0.18	3%					0.78	12%
Jar, bead-rimmed (CH)	0.21	41%	0.81	13%					0	
Jar, everted rim (CI)			0.29	4%	0.47	4%			0	
Jar, cooking-pot type (CK)									0.05	1%
Jar, storage jar (CN)			0.74	11%	0.4	4%	0.1	7%	0.1	4%
Beaker, unspecified (E)			0.13	2%	0.6	5%	0.1	7%	0	
Butt-beaker (EA)			0.15	2%	0.1	1%			0	
Beaker, bag-shaped (EC)					0.28	3%			0	
Beaker, globular (ED)			0.29	2%					0	
Beaker, poppy-headed (EF)					0.44	4%			0	
Cup, hemispherical (FA)			0.19	3%					0	
Cup, bell-shaped (FB)			0.17	3%	0.2	2%			0	
Cup, conical (FC)			0.11	2%	0.09	1%			0	
Bowl, unspecified (H)			0.19	3%	0.13	1%	0.16	11%	0.2	3%
Bowl, carinated (HA)					0.11	1%	0.19	13%	0.18	4%
Bowl, curving-sided (HC)	0.03	6%	0.25	4%	0.37	3%			0	
Bowl, necked (HD)									0.28	4%
Dish, unspecified (J)									0	
Dish, straight-sided (JA)					0.23	2%			0.33	5%
Dish, curving-sided (JB)			0.12	2%	0.49	4%	0.22	15%	0.27	4%
Platter (JC)			0.22	3%					0.1	2%
Mortarium, unspecified (K)					0.05	<1%			0	
Mortarium, flanged (KA)					0.33	3%			0	
Mortarium, wall-sided (KD)					0.07	1%			0	
Lid (L)					0.15	1%	0.23	15%	0.12	3%
Total	0.51		0.34		0.6		1.51		3.76	

TABLE 8. QUANTIFICATION OF VESSEL TYPES BY EVE BASED ON CONTEXT GROUP DATES

fabrics of late Iron Age tradition, which declined), taking a 12 per cent share of the early Roman assemblage by weight, and forms included barrel-shaped jars and high-shouldered, necked jars of 'Belgic' tradition. Butt-beakers were also represented, though no rims survived. Fabric R30, contributed 17 per cent, mainly derived from local and wider Oxfordshire sources; reasonably micaceous surfaces, an occasional trait of Oxfordshire fabrics,¹¹¹ were noted on a number of sherds. Late Iron Age-style forms, particularly the high-shouldered jar, were available in fabric R30, though were joined, at the end of the first century or early in the second, by a platter and conical cup (copying samian form Drag. 33). Other reduced coarse wares were present in lesser amounts, but included material of Oxfordshire origin.

The early Roman assemblage, which accounted for 29 per cent of the total assemblage, introduced a range of oxidized, white and fine wares. Fine and coarse white wares (W12, W20, and W22) arrived mainly from Oxfordshire sources, though some sandy fragments could belong to Verulamium products. Flagons, jars (Young type W33), and butt-beakers were available. A single sherd of fine white ware W30 was tentatively identified as North Gaulish white ware. Oxidized wares (O) similarly had local origins and a near-identical range of vessel types. Fine wares, forming 2 per cent of the assemblage by weight, included an oxidized mica-dusted ware (F35) that was produced at Nuneham Courtney during the late first and early second century.¹¹² This was joined by south Gaulish samian ware (S20); a Ritterling 8 hemispherical cup from context 6191 is likely to have arrived before AD 80. A Dragendorf 27 cup and dishes or platters were also recorded, as was an unidentified red-slipped fabric (F01), possibly a continental import.

Pottery from mid-Roman (AD 130-250) context groups contributed 27 per cent to the total assemblage by weight. Reduced wares retained their dominance; fabric R30 accounted for 38 per cent of mid-Roman pottery. Jars were the most common vessel class; forms included narrow-necked jars, medium-mouthed necked jars, and everted-rim jars. Bead-rimmed and plain-rimmed dishes replaced platters, while butt-beakers were joined by bagshaped and globular beakers. The levels of fine grey ware, coarse sandy reduced wares, storage jar fabrics, and north Wiltshire products remained largely unchanged from the early Roman period. Dorset black-burnished ware (B11) appeared in small quantity after c. AD 125; a straight-sided dish with a groove below the rim was the sole mid-Roman form to be recognized. Oxidized wares accounted for under 2 per cent of the assemblage by weight. Jars, flagons, and beakers were represented, though mainly identified from body sherds. The level of white wares increased in the mid-Roman period to over 10 per cent by weight. At least two large-mouthed flagons were represented in fine Oxfordshire white ware (W12), while jars, beakers, and bowls were present in coarser wares. Oxfordshire white ware mortaria (M22; Young M2) appeared during the second century AD. Excluding continental material, fine wares were confined to a bag-shaped beaker with barbotine decoration in Nene Valley colour-coated ware (F52), which dated to the late second century and first half of the third century. Central Gaulish samian ware (S30) replaced south Gaulish samian during the early second century (though there were residual occurrences of the latter). Les Martres-de-Veyre products were identified, though most samian ware arrived from Lezoux. East Gaulish samian ware (S40) was supplied after c. AD 160. Cups appeared to be the best represented vessel class, though this included residual Drag. 27s; otherwise, dishes (Drag. 18/31, 31, and Curle 15) were the most common. Drag. 37 and Curle 11 bowls were also represented. South Spanish amphorae (A11) completed the range of imported wares.

Pottery from context groups dating after AD 240–50 accounted for 4 per cent of the total assemblage. Coarse reduced wares formed 86 per cent of the late Roman assemblage. Fabric R30 took the largest share of this; jars were ubiquitous, and included cooking-type jars and oval-bodied, medium-mouthed jars. Dishes – bead-and-flanged types – and beakers were equally represented, albeit relatively uncommon. Black burnished ware slightly increased its share, though still contributed just 1 per cent to the late Roman assemblage. Oxidized wares appeared to be of marginal interest, as they had been in previous phases. Dishes (Young O35 and O41) and a beaker (Young O18) were available in Oxfordshire wares, while a probable north Wiltshire globular jar was also retrieved. Fine and sandy Oxfordshire white wares were joined by parchment ware (W11) and burnt white ware (W23), also Oxfordshire products. The standard types – a bowl (Young P24) and a jar (Young BW2) – were available in these fabrics. This phase saw the introduction of Oxfordshire red colour-coated ware (F51), which contributed 11 per cent of the late Roman assemblage. The flanged hemispherical bowl (Young C51) was the commonest form, though this was joined after *c*. AD 325 by necked bowl Young C75 and pedestal beaker or cup Young C38. Colour-coated *mortaria* (M41) were also present.

¹¹¹ Roberta Tomber and John Dore, *The National Roman Fabric Reference Collection: a Handbook*, Museum of London Archaeology Series, Monograph 2 (London, 1998).

¹¹² P. Booth, 'The pottery', in P. Booth, A. Boyle, and G. D. Keevill, 'A Romano-British kiln site at Lower Farm, Nuneham Courtenay, and other sites on the Didcot to Oxford and Wootton to Abingdon water mains, Oxfordshire', *Oxoniensia*, 58 (1994), pp. 134–206.



Fig. 13. Roman pottery, 1-12

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Fig. 14. Roman pottery, 13-20

Catalogue of Illustrated Pottery (Figs 13–14)

The pottery from the following groups best illustrates the chronological and typological range of the assemblage. Two pieces of intrinsic interest are additionally shown.

Fig. 13

(Pit 7053, fill 7052. Mid-2nd century AD)

1. Flagon (Young type W6), fabric W12.

2. Medium-mouthed jar (Young type C33), fabric W22.

3. Medium-mouthed jar (CD), fabric R30.

4. Bag-shaped beaker (Young type R35), fabric R10.

5. Cup (Drag. 27), fabric S31.

6. Bead-and-flanged mortarium (Young M2), fabric M22.

7. Lid, fabric R30.

(Ditch 7799, fill 7654. Mid- to late 2nd century AD)

8. Ring-necked flagon (Young type W2), fabric W22.

9. Medium-mouthed jar (Young type W33), fabric W22.

10. Carinated jar (Young type R38), fabric R30.

11. Everted-rim jar (CI), fabric R11. Unusually, the external and internal surfaces are coated with a grey-brown slip. Neither the form or the fabric is typical of the late Roman red colour-coated fine fabric F51, and a second-century date for the piece is appropriate.

12. Everted-rim jar (CI), fabric R30.

Fig. 14

(Ditch 7799, fill 7654. Mid- to late 2nd century AD)

13. Storage jar (CN), fabric R90.

14. Jar, fabric R30.

15. Bag-shaped beaker (EC), fabric O11.

16. Globular beaker (Young type R31), fabric R11.

17. Carinated bowl (Young type R57), fabric R30.

18. Curving-sided bowl (Young type W44), fabric W12. The sherd is decorated under the rim with a red-brown slip and resembles Oxfordshire parchment ware W11, but the form is untypical of that late Roman fabric.

19. Lid, fabric R30.

20. Beaker base, fabric R10. Graffito on base incised after firing. Mid-2nd to mid-3rd century AD. Context 1005. 21. Body sherd, fabric E20. Graffito on wall scratched after firing appears to show the letters I, I, N. The sherd is likely to date to the first century AD, though was residual in 15th–18th-century context 6088.

APPENDIX 3: MEDIEVAL AND POST-MEDIEVAL POTTERY by CAROLE WHEELER

The post-Roman pottery assemblage comprised 6,011 sherds with a total weight of 113,879 g. The estimated vessel equivalent (EVE) by summation of surviving rim sherd circumference was 53.84. The bulk of the assemblage was medieval or post-medieval in date, although there was a scatter of early to mid-Saxon sherds across the site (72 sherds, 1789 g). The medieval sherds were unusually large and well preserved, and although much of the pottery was retrieved from poorly defined intercutting pits, it is still possible to produce a relatively secure dating sequence. The terminology used to define the form types is that set out in the Medieval Pottery Research Group Guidelines.¹¹³

Fabric Recording

The majority of the fabrics correspond to types commonly found in Oxfordshire and were recorded using the coding system and chronology of the Oxfordshire county type series.¹¹⁴ The following fabrics were identified:

OXR – St Neot's ware type, 10th-11th century. 16 sherds, 70 g, EVE = 0.25.

OXB - Late Saxon Oxford Ware, 10th to mid-11th century. 9 sherds, 102 g.

OXBB – Minety-type Ware, early 13th century to c. AD 1540.64 sherds, 2289 g EVE = 0.77.

OXAC - Early Medieval West Oxfordshire Ware, 10th to mid-13th century. 188 sherds, 1828 g, EVE = 0.81.

¹¹³ 'Minimum standards for the processing, recording, analysis and publication of post-Roman ceramics', Medieval Pottery Research Group Occasional Paper, 2 (2001).

¹¹⁴ Maureen Mellor, 'Early Saxon, medieval and post-medieval pottery', in T. G. Allen et al., 'A medieval grange of Abingdon Abbey, Dean Court Farm, Cumnor, Oxon', *Oxoniensia*, 64 (1994), pp. 325–57.

OXBF - Early Medieval South-West Oxfordshire ware, mid-11th to early 13th century. 38 sherds, 467 g, EVE = 0.14.

OXY – Early Medieval Oxford Ware, mid-11th to 13th century. 326 sherds, 3986 g, EVE = 9.27.

OXAG - Ashampstead ware, mid-11th to 13th century. 866 sherds, 14119 g, EVE = 5.81.

WA38 – Wallingford-type fabrics – III.18, ?mid-11th to mid-13th century. 118 sherds, 1521 g, EVE = 0.89.

OX162 – South-east Oxfordshire Ware, ?12th–14th century. 53 sherds, 321 g, EVE = 0.36.

OXAW - Early Brill-Boarstall ware, late twelfth to mid-14th century. 670 sherds, 11625 g, EVE = 0.45.

OXAM – Late Brill-Boarstall ware, 13th–15th+ century. 757 sherds, 14,028 g, EVE = 7.27.

OXAQ – Late Medieval East Wiltshire ware, late 12th to early 15th century. 522 sherds, 8231 g, EVE = 4.47.

OXBX – Late Brill-Boarstall ware, mid-13th–16th century. 1 sherd, 12 g.

OXBG/BN – Surrey Border Ware, 1500–1700. 244 sherds, 3736 g, EVE = 1.83.

OXCL – Cistercian-type ware, 1475–1700. 17 sherds, 205 g, EVE = 0.38.

OXBH - East Midlands Reduced ware, 13th-14th century. 2 sherds, 51g.

REW – Post-medieval Red earthenwares, 16th century+. 782 sherds, 28,404 g, EVE = 11.75.

OXCE – Tin-glazed earthenware, 17th century+. 245 sherds, 4246 g, EVE = 1.91.

Tudor Green - c.1450-1550.2 sherds. EVE = 0.08.

OXST – Rhenish Stonewares, 16th–18th century. 136 sherds, 4242 g, EVE = 3.29.

OXST – Westerwald stoneware c.1590 to present day, 18 sherds, 320 g, EVE = 0.18.

Staffordshire/Bristol slipwares, c.1670-18th century. 32 sherds, 232 g, EVE = 0.55.

OXCRM – Creamware, 1740–19th century. 44 sherds, 249 g, EVE = 0.30.

OXDN - Staffordshire Blackware, early to mid-17th-18th century. 36 sherds, 315 g, EVE = 0.25.

Mocha wares, 19th century, brown fern-like transfer decoration. 1 sherd, 4 g.

Modern earthenware – late 18th century+. 133 sherds, 899 g, EVE = 0.30.

In addition, the following new Abingdon fabrics appear:

- AB2 quartz tempered. Abundant sub-angular glassy and iron-strained quartz. Occasional clay grains. Black in fracture. ?11th-13th century. 8 sherds, 52 g.
- AB3 moderate white sub-rounded, ill-sorted quartz, with limestone flakes and white flint. Coil-made. Part of same dispersed East Wiltshire/Savernake tradition. ?Late 12th to early 15th century. 200 sherds, 3138 g, EVE = 0.63.
- AB5 abundantly tempered with irregular limestone, sub-rounded glassy quartz with black-and-white flint. Handmade tradition. Date: ?11th–13th century. 48 sherds, 846 g, EVE = 0.52.
- AB6 ill-sorted, sub-rounded white water-washed quartz. Hackly in fracture. Distinctive pulled-across grains on outer surface of sherd as though something has torn the surface of the clay. Fabric matrix is very like an early OXAG ? mid-11th to late 12th or 13th century. 28 sherds, 724 g, EVE = 0.23.
- AB7 abundant sub-angular, ill-sorted quartz, sub-angular voids. Hard fired. Wheel thrown. Outer and inner surface fired to orange, creating a sandwich effect with a grey core. 47 sherds, 1190 g, EVE = 0.78.
- AB8 abundant sub-round water-washed white and iron-stained quartz. The decorated sherds have white slip beneath apple- green glaze, typical of OXAG tradition, but the iron-stained grains make it likely to be a copy. ?11th–13th century. 1 sherd, 18 g, EVE = 0.07.
- AB9 reduced fabric, ill-sorted limestone and flint tempered. Possibly allied to the dispersed East Wiltshire/Savernake tradition? 5 sherds, 59 g.

Type fabrics for Abingdon were first recognized by Parrington and Balkwill¹¹⁵ in their excavations at Broad Street, Abingdon, but their codes have now been superseded by the Oxfordshire series¹¹⁶ shown above. Those Abingdon-types recognized here have been pre-fixed with 'AB'. It is likely that some of the dating originally proposed in the Broad Street report will be subject to change. Parrington and Balkwill's Abingdon Fabric B was paralleled with Oxford Fabric OXBF,¹¹⁷ but whilst examining pottery for Abingdon Vineyard, Lucy Bown¹¹⁸ argued a later date for this fabric (11th to late 14th or 15th century) and recognized a link to the Newbury ceramic tradition. In this assemblage, fabric AB5 shares certain similarities with OXBF (late Saxon and early medieval South-west Oxfordshire Ware) in that both are handmade in a flint tempered fabric and, in the same way, AB3 shares characteristics with OXAQ (early to late medieval East Wiltshire/Savernake Forest fabric tradition that may incorporate more than one fabric type.¹¹⁹ A similar dispersed tradition may also apply to fabrics AB6, AB7, and AB8, where the clay matrix displays the same water-washed quartz inclusions used in OXAG (Ashampstead Ware), but is less dense and

¹¹⁵ M. Parrington and C. Balkwill, 'Excavations at Broad Street, Abingdon', *Oxoniensia*, 40 (1975), pp. 5–58.

¹¹⁶ Mellor, 'Early Saxon, medieval and post-medieval pottery', p. 80, n. 114.

¹¹⁷ R. Haldon and M. Mellor, 'Late Saxon and medieval pottery', in 'Archaeological investigations in St Aldates', *Oxoniensia*, 42 (1977), pp. 111–39.

¹¹⁸ L. Bown, 'Abingdon Vineyard Area 1 and 6, medieval pottery', unpublished report (2001).

¹¹⁹ Maureen Mellor, personal communication (2004).

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in the case of AB8 is iron stained (not found in OXAG). However, the decoration of white slipped bands and dots with an external light green or orange glaze is typical of the OXAG tradition in the thirteenth century.¹²⁰

What is clear is that in the eleventh to fourteenth centuries Abingdon was receiving just as many of its pottery wares from the south-west dispersed ceramic traditions of the East Wiltshire/Savernake Forest area and the South Oxford Ashampstead kilns as from the Oxford/North Buckinghamshire Brill/Boarstall traditions (OXAW, OXAM). On this site, 36 per cent by number (46 per cent weight) originate in the south/south-west and 35 per cent by number (46 per cent weight) come from the Brill/Boarstall kilns. The importance of the south-west producers has been noted on other sites, such as Barentin's Manor, Chalgrove,¹²¹ and the dominance of the OXAG Ashampstead wares in Abingdon is echoed in those sites lying at the gates to Oxford, for example, Dean Court Farm, where Abingdon Abbey was the landlord up to the late fourteenth century, and nearby Seacourt.¹²² A closer link to the Abingdon rather than the Oxford market is apparent. A similar predominance of OXAG-type wares has been noted at Friar Street, Reading, and Underwood-Keevil¹²³ speculates on the influence of monastic control both at Reading and Abingdon. Alternatively, Mepham and Heaton¹²⁴ argue the possibility of different marketing traditions for cooking pots and glazed wares, suggesting the AG fabric-types may be sourced from different production centres, such as Ashampstead or Camley Gardens. The post-medieval assemblage is dominated by red earthenwares (13 per cent of the whole assemblage). It is probable that the majority of these were either made locally or came from the Brill kiln. George Ecton of Abingdon is known from his probate inventory of 1696 to have sold a wide range of wares, but the production centres are unknown.¹²⁵ Local potters were recorded working at Nettlebed and Stoke Row during the sixteenth and seventeenth centuries.¹²⁶

Chronology

There is no established dating for Abingdon medieval pottery, and publications have been based around the wellestablished Oxford dating sequences, while recognizing that Abingdon belonged to a different distribution area which could change the early and latest dates for wares. The dating here, therefore, must still be broadly based on the Oxford chronology. The broad chronological groups are shown in Table 9. The pattern shows that 50 per cent of the sherds fall within the mid-11th-late twelfth to 13th–14th centuries, dipping from the late 14th to 16th and rising again from the 16th to 17th centuries onwards. The SEB and Cinema areas show residual mid-11th- to 13thcentury fabrics, such as OXAC, OXY, and OXAG still present beyond the 16th century.

Phase	Date (century)	No. of Sherds	Wgt. of Sherds (g)	EVE
LS (Late Saxon)	10–11th	3	31	0.25
1	11M-13th	575	9725	4.46
1a	12L-13th	1289	20446	9.08
2	12L-E15th	180	2167	1.14
3	13M-14th	986	17977	11.45
4	14L-16th	340	4729	1.46
5	16–17th	764	12069	4.60
6	17–18th	764	15141	7.83
7	18th +	1019	30590	13.57

TABLE 9. MEDIEVAL AND POST-MEDIEVAL CERAMIC PHASING: POTTERY OCCURRENCE PER PHASE BY NUMBER AND WEIGHT OF SHERDS AND EVE

NB. 6 contexts dated to mid-Saxon (9 sherds, 246g)

23 contexts (83 sherds, 777g) could not be confidently dated to a period

¹²⁰ Mellor, 'Early Saxon, medieval and post-medieval pottery', p. 80, n. 114; L. Mepham and M. J. Heaton, 'A medieval pottery kiln at Ashampstead, Berkshire', *Medieval Ceramics*, 19 (1995), pp. 29–43.

¹²¹ Philip Page, Kate Atherton, and Alan Hardy, *Barentin's Manor: Excavations of the Moated Manor at Harding's Field*, *Chalgrove, Oxfordshire 1976–9* (Oxford, 2005), p. 170.

¹²² Mellor, 'Early Saxon, medieval and post-medieval pottery', p. 352, n. 114.

¹²³ C. Underwood-Keevil, 'Excavation of a medieval frontage at Friar Street, Reading', in Steve Preston, ed., *Reading and Windsor, Old and New* (Reading, 2005), p. 26.

¹²⁴ Ibid., p. 41, n. 120.

¹²⁵ D. Vaisey and F. S. C. Celoria, 'The inventory of George Ecton, potter of Abingdon, Berkshire 1699', *Journal of Ceramic History*, 7 (1974), pp. 13–42.

¹²⁶ Maureen Mellor 'Medieval pottery', in T. G. Hassel, C. Halpen et al., 'Excavations in St Ebbe's, Oxford, 1967–1976: Part II: Post-medieval domestic tenements and the post-dissolution site of the Greyfriars', *Oxoniensia*, 49 (1984), pp. 153–275, III, E1.



Fig. 15. Medieval pottery, 1–5



Fig. 16. Medieval pottery, 6-8

Catalogue of Illustrations (Figs 15–18)

Neave House Trenches 15 & 16 (Fig. 15)

Late 12th-13th centuries

- 1. Jar OXY (8009). Flat rimmed with thumbed edge. Rim diameter = 200 mm, Pit 8008.
- Strap handle, neck and shoulder of a round jug OXAG (8009). Applied zigzag strips and thumb-pressed central strip beneath the handle. Roller stamp decoration to edge of handle. Yellow/green glaze. Rim diameter = ?120 mm, Pit 8008.

SEB Site (Figs 15–16)

Late 12th–13th centuries

- 3. Jar WA38 medieval Wallingford ware (6390). Pronounced thumb-pressed rim Rim diameter =320 mm, Pit 6384.
- 4. Round jar OXAQ (6389). Angular upright rim, external sooting. Rim diameter = 200 mm Pit, 6384.
- 5. Round jug OXAG (6389). Strap handle with plaited inlay. Applied ribbon strip from rim to around base of handle. Light-green clear glaze. Rim diameter = 120 mm, Pit 6384.
- 6. Spouted tripod pitcher OXAW (6320). Strap handle with central plaited insert and two small plaited loops either side of the vessel between handle and spout extending from mid-way down the neck to the shoulder. There are bands of roller stamp around the belly extending to the base. Clear dark-yellow glaze. Rim diameter = 140 mm.
- 7. Jug OXAG (6303). Strap handle with plaited inlay. Dark-orange glaze. Rim diameter = 120 mm.
- 13th–14th centuries.
- 8. Anthropomorphic jug OXAM (6684). Full description in text. Pit 6688.
- 9. Round jug OXAG (6684). Rim with pinch spout and neck. Horizontal bands of white slip over dark-green glaze. Rim diameter = 120 mm. Pit 6688.
- 2 sherds from aquamanile OXAM (6156/6132). Applied decoration to represent the hair of an animal. Possibly its neck or back? Dark-green glaze.
- 11. Cooking pot cauldron-type vessel OXAG (6137). Simple rim with incised V-shaped lines, imitating leather-work detail from outer rim to shoulder. Thin green glaze to inner rim Rim diameter = 180 mm. Garderobe Pit 6139.
- 12. Round jar AB7 (6137). Upright rim with small angled handles at right-angles to it. Wavy line decoration to body. Rim diameter = 200 mm. Garderobe Pit 6139.

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Fig. 17. Medieval and post-medieval pottery, 9-14



Fig. 18. Medieval and post-medieval pottery, 15-16

Cinema Site (Figs 17–18)

17th-18th centuries

- Bartmann jug OXST Cologne/Frechen salt-glazed stoneware (7601). Complete except for missing handle. Face mask and Amsterdam heraldic motif. Rim diameter = 30 mm, base = 80 mm, girth = 455 mm, height = 220 mm. Cesspit 7657.
- 14. Fake heraldic rosette from a Raeren stoneware jug OXST (7521). Mid- to late 17th century. Cesspit 7657.
- Globular tankard/jug OXST (7521/7579). Westerwald grey stoneware. 17th-century gentleman with staff (of office?) is shown in relief on oval medallions round the vessel. Base diameter = 80 mm. Cesspit 7657.
- 16. Charger dish (OXCE). Tin glazed in white with geometric blue design to the upper side and ring foot. London ?Lambeth. Ring foot diameter = 120 mm. Cesspit 7657.

APPENDIX 4: METALWORK by LEIGH ALLEN (Roman coin identified by Paul Booth)

THE SEB SITE

The bulk of the metalwork assemblage was recovered from the SEB site. The earliest finds came from a series of medieval pits dating from the eleventh to thirteenth centuries to the rear of the tenements. A residual fourthcentury Roman coin (GLORIA ROMANORUM, emperor and captive, AD 364–78) was recovered from context 6317, a fill of pit 6310; a horseshoe nail of fiddle-key type was also recovered from this context. Fiddle-key nails, distinguished by their semicircular head, were designed to fit into countersunk nail holes in horseshoes, dating from the eleventh to thirteenth centuries.¹²⁷ Pits 6170 and 6384 also produced horseshoe nails of this form. Other pits of this date produced a very corroded blade fragment (from pit 6254), a figure-of-eight-shaped hasp (from cess pit 6304), and a small circular mount with ring-and-dot motif around the edge (from posthole 6587). Mounts of various forms were used in the medieval period to decorate belts and straps, a tradition that had largely died out by the sixteenth century.¹²⁸ A second phase of pit digging took place in the thirteenth to fourteenth centuries. The

¹²⁷ J. Clark, 'Medieval Finds', in *Excavations in London: 5. The Medieval Horse and its Equipment c.1150–c.1450* (London, 1995), p. 86.

¹²⁸ Geff Egan, Material Culture in London in an Age of Transition. Tudor and Stuart Period Finds c.1450–c.1700 at the Riverside Sites in Southwark, Museum of London Archaeology Series, Monograph 19 (London, 2005), p. 39.

upper fill of pit 6401 produced a fragment from a curved drop handle, looped at one end, broken at the other. The fill of a tanning pit (6491) dating from the fourteenth to sixteenth centuries produced a fragment from a circular iron mount, possibly from a horse harness. It is decorated round the edge with a row of small copper alloy rivets, and there are two square-headed rivets at the centre.

Occupation of the site continued into the post-medieval period, and a further series of pits was dug to the rear of the tenements. Pit 6160 produced ten fine wire pins, a lace tag, a D-shaped iron buckle frame, and the fragmentary remains of a key for a mounted lock. Fine pins with wire wound heads are common finds on late medieval and post-medieval sites, where they are often recovered in large numbers and in association with lace tags. Pins were also recovered from the dumped fill of pit 6077, the backfilling of garderobe 5066 and garden soil 6597. A second iron buckle frame was recovered from pit 6556, probably from a shoe. A double-oval copper alloy buckle frame was recovered from pit 6421, with ornate expanded pin rests in the form of rosettes and lobes at the junction of the frame and bar. An identical example recovered from Norwich dates to the seventeenth century.¹²⁹

The primary fill of pit 6413 produced a lock plate, a hooked plate, a blade fragment, and a horseshoe. Horseshoe fragments were also recovered from pit 6470 and tanning pit 6551. An incomplete whittle-tang knife was recovered from the post-medieval backfill of pit 4035. A further corroded blade fragment was recovered from pit 6427. Two thimbles of two different forms were recovered from pits 6077 and 6620. The first has a wide band at the rim, decorated with roundels containing birds and probably dates to the post-medieval period. The second is cast, conical and with uneven rows of punched indentations and is probably medieval in date. Other domestic items recovered from the site include a possible fragment from a sieve from the backfill of garderobe 5066 and the cast foot from a metal vessel from context 6589.

THE CINEMA SITE

Only five identifiable objects were recovered from the Cinema site, none of them diagnostic. A short length of iron chain comprising twelve slender S-shaped links came from medieval pit 7673. The remaining four objects are from post-medieval features and comprise a very corroded whittle tang knife from cesspit 7657, a very short section of a blade from stone drain 7586, a hinge pivot from pit 7597, and a short length of window came (a strip of lead holding small pieces of glass in a window) from well 7121, probably medieval in date.

THE CEMETERY

The majority (98) of the metal objects recovered from the cemetery are nails. In addition, five copper alloy hookand-eye fasteners were associated with skeleton 3024, and a fine wire pin with white metal plating was associated with skeleton 3029. These objects are post-medieval in date.

APPENDIX 5: CLAY TOBACCO PIPES by DAVID A. HIGGINS

The 2,319 fragments of clay pipe recovered from these excavations provide valuable information about the pipe styles that were being produced and used at Abingdon. They also provide a sample from this previously unstudied centre that can be used to place it within its broader regional context. The pipe evidence from these excavations is, however, biased towards certain periods. There are only one or two early bowl fragments, dating from before about 1650, but then a mass of pipes dating from between *c*.1650 and 1710. After 1710 pipes were no longer regularly deposited on the site, and there is very little later material of any date. In particular, there is virtually no ninteenth-century material, a period from which more marked and decorated pipes are usually found, and when there is known to have been pipe production taking place in Abingdon.

Not much is known about the history of pipe-making in Abingdon, and there does not appear to have been any previous study of pipes from the town. In a 1984 list of Oxfordshire pipe-makers there are only two listed who were known to have worked in Abingdon, a John Thorneton, who died in 1684, and a G. H. Bryant, who was working from at least 1843 to 1864.¹³⁰ More recent research since then suggests that John Thorneton senior died in 1682, at which point his son was described as a pipe-maker, and that the working dates for George Bryant can be extended to 1869.¹³¹ Cannon has also added a number of other names to the list of Abingdon pipe-makers: William Buckner, who was apprenticed in Oxford in 1699 and working in Abingdon by 1710; Thomas Burt, who is recorded at St Helen's Abingdon in 1710; Thomas Harris from Abingdon, who was apprenticed in Dunstewe (Oxfordshire) in 1646; Samuel Henwood, who married at Culham in 1699 and was living in Abingdon with his family in 1704;

¹³⁰ A. Oswald, 'Clay pipes', in T. G. Halsell, C. E. Halpin, and M. Mellor, 'Excavations in St Ebbes, Oxford, 1967–76', *Oxoniensia*, 49 (1984), pp. 251–62, at p. 261.

¹²⁹ Susan M. Margeson, 'Norwich households: the medieval and post-medieval finds from Norwich Survey excavations, 1971–1978', East Anglian Archaeology Report, 58 (Norwich, 1993), p. 28, fig. 17, no. 174.

¹³¹ P. Cannon, 'The Pipe-makers of Berkshire', unpublished summary (working draft) as of 11 March 1999.

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Thomas Shreeve, who may have been a pipe-maker at Abingdon in 1699, and who was certainly a pipe-maker in Oxford by 1723; and Benjamin Thorneton, recorded at Abingdon in 1694 and 1708. This brings the total number of documented pipe-makers for the town to eight, most of whom were active during the late seventeenth and early eighteenth centuries. There may well have been others, but the documentary sources have not been systematically checked. From this preliminary research, however, it seems clear that there was a thriving pipe-making industry in the town from at least 1680 to 1720, and that production was also taking place during the mid-nineteenth century. Although the artefactual evidence from these excavations is limited to one main period, this does at least coincide with the time during which the greatest number of known pipe-makers was working in the town.

One of the most useful results of the excavations has been the recovery of nearly 500 bowl fragments from which to assess the styles of pipe that were being used in Abingdon. Pipe-bowl forms are intensely regional in character and often vary from town to town across a region. This group provides the first real opportunity to study material from Abingdon and to compare it with neighbouring centres. Recent work at the Oracle site in Reading produced nearly 4,000 pipe fragments, which were used to construct a bowl-form typology for the town.¹³² This provides the most detailed typology for the region, and so it has been used to assess the Abingdon pipes. The bowl forms have been compared with the Reading material and any matching bowl forms identified in the detailed catalogue.

Although many of the bowl forms found at Reading proved to be similar to those from Abingdon, the match was not particularly close. Many of the Abingdon examples had to be catalogued as 'variants' of the Reading forms, that is, they were similar but not identical, while a significant number of other examples were not closely matched at all. This suggests that although the two centres could be said to belong to the same stylistic region, there are significant differences between the two places, suggesting that alternative (and probably more local) supply sources and stylistic influences were at work. Perhaps more surprisingly, there appear to be equally marked differences from the pipes found in Oxford, which is just a few miles to the north.

The pipes from Oxford have not been particularly well studied, and although various individual site reports have been prepared, there is not any one large assemblage or study that has been published in detail. A large number of pipes from St Ebbe's was excavated in the 1960s and 1970s, but the published report¹³³ focuses on the marked and decorated pieces, many of which were imported to the town, rather than the locally produced plain forms, which form the bulk of the material recovered. Sufficient material has been seen, however, to suggest how the two centres compare. At Oxford there are some similar late seventeenth-century heel pipes to those from these excavations; for example, the distinctive tall, forward-leaning type shown in Fig. 19 (12), which is very similar to an example from the Sackler Library site in Oxford.¹³⁴ This style, however, is never very common at either centre, and at Oxford the assemblages of this date tend to be dominated by rather straight sided but rather 'lifeless' bowl forms, similar to Fig. 20 (18). A large number of these types can be seen amongst the illustrated material from Rewley Abbey, Oxford,¹³⁵ but this form is scarce at Abingdon. Similarly, by c.1700 a large number of more upright forms, with rather cylindrical bowls, similar to Fig. 20 (26), appear at Oxford¹³⁶ and they go on to dominate the early eighteenth-century assemblages.¹³⁷ Once again, this form appears to be scarce at Abingdon, where more curved forms exhibiting West Country influence are much more common.

Similar differences between the two centres can be seen with the spur forms. At Oxford, the mid-seventeenthcentury spur pipes tend to have a strongly bulbous form with something of a humped back,¹³⁸ and during the second half of the century forms with a marked projection and curve in front of the spur are common.¹³⁹ This particular style does occur at Abingdon (nos 34 and 35), but these are really the only two examples recovered, and they could easily be 'imports' from Oxford rather than locally produced. Once again, the Abingdon forms tend to be different from Oxford and, in particular, to exhibit more of a West Country feel, for example, numbers 41–6. A final difference that can be noted is in surface finish. In Oxford the late seventeenth-century and early eighteenth-century pipes are often burnished, perhaps 35–50 per cent of them being so treated. In contrast, there are very few burnished pipes from Abingdon where, from the assemblage as a whole, there were 2,222 fragments where the surface finish could be seen. Of these, only eighty-five were burnished, which represents just under 4

¹³² D. A. Higgins, 'Clay tobacco pipes from excavations at the Oracle Site, Reading, Berkshire (REOR 96–97 and REORM 98)' (OA TS report, 2003).

¹³³ Oswald, 'Clay pipes', n. 130.

¹³⁴ D. A. Higgins, 'Clay tobacco pipes', in D. Poore and D. R. P. Wilkinson, 'Beaumont Palace and The White Friars: Excavations at the Sackler Library, Beaumont Street, Oxford', Oxford Archaeological Unit, Occasional Paper 9 (2001), pp. 62–9, fig. 19.3.

¹³⁵ D. A. Higgins, 'Clay tobacco pipes', in J. Munby et al., 'From Studium to Station. Rewley Abbey and Rewley Road Station, Oxford', Oxford Archaeology Occasional Paper 16 (2007), pp. 43–51.

¹³⁶ E.g., Higgins, in Poore and Wilkinson, 'Beaumont Palace', n. 134, fig. 19.6.

¹³⁷ E.g., D. A. Higgins, 'Clay Tobacco Pipes', in Phillipa Bradley et al., 'Prehistoric and Roman activity and a Civil War ditch: excavations at the Chemistry Research Laboratory, 2–4 South Parks Road, Oxford', Oxoniensia, 70 (2005), pp. 172–4, figs 11.3–4

¹³⁸ Higgins, in Poore and Wilkinson, 'Beaumont Palace', n. 127, fig. 19.1.

¹³⁹ Oswald, 'Clay pipes', n. 123, fig. 52.7.



Fig. 19. Clay tobacco pipes, heel bowls, 1-13



Fig. 20. Clay tobacco pipes, heel bowls, 14-26

per cent, a very marked difference from the figures found at Oxford. This difference alone is enough to suggest that the two centres were being supplied from very different sources, almost certainly from pipe-makers working in the respective towns.

Although the Abingdon excavations have not provided a broad enough spread of material to produce a complete bowl typology for the town, the pipes recovered still provide a good sample of the local types, particularly for the period from c.1650–1710. So far as possible, a representative range of bowl forms for both the heel pipes and the spur pipes has been selected from the excavated material, and these forms are presented in the following two sections. These establish the broad range of pipe styles being produced and used in Abingdon and will provide a useful reference point for comparison with future finds, both from the town itself and from the region as a whole.

The Heel Forms (Figs 19–20, 1–26)

The earliest heel form (1), dating from c.1610–40, is doubly important since it is made of a distinctive fabric with fine sandy inclusions, that was used in the Oxford/Reading area, including at Abingdon (see below). This is the earliest known pipe made of this fabric and shows that production had certainly started locally, perhaps in Abingdon itself, by this early date. The early forms (1-3) are similar to styles found widely across the country, but by c.1660 local styles are becoming evident. At Abingdon between c.1660 and 1690 the side of the bowl facing the smoker tends to become fairly straight, with a much more marked curve on the other side (4-5). Towards the end of the century there is also a move towards rather large, full-bodied bowls, with large round heels (6–7). 'Transitional forms', that is, those starting to move away from the typical seventeenth-century barrel-shaped bowl towards thinner and more upright eighteenth-century forms, are well represented, with a wide range of forms being produced. These include a range of fairly tall, slender bowls (8-13), as well as those with a marked West Country style to the bowl (14-15). Although drawing on Hampshire and Wiltshire styles, these bowls are often unmarked and comparatively poorly finished, suggesting that they were produced locally in these styles rather than being actual imports from the south and west. There are a few forms that mirror the large rather 'baggy' shapes of Oxford (18–19) but, from the evidence recovered so far, the tall cylindrical form seems to have been quite scarce at Abingdon (26) and, if they do occur, they often have a West Country flavour to them (20). In the early eighteenth century flared heels appear to become a particular feature of local production (23-5) and this style probably continued throughout the century, although more evidence of this date is really needed to form a clear picture. There is one later eighteenth-century 'London style' bowl, probably imported from Reading (Fig. 24, 68) that may reflect other forms that would have been used during the century, but more finds are needed to confirm this. There were no nineteenth-century heel forms recovered from the excavations, so later developments remain unknown.

The Spur Forms (Figs 21–2, 27–47)

The earliest spur form recovered dates from c.1640–60 and is of a style typical of southern England at this period. This particular example (27) has quite an elegantly curved profile that is soon lost as more local styles emerge from the mid-century onwards (28-32). The earliest of these more local forms (28) is a particularly common style at Abingdon and seems likely to have been produced locally in some numbers. This form, and slightly larger variants of it, continue to appear in assemblages until quite late in the century, to the extent that they may well have been made much later than would normally be expected, perhaps into the 1680s or even 1690s. The spur forms of mid- to late seventeenth-century date from Abingdon do not seem to be quite as sharply curved and bulbous as those from neighbouring Oxford. There are, however, some later forms (34-5) that have a distinctive projection in front of the spur and then a sharp upward curve, which is typical of Oxford. The later seventeenth-century forms include some with quite narrow waists' and top-heavy bowls (nos 36-7) as well as some more 'dumpy' examples, some more normally proportioned forms, and some with slightly elongated, fairly slender bowls (38-40). From c.1690 onwards the distinctive curves of the West Country styles have a strong influence on local styles (42–6). As with the heel forms, there is then a dearth of later material, making it hard to know how the spur shapes evolved after about 1730. The only later clue is part of a large, thin-walled bowl of late eighteenth-century date (47). This particular piece, however, is of a shape characteristic of the Broseley area industry of Shropshire, and it may well be an import from there, examples of which of this date are well known from Oxford.¹⁴⁰

Marked Pipes (Figs 23–4, 55–68)

The excavations produced a total of fourteen stamped marks and one moulded heel mark. Eleven of the stamped marks had been applied across the stem of the pipe, two on the bowl facing the smoker, and one on the base of a heel. Two of the stem marks were also associated with decorative impressed borders. Although the total number of marked pipes from the excavations is relatively small, they are important for two reasons. Firstly, some of them represent pipes that have been 'imported' to Abingdon from other production centres, thus providing an indication of the areas from which goods and services were being drawn. Secondly, several of the marks are

¹⁴⁰ Ibid., figs 21–4.



Fig. 21. Clay tobacco pipes, spur bowls, 27-38



Fig. 22. Clay tobacco pipes, spur bowls, 39-47; milled decoration, 48-54



Fig. 23. Clay tobacco pipes, marked pipes, 55-63 (stamp details at 2:1)



Fig. 24. Clay tobacco pipes, marked pipes, 64–8; probable pipe kiln waste, 69–75 (stamp details at 2:1)

previously unrecorded and provide valuable new information as to the pipe manufacturers working in and around Abingdon.

In general terms it is worth noting the dominance of stem marks from this assemblage. Although stem marks were occasionally used in London and the south-east, this particular style is much more typical of the pipes produced in central southern England, particularly Wiltshire and Hampshire. In this respect the Abingdon pipes exhibit a stronger stylistic affinity with areas to its south-west rather than London. On the other hand, the majority of the marks used in central southern England had incuse lettering, whereas the marks that are local to Abingdon all have relief lettering.

Another point to note is that four of the locally produced stamped marks are in heart-shaped frames. Again, frames of this type were occasionally used in many different parts of the country, but there seems to be a regional preference for this style of mark to the north-west of London, including the Abingdon area. Heart-shaped marks appear to be relatively common at Aylesbury, for example the EK and HF marks associated with kiln waste there.¹⁴¹ A heart-shaped possibly reading RR has been found at Hemel Hempstead¹⁴² but, interestingly, no marks with this shape border were noted from the St Ebbe's excavations in Oxford.¹⁴³ The individual marks recovered from the Abingdon excavations are described and discussed below with the stamped marks being listed before the moulded example. Within the stamped list the lettered marks are given first in alphabetical order (by surname), followed by the symbol marks, and finally the decorative stem borders.

Stamped Marks

**ED/BEAS/TEN.* One example of an Edward Beasten stem stamp of *c*.1690–1730 was found in garden soil 5036 (Fig. 24, 66). The stamp is poorly impressed and only partly legible. It occurs on the top of a stem 22 mm behind the bowl of a pipe with a small and rather oval heel. The pipe has an average burnish and a stem bore of *6*/64". It has been suggested that this maker worked in Newbury or the nearby pipe-making centre of East Woodhay, in Hampshire, about twenty miles south of Abingdon, since his marks are most common in this area.¹⁴⁴ Cannon notes examples of this mark from Brinkworth, Cirencester, Cricklade, East Woodhay, Fulham, Hannington Wick, Highworth, Littlecote, Marlborough, Newbury, Old Swindon, Overton, Salisbury, Stroud, Swindon, and Winchester, which shows not only how prolific this maker was, but also the market area that he was able to achieve. Examples of this mark have also been recorded from Magdalen Street and Rewley Abbey, Oxford,¹⁴⁵ and Faccombe Netherton, Hampshire.¹⁴⁶

IOSh/BARNS. One poorly impressed example of a stem stamp (Fig. 24, 67) that would have read IOSh/BARNS originally was recovered from context 7792, under a cobbled surface at the Cinema site. The stem is made from a fine fabric with a glossy surface, even though it does not appear to have been burnished. There are no sandy particles visible in the surface of the clay, and the stem is thinner than the other marked examples recovered from these excavations and with a smaller stem bore (5/64"). This piece can be attributed to Joseph Barns of East Woodhay, in Hampshire, who is recorded there in the parish registers between 1714 and 1722.¹⁴⁷ This is the most common of three different stamp types used by Barns, and Cannon notes that it is frequently poorly impressed. He goes on to record examples of Barns's pipes from Coleshill (near Highworth, Wiltshire), Cricklade (Wiltshire), Donnington (Berkshire), Dorchester-upon-Thames, East Woodhay (Hampshire), Great Coxwell (Oxfordshire), Highworth, Littlecote, Marlborough, Newbury, Swindon, and Winchester. The wide distribution of these pipes shows that he was a well-established and prolific maker, who was probably working from *c*.1710–40, and possibly later.

RB. One stem with a large oval RB stamp was recovered from cesspit 7657. This stem is made of a fabric containing very fine sandy particles and it has a stem bore of 7/64". The stem is not burnished and is of a typical late seventeenthor early eighteenth-century style, which matches with the other finds from the context. The associated bowl forms range from c.1660-1730 in date, but with a final deposition during the 1690s seeming most likely, since there are

¹⁴¹ J. Moore, 'The remains of a seventeenth century clay pipe kiln at 13 Castle Street, Aylesbury, and the pipes from a probable kiln site at Whitehall Street', *Records of Buckinghamshire*, 21 (1979), pp. 123–32.

¹⁴² D. A. Higgins, 'Clay Tobacco Pipes from 27, George Street, Hemel Hempstead', in P. Davey, ed., *The Archaeology of the Clay Tobacco Pipe*, 9, BAR, BS 146(ii) (Oxford, 1985), pp. 337–62, fig. 8.82.

¹⁴³ Oswald, 'Clay pipes', n. 130.

¹⁴⁴ P. Cannon, Evidence of tobacco pipe making in East Woodhay and district, *Transactions of the Newbury and District Field Club*, 14 (1991), pp. 16–27, at p. 22..

¹⁴⁵ P. Cannon, 'Clay tobacco pipes', archive report on finds from the Debenham's excavations, 1–12 Magdalen Street, Oxford (NBD 99/33) prepared for the Cotswold Archaeological Trust (2000); Higgins, in Poore and Wilkinson, 'Beaumont Palace', n. 128.

¹⁴⁶ A. Oswald, 'Pipe Stamp Index', unpublished copy of Adrian Oswald's archive index, held at the National Clay Tobacco Pipe Archive, University of Liverpool (1991).

¹⁴⁷ Cannon, 'Clay tobacco pipes', n. 137.

no purely eighteenth-century forms present within this group. The mark itself (Fig. 23, 63) is extraordinary, since its size and style are quite unlike anything normally found in the south of the country, although it is very similar to heel marks used by Robert Burrill of Hull, who took his freedom in 1683, and who died in 1735.¹⁴⁸ A particular feature of this mark is the use of what is generally termed a 'stylized tobacco plant' between the initials, a very distinctive motif that is especially associated with pipe marks from Yorkshire. Another example of the Abingdontype RB mark has previously been recorded on the stem of a West Country style spur pipe of *c*.1690–1720 found in London.¹⁴⁹ In his paper Atkinson wonders whether this was a London hybrid drawing on regional styles from two different parts of the country. This author, however, considers that the bowl form, the new find from Abingdon and, in particular, the fabric (as evidenced by the Abingdon example), all point to these pipes being produced in the Oxford/Reading area, *c*.1690–1710. No maker is yet known from this area with these initials, but it seems almost certain that one must have existed, perhaps originating from Yorkshire, as is suggested by the style of mark that he chose.

THOMAS BVRT. One example of an unusual and previously unrecorded bowl mark reading THOMAS/BVRT (Thomas Burt) was recovered from garden soil 7624. The mark is in a very large, heart-shaped frame, placed facing the smoker on a spur bowl of c.1660-80 (Fig. 23, 57). The bowl has been finely burnished and it is made of a fine sandy fabric, which is characteristic of pipes found (and presumably manufactured) in the Oxford/Reading area. Although the style of the bowl is typical of pipes produced at this period in London and the south-east, the mark is unusually large. Furthermore, heart-shaped frames are not particularly common in London, whereas this style seems to occur much more frequently in the Thames valley region to the west and north-west of London - for example, see the TB and IW marks from these excavations. The mark includes what appears to be a Tudor rose beneath the maker's name. The choice of this symbol may indicate that the manufacturer supported the Royalist cause, which would not be surprising in this area, since Oxford became the centre of government for the King during the Civil War. A pipe-maker called Thomas Burt is recorded at St Helen's, Abingdon, in 1710.150 The marked bowl, however, seems some thirty to fifty years earlier than this. It seems more likely that there were, in fact, two Thomas Burts working at Abingdon, perhaps a father and son. The earlier maker has not been previously recorded, but this mark provides tangible evidence for his existence. It is also worth noting that an early seventeenth-century pipe-maker called Edward, with the surname variously given as Bird, Birt, Burt, or Birth from Surrey (most likely the area since subsumed by London) moved to Amsterdam, where he married in 1630 and established an important pipe manufactory. It is possible that Thomas was a member of the same family who moved to Abingdon. See also the TB mark below.

TB. Two pipes stamped with a heart-shaped TB mark were recovered from the excavations. The two marks are identical in overall form and arrangement of the motifs, but they seem to differ slightly in the strength of their detail. It is thought that pipe-makers sometimes made a number of working dies from a common master and these two marks may be an example of this. The TB mark has a plain border and then stars above and below the initials. This is a very similar arrangement to a heart-shaped SH mark from London (Elkins Collection) with dots above the initials and a star below, which was probably made by Samuel Henwood of Abingdon (see below). The first of the two TB examples occurs as a stem mark some 33 mm from a large and chunky bowl form, although with fairly thin walls (Fig. 23, 58). The pipe has been finely burnished, and the rim is internally trimmed and bottered, but not milled. There are no sandy particles visible in the surface of this pipe, which was recovered from cesspit 7657, and which probably dates from c.1690-1710. The second example occurs on a thin-walled transitional bowl form of c.1690–1720 that was recovered from layer 7792. This pipe is made of a local fine sandy fabric and has the TB mark on the bowl facing the smoker (Fig. 23, 59). Only a part of the rim survives, but this appears to have been cut and wiped. The fact that two examples of this mark were recovered from these excavations, and that the mark has not been previously recorded elsewhere, both argue for local production. Furthermore, the use of a fine sandy fabric for at least one of the bowls also points to local production. Given the date range of the associated material, it seems most likely that these two bowls date from the 1690s or early 1700s and that they can therefore be attributed to the Thomas Burt who is recorded at St Helen's, Abingdon, in 1710. These two bowls are important not only in establishing the exact form of the pipe styles that were being produced in the town at this date, but also in showing that Burt was using a range of fabrics, finishes, and stamp locations for his pipes.

Rob Gadney (Die 310). A thick stem with a large bore (9/64") from stone drain 7586 was decorated with Oxfordshirestyle stem borders (see below) and a stamped mark reading Rob Gadney (Fig. 23, 55). This can be attributed to Robert Gadney (I) of Oxford, recorded working from at least 1667 to 1677.¹⁵¹ This example is made from a fine

¹⁴⁹ D. R. Atkinson, "Wiltshire Spur" type pipes apparently made in London', *Society for Clay Pipe Research Newsletter*, 14 (1987), pp. 16–18, fig. 45.

¹⁵⁰ Cannon, 'Clay tobacco pipes', n. 131.

¹⁵¹ Oswald, 'Clay pipes', p. 262, n. 130.

¹⁴⁸ S. D. White, *The Dynamics of Regionalisation and Trade: Yorkshire Clay Tobacco Pipes c. 1600–1800*, ed. Peter Davey and David A. Higgins, BAR, BS 374 (Oxford, 2004), p. 166, fig. 8.7.

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fabric, showing that Gadney was probably using a better quality imported clay rather than the fine sandy fabric that was being exploited by many of the local makers at this period. An identical example of Gadney's mark, also on a burnished stem, was recovered from the St Ebbe's excavations in Oxford.¹⁵² Other examples of this mark have been recorded from elsewhere in Oxford,¹⁵³ as well as at Aylesbury and Salisbury.¹⁵⁴ and at Cowley and from the river Thames.¹⁵⁵ Another type of Rob Gadney die, with what appears to be a woolpack beneath the lettering, is also known, but this occurs in association with slightly later bowl forms of *c*.1690–1720.¹⁵⁶ There are also early eighteenth-century pipes with the moulded initials RG known from Oxford,¹⁵⁷ but these are almost certainly the products of Robert Gadney (II), recorded in 1722. The earlier style of stamped mark, as found at Abingdon, was probably in use from *c*.1660–80.

SH. Two examples of a large, roughly square stem mark containing the crudely executed relief letters SH were recovered from the excavations. This mark has previously been recorded from London,¹⁵⁸ where it occurred on a stem that was dated to c.1720–40. At the time Atkinson noted this as an unusual style of mark for the capital, and given the examples from Abingdon it seems more likely to have been an import from somewhere to the west, perhaps west Hampshire or Wiltshire, where this style of marking was much more common. This suggestion is supported by one of at least three examples that the author has recorded from London, which has a complete bowl associated with the mark. This was recovered from Queenhithe, in the City of London (Peter Elkins Collection), and the mark occurs some 18 mm from a heel bowl of c.1690-1720. The bowl not only has a distinctive West Country form, but it is also made of a fine sandy fabric, typical of the Oxford/Reading area. Given that the fabric, the style of the mark, and the associated bowl form all point to a source to the west of London, and that two examples of the mark have now been recovered from Abingdon, a local maker working in this area seems most likely. A pipe-maker named Samuel Henwood married Dorothy Baldwin at Culham, Oxfordshire, in 1699 and in 1704 was settled with his family in St Nicholas parish, Abingdon.¹⁵⁹ Given the stylistic evidence for the origin of these pipes, it seems likely that the SH stem stamps can now be attributed to Samuel Henwood of Abingdon. It is also worth noting that the Elkins Collection includes another bowl that appears to be from the same mould as the one mentioned above, but which has a heart shaped SH mark associated with it. This has a star below the letters and dots above, in a very similar manner to the TB marks attributed to Thomas Burt of Abingdon (see above).

The first of the two new rectangular SH marks was recovered from an upper fill of cesspit 7657, a fairly small group that included six bowl fragments ranging from c.1660-1740 in date. This date range ties in with the evidence provided by the mark itself, which occurs on a relatively thick, unburnished stem with quite a large bore (7/64"), both of which would suggest a late seventeenth- or early eighteenth-century date. However, the most likely deposition date for this group based on the other finds is c.1700-20, which, if correct, ties in perfectly with the known dates for Samuel Henwood given above. The second example was recovered from the lower fill of the same cesspit and was placed 17 mm behind the bowl (Fig. 23, 61). Once again, the mark is on quite a thick, unburnished stem made of a fine sandy fabric, but this time with a stem bore of just over 6/64". The other finds from this context include a few early eighteenth-century forms that suggest a final deposition date of c.1700-10 for the group as a whole. The archaeological evidence suggests that both of the SH marks were discarded during the first decade or two of the eighteenth century. This ties in perfectly with the documentary evidence and suggests that any other examples of this rectangular mark can now be closely and securely dated to c.1700-20 and attributed to Samuel Henwood of Abingdon.

Thomas Hunt. Two marks of the prolific Marlborough pipe-maker Thomas Hunt were found, one a heel stamp and the other a stem stamp. The Hunt family are one of the best known of the West Country pipe-making families, who appear to have originated in the Norton St Philip area of Somerset, where Jeffry [*sic*] and Thomas Hunt probably started pipe-making during the 1630s.¹⁶⁰ It was one of Jeffry's sons, another Thomas (baptised on 18 June 1639), who appears to have moved to Marlborough and established a large-scale manufactory there. He took apprentices at Marlborough between 1667 and 1689 and died there in 1696. The Marlborough Thomas had a son of the same name, born in 1670,¹⁶¹ who seems likely to have continued the family business into the early eighteenth century. From about 1660 to 1710 heel bowls with an incuse stamped mark were produced. At first this seems to have

¹⁵² Ibid., fig. 52.8.

¹⁵³ D. A. Higgins, 'The interpretation and regional study of clay tobacco pipes: a case study of the Broseley District' (Liverpool Ph.D. thesis, 1987), fig. 79.11.

¹⁵⁴ Oswald, 'Clay pipes', p. 255, n. 130.

- ¹⁵⁵ Oswald, 'Pipe stamp index', n. 146.
- ¹⁵⁶ Higgins, 'Interpretation and regional study', n. 153, fig. 79.13.
- ¹⁵⁷ Oswald, 'Pipe stamp index', n. 146.

¹⁵⁸ D. R. Atkinson, 'Makers' marks on clay tobacco pipes found in London, part two', Archaeological Newsletter, 7.11 (1965),

- pp. 249–56, fig. 4.59.
 - ¹⁵⁹ Cannon, 'Pipe-makers of Berkshire', n. 131.
 - ¹⁶⁰ M. Lewcun, ^cThe Hunt family identified', Society for Clay Pipe Research Newsletter, 8 (1985), pp. 14–21.
 - ¹⁶¹ Ibid., p. 16, n. 160.

been the only style produced, but after *c*.1685 spur forms were introduced with incuse marks, often in ornately shaped frames, stamped across the stem. These rapidly grew in popularity, eventually replacing the heel forms and continuing in production into the early eighteenth century.

The heel stamp from these excavations occurs on a distinctive West Country bowl of *c*.1680–1710 from cesspit 7657, and is one of the typical heel forms that were produced in Marlborough during this period (Fig. 24, 64). The incuse, unbordered lettering THO/MAS/HVNT occurs on the large and slightly flared round heel. The bowl (but not the stem) has been finished with an average burnish, and the rim is bottered but not milled. This is one of at least eleven different full-name heel stamps used by this maker.¹⁶² Oswald¹⁶³ records examples of Thomas Hunt's heel marks from Bath, Brinkworth, Bristol, Devizes, Farleigh Hungerford Castle, Highworth, Marlborough, Shepton Mallet (Park House), and Steeple Aston, Wiltshire. The author has also recorded at least three examples from London. This widespread distribution not only shows how prolific this maker was, but also the huge market area over which his products were disseminated.

The stem stamp dates from c.1685–1720 and consists of the incuse stamped lettering THO/HVNT within a decorative frame (Fig. 24, 65). This is one of at least twenty-five different stem stamps¹⁶⁴ used during this period by one or both of the Thomases. Oswald¹⁶⁵ notes examples of Thomas Hunt stem stamps from Brinkworth, Calne, Devizes, Hindon, Marlborough, Newbury Wharf, and Salisbury. The author has also recorded at least one example from London. Although the two Hunt marks from the excavations represent only a very small proportion of all the pipes recovered, they do represent either individual trips or trade with Marlborough, some twenty-five miles to the south-west of Abingdon. They also show how the distinctive 'West Country' styles of Wiltshire could have come to influence designs produced in the Abingdon area.

IW. One pipe of *c*.1690–1720, with a previously unrecorded heart-shaped stem stamp, containing the initials IW, was recovered from cesspit 7657. This mark was placed 15 mm behind the bowl of this finely burnished pipe, which is made of a fairly fine fabric with a few very small and fine sandy particles in it (Fig. 23, 60). The general form of this mark is very similar to the TB marks described above. In this case there is no border around the lettering, although there is a dot above each of the initials and a star below them. This arrangement of motifs is identical to that noted on an SH mark from London, which was probably made by Samuel Henwood of Abingdon, working in 1704 (see above). There are no known makers with the initials IW in the Abingdon area, but, given the similarity of the mark and arrangement of its motifs with other known Abingdon products, it is quite possible that this maker worked in the town at the start of the eighteenth century.

Ship stamp. One of the spur bowls of c.1650–70 from made ground 7521 is particularly interesting, since it has been burnished and has an elaborately decorated stem, which has been impressed with both stem borders (see below) and milling, as well as two decorative stamps depicting a ship in full sail (Fig. 23, 56). One of these impressions has been placed on top of the stem and one below it, which is a very unusual position for a stamp to be impressed. The marks were added after the stem borders and milling had been applied. The stamp itself has a serrated border and depicts a contemporary sailing ship. Most pipe marks of this date contained the maker's initials or name and purely symbol marks are relatively rare. When they do occur, they most frequently depict heraldic subjects, such as a lion, or geometric motifs, such as stars or wheels. The use of a ship is extremely rare, and the only other examples known to the author are three from excavations at Barnard Castle, in County Durham. These also occur on the stems of pipes, and the three are identical to one another, suggesting that they were produced locally. The die used to produce them, however, is different from the Abingdon example, and they do not appear to have been used in association with any other stem decoration. The Barnard Castle die has been allocated the die number 113 in the national clay tobacco pipe-stamp catalogue that is being compiled by the author. Only the stems were found at Barnard Castle, making them very hard to date, but it has been suggested that they were produced c.1680-1720, which would make them slightly later than the Abingdon example. The Abingdon example occurs not only on a bowl form local to that part of the country, but it is also associated with a distinctive Oxfordshire style of stem border. It would appear that pipe-makers in Oxfordshire and Durham both independently chose to use this unusual mark during the second half of the seventeenth century, since, so far as is known, there is no connection between the makers in these two areas.

Wheel stamp. A slightly oval stem made of a local (fine sandy) fabric with a simply executed wheel stamp across it was recovered from cesspit 7657. This stem fragment almost certainly comes from near the bowl, but it is more slender and with a smaller bore (6/64") than most of the other comparable pieces from this context. The oval section to the stem is also a characteristic of transitional pipes, and so this piece almost certainly dates from *c*.1690–1720. This date would fit with the use of a mark across the stem, which became popular during this period.

¹⁶² D. R. Atkinson, 'Clay tobacco pipes and pipe-makers of Marlborough', *Wiltshire Archaeological and Natural History Magazine*, 60 (1965), pp. 85–95, figs. 1.1–11.

¹⁶³ Oswald, 'Pipe stamp index', n. 146.

¹⁶⁴ Atkinson, 'Clay tobacco pipes', p. 9, n. 162, figs 2.43–2.67.

¹⁶⁵ Oswald, 'Pipe stamp index', n. 146.

In this instance the mark comprises a simply executed 'wheel' (Fig. 23, 62) of a type widely used by pipe-makers across the country, making it very hard to identify either the source or the maker. The placing of the mark (across the stem) and the distinctive local fabric characteristic of the Oxford/Reading area both point to this being a relatively local piece.

Stem borders. One of the spur bowls from made ground 7521 is important since not only has it been burnished, but it also has an elaborately decorated stem, which has been impressed with both stem borders and decorative stamps (see ship stamp above) as well as milling (Fig. 23, 56). The stem borders comprise scalloped lines that have clearly been impressed around the stem after it has been moulded. These seem to occur in pairs, with the area between them being slightly depressed from the surrounding level of the pipe stem, but at the same time with this intervening area being slightly domed in the centre. It might be expected that these borders were impressed in one action, using some sort of marking tool with both edges scalloped. Careful examination of the marks, however, suggests that this was not the case. There certainly seem to have been two different scalloped edges that were being used to mark the stem, since all the lines facing the bowl seem to have been impressed using one edge, and all those facing away from it with another. This does not seem to have been the same edge that was simply turned round, since the exact profile of the scalloping and faint scratches on the background or 'field' at each side of the stamp do not match. Furthermore, the relationship between the spikes of the scalloping varies from pair to pair, as does the point at which each scalloped line overlaps having run around the stem and the distance between the two lines. The most likely explanation of these observed characteristics would seem to be that the two sides of each border were impressed separately, using the two sides of a marking tool. This may well have been a flat, file-like tool with scalloped edges. This could have been angled slightly, then run around the stem, so that one edge dug in slightly to produce one side of the border, and then the angle changed so that the other edge dug in to produce the opposing side. This would explain why the spacing and relationship of the sides of each border varies slightly between pairs of impressions, as does the point at which the pattern on each side overlaps. It would also explain the slightly domed centre to the mark.

This is the first time that this particular manufacturing technique has been noted from anywhere in the country, and it would be useful if other examples could be identified to confirm these observations and their suggested interpretation. It is suspected that this particular technique may well prove to be specific to this style of stem border, which probably had a very limited currency and geographical spread. This style of decorative border, that is, one with opposing scalloped edges, has previously been noted from the St Ebbe's excavations in Oxford, where it was identified as being of an eighteenth-century character.¹⁶⁶ This dating, however, is probably too late since a similar example found elsewhere in Oxford, but now in the Woodstock Museum,¹⁶⁷ occurs on a stem of a spur pipe dating from c.1660–80.¹⁶⁸ The example at Woodstock also has a Robert Gadney stem stamp, showing that it was produced in Oxford by the maker of this name, who is recorded in the Hearth Tax assessments for 1667–77.¹⁶⁹ The Abingdon excavations have produced another example of a stem with a Rob Gadney stamp and associated borders on it from stone drain 7577. This example (Fig. 23, 55) is decorated with stem borders comprising plain scallops at the bowl edge and then alternating scallops and small spikes on the opposing edge, which is the same design as the example in Woodstock Museum.

Another example from the St Ebbe's excavations was stamped CC for an, as yet unidentified, local maker who was using an identical style of stem border, that is, with the bowl edge evenly scalloped and the other with scallops interleaved with small spikes. The CC example and both of the Gadney examples described above exhibit the raised area between the edges of scalloped borders, suggesting that both of these makers produced the borders in the same way as suggested above. The new example from Abingdon occurs on a slightly smaller bowl form than any previously recorded, which probably dates from c.1650-70. This provides the earliest example of this particular style of stem border yet recorded and confirms its place as a seventeenth- rather than an eighteenth-century style. It is suggested that this type of border is characteristic of the Oxford area, where at least two different manufacturers can be shown to have been using it. Examples associated with bowl forms suggest a date range of c.1650-80, making it one of the earliest styles of stem border to have been produced anywhere in the country. It cannot yet be determined whether the Abingdon example associated with the ship mark represents an 'import' from Oxford or evidence for production of this style in Abingdon as well.

Moulded Mark

IP. An example of a heel bowl of c.1740–1800 marked IP was recovered from an unstratified context within the knotweed watching-brief area. This has a large, thin-walled bowl, with a thin stem and small stem bore of just 4/64" (Fig. 24, 68). The rather small heel has a trimmed base. IP marks are extremely common at Reading, where they

¹⁶⁶ Oswald, 'Clay pipes', p. 255, n. 130.

- ¹⁶⁸ Higgins, 'Interpretation and regional study', p. 593, n. 153, fig. 79.11.
- ¹⁶⁹ Oswald, 'Clay pipes', p. 255, n. 130.

¹⁶⁷ Acc. No. W/74.19.3.

accounted for about 55 per cent of the 166 moulded heel marks from the Oracle excavations.¹⁷⁰ Although most of the Oracle examples date from the earlier part of the eighteenth century, there were certainly some later eighteenthcentury examples from Reading that are comparable with this piece. A John Paty was working as a pipe-maker in Reading until his death in 1745 and may have produced the Abingdon example, although a slightly later but as yet undocumented maker from Reading seems more likely.

Decorated pipes. Barely any decorated fragments were recovered from the excavations, largely because of the date of the material recovered. Moulded decoration becomes common only from the late eighteenth century onwards, and only one small piece of nineteenth-century bowl, with simply moulded dots on the seams, presumably representing simple leaves, was recovered. During the seventeenth and early eighteenth centuries milled decoration was occasionally used, and the pieces from the excavations are described below, together with an unusual piece that seems to have painted decoration on it.

Painted stem? A possible piece of decorated pipe stem was recovered from cesspit 7657. This fragment probably dates from about 1660 to 1710 and is made of fine sandy fabric, typical of the local area. The stem has a single red line along one side of it, about 3 mm wide, which appears to have been painted or applied to the pipe before it was broken. Surviving painted decoration on pipes is extremely rare, although it may have originally been more common, since the paint or colouring may not always have survived burial. The author has seen a late seventeenth-century stem from London with several red lines along its length, very similar in appearance to this one. The mould seams are not clear on this piece, but the red line appears to follow one of them, presumably the upper one.

Milled stems. A total of eight stems with milled decoration were recovered, all of which probably date from the late seventeenth century. One with additional faceted decoration is discussed in a separate section below, the other seven are described here. Four examples of stem milling were recovered from cesspit 7657, one of them consisting of crossing bands that were applied immediately behind a heel bowl of *c.*1680–1710 (Fig. 19, 11). There are three other bowls made from the same mould in this context, none of which has milling in this position. It is interesting to note, however, that two of these others are over fired and discoloured, perhaps indicating that they are kiln waste, and there is certainly other kiln debris in this context (see below). The other bowls in this context all range from *c.*1650–1710 in date, with most of the material dating from *c.*1660–1700. The other two stems almost certainly date from this period as well. One of them has two surviving bands of milling, the ends of which join to make a single spiral around the stem (Fig. 22, 50). At the break point is a large red inclusion in the fine sandy fabric, which probably caused a distortion in the stem that the milling might have been intended to hide. The other piece (Fig. 22, 49) is thinner, but also has two surviving bands, which again almost touch to make a spiral around the stem. It seems likely that all three examples are contemporary and that they might even represent local examples being produced on or near the site. All are made of a clay with fine sandy inclusions in it.

Another heel bowl with stem milling, also dating from *c*.1680–1710, was recovered from cesspit 7657. Only a very small part of the milling survives (Fig. 19, 10), but there is no evidence of a repair here, and it appears to have been purely decorative. The use of stem milling was not confined to heel bowls, as is shown by an example that occurs on a spur pipe of *c*.1680–1720 from stone drain cut 7579 (Fig. 22, 53). Once again the milling appears to have been purely decorative, as is the case with another stem fragment (Fig. 22, 51). In the case of a fragment from cesspit 7657, however, the stem has clearly been broken during manufacture and clumsily mended, with the milling being used to disguise the join (Fig. 22, 48). This shows that although the milling often appears to have been purely decorative, in two out of seven cases it has been used to disguise a damaged or repaired section of stem.

Milled and decorated stem. There is a very unusual stem with milled decoration where the use of milling as a decorative technique has been taken one step further. The stem is markedly oval in section and quite thick, suggesting a date after *c.*1660, while the use of milling suggests a date of before *c.*1700, since it generally went out of fashion during the early eighteenth century. The associated bowls range from *c.*1650–90 in date, with deposition during the 1670s seeming most likely. The stem fragment (Fig. 22, 52) must have come from quite near to the bowl and has been decorated in two ways. Firstly, a panel has been divided off with two concentric rings of milling around the stem, within which cross-hatched milling has been applied. Secondly, further away from the bowl the stem has been slightly faceted, with each facet being decorated with alternately angled parallel lines. It is not entirely clear whether these lines were made by impressing some sort of cross-hatched die on to the surface or by lightly 'combing' the surface in alternate directions with a serrated blade, such as was likely used as a milling tool. The latter suggestion seems more probable. Finally, the stem section running up to the bowl and over the milled section was finely burnished. This was done last, as can be seen from the fact that some of the burnish lines run across the milling. This style of stem decoration is extremely rare, and there are few parallels to it. It was a technique that was certainly employed at the important pipe-making industry based on the Much Wenlock/Broseley area of Shropshire, since a pipe made there by Samuel Deacon with this style of decoration has been found at Warrington.¹⁷¹ The Warrington

¹⁷⁰ Higgins, 'Clay tobacco pipes', n. 132.

¹⁷¹ P. J. Davey and T. J. Pierce, 'The clay pipes', in A. Leigh, 'Excavations at Saint Elphin's Rectory, Warrington', *Journal of the Chester Archaeological Association*, 60 (1977), pp. 102–13, fig. 10.

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bowl dates from *c*.1690, which provides a good date for this style of decoration as well as supporting the suggested date for the Abingdon example. The Abingdon example was not necessarily made in the Broseley area; it is merely using a style that can be shown to have been in use at this time. The Abingdon stem is made of a fairly fine clay, unlike the coarse Coalmeasure clays that are typical of the Broseley area and unlike the fine sandy fabrics that were sometimes used in the Oxford/Reading area.

Milled spur. Finally there is one example where milling occurs which appears to be purely accidental. During the manufacture of spur pipes the base of the spur was often flattened to disguise the mould seam, rather than trimming it, which is difficult with such a small and fragile area of the pipe. In one example of *c*.1670–1700 the base of the spur has been flattened, but it also has a clear step in it with a 'zig-zag' edge. This appears to have been created when a flat object with a serrated edge was accidentally knocked against the base of the spur (Fig. 22, 54). Although no actual seventeenth- or eighteenth-century pipe-makers' tools survive, it is thought that the milling was created using the serrated edge of a knife blade that would also have been used for trimming the pipes. If this way and leaving a serrated face. Although only a small flaw, this mark provides the first tangible evidence to support the suggestion that trimming knives had serrated backs to them.

Fabrics. Some of the pipes from this site are made of a distinctive clay that is full of fine sandy inclusions. This particular fabric is characteristic of finds from the Oxford/Reading area, but its source and the full extent of the area over which it was used remain to be established. The presence of pipes made from this fabric amongst the excavated assemblage is important for two reasons. First, this particular fabric has not previously been noted at Abingdon. The discovery of these pieces clearly demonstrates that Abingdon certainly fell within the market area of these pipes. Second, the pipes made from this fabric range in date from about 1610 to 1640 (Fig. 19, 1) through to c.1740-1800 (Fig. 20, 25), which provides a good indication of the date range during which this particular fabric was being exploited. The early bowl is particularly important, since this is by far the earliest pipe so far noted that has been made of this fabric. This shows that the clay source was already known by c.1610–40, and that it was being exploited by some of the earliest makers in the area. Early pipes dating from before c.1660-80 from neighbouring centres like Oxford and Reading generally seem to have been made of finer fabrics that were presumably imported from elsewhere. Although the source of this particular fabric must already have been known by the early seventeenth century, it seems to have been thirty or forty years before it was more generally exploited by pipe-makers working in these areas. The next earliest examples noted amongst the assemblage occur on pipes dating from c.1660-80. After this date its use becomes very common, especially for the late seventeenth-century and early eighteenth-century bowl forms and, as noted above, with late examples continuing well into the second half of the eighteenth century. It is interesting to note that none of the probable late seventeenth-century kiln wasters recovered from these excavations (see below) appear to have been made of the fine sandy fabric. This suggests that the limited early production using this fabric was not taking place in Abingdon itself, and that any early examples of this type are imports to the town.

Possible Kiln Waste (Fig. 24, 69–75)

As noted above, there appears to have been a thriving pipe-making industry in the town from at least 1680 to 1720. Some probable pipe wasters and kiln debris from these excavations has now provided the first artefactual evidence for pipe production in the town.

The finds from made ground 7006 included a single overfired pipe stem with traces of fired clay adhering to it. The style of the stem dates it to c.1610-1720, while the three associated bowls from this context range from c.1650-1720, with the latest piece dating from c.1680-1720. This fragment has all the appearance of being from a pipe kiln muffle, most likely of the later seventeenth century or early eighteenth century. A similar stem, also associated with bowls of c.1650-1710, but with the context most likely finally deposited c.1680-1710, was recovered from stone drain cut 7579 and two more from cesspit 7657, which also contained bowls of c.1660-1730, with a likely deposition date of c.1690-1710. Made ground 7521 also included two similarly overfired and encrusted stems, suggesting that it contained an element of kiln debris, and there was yet another example from garden soil 7624. This last context also included a late seventeenth-century heel bowl with reddish discolouration that could be a kiln waster, although this is not certain.

Further pieces that can be securely identified as kiln waste were found within the Cinema site, including a limestone wall (7032), a rubble layer (7658), and several dumps of made ground (7521, 7581, 7582) (Fig. 24, 70–4). As well as pipes that have probably come from muffle fragments, the excavations also produced one piece of possible kiln furniture in the form of a fired clay rod from garderobe 5056 in the watching-brief area. The rod (Fig. 24, 69) appears to have been extruded and is roughly circular in cross section. The surviving section is straight but broken at both ends and with a diameter of 8–9 mm, and has been discoloured from firing. Unfortunately the context from which this piece was recovered contained some rather fragmentary and abraded pieces of pipe, suggesting a reworked and rather mixed deposit. The majority of the pipes, however, appear to be of late seventeenth- or early eighteenth-century date, which provides a possible date for the clay rod. This context, however, also contained nineteenth-century fragments, and the extruded nature of this piece might argue for a later date.

Although no single excavated deposit produced a large quantity of kiln waste, there was clearly a pipe kiln

working somewhere on or near to the excavated site from *c*.1660–1710. This kiln was certainly making spur forms, which seem to have been its main product, although there are also probably heel bowl wasters. There appear to have been several pipe-makers working in Abingdon during this period, but unfortunately none of the waste pipes is marked to give an indication of which workshop it might have come from. Finally, although it is hard to be sure from these overfired and encrusted fragments, it is worth noting that some of these waste pieces appear to be made of the distinctive clay containing fine sandy inclusions that is characteristic of the Oxford/Reading area. This provides the first firm evidence for a kiln site that was exploiting this local clay source, although it seems certain than the pipe-makers in both Oxford and Reading were using it too.

Illustration Catalogue (Figs 19–24)

The illustrations have been arranged in five main sections. The first two show the evolution of the plain bowl forms that were used at Abingdon. The first (Figs 19–20, 1–26) covers heel bowls from c.1610-1800 and the second (Figs 21–2, 27–47) spur forms from c.1640-1800. The third section (Fig. 22, 48–54) illustrates fragments with milled decoration and the fourth (Figs 23–4, 55–68) the marked pipes recovered from the excavations. The final section (Fig. 24, 69–75) illustrates probable pipe kiln waste.

All of the pipes are illustrated at 1:1 with the stamp details being shown at 2:1. Relief detail on the marks is shown in outline while incuse detail is shown in solid black. Broken lines on the surface of the pipe represent burnished surfaces. The site code and context number for each illustrated fragment appears at the end of the following entries, together with the reference letter(s) allocated to tie that particular piece in with the archive catalogue. Dr S. D. White has illustrated all of the pipe drawings while the author has prepared all of the details.

Section 1 – Heel Bowls, c.1610–1800 (Figs 19–20, 1–26)

1. Bowl of c.1610-40, with an average burnish and a stem bore of 9/64". The rim has been bottered and is fully milled. This is an early bowl form made of a sandy local fabric, neatly designed and finished. 96.123 [5062].

2. Unburnished bowl of c.1640-60 with a stem bore of 8/64". The rim has been bottered and is fully milled. Very neatly designed and finished London style bowl (type 10) made of a smooth, glossy fabric. 96.123 [5048] (A).

3. Unburnished bowl of c.1650-80 with a stem bore of 6/64". The rim has been bottered and is fully milled. 02.167 [7582] (A).

4. Unburnished bowl of c.1660-90 with a stem bore of 7/64". The rim has been bottered and is half milled. 02.167 [7521] (AK).

5. Unburnished bowl of c.1660-90 with a stem bore of 7/64". The rim has been bottered and is fully milled. Probably the same mould type as 7624 (K). 02.167 [7521] (AL).

6. Bowl of *c*.1670–1700 with a good burnish and a stem bore of 7/64". The rim has been bottered and is fully milled. Same mould as 7521 (AP), 7582 (D) and 7658 (AD–AH). 02.167 [7624] (N).

7. Unburnished bowl of c.1670–1700 with a stem bore of 8/64". The rim has been bottered and is half-milled. 02.167 [7521] (AM).

8. Unburnished bowl of c.1670–1700 with a stem bore of 7/64". The rim has been bottered and is one-quarter milled. 02.167 [7521] (AN).

9. Unburnished bowl of *c*.1670–1700 with a stem bore of 9/64". The rim has been bottered and half milled. Other bowls produced from this same mould were recovered from 7033 (F), 7521 (AR and AQ), 7601 (M), 7602 (AN, AP, and BS), 7658 (AJ and AK), and 7833 (F), suggesting it was a locally produced type. 02.167 [7600] (X).

10. Unburnished bowl of c.1680-1710 with a stem bore of 7/64". The rim has been bottered and is half milled. There is also a neat band of milling around the stem that appears to have been purely decorative as there is no sign of a repair. 02.167 [7602] (AU).

11. Unburnished bowl of c.1680-1710 with a stem bore of 8/64". The rim has been bottered and is half milled. There is also stem milling immediately behind the bowl which seems to be purely decorative as it does not appear to be on a repaired section. One of four bowls from the same mould in this context (AL-AO), two of which could possibly be wasters. 02.167 [7658] (AL).

12. Bowl of *c*.1680–1710 with a good burnish and a stem bore of 8/64". The rim has been bottered and is half milled. Nice neat form, probably made in the same mould as bowl (L) from Context 7601. 02.167 [7600] (Z).

13. Unburnished bowl of *c*.1680–1710 with a stem bore of 7/64". The rim has been bottered and is one-quarter milled. 02.167 [7624] (O).

14. Unburnished West Country style bowl of *c*.1680–1720 with a stem bore of 7/64". The rim has been bottered but is not milled. 02.167 [7602] (CA).

15. Unburnished bowl of c.1680-1720 with a stem bore of 6/64". The rim has been cut and wiped but is not milled. 02.167 [7601] (AA).

16. Unburnished bowl of c.1680–1710 with a stem bore of 7/64". The rim has been cut and internally trimmed but is not milled. Other examples produced in this mould were recovered from 7602 (AX, AZ, and BA). 02.167 [7601] (P).

17. Bowl of c.1670-1700 with a good burnish and a stem bore of 6/64". The rim has been internally trimmed, bottered, and is half milled. 02.167 [7602] (AO).

18. Unburnished bowl of c.1690-1720 with a stem bore of 7/64". The rim has been cut and wiped but is not milled. 02.167 [7601] (X).

19. Unburnished bowl of c.1690-1720 with a stem bore of 6/64". The rim has been internally trimmed and bottered but not milled. 02.167 [7833] (J).

20. Unburnished bowl of c.1690-1720 with a stem bore of 6/64". The rim has been cut and wiped but is not milled. 02.167 [7833] (H).

21. Unburnished bowl of c.1690-1730 made of a fine sandy local fabric with a stem bore of 6/64". The rim has been internally trimmed and wiped but not milled. 02.167 [7599] (D).

22. Unburnished bowl of c.1680-1720 with a stem bore of 6/64". The rim has been lightly bottered but is not milled. Local heel form made of a fine sandy fabric. 02.167 [7006] (B).

23. Composite drawing of two unburnished bowl fragments of c.1690-1720, both of which were made in the same mould, and both of which have stem bores of 6/64". The one surviving rim has been wiped, but the surviving portion is not milled. This is an unusual transitional form with a small but sharply flared heel. 02.167 [7590] (B) and 02.167 [7599] (E).

24. Unburnished bowl of c.1710-60 with a stem bore of 5/64". The rim has been cut and wiped but is not milled. Local heel form with sharply flared heel and rather dumpy bowl form with slightly flared rim. Fine sandy particles visible in the fabric. 02.167 [7536] (B).

25. Unburnished bowl of c.1740-1800 with a stem bore of 4/64". The rim has been cut but is not milled. Distinctive local bowl form with a large, thin-walled bowl and a pronounced flare to the heel. The bowl is made of a fine sandy fabric, characteristic of the Oxford/Reading area. 96.123 [5048] (D).

26. Unburnished bowl of c.1700-70 with a stem bore of 5/64". The rim has been cut and wiped but is not milled. A tall, cylindrical bowl form with quite a thin stem, made of a fine sandy fabric. The left hand half of the mould has a clear mould line about 3mm below the rim, but this is not evident on the illustrated side. 02.167 [7589].

Section 2 - Spur Bowls, c.1640-1800 (Figs 21-2, 27-47)

27. Unburnished bowl of *c*.1640–60 with a stem bore of 8/64". The rim has been bottered and is one-quarter milled. 96.123 [5036] (A).

28. Unburnished bowl of c.1650-80 with a stem bore of 7/64". The rim has been bottered and is half milled.

29. Unburnished bowl of c.1660-90 with a stem bore of 8/64". The rim has been bottered and is half milled. 02.167 [7602] (B).

30. Unburnished bowl of c.1660-90 with a stem bore of 7/64". The rim has been bottered and is half milled. 02.167 [7582] (AC).

31. Unburnished bowl of c.1660-90 with a stem bore of 7/64". The rim has been bottered and is half milled. 02.167 [7521] (Q).

32. Unburnished bowl of c.1660-90 with a stem bore of 7/64". The rim has been bottered and is fully milled. 02.167 [582] (R).

33. Unburnished bowl of c.1680-1720 with a stem bore of 8/64". The rim has been bottered and is half milled. 02.167 [7032] (B).

34. Unburnished bowl of c.1690-1730 with a stem bore of 8/64". The rim has been bottered and is half milled. 02.167 [7600] (S).

35. Bowl of c.1690-1730 with an average burnish and a stem bore of 8/64". The rim has been bottered and is half-milled. 02.167 [7600] (T).

36. Unburnished bowl of c.1670-90 with a stem bore of 8/64". The rim has been bottered and is half milled. Less usual form with rather a thin stem and a slightly forward pointing spur; quite a thin 'waist' and top-heavy bowl. 02.167 [7613] (E).

37. Bowl of c.1670-1700 with a good burnish and a stem bore of 8/64". The rim has been bottered and is half milled. 02.167 [7602] (Q).

38. Unburnished bowl of c.1670-90 with a stem bore of 7/64". The rim has been bottered but is not milled. The bowl form is unusually small for the period and with rather a clumsy spur. Another example, 7658 (P), is from the same mould. 02.167 [7658] (Q).

39. Bowl of c.1670-1700 with a good burnish and a stem bore of 7/64". The rim has been bottered and is half milled. This piece has been overfired and discoloured a reddish brown – could be a kiln waster. 02.167 [7658] (M).

40 Bowl of c.1680-1710 with a good burnish and a stem bore of 8/64". The rim has been bottered and is threequarters milled. This piece is from the same mould as bowl (M) from this context and bowls (M) and (N) from Context 7602. 02.167 [7600] (L).

41. Unburnished bowl of *c*.1680–1710 with a stem bore of 8/64". The rim has been internally trimmed and bottered but not milled. 02.167 [7601] (J).

42. Unburnished bowl of c.1690-1730 with a stem bore of 7/64". The rim has been bottered but is not milled. This piece is almost certainly from the same mould as three others from this context, (Z), (AA) and (AD). 02.167 [7602] (AB).

43. Unburnished bowl of c.1690-1730 with a stem bore of 7/64". The rim has been bottered but is not milled. 02.167 [7601] (D).

44. Unburnished bowl of c.1690-1720 with a stem bore of 7/64". The rim has been bottered but is not milled. 02.167 [7601] (E).

45. Unburnished bowl of c.1690-1720 with a stem bore of 6/64". The rim has been bottered but is not milled. 02.167 [7601] (G).

46. Unburnished bowl of c.1680-1720 with a stem bore of 6/64". The rim has been bottered but is not milled. 02.167 [7833] (E).

47. Unburnished bowl fragment of c.1770-1810 with a stem bore of 5/64". The rim has been cut and internally trimmed but is not milled. This fragment is from a large, thin-walled spur bowl of Broseley style, almost identical to that from an inn clearance group of c.1800 from Eccleshall, Staffordshire.¹⁷² This piece has an internal bowl cross, arranged as an upright '+' with the long axis of the pipe. This is the only example of an internal bowl cross to have been recovered from the excavations. 02.167 [7667].

Section 3 – Milled Decoration (Fig. 22, 48–54; see also Figs 19 and 23, 10, 11, and 56)

48. Unburnished stem fragment of c.1610-1710 with a stem bore of 8/64". This fragment comes from towards the mouthpiece of a pipe that clearly broke during manufacture. It was poorly aligned when the stem was stuck back together and the join disguised with five parallel bands of milling. 02.167 [7600].

49 Unburnished stem fragment of c.1660-1710 with a stem bore of 7/64". The stem has two surviving bands of milling, the ends of which almost meet to make a spiral around the stem The stem is made of a fine sandy fabric and there is no evidence of repair at the break point. 02.167 [7658] (BI).

50 Unburnished stem fragment of c.1660-1710 with a stem bore of 7/64". This piece has two surviving bands of milling, the ends of which join to make a single spiral around the stem. At the break point is a large red inclusion in the fine sandy fabric, which probably caused a distortion in the stem that the milling may have been intended to hide. 02.167 [7658] (BH).

51. Unburnished stem fragment of c.1660-1700 with a stem bore of 6/64" and a single milled band around the stem, without any evidence of a repair. 02.167 [7602].

52. Stem fragment of c.1660-90 with a fine burnish and a stem bore of 7/64". Quite a thick, oval section stem with a cross-hatched panel of milling and decorated facets that seem to have been formed by combing the surface of the stem in alternate directions with a finely serrated blade. 02.167 [7623].

53. Unburnished West Country style bowl of c.1680-1720 with a bottered rim and a stem bore of 6/64". There is at least one band of milling 12 mm from the bowl, which seems to be purely decorative rather than a repair. 02.167 [7579] (L).

54. Unburnished bowl of c.1670-1700 with a stem bore of 7/64". The rim has been bottered and is half milled. This piece is unusual in that the base of the spur has been accidentally marked with a serrated implement, presumably a milling tool. Fabric contains some fine sandy inclusions. 02.167 [7581] (I).

Section 4 – Marked Pipes (Figs 23–4, 55–68)

55. A very thick stem of c.1660-80 with a stem bore of 9/64" that appears to have been given an average burnish, but the fabric (which is not sandy) has not taken a shine very well. Oxfordshire-style scalloped borders flank the stamp of Robert Gadney (I), recorded working in Oxford from 1667–77. 02.167 [7577].

56. Bowl of c.1650-70 with a fine burnish and a stem bore of 7/64". The rim has been bottered and is three-quarters milled. A very neatly made and well-finished pipe with roll stamped scalloped borders, milling, and two ship stamps on the stem. Unusually one of the ship stamps has been placed underneath the stem. This fragment is made of a fine fabric without sandy inclusions and has been cleaned of iron staining using EDTA solution. 02.167 [7521] (A).

57. Bowl of c.1660-80 with a fine burnish and a stem bore of 7/64". The rim has been bottered and is fully milled. Unusually large heart-shaped bowl stamp reading THOMAS BVRT. This mark is previously unknown but probably represents a mid-seventeenth century Abingdon maker. The pipe is made of a fine sandy fabric. 02.167 [7624] (A).

58. Unburnished bowl of c.1690-1710 with a fine burnish and a stem bore of 7/64". The rim has been internally trimmed and bottered but not milled. Rather a large, 'baggy' local form but finely burnished and with a TB stamp across the stem 33mm from the bowl. Almost certainly made by the Thomas Burt who was recorded working in Abingdon in 1710. No obvious sandy inclusions in the fabric. 02.167 [7601] (W).

59. Unburnished bowl of *c*.1690–1720 with a stem bore of 6/64". The rim has been cut and wiped. Thin-walled transitional bowl form made of a local fine sandy fabric with a previously unrecorded heart-shaped TB mark. Almost certainly made by the Thomas Burt who was recorded working in Abingdon in 1710, 02.167 [7792] (I).

Almost certainly made by the Thomas Burt who was recorded working in Abingdon in 1710. 02.167 [7792] (I). 60. Bowl of c.1690-1720 with a fine burnish and a stem bore of 6/64. The rim has been cut and wiped but is not milled. There is a previously unrecorded heart-shaped IW stem stamp 15 mm from bowl that probably represents a local maker. The pipe is made of a fairly fine fabric without any obvious sandy inclusions. 02.167 [7833] (I).

¹⁷² N. Boothroyd and D. Higgins, 'An Inn-clearance group, *c*.1800, from the Royal Oak, Eccleshall, Staffordshire', *Post-Medieval Archaeology*, 39 (2005), pp. 197–203.

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61. Unburnished stem of *c*.1700–20 with a bore of 6/64". Large square SH stem mark for Samuel Henwood, recorded working at Abingdon in 1704. Made of a fine sandy local fabric. 02.167 [7833] (K).

62. Unburnished stem c.1690-1720 with a bore of 6/64". A slightly oval stem made of a local (fine sandy) fabric with a simply executed wheel stamp across it. This stem has a smaller bore and later feel than most of the others from this context. 02.167 [7600].

63. Unburnished stem of c.1690-1710 with a bore of 7/64". Oval RB mark with a stylized tobacco plant between the letters. Fine sandy particles in the fabric suggest local manufacture, but the maker is unknown. 02.167 [7602]. 64. West Country style bowl c.1680-1710 with an average burnish and a stem bore of 7/64". The rim has been bottered but is not milled, and there is an incuse stamp reading THO/MAS/HVNT on the heel for Thomas Hunt of Marlborough. Made of a fine fabric without any obvious sandy inclusions. 02.167 [7601] (Z).

65. Unburnished stem of c.1685-1720 with a bore of 6/64". Rather a battered fragment with a very glossy surface, but without any burnish lines visible so it is uncertain if the clay is naturally glossy or whether it was actually burnished. Stamped THO/HVNT mark in a decorative frame, one of many similar designs used by this maker in Marlborough c.1685-1720. Made of a fine fabric without any obvious sandy inclusions. 02.167 [7590].

66. Bowl fragment of c.1690-1730 with an average burnish and a stem bore of 6/64". There is an incuse stamp that would have originally read *ED/BEAS/TEN across the stem. This maker probably worked in the East Woodhay area (Hampshire). Very fine fabric without any visible inclusions. 96.123 [5036] (F).

67. Unburnished stem of c.1710-40 with a bore of 5/64". Glossy, thin stem with a very poorly impressed incuse stamp that would probably have read IOSh/BARNS originally. This maker worked at East Woodhay, Hampshire, c.1710-40. Very fine fabric without any visible inclusions. 02.167 [7792] (H).

68. Unburnished bowl of c.1740-1800 with a stem bore of 4/64". The rim has been cut and wiped but is not milled. Large, thin-walled bowl with a thin stem and small stem bore. Small heel with trimmed base and the moulded maker's initials IP on its sides, probably from Reading, where this mark is very common. 96.123 [5035].

Section 5 – Probable Pipe Kiln Waste (Fig. 24, 69–75)

69. A solid rod of fired clay, about 9 mm in diameter. The clay body is pale in colour, presumably pipe clay, but overfired and burnt so that the object appears a mottled greyish colour with some slight flash glazing forming on its surface. The fabric is fine but has a slightly granular fracture, and the rod has slight longitudinal striations, suggesting that it has been extruded. Extruded rods like this are not typical of pipe-kiln assemblages, and so it is uncertain whether this object relates to pipe production in the town or not. 96.123 [5057].

70. Unburnished bowl of c.1660-90 with a stem bore of 7/64". The rim has been internally trimmed, bottered, and is half milled. The bowl is overfired with yellowish discolouration and a small patch of fired clay adhering to it. Does not appear to have been smoked and may well represent pipe kiln waste. Some fine sandy inclusions in the fabric. 02.167 [7581] (F).

71. Unburnished and overfired bowl of c.1660-90 with a stem bore of 7/64". The rim has been bottered and is halfmilled. The bowl has fired clay adhering to it, almost certainly resulting from its reuse as part of a pipe-kiln muffle. No obvious inclusions in the fabric, which has a granular fracture. 02.167 [7521] (N).

72. Unburnished and overfired bowl of c.1660-90 with a stem bore of $7/64^{\circ}$. The rim has been bottered and is fully milled. The extremely narrow band of milling goes all the way round the bowl, but overlaps about 4.5 mm apart rather than meeting. There is fired clay adhering to the stem of this piece, almost certainly resulting from its reuse as part of a kiln muffle. No obvious inclusions in the fabric, which has a granular fracture. 02.167 [7521] (O).

73. Unburnished bowl of c.1660-90 with a stem bore of 7/64". The rim has been bottered and is fully milled. The bowl has been badly overfired and discoloured grey, suggesting that it could be a kiln waster. Fairly fine fabric, but including some extremely fine sandy inclusions. 02.167 [7658] (G).

74. Unburnished bowl of c.1660-90 with a milled rim and a stem bore of 7/64". This fragment has a pinkish surface from burning. Perhaps kiln waste but not certain. Fabric contains some extremely fine sandy inclusions. 02.167 [7582] (AH).

75. Unburnished bowl of c.1680-1710 with a stem bore of 7/64". The rim has been bottered and is half milled. This bowl has split down the seam facing the smoker and is also squatted (started to collapse) during firing, suggesting that it is a kiln waster. Fabric contains some extremely fine sandy inclusions. 02.167 [7602] (BN).

APPENDIX 6: CERAMIC BUILDING MATERIALS by JOHN COTTER and KATE BRADY

The assemblage (2,121 fragments, 16.19 kg) consists predominantly of post-Roman ceramic building materials (CBM), mostly roofing tiles, along with a few scraps of Roman CBM. The Roman and medieval material is generally in a very fragmentary state, the post-medieval material is better preserved, although no complete roofing tiles or other types of CBM were present. The post-medieval contexts produced the largest number of fragments.

Roman Tile

One fairly definite, though smallish, piece from the flange of Roman roofing tile (tegula) in a red fabric was noted in context 6022. This must be residual as it was associated with medieval pottery. A second possible tegula scrap

was noted in 6706, again residual. A scrap of possible curved roofing tile (imbrex) in a cream fabric was noted in context 6103, a ditch fill in the SEB site.

Medieval and Post-medieval Roofing Tile

These constitute the overwhelming bulk of the assemblage. The vast majority of roof tiles are in red-firing sandy fabrics typical of the post-medieval period. Only circular nail holes were noted on the sampled tiles. Most of the tiles assumed to be of medieval date also have a red sandy fabric, though these are generally coarser in texture and sometimes thicker and cruder than the post-medieval tiles. In some cases the coarser tiles bore patches of clear lead glaze — a characteristic generally associated with medieval tiles (13th–16th century).

Ridge Tiles. A few fragments of ridge tile were noted, mostly edge fragments, although one fragment came from a tile which might originally have had an applied ridge or crest (now detached). These are often glazed (clear or green) and occur in fabrics similar to the glazed medieval tiles described above. Two fragments of particular interest came from the fill (6617) of a pit dated from the sixteenth to seventeenth centuries on the SEB site, although the tenement building on this site is known to date from the twelfth to thirteenth centuries (construction). The two large fragments of ridge tile were in a medieval green glazed fabric and were possibly of Brill/Borstall type. The apex had scalloping on either side. No original edges remained, so size could not be measured. This type has not been encountered before in the Oxford region by the authors. It is probably of thirteenth-century date.

Medieval Floor Tiles

Several small pieces of decorated medieval floor tile were recorded, all very worn (indicating long use) and apparently residual (in one case associated with 16th-/17th-century pottery, context 6223). These are in a red sandy fabric with designs inlaid in white slip under a clear lead glaze. On one or two pieces traces of geometric or floral decoration can be distinguished. On two pieces vestiges of stabbed keying can be seen on the underside. Measurable thicknesses included 20–22 mm. They should probably be dated within the thirteenth to fifteenth centuries. Tiles such as these are normally associated with ecclesiastical buildings or buildings of some status. One or two scraps of plain glazed floor tiles were also noted.

Brick

A fairly small number of brick fragments were noted. These were generally small and scrappy with few measurable dimensions. One or two pieces appear to be of 'Tudor' date. Most are of sixteenth- to seventeenth-century date. One nineteenth-century frogged example was noted.

APPENDIX 7: THE LEATHER by QUITA MOULD

Leather was recovered from three pits (7823, 7831, 7744) located at the rear of the properties fronting Ock Street within the Cinema site. A large group of leather was recovered from three fills (7822, 7839, and 7842) of pit 7823 and from a single fill (7810) in pit 7744. These two pits (7744, 7823) have been attributed to the early post-medieval period, sixteenth to seventeenth centuries. A small amount of leather came from fill (7829) of pit 7831, dating from the fourteenth to sixteenth centuries. All the leather examined was remarkably consistent and can be seen as a single group of late medieval date, likely to have been deposited in the second half of the fourteenth century to early fifteenth century. A full report can be found within the site archive.

The shoes. Eighteen shoe parts, all from late medieval shoes of turnshoe construction, were recovered from amongst the waste leather (Table 10). At least five shoes are represented and provide dating for the large amount of waste leather with which it is associated. The better preserved shoe parts come from shoes with vamps and one-piece quarters and two-part soles. Figure 25 shows the two styles of shoe that were found at the site.

Shoe part	Context 7810	Context 7842
Sole, forepart	0	1
2 part Sole, forepart	1	1
2 part Sole, seat	1	1
Vamp	1	2
Vamp fragment	0	2
One-piece quarters	1	2
Upper insert	0	1
Lace hole lining	0	1
Upper fragments	0	3

TABLE 10. SHOE PARTS



Fig. 25. Medieval shoe styles found during excavations

The straps. Fragments from two straps of heavily worn bovine leather were found.

The waste leather. Waste leather is the discarded unusable off-cuts from either the processing of hides and skins or the subsequent manufacture of those hides into different types of leather goods. The processing of hides and skins and the making of leather goods produces distinctive waste that in some cases allows individual trades to be distinguished. The waste leather recovered here has been classified into two general groups: primary waste (deriving from the initial trimming of the tanned hides to remove unusable parts of the skin or hide) and secondary waste (off-cuts of leather with knife-cut edges produced when cutting out and trimming pattern pieces during manufacture or repair). The waste leather recovered is summarized in Table 11.

Pit	Fill	Primary	Primary	Primary	Second	Second	Second
		Hide edge	No hide edge	Bellyskin	Cut edges	Trimming	other
7744	7810	66	5	28	1	5	7
7823	7822	7	1	3	0	0	2
7823	7839	9	0	24	0	0	0
7823	7842	215	5	369	9	4	6
7831	7829	0	0	0	1	6	0

TABLE 11. THE WASTE LEATHER

Primary waste. The waste leather comprises mainly primary waste. All the primary waste was of bovine leathers, principally of cattle hide (97 per cent) varying in thickness from 1.5–9 mm. A small amount of calfskin was found, between 1.5–3 mm in thickness. Much of the primary waste (96 per cent) had areas of hide edge present. Twenty-five pieces had teats present.

Å stamped mark (Fig. 27, 7; SF 217), 11 x 9 mm, was present on a piece of waste cattle hide from fill 7810, in pit 7744. The occurrence of such a mark on a piece of later fourteenth- to early fifteenth-century leather is a rare find of some interest. The mark may have been made by the stampers and sealers on behalf of a leatherworking guild, used by them to denote whether the leather had successfully passed through their rigorous quality control system. It is possible that the stamp was made before the hide was tanned and that it was a tanner's mark. All these primary waste pieces are of tanned leather and were cut off after the tanning process, possibly either before or during the initial stages of currying, when the thick, inflexible hides were further worked to produce a finished leather.

Secondary waste. A small amount of secondary waste was found amongst the primary waste in contexts 7842 and 7810. Similarly, a small amount of secondary waste, along with a small fragment of strap (SF 216) of worn bovine leather, was found in fill 7829 of pit 7831. Four of the secondary waste pieces from fill 7842 also had hide edges and so could be considered as either primary or secondary waste. Hide edges on pieces of secondary waste show that the leather-worker was being very economical when cutting out pattern pieces from a large piece of hide.

The final trimmings of pattern pieces during their assembly into finished goods can be recognized as thin strips, sometimes referred to as tertiary waste; fifteen of these thin trimmings were noted. A lentoid-shaped piece of secondary waste of cattle hide (Fig. 27, 11: SF 221), found in fill 7842, is of a shape that could have been made into either the forepart of a two-part shoe sole or a clump repair piece. It provides direct evidence for either the shoemaking or the cobbling trades and, along with the small amount of secondary waste pieces found in the context, suggests that at least some of the leather is waste from a manufacturing workshop.


Fig. 26. Shoes with buckle and strap fastenings

Catalogue of Illustrated Items (Figs 26–7, 2–3)

1. Turnshoe with buckle and strap fastening over the instep for left foot. Two-part turnshoe sole with edge/flesh seam, stitch length 5–6 mm, seamed across the waist. Vamp with high throat fastening across the instep with a buckle and strap, with integral buckle strap, opposing strap now missing. One-piece quarters, raised at centre back, left side seam is peaked. Stitching to attach a strengthening cord present on flesh side at junction of throat and straps on the vamp and side seams and top edge on quarters. Impression of toe stuffing visible at the pointed vamp toe. Lasting margin stitch length 5–6 mm. Leather: sheep/goatskin 1.5 mm thick. Sole length 270 mm, adult size 7(41). SF 200 [7810].

2. Turnshoe vamp with buckle and strap fastening over the instep for left foot. Vamp for left foot with worn, pointed toe and straight throat with butted edge/flesh side seam present on the left side extending into a fastening strap with slit fold around buckle. Part of side seam present on the right side. Stitching for strengthening cord present along throat on to flesh side on the left side. Lasting margin stitch length 7 mm. Leather: worn cattle hide 2.5 mm thick. SF 201 [7842].

3. Turnshoe high-throated shoe, probably fastening across the instep, for right foot. Vamp for right foot with pointed toe, now broken, and high throat. Remains of edge/flesh butted side seam present on the right side, with tunnel stitching on flesh side at junction of throat and side seams. Leather: cattle hide 2 mm thick. SF 202 [7842] (may belong with 4 and 5 below).

4. Heavily worn turnshoe sole for part of right foot. Edge/flesh seam 4–5 mm, leather delaminated. Surviving length 146 mm. SF 203 [7842].

5. One-piece quarters raised at centre back, right side seam peaked with stitching to attach strengthening cord along the edge of the flesh side. Top edge close to right side seam has short distance of tunnel stitching on flesh side. Lasting margin stitch length 6 mm. Height: centre back 83 mm. Leather: cattle hide 2 mm thick. SF 204 [7842].

6. Lace-hole lining, lasting margin torn away, six holes remaining. Whip stitching along each side to attach to interior of shoe. Leather: worn bovine. 1 mm thick. Surviving height 80 mm, width 25 mm. SF 205 [7842].

7. Angular waste piece with two hide edges and two cut edges with a stamped mark on the grain side. Leather: cattle hide 2.5 mm thick. Length 96 mm, width 78 mm. SF 217 [7842].

8. Waste piece with a rolled hide edge, a cut and a torn edge. Cut mark XII. Leather: cattle hide 3 mm thick. Length 89 mm, width 54 mm SF 218 [7842]

9. Waste piece with hide edge and three cut edges. Cut mark DX. Leather: cattle hide 2.5 mm thick. Length 155 mm, width 70 mm. SF 219 [7842].

10. Waste piece with hide edge and cut edge. Cut mark large X. Leather: cattle hide 3 mm. Length 206 mm, width 39 mm. SF 220 [7842].



Fig. 27. Leather shoe parts 3-6, waste 7-11

11. Lentoid-shaped secondary waste piece with all edges cut, for a shoe sole or repair piece. Leather: cattle hide 3 mm thick. Length 195 mm, width 114 mm. SF 221 [7842].

APPENDIX 8: WORKED STONE by PETER DAVENPORT and RUTH SHAFFREY

The worked stone assemblage includes a lampholder, a mortar fragment, a hammerstone, two whetstones, a chalk sphere, and a piece of chalk carved into the form of a shell. There are also fragments from at least eight roof stones, building blocks and a Purbeck Marble column shaft. All the stone was retrieved from medieval or later contexts and is summarized in Table 12.

Worked Stone Objects

There are several portable stone artefacts including two pieces of worked chalk: one sphere and another carved into the shape of a shell (7006, eighteenth-century layer). Two whetstones are made of Norwegian Rag and sandstone. The Norwegian Rag whetstone was recovered from the eighteenth-century garden soil 5036 but is probably medieval in origin, while the other was found in a large medieval pit (8009). This whetstone had been very well used for sharpening wide blades on two faces and for point sharpening on the other two faces (Fig. 28, 3).

A rim fragment of a small (140 mm diameter), straight-sided, Purbeck-marble mortar was recovered from the fill of medieval pit 6636 to the rear of the tenements (6638, SF 141). The fragment has a single rectangular lug with a smooth inside and rough outside, but both faces still have very clear tooling marks. This mortar is on the cruder, and therefore presumably less desirable side, but Purbeck marble mortars do vary in the quality of their finish, and comparable examples have been found in contexts of similar date.¹⁷³

Česspit 6264 (to the rear of the tenements) produced a probable lampholder of oolitic limestone (Fig. 28, 1). The item is damaged but is of a simple waisted pedestal type with circular section. Stone pedestal lamps probably held an additional vessel rather than directly containing oil,¹⁷⁴ and as both ends of the lamp were capable of supporting

¹⁷³ R. Shaffrey, 'The worked stone', in A. Norton and D. Poore, 'Excavations at 90–93 Reading Broad Street', OA Occasional Paper (forthcoming).

¹⁷⁴ K. Barclay and M. Biddle, 'Stone and pottery lamps', in M. Biddle, *Object and Economy in Medieval Winchester* (Oxford, 1990), p. 985.



Fig. 28. Worked stone, 1-3

TABLE 12.	THE	WORKED	STONE

	Medieval	Post-medieval	18th century	Unstratified	TOTAL
Roof-stones	4	3	1		8
Whetstones	1		1		2
Building stone and blocks	1 block	1 slab	1 slab, 1 ashlar block		4
Other	1 mortar, 1 lamp holder	1 hammerstone	1 decorated chalk 'shell', 1 column shaft	1 chalk ball	6
TOTAL	8	5	6	1	20

a shallow globular ceramic lamp, the lamp could have stood either way up. The lamp resembles in profile some of the pedestal lamps from Winchester,¹⁷⁵ although it is plain in form with no exact known parallels; lamps of this variety tend to be quite sophisticated in style (for example, Oxford Town Hall).¹⁷⁶ The simple design could be taken as an indication that less wealthy (but perhaps ambitious) households were able to acquire imitations of grander products. The lamp could have been imported to the town in its completed state (other oolitic limestone lamps are known, including the Oxford cresset lamp) or indicates the reuse of building stone (see above).

The worked stone artefacts are varied and mostly typical of medieval urban assemblages. The design of the lamp suggests, however, that the occupants had aspirations above their current position, while the simplicity of its design and the crude finish of the mortar suggest perhaps they were not quite reaching where they desired to be.

¹⁷⁵ Ibid.

¹⁷⁶ S. Penney, 'A twelfth century cresset lamp from Oxford', Oxoniensia (1987), pp. 196–8.

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Fig. 29. Worked stone, 4-7

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Structural Stone

Three of the roof stones were recovered from the backfill of robber cut 6337, one from infill 6351 (a wall construction cut), one from the fill of pit 6310 to the rear of the tenement properties, and two from the backfill of garderobe 6098. Two of the stones are of typical rectangular medieval (and post-medieval) design.¹⁷⁷ A further example has the upper corners removed, a characteristic of some medieval roof stones, while a third (Fig. 29, 7) has curved edges. One roof stone (6165) is square and also of medieval form, dating anywhere between 1200 and 1700. All of these roof stones are made of types of shelly or oolitic limestones from the Cotswolds. There is also a single roof slate of probable Welsh origin (from the eighteenth-century backfill of well 7125), indicating a relatively early use of such slate in the area. It has the remains of a lime mortar fillet along one short edge, which indicates it was laid up against a vertical wall like a chimney or, alternatively, was the top course of the roof of a lean-to, where it joined the wall of the rest of the building. The evidence is that stone was used for roofing, although by the later Middle Ages it was not an indication of especial wealth or status.¹⁷⁸

A number of pieces of building stone were recovered, including oolitic limestone slabs in a well (fill 7515, SF 145) and a late seventeenth-century cobbled surface (7583) at the rear of the Lamb Inn, plus a block from the garderobe wall (5056). A broken fragment of an ashlar block of oolitic limestone was also recovered (7578). It has three original faces, including the front, visible face, which is finely finished, the vertical side joint, a planar face with narrow, flat chisel marks, and the underside, which is roughly worked and finished with a narrow adze or pick. The arris of the front face and the broken upper face is cut into by a rectangular section slot. This is in the wrong place to be a clamp hole, and it is not a lewis hole. It is probably for fixing something into the face of the wall when it stood, and has perhaps been used later to split the stone.

A fragment of a three-quarter column shaft of Purbeck marble was found in a drain backfilled in the eighteenth century (7578 SF 154), so presumably refers to the demolition of the building at or just before that period. The column face is finely polished, and the rear is roughly worked flat. Such shafts were commonly used from the late twelfth to the early fourteenth centuries in attached shafting to door openings, windows, and arcades. It would be expected that this fragment is from an ecclesiastical or high-status secular building.

Catalogue of Illustrated Worked Stone (Figs 28–9, 1–2)

1. Possible lampholder. Oolitic limestone. Circular with a biconical profile. The waist has a slight groove around it, but it does not seem to have been suspended. There is a shallow bowl at each end, suggesting that it held a ceramic lamp, which was intended to be visible. Diameter varies from 53 mm (waist) to 80 mm at one end and 64 mm at the other. 73 mm high. Ctx. 6253. 12th–13th century

2. Decorated item. Chalk. Small chalk object shaped and decorated like a shell. Measures 22–27 mm diameter x 15 mm thick. Ctx. 7006. 18th century.

3. Whetstone. Fine-grained micaceous sandstone. Complete cigar-shaped whetstone. Two side edges have been well used for whetting and are thus very concave; one also has polish. The two main faces have been used for point sharpening and have some fine grooves along the length. One face has a very deep groove. Ctx. 8009. SF 173. Late 12th-13th century.

4. Complete roof stone. Fine grained quartzitic limestone. Complete rectangular roof stone with suspension hole slightly offset to middle. Perforation measures 9mm diameter. Measures 270 x 140 x 10 mm. Ctx. 6165. 16th-17th century.

5. Roof stone. Oolitic limestone. Roof stone with nicely drilled cylindrical suspension hole 8 mm diameter. Part of two original edges remaining suggest this was part of an elongated hexagonal roof stone. Measures >160 x >90 x 14 mm thick. Ctx. 6309. Post-medieval.

6. Roof stone . Slightly shelly limestone. Probable roof stone with curved edges and tapered towards the lower edge. Perforation measures 11 mm in diameter. Measures approx. 90 x 90 mm x 23 mm thick. Ctx. 6336. Late 12th–early 15th century.

7. Roof stone. Shelly limestone. Narrow rectangular shape typical of medieval roofing. Suspension hole 8 mm in diameter. Measures 87 mm wide x > 141 mm long x 16 mm max thickness. Ctx. 6336. Late 12th–early 15th century.

APPENDIX 9: GLASS by HUGH WILLMOTT

Over three hundred fragments of vessel glass were recovered from the excavations, mostly eighteenth century in date. The bulk glass (bottles and window) has been categorized and recorded in tabular format within the site archive, whilst the finewares are individually catalogued. The glass is discussed by period and general type.

¹⁷⁷ J. P. Allan, Medieval and Post-medieval Finds from Exeter, 1971- 80 (Exeter, 1984), fig. 168, pp. 41–4.

¹⁷⁸ See http://www.stoneroof.org.uk/exsrie.html.

Roman Glass

A very small assemblage of Roman glass was found during the excavations, although none appears to be in primary contexts. One of these fragments, G1, is a small portion of lower side from a pillar-moulded bowl. Formed by sagging a disc of glass over a solid former, this was a common drinking vessel during the first century AD, being found on both military and civilian sites alike.¹⁷⁹

The remaining two fragments, G2–3, are from the same type of vessel, although judging from the colour differentiation different examples. These are small sections of body from thick, square, or rectangular prismatic bottles. This type of bottle was again very common throughout the Roman world, primarily for the transport of liquids or semi-solids, although they also functioned as ordinary domestic items, even being reused as cinerary urns. Prismatic bottles are a long-lived form, being found in England from AD 43 to the end of the second century.¹⁸⁰

Medieval Glass

A small quantity of late medieval glass was also recovered from the excavations. Two pieces of this, G4–5, are from small oval bottles. These when complete are typically only around 150 mm tall, and made using a double gather of green potash glass and decorated with optic-blown ribbing. This type of flask dates primarily to the late fifteenth century. The remaining fragments of medieval glass are from windows and could date to any time between the twelfth and sixteenth centuries.

Post-medieval Tablewares

Only four post-medieval tablewares of note were found. The first, G7, is a wine glass, represented by the lower portion of a solid rod stem and base. These relatively simple stems are typical of styles common in the mideighteenth century, and whilst relatively understudied archaeologically, have been found in numerous excavations, particularly in urban contexts.¹⁸¹ Probably from a similar eighteenth-century vessel are the fragments of wine-glass bowl, G8, although without the more diagnostic stem further identification is not possible.

More diagnostic is a single fragment, G8, from a small, clear-glass jug or cruet. These vessels are usually made in a good quality glass and were probably used at the table to hold liquids such as vinegar. This type of flask is typically dated to the first half of the seventeenth century, although some might be a little later in date.¹⁸² The final tableware, G10, is decorated with opaque white *vetro a fili* trailing, and probably eighteenth century in date.

Post-medieval Storage Vessels

The largest category of glass recovered was storage vessels, and of these a few are jars. The most unusual is the rim and upper body from a vertical-sided jar with outfolded rim, dating to the mid-seventeenth century (G11). A more common version of this type of storage vessel was the globular jar. This had an everted rim and cylindrical body, and two were found here (G12–13). This type first occurred in the late sixteenth century, although both of these examples are late seventeenth or early eighteenth century in date.

A number of fragments of phials were found. Phials first occurred in the late sixteenth century, but did not become a common form until the eighteenth century, and they are found on virtually every post-medieval site.¹⁸³ Phials were used to hold all types of liquids, perfumes, and medicines, and therefore no specific functions can be assigned to them

By far the most common vessel found at Abingdon is the wine bottle, with at least forty being recovered. This is typical for a post-medieval site, as from the late seventeenth century onwards wine bottles were produced in huge numbers in regional centres all over England.¹⁸⁴ The form was primarily manufactured for the temporary storage and serving of wine; they were used more as decanters than as the disposable storage containers that they have become today. Furthermore, it is probable that they were also used in many households to store other liquids too. For both these reasons they had a very long lifespan, and it is common to find wine bottles deposited in contexts some decades later than their date of manufacture.

Four broad designs of wine bottle dating to between the seventeenth and eighteenth centuries were found. The earliest, dating to between 1650 and 1680, is known as a shaft and globe, as it has a bulbous body and a long, slightly tapering neck. Two bottles of this form are represented by neck fragments. The most common type of wine bottle is the onion or mallet variety. A minimum of nineteen were found, although this is certainly a significant underestimation of the original total. Onion or mallet bottles date to the last decades of the seventeenth century

¹⁷⁹ J. Price and S. Cottam, Romano-British Glass Vessels: a Handbook (York, 1998), p. 44.

¹⁸¹ E.g., R. J. Charleston, 'Glass from Plymouth', in Cynthia Gaskill-Brown, *Plymouth Excavations: the Medieval Waterfront, Woolster Street, Castle Street. Finds Catalogue* (Plymouth, 1986), p. 46.

¹⁸² Hugh Willmott, 'Early Post-Medieval Vessel Glass in England, c. 1500–1670', CBA Research Report 132 (York, 2002), p. 77.

¹⁸⁴ Hugh Willmott, A History of English Glassmaking, AD 43–1800 (Stroud, 2005), pp. 108–44.

¹⁸⁰ Ibid., pp. 194–5.

¹⁸³ Ibid., pp. 89–91.



Fig. 30. Worked bone, 1-2

and continued until the 1740s, although there is chronological overlap with both the earlier shaft and globe and the later short cylindrical bottle. The third type of bottle found is the short cylindrical bottle. By the mid-eighteenth century wine was being stored for longer in the bottle, so a style that allowed stacking was required. Again the dating of the form must be treated with some degree of flexibility, although they were most popular between 1740 and 1780. Nine examples were found at Abingdon, rather fewer than the earlier types, and this reflects a change in use of the site, rather than the wine bottle becoming less popular generally at this time. The final type of bottle was the cylindrical variety, there being four examples in total. This form, which more closely resembles the modern-day version of the wine bottle, slowly developed in the latter half of the eighteenth century and was hand-blown. It continued to be produced in the nineteenth century.

Post-medieval Window Glass

A small quantity of post-medieval window glass was also recovered from the excavations. Most of the window glass is small and undiagnostic, but from general appearance most can be said to be of eighteenth-century date, although there are a few earlier fragments.

APPENDIX 10: WORKED BONE by ROSEMARY GRANT

A total of four worked bone objects were recovered from the excavations. The assemblage comprises two decorated casket strips and two pieces of worked antler. The decorative casket strips were recovered from fill 6392 of pit 6421 in the SEB area, which contained pottery of mixed date, including Roman and medieval material. These objects are most likely to be medieval in date. The largest of the two pieces (Fig. 30, no. 2) is made from a section of large rib, probably from a cow. The strip is decorated with triple ring-and-dot design, with a larger double contoured circle surrounding open-work detail. There are two circular holes which cut through the ring-and-dot design and are possibly for attachment. The smaller of the two strips (Fig. 30, no. 1) is also from rib and is decorated with three triple ring-and-dot motifs. Rectangular strips of worked bone would have been pinned to wooden bases to form caskets. Examples of these have been found at Winchester.¹⁸⁵

¹⁸⁵ M. Biddle and D. Hinton, 'Decorative bone casket strips', in Biddle, *Object and Economy*, p. 784, fig. 227, no. 2429.

Illustration Catalogue (Fig. 30, no. 1)

- 1. Decorative casket strip. Cxt. 6392, SF 96, length 65 mm.
- 2. Decorative casket strip. Cxt. 6392, SF 101, length 129 mm.

APPENDIX 11: PATHOLOGY OF THE HUMAN BONE by CERIDWEN BOSTON

Trauma. Skeleton 3027 displayed a healed fracture of the fibular midshaft, with subsequent bony bridging of the distal fibula and tibia. It also showed a healed fracture of the stylis of the left ulna, resulting in osteophytic changes to the articular surface. Four healed fractured ribs and a poorly set right clavicle were present in skeleton 3009. A swelling of the anterio-lateral aspect of the left upper femur shaft of skeleton 3026 is consistent with an ossified sub-periosteal haematoma, probably secondary to localized trauma.

Degenerative joint disease. Degenerative joint disease was not common, probably reflecting the overall youth of this assemblage, with three (3005, 3008, and 3025) showing only slight osteophytosis of the vertebrae, two (3005 and 3009) of the hands, and one (3008) of the distal phalanx of the first toe.

Infectious disease. The paranasal sinuses of skeleton 3024 displayed deposition of woven bone indicative of chronic sinusitis,¹⁸⁶ which often occurs as a result of poor ventilation, allergy and chronic exposure to polluted sooty air.¹⁸⁷ Skeleton 3024 also displayed rickets, severe dental enamel hypoplasia, and severe growth retardation. The presence of the three conditions suggests a sickly child who was kept indoors in a poorly ventilated environment for extended periods of time.

Metabolic disorders. Skeletons 3005, 3006, 3007, and 3021 had cribra orbitalia, indicative of childhood iron deficiency, which often results from poor dietary intake of iron and/or intestinal parasites.¹⁸⁸ Slight cribra orbitalia was also observed in the orbits of Roman skull 901.

The lower limb bone shafts of skeleton 3024 showed marked anterio-posterior bowing consistent with rickets, whilst only slight bowing of the femora, and of the tibiae and femora was present in skeletons 3023 and 3001, respectively. Rickets is caused by a deficiency in vitamin D, which may be obtained in some foodstuffs, such as oily fish, but predominantly forms during exposure of the skin to sunlight.¹⁸⁹

Congenital anomalies. Skeleton 3009 displayed a rudimentary unilateral right cervical rib. The right first thoracic rib was unusually broad and contained a facet mid-way along its length that articulated with the cervical rib. Cervical ribs are a developmental anomaly and are usually inherited.¹⁹⁰ However, neither sub-adult (3010 and 3011) buried in the same grave as skeleton 3009 shared this anomaly.

Spina bifida occulta was present in skeletons 3008 and 3023. Sacralization was also observed on the latter, and was suggested by the fragmentary remains of skeleton 3010. Skeleton 3006 displayed lumbarization. The high prevalence of these mid-line developmental anomalies has been noted in other local populations (for example, Oxford Castle and Abingdon Vineyard) and may reflect regional patterning of these inherited traits. This observation, however, requires further research.

Dental decay. Six individuals were affected by dental caries (3002, 3005, 3021, 3008, 3010, and 3024), a prevalence of 5.46 per cent per tooth. This is less than half the prevalence quoted by Roberts and Cox¹⁹¹ for this period. Dental abscesses were noted in skeletons 3005 and 3021 (0.33 per cent per socket). There was little ante-mortem tooth loss (2.78 per cent per socket). Little calculus was present. These low rates of dental disease in part reflect the youth of the population, but suggest a diet low in refined sugars, the principal cause of dental decay.¹⁹² A dental abscess was present in the maxilla of the isolated Roman skull (901).

Dental enamel hypoplasia. All eight skeletons examined for dental enamel hypoplasia displayed characteristic lines of thinned tooth enamel on the tooth crowns (59.77 per cent per tooth), which indicates a prolonged episode of health stress and/or malnutrition during the first seven years of life.¹⁹³ With the exception of skeleton 3024, these defects were not marked.

¹⁸⁶ A. C. Aufderheide and C. Rodriguez-Martin, *The Cambridge Encyclopaedia of Human Palaeopathology* (Cambridge, 1998), p. 257.

¹⁸⁷ Charlotte Roberts and Keith Manchester, *The Archaeology of Disease*, 2nd edn (Ithaca, NY, 1995), p. 131.

¹⁸⁸ P. Stuart-Macadam and S. Kent, *Diet, Demography and Disease: Changing Perspectives on Anaemia* (New York, NY, 1992), p. 159.

¹⁸⁹ Donald J. Ortner and Walter G. J. Putschar, *Identification of Pathological Conditions in Human Skeletal Remains*; Smithsonian Institution (Washington, D.C., 1981), p. 273.

¹⁹⁰ E. Barnes, Developmental Defects of the Axial Skeleton in Palaeopathology (Boulder, CO, 1994), p. 125.

- ¹⁹¹ Ibid., p. 326, n. 84.
- ¹⁹² Roberts and Manchester, Archaeology of Disease, p. 48, n. 187.
- ¹⁹³ A. H. Goodman and J. C. Rose, 'Dental enamel hypoplasia as indicators of nutritional status', in M. A. Kelly and
- C. S. Larsen, eds, Advances in Dental Anthropology (New York, NY, 1991), pp. 279–93.

APPENDIX 12: FISH REMAINS by REBECCA NICHOLSON

The fish remains from the Central Abingdon sites were almost all recovered from soil samples sieved to 0.5 mm as part of the flotation process for the recovery of charred plant remains. Hand-collected fish bones were rare, and the bones tabulated here (Table 13) were largely extracted from the >2 mm residues and flots. However, in addition to the recorded assemblage, extremely large numbers of tiny bones from a range of taxa were present in the 0.5–2 mm residue fractions which were partially sorted for mineralized seeds (3–5 tablespoons of residue per sample). Time did not permit the extraction and quantification of these bones, but their significance is discussed below.

Results and Discussion

Over twelve hundred fish bones were recorded (Table 13), representing a wide range of both marine and freshwater taxa. These counts exclude the thousands of tiny fish bones present in the fine residues from samples 21, 24, and 29 in particular and which were dominated by the remains of tiny cyprinids (Cyprinidae, especially dace, Leuciscus leuciscus, and minnows, Phoxinus phoxinus), eels (Anguilla anguilla) and stickleback (Gasterosteus aculeatus). All the identified bones came from medieval and post-medieval contexts. Not a single bone from a Roman context was recovered, despite all residues from Roman samples being scanned for fish remains. In almost all contexts clupeids (herring, sprat, and pilchard), eel, and small cyprinids dominated in terms of bone numbers. Gadids (cod family fishes) were relatively rare, although one large cod or ling would provide more meat than ten or more small herrings or cyprinids. Of the other species identified, flatfish bones included an anal pterygiophore from a large halibut (Hippoglossus hippoglossus) as well as a vertebra from a brill or turbot of around 350-400 mm (Scophthalmidae: left-eyed flatfishes) and a range of bones from smaller right-eyed flatfishes (Pleuronectidae). Elasmobranchs (sharks and rays) were rare, but had cartilaginous skeletons; dermal denticles from thornback ray (Raja clavata) were identified. Unusually, ballan wrasse (Labrus bergylta) was identified from a premaxilla in sample 63 (8060). This sample also contained a tub gurnard (Trigla lucerna) scute. While tub gurnards are certainly good to eat, wrasse are not usually marketed today, as their flesh is considered to be of poor flavour. These fish would have been purchased fresh, an indication of the speed of transport from the coast in the medieval period. A single large ling (Molva molva) cleithrum from context 6457 probably represents a dried fish - both ling and cod were commonly sold in a dried and often also salted form (identified in documents as 'salt fish', 'stockfish', or 'haburdenes') in the medieval and post-medieval centuries.

Freshwater fish were represented by a range of cyprinids, three-spined stickleback, and (rarely) perch (Perca fluviatilis) and pike (Esox lucius). Eels were common, and can be caught in freshwater, estuaries, or in the sea. The main feature of the Abingdon Cinema assemblage is the predominance of small and tiny fish (usually under 150 mm long) represented in the cesspit fills. Samples 21, 22, 24, 29, and 30 were especially full of bones from small clupeids, eel, cyprinids, sticklebacks, and small cottids - probably freshwater bullheads (Cottius gobio). Samples 21 and 29 produced over one thousand tiny fish bones in under 500 ml. of residue, but surprisingly, twelfth- to thirteenth-century cesspit fill 6161 (sample 23) seems to have contained very few fish bones. It is clear from the mineralized cess, abundant fly pupae, and mineralized seeds in these residues that the fills were indeed full of human sewage. The tiny fish remains are, however, somewhat enigmatic, since small bones do not readily survive through the human digestive tract,¹⁹⁴ yet in almost all cases the bones were extremely well preserved and in some cases were encrusted with cess. Pelling (see below) has interpreted the plant remains from these fills as representing a mixture of cess and refuse, and it seems most likely that many of the fish bones originated either as table waste or possibly as spoiled items. In some cases even the tiniest bones appeared stained and/or partly charred in a manner consistent with the items having been cooked, which would indicate the likelihood of kitchen or table waste having been incorporated into the cesspits. Once boiled, fish bones degrade rapidly, so it is unlikely that the bones recovered here had been part of a mixed stew. The similarity between the fish assemblages in samples 21, 22, 24, 29, and 30 would suggest that these fills all contained material from a single phase of cess deposition/ dumping, despite the apparent differences in their age. The concentration of such tiny fish bones in an inland, medieval, assemblage is surprising and unique to the knowledge of this author. Small and tiny fish bones, some from freshwater fish, including sticklebacks, have been found archaeologically,195 and in most cases these finds were

¹⁹⁴ A. K. G. Jones, 'Fish bone survival in the digestive systems of the pig, dog and man: some experiments', in D. C. Brinkhuisen, and A. T. Clason, eds, *Fish and Archaeology*, BAR, IS, 294 (1986), pp. 53–61; R. A. Nicholson, 'An investigation into the effects on fish bone of passage through the human gut: some experiments and comparisons with archaeological material;' *Circaea* 10(1993), pp. 38–50.

¹⁹⁵ E.g., A. K. G. Jones, 'Fish bones', in A. Rogerson and C. Dallas, 'Excavations in Thetford, 1948–59 and 1973–80', *East Anglian Archaeology*, 22 (1984), pp. 192–4; A. K. G. Jones and S. A. Scott, 'The fish bones', in M. Atkin, 'Excavations on Alms Lane', in M. W. Atkin, A. Carter, and D. H. Evans, 'Excavations in Norwich 1971–1978, part II', *East Anglian Archaeology* 26 (1985), pp. 223–8; R. A. Nicholson, 'Fish Bones', in P. Andrews, 'Excavations at Redcastle Furze, Thetford, 1988–9', *East Anglian Archaeology*, 72(1995), pp. 128–31; R. A. Nicholson, 'The fish remains', in A. Connor and R. Buckley, eds, *Roman and Medieval Occupation in Causeway Lane, Leicester*, Leicester Archaeology Monographs, 5 (Leicester, 1999), pp. 333–7.

TABLE 13. THE FISH REMAINS

SAMPLE	21	22	23	24	29	30	31	33	38	52	55	63	64	НС	НС	НС	Grand Total
CONTEXT	6144	6164	6161	6137	6278/9	6221	6327	6389	6540	7810	7810	8060	8024	6077	6457	6699	
Vol. soil sieved	40L	40L	40L	40L	40L	34L	40L	40L	7L	10L	1L	20L	20L				
Date	18C	16– 17C	12– 13C	12– 13C	18C	11– 15C	11– 15C	13– 14C	12– 13C	11– 15C	11– 15C	Undated	11– 15C	11– 15C	11– 15C	15– 18C	
Feature type	Cess Pit	Cess Pit	Cess Pit	Cess Pit	Pit	Pit	Pit	Pit	Pit	Pit	Pit	Pit	Pit	Pit	Pit	Pit	
Elasmobranch		1			3	1		2									7
Thornback ray	3				1												4
Eel	137	70	2	35	113	75	2										434
Conger eel				6		1										1	8
Clupeidae	47	18	2		43	3	1		1			2	1				115
Herring	105	4		52	2	43		1	114			3					324
Cyprinidae	69	9		5	35	6	1										125
Dace	8	4		1	16	2											31
Gudgeon					1	1											2
Roach	3	2		2	4	3											14
Cf. Rudd						1											1
Minnow		2		4													6
Gadidae				6	6	1	3					2					18
Cod				14		1	1			1							17
Haddock				8			3										11
Whiting		1			4	1						7					13
Whiting/cod												1					1
Ling															1		1
Cf. Perch	1																1

Tub gurnard												1					1
Cottidae		3				4											7
Bullhead	7				4	1											12
Pike		1									1						2
Cf. Pike				1													1
Cf. Wrasse (small)	2																2
3-spined Stickleback		5			10	4											19
Ballan wrasse												1					1
Flatfish nfi	1											1					2
Left-eyed flatfish	1								1								2
Right-eyed flatfish		1		8								1					10
Halibut														1			1
Unidentified	26			7	31	2					1						67
Grand Total	410	125	4	149	274	149	11	3	116	1	2	19	1	1	1	1	1267

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from cesspits. The usual interpretation is that these bones derived from the guts of larger fish, although this was questioned by Nicholson.¹⁹⁶ The abundance of tiny bones in the Abingdon cesspits suggests that they are unlikely to derive from fish gutting, especially since the bones of larger carnivorous freshwater fish (especially pike and perch) are rare. It is more likely that these fishes, now not considered good to eat, were not just captured occasionally, by accident, but that they formed a significant food. The consistent mixing of eel, clupeids, cyprinids, and other small and tiny fish suggests that they were sold and eaten together, perhaps fried (as whitebait). A mixture of small fish sold together can be seen in Mediterranean fish markets today, although those seen by the author comprised exclusively marine taxa.

While the freshwater fish and eels were probably caught locally, the source of the marine fish is less clear. Most of the identified fish would have been available all round the coast of southern England; conger eel is a typical component of bone assemblages from sites round the southern coast, but haddock and ling have a more northerly distribution. Fish typical of south-west ports (especially hake, *Merluccius merluccius*) were absent in this assemblage. Transport by water would have been the most efficient way of moving fish inland, and the river Thames would have provided access to central England from London and the south-eastern ports.

APPENDIX 13: THE CHARRED, MINERALIZED, AND WATERLOGGED PLANT REMAINS by RUTH PELLING

In the course of the excavations in central Abingdon by Oxford Archaeology a series of samples was taken for the recovery of charred and waterlogged plant remains. The samples analysed include four samples of Romano-British date from the *oppidum* ditch, and ten medieval and post-medieval samples (12th/13th century to 16th century) from garderobe, pit, and well fills. The detailed results are shown in Tables 14–16.

The Roman Period

The charred plant remains. Four samples were examined from the late Iron Age-Roman *oppidum* ditch in the Cinema site. In addition to charred plant remains, all produced waterlogged (or suspected waterlogged) material, with samples 56 and 58 producing a more extensive taxa list, probably due to better preservation. The waterlogged remains are discussed below.

Three cereal species are represented in the samples: *Triticum spelta* (spelt wheat), *Triticum dicoccum* (emmer wheat), and hulled *Hordeum vulgare* (barley). A single grain of free-threshing *Triticum* species in sample 45 is likely to be of medieval origin. Occasional grain of *Avena* species may be of the wild species, given the presence of wild, *Avena fatua* floret bases. A common arable weed, wild oats may have been harvested and tolerated with the crop grain. *Triticum spelta* is the predominant wheat species of the Roman period in southern Britain. *Triticum dicoccum* is rare in the samples, represented by occasional glume bases and spikelet forks only, suggesting it is present as a weed of the spelt crop rather than a cultivated crop in its own right.

In all four samples the charred remains are dominated by the chaff of *Triticum spelta*, particularly glume bases and spikelet forks, but including rachis segments. Chaff outnumbers grain by a ratio of at least 10:1 in all samples. (Quantification for samples 45 and 59 is for ¹⁄₄ of chaff and weed seeds.) Given the differential preservation of chaff and grain (chaff survives charring poorly compared with grain),¹⁹⁷ it would appear that these deposits are composed of cereal processing waste, particularly the fine sieving waste removed from the clean grain either immediately prior to milling or consumption or prior to storage if stored clean. Weed seeds were present but in much smaller numbers than the chaff. This might suggest some processing for the removal of weeds had taken place previously. In a recent study of Iron Age and Roman sites in the Thames Valley area, Stevens¹⁹⁸ suggests a distinction can be drawn between sites on which spelt crops were stored as cleaned spikelets (with weeds removed), such as Ashville, Abingdon,¹⁹⁹ and those on which processing was minimal and weeds were not removed (resulting in large numbers of small weed seeds). This routine day-to-day processing, however, is likely to take place on all sites. Stevens suggests this is related to labour availability, where larger farms or villas have sufficient labour to process grain to spikelet or even clean grain, while small producers would conduct sieving and cleaning on a day-to-day basis at a household level. In the current study the number of available samples is too small to enable conclusive comments; however, the high number of glume bases in relation to both grain and weed seeds would suggest the

¹⁹⁶ Nicholson, 'Fish bones', in Andrews, 'Excavations at ... Thetford', pp. 128–31, n. 195.

¹⁹⁷ S. Boardman and G. E. M Jones, 'Experiments on the effects of charring on cereal plant components', *Journal of Archaeological Science*, 17 (1990), pp. 1–11.

¹⁹⁸ C. Stevens, 'An investigation of agricultural consumption and production models for prehistoric and Roman Britain', *Environmental Archaeology*, 8 (2003), pp. 61–76.

¹⁹⁹ M. K. Jones, 'The plant remains', in M. Parrington, *The Excavation of an Iron Age Settlement, Bronze Age Ring-Ditches and Roman Features at Ashville Trading Estate, Abingdon (Oxfordshire) 1974–76*, OAU report 7, CBA Research Report, 28 (London, 1978), pp. 93–110.

	Sample Context Date Volume (litres)	45 7019 RB 20	56 7895 RB	58 7652 eRB	59 7860 eRB 20
CDAIN	Small fraction quantified	l⁄4			1⁄4
GRAIN Triticum spelta	spelt wheat grain	4	1	_	7
Triticum spelta	spelt wheat germinated grain	3	_	1	, 10
Triticum of spelta	cf spelt wheat grain	_	1	4	14
Triticum cf. spelta	cf spelt wheat germinated grain	10	2	4	20
Triticum spelta/dicoccum	spelt/emmer grain	4	_	_	1
Triticum spelta/dicoccum	spelt/emmer.germinated	_	_	_	_
Triticum sp	wheat grain	14	_	4	19
Triticum aestivum/turoidum type	free threshing wheat short grain	1	_	_	_
Triticum sp	wheat germinated grain	33	_	_	6
Hordeum vulgare	barley hulled straight grain	_	_	_	3
Hordeum vulgare	barley grain	_	_	_	6
cf Hordeum vulgare	cf harley grain	_	_	_	1
Avena fatua	wild oats	1	_	_	_
Avena sp	oats	_	_	_	5
cf Avena sp	cf oats	5	_	_	_
Cerealia indet (grain)	ci. outs	44	12	7	70
Total No Cereal Grains		119	16	, 20	162
Total Ivo. Ocical Granis		117	10	20	102
CHAFF					
Triticum spelta (glume)	spelt wheat	970	278	141	782
<i>Triticum spelta</i> (spikelet)	spelt wheat	14	4	9	13
<i>Triticum spelta</i> (rachis)	spelt wheat	1	1	3	3
Triticum dicoccum (glume)	emmer wheat	4	2	3	-
Triticum dicoccum (spikelet)	emmer wheat	1	3	2	-
Triticum dicoccum (rachis)	emmer wheat	1	2	-	-
Triticum cf. dicoccum (glume)	emmer wheat	1	1	-	2
Triticum cf. dicoccum (spikelet)	emmer wheat	3	-	-	4
<i>Triticum spelta/dicoccum</i> (glume base)	spelt/emmer wheat	53	64	41	593
<i>Triticum spelta/dicoccum</i> (spikelet)	spelt/emmer wheat	7	11	-	37
Triticum spelta/dicoccum (rachis internode)	spelt/emmer wheat	1	-	5	5
Triticum sp. (dense rachis)	wheat	19	5	2	66
<i>Hordeum vulgare</i> , six–row (rachis internode)	barley	1	-	-	-
Hordeum sp.(rachis internode)	barley	2	1	2	13
Avena fatua (lemma base)	wild oats	1	-	1	-
Cereal size (culm node)		-	-	-	6
Cerealia indet (basal rachis)		-	3	3	12
Cerealia indet.	coleoptile	8	4	7	45
Total Chaff		1087	379	219	1581
WEED/WILD					
Brassica/Sinapis spp.	cabbage, turnip etc. wild mustard	_	_	_	1
Ranunculus acris/repens/hulhosus	buttercup	_	_	_	1
Stellaria media agg.	chickweed	2	_	_	_

TABLE 14. THE ROMANO-BRITISH CHARRED PLANT REMAINS

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Agrostemma githago	corn cockle	2	-	-	1
cf. Agrostemma githago		1	-	-	-
cf. Caryophyllaceae capsule frag		1	_	-	_
Atriplex sp.	orache	-	-	-	1
Chenopodiaceae indet.		1	-	-	3
Vicia/Lathyrus sp. small seeded	vetch/vetchling	-	1	-	10
Vicia/Lathyrus sp. large seeded	vetch/vetchling	1	_	-	2
Medicago/Trifolium sp.	medick/trefoil, clover etc	7	1	_	36
cf. Ononis repens	common restharrow	-	_	-	1
Umbelliferae indet, large seeded		_	_	-	1
Polygonum aviculare agg.	knotgrass	-	-	_	2
Polygonum persicaria	pale persicaria	_	_	-	1
Rumex sp.	docks	-	-	_	25
Corylus avellana	hazel nut shell frag	_	_	_	5
Veronica hederifolia	ivy-leaved speedwell	_	_	_	1
Odontites verna/Eurphrasia sp.	red barstia/eyebright	1	_	2	_
Plantago media/lanceolata	plantain	_	_	_	4
Galium aparine	goosegrass	_	_	1	2
Valerinella dentata	narrow-fruited corn-salad	1	_	_	_
Tripleurospermum inodorum	scentless mayweed	3	2	1	3
Centaurea sp.		_	_	_	1
Compositae intermediate		1	_	_	_
Eleocharis palustris type	common spikerush	_	_	_	4
<i>Juncus</i> sp.	rushes	1	_	_	_
<i>Juncus</i> sp.	rush seed capsule	_	_	_	2
<i>Carex</i> sp. three sided	sedge	_	_	_	2
Bromus subsect Eubromus sp.	brome grass	14	8	_	27
Bromus subsect Eubromus sp.	brome grass germinated	5	_	_	_
Festuca/Lolium sp. type	0 0 0	64	4	6	68
Gramineae (large)		15	_	5	5
Gramineae (medium)		17	5	_	17
Gramineae (small)		2	_	_	_
Indet weeds small		4	_	_	55
Indet, bud		1	_	_	55
Total weed seeds		144	21	15	336
Not charred (dried waterlogged)					
Ranunculus acris/bulbosus/repens		-	-	-	1
Thalictrum flavum		-	-	-	3
Fumaria sp.	fumitory	-	-	-	3
Rubus fruticosus	bramble	+	-	-	5
Rubus sp.		-	-	-	1
Potentilla erecta	cormentil	+	-	-	-
Aethusa cynapium	fool's parsley	+	-	-	11
Conium maculatum	hemlock	+	-	-	29
Euphorbia helioscopia	san spurge	+	-	-	_
Urtica dioica	common nettle	+++	-	-	_
Ficus carica	fig	-	-	-	1
Hyoscyamus niger	henbane	_	_	_	9

ABINGDON WEST CENTRAL REDEVELOPMENT 193

Mentha sp.	mint	+	-	-	-
Stachys sp.	woundwort	+	-	-	11
cf. Lamium sp.	dead nettle	+	-	-	-
Labiatae		-	-	-	20
Sambucus nigra	elder	100 +	-	-	71
Juncus sp.	rushes	++	-	-	-
Carex sp.	sedges, 3 sided	-	-	-	13
Indet		-	-	-	1

deposits represent the waste product of processing semi-clean spikelets, which may have been cleaned of the bulk of weed seeds prior to storage. The presence of such deposits in the *oppidum* ditch suggests it was used for refuse disposal. A number of the grain had germinated. However, the numbers of grain involved and the absence of large numbers of detached coleoptiles (embryo sprouts) do not suggest malting waste is represented. The occasional germinated grain is likely in any harvested crop, particularly if stored slightly damp.

The weed flora includes a large number of large, grain-sized grasses which are likely to have remained with the spikelets and grain until final cleaning by hand, or even tolerated with the final product. Small, seeded leguminous weeds were particularly common in sample 59 from the ditch, particularly *Medicago/Melliotus/Trifolium* type. These included a seed of possible *Ononis repens*, characteristic of rough grassland, while vetches and many species of small legume occur in grassland. This deposit could include cut grass, the grass seeds having entered the deposit as hay rather than arable weeds, or may include seeds which entered the site with animal dung, subsequently used as fuel. Alternatively a grassland flora may have characterized the margins of arable fields. Seeds of docks were also numerous in sample 59. Again docks may have been growing on the margins of arable fields, although they typically occur in a range of ruderal habitats.

The remaining wild species were present in small numbers only and represent typical arable or ruderal weed species. A small number of wet ground taxa, including *Juncus* species, *Eleocharis palustris*, and *Carex* species may derive from wetter parts of arable fields. All the arable weeds present could derive from arable fields on the gravel terraces, including species from the field margins (particularly grasses) and wetter parts of fields.

The waterlogged plant remains. The presence of waterlogged material from the ditch fills is indicative of the proximity of the water table to the surface. Sample 56 produced a particularly rich sample with a diverse species list, while sample 58 produced a slightly more limited flora dominated by seeds of *Urtica dioica* (stinging nettle) (Table 15).

The range of taxa present in the samples is suggestive of the character of the deposits, with some ruderal species overhanging or growing near the deposits, as well as arable weeds presumably discarded into the features as waste. *Caltha palustris* (kingcup, marsh marigold), *Ranunculus* subgen *Batrachium* (crowfoot), *Lycopus europeus* (gipsywort), and the *Juncus* species (rushes) and *Carex* species (sedges) are likely to have been growing on the muddy banks of the ditches, while *Salix* species (willow) may have overhung the features. There are no clear, purely aquatic species, and it is likely that the features held wet mud rather than open water, although there could have been periodic flooding. The majority of species suggest ruderal or grassy habitats, as might be expected on the edges of settlements or beside boundary ditches, such as *Pastinaca sativa* (wild parsnip), *Carduus/Cirsium* species (thistles), and *Arctium* species (burdock). Two species characteristic of wet nitrogen-rich soils are *Conium maculatum* (hemlock) and *Hyoscyamus niger* (henbane), both of which may have colonized damp refuse deposits. Ruderal species which are likely to have been spread throughout the settlement include *Uritica dioica* and *Uritica urens* (stinging and small nettles), *Stellaria media* (chickweed), *Chenopodium album* (fat hen), *Rumex* species (docks), and *Sambucus nigra* (elder). Finally several of the ruderal species may have derived from arable fields and are likely to represent weeds incorporated with cereal processing waste. Few purely arable weeds were represented, however, other than *Agrostemma githago* (corn cockle).

The waterlogged deposits are characteristic of largely ruderal habitats, with some species which must have been growing on the muddy banks or edges of features. There is no evidence for open water in the features. Some waste of cereal processing activity may also have entered the deposits, although generally the species present are such that seeds may have simply fallen in from surrounding plants.

The Medieval Samples

Charred cereal remains, particularly grain, dominated all the medieval samples with the exception of sample 51, a seventeenth- to eighteenth-century deposit which produced mineralized material only (Table 16). All other samples

	Sample	56	58
	Context	7895	7652
	Date	RB	eRB
Caltha palustris	kingcup	1	-
Ranunculus acris/repens/bulbosus	buttercup	29	2
Ranunculus bulbosus	bulbous buttercup	1	-
Ranunculus subsp. Batrachium	crowfoot	1	5
Papaver rhoeas/dubium	рорру	-	2
Glaucium sp.	horned poppy	3	8
<i>Fumaria</i> sp.	fumitory	-	1
Thlaspi arvense	field penny cress	53	1
Silene cf. dioica	red campion	1	_
Agrostremma githago	corn cockle	1	-
Stellaria media agg.	chickweed	5	4
Chenopodium album	fat hen	6	1
Atriplex sp.	orache	3	7
Chenopodiaceae		3	3
Potentilla sp.	cinquefoil	2	_
Fragaria vesca	wild/alpine strawberry	1	_
Aphanes arvensis	parsleypiert	1	_
Umbelliferae, small seeded		9	_
Scandix pecten-veneris	shepherd's needle	52	6
Aethusa cynapium	fools parsley	18	2
Conium maculatum	hemlock	16	9
Apium graveolens	wild celery	1	3
Pastinaca sativa	wild parsnip	-	15
Polygonum aviculare	knotgrass	5	3
Polygonum persicaria	persicaria	2	_
Rumex cf. crispus	curled dock	3	_
Rumex sp.	docks	14	1
Urtica dioica	stinging nettle	441	658
Urtica urens	small nettle	3	1
Ficus carica	fig	-	2
<i>Salix</i> sp. bud	willow	31	1
Salix sp. seed capsule	willow	1	-
Anagalis arvensis	scarlet pimpernel	_	1
Hyoscyamus niger	henbane	10	2
Solanum sp.		1	3
Scrophulariaceae		1	_
Mentha sp.	mint	2	2
cf. Lycopus europeus	gipsywort	-	1
Prunella vulgaris	self heal	1	_
Stachys sp.	woundwort	51	3
Lamium sp.	dead nettle	6	2

TABLE 15. THE ROMANO-BRITISH WATERLOGGED PLANT REMAINS

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Galeopsis sp.	hemp nettle	11	1
Labiatae		4	2
Sambucus niger	elder	64	34
Arctium sp.	burdock	2	_
Carduus/Cirsium spp.	thistle	38	2
Leontodon autumnalis	hawkbit	1	-
Sonchus apser	spiney milk-thistle	2	_
Juncus spp.	rushes	22	20
Eleocharis palustris	common spikerush	4	2
Carex sp., 3 sided achene	sedges	6	_
Carex sp. perianth	sedges	_	1
Cyperaceae, 2 sided		2	_
Gramineae small seeded		40	5
Gramineae, intermediate seed		1	_
Ignota		3	8
Mosses		++	_
Query		_	2
Worm capsule		_	+

were dominated by cereal grain. Mineralized remains consisting of hard calcium phosphate replacing seeds and other plant matter were identified in five samples, of which two were taken from garderobes (samples 24 and 22), two from pits (samples 33 and 38), and one from an unknown feature type of seventeenth- to eighteenth-century date (sample 51). The presence of mineralized material is to be expected in garderobe fills. The fact that these samples also contain charred grain suggests they were used for general refuse disposal. The presence of mineralized material in other features suggests they were backfilled with refuse which included sewage. In addition, non-charred material which was softer and not fully mineralized was recovered from all samples except sample 70 in varying quantities. The range of taxa present is similar to the mineralized material and includes large numbers of fruit remains, particularly from garderobe sample 22. It is likely that this material derived from similar wet deposits as the sewage material but was not fully mineralized. It is not clear why some material may be mineralized and other material not. This may simply reflect susceptibility of some species to mineralization or may reflect position in the deposit, duration of exposure to appropriate conditions, or multiple episodes of deposition.

Charred plant cereal species. The medieval cereal remains are dominated by the grain of free-threshing *Triticum* species (wheat). A short, round grain was most commonly identified, being almost spherical. The grain tended to be poorly preserved and highly clinkered, although was recognizable by its characteristic spherical outline. Both *Triticum aestivum* type (bread wheat) and *Triticum turgidum* type (rivet wheat) rachis were identified, although always in small numbers. The majority of rachis fragments could not be identified to species. The presence of a single *Triticum spelta* glume base and possible *Triticum gelta* and *Triticum dicoccum* grain suggests some contamination from Roman deposits is likely. The *Triticum dicoccum* grain was short and compact, typical of 'drop shaped emmer', with a slightly concave ventral surface and humped dorsal surface, although retained some roundness. It was distinguishable from the free-threshing grain in that it was laterally compressed, the free-threshing grain being rounded both laterally and dorsally. Firm identification was not possible, however, given the absence of *Triticum vulgare, Secale cereale* (rye), and *Avena* species (oats) were also present in the samples in varying proportions, but always in much smaller numbers than the *Triticum* species. With the exception of the possible *Triticum dicoccum*, this range of cereal is typical of the medieval period and remains consistent in the samples from the twelfth- to thirteenth-century deposits through to the seventeenth and eighteenth centuries.

Chaff was present in all but one sample, although always in much smaller proportions than the grain. Given the differential survival of chaff and grain (free-threshing chaff survives charring particularly poorly in relation to grain),²⁰⁰ this chaff is likely to be under-represented. However, the number of grains present in the samples is so much greater than the chaff that it is likely processed grain was brought into the site and the chaff present represents contamination of the clean grain. It is possible that some rachis entered the site with straw. The deposition of large numbers of charred grain, common on medieval sites, may be the result of accidental burning of stores grain or

²⁰⁰ Boardman and Jones, 'Experiments on the effects of charring', pp. 1–11, n. 197.

	Sample	65 8027	69 8005	23	24	33	38	41	22	51	70
	Context Easture Tures	002/ nit	ditch	0101	doroho	0309	0340	7072 woll 611	0104	7002	0017
	Date	pn 12_13C	12_15C	gar 12		pit 13_14C	pn 12_13C	12 - 15C	16_17C	17_18C	ри 17_18С
	Date	12-150	12-150	12	-150	13-140	12-150	12-150	10-170	17-100	17-100
	Sample Volume (l)	20	20	40	40	40	7	20	40		18
Cereal Grain						50%					
Triticum spp.	free-thresing wheat, short grain	43	232	309	1020	906	661	15	42	_	199
Triticum spp.	free-threshing wheat grain	4	_	5	_	10	33	2	_	_	12
Triticum spp.	wheat grain	27	69	13	27	115	65	11	7	_	86
Triticum cf. dicoccum	cf. dropped shaped emmer wheat	3	_	_	_	_	_	-	_	_	28
Triticum cf. spelta	cf. spelt wheat	_	_	_	_	_	_	1	_	_	3
Hordeum vulgare	barley, hulled straight grain	_	_	_	_	_	2	_	_	_	_
Hordeum vulgare	barley, hulled asymmetric grain	_	_	_	_	_	1	_	_	_	_
Hordeum vulgare	barley, hulled grain	_	2	_	_	_	_	_	1	_	_
Hordeum vulgare	barley, straight grain	_	_	2	17	_	_	_	_	_	_
Hordeum vulgare	barley grain	7	28	14	23	34	47	10	9	_	4
Secale cereale	rye grain	1	_	5	_	24	90	_	1	_	5
cf. Secale cereale	cf. rve grain	_	_	_	_	_	11	_	_	_	_
Secale cereale/Triticum spp.	rve/wheat grain	6	8	_	46	60	42	2	2	_	22
Avena sp.	oats, grain	7	7	9	13	17	17	1	1	_	_
cf. Avena sp.	cf. oats, grain	_	_	_	7	6	3	2	_	_	_
Cerealia indet	indeterminate grain	114	382	377	775	1022	635	51	56	_	138
Cerealia indet	detached embryo	3	_	6	2	1	2	_	_	_	_
Total grain		215	728	740	1930	2195	1609	95	119	0	497
Cereal Chaff											
Triticum aestivum type	bread wheat type rachis	1	_	3	1	_	1	1	_	_	_
Triticum cf. aestivum	cf. bread wheat type rachis	_	_	_	1	_	_	_	_	_	_
Triticum turgidum	rivet wheat type rachis	4	1	_	1	_	_	1	_	_	_
Triticum cf. turgidum	cf. rivet wheat rachis	_	_	_	1	_	_	_	_	_	_
Triticum sp.	Free-threshing wheat rachis	56	91	51	13	4	44	19	_	_	1
Triticum sp.	wheat, basal rachis	_	2	3	_	_	3	6	_	_	_
Triticum sp.	wheat, rachis	3	_	10	_	_	5	_	_	_	_
Triticum spelta	spelt wheat glume base	_	_	_	_	_	1	_	_	_	_
Hordeum vulgare	barley rachis	_	_	_	_	1	5	5	_	_	_
Secale cereale	rve rachis	6	15	3	2	4	12	9	_	_	_
Secale cereale/Hordeum vulgare	rye/wheat rachis	4	4	_	_	_	_	_	_	_	_
Avena cf. fatua	wild oats. Floret	_	_	1	_	_	_	_	_	_	_
Cerealia indet	indet rachis	12	3	_	_	_	2	_	_	_	_
Cerealia indet	indet basal rachis	_	3	_	_	_	_	_	_	_	_
Cerealia indet	culm node	11	7	8	7	6	16	3	1	_	4
Total chaff		97	126	79	26	15	89	44	1	0	5

TABLE 16. THE MEDIEVAL AND POST-MEDIEVAL PLANT REMAINS

Pulses/Oil Crops											
Pisum sativum	pea	_	_	_	1	_	_	_	_	_	1
cf. Pisum sativum	cf. pea	_	_	_	_	_	4	_	_	_	1
Vicia villosa?/Pisum sativum	fodder vetch/pea	_	_	_	_	10	_	_	_	_	_
Vicia/Pisum sp.	bean/pea (>4mm)	1	1	_	2	_	4	5	_	_	33
Vicia/Pisum sp.	bean/pea (3–4mm)	6	27	_	_	49	_	_	6	_	10
Vicia faba	Celtic/broad bean	_	_	_	1	_	_	_	1	_	4
Vicia sativa subsp. sativa	fodder vetch (4–8mm)	_	_	_	_	3	_	1	_	_	4
Vicia sativa cf. subsp. sativa	cf. fodder vetch (<4mm)	_	_	_	_	3	_	_	_	_	_
Linum usitatissimum	flax seed	_	_	_	_	_	2	_	_	_	_
cf. Linum usitatissimum	flax seed	_	_	_	_	_	2	_	_	_	_
Linum usitatissimum	flax capsule frag.	_	_	_	_	_	1	_	_	_	_
Vitis vinifera	grape, seed	1	-	_	-	-	-	-	_	_	_
Wild Taya											
Ranunculus acris/repens/hulhosus	buttercup	1	_	1	_	1	2	_	_	_	1
Papaver sp	poppy	-	_	1	_	_	-	_	_	_	-
Raphanus raphanistrum	wild raddish cansule frag	_	1	-	_	_	_	_	_	_	_
Silene sp	campion catchfly	_	-	2	_	1	5	1	_	_	_
Agrostemma githago	corn cockle	_	_	_	2	_	3	-	_	_	_
cf Agrostemma githago	cf. corn cockle	_	_	_	1	_	_	_	_	_	_
Scloranthus annuus	annual knawel	_	_	1	1	_	_	_	_	_	_
Spergula arvensis		1	_	-	_	_	_	_	_	_	_
Carvophyllaceae	comspuny	-	_	_	1	_	_	_	_	_	_
Caryophyllaceae	capsule frags	_	_	_	1	_	4	_	_	_	_
Chenopodium album	fat hen	4	1	_	_	1	-	23	_	_	_
Atriplex sp	orache	-	1	2	*4	2	13	25	_	_	_
Chenopodiaceae	oraclic	_	1	1	_	1	10	2	_	_	_
Vicia/Lathyrus large (>2mm)	vetch/tare etc	1	-	20	3	_	6	5	_	_	_
Vicia/Lathyrus small (<2mm)	vetch/tare etc	14	3	1	1	_	5	5	_	_	_
Medicago lupulina	black medick	4	_	-	1	_	1	_	_	_	_
Medicago/Melliotus/Trifolium sp	medick/trefoil/clover	24	3	7	*88	4	31	7	_	_	_
Leguminosae	small seeded legume	24	_	23	*8	-	-	_	_	_	_
Prunus spinosa/avium	sloe/cherry	_	_		_	_	_	_	_	_	5
cf Rosaceae	side, enerry	_	_	1	_	_	_	_	_	_	_
cf Apjum graveolens	wild celery	1	_	_	_	_	_	_	_	_	_
Umbelliferae small seeded	while eelery	-	_	1	_	_	_	_	_	_	_
Umbelliferae large seeded		_	_	_	_	_	1	_	_	_	_
Polygonum aviculare	knotgrass	2	_	_	_	1	_	_	_	_	_
Polygonum persicaria	rad shaple	-	_	1	_	_	_	_	_	_	_
Fallopia convolvulus	him druge d	_	_	1	_	_	_	_	_	_	1
Pumar spp	bindweed	4	7	5	_	2	5	1	_	_	1
Polygonaceae	docks	4 2	/	5	_	<u>~</u>	5	1	_	_	_
Corvlus avellena	hazal put shall frage	2 1	_	10	_	= 8 (2 mutc)	3	1	_	_	_
Anagalis arvansis tupo	nazei nut snell irags	1	-	10	-	o (2 mills)	5	1	-	-	-
Lithospormum arvansa	scariet pimpernei	_	2	1	-	- 42	2	1	-	-	-
Lunospermum urvense	corn gromwell	-	4	1	_	44	4	-	-	-	4

Hyoscyamus niger	henbane	_	_	8	_	_	_	_	_	_	_
cf. Prunella vulgaris	selfheal	_	_	_	_	_	1	-	_	_	_
Odontites verna	red barstia	8	4	5	*4	3	-	3	_	-	_
Plantago lanceolata/media	platain	_	_	_	-	1	-	-	_	-	_
Sherardia arvensis	field madder	-	-	-	-	-	1	-	-	-	_
Galium aparine	goosegrass	-	1	1	_	-	_	-	-	-	3
Compositae small		_	_	_	-	1	-	-	_	-	_
Anthemis cotula	stinking mayweed	8	14	37	*12	6	-	3	_	-	-
Tripleurospermum inodorum	scentless mayweed	1	1	-	-	_	-	-	_	-	-
Centaurea cyanus	cornflower	_	1	-	-	2	11	-	_	-	-
Centaurea sp.	cornflower/knapweed	1	_	2	*4	3	3	1	2	-	-
cf. Leontodon sp.	hawkbit	_	_	-	-	_	1	-	_	-	-
Cyperaceae		_	_	1	-	_	-	-	_	-	_
Eleocharis palustris	common spikerush	2	1	14	1	68	-	1	_	-	_
Carex spp.	sedges, 3-sided nutlet	_	3	2	-	3	1	-	_	-	_
Carex spp.	sedges, 2-sided nutlet	_	1	_	-	2	-	-	_	-	_
cf. Isolepis sp.	club-rush	_	_	_	-	_	_	1	_	-	-
Juncus sp.	rush seed	_	_	1	_	_	_	-	_	_	_
Juncus sp.	rush, seed head	_	_	_	-	_	2	-	_	-	_
Festuca/Lolium sp.	fescue/rye grass	_	_	_	-	_	10	2	_	-	_
Bromus mollis type	Lop-grass	_	_	_	-	_	6	_	_	-	-
Bromus sterillis	barren brome	_	_	_	-	_	2	-	_	-	_
Gramineae large seeded	grass	1	_	3	5	10	16	2	_	-	-
Gramineae small seeded	grass	2	10	6	-	1	8	1	_	-	_
Graminease intermediate	0	_	2	3	_	_	9	-	_	_	_
Indet bud		_	_	_	-	_	5	-	_	-	_
Indet, small fruit		_	_	1	-	_	-	-	_	-	_
Ignota		_	6	18	*32	5	20	5	_	-	5
Query – fern frond?		_	_	_	-	_	1	-	_	-	_
Indet nut shell frags		2	_	_	-	_	-	-	_	-	_
Total weed seeds (excludes nuts etc)		81	63	168	129	160	182	65	2	0	19
MINERALISED											
Cultivated/Edible											
cf. Ficus carica	fig	_	_	-	38	_	-	_	_	-	_
Ficus carica	fig	_	_	_	15	_	5	-	*10	-	_
Morus nigra/alba	mulberry	_	_	_	-	_	-	-	_	1	_
Vitis vinifera	grape	-	-	-	7	-	-	-	6	74	_
cf. Malus/Pyrus sp.	apple/pear seed	-	-	-	-	-	-	-	1	-	_
Malus sylvestris	apple seed	-	_	-	-	-	-	-	-	1	_
Prunus domestica subsp. Domestica	plum	-	_	-	-	-	-	-	-	1	_
cf. Prunus domestica	plum/bullace	-	-	-	13	-	-	-	-	-	_
Prunus cf. domestica	plum/bullace	_	_	_	1	_	_	-	8	_	_

Prunus cf. spinosa	sloe	_	_	_	14	_	_	_	_	_	_
Prunus sp.		_	_	_	_	_	_	_	4	-	_
cf. Prunus spp.		_	_	_	8	_	_	-	2	-	_
cf. Vicia/Pisum sativum	bean/vetch/pea	_	_	_	_	_	_	-	_	-	_
<i>Vicia</i> sp.	bean/vetch, detached hilum	-	-	-	1	-	-	-	-	-	-
Wild		_	_	_	_	_	_	_	_	_	_
Pteridium aquilinum	bracken frond	_	_	_	_	_	_	_	_	1	_
Papaver rhoeas/dubium	рорру	_	_	_	_	2	_	_	_	_	_
Malva sp.	1 117	_	_	_	_	_	_	-	1	-	_
Chenopodiaceae		_	_	_	3	2	1	-	_	-	_
Medicago/Melliotus/Trifolium sp.	medick/clover	-	-	_	1	_	_	-	_	-	-
Trifolium sp. seed and calyx	clover/trefoil	-	-	-	-	-	-	-	_	1	-
Fragaria vesca	wild/apine strawberry	-	-	-	-	-	-	-	_	-	-
Umbelliferae	large seeded	-	-	-	-	-	-	-	_	1	-
Odontites verna/Euphrasia	Red-barstia/eyebright	-	-	-	-	-	-	-	_	-	-
Labiatae	small seeded	-	-	-	1	-	-	-	-	-	-
Labitatae		-	-	-	2	-	-	-	_	-	-
Galium sp.		-	-	-	-	-	-	-	-	-	-
cf. Anthemis cotula	stinking mayweed	-	-	-	-	1	-	-	-	-	-
Eleocharis palustris	common spikerush	-	-	-	-	1	-	-	-	-	-
Carex sp.	sedge, 3 sided	-	-	-	-	2	-	-	-	-	-
Cyperaceae		-	-	-	-	1	-	-	-	-	-
<i>Lolium/Festuca</i> sp. type	fesuce/rye grass	-	-	-	-	-	-	-	-	-	-
Gramineae	grass, small seeded	-	-	-	1	-	-	-	-	-	-
Cerealia indet	lemma/palea frag	-	-	-	1	-	-	-	-	-	-
Cerealia indet	grain	-	-	-	3	-	-	-	-	2	-
Ignota		-	-	-	28	9	3	-	-	27	-
Indet, large seeded		-	_	-	2	2	-	_	-	1	-
straw lengths		-	-	-	+	-	-	-	-	-	-
Cerealia type culm node		-	-	-	1	-	-	-	-	-	-
Large indet. fruit fragments		-	_	-	1	-	-	_	9	4	-
Indet fruit skin fragments		-	-	-	2	-	-	-	-	+++	-
large fly pupare		-	-	-	1	-	-	-	-	-	-
small fly pupare		-	-	-	554	-	-	-	3	-	-
Large Insect fragment (head and thorax)		-	-	-	-	-	-	-	-	-	-
worm segment		-	-	-	1	-	-	-	-	-	-
Mineralised concretions		-	-	-	+++	-	+	-	+++	+	-
copper wire frag		-	-	-	-	-	-	-	_	-	-
fish bone		_	_	_	+	_	_	_	_	+	_

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WATERLOGGED?												
Cultivated/Edible												
Ficus carica	fig	_	1	7	_	_	_	_	*500+	259	_	
Morus nigra/alba	mulberry	_	_	_	_	_	_	_	_	4	_	
Fragaria vesca	wild strawberry	_	_	1	_	_	_	_	1	3	_	
Rubus fruticosus	bramble	_	_	_	1	_	1	_	9	118	_	
Rubus ideaus	raspberry	_	_	_	_	_	_	_	_	_	_	
Rubus cf. ideaus	cf. raspberry	_	_	_	_	_	-	_	_	28	_	
Rubus sp.	raspberry/bramble etc	-	-	1	-	-	-	+	-	-	-	
Weed/Wild												
Papaver rhoeas/dubium	рорру	_	_	38	_	_	-	+	_	_	_	
Fumaria sp.	fumitory	_	_	1	_	_	-	_	_	_	_	
Brassica/Sinapis spp.	turnip/cabbage/wild mustard	_	_	_	_	_	-	_	_	7	_	
1 11	etc											
Chenopodium album	fat hen	1	-	-	-	-	-	_	_	1	_	
Aethusa cynapium	fools parsley	1	-	1	-	-	-	_	_	-	_	
Conium maculatum	hemlock	1	-	-	-	-	_	3	_	-	_	
Urtica dioica	stinging nettle	-	-	-	-	-	_	+++	-	1	_	
Urtica urens	small nettle	1	-	1	-	-	-	_	_	-	_	
Hyoscyamus niger	henbane	12	1	34	-	-	-	16	_	-	_	
Odontites verna/Euphrasia sp.	Red-barstia/eyebright	-	-	6	-	-	-	-	-	-	-	
Stachys sp.	woundwort	1	-	-	-	-	-	3	-	-	-	
Lamium sp.	dead nettle	6	1	-	-	-	-	++	-	-	-	
Labiatae		1	-	-	-	-	-	-	1	-	-	
Sambucus nigra	elder	85	-	51	-	2	7	79	6	1	-	
Juncus sp.	rushes	-	-	66	-	-	-	-	-	-	-	
Eleocharis palustris	common spikerush	-	-	7	-	-	-	+	-	-	-	
Carex sp.	sedges, 3 sided	1	-	1	-	-	-	+++	2	-	_	
Indet		-	_	2	_	_	_	_	_	2	_	

* estimated figures

deliberate destruction of grain – for example, if it was damaged by fungal or insect attack. No obvious infestation was recorded in the deposits.

Other charred crop species. Pulses were present in several samples in quite good numbers. Pulses tend to be poorly represented in relation to grain on archaeological sites, which is generally assumed to be related to crop-processing activities and the chance of burning. The numbers of pulses are quite high in some samples, particularly samples 33 and 70. At least three species are represented: *Pisum sativum, Vicia faba,* and *Vicia sativa* subspecies *sativa* (fodder vetch). Several small seeds produced a hilum characteristic of *Pisum sativum,* but given the small size another species might be represented, such as *Vicia villosa,* another fodder vetch. *Pisum sativum* and *Vicia faba* have a long history of cultivation in Britain. *Vicia sativa* subspecies *sativa* is a more recent introduction, rarely recorded before the twelfth century.²⁰¹

Two final cultivated species are represented by charred remains: *Linum usitatissium* (flax) and *Vitis vinifera* (grape). *Linum usitatissium* is represented by rare, poorly preserved seed and one fragment of capsule in sample 38. A single seed of *Vitis vinifera* was recovered from sample 65. Grape is well represented by mineralized remains, so clearly was commonly eaten at the site. The significance of flax is unclear. Flax is cultivated for both its fibre and its seed.

The charred weed flora. The weed flora is much more diverse than for the Roman period, although the actual number of seeds is low in relation to the grain, suggesting they are present as rare contaminants of the grain. There are some consistencies with the Roman period, however, suggesting the weed flora remained fairly constant, presumably reflecting the local soil types. The weed flora is dominated by arable and/or ruderal species, with some grassland flora. Most could have grown on the circum neutral soils of the Thames gravel terraces. Characteristic corn-field weeds of the medieval period include *Agrostemma githago* (corn cockle), *Lithospermum arvensse* (corn gromwell), *Anthemis cotula* (stinking mayweed), and *Centaurea cyanus* (corn flower). The weeds are amongst the most numerous and troublesome weeds in the medieval periods.²⁰²

Leguminous weeds are particularly numerous in the samples, notably small seeded *Vicia/Lathyrus* species (vetches and tares) and *Medicago/Melliotus/Trifolium* species type (medick, clover, etc.). A small number of the latter were identified as *Medicago lupulina* (black medick), a grassland species, on the basis of seed-pod fragments remaining attached to the seed. Unfortunately the vetches and tares were too poorly preserved to enable identification to species. Small-seeded vetches become numerous in medieval arable assemblages, and it is likely that a large number are present as arable weeds or weed of cultivated pulses. As in the Roman period, it is also possible that grassland species are also present, possibly growing on the field margins. Grass seeds are also numerous, particularly of *Festuca/Lolium* type and *Bromus* species. Again these grasses may have been growing on the field margins and were harvested with the cereal crop.

A few of the weed seeds are less characteristic of arable fields. *Hyoscyamus niger* (henbane) is a nitrogenloving species which is commonly associated with middens or farmyard deposits. One possible seed of *Prunella vulgaris* (self heal) was identified, which is a low-growing grassland species more characteristic of short, grazed grassland than field margins. Finally there is a limited number of species which are more characteristic of wet or damp ground, including *Apium graveolens* (wild celery), tentatively identified, *Eleocharis palustris* (common spikerush), *Carex* species (sedges), *Isolepis* species (club rush), and *Juncus* species (rush), of which two seed heads were recovered. Damp-ground species appear to be more characteristic of arable assemblages in the past than they are today, which tends to be interpreted as resulting from the cultivation of damp ground.

The mineralized remains. Mineralized remains were present in five samples, including two garderobe samples. Mineralization occurs when the organic content of a seed or other plant part is replaced by Calcium phosphate, and as such tends to be associated with sewage deposits, where the minerals are present in solution.²⁰³ It is thus unsurprising to find mineralized deposits contain fruit seeds, pips, and stones. It is more surprising that this includes some larger *Prunus* stones, including possible plum (*Prunus domestica*), although plum and sloe stones tend to be common in cesspits. Other fruits present are *Ficus carica* (fig), *Vitis vinifera* (grape), *Malus sylvestris* (apple), and from a seventeenth- to eighteenth-century deposit, *Morus nigra/alba* (mulberry). The first three species are common in medieval period cesspits. The abundance of fig seeds in part reflects the large number of seeds in an individual fruit (up to 800), although the fruit does appear to have been a common import throughout the medieval period.²⁰⁴ Grape also appears to have been imported as raisins and currants from Spain and Portugal²⁰⁵

²⁰¹ C. R. J. Currie, 'Early vetches in medieval England: a note', *Economic History Review*, 41(1988), pp. 114–16.

²⁰² J. Greig, 'Archaeobotanical and historical records compared – a new look at the taphonomy of edible and other useful plants from the eleventh to the eighteenth centuries A.D.', *Circaea* 12 (1996), pp. 211–47.

²⁰³ F. J. Green, 'Phosphate mineralisation in seeds from archaeological sites', *Journal of Archaeological Science*, 6 (1979), pp. 279–84.

²⁰⁴ Grieg, 'Archaeobotanical and historical records compared', pp. 211–47.

²⁰⁵ N. S. B. Gras, The Early English Customs System: a Documentary Study of the Institutional and Economic History of the Customs from the Thirteenth to the Sixteenth Centuries (Cambridge, MA, and London, 1981), p. 107.

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and appears to have been widely consumed.²⁰⁶ Apple is, of course, likely to have been locally cultivated. Seeds of *Morus* species (the species cannot be distinguished on the basis of the seeds) are far rarer in the British Isles, although it has been occasionally recorded, for example from Eastgate, Beverley, East Yorkshire,²⁰⁷ and it appears to have been cultivated only rarely. A large quantity of unidentifiable fruit-skin fragments may include apple and/or plum skin.

In addition to the fruits, a number of wild species were represented by the mineralized remains. The range of species reflects that seen in the charred record and is likely to include arable weeds which were disposed in cesspits or garderobes as waste, or possibly with straw to reduce bad odours. One seed of *Fragaria vesca* (wild/apine strawberry) is likely to represent food waste.

Waterlogged remains. Possible waterlogged material was recovered from most samples and in considerable quantities in samples 23, 41, 22, and 51. These last two produced large quantities of fruit remains, particularly *Ficus carica* (fig) seeds and are interpreted as human sewage. Seeds of *Morus nigra/alba* were again identified, as were two species of *Rubus* species, *Rubus fruticosus* (blackberry/bramble) and *Rubus ideaus* (raspberry), again, both common in waterlogged or mineralized deposits of all periods. The wild taxa included species characteristic of damp middens or other nitrogen-rich deposits, such as *Hyoscyamus niger* (henbane) and *Conium maculatum* (hemlock). Particularly numerous are seeds of *Sambucus nigra* (elder) and *Urtica dioica* (stinging nettle), both common on disturbed ground. Wet-ground species including *Eleocharis palustris* and *Juncus* species (rushes) may have been growing on wet ground around the features. The dried waterlogged material is therefore likely to derive from sewage remains, plants growing around the feature, and possibly some arable weeds or other waste thrown into the deposits as waste.

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The site archive from the Abingdon West Central sites is to be deposited in the Oxfordshire County Council Museums Resource Centre under the following site reference codes and museum accession numbers: ABCIN 96 (site reference code), OXCMS 1996.123 (museum accession number), ABCIN 02 (site reference code), OXCMS 2002.167 (museum accession number).

²⁰⁶ C. C. Dyer, Standards of Living in the Later Middle Ages (Cambridge, 1989), p. 62.

²⁰⁷ W. J. B. McKenna, 'The environmental evidence', in D. H. Evans and D. G. Tomlinson, eds, 'Excavations at 33–35 Eastgate, Beverley 1983–86', Sheffield Excavation Reports, 3 (1992), pp. 227–35.