Late Saxon, Medieval and Post-Medieval Archaeology at the Nun's Garden, The Queen's College, Oxford

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SUMMARY

An excavation and watching brief in 2010 revealed a single late Saxon pit, which adds to the evidence for domestic occupation of this period recovered in previous work at Queen's College. The site lay at the rear of medieval properties fronting onto the High Street to the south and New College Lane to the north, and a number of quarry and rubbish pits were identified. The site is unusual for the very low representation of high medieval Brill/Boarstall ware pottery, and it is suggested that this could reflect the gradual transformation of the area at this time into an academic enclave. A stone building revealed in the excavations may be identifiable as a structure shown on Loggan's map of 1675. Two phases of rebuilding at No. 33 High Street are identifiable from dumps of rubble, one in the late sixteenth or early seventeenth century and the other around a century later. The fills of pits and cellars dating from the late seventeenth century to the nineteenth century contained high-quality ceramics and numerous wine bottles. A watching brief within the adjacent garden behind No. 34 High Street revealed a large eighteenth-century barrel-vaulted cellar.

Between February and November 2010 Oxford Archaeology undertook an excavation and watching brief at the Nun's Garden, Queen's College, Oxford, prior to the construction of a new lecture theatre and associated landscaping for a new garden by the college. Queen's College is located in central Oxford, on a site bounded by New College/Queen's Lane to the north and east, the High Street to the south, and All Souls College to the west (NGR SP 5173 0632; Fig. 1). The eastern part of the site now comprises the college's two quadrangles, constructed in the first half of the eighteenth century. The western part of the site remains more informal. It is divided by a walled passage known as Long Walls, with the area to the north currently in use as gardens and car parking. The excavations that form the subject of the present report took place immediately to the south of Long Walls. The main investigation (Area 1) was located in the Nun's Garden, which is enclosed on the north by Long Walls, on the west by the boundary wall with All Souls, and on the east by the boundary wall of the former Provost's Garden, now the Fellows' Garden. A watching brief (Area 2) was maintained during landscaping and construction work to the south-east for the creation of the new Drawda Garden.

ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

Queen's College lies within the eastern part of the late Saxon *burh* at Oxford. It is still unclear whether this area was part of the *burh* in its earliest late ninth- to tenth-century form, or

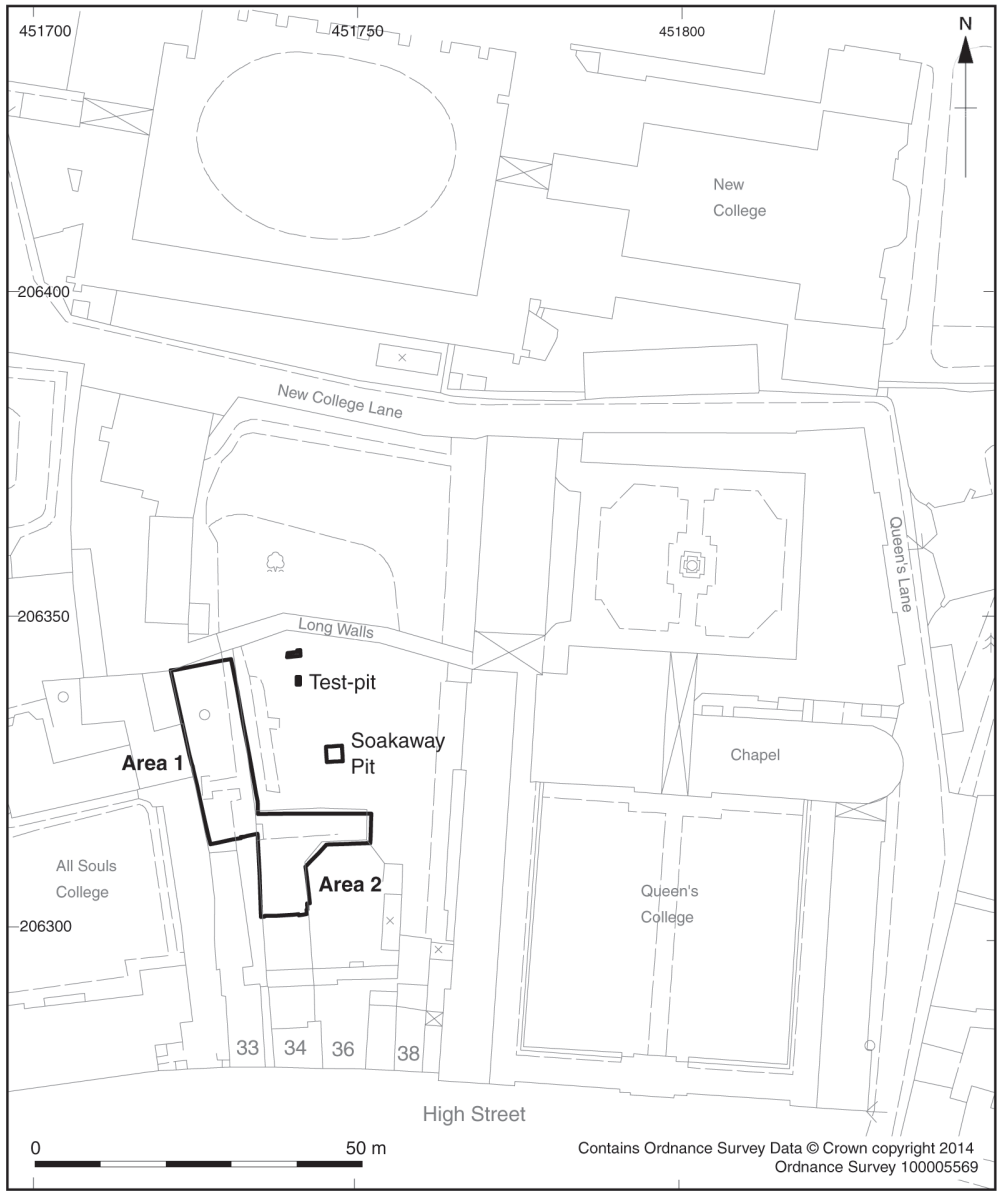

Fig. 1. Site and trench location.

whether it was subsequently incorporated in an eastern extension.[1] Observations of the primary street surface of the *burh* have been made along the High Street as far east as Drawda Hall, and evidence for late Saxon occupation has been seen on the south side of the High Street at the Examination Schools, and in previous works at Queen's College to the north. An

[1] For a summary of the evidence see J. Munby, 'The Eastern Extension' in A. Dodd (ed.), *Oxford before the University*, Thames Valley Landscapes Monograph, 17 (2003), pp. 24–5; for a recent re-evaluation see J. Haslam, 'The Two Anglo-Saxon *Burhs* of Oxford', *Oxoniensia*, 75 (2010), pp. 15–34.

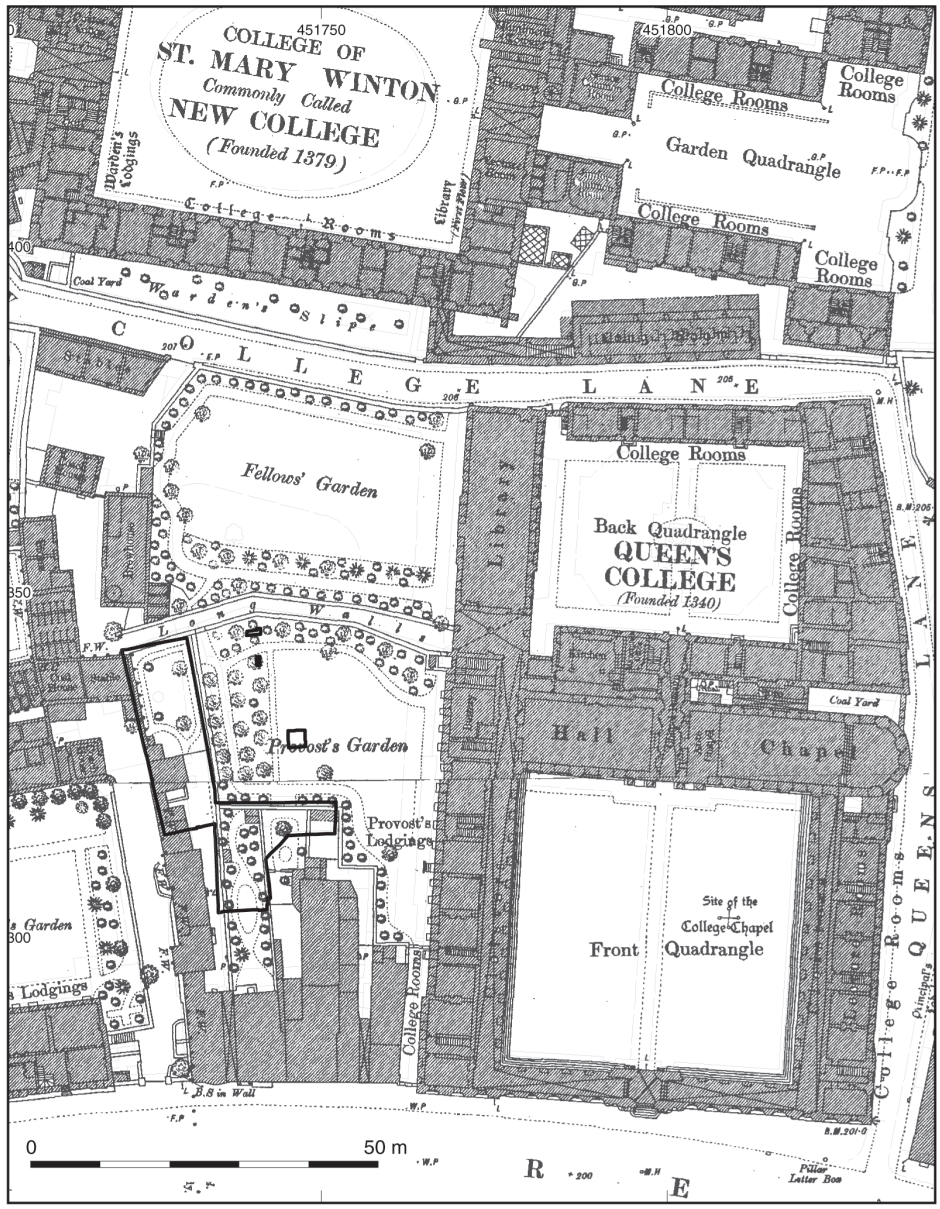

Fig. 2. The site on the first edition Ordnance Survey map of 1876.

archaeological evaluation in 1998 located 20 metres to the north-east of the present site (in the Provost's Garden) revealed a gravel surface and a large pit containing slag, provisionally dated to the tenth century.[2] Domestic occupation in the form of six late Saxon pits was found

[2] 'Provost's Garden, Queen's College, Oxford, Archaeological Evaluation', unpublished OA report (1998); 'Provost's Garden, Queen's College, Oxford, Archaeological Watching Brief', unpublished OA report (2001).

during excavations in 2008 for the college's kitchen extension; one of the pits also contained a halfpenny of Æthelred II that was probably in circulation from 997–1003.[3]

The medieval topography of the area can be followed more easily on the detailed OS plan of 1876 (Fig. 2). The north-western part of the college site formed part of the original medieval endowment, and was used as a garden from an early stage.[4] The south-western part is formed by tenements fronting onto the High Street, now Nos. 33, 34, 35–36 and 37–38, which were not acquired by Queen's until 1908. Areas 1 and 2 lay within the backyards behind these houses. Their history was traced by Salter back to the early thirteenth century.[5] On the west, Area 1 was located at the back of No. 33 (Salter NE 174), known as Drawda Hall. First recorded as a tenement of Henry Ing in 1232, it was subsequently held by William of Drogheda, an eminent teacher of canon law at the university, after whom it is still named. William granted the property to Sherborne Priory in 1242, and in 1255 the priory sold it to the new foundation of University College. University College's main site seems always to have been elsewhere, and it is likely that Drawda Hall was leased;[6] surviving rentals suggest that it was used as an academic hall until 1436.[7] Area 2 was located within the yards of the next two properties to the east (Salter NE 175–6). The evidence suggests that these may have been held jointly for much of the thirteenth century. Around 1210 Ailwin the turner granted NE 175 (No. 34) to St. John's Hospital and NE 177 (Nos. 37–38) to Robert son of Waldri, while Roger le turner granted NE 176 (Nos. 35–36, George Hall) to William of Winchester, spicer, in 1232. In 1263–4 NE 175 and 176 were disposed of by William's daughter Mary and widow Gunnora, respectively. Shortly afterwards, both properties were in the hands of Henry of Swapham (?of Lincoln), who left his 'two houses' to the Hospital of St John in 1275 reserving a life interest for his brother William in NE 176. George Hall was in use as an academic hall from 1321–51, and in 1478 and 1480 there were successive tenants identified as 'Ducheman'. Salter notes that NE 175 (No. 34) is described as 'newly erected' in 1695, when it was held by Sir Robert Harrison.

The site is depicted on Agas's map of 1578 as a row of gardens behind the houses fronting onto the High Street. Loggan's map of 1675 shows the yard areas immediately behind the street frontages filling up with rows of small buildings; to the north of the yards each tenement appears to have its own walled garden, and a small building marks the boundary between the yard and the garden in each case. The eighteenth-century maps of Taylor (1751) and Faden (1789) suggest that buildings were encroaching further into the gardens, although Area 1 appears still to be completely open. By the time of the OS map of 1876, much of the back garden area of Nos. 34–38 has been taken into the garden of the Provost of Queen's College. Only No. 33 still extends all the way back to Long Walls.

FIELDWORK METHODS AND RECORDING

Prior to the development, the site was in use as a garden. It lies at *c.*62 metres OD on the second gravel terrace and the underlying geology is Oxford Clay. The new building in Area 1 occupies an area of approximately 27 by 7 metres and the basement, measuring approximately 15 by 7 metres, is located at its southern side. Prior to archaeological excavation, the area of the new basement was stripped of topsoil under watching brief conditions for the construction of a pile mat. This allowed for the recording of post-medieval features and structures. A pile trench 0.6 metres wide and 0.9 metres deep was then excavated around the perimeter of the basement area

[3] A. Norton and J. Mumford, 'Anglo-Saxon Pits and a Medieval Kitchen at The Queen's College, Oxford', *Oxoniensia*, 75 (2010), pp. 165–217.

[4] H.E. Salter, *Survey of Oxford,* vol. 1, OHS, ns, 14 (1960), NE 207–8, pp. 151–3 (hereafter Salter, *Survey*); H.E. Salter, 'Appendix C', in J.R. Magrath, *The Queen's College*, 2 vols. (1921), vol. 1, pp. 326–31.

[5] Salter, *Survey*, NE 174–77, pp. 136–8.

[6] R. Darwall-Smith, 'The Medieval Buildings of University College, Oxford', *Oxoniensia*, 70 (2005), pp. 9–26.

[7] Salter, *Survey*, pp. 136–7.

under close archaeological supervision. This allowed for further mechanical excavation of post-medieval garden soils to the next archaeological horizon, at approximately 1 metre below the surface. A targeted hand-excavated sample of the archaeological features was investigated, and mechanical excavation then continued under close archaeological control to basement level, around 2.5 metres below the ground level. Soil stripping to formation level was also undertaken to the north of the basement though significant archaeological levels were not reached. A watching brief was maintained on services and landscaping associated with the new building. During the course of this work an intact and partially infilled post-medieval barrel-vaulted cellar was revealed within the new Drawda Garden (Area 2). Concerns regarding its stability led to its complete exposure and the identification of its blocked entrance. Proposals by the college for its preservation resulted in its entrance being opened and the cellar emptied in order to allow for a photographic record and for a limited investigation of its foundation levels to establish its date.

DISCUSSION

Late Saxon Occupation (Fig. 3)

A single, heavily truncated pit (284) contained four sherds of St Neot's-type ware pottery and a single small sherd of Cotswold-type ware, and represented the only feature from the site that could be dated to this period. The pit also contained a fragment of slag, a small assemblage of largely unidentifiable animal bone, recovered from the environmental sample from fill 281, together with a small assemblage of charred plant remains comprising predominantly wheat, with some hulled barley and oats. More unusually, a charred broad bean was also present. The purpose of the pit was unclear, although the remains are suggestive of domestic occupation in the vicinity. A further twenty-two sherds of St Neot's-type ware and a sherd of late Saxon Shelly ware were found redeposited in later contexts, suggesting that further deposits of this date had been removed by later pits. Indeed Cotter (Post-Roman Pottery, below) points out that the size of the St Neot's-type ware assemblage matches that from the 2008 excavations at Queen's College where six tenth- or eleventh-century pits were recorded.[8] Taken together with the results from the Provost's Garden, this adds to the evidence for late Saxon occupation in the area of Queen's College, and the possibility that there may have been ironworking in the vicinity. The presence of the small sherd of Cotswold-type ware in pit 284, if not intrusive, could suggest that its date lay towards the end of this period, and a similar interpretation was suggested at the kitchen extension site on the basis of a mixed pottery assemblage that included St Neot's- and Cotswold-type wares with a sherd of Michelmersh ware. A coin of Æthelred II found in one of the pits at the kitchen extension site is likely to have been in circulation in the period 997–1003, and provides the closest dating evidence yet recovered for the late Saxon occupation in this area.

The Medieval Period (Fig. 3)

Phase 2, covering the period from the late eleventh to mid thirteenth centuries, is dated by the presence of pottery assemblages containing Cotswold-type (OXAC) and Medieval Oxford (OXY) pottery, the former datable up to *c*.1225 in Oxford, and the latter to *c*.1300. The early coarser form of Brill ware (OXAW), datable up to *c*.1400, is also represented, with sherds from two double-shelled oil lamps present in an assemblage of seventeen sherds. The absence of the high-medieval form of Brill/Boarstall ware (OXAM) suggests that the activity of Phase 2 can be dated largely to the twelfth and early thirteenth century, as OXAM becomes very common in Oxford from *c*.1225. During this period, the site was used for the digging of pits. A total of up to 18 were investigated. The largest (357/264) may have been a timber-lined rectangular pit, or possibly even a cellar, that measured *c*.3.8 metres across and *c*.2.0 metres in depth. No direct evidence of structural features was seen for the earliest phase of the pit,

[8] Norton and Mumford, 'Anglo-Saxon Pits and a Medieval Kitchen', pp. 178–82.

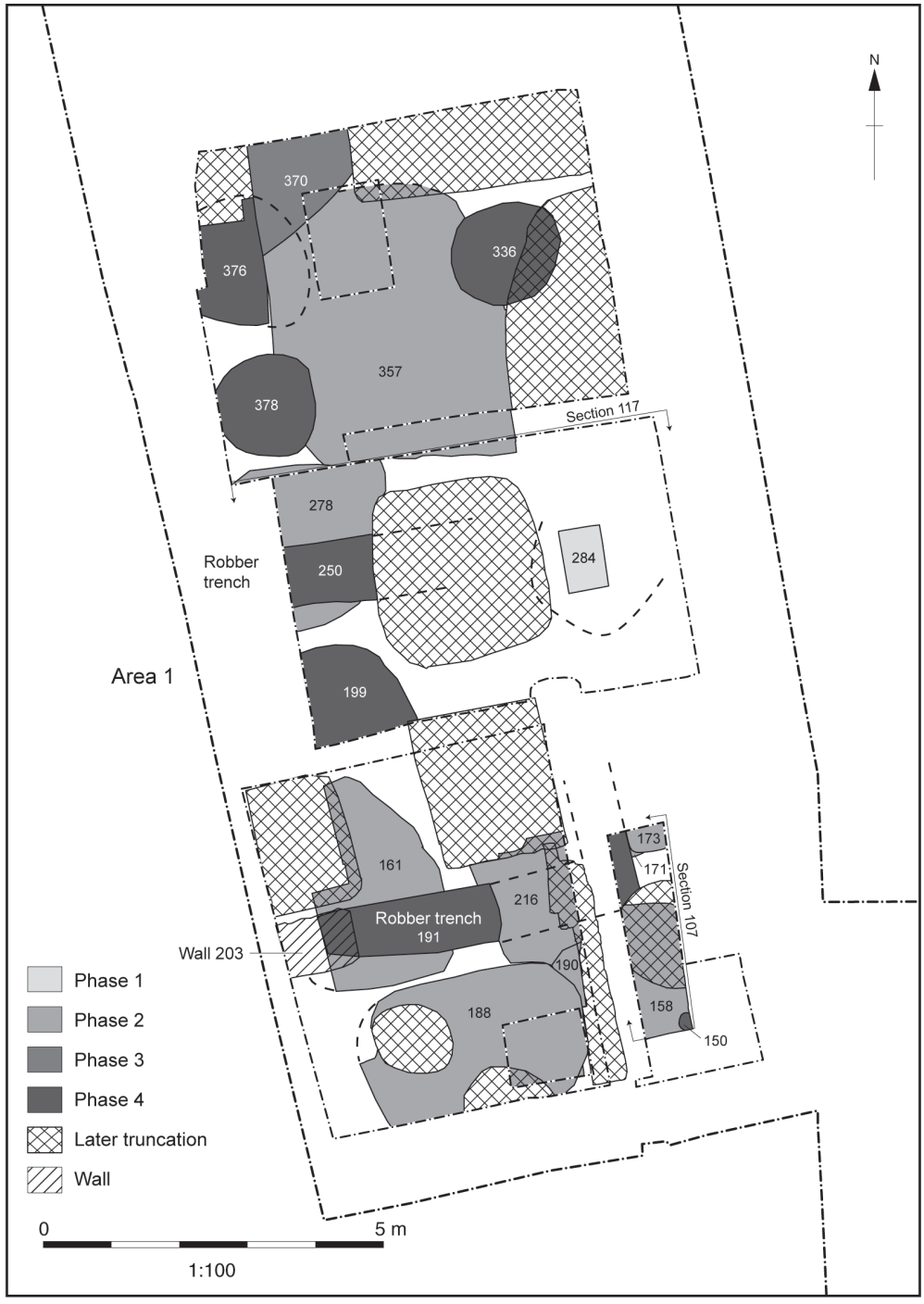

Fig. 3. Late Saxon and medieval features in Area 1.

but a layer of white mortar 80 mm thick set on a gravel bedding layer was recorded in a small sondage excavated against its northern edge, but was not seen in the excavated slot on its south side (Section 117). The mortar was spread over the lower fills of the pit at a depth of *c.*1.0 m, suggesting the establishment, or re-establishment, of a floor or lining. Pit 278, which cut the south-west edge of pit 357/264, had vertical sides and may also have been lined with timber or perhaps set inside a structure that sheltered it from the weather. Again, the function of this pit is unclear, but its primary fill contained large fragments of medieval roof tile, and fill 276 contained an unusual body sherd from a thin medieval Oxford ware jar with holes bored through it, possibly for use as a lamp or brazier. A later pit or re-cut (324) yielded the richest environmental sample from the site from its lower fill (275), comprising a large assemblage of charred wheat, with some barley, oats and rye, seeds from arable weeds, and a relatively large number of charred legumes including broad beans, lentils and vetch. A small assemblage of fish bone included herring, eel, mackerel, pike, cod and flatfish. The pit's upper fill (274) contained a rare chimney pot rim and a fragment from a curfew dome in Cotswold-type ware. Taken together, this suggests domestic activity associated with a nearby house substantial enough to have had a tiled roof and a chimney pot. The remaining pits of this phase were clustered at the south end of Area 1. Several of these, especially pits 161 and 188, are likely to have originated as gravel quarries. They seem to have been dug in sequential order and rapidly backfilled with redeposited soil, probably upcast from a freshly dug adjacent pit. They contained relatively few finds and relatively sparse environmental remains. Though the finds and sample evidence generally offers little insight into the occupations of the inhabitants of the site, a red deer antler found in one pit was probably discarded waste from bone and antler working, and it is possible that a sheep horncore found in a late-medieval pit occurred residually and was originally associated with this activity. The upper fill of pit 161 contained potentially the latest pottery from Phase 2 features, amongst which was a sherd from a double-shelled oil lamp, probably datable within the period *c.*1250–1350.

Only a single feature (Pit 370) can be dated to Phase 3, the period from the mid thirteenth century to the fifteenth century. A real absence of contemporary activity at the site is also reflected in the exceptionally small quantity of high-medieval Brill/Boarstall ware (OXAM) even occurring residually on the site (see Cotter, Post-Roman Pottery, below). This is very unusual for medieval Oxford. High medieval Brill/Boarstall ware was in use from *c.*1225 and is usually the dominant ceramic tradition on medieval sites in the town and its suburbs. University College acquired Drawda Hall in 1255, and although the college fellows were not based there, it is likely that the property was leased, and it is hard to imagine that there would have been any difficulty finding tenants for a prime High Street tenement at this time. The excavated area lies almost exactly halfway between the High Street and New College Lane, and the predominance of domestic rubbish in the earlier pits on the north side of Area 1 compared with the relatively sterile fills of the pits to the south suggests the possibility that during the twelfth and early thirteenth century the northern part of Area 1 lay at the back of a property facing onto New College Lane (then known as Thorold's Lane), rather than onto the High Street. Why the occupants here or at the High Street house apparently stopped using this area from the mid thirteenth century is hard to understand. However, there is no doubt that this period sees the start of college acquisition of tenements along New College/Queen's Lane that was to continue into the fifteenth century and transform the character of the area from its earlier residential form into an academic enclave. It may be that the lack of high medieval occupation evidence here is reflecting the gradual squeezing out of domestic housing as colleges acquired and consolidated their sites.

In Phase 4 (fifteenth to early sixteenth century) there is evidence once again for the digging of pits and also for what may have been the earliest elements of the more formal arrangement of yards and gardens depicted on Loggan's map of 1675. By this time, it is likely that Long Walls marks the approximate boundary between Queen's College land to the north, in use as gardens, and the High Street tenements to the south, with the excavated areas lying towards

the rear of the tenement back yards. The pits could generally be only broadly dated by the presence of late Brill ware pottery (OXBX), which was in use during the period *c.*1400–1625. The presence in one of a fresh sherd of medieval Surrey Ware (1350–1500) suggests that some of this pit digging activity, at least, is likely to date to the fifteenth century rather than later. A stone structure was built across the southern part of Area 1 (Fig. 3 wall 203 and robber trenches 250 and 191). Although its walls had largely been robbed, a surviving length of the southern wall foundation (203) was 0.95 metres wide and suggests a reasonably substantial building (Fig. 6). This may well be the structure depicted on Loggan's map of 1675, one of a row of small buildings dividing the yards of Nos. 33–38 High Street to the south from walled gardens to the north. Pit 199 was located inside the footprint of this building, and although it may have pre-dated the building's construction it is interesting to note that it contained limestone fragments in its bottom fill that could represent building rubble. A cobbled surface was laid to the south of the building, and to the east, in Area 2, garden soils were accumulating.

The Post-Medieval Period (Fig. 4)

In Phase 5 (mid sixteenth to mid seventeenth centuries) a thick garden soil was accumulating to the north of the stone structure in Area 1 and a similar garden soil containing a clay pipe datable to the period *c.*1580–1610 was accumulating to a depth of 0.95 metres to the north of Area 2. A small number of pits on the east side of Area 1 contained early post-medieval pottery and some domestic refuse, but also interestingly a number of finds suggesting a campaign of rebuilding or renovation. These included a quantity of mixed and very worn medieval floor tiles of different styles and dates that may have been re-used in a patched and repaired surface for a hearth or passageway and were now being cleared out (see Cotter, Ceramic Building Material, below). Pit 144 of this phase cut through the earlier cobbled surface (see above) and contained thick dumps of limestone rubble; that the yard surface was subsequently re-instated with gravel (see below) suggests that this may have been a temporary measure to dispose of surplus building or demolition material.

A stone-lined pit, 166, was subsequently constructed within the eastern part of the footprint of the stone building in Area 1 (Phase 6, late seventeenth to eighteenth century). The original function of the pit is unclear. Although it has the appearance of a stone-lined latrine, the environmental sample taken from its fills contained none of the characteristic evidence of cess and human waste and it is possible that it had an entirely different function, or that it had been regularly cleaned out. It seems to have been backfilled sometime around the year 1700, perhaps as part of a substantial clearance that could have been associated with rebuilding on the frontage (No. 34 next door was 'newly erected' in 1695 (see above), and No. 33 has an eighteenth-century facade). Amongst the more closely datable material from the fills of pit 166 were sherds from a 'Nevers-blue' tin-glazed cup of *c.*1680–1725, a highly decorated clay pipe (Fig. 11 No. 2) datable to *c.*1680–1700, and late seventeenth- and early eighteenth-century wine bottles (see Fig. 10, No. 1). Pit 238 contained finds of much the same date range, including a Chinese-style tea bowl, a complete bottle with the seal of Anne Morrell of the Crown Tavern, Cornmarket, dated 1689 (Fig. 10, No. 2), and the base of an early eighteenth-century broad squat wine bottle. If the stone building is the structure shown by Loggan, then it was presumably still standing around the time he was working in the 1670s; Pit 238 cut across the line of its north wall, however, which suggests that it was demolished during the early eighteenth century at the latest.

Further rubbish pits with mid eighteenth-century ceramics and glass in their fills were excavated to the north-east. A large rubbish pit (267/269) contained three complete glass pharmaceutical bottles, some attractive eighteenth-century dishes, tea bowls and mugs in Chinese porcelain (Fig. 9, No. 4), an attractive polychrome bowl in Brill slipware (Fig. 9, No. 5), and a London 'new type' pipe that may date to the mid to late eighteenth century (Fig. 11, No. 3). The impression that the late seventeenth- and eighteenth-century inhabitants enjoyed a comfortable lifestyle is supported by the presence of swan and woodcock bone in the Phase 6 faunal assemblage (see Table 3).

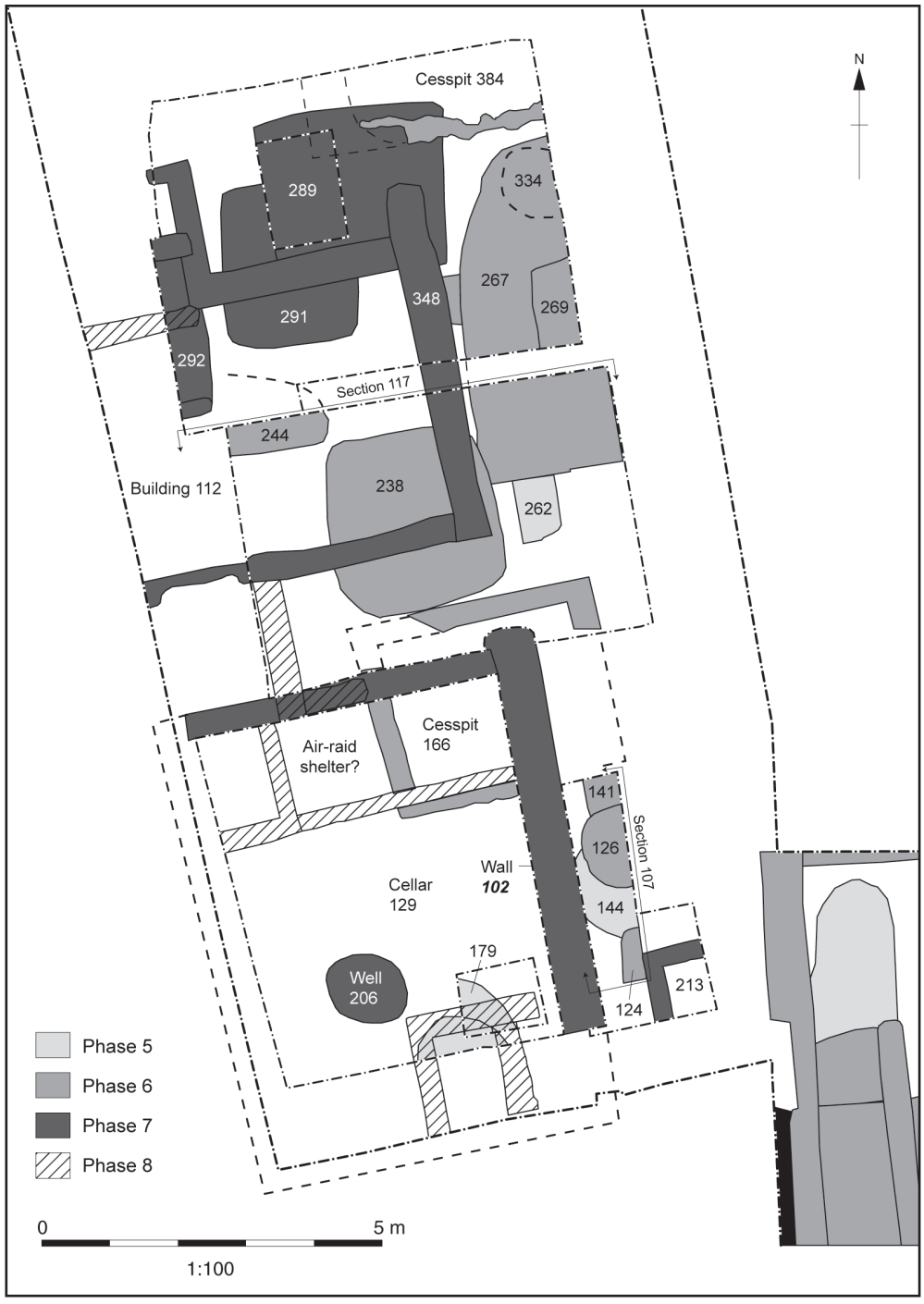

Fig. 4. Post-medieval features in Area 1.

Subsequently (Phase 7, nineteenth century) a deep cellar (129) was built at the south end of Area 1 against the western boundary of the site. Although largely constructed of stone, the cellar walls contained occasional brick and two late eighteenth- or early nineteenth-century examples were recovered. A capped stone-lined well was found within the cellar. A concrete air-raid shelter was later constructed at its northern end. To the north a limestone and brick-built structure (building 112), possibly an outhouse, was constructed over pits infilled in the early nineteenth century. A well-built cobbled surface was located to the east. Two dishes with the arms of University College (Fig. 9, Nos. 7 and 8), the owner of the property, were found in the backfill of a mid nineteenth-century latrine pit (145).

The Barrel-Vaulted Cellar in Area 2 (Figs 7–8). During topsoil stripping within the rear part of the garden of No. 34 High Street (Area 2), part of a large stone-built structure with an intact underlying barrel-vaulted cellar (433) was revealed. No internal features or fittings survived within the cellar though a stone-built fireplace survived at ground-floor level above. This implies that the building had at least one storey above ground, and it was clear that the space formed above the top of the vault between the vault and the retaining walls had been infilled with rubble to provide a level platform for a floor. The building spanned the entire width of the back garden of No. 34 (see below), and an internal ground-floor wall (440) forming an internal corridor was presumably a means of access to the back. This building corresponds to a range of structures first depicted on Taylor's map of 1751, and pottery and clay pipe from the rubble infilling suggests a date of construction in the early to mid eighteenth century. It seems to have been a relatively short-lived structure, as the entrance to the cellar was blocked during the late eighteenth or early nineteenth century. By the time of the OS map of 1876 the area has reverted to garden, the boundary walls on the north, west and east being constructed on the foundations of the cellared building. Following the demolition of the cellared building, a brick-built icehouse was constructed in the north-eastern corner of the garden; this appears on the 1876 Ordnance Survey map.

STRATIGRAPHIC SUMMARY

Natural

Natural was only revealed within the basement part of Area 1 and comprised compact light yellowish brown coarse gravel (165). Where extensive later pitting had not impacted on its surface, it survived at 60.16 m OD at its highest point (around 1.8 m below the existing surface; see Fig. 5). In places the characteristic late Saxon subsoil, a thin, sterile reddish brown sand loam with gravel, survived over its surface.

Phase 1, Late Saxon (Figs. 3 and 5)

A single, heavily truncated early pit (284) found within Area 1 may date to this phase. Possibly originally circular, it was 1.18 m deep and contained several fills. The lowest fill contained no finds, but the upper fills, of 'cessy' dark orange brown sandy silt, both contained sherds of St Neot's-type ware and a single small sherd of Cotswold-type ware, which together could suggest a late Saxon date. These fills also contained a small quantity of animal bone and a piece of iron slag. Further sherds of St Neot's-type ware occurred residually in the fills of later pits.

Phase 2, Late Eleventh to Mid Thirteenth Centuries (Figs. 3 and 5)

This phase saw a marked increase in activity with the remains of up to eighteen pits, although many were heavily truncated by later features. The extents of only seven of these pits (357, 278, 161, 216, 188, 158 and 173) survived sufficiently well to allow them to be described in any detail. Pits 311, 305 and 252 were recorded in section only (Fig. 5); their stratigraphic position suggests that they could pre-date this phase, but no dating evidence was found.

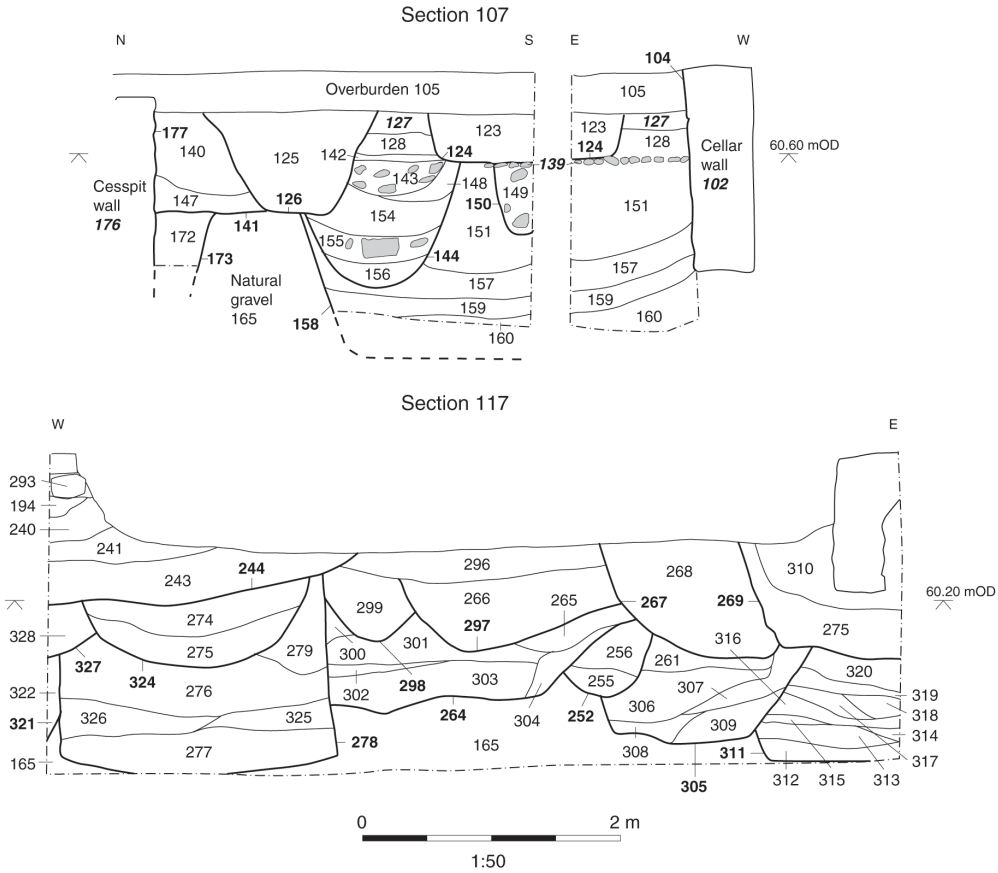

Fig. 5. Sections 107 and 117.

The largest pit (357=264, Fig. 5), located at the northern end of the basement area, was rectangular in shape, measuring at least 3.8 by 3.4 m in plan, with vertical upper sides and a stepped base, approximately 2.0 metres deep. Its vertical sides suggest either that the pit was not left open for any significant period or that its sides had been protected from weathering with a timber lining, though no direct evidence of this was found. A sondage excavated against its southern side revealed that its earliest fills comprised thick deposits of mid to dark brown sandy silt containing animal bone and pottery of thirteenth-century date. Above these fills, within a sondage excavated against its northern edge, was a fairly level deposit of white mortar, 80 mm thick; in places a thin bedding layer of gravel survived beneath the mortar, suggesting that this was a deliberately laid surface or lining, although it had not apparently been compacted. The pit was then filled with further thick dumps of light to mid brown sandy silt, probably deposited in quick succession. These contained small quantities of animal bone and pottery that could date to the thirteenth century.

Pit 278 clipped the southern edge of pit 357 (Figs. 3 and 5). Its vertical edges suggest that its sides had been protected from the elements, possibly either enclosed within a structure or originally protected with timber. Its basal fill consisted of a thick deposit of 'cessy' light brown sandy silt (277) containing late twelfth- to mid thirteenth-century pottery and large fragments of medieval roof tiles, though no mineralised remains were found in the soil sample. This deposit appears to have been deliberately capped by compact dark orange brown silty sand

(325 and 326). Subsequently the pit was filled with thick mid grey/brown sandy silts (276 and 279) that contained appreciable quantities of domestic refuse including pottery of thirteenth-century date (276). A later pit or recut (324) contained a fragment of a ceramic chimney pot in its upper fill (274).

The remaining pits were mostly confined to a cluster located at the southern end of the basement area. The largest (pits 161, 188 and 216) may have originated as quarries on account of their size and the nature of their fills. A slot excavated against the eastern side of pit 161 showed that it had a straight near-vertical side here, and was over 0.92 m deep. Its earliest exposed fill, light brown sandy silt, appears to represent deliberate and rapid infilling and filled the majority of the pit. It contained small quantities of animal bone and pottery, the latter suggesting a thirteenth-century date. Subsequent fills probably accumulated as a consequence of later settling of this fill and contained pottery of late-medieval and post-medieval date. Pit 216 was 0.7 m deep with two thick fills that also appear to have been deposited rapidly. The lower fill, of light grey sandy silt, contained a small assemblage of animal bone and late twelfth- to thirteenth-century pottery. Pit 161 was 0.8 m deep, with a thick deposit of light reddish brown silty sand at its base, from which a small quantity of animal bone was recovered. Above was dump of animal bone that contained a large sherd from a cooking pot in Olney Hyde-type fabric (*c.*1150–1400). The upper fill contained potentially the latest pottery from this sequence of pits, dating to *c.*1225–1300, including sherds from a double-shelled lamp.

Parts of two pits (158 and 173) and a possible post hole (175) were found to the east of this possible quarry group. Pit 158 was found by probing to be 1.40 m deep. Part of the edge of pit 158 was found on its northern side, and was seen to be vertical, suggesting that it may have been timber-lined. Its basal fill comprised cessy reddish brown silt with lenses of redeposited natural gravel, suggesting gradual deposition into the pit, though no evidence for cess was found from analysis of a soil sample. It contained a worn sherd (probably residual) of St Neot's-type ware. A thin cessy/ashy silt above contained a dump of animal bone and a sherd of medieval Oxford ware (*c.*1075–1300) or possibly an early variant of Ashampstead-type ware (*c.*1175–1400). These fills were seemingly deliberately covered by a thick layer of redeposited natural gravel and brickearth, presumably in order to seal the pungent contents of the pit.

Phase 3, Late Thirteenth to Fourteenth Centuries (Fig. 3)

Only a single pit (370) could be assigned to this phase. It was partially revealed at the northern edge of the basement of Area 1 and cut pit 357. It was 1.1 m deep. A single sherd of pottery dating no later than the mid fourteenth century was recovered from its upper fill.

Phase 4, Fifteenth to Early Sixteenth Centuries (Figs. 3, 5 and 6)

The fragmentary remains of a heavily robbed stone-built structure were revealed at the southern end of Area 1 cutting into the infilled Phase 2 pits. It comprised a substantial east–west aligned wall foundation (203), measuring 0.95 m in width and 0.75 m in depth. It was constructed with large roughly hewn limestone blocks bonded by orange silty clay that had been completed removed by robber trench 191 to its east. It is possible that pit fragment 171 represents the continuation of this robber trench to the east, and it contained sherds of late-medieval Brill ware (1400–1625). A second probable robber trench (250) filled with yellowish mortar/silt and limestone fragments ran parallel to the line of the wall 4.5 m to its north and may mark the position of a corresponding wall of the same structure. To the south of the line of wall 203 were the remains of a tightly packed limestone cobbled surface (139) that may have been contemporary with the structure, possibly a courtyard to its south. The surface sealed a post hole (150) that contained late-medieval Brill ware and was itself cut by Phase 5 pit 144 (see Fig. 4).

Three pits of this phase were found to the north of this possible structure (pits 336, 376 and 378). Pit 336 was vertical sided and at least 1.40 m deep, with a single cessy fill containing an appreciable quantity of animal bone and pottery, the latter predominantly sherds from

Fig. 6. Late-medieval wall foundation 203, looking west.

late-medieval Brill ware jugs (1400–1625). Additionally, a fresh sherd from a jug in medieval Surrey Ware (1350–1500) would suggest a fifteenth-century date for the deposit. Adjacent pits 376 and 378 were considerably shallower at around 0.8 m in depth. Pit 378 contained a thin basal fill of weathered natural sand over which was a dump of charcoal-rich silt. The pit then filled with rubbish that included a dump of least three late-medieval Brill ware jugs. Pit 199 may have been located inside the suggested structure defined by walls/robber trenches 203/191/250, or possibly pre-dated its construction; no clear relationship between the two could be determined. It was vertical sided, 1.40 m in depth with a sharp rounded base, suggesting lack of weathering. It contained a thick basal fill of compact dark reddish-brown silt sand with limestone fragments, from which a fragment of a Flemish-style quarry floor tile of probable fifteenth- or sixteenth-century date was recovered; otherwise the pit was largely devoid of finds.

At the north and south ends of Area 2 the upper levels of a dark reddish brown silty sand loam were revealed that pre-dated the Phase 5 pits in these areas. It probably represented garden soil and contained fourteenth- or fifteenth-century pottery. A contractor's test pit to the east of cellar 433 revealed a greenish brown sandy silt at a depth of 1.2 m, which was probably the fill of a pit. Sherds from late-medieval Brill ware jugs and a worn fragment from a Penn/Chiltern-type floor tile of possible fourteenth-century date were recovered.

Phase 5, Mid Sixteenth to Mid Seventeenth Centuries (Figs. 4, 5 and 7)

Within the basement part of Area 1, there was a notable absence of features that could be assigned to this phase and the structure identified in Phase 4 probably continued in use. Three small rubbish pits (144, 262 and 334) were found towards the east side of the trench. Pit 334

measured 1.2 m in depth and its basal fill comprised thick 'cessy' greenish grey silt above which were fills that were rich in domestic refuse, predominantly animal bone, with sherds of early post-medieval pottery and a fragment of grozed window glass. Pit 262 was notable for containing an appreciable quantity of worn floor tiles of mixed date, including two Stabbed Wessex tiles with a white slip design (which were common in Oxford in the period 1280–1330) and a number of Flemish-style quarry tiles, possibly of sixteenth-century date. Pit 144 cut through cobbled surface 139 (see above). It contained thick dumps of limestone rubble together with smaller quantities of refuse that included the base of a Brill Cistercian-type cup and other early post-medieval pottery. Shallow 'pit' 179 to the south was probably formed from the subsidence/levelling of underlying medieval pits. It contained a near complete early post-medieval redware bowl or pancheon and a large part of a Frechen globe and cylinder drinking jug suggesting a date of *c.*1575–1625.

Towards the north of Area 1, a mid-grey brown garden soil may have been accumulating during this phase. It was at least 0.6 m thick and several large sherds from two jars of possible seventeenth-century date were recovered. Further evidence for this garden soil was revealed in a test-pit dug to the east of Area 1 by contractors, where it was found to be more than 0.95 m in depth; an unabraded clay-pipe bowl and stem datable to *c.*1580-1610 date were recovered.

Within Area 2 (Fig. 7) a number of pits were revealed that remained largely unexcavated since they lay below impact level. Two groups were identified, to the north and south of the area, and all appeared to have cut an earlier garden soil (see Phase 4 above). A small quantity of sixteenth- or early seventeenth-century pottery was recovered from the upper level of pit 144.

During the excavation of a pit for the insertion of a new soakaway, located some 11 m to the east of Area 1 (see Fig. 1 for location), part of one or more pits were recorded. A small quantity of early post-medieval pottery was recovered including a sherd from an early Bellarmine pot, datable to *c.*1580–1650.

Phase 6, Late Seventeenth to Eighteenth Centuries

Area 1 (Figs. 4–5). It is not certain whether the Phase 4 structure in Area 1 continued in use, though the courtyard surface (139) to the south was resurfaced with compact gravel (127, Fig. 5). However, this surface was later cut by several small rubbish pits (124, 126, 141) containing seventeenth-century pottery. Towards the north of the area there was a marked increase in the degree of pitting compared to the previous phase, including two limestone-lined latrines (166 and 384) and several other large rubbish pits (238, 267/269). Rectangular latrine 166, which post-dated pit 141, was approximately 1.5 m deep and was lined with roughly squared limestone blocks bonded by light brown yellowish clay. It contained a 0.50-m thick deposit of laminated and cessy dark reddish-brown silt at its base, though no mineralised remains were found from soil samples. Above was an accumulation of rubbish that presumably formed after it ceased to be used and contained fragments of late seventeenth-century wine bottle, pottery and clay pipe, the latter including a complete spurred bowl datable to *c.*1680–1700. The second stone-lined pit (384) was not investigated in detail and had been heavily robbed. The other pits contained a good deal of household refuse, notably pit 267/269 which contained several complete pharmaceutical bottles and attractive eighteenth-century dishes, tea bowls and mugs in Chinese porcelain. Pit 238 contained pottery and wine bottles of early eighteenth-century date.

Area 2 (Figs. 7–8). Within Area 2 topsoil stripping during the watching brief revealed the complete plan of a large and well-preserved stone-built barrel-vaulted cellar (Cellar 433) that had been partially backfilled. It still retained its vault to its full height of 2.58 m above the floor level and measured internally 7.95 m in length and 4.55 m in width. An entrance on the south side was surrounded by walls for a stairwell that may originally have contained a free-standing wooden staircase leading down to the cellar entrance, later blocked. The vault

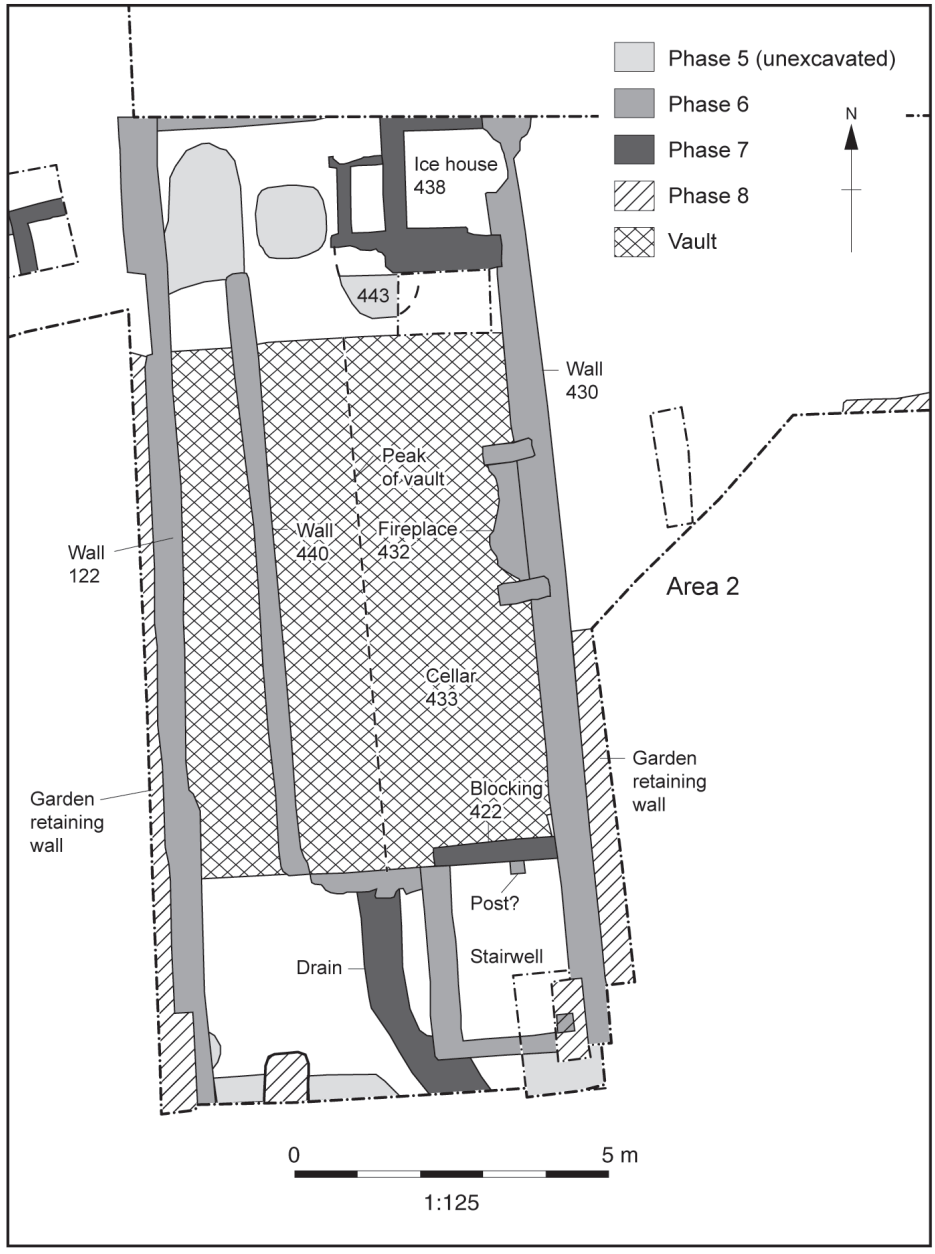

Fig. 7. Post-medieval features in Area 2.

was 0.22 m thick, constructed with roughly squared limestone blocks bonded by yellow-white mortar, and had been rendered internally with greyish-white mortar. The top of the vault was constructed mainly of red brick forming a linear 'keystone' area along the crest of the cellar. The floor of the cellar had probably been robbed, though remnants of mortar, probably bedding for a lost stone slab floor, were noted. The space between the top of the vault and the outer retaining walls on the east and west side of the cellar (430 and 122) had

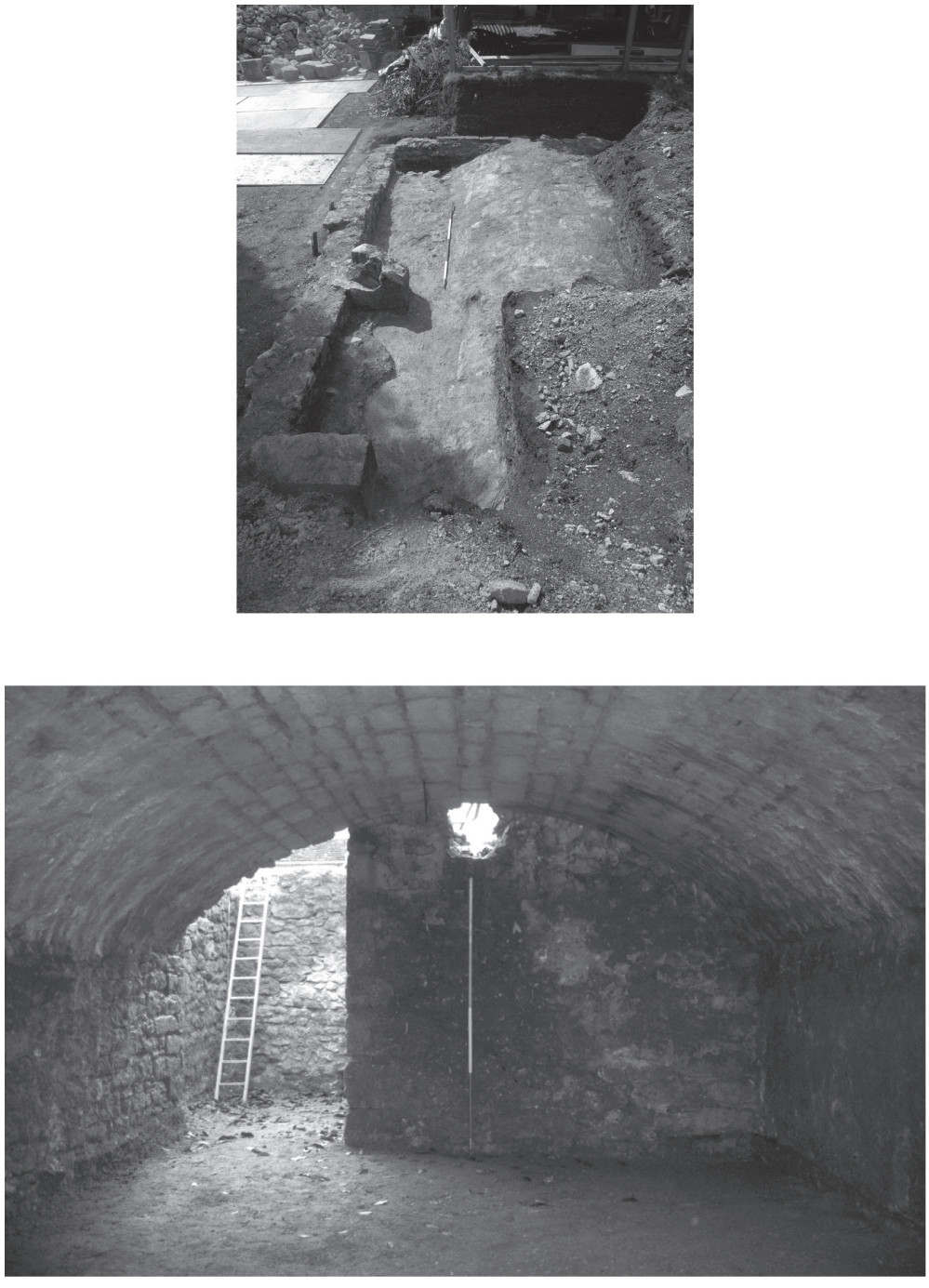

Fig. 8. Barrel-vaulted cellar 433 at ground level showing fireplace 432, looking south (above); interior of barrel-vaulted cellar 433 showing stairwell, looking south (below).

been levelled with mortar rubble in order to provide a level platform for a ground-level floor. These deposits contained pottery and clay pipe fragments suggesting an early to mid eighteenth-century date. The remains of a stone-built fireplace (432) survived against and keyed into the east retaining wall of the vault (430), and would have heated the ground floor of the building, which may have been partitioned off by internal wall 440, forming a narrow corridor along its west side. After the cellar had been partially filled, the entrance at the base of the stairwell was blocked by a stone wall (422) and the stairwell was infilled with rubble. This rubble contained a large group of late eighteenth- to early nineteenth-century pottery.

Phase 7, Nineteenth Century

Area 1 (Figs. 4 and 5). The remains of part of a rectangular cellar (Cellar 129) were revealed in the southern part of Area 1, which cut through stone latrine 166 and had been constructed after a garden soil (105, Fig. 5) had developed over Phase 6 pits 124, 126 and 141, some time after the mid to late eighteenth century. The cellar was 2.6 m deep. Its walls were constructed with roughly dressed oolitic limestone blocks with occasional use of brick, of which two late eighteenth- or early nineteenth-century examples were recovered. The partial remains of a springer for a vault survived on its east wall and a bricked-up door in its south wall led to a second chamber that extends under 'Little Drawda'. An existing garden wall that had been built directly above it marked its west wall. A stone-lined well (206) contained within the cellar may have been contemporary but was capped when a brick floor was laid. The cellar appears to have continued in use into the twentieth century when a concrete air-raid shelter was constructed at its northern end. To the north of the cellar was a contemporary limestone and brick-built structure (Building 112), possibly an outhouse. It was built over pits 289, 291 and stone latrine 292, all of which were infilled during the early part of the nineteenth century. To its east was a well-built cobbled courtyard surface.

Area 2 (Fig. 7). The structure that contained barrel-vaulted Cellar 433 appears to have gone out of use, perhaps at the time when the stairwell was infilled and levelled (see above), and the area reverted to a garden with loamy soil accumulating over it. The northern, eastern and western walls formed the foundations for the retaining walls of the existing garden against which a brick-built icehouse was constructed (438).

POST-ROMAN POTTERY by JOHN COTTER (FIG. 9)

856 sherds of pottery weighing 26.446 kg were recovered. By sherd count the amounts of medieval (up to *c.*1500) and post-medieval pottery are roughly the same with medieval comprising 54 per cent and post-medieval 46 per cent. By weight, however, post-medieval pottery comprises nearly three-quarters of the assemblage (73.5 per cent), and by rim count over half the assemblage (55.4 per cent). These differences reflect both the thinner-walled and more fragile nature of medieval pottery compared to the generally more robust post-medieval forms and also the greater length of time the medieval assemblage has been exposed to risk of fragmentation. The pottery is in a fairly mixed and quite fragmentary condition with some abrasion visible on the some of the softer late Saxon/early medieval sherds. The medieval assemblage includes many quite large fresh sherds, including near-profiles of one or two jars in the commonest fabric (OXY) and a few more robust smaller vessel forms in other fabrics (for example OXAW lamps). The post-medieval assemblage is better preserved and includes several complete profiles and a small number of complete nineteenth-century vessels from latrine pits and the fill of Cellar 433.

The range of fabrics and vessel forms present is fairly typical of sites along or near the main thoroughfares of central Oxford with the late Saxon, medieval and post-medieval periods all represented. Most of the types present here also occurred in a smaller assemblage (of 301

sherds) excavated at Queen's College in 2008, though in very different quantities.[9] Nearby sites along the High Street with a comparable range of late Saxon to post-medieval material include 113–119 High Street and Logic Lane with its late Saxon pits.[10] In its high-medieval and particularly late-medieval vessel types, including a number of Brill/Boarstall ware oil lamps (perhaps connected with places of study?), the assemblage has more than a little in common with pottery recently published from Merton College.[11] Considerably more late post-medieval pottery (*c*.1780–1900) was recovered from the present excavation than from the 2008 excavation. Given the availability of good published parallels for most of these types in the city, coupled with the relatively small size of the present assemblage, what follows is simply a quantified table of the various fabrics present and a summary report focusing on the more significant or interesting aspects of the assemblage.

Methodology

An intermediate level catalogue of pottery types was constructed, following standard procedure, for the whole hand-excavated assemblage and spot-dates produced for each context. The catalogue includes, per context and per pottery fabric, quantification by sherd count and weight. Quantification by rim EVEs (measurable rim percentage) was not considered worthwhile although the number of rim sherds (total 139) was recorded instead for all fabrics and vessel forms except the mass-produced table wares of the industrial period (*c*.1780+). Further details of vessel form, part, decoration or any other features of note were recorded in a comment field. Full details can be found in the project archive. As better parallels exist elsewhere, only a small number of the more interesting items have been illustrated.

Pottery Fabrics

Medieval pottery fabrics were recorded using the system of codes developed for the Oxfordshire county type series.[12] Post-medieval pottery fabrics were recorded using the codes of the Museum of London, which can be applied to most post-medieval types in south-east England.[13] The types and quantities occurring at Queen's College are summarised below in Table 1.

Late Saxon to Early Medieval. The five sherds assigned to Phase 1, a possible late Saxon pit (284), comprise four sherds of St Neot's-type ware (OXR) from at least two vessels including a fairly fresh rim from a small jar with external sooting, and a scrap of 'Cotswold'-type ware (or early medieval Oxford ware, OXAC). The latter has a broad dating in Oxfordshire and the Cotswolds area of *c*.875–1250, but in Oxford is more typical of the period *c*.1050–1225.[14] St Neot's-type ware likewise is broadly dated from *c*.850 or 900 to *c*.1100 in the south-east Midlands but in Oxford has a main currency of *c*.950–1075.[15] Given the predominance of the latter, a late Saxon date for this pit is plausible. Most of the St Neot's-type ware from the site occurs residually in post-Saxon contexts. Bowl and jar rim sherds were present.

Although the quantity of St Neot's-type ware here is almost the same as that from the 2008 excavation (29 sherds), most of the latter came from five late Saxon pits. A single slightly worn

[9] J. Cotter, 'Post-Roman Pottery', in Norton and Mumford, 'Anglo-Saxon Pits and a Medieval Kitchen', pp. 192–6.

[10] J. Timby and C. Underwood-Keevill, 'The Pottery', in G. Walker and R. King, 'Early Medieval and Later Tenements at 113–119 High Street, Oxford: Excavations in 1993–5', *Oxoniensia*, 65 (2000), pp. 409–19; F. Radcliffe, 'Excavations at Logic Lane, Oxford', *Oxoniensia*, 26–7 (1961–2), pp. 38–69.

[11] P. Blinkhorn, 'Pottery', in D. Poore et al., 'Excavations at No. 4A Merton St., Merton College, Oxford', *Oxoniensia*, 71 (2006), pp. 258–78.

[12] M. Mellor, 'Oxfordshire Pottery: A Synthesis of Middle and Late Saxon, Medieval and Early Post-Medieval Pottery in the Oxford Region', *Oxoniensia*, 59 (1994), pp. 17–217.

[13] London Archaeological Archive and Research Centre (LAARC), 'Post-1992 Museum of London Code Expansions: Post-Roman Pottery' (2007).

[14] Mellor, 'Oxfordshire Pottery', pp. 51–2.

[15] Ibid. p. 57.

Table 1. Pottery types and quantities in roughly chronological order

Fabric	Common Name	Date	Sherds	Weight (g.)	Rims
OXB	Late Saxon shelly ware (Oxon.)	775-1050	1	26	1
UNID	Unidentified wares	800-1900	6	70	2
OXR	St Neot's-type ware	850-1100	27	208	6
OXBF	SW Oxon ware (Newbury A)	875-1250	4	38	1
OXAC	Cotswold-type ware	1050-1225	44	596	6
OXY	Medieval Oxford ware	1075-1300	182	2268	24
OXAQ	East Wilts ware (Newbury B)	1150-1350	11	309	3
OXCG	Olney Hyde-type shelly ware	1150-1400	9	300	2
OXAH	Nuneaton-type ware (Warks.)	1175-1250	3	31	0
OXAG	Ashampstead-type ware (Berks.)	1175-1400	13	138	2
OXAW	Early Brill ware (Bucks.)	1175-1400	17	301	1
OXAM	Brill/Boarstall ware (Bucks.)	1225-1625	15	128	0
KING	Kingston-type ware (Surrey)	1230-1400	2	30	0
OXBG	Coarse Border ware (Surrey/Hants.)	1350-1500	3	38	1
TUDG	Tudor Green ware (Surrey/Hants.)	1375-1550	1	2	0
OXBX	Late med Brill ware (Bucks.)	1400-1625	124	2519	13
RAER	Raeren stoneware (Germany)	1475-1550	3	48	1
PMRE	Early post-med redwares	1480-1600	5	56	2
CIST	Cistercian-type ware	1480-1700	3	88	2
FREC	Frechen stoneware (Germany)	1525-1750	28	1094	5
OXAP	Brill proto-stoneware (Bucks.)	1540-1625	5	24	0
BORD	Border ware (Surrey/Hants.)	1550-1700	11	333	4
PMR	Post-medieval red earthenwares	1550-1900	96	6677	32
TGW	English tin-glazed earthenware	1575-1825	55	1553	18
WEST	Westerwald stoneware (Germany)	1590-1750	1	7	0
FTGW	French tin-glazed ware	1600-1800	1	434	0
CHPO	Chinese porcelain	1600-1900+	8	223	4
BRSL	Brill post-med slipware	1650-1800	3	245	2
ENGS	English stonewares (misc.)	1670-1900	3	1113	0
STMO	Staffs-type mottled brown glazed	1680-1800	6	202	2
STSL	Staffs-type combed slipware	1680-1900	5	228	3
STBRS	Staffs-type brown stoneware	1690-1730	2	68	0
NOTS	Nottingham stoneware	1700-1800	1	161	0
SWSL	Staffs white dipped stoneware	1710-1760	1	23	0
SWSG	Staffs white salt-glazed stoneware	1720-1780	4	284	2
STBL	Staffs fine blackware (Jackfield)	1740-1780	6	33	0
ENPO	English porcelain	1745-1925	4	42	0
CREA	Creamware (Staffs./Yorks.)	1760-1830	59	2723	0
PEAR	Pearlware (Staffs./Midlands)	1780-1830	11	342	0
PEAR TR	Transfer-printed Pearlware	1780-1830	32	736	0
TPW	Transfer-printed wares (Staffs. etc)	1780-1900+	34	1265	0
YELL	Yellow ware (Staffs./Midlands)	1790-1900	1	36	0
REFW	Refined whitewares (Staffs. etc)	1800-1900+	4	481	0
ENGS BRST	English stonewares (Bristol glaze)	1835-1900	2	925	0
Totals			856	26446	139

everted jar/cooking pot rim (Mellor 1994, fig.6.4) in late Saxon Oxford shelly ware (OXB) is almost certainly of pre-Conquest date as production of this type ceased *c*.1050. This, however, was residual in an early medieval pit context (Ctx 355, Ph 2).

Cotswold-type ware (OXAC) from the present excavation comes mostly from Phase 2 pits and includes rim sherds from five large jars/cooking pots with large beaded/hammerhead rims up to *c*.340 mm in diameter, probably from the latest phase of this tradition.[16] Two very rare forms in this fabric (both Ctx 274) include the worn rim of a probable chimney pot with stabbed pits on the rim and a perforation through the wall (Fig. 9.1), and also a worn body sherd from the dome of a curfew (firecover) with a circular perforation and handle scar and some evidence of internal sooting.[17] These probably date to the late twelfth or thirteenth century. Medieval Oxford ware (OXY, *c*.1075–1300) is the commonest single fabric from the site in terms of sherd count (182 sherds) and is mostly from Phase 2 pits. It is present both as unglazed jars/cooking pots (twenty rims) and yellow-glazed pitchers (four rims) including a worn foot from a tripod pitcher. The more fragmentary jug/pitcher sherds include examples with incised, red slip-painted and rouletted decoration. The jar/cooking pot assemblage is mostly sooted from use and comprises vessels with rim diameters in the 180–230 mm size range. These include two near-complete jar profiles, one of which is an unusually thin-walled example only 3 mm thick in places (274). Only a single rim is thumb-decorated. A body sherd from the widest part of a thin-walled jar/cooking pot shows evidence of at least three bored circular holes (*c*.10 mm in diameter) made after firing. As the vessel is also heavily sooted internally, it seems likely that it was adapted for use as a brazier or lamp (Ctx 276). Other wares up to *c*.1250 have a fairly minor presence. Notable pieces include a jug rim in Ashampstead-type ware (OXAG) with unusual fluted decoration on the neck possibly in imitation of metalware forms (Fig. 9.2). Three sherds from the same yellow glazed Nuneaton-type ware jug/pitcher (OXAH, *c*.1175–1250), from Warwickshire, represent the most distant medieval source represented here.

Seventeen sherds in coarser early Brill ware (OXAW) were identified, including the only two examples of double-shelled oil lamps from the site (Fig. 9.3), a characteristic thirteenth- to fourteenth-century form that normally occurs in OXAM. Both examples are fresh (163 and 296), though incomplete, though one is residual in its context (296, Phase 6). At least four OXAM lamps were also found on the 2008 excavations at Queen's College,[18] and their presence here may be a reflection of the use of the property as an academic hall. A collection of at least sixteen lamps is known from Merton College,[19] and smaller numbers are known from other collegiate sites.

Medieval, Late Medieval and Post-Medieval. In contrast to the early medieval period (Phase 2), pottery of the high medieval period *c*.1250–1400 (Phase 3) seems to be poorly represented on the site: only ten sherds were assigned to this phase. Assemblages of this date in Oxford are normally dominated by products of the Brill/Boarstall ware industry (OXAM), mainly in the form of decorated green-glazed jugs with incised or applied coloured strip decoration. The later products of this industry (OXBX, *c*.1400–1625) are not always easy to distinguish on the basis of fabric alone but tend to be much plainer, thicker-walled and less competently made with an increased output of heavier utilitarian forms such as bowls and storage jars. There is little doubt that the bulk of Brill/Boarstall ware from the site is of this late-medieval/early post-medieval type (Phases 4 and 5). Only fifteen fairly definite sherds of OXAM were identified and most of these are residual in later contexts. These include a sherd from a characteristic bottle-like form (Ctx 499). The assemblage of late-medieval Brill/Boarstall ware (OXBX) is quite fragmentary and mostly comprises fairly

[16] Ibid., for example, fig. 11.4 and 11.
[17] Ibid. fig. 13.12–13.
[18] Cotter, 'Post-Roman Pottery', in Norton and Mumford, 'Anglo-Saxon Pits and a Medieval Kitchen'.
[19] Blinkhorn, 'Pottery', in D. Poore et al., 'Excavations at No. 4A Merton St.'.

plain functional jugs including smallish drinking jugs. These sometimes have a patchy clear orange glaze with copper green flecking but often they have little or no glaze at all. A small number of bowls with flanged rims and a bifid rim jar complete the list. All of these forms can be paralleled in existing publications.[20] Late-medieval Brill ware (OXBX) comprises the majority of contemporary pottery in Phase 4 (*c*.1400–1525), around 45 per cent, and much of that (26 per cent) in Phase 5 (*c*.1550–1650). However, by *c*.1550 small amounts of post-medieval red earthenwares (PMRE and PMR) were already in circulation and by *c*.1625 these had replaced the medieval Brill/Boarstall fabrics and forms in Oxford and become the dominant post-medieval ware tradition, as in most of south-east England. Much of this glazed redware was still produced at Brill (as late as *c*.1900) but it was also produced at many other regional centres.

Excluding the latest Brill/Boarstall products, which continued into the early seventeenth century, post-medieval pottery (*c*.1500+) comprises a substantial proportion of the pottery from the site. Most of this pottery dates to the seventeenth and eighteenth centuries and much of it takes the form of large, fresh sherds – including a few near-complete vessels – disposed of in brick- or stone-lined latrines or other large squarish pits that may have served a similar function. These also produced clay pipes and bottle glass. None of these groups, however, was particularly large or unique and good parallels for most of the pottery forms can be found in the abundant groups of post-medieval pottery published from St Ebbe's and Market Street.[21] The Phase 5 contexts include a few common imports of the period, mainly drinking jugs and 'Bellarmine' bottles in Frechen stoneware (FREC) and a couple in Raeren stoneware (RAER). One Frechen drinking jug of common 'globe and cylinder' form dates to *c*.1575–1625 and is complete apart from the rim (Ctx 178). Another late Frechen jug or bottle (Ctx 235, *c*.1680–1725) has a complete plain flat base with a deliberate small (post-manufacture) perforation through the centre – perhaps for use as a water-sprinkler? A similar pierced jug base was recently found on the Ashmolean Museum extension site.[22] Post-medieval red earthenwares (PMR), as usual, comprise the largest single element of the post-medieval wares: about a third of all wares in Phase 6 (25–40 per cent, depending on quantification method). These comprise a high proportion of bowls, also cups or drinking vessels, a few jars and chamber pots and in the eighteenth to nineteenth century a few flowerpots. Apart from Creamware (59 sherds), the second commonest post-medieval fabric by sherd count, a surprisingly high proportion of the post-medieval assemblage comprises seventeenth- to eighteenth-century tin-glazed wares (TGW: 55 sherds). These also comprise about a third of the Phase 6 assemblage (25–37 per cent) and mainly consist of plain and decorated London products of the period *c*.1650–1750 including quite a high number of plain white-glazed bowls or basins, also decorated dishes and porringers, a few ornamental vases, a few chamber pots, ointment pots and Chinese-style tea bowls. The largest group of these tin-glazed wares came from the lower fill of a square stone-lined latrine (Pit 166, Ctx 168) dated to *c*.1680–1725 by a cup/mug rim with a 'Nevers blue' dark blue tin-glaze with white painted decoration. The same group also produced a rare highly decorated late seventeenth-century clay pipe (see pipe report, below). One wide bowl with simple Chinese-style decoration in blue was found in association with a complete wine bottle dated 1689 (Pit 238, Ctx 235). A large square ?latrine pit (Pit 269, Ctx 270), dated *c*.1740–80, also produced several tin-glazed vessels and some attractive eighteenth-century dishes, tea bowls and mugs in Chinese porcelain (Fig. 9.4), an attractive polychrome bowl in

[20] M. Mellor and G. Oakley, 'A Summary of the Key Assemblages. A Study of Pottery, Clay Pipes, Glass and Other Finds from Fourteen Pits, Dating from the 16th to the mid 19th Century', in T.G. Hassall 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. 181–219.

[21] Ibid.; P. Blinkhorn, 'Pottery', in K. Taylor and G. Hull, 'Excavation of Post-Medieval Features and a Dump of Late Eighteenth-Century Artefacts from 5/6-7 Market Street, Oxford', *Oxoniensia*, 67 (2002), pp. 318–43.

[22] P. Blinkhorn, 'Pottery', in 'Medieval and Later Occupation at the Site of the Ashmolean Museum Extension', OA, forthcoming.

Brill slipware (Fig. 8.5), two near-complete tankards in Staffordshire white stoneware and two or three probable PMR chamber pots. A number of eighteenth-century tankards or mugs in other fabrics (STMO, STBRS, SWSL) were recovered from other contexts.

Later contexts produced reasonably large quantities of mass-produced Staffordshire-type table wares of the period *c.*1780–1830, mainly Creamware and dishes and plates in blue transfer-printed Pearlware with Chinese-style designs. Much of this came from the backfill of post-medieval Cellar 433 (Ctx 512), the contents of which were only sampled. This was probably back-filled *c.*1800–30. Finds here included fragments of two identical Pearlware dishes with blue transfer decoration in a mixed Chinese/European landscape, also Pearlware teacups and a tea bowl in Chinese porcelain. It also produced a very late example of English tin-glazed earthenware – a small ointment or salve pot of *c.*1780–1820 (Fig. 9.6). Another interesting assemblage of later table wares came from the backfill of a square brick-lined pit – probably a nineteenth-century latrine (Pit 145, Ctx 234). The transfer-printed table wares and other late types date to *c.*1840–80 and include some unusual types, among which are three dishes with college connections. Two of these bear the arms of University College in the centre of the dish. The earliest and finest of these (Fig. 9.7) is a Creamware dish fragment of *c.*1770–1800 with high quality painted decoration and gilding (see illustration catalogue). The second piece (Fig. 9.8), which is complete, though broken, is a Staffordshire-type whiteware dish or plate of *c.*1840–60(?) with dark blue transfer-printed decoration with the arms of University College in the centre (see illustration catalogue). Fragments of a very similar dish with the same arms were recovered from an overburden layer (101). These last two dishes must have been part of a much larger dinner service made for use in the college dining room or refectory. Also from Pit 145 are two sherds from the same green-glazed Creamware dish of *c.*1770–1830(?) with moulded cabbage leaf decoration (Fig. 9.9). On the back of this – possibly scratched with a diamond ring – is part of the owner's name 'R. Wha …'. This seems to have been something of a university tradition in the eighteenth-nineteenth century as similarly marked dishes and bowls, with the names of owners and sometimes colleges, are known from several other Oxford colleges and from domestic sites such as St Ebbe's where several examples have been recovered.[23] Other items from the pit include chamber pots, jugs, preserve jars and a nineteenth-century mustard jar in French tin-glazed earthenware with a transfer-printed 'by appointment' inscription listing the crowned heads of Europe (Fig. 9.10). The latest vessel from the site is a post-1900 'W P HARTLEY' stoneware marmalade jar, which has been reused as a paint pot (Ctx 436).

Catalogue of Illustrated Vessels:

(1) Cotwold-type ware (OXAC). Worn rim from a possible chimney pot.[24] Hammerhead rim with three deep stabbed pits on top and pre-firing perforation (*c.*15 mm diameter) through wall. Rim diameter *c.*140 mm. Dull grey-brown. Slightly darker and possibly sooted internally? Context 274. Phase 2. Spot-date *c.*1175–1250.

(2) Ashampstead-type ware (OXAG). Unusual jug/pitcher rim. Neck decorated with long vertical/oblique finger flutes, possibly in imitation of metalware jugs? Diameter *c.*150 mm. Oxidised orange-brown fabric with grey core. Patchy greenish-brown glaze mostly on rim top and half way down neck internally. Context 277. Phase 2. Spot-date *c.*1175–1250.

(3) Early Brill/Boarstall ware (OXAW). Double shelled lamp. Lacks rims but has complete pedestal with large part of drip-tray and part of the lamp dish/bowl at upper end. Coarse sandy fabric with pale orange-brown surfaces and pale grey core. Rare coarse chalk/limestone. Copper-green mottled glaze all over except under base, which is hollow and conical underneath – probably knife-trimmed or fettled. Date probably *c.*1250–1350? Context 296. Phase 6. Eighteenth century (residual).

[23] Mellor and Oakley, 'A Summary of the Key Assemblages', plate 4.
[24] Ibid. fig. 12.16.

Fig. 9. Pottery.

(4) Chinese porcelain (CHPO). Profile small cylindrical mug. Probably made for European market. Height 63 mm, rim diameter 60 mm. Blue-painted stylised landscape scene with two human figures bowing to each other. Diaper band below rim. Tip of rim dipped in pale brown slip to simulate gilding. Trace of handle scar. See S. Jennings, 'Eighteen Centuries of Pottery from Norwich', *East Anglian Archaeology*, 13 (1981), fig. 99.1538 for very similar mug from Norwich dated *c*.1760–70. From square ?latrine (Pit 269, Ctx 270). Phase 6. Spot-date *c*.1740–80.

(5) Brill post-medieval slipware (BRSL). Near-profile polychrome slipware bowl or porringer with trace of pad base. Rim diameter 180 mm. Fine off-cream sandy fabric with all-over internal white slip as far as rim where meets an all-over external light brown slip. Internal decoration consists of painted vertical/oblique bands of brown slip separated by vertical strokes or trails of green glaze. In lower half of vessel these coloured slips have been 'feathered' or 'marbled' to create a horizontal swirling effect. The use of green glaze on this ware dates from *c*.1740.[25] A similar bowl was reported by Paul Blinkhorn from Market Street.[26] Context 270 (as No. 4 above).

(6) English tin-glazed earthenware (TGW). Profile of very small ointment or salve pot. Solid conical base with small dish on top. Yellow fabric with slightly bluish tin glaze all-over except for flat base. Base complete, but rim only *c*.17 per cent complete. Rim diameter 60 mm; height 36 mm.[27] Small amounts of eye ointment etc. were sold in individual pots like this and sealed with a cloth or paper cover. From the latest years of English tin-glazed ware production *c*.1790–1840. Context 512. Backfill of Cellar 433. Phase 7. Spot-date *c*.1800–30.

(7) Creamware (CREA). High-quality dish with painted with arms of University College in centre – a cross with four birds (martlets). Date *c*.1770-1800? Diameter 200 mm. Top left corner of coat of arms survives only. Shield in dark red-brown with white (blank) bird outlined in gold gilding. Against circular garter in brown paint with part of motto 'MAG. A…….' Outside this a very finely executed, stylised, classical floral decoration in decayed gold or brown paint with scrolling border. Backfill of a square brick-lined nineteenth-century pit/latrine (Pit 145, Ctx 234). Phase 7. Spot-date *c*.1840–80.

(8) Transfer-printed whiteware (TPW). Complete dish/dinner plate. Diam. 230 mm. Dark blue-black decoration with the arms of University College in centre featuring small shield against a quatrefoil garter/ribbon with inscription 'UNIV. COLL. OXON' Diaper frieze on rim. Impressed maker's mark on back 'B&B/New Stone'. Possibly Bagley and Ball of Longton, Staffs 1822–36.[28] Impressed 'W' on its own plus a small black painted cross. Context as No. 7 above (Pit 145, Ctx 234).

(9) Wedgwood-style green-glazed Creamware (CREA). Moulded 'cabbage' or vine leaf dish *c*.1770–1830. Diameter 210 mm. The leaves sit on a basketwork background (at the rim). Profile with rounded or slightly angled flat base and gently flanged rim. Owner's name scratched on back, possibly with a diamond ring, in cursive script 'R Wha----'. Context as No. 7 above (Pit 145, Ctx 234).

(10) French tin-glazed ware (FTGW). Possibly Sarreguemines? Complete cylindrical/conical mustard jar with heavy beaded rim. Height 127 mm; rim diameter 55 mm. Pale greyish tin glaze. Stencilled (or transfer-printed?) inscription in black on body 'Moutarde de MAILLE/ Vinaigrier de LL. M.M./ la Reine d'Angleterre,/ et les Empereurs/ d'Autriche et de Russie,/ à Paris.' Probably *c*.1850–75? Identical mustard jars with the same inscription were also produced in refined white earthenware (REFW). These sometimes bear

[25] Ibid. p. 198.
[26] Blinkhorn, 'Pottery', in Taylor and Hull, 'Excavation of Post-Medieval Features', fig. 4.7.
[27] F. Britton, *London Delftware* (1986), Jonathan Horne, London, for similar but not identical pot with 'Singleton's Ointment' inscription.
[28] G.A. Godden, *The Handbook of British Pottery and Porcelain Marks* (1983).

the crest and name of Sarreguemines on the base – a famous faience-producing town in Alsace on the German border. Context as No. 7 above (Pit 145, Ctx 234).

METALWORK AND WORKED BONE by LEIGH ALLEN (JETTONS IDENTIFIED by IAN SCOTT)

The small assemblage comprises seven copper alloy objects (including two jetons), twenty-eight iron objects (including eighteen nails) and one lead object. The condition of the assemblage is poor and fragmentary. The majority of the objects are late-medieval/post-medieval in date and domestic in nature. The most interesting are briefly catalogued below; a full catalogue with details of nails and miscellaneous material is available in the project archive.

Phase 3, Late Thirteenth to Fourteenth Century
An English jeton of Edward II with a cross on one face and a shield with bend (diagonal bar) on the reverse face was recovered from the fill of pit 357.[29]

Phase 4, Fifteenth to Early Sixteenth Century
An incomplete whittle tang knife, a vessel spout (SF 1) and a copper alloy drop handle (SF 2) were recovered from pit 171. The iron knife is in very poor condition with little of the blade surviving; the spout is cast and may have originally been attached to a wooden or leather vessel, and the kidney-shaped drop handle would have been for use on a drawer or small chest. A bone tuning peg came from Pit 378; it is incomplete, the head is missing, but it is identifiable as a string tensioning peg as it has a hole through the base of the shaft. Pegs of this type would have been used on instruments whose peg-board was accessible from both sides such as lyres, harps, lutes and fiddles. Instrument pegs are fairly common finds on medieval and post-medieval sites in Oxford and there is both archaeological and documentary evidence that an instrument maker was working in a property in St Aldate's in the fifteenth century.[30]

Phase 5, Mid Sixteenth to Mid Seventeenth Century
A second jeton (SF 8) was recovered from the fill of pit 447. This is a Nuremberg jeton, 'Rose and Orb' type, of Hans Krauwinkel II (1586–1635).

Phase 6, Late Seventeenth to Eighteenth Century
A second whittle tang knife and a length of lead window came were found in rubble layer 408. The knife although corroded and incomplete has a bolster (thickening) where the tang meets the blade, which was a seventeenth-century innovation.

Phase 7, Nineteenth Century
A copper alloy spoon and a long handled bone brush were recovered from the in-filling of cellar 433. The spoon has a flat stem with a trefoil terminal and an oval bowl with a triangular continuation from the stem on the back of the bowl. There is a very faint maker's mark on the stem and the owner's incuse initial 'M' on the terminal. The bone brush has holes in the front face of the head to hold the bristles and grooves in the back of the head, stained green from the copper wire which would have held the bristles in place. This type of brush (slightly larger than a modern day toothbrush) could have served a variety of uses.

[29] G. Berry, *Medieval English Jetons* (1974), plate 5.7.
[30] M. Henig, 'Objects of Bone, Antler and Shell', in B. Durham, 'Archaeological Investigations in St. Aldate's, Oxford', *Oxoniensia*, 42 (1977), pp. 163–6.

GLASS by IAN SCOTT (FIG. 10)

This report is an abridged version of the full report, which is available in the project archive. The excavation produced eighty sherds of glass: sixty-three sherds of vessel glass, fifteen sherds of window glass, one sherd of part melted glass (which could be vessel or window glass) and one fragment of glass waste. The vessel glass includes four sherds that cannot be identified to vessel form, forty-one sherds from wine bottles, and a small number of sherds from pharmaceutical bottles and wine glasses. The only glass from Phase 5 comprises two sherds of window glass (fill 180 of pit 188 and fill 332 of pit 334). Both are probably post-medieval and not closely datable. There are fifty-eight sherds of glass from Phase 6, including twelve sherds of window glass and thirty sherds from wine bottles, fourteen of which came from latrine pit 166. The assemblage from pit 166 includes sherds from mid to late seventeenth-century 'globe and shaft bottles' with angular shoulders, the base of a squat wine bottle of late seventeenth- or early eighteenth-century date with shallow kick, and a number of body sherds from early wine bottles. Fill 169 produced a single glass find, a small complete free-blown wine bottle with squat body and deep kick (Cat. No. 1; Fig. 10.1). The form suggests a very late seventeenth- or more probably an early eighteenth-century date. Pit 238 (fill 235) produced a base from an early eighteenth-century broad squat wine bottle, and a slightly earlier small complete squat free-blown wine bottle with shallow kick (Cat. No. 2; Fig. 10.2). This bottle is sealed with the cypher of Anne Morrell of the Crown Tavern, No. 3 Cornmarket, Oxford and is dated 1689. The last figure of the date is distorted and difficult to read clearly. William and Anne Morrell were licensees at the Crown from 1660. Anne was widowed in 1679 and continued as licensee until 1696.[31] Three complete free-blown cylindrical pharmaceutical bottles that are probably of eighteenth-century date were found in fill 270 of pit 269, and further sherds of wine bottle and window glass came from the contemporary garden soils. Much of this glass probably dates no later than the middle of the eighteenth century.

Most of the window glass (nine sherds) came from a rubble layer (context 408), and is post-medieval in date. The most interesting pieces are two joining sherds of olive green glass with a partial graffito scratched onto the surface (Cat. No. 4; Fig. 10.4). Little of the graffito survives but it appears to show part of a number – '12' and a fragment of a word – '.]decel' or '.]duel'. A sherd from context 411 appears to be waste, possibly from glass making. The backfill (context 484) of Cellar 433 produced three sherds of glass from two free-blown cylindrical wine bottles of late eighteenth-century or very early nineteenth-century date. Contexts of Phase 7 (nineteenth century) produced fifteen sherds of glass, much of it clearly redeposited. The more interesting contemporary material included most of a stemmed wine glass of late eighteenth- or early nineteenth-century date (Cat No. 3; Fig. 10.3) and a complete moulded sauce bottle of early to mid nineteenth-century date. There are just five sherds from Phase 8 contexts, including a medicine bottle embossed 'HITCHCOCK AND SONS | OXFORD' and a soda water bottle embossed 'ECLIPSE AERATED WATER CO OXFORD'. Both are of late nineteenth- or early twentieth-century date. Hitchcock and Sons were 'pharmaceutical chemists' and mineral water manufacturers, with premises at 108 High Street, Oxford, on the corner with King Edward Street and in Bear Lane, Oxford.[32] Hitchcocks appear to have ceased trading by the early twentieth century. The 'Eclipse Aerated Mineral Water Co.' is probably the Eclipse Mineral Water Company which was based in the Market Place, Bicester at the end of the nineteenth century and in the early years of the twentieth century.[33]

[31] E.T. Leeds, 'Glass Vessels of the XVIth Century and Later from the Site of the Bodleian Extension in Broad Street, Oxford', *Oxoniensia*, 3 (1938), p. 154, nos. 3–8 and plate xii, C.1-C.4; E.T. Leeds, '17th and 18th Century Wine-Bottles of Oxford Taverns', *Oxoniensia*, 4 (1941), pp. 44–8 and plate ix, nos. 9–13a (William and Anne Morrell), 14–19a (Anne Morrell).

[32] *Harrod & Co.'s Directory of Bedfordshire, Buckinghamshire, Berkshire, Oxfordshire, Huntingdonshire and Northamptonshire 1876*, p. 778; *Kelly's Directory of Oxfordshire 1895*, pp. 212, 249.

[33] *Kelly's Directory of Oxfordshire 1895*, p. 384; *1907*, p. 50; *1911*, p. 49.

Fig. 10. Glass.

Catalogue of Illustrated Glass (Fig. 10):

(1) Wine bottle, small squat bottle with deep kick. The short neck has a cracked-off fire-polished finish with a horizontal string rim immediately below. Almost 'Mallet'-shaped. Early eighteenth century. Green metal. Height: 130 mm; diameter: 110 mm. Latrine pit 166, fill 169. Phase 6 [Inv. No. 39]

(2) Wine bottle, small squat bottle with short tapering stem with cracked-off fire-polished finish and hand applied horizontal string rim. Seal of Ann Morrell of the Crown Tavern, Cornmarket, Oxford, with date 168[9]. Dark green metal. Height: 131 mm; diameter: 120 mm. Pit 238, fill 235, sf 4. Phase 6 [Inv. No. 37]

(3) Stemmed wine glass with thick walled bucket bowl, short stem with annular knop and plain foot. Extant height: 70 mm; stem and foot height: 40 mm; foot diameter: 78 mm. Late eighteenth century, or first half nineteenth century. Colourless metal. Pit 292, fill 323. Phase 7 [Inv. No. 29]

(4) Window glass with a partial graffito scratched on one face: '. . .]12 | . . .]decel' or '. . .]duel'. Glass is post-medieval. Two joining sherds. Olive green metal. Length: 52 mm; width: 45 mm; thickness: 2.1 mm. Rubble layer 408. Phase 6 [Inv. No. 45]

CLAY PIPES by JOHN COTTER (FIG. 11)

A total of 109 pieces of clay pipe weighing 641 g was recovered. These comprise twenty-five bowl fragments, three mouthpieces and eighty-one stem fragments. Thirteen pipe bowls were complete or nearly so. The condition of the material was generally quite fresh with several stem fragments in the 80–160 mm range and one up to 183 mm long. Bowl shapes have been compared, initially, to those published from St Ebbe's, Oxford and also the more general national typology.[34] A full catalogue of the pipes has been compiled (details in archive). Most bowls and stems appear to be common local types datable to *c.*1660–80 or to the late seventeenth/early eighteenth century, in line with most of the post-medieval pottery assemblage. A few pipes, however, are earlier than this and a few are as late as the nineteenth century. Most pieces derive from the Phase 6 pits. The earliest piece is a very small early complete bowl of *c.*1580–1610 from a Phase 5 garden soil (Ctx 477) containing nothing later. The bowl is bulbous and unburnished but has a line around the rim and a teardrop-shaped heel.[35] There are two slightly larger bowls of *c.*1630–1650.[36] One of these (Fig. 11, No. 1) is burnished and has a small circular heel stamped with a small 8-pointed star with a small central raised pellet. This is probably a high quality London product. The stamp is exactly matched by a pipe bowl of *c.*1640–60 in the Museum of London clay pipes archive.[37] The stamp is also very similar to one recently found at Jesus College, Oxford.

The most remarkable pipe is also the best-preserved (Fig. 11, No. 2). This has a complete bowl of *c.*1680–1700, or slightly later, with a prominent conical spur. Together with a joining piece of stem this has a surviving stem length of 183 mm behind the bowl, making it the longest pipe in the assemblage. This is also probably the most complete pipe ever found decorated with 'Oxfordshire style' rouletted stem borders.[38] This style dates from the mid seventeenth to early eighteenth century and comprises pipes with rouletted decoration on the stem and often, as here, the maker's name in a small stamped roundel on the upper side of the stem. On either side of the roundel, the stem is decorated with a symmetrical

[34] A. Oswald, *Clay Pipes for the Archaeologist*, BAR, 14 (1975).
[35] Ibid. fig. 3G.1.
[36] Ibid. fig. 51.A.
[37] LAARC, 'Pipes': http://www.museumoflondon.org.uk/claypipes/pages/marks.asp, die no.100021.
[38] D.A. Higgins, 'Clay Tobacco Pipes', in K. Brady et al., 'Excavations at Abingdon West Central Redevelopment: Iron Age, Roman, Medieval, and Post-Medieval Activity in Abingdon', *Oxoniensia*, 72 (2007), p. 170.

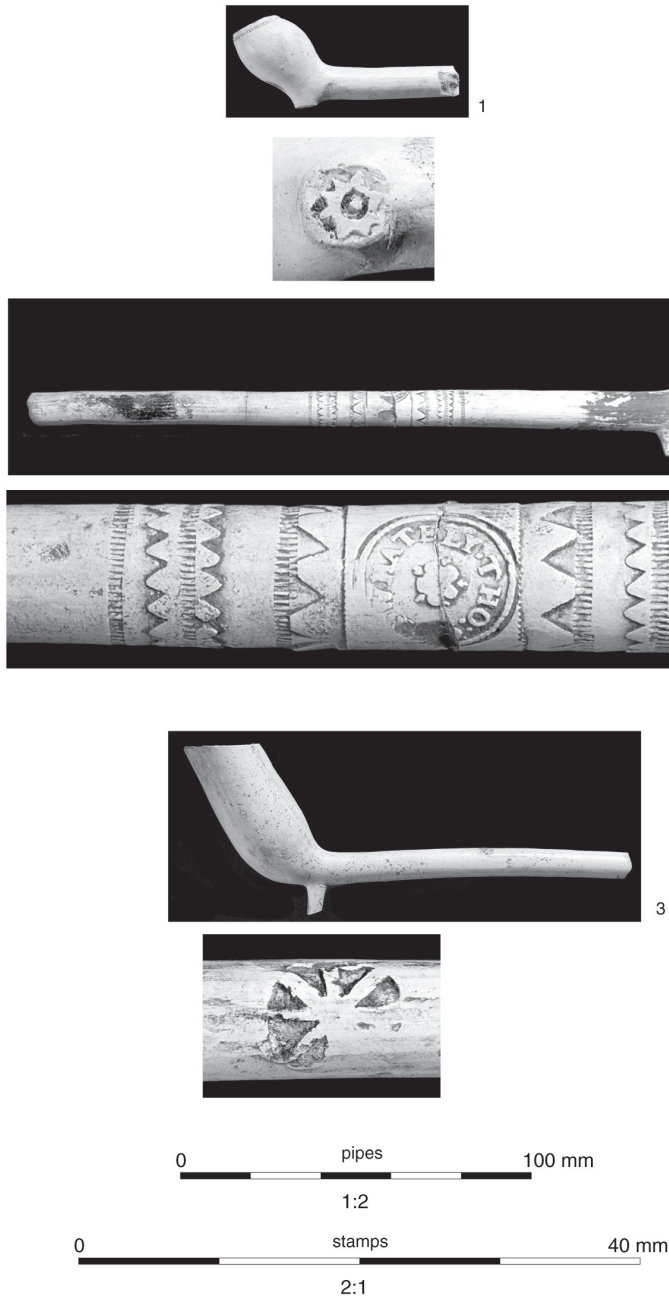

Fig. 11. Clay tobacco pipes.

arrangement of rouletted bands including chevrons, scalloped bands and plain milled lines similar to other published examples in this style.[39] The roundel is of circular/oval shape (11

[39] Ibid. fig. 23.55–6.

mm diameter) with the name THO : [---] .WHATELY in relief around the edge and a small cinquefoil rosette in the centre. There was clearly a short (?three-character) word/name after the colon (perhaps beginning with an O, C or G?) but unfortunately the stem is chipped at this point. This appears to be a previously unknown Oxfordshire maker. Photographs of the pipe were shown to David Higgins who suggested the dating above. Higgins's initial search of the International Genealogical Index (IGI) showed that the only Whatelys living in Oxfordshire in the period 1630–1740 were all living in Banbury. A Thomas Whately was baptised there on 11 December 1656 and he could plausibly be our pipe maker. He could have worked in Banbury, or moved to Oxford at the end of the century. In style this is very similar to another highly decorated pipe by the Oxford maker John Taylor (or Tayler, *c.*1660–84), found recently during excavations at Corpus Christi College (Higgins, forthcoming). Pipes such as these are quite rare finds and were almost certainly made for the upper end of the pipe-smoking market.

A near-complete pipe bowl (Ctx 100) lacking its spur has the incuse mark of RICH/ARD. S/AYER on top of the stem. An identical marked bowl from Southampton is dated *c.*1700–30.[40] This is one of two pipemakers of this name working at East Woodhay (Hants.). Several other pipes with this mark are known from Oxford.[41] Another complete bowl (Fig. 11, No. 3) is dated *c.*1740–1800 by comparison with a London 'New type' pipe.[42] This has a good quality burnish all over and an unusual circular sunburst or cartwheel stamp on the upper side of the stem. A similar stamp from Abingdon occurs on a stem of *c.*1690–1720.[43] The latest pieces identified were three spur bowls of *c.*1820–40 including two with tiny rosettes on the spurs (Ctx 295).

Illustration Catalogue (Fig. 11):

(1) Pipe bowl *c.*1630–50. Probably from London. Eight-pointed star stamp on heel. Context (512). nineteenth-century backfill of Cellar 433.
(2) Pipe bowl *c.*1680–1700. Stem length 183 mm. Average burnish on bowl and striations along stem. Delicate dog-tooth milling around rear two-thirds of bowl rim. Highly decorated rouletted stem border in the Oxfordshire style. Maker's name THO : [---] .WHATELY. in circular stamp on upper side. Fresh but with cessy brown deposits externally. Context (168). Stone-lined latrine or cess-pit (Pit 166). Associated pottery *c.*1680–1725. Four other stems from this context may be of eighteenth-century date (stem bores *c.*1.8–2 mm.).
(3) Pipe bowl with sunburst or cartwheel stamp on stem. London 'New type' *c.*1740–1800. Context (270). Fill of Pit 269.

CERAMIC BUILDING MATERIALS by JOHN COTTER (FIG. 12)

A total of 151 fragments of ceramic building material (CBM) weighing 26.391 kg was recovered. These range in date from the late twelfth or thirteenth century to the nineteenth century. Full details of the recording methodology and of the assemblage are available in the project archive, with a summary of the most interesting material presented here. Most of the material (by sherd count) appears to be medieval (up to *c.*1500) but its worn and

[40] D.A. Higgins, 'Clay Tobacco Pipes', in R. Brown and A. Hardy, *Trade and Prosperity, War and Poverty: An Archaeological and Historical Investigation into Southampton's French Quarter*, Oxford Archaeology Monograph, 15 (2011), fig. 5.43, no. 11.
[41] Oswald, *Clay Pipes for the Archaeologist*, fig. 53.17.
[42] D. Atkinson and A. Oswald, 'London Clay Tobacco Pipes', *Journal of the British Archaeological Association*, 32 (1969), fig. 2.26.
[43] Higgins, 'Clay Tobacco Pipes', in Brady et al., 'Excavations at Abingdon West Central Redevelopment, fig. 23.62.

fragmentary condition suggests that most of it is probably residual. The condition of the thirteenth- to fourteenth-century material in particular was very worn. The number of definite post-medieval items is surprisingly small and largely confined to a few complete eighteenth- or nineteenth-century bricks and brick fragments and a few late-looking roof tile fragments. Despite the residual nature of most of the assemblage it includes a few larger fresher pieces and a few rare or unusual types which are of interest in their own right. The assemblage is more diverse than that recovered from the 2008 excavations for the college kitchen extension, with more floor and ridge tile represented, and more brick.[44]

Flat Roof Tile

The bulk of the CBM assemblage (eighty-five pieces) consists of medieval plain or flat rectangular roof tile with a pair of circular nail holes near the upper end (peg tiles). In general, the assemblage was very fragmentary with nothing like a complete tile or even a complete width present. Most of the tiles here occur in common orange-red (oxidised) sandy fabrics (Fabric IIIB, or similar) but several examples in pink or orange-pink fabrics typical of the thirteenth-fourteenth century (VIIA, VIIB and VIIBB) also occur.[45] Many tiles also show evidence of glaze typical of medieval tiles. A few possible late-medieval tiles were noted, in contrast to the large assemblage of tiles of this date from the 2008 excavations, which may have originated from a single roof or structure. A small number of denser orange-red post-medieval tiles were identified from eighteenth- and nineteenth-century deposits. The only other notable pieces are a medieval tile fragment with dog or cat paw print (Ctx 276) and a rare nibbed roof tile which appears from its pit context to be of sixteenth- or seventeenth-century date (263). This occurs in a soft orange-red brick-like fabric with coarse angular flint inclusions (quite unlike local fabrics) and has a crudely formed pyramidal nib (one of a pair) for supension. Given that nibbed tiles were not an Oxford tradition it may have come from outside the area.

Ridge Tile

These are medieval thirteenth- to fourteenth-century and perhaps fifteenth-century types, mostly quite worn and fragmentary and as with the roof tile above probably mostly residual. The relatively high number of pieces (twenty-four) present in the overall assemblage is notable, however. Most pieces come from the thickened and sometimes knife-trimmed lower edges of ridge tiles including a few corner pieces and most are glazed to some extent. Ridge tiles mainly have the same orange sandy or pinkish fabrics as used for plain roof tiles but the lighter orange-pink fabrics seem to have been preferred here. A single edge fragment occurs in a pale brown oolitic limestone-tempered fabric (Fabric IB), which mainly dates to the late twelfth and thirteenth centuries. Of rather more interest are parts of three apparently separate crested ridge tiles (four sherds) in a fine sandy pink-buff fabric with a light mottled green glaze which probably come from the Brill/Boarstall tileries in Buckinghamshire (Fabric IIIA). These, unlike the pottery from this source, are relatively rare in Oxford and probably date to the fourteenth and fifteenth centuries (and perhaps even the sixteenth century?). The illustrated Brill piece (Fig. 12.1) is remarkably large and fresh compared to the rest of the CBM assemblage and unlikely to be very residual. It is puzzling therefore that it came from a pit context (288) containing only large fresh sherds of pottery datable *c.*1800–30, unless perhaps it remained in position on the roof of a building until that date? The piece is fully described in the illustration catalogue below. The other two Brill pieces are from contexts associated with

[44] Cotter, 'The Ceramic Building Material', in Norton and Mumford, 'Anglo-Saxon Pits and a Medieval Kitchen', pp. 196–8.

[45] The fabrics of Oxford medieval roof tile are discussed in more detail in Cotter, 'The Ceramic Building Material', in Norton and Mumford, 'Anglo-Saxon Pits and a Medieval Kitchen', and in Cotter, 'Ceramic Building Materials', in Poore et al., 'Excavations at No. 4A Merton St.', pp. 292–305.

sixteenth-century pottery or floor tile (Ctxs 125 and 263).

Floor Tile

The floor tile (twenty-six pieces) is all medieval in date, and late-medieval (fifteenth- to sixteenth-century) types appear to predominate. Most are plain and glazed, but heavily worn from long use and redeposited to some extent. One small, early decorated tile preserves its complete dimensions and a small number of other tiles preserve complete widths. Square, triangular and rectangular tiles are present; the latter two shapes have usually been formed by cutting or breaking an originally square tile into smaller pieces along a line scored before firing.

The character of the tile assemblage is best represented by those from Pit 262 (context 263). This produced the largest quantity of CBM from the site (27 pieces, 4.446 kg) including fifteen pieces of floor tile (3.406 kg). The context produced no useful pottery dating, but is approximately dated to the sixteenth-seventeenth century by a rare nib tile (see above) and the 'Tudor' character of the latest 'quarry' tiles. This one context produced a collection of worn tiles encompassing several types of floor tile in use in Oxford between the thirteenth and the sixteenth centuries, including some rarer types. The earliest pieces (thirteenth to fourteenth century) show extreme use-wear while the latest pieces (fifteenth to sixteenth century) are generally less worn. That they all ended up in the same early post-medieval pit may not be entirely coincidental and suggests they might once have formed part of the same patchwork floor of contemporary and older re-used tiles which by the sixteenth or seventeenth century had become so worn-out that it was torn up and disposed of.

The state of extreme wear seen on the two decorated tiles of *c.*1280–1330 is reminiscent of the medieval tile fragments from a group of large sixteenth- to seventeenth-century pits excavated at Postmaster's Yard, Merton College.[46] Both have been cut down to size from larger square tiles. The normally orange sandy fabric of these (IIIB) has been reduced to grey and brown, possibly by burning (perhaps re-used around a hearth?). Both have deeply stabbed keying on the back characteristic of the 'Stabbed Wessex' group of floor tiles which are common in the Oxford area *c.*1280–1330, though both have lost all their glaze, and only one retains traces of its original decoration.

Four separate triangular tiles (Fig. 12.2) occur in a rare fine sandy pink-buff fabric with a pale grey core and a clear yellow or pale green glaze. This is probably a Brill fabric (Fabric IIIA), though softer than the ridge tiles described above. They are all very worn. Two different sizes of triangular tile appear to be represented, all with deeply stabbed keying on the underside (see illustration catalogue for fuller description). A fifth example from another context (143) appears to have part of a large circular keying scoop on the underside rather than stabbing. Scoops such as these are usually associated with early floor tiles including those of the Stabbed Wessex group. The date of the possible Brill tiles here can only be guessed at. They might be fourteenth century, but little is known about them as only a handful of examples have been discovered in Oxford, so it is highly unusual to find five examples here.

The largest group of floor tiles, from Pit 262, comprises seven separate Flemish-style quarry tiles of late-medieval date, mostly with a plain clear or brown glaze and mostly very worn. These are characterised by their thickness (mostly 32–37 mm), their orange-red sandy fabric and bevelled edges and include square and cut triangular and cut rectangular tiles (see catalogue for details). The source of these tiles was probably fairly local but may include products of the neighbouring Penn/Chiltern tileries. A date of *c.*1375–1550 would probably encompass these. A single complete tile in this group is of rectangular form (139 by 45/48 by 32 mm thick) and was probably one of three such tiles cut from an original square tile (139 by 139 mm). This has a more post-medieval looking bright orange fabric

[46] Cotter, 'Ceramic Building Materials', in Poore et al., 'Excavations at No. 4A Merton St.', pp. 292–305.

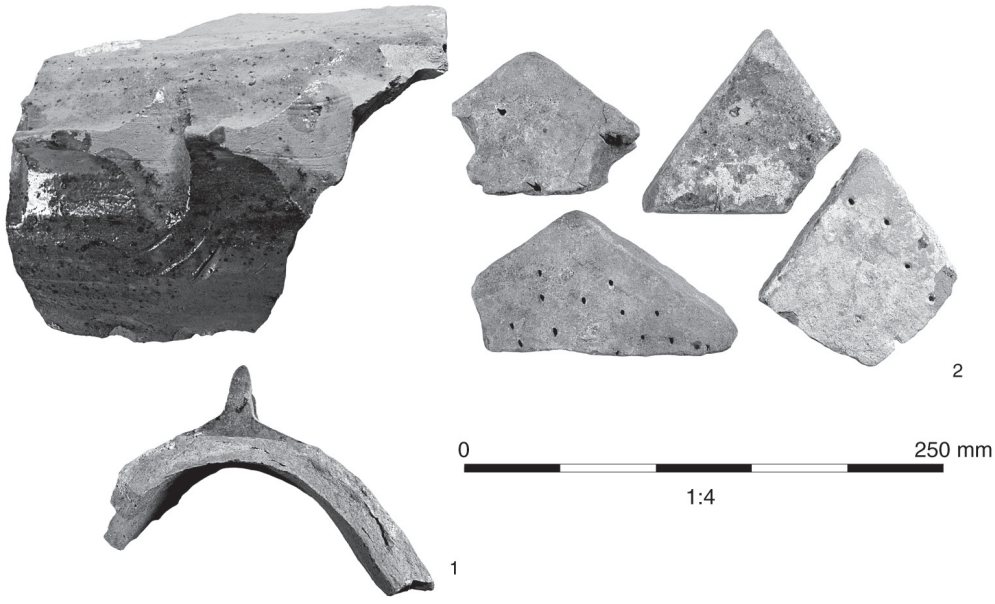

Fig. 12. Ceramic building material.

and the upper surface is covered with a white slip under a pale mottled green glaze. It is very similar to a large collection of 'black and white' tiles (laid in chequerboard schemes) recently excavated from Corpus Christi College and probably contemporary with its sixteenth-century foundation.

A few pieces from other contexts deserve a mention. These include a worn fragment of a decorated medieval floor tile from the Penn/Chiltern tileries (*c*.1330–80+) with traces of 'printed' decoration in white slip (472). Another tile possibly from this source is represented by a complete side fragment (180 mm wide by 33 mm thick) with a fine sandy bright orange fabric. The upper surface is fairly fresh and has been thinly brushed or wiped with a swirl of thin patchy white slip and then covered with a glossy orange glaze. Near one of the corners is a small pin-hole characteristic of (but not unique to) Flemish tiles (123). The thickest piece in the assemblage is a small roughly rectangular unglazed orange tile (88 by 58 by 41 mm) which appears to have been sawn-down or sawn-off a larger tile. The presence of such a heterogeneous collection of tiles, including several quite small and oddly-shaped examples, suggests they may have been used or re-used to patch-up existing areas of tiled flooring, perhaps around hearths and in passageways.

Brick

These (fourteen pieces) include three complete unfrogged bricks in orange-red or brownish fabrics. The earliest may be of late seventeenth- or eighteenth-century date but seems to have been reused in a nineteenth-century brick culvert draining into the cellar (494). The other two are probably of late eighteenth- or nineteenth-century date. Other fragments are of similar dates (details in archive).

Illustration Catalogue (Fig. 12):

(1) Crested ridge tile in Brill/Boarstall ware (Fabric IIIA). Large fresh fragment from rounded apex and sides. Possibly 50 per cent of tile present. A small part of one knife-

Table 2. Pottery quantities by phase

Phase	Date	Sherds	% Sherds	Wt	% Wt	Rims	% Rims
1	LSaxon	5	0.6%	30	0.1%	1	0.7%
2	L11-M13C	201	23.5%	2900	11.0%	31	22.3%
3	L13-14C	10	1.2%	221	0.8%	1	0.7%
4	15-E16C	132	15.4%	1995	7.5%	14	10.1%
5	M16-M17C	119	13.9%	4483	17.0%	28	20.1%
6	L17-18C	193	22.5%	7044	26.6%	49	35.3%
7	19C	163	19.0%	5724	21.6%	15	10.8%
8	Modern	26	3.0%	3877	14.7%	0	0.0%
Unphased	N/A	7	0.8%	172	0.7%	0	0.0%
Total		856	100.0%	26446	100.0%	139	100.0%

cut end survives but lower sides and edges are missing. Evidence for at least three knife-cut near-pyramidal crests - probably cut from an applied ridge or spine of clay. Hard fine sandy to smooth fabric with pink-buff surfaces/margins and a pale grey core. Pale olive green glaze with darker copper green flecks occurring mostly in a broad band along the apex of the tile. Glossy in places, thin and patchy on the crests and at lower limits. Parallel horizontal finger grooving on sides. Also groups of pre-firing scratches on sides, probably accidental. Rough and sanded internally. Max. surviving height *c.*105 mm, max. surviving length *c.*197 mm, max. thickness 17 mm. Date: fourteenth to fifteenth century? Pit context (288). Associated pottery *c.*1800–30.

(2) Group of triangular floor tiles possibly in Brill/Boarstall ware (Fabric IIIA). All worn to very worn. Fine sandy pink-buff or off-cream fabric with a pale grey core. Most examples (originally) with a clear yellow glaze on the upper surface. One example with a light ?copper green glaze on the underside. Thicknesses 25–28 mm. The edges are slightly bevelled and have been knife-shaved or sawn while in a dry but leather-hard state. The two smaller tiles (Right) are roughly equilateral triangles with equal angles. The more complete of these has a side length of *c.*108 mm and is green-glazed underneath but shows no evidence of stabbing. The undersides of the other three tiles are covered with small circular keying stabs (partly obscured by mortar). The other two tiles (left) are of flatter (isosceles) triangular shape with a longer base length of *c.*180 mm and two side lengths of *c.*115/120 mm. These have clearly been cut and snapped along pre-scored lines from a larger original elongated lozenge-shaped tile (*c.*180 x 140 mm across angles). The lower broken part of the cut (base side) has been left rough and untreated. Possibly fourteenth-century? Pit context (263). Latest associated finds sixteenth- to seventeenth-century?

WORKED STONE by RUTH SHAFFREY

The worked stone includes two limestone roof stones and a column, all of which had been reused structurally. One roof stone had been used in a floor make-up layer (128) in Phase 6. The other roof stone and the column had been used in the construction of the eastern wall of the vaulted cellar (102). The column is made of Bath stone and retains some plaster; it is clearly reused from an earlier structure and it is possible that the other oolitic limestone blocks had been similarly scavenged. A single slate pencil was the only stone artefact recovered and was found in the upper fill of pit 471 (469).

Table 3. Animal bone: total NISP and percentages. Bones from the same individual are counted as 1; numbers in brackets are from soil samples

Species	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**Total**
	LSaxon	**L11-M13**	**L13-14C**	**15-E16C**	**M16-M17C**	**L17-18C**	**Phase 7**	
Mammal bone								
Equid					2		1	3
Cattle		32 (1)	1	18 (3)	29	18	6	103 (4)
Pig	1	14 (3)		8	7	2	1 (1)	33 (4)
Sheep/Goat		34 (2)	5	14 (3)	41	19 (1)	1	114 (6)
Sheep		11	1 (1)	5	16	6		39 (1)
Goat					2			2
Dog					1	3		4
Cat		2					(1)	2 (1)
Rabbit		(1)			4			4 (1)
Red Deer		1			1			2
Cattle/Red Deer		1	3	8 (1)	6	5 (1)		23 (2)
Sheep/Goat/Roe Deer	(1)	2 (2)		1	18	3		24 (3)
Cat Sized Mammal		1			1	(1)		2 (1)
Small mammal		(2)					(1)	(3)
Medium Mammal	(4)	41 (16)	2	28 (9)	102	126 (5)	4 (1)	303 (35)
Large Mammal	1 (1)	25 (3)	10	45 (62)	69	26 (1)	2 (2)	178 (68)
Unidentified Mammal	(78)	19 (41)	7	8 (207)	19	18 (61)	(9)	71 (396)
Bird Bone								
Domestic Fowl		4 (1)		1	5	5	1	16 (1)
Domestic/Greylag Goose		1		3	2	1		7
Swan						2		2
Woodcock						1		1
Domestic Fowl/ Pheasant		3			1	2		6
Galliform		2			3			5
Unidentified Bird		4 (3)		4	5	10		23 (3)
Amphibians								
Frog/Toad		(9)						(9)
Total	2	197	29	143	334	247	16	968
NISP identified to a species level or low order group	1	102	7	49	111	59	10	339
Principal Stock Animals								
Cattle		35.2		40.0	31.5	40.0		
Sheep/Goat + Sheep		49.5		42.2	62.9	55.6		
Pig		15.4		17.8	7.6	4.4		

THE ANIMAL BONE by ANDREW BATES

In total, 1,541 bone or teeth fragments weighing *c.*14 kg were recovered from the site. A summary of the assemblage is given in Table 3 and a number of interesting aspects are discussed below. Too few mandibles, loose teeth, or records of epiphyseal fusion were available for an analysis of the mortality profiles of the stock animals. Similarly, there were too few metrical records to undertake a biometric study. The data recorded are available in the site archive.

The main animals eaten were cattle and sheep, although the number of identified fragments was very low in some phases. A number of bones from new-born or veal calves were present, including one bone from Phase 3 (late thirteenth to fourteenth century), and two bones each from Phases 2, 4, 5 and 6. This may indicate some association with the husbanding of these animals, or the procurement of veal. There was some evidence for keeping pigs in Phase 5 and poultry in Phases 2, 5 and 6. The Phase 5 pig bone included a single neonatal bone and four bones from at least two new-born animals from pit 334. A galliform humerus of a new-born chick, most likely of domestic fowl, came from a phase 5 context, and four further young galliform bones were recorded, two from Phase 2 and one each from Phases 5 and 6. Some level of local poultry production, therefore, seems likely. The swan and woodcock bones are likely to indicate late seventeenth- to eighteenth-century aristocratic dining or banqueting.

A few bones have provided evidence for craft working, although not necessarily on the site itself. Antler working was indicated by a butchered red deer antler fragment from Phase 2 pit 278. Both the beam and the tine had successive chop marks around the circumference, allowing the majority of the antler to be broken away and presumably discarded as waste while the remainder could be used as a raw material for fabricating other artefacts. The antler had been naturally shed from the animal. A cattle metatarsal from Phase 2 (late eleventh to mid thirteenth century) had shallow chop marks upon it most likely resulting from the removal of the hide.

A partial dog skeleton was recovered from the fireplace within cellar 433 (Phase 6). It comprised the forelimbs, minus most of the feet bones with only three of the ten metacarpals present, all of the cervical vertebrae (including the atlas and axis), and eight of the thirteen thoracic vertebrae. The remains appeared to be located within an ashy deposit, but had not been burnt. It was unclear whether the remains were intrusive and they may, therefore, be of a later phase.

FISH REMAINS by REBECCA NICHOLSON

A very small assemblage of fish remains was recovered, almost all from the residues of bulk sieved samples. The species identified have also been recovered from other sites in Oxford dating from the late Saxon to post-medieval periods, including the nearby site of Queen's College kitchen.[47] The paucity of fish remains is unusual for pit fills of this date, especially since two are thought to be from cesspits. It seems likely that some fills may be redeposited, backfilled soil rather than in situ rubbish or faecal deposits.

Phase 1, Late Saxon

Sample 3, from pit fill 281 included only two eel (*Anguilla anguilla*) vertebra, one herring (*Clupea harengus*) vertebra and an unidentified scale fragment in 40 litres of soil.

[47] R. Nicholson, 'Fish Bones', in Norton and Mumford 'Anglo-Saxon Pits and a Medieval Kitchen', pp. 210–14.

Phase 2, Late Eleventh to Mid Thirteenth Century
Sample 1, from fill 275 in pit 324 included four herring vertebra, two eel vertebrae, a fragment of a mackerel (*Scomber* cf. *scombrus*) vertebra and cleithrum from a small pike (*Esox lucius*). Small pike (in this case under 250 mm) were known as pickerel.[48]

Sample 5, from fill 277 in pit 278 included one small gadid (Gadidae) vertebra, probably from cod (*Gadus morhua*), and one small right-eyed flatfish (Pleuronectidae) vertebra, in 20 litres of soil. Although sample 7 came from fill 160 in late eleventh-mid thirteenth century cesspit 158, there were no fish remains, which is surprising if this feature is indeed a cesspit. Sample 8, from fill 215 in pit 216, included only tiny fragments of fish bone one of which is from mackerel (*Scomber* cf. *scombrus*).

Phase 4, Fifteenth to Early Sixteenth Century
Sample 9, a 10-litre sample from fill 380 in pit 378, included six whiting (*Merlangius merlangus*) caudal vertebrae, probably from a single fish. A small gadid hyomandibular may also have come from this individual. Other fish remains comprised three herring vertebrae, an epihyal and a subopercular and one calcined small gadid precaudal vertebra.

Later Phases
The only hand collected fish bone from a Phase 5 context was a large gadid cleithrum fragment from fill 183 in pit 188. A single tiny pike vertebra came from sample 2, pit 237, Phase 6. Sample 6, a 35-litre sample from fill 239 in Phase 6 stone lined cesspit 166 included only a tiny and eroded fish vertebra, not further identifiable. Again, a lack of fish remains is unusual for a cesspit fill. Sample 10, from fill 294 in Phase 7 pit 292 included a single mackerel vertebra, two herring vertebrae and single vertebra from a small (150–300 mm) and a tiny (< 150 mm) gadid.

PLANT REMAINS by JOHN GIORGI

Ten environmental bulk soil samples were collected from the fills of individual pits in Area 1, several of which were interpreted as possible cess pits, for the potential recovery of macro-plant remains and information on economy (diet) and human activities at the site. Full details of the samples and the results are given in Table 4. The samples were processed using a modified 'Siraf'-style type flotation tank, with mesh sizes of 0.25 mm and 0.5 mm for the recovery of the flots and residues respectively. The flots, once dried, were examined for plant remains, which were identified using a binocular microscope (with a magnification of up to x40) together with modern and charred reference material and reference manuals.[49] Nomenclature follows Stace, which was also used for habitat/ecological information along with Hanf and Wilson et al. [50]

Phase 1, Late Saxon
Pit 284 contained a modest assemblage of charred plant remains, consisting mainly of unidentifiable cereal grains (and fragments), with a few grains of free-threshing wheat (*Triticum aestivum* type), (six-row) hulled barley (*Hordeum vulgare*) and oat (*Avena* sp.). These grains may have become accidentally burnt while being dried before milling and/or storage or as a result of cooking accidents. A broad bean (*Vicia faba*) was also found. A small number of wild plant/weed seeds included a few potential arable weeds, *Anthemis cotula* (stinking chamomile) and *Bromus* (brome); occasional *Carex* (sedges) and *Eleocharis* spp. (spike-rush) seeds may indicate damp areas of ground. This range of cereals is typical for

[48] C.F. Hickling, 'Prior Moore's Fishponds', *MedArch*, 15 (1971), pp. 120–1.
[49] R.T.J. Cappers et al., *Digital Seed Atlas of the Netherlands* Groningen Archaeological Series, 4 (2006); S. Jacomet, *Identification of Cereal Remains from Archaeological Sites*, 2nd edn (2006).
[50] C. Stace, *New Flora of the British Isles,* 2nd edn (2005); M. Hanf, *The Arable Weeds of Europe* (1983); P. Wilson and M. King, *Arable Plants – A Field Guide* (2003).

Table 4. Nun's Garden, Queen's College, Oxford (OXQCNG10): Area 1: The Charred, 'Waterlogged' (w) and Mineralised (m) Plant Remains

	period	**Late Saxon**		**Late 11th-mid 13th century**				**15-E16C**	**L17C-18C**		**19C**
	phase	**1**				**2**		**4**	**6**		**7**
	feature type	PF	PF	PF	PF	CPF	PF	PF	PF	CPF	PF
	pit number	284	##	287		158	216	378	##	166	292
	context number	281	##	285		160	215	380	##	239	294
	sample number	3	1	4		7	8	9	2	6	10
	vol sample (l)	40	23	9		28	30	10	32	35	16
	vol flot (ml)	52	##	8		16	39	500	32	18	135
LATIN_NAME	ENGLISH										
Cereal grains											
Triticum dicoccum/spelta	emmer/spelt wheat		1								
T. aestivum//turgidum type	free-threshing wheat	1	24	2				1			
T. cf. *aestivum/turgidum* type	?free-threshing wheat	5	33	1		1	1	1	1		1
Triticum sp(p).	wheat	2	19	1				3			
cf. *Triticum* sp(p).	?wheat	1	36				2		1	1	1
cf. *Secale cereale*	?rye		3								
Triticum sp(p)./*Secale cereale* L.	wheat/rye		9	1							
Hordeum vulgare L.	barley, hulled straight	1									
H. vulgare L.	barley, hulled twisted	1							1		
H. vulgare L.	barley, hulled indet.	2	3				1	1	1	1	
cf. *H. vulgare*	?barley		1	1			2		2		
Avena sp(p).	oat	1	6	1			1				
cf. *Avena* sp(p).	?oat	1	8							1	1
Cerealia	indet. cereal	22	##	7		3	11	9	5	7	1
Cerealia	indet cereal fragments < 2 mm	+++	++++	++	++	++	++	+++	++	++	+
Cereal chaff											
Triticum aestivum//turgidum type	free-threshing wheat type rachis		4	2				1			

Secale cereale L.	rye rachis fragments		3	1				
Other plant/weed seeds								
Ficus carica L.	fig						+(w)	++(w,m)
Corylus avellana L.	hazel nut shell fragment		+	+	+	++		
Chenopodium spp.	goosefoot etc		9					
Atriplex spp.	orache		12					+(w)
Atriplex/Chenopodium spp.	orache/goosefoots etc.		22					
Scleranthus annuus L.	annual knawel		2					
Spergula arvensis L.	corn spurrey		1					
Polygonum aviculare L.	knotgrass		17					
Fallopia convuluvulus (L.) A Love	black bindweed		7					
Rumex sp(p).	dock		6	1				
Polygonaceae indet.			7					
Rubus idaeus L.	raspberry							+++(w,m)
Rubus fruticosus agg.	blackberry							++(w,m)
Rubus fruticosus/idaeus	blackberry/raspberry					+(w)		+++(w,m)
Malus sylvestris/domestica	apple							1
cf. *Vicia sativa*	?common vetch		3					
V. faba L.	broad bean	1						
cf. *V. faba*	?broad bean cotyledons		4					
Lens culinaris Medik.	lentil		1					
cf. *L. culinaris*	?lentil		7					
Vicia/Lathyrus sp(p).	vetch/tare/vetchling (small seeds)		19	1				
Vicia/Lathyrus/Pisum spp.	vetch/tare/vetchling/ pea (large seeds)		8					
Medicago/Trifolium sp(p).	medicks/clovers		13					
Fabaceae indet.	large indet legume fragments		47					

Table 4. (Continued)

	period	Late Saxon	Late 11th-mid 13th century				15-E16C	L17C-18C		19C
Fabaceae indet.	small indet legume frags/cotyledons		15				1			
Lithospermum arvense L.	field gromwell		13							
Sherardia arvensis L.	field madder					1				
Galium aparine L.	cleavers		3							
Galium sp.	bedstraws		1							
Sambucus nigra L.	elder	+(w)	+(w)	+(w)	+++(w)	+(w)	++++(w)		+(w)	+++(w)	+(w)
Centaurea sp(p).	knapweeds	1	2							
Anthemis cotula L.	stinking chamomile	1	86							
Asteraceae indet			2							
Juncus spp.	rushes									++(w)
Eleocharis palustris/uniglumis	spike-rush	1	1							
Carex sp(p).	sedge	3	1			3	3			+(w)
Lolium sp.	rye-grass									1
Avena/Bromus sp.	oat/brome				1					
Bromus spp.	brome		2							
cf. *Bromus* sp(p).	?brome	1	10							
Poaceae indet.	grasses (large seeds)		21			2	1			1
Poaceae indet.	grasses (small seeds)	2	7			2				1
Poaceae indet.	grass/cereal node/ internode		++							
indeterminate	thin stem fragments		+							
indeterminate	?fruit remains									+(m)
indeterminate	wood charcoal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
indeterminate		+	+	+	+	+	+	+	+	+	+(m)
	Total	**47**	**##**	**19**		**5**	**26**	**21**	**11**	**10**	**8**
item density (per litre of processed of soil)		*1.2*	*31*	*2*		*0*	*0.9*	*2.1*	*0*	*0*	*0.5*

Key: Item frequency: < -5; ++ = 5-25; +++ = 26-100; ++++ = 101-300; +++++ => 300 items; w=un-charred plant remains; m=mineralised plant remains; PF = pit fill; CPF = cesspit fill

the late Saxon period,[51] with evidence from numerous sites in Oxford including two large late Saxon deposits, one of free-threshing wheat at All Saints Church and another of barley and wheat on the north side of Lincoln College.[52] Traces of free-threshing wheat, hulled barley, oat (and possibly rye) were also recovered in a late Saxon pit found during the 2008 excavations at Queen's College.[53] Charred beans are not often found although a large quantity was identified in an eleventh-century deposit from Folly Bridge, Oxford.[54]

Phase 2, Late Eleventh to Mid Thirteenth Century

Pit 324 produced a large charred plant assemblage although with very poorly preserved and fragmentary remains suggesting intensive burning. Grains made up almost 50 per cent of the quantified material (not counting a large number of cereal fragments), 60 per cent of which, however, were not identifiable. Free-threshing wheat was the dominant grain, either from hexaploid bread wheat (*Triticum aestivum*) and/or tetraploid rivet wheat (*T. turgidum*); the several free-threshing wheat rachis fragments in this sample (and also in pit 287) were broken at the point of the abscission scar and thus could not be used as a diagnostic species indicator. Rivet wheat, however, appears to have been less common than bread wheat in the medieval period.[55] A hulled wheat grain (*Triticum dicoccum/spelta*) in the sample is probably a relic from previous harvests. There was also a small number of hulled barley and oat grains and several grains tentatively identified as rye (*Secale cereale*); the presence of this cereal, however, was confirmed by the recovery of a few rye rachis fragments. This is the usual range of cereals for the early medieval period,[56] with similar finds from many sites in Oxford. For example, large quantities of free-threshing wheat were also found in late eleventh-century deposits from Corpus Christi College (together with significant quantities of rye) and in similarly dated contexts from Jesus College (along with hulled barley).[57] Documents from around 1300 suggest that the catchment area for cereal production and supply to Oxford extended to a radius of no more than twelve miles.[58]

The weed seed assemblage in pit 324 provides some indication as to the possible range of soils being used for cereal cultivation, with the most common seed, *Anthemis cotula*, plus *Lithospermum arvense* (field gromwell) and *Galium aparine* (cleavers) suggesting the use of (calcareous) clay soils, similar to those found around the town. On the other hand, several weeds, *Scleranthus annuus* (annual knawel), *Spergula arvensis* (corn spurrey), *Polygonum aviculare* (knotgrass) and *Fallopia convolvulus* (black bindweed) could point to the use also of (well-drained) acid sandy soils for growing crops. The weeds *Spergula arvensis* and *Fallopia convolvulus* on the one hand, and *Galium aparine* on the other, may also tentatively suggest that crops were both spring and autumn sown.

[51] J. Greig, 'The British Isles', in W. van Zeist et al. (eds.), *Progress in Old World Palaeoethnobotany* (1991), p. 315.

[52] M. Robinson, 'Environmental Evidence from All Saints Church', in Dodd (ed.) *Oxford before the University*, p. 389; Z. Kamash et al., 'Late Saxon and Medieval Occupation: Evidence from Excavations at Lincoln College, Oxford, 1997–2000', *Oxoniensia*, 67 (2002), pp. 199–286.

[53] W. Smith, 'Assessment of Charred and Mineralised Plant Remains from Queen's College Kitchen Extension, Oxford University', unpublished OA CPR assessment report (2008).

[54] M. Robinson, '35 St Aldates. Agricultural Debris against the Norman Bridge', in B. Durham 'The Thames Crossing at Oxford: Archaeological Studies 1978–9', *Oxoniensia*, 49 (1984), pp. 78–9.

[55] L. Moffett, 'The Archaeology of Medieval Plant Foods', in C.M. Woolgar et al. (eds.), *Food in Medieval England. Diet and Nutrition* (2006), p. 49.

[56] Greig, 'The British Isles', p. 321.

[57] W. Smith, 'Charred and Waterlogged Plant Remains', in R. Bashford et al., 'Medieval and Post-Medieval Remains from Excavations on the Site of the New Auditorium, Corpus Christi College, Oxford, 2008', *Oxoniensia*, 79 (2014), pp. 206–8; eadem, 'Charred and Mineralised Plant Remains', in 'Eleventh-Century, Later Medieval and Early Post-Medieval Evidence from Investigations at Jesus College and Market Street, Oxford', OA, forthcoming

[58] B.M.S. Campbell et al., *A Medieval Capital and its Grain Supply. Agrarian Production and Distribution in the London Region c.1300,* Historical Geography Research Series, 30 (1993), p. 173.

The pit fill sample also contained a relatively large number of charred legumes although again poor preservation meant that most of this material was indeterminate or only broadly identified as *Vicia/Lathyrus/Pisum* (vetch/tare/vetchling/pea) and may be from wild and/or cultivated species. However, lentil (*Lens culinaris*) was identified on the basis of one seed and possibly a small number of others, while several seeds were tentatively identified as broad bean and common vetch (*Vicia sativa*). There are very few finds of lentil from the medieval period although it was recorded from Cumnor Dean Court Farm near Oxford[59] and may have been cultivated on a small scale, being mentioned in a number of documentary records.[60] Archaeobotanical and historical evidence also suggests the increased growing of vetches during this period.[61] By 1300 legumes (including vetches and beans) were widely grown in the London region, including Oxford. They were usually a minority crop, although in the Cherwell Valley to the north of Oxford they were cultivated on a slightly larger scale.[62] Documentary evidence also shows that legumes were grown not only as a field crop but also in town gardens.[63] Beans and vetches were mainly used for fodder but also eaten by the very poor, particularly following failed harvests, in bread, soup and in pottage.

There were occasional charred hazelnut (*Corylus avellana*) shell fragments in this pit, as well as in pits 287 and 216, which may be the residues of the nuts gathered for use as food. Elder, represented by occasional charred seeds and large numbers of uncharred seeds in pits 216 and 278, may be the discarded remains from collected and processed fruit and/or were simply naturally deposited into the pit from nearby or overhanging vegetation. The remains of both these wild plants are common finds in medieval deposits in Oxford.

The charred plant debris in pit 324 may have come from several different activities although mainly from the advanced stages of crop-processing and food preparation. The grains may have been accidentally burnt while being dried before storage and/or before milling, while the larger weed seeds of a similar size to the cereal grains, for example *Lithospermum arvense, Galium aparine, Bromus* and possibly some of the larger indeterminate legume seeds, would have persisted to the latter stages of the crop-cleaning process and required hand-sorting from the grain. There was a little debris from the earlier stages of crop-cleaning, the smaller weed seeds, for example *Atriplex/Chenopodium* (oraches/goosefoots), Polygonaceae seeds, which would have been separated from the grain by the use of the 'wheat' sieve, and traces of rachis fragments and possibly cereal straw fragments, all these by-products being burnt as fuel and/or for waste disposal.

Pits 158, 216, 278 and 287 contained only small amounts of charred plant remains, all with item densities of three or less per litre of processed soil, but with a broadly similar botanical composition (in terms of cereal grains and weed seeds) to pit 324, the remains representing background debris also largely from the final stages of crop-cleaning. There was no botanical or other biological evidence in the flot from pit 158 to support the interpretation of this feature as a cesspit.

Phase 4, Fifteenth to Early Sixteenth Century

Pit 378 contained a large quantity of charcoal together with a very small assemblage of mainly poorly preserved cereal grains, with traces of free-threshing wheat (and chaff) and hulled barley, both typical grains for the late medieval period including sites in Oxford, for example

[59] Greig, 'The British Isles', p. 323.

[60] F.J. Green, 'The Archaeological and Documentary Evidence for Plants from the Medieval Period in England', in W. van Zeist and W.A. Casparie (eds.), *Plants and Ancient Man. Studies in Palaeoethnobotany* (1984), p. 107.

[61] Greig, 'The British Isles', p. 323.

[62] Campbell et al., *A Medieval Capital and its Grain Supply*, p. 134.

[63] Green, 'The Archaeological and Documentary Evidence for Plants from the Medieval Period', p. 107.

in a fourteenth- to sixteenth-century deposit from Jesus College.[64] A small amount of charred hazelnut shell fragments and a few uncharred *Rubus* (blackberry/raspberry) seeds were also identified, which may be the residues from gathered foodstuffs or simply represent incidental intrusions from nearby vegetation. There were also a few charred wild plant/weed seeds.

Phase 6, Late Seventeenth to Eighteenth Century

Cesspit 166 and pit 237 produced very little plant material, consisting mainly of a very small number of charred cereal grains including (free-threshing) wheat, (six-row) hulled barley and possibly oat. Pit 166 also contained a fig (*Ficus carica*) seed and a modest number of elder seeds but no obvious evidence for cess.

Phase 7, Nineteenth Century

Pit 292 contained an interesting assemblage of plant remains. In addition to several charred grains, including possibly free-threshing wheat and oat, plus a few charred grass seeds, there was a small range of fruit seeds dominated by a very large quantity of *Rubus* seeds, predominantly uncharred but also with some calcified examples and including evidence for both blackberry (*Rubus fruticosus*) and raspberry (*R. idaeus*). Small numbers of uncharred and mineralised fig seeds were also present together with a few elder seeds and a charred apple (*Malus domestica/sylvestris*) seed. Figs may have been grown in the past but were also imported as dried fruit in large quantities. These fruits were all identified amongst a large range of fruit pips and stones in a sixteenth to eighteenth-century cellar and cesspit fill in excavations at Corpus Christi College.[65] The sample also contained a large quantity of mineralised concretions including possibly the remains of other calcified fruits although the poor state of preservation meant that identification was not possible. A few wild plants were represented by small numbers of uncharred *Carex* and *Juncus* (rush) seeds. The plant remains from this pit fill suggest that this feature was used not only for the disposal of debris from food preparation and cooking (grains and charcoal) but also possibly for cess, not only on the basis of the mineralised small fruit seeds but also on the evidence of mineralised fly pupae in the sample. The *Carex* and *Juncus* seeds may be the residues of plants initially used as flooring materials and then dumped in the pit to keep the smells down.

ACKNOWLEDGEMENTS

OA would like to thank the provost and fellows of The Queen's College, who funded the project, for their support and interest throughout. We are also grateful for the cooperation and patience of Berman Guedes Stretton (the design architects) and Kingerlee (the building contractor). The authors wish to thank Professor John Blair for reading and commenting on the report. Any errors, however, are the responsibility of the authors alone. The project was monitored by David Radford, Oxford City Archaeologist. The project was managed for OA by Andrew Norton and carried out by Jim Mumford with Chris Richardson and Ian Cook. The illustrations were produced by Julia Collins. The archive has been deposited with OXCMS under accession number 2010.7.

[64] W. Smith, 'Charred and Mineralised Plant Remains', in 'Eleventh-Century, Later Medieval and Early Post-Medieval Evidence from Investigations at Jesus College'.

[65] Idem, 'Plant Macrofossils'.