



Former Acland Hospital, Keble College, Oxford Archaeological Excavation Report

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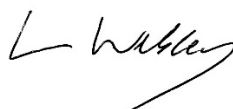


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Prepared by: Mike Sims, Kirsty Smith and Andrew Simmonds
Checked by: Andrew Simmonds (Project Manager)
Edited by: Leo Webley (Head of Post-Excavation)
Approved for Issue by: Leo Webley (Head of Post-Excavation)
Signature:



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OA South

Janus House
Osney Mead
Oxford
OX2 0ES

t. +44 01865 263 800

OA East

15 Trafalgar Way
Bar Hill
Cambridge
CB23 8SG

t. +44 01223 850 500

OA North

Mill 3
Moor Lane Mills
Moor Lane
Lancaster
LA1 1QD

t. +44 01524 880 250

e. info@oxfordarch.co.uk

w. oxfordarchaeology.com

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Former Acland Hospital, Keble College, Oxford

Archaeological Excavation Report

Written by Mike Sims, Kirsty Smith and Andrew Simmonds

With contributions from Leigh Allen, Paul Blinkhorn, Lee G Broderick, Sharon Cook, John Cotter, Geraldine Crann, Rebecca Nicholson, Cynthia Poole, Ian Scott and Ruth Shaffrey and illustrations by Benjamin Brown, Gary Jones, Sophie Lamb and Charles Rousseaux

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Summary

Between March 2016 and January 2017 Oxford Archaeology conducted a series of archaeological investigations at the former Acland Hospital, Keble College, Oxford, in association with redevelopment of the site as student accommodation.

The excavation uncovered a Roman field boundary ditch and two areas of medieval activity comprising a roadside ditch or boundary ditch parallel to Woodstock Road and a group of three pits on the Banbury Road frontage. The medieval features are situated beyond the northern limit of contemporary suburban development and may represent off-site activity such as gravel quarrying, although they could alternatively be associated with an outlying farmstead, such as the historically-attested hamlet of 'Buricroft'. Two pits dated to the 17th century were also recorded.

The site was subject to extensive quarrying during the 18th and early 19th centuries before the construction of Northgate House during the 1840s and the development of Acland Hospital during the late 19th and 20th centuries.

No evidence was found for the Civil War bastion shown close to the south-western corner of the site on de Gomme's map, which presumably lies further south.

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The project was managed for Oxford Archaeology by Ben Ford. The fieldwork was directed by Mike Sims, who was supported by Ben McAndrews, Tom Black, Jim Mumford and Chris Richardson. Survey and digitizing was carried out by Conan Parsons, Benjamin Brown, Gary Jones and Sophie Lamb. Thanks are also extended to the teams of OA staff that cleaned and packaged the finds under the management of Leigh Allen, processed the environmental remains under the management of Rebecca Nicholson and prepared the archive under the management of Nicola Scott.

1 INTRODUCTION

1.1 Scope of work

- 1.1.1 Oxford Archaeology OA undertook a programme of strip, map and sample excavation on behalf of Rick Mather and Keble College at the former Acland Hospital, Keble College, Oxford (Fig. 1). The investigation was commissioned in association with a development intended to increase student and academic facilities at the campus. To achieve this the construction necessitated demolition, retention and renovation of existing structures at the site.
- 1.1.2 The work was undertaken as a condition of planning permission, ref. 09/02466/FUL (15/03275/VAR). A brief was set by David Radford, Oxford City Archaeologist, and the work was carried out in accordance with a written scheme of investigation produced by OA (OA 2016).
- 1.1.3 The excavation followed an evaluation (OA 2009) and a watching brief during construction of an extension to the rear of No. 23 Banbury Road (OA 2014).
- 1.1.4 The site was formerly Acland Hospital, part of the Nuffield Hospital estate and is now owned by Keble College and used mainly for student accommodation. Part of the former Hospital's north range known as 'The Acland Home' (No. 25 Banbury Road) is a Grade II Listed Building for its special architectural and historic interest and was retained as part of the new development.
- 1.1.5 The excavation was conducted in stages in order to accommodate the demolition programme of the existing buildings, Areas 1-3 being excavated during March-June 2016, before demolition began, and Areas 4-7 during July 2016-March 2017, following the demolition of the majority of the standing structures (Fig. 2).

1.2 Location, topography and geology

- 1.2.1 The site lay north of the historic core of the city of Oxford, within the parish of St Giles, and extended between Woodstock Road and Banbury Road, centred on NGR SP 5132 0639 (Fig. 1). It was bounded to the north by St Anne's College, to the south-west by the Grade II listed Royal Oak public house, to the south-east by Felstead House (No. 23 Banbury Road) and to the south by the Grade II Listed No. 21 Banbury Road. An early 20th century detached house, previously known as 'The Lodge', occupied the north-west corner of the site on the Woodstock Road frontage.
- 1.2.2 The site encompassed an area of 0.7ha. The ground was relatively flat with a consistent height of c 63.5m aOD, falling away gently to the south, east and west. To the north the flat ground continues, and therefore the site sits at the top of a slight break of slope. Prior to the investigation it comprised a mixture of 19th and 20th century buildings, with grass, landscaped and tarmac areas.
- 1.2.3 The site lay in the centre of the N-S aligned promontory of Summertown-Radley terrace sands and gravels between the River Thames and River Cherwell on which the historic city of Oxford is situated. The underlying geology beneath the terrace is mapped as Oxford Clay.

1.3 Archaeological and historical background

Prehistoric Period (500,000 BP-AD 43)

- 1.3.1 Two Palaeolithic stone axes were recovered from the old Girls' High School, 21 Banbury Road, immediately to the south of the site.
- 1.3.2 The site lies within a late Neolithic-early Bronze Age monument complex comprising a henge monument that lies c 200m to the south-east, beneath Keble College and St John's College, and a Bronze Age barrow cemetery comprising ring ditches and burials that have been excavated at Radcliffe Observatory c 200m to the west and identified from cropmark evidence in the University Parks c 200m to the east. Further ring ditches have been identified across the northern part of the city, from the Science Area to the Sackler Library in St John's Street.
- 1.3.3 Cropmark evidence in the University Parks has also indicated quite dense Iron Age settlement, which has been confirmed by excavation (OA 2011; Thompson 2015).

Roman Period (AD 43-410)

- 1.3.4 There have been stray finds of Roman coins and pottery across much of north Oxford. Occupation has been identified in the Science Area c 400m south-east of the site and at St Antony's College, c 250m north-west of the site, and it is possible that the Iron Age activity evidenced by the cropmarks in the University Parks continued into this period.

Medieval Period (AD 410-1550)

- 1.3.5 From the 9th century onwards Oxford developed into a substantial defended town, although during the medieval period the site lay c 700m north of the town wall.
- 1.3.6 St Giles' Church was constructed between 1123-33. Evidence from the Hundred Rolls Survey of 1279 suggests that the parish of St Giles had developed by this date; it is likely to have mainly comprised development on the frontage of St Giles and its northern extent is unknown. Archaeological evidence for this medieval northern suburb has so far been limited and this may be due to extensive development of this area during the later post-medieval period (Dodd 2003, 62). The area around St Giles' Church became known as Walton Fields from the 13th century. This area was used as a mixture of arable and meadow, with common pasture rights recorded in the 14th century. The area became known as St Giles Field in 1542 and much of it was purchased by St John's College in 1573 (Chance *et al.* 1979, 265-83) Evidence for medieval ridge and furrow has been found 30m north of the site.

Post-Medieval Period (AD 1550-1850)

- 1.3.7 During the post-medieval period, the site was situated between the Woodstock and Banbury Roads and was used as open arable fields until the mid 19th century. The 1769 map of St Giles parish shows the site located in fields between the Woodstock and Banbury Roads. This map also shows a building located to the west of the site and this may be the Royal Oak pub, built during the 17th century.
- 1.3.8 During the Civil War, the northernmost bastion of the outer line of the city's defences may have been located on or near the southern part of the site. It is also likely that the

area to the north of these defences would have been levelled to create an open field or fire from the northern lines and the Northgate bastion.

- 1.3.9 The area of St Giles was used for quarrying during the later post-medieval period, evidence for which was found in archaeological excavations 30m to the north of the site at St Anne's College (OAU 1991).

Modern Period (AD 1851-1939)

- 1.3.10 During the 19th century north Oxford developed rapidly and the former arable fields around St Giles were replaced by large residential houses. Northgate House, one of the earliest houses built along Woodstock and Banbury Roads, was constructed in the northern part of the site in 1841-50, along with its associated outbuildings and gardens. Felstead House was built to the south in 1867 and its west wing added in 1876. Northgate House was incorporated into the Acland Nursing Home, built in 1896. The east wing of the home was added by 1913, when Felstead House became part of the Acland Hospital. Northgate House was demolished in 1936 when extensive new buildings that expanded the capacity of the Acland Hospital were constructed. The west wing was built during the 1980s, completing a plan arranged around a central quadrangle.

1.4 Previous archaeological work

- 1.4.1 In July 2009 OA carried out an evaluation comprising seven trenches and a series of geotechnical test pits and boreholes. The earliest features lay on the east side of the site, here a series of possible postholes and a NW-SE aligned ditch were uncovered. A further large pit in this location produced a sherd of 10th-12th century pottery. This suggests some sort of low-level occupation of the site during the late Saxon to early Norman period. A layer of reworked loessic loam overlay the pit and may indicate ploughing in this area in the 13th century. A very large pit or ditch was identified in the south-west corner of the site, whose fills contained early post-medieval finds giving a date of c 1630. The feature was interpreted as possibly being the ditch that fronted the northernmost bastion of the city's Civil War defences. Evidence for post-medieval quarrying was recorded in this area and in the north-western part of the site.
- 1.4.2 In November 2013 OA conducted an archaeological watching brief during the excavation of a trench for a guide wall to facilitate a piling rig on the entrance to the site from the Woodstock Road. The watching brief recorded evidence for a post-medieval building and deposits associated with its demolition prior to the construction of the Acland Hospital buildings. A stone-lined well was also recorded, although the relationship between this structure and the building was uncertain.
- 1.4.3 In May 2014 OA undertook an archaeological watching brief during the excavation of strip foundation trenches and a reduced dig within the footprint of the new build 23 Banbury Road, Oxford (OA 2014) which revealed a buried topsoil deposit that was cut by a large discrete feature which was likely to be a pit, but the function and date of the feature were unclear.

2 AIMS AND METHODOLOGY

2.1 Aims

General

- To identify and record any significant archaeological features, structures or deposits which will be impacted by the development
- To disseminate information about the works to the general public
- To assess the results of the Archaeological Mitigation and publish the significant results in an acceptable journal or monograph, and lodge the archive in the relevant receiving museum

Specific Aims

2.1.1 The specific aims and objectives of the post-evaluation archaeological works were:

- To identify and establish the character and date by sample excavation of any pre-medieval, medieval and post-medieval land-use
- To determine if any prehistoric features are present and if so how might they relate to the known middle Neolithic-early Bronze Age ritual and funerary landscape and later agricultural landscapes located on the Summertown-Radley gravel terrace
- Is there any evidence for late Saxon activity at the site? If so what is the nature of that activity?
- What can the character, content or absence of medieval and post-medieval gravel, rubbish and cess pits tell us about domestic, commercial or industrial activity in the north Oxford medieval and post-medieval suburb over time?
- To establish the ecofactual and environmental potential of any archaeological deposits and features
- To make available the results of the investigation, by various means from public information during the excavations such as media stories, public talks to post-excavation assessment and final publication if warranted and finally archive deposition.

2.2 Local Research Agenda questions

2.2.1 These relevant local research agenda questions are taken from the Oxford City Council Draft Local Research Agendas (Oxford City Council 2012).

Prehistoric – Neolithic and Bronze Age

- What is the date of any prehistoric activity, which scientific dating methods help refine this?
- What is the character of any prehistoric remains and what does this tell us about the postulated 'ritual' landscape?
- What is the nature of the changing environment throughout prehistory, especially prior to, and during the time of the Neolithic and Bronze Age ritual activity on the Oxford promontory?

Norman, Medieval and Post-Medieval

- Are there opportunities for the use of stratigraphic sequences and scientific dating techniques to refine archaeological ceramic and other relative dating chronologies?
- How did patterns in material culture change after the conquest, in what way was Norman culture influential? Can the impact of Norman production or decoration techniques be identified and studied?
- What was the pace and character of suburban development around the walls during the Norman period?
- Within the urban and suburban area can further urban patterns of tenement subdivision or alteration be identified?
- What pattern of suburban growth and redevelopment in the post-medieval period can be identified in the archaeological record?
- Can identification of cobb walls and stone footings help establish zones of wealth between or within intra- and extra-mural parishes?
- Can we further establish the origins and development of urban housing types plan, gables and ridges in relation to roads?
- What can the patterning of waste disposal tell us about the wealth and specialisms of different urban and suburban areas?
- What can studies of environmental data, artefacts and structural remains tell us about variations in diet, living conditions and status?

2.3 Methodology

- 2.3.1 Modern overburden was removed using a mechanical excavator fitted with an appropriately sized toothless bucket, in spits of no more than 0.15m in depth. This was undertaken under the control of a suitably qualified archaeologist. Excavation was halted when either the top of undisturbed natural or the first significant archaeological horizon was revealed.
- 2.3.2 Where appropriate a machine was used to facilitate the bulk removal of selected deposits and features, including the existing turf, flower beds and car park and garage surfaces, historic garden soils, fills of modern services, demolition and dumped deposits.
- 2.3.3 A number of remains were encountered in the excavation at levels above any significant archaeological horizon, these related to buildings visible on 19th century maps. A mechanical excavator was used as detailed above to reveal these structures. The exposed archaeology was then hand cleaned to reveal its form and character and to define features such as structures. Once revealed and subject to initial hand cleaning the remains were mapped by the assigned Survey Team using an Electronic Total Station. All survey was conducted in OS co-ordinates and related to Ordnance Datum. All such structures were then recorded and photographed.
- 2.3.4 When, following machine excavation, a significant archaeological horizon was revealed, a pre-excavation site plan was prepared. Following this any features were excavated and recorded according to standard OA methodology. This included the

sampling of features for dating evidence and environmental samples together with drawn plans and sections and photographs.

3 RESULTS

3.1 General soils and ground conditions

- 3.1.1 Ground conditions throughout the excavation were generally good, and the trenches remained reasonably dry throughout. Archaeological features, where present, were easy to identify against the underlying natural geology of terrace gravels.
- 3.1.2 The underlying terrace gravel was encountered at a depth of 0.75-1.20m below ground level. The gravel was overlain by a 0.2-0.4m deep layer of reddish brown clayey silt, representing wind-blown loess, except in the west and north-west parts of the site, where it had been removed by post-medieval quarrying, and in the central part, where it had been truncated during construction of the Acland Hospital buildings.
- 3.1.3 A number of ovoid features filled with a clean silty clay proved on excavation to be natural features.

3.2 Roman period

- 3.2.1 Ditch 363 (Fig. 4, section 300; Plate 1), which extended across the north-eastern corner of the site on a NW-SE alignment, produced a single tiny sherd of Roman pottery. The ditch lay on an alignment that was not shared by any later features and was cut by 19th century quarrying at the eastern edge of the excavation area. It was a shallow feature, only 0.4m deep, and was exposed for a total distance of 11m. A ditch (364) on a similar alignment 7m further south may be contemporary but produced no datable material apart from a small sherd of glass that is either Roman or post-medieval.

3.3 Medieval period

11th century

- 3.3.1 Medieval activity may have begun as early as the 11th century, since pottery of this date was recovered from the lower fills of pits 352 and 706 and the backfills of post-medieval quarries. However, no features could be attributed to this phase.

13th century

- 3.3.2 During the 13th century a boundary ditch (528) was established near the western edge of the excavation area and a group of pits to the east may be of similar date. A large area of quarrying in the south-western part of the excavation area may also have been medieval in origin.
- 3.3.3 The ditch (Fig. 4, sections 500, 502 and 504; Plates 2 and 3) extended on a NNE-SSW alignment that lay parallel to, and c 13m east of the current alignment of Woodstock Road. It exhibited two phases. The initial ditch had steeply sloping sides and a flat base, measuring up to 1.8m wide and 1m deep. It was interrupted by an entrance 3.1m wide, defined by a pair of rounded terminals (Plate 3). The ditch was subsequently recut as a continuous boundary. This iteration had less steep sides and a concave base and measured up to 2.8m wide and 1.2m deep. Pottery from both phases of the ditch dated from the 13th century and small quantities of bone and peg tile were also recovered.

- 3.3.4 To the east of the site several medieval pits were found which were dated to the 13th century. Some of these features also contained residual 11th century pottery within their upper fills suggesting some local activity post-conquest.
- 3.3.5 The largest feature was pit 706, a sub-rectangular feature that measured 4.0 x 2.6m (Fig. 4, Section 700; Plate 4). Excavation of the feature showed it to have steeply sloping sides with a pronounced change of slope halfway down. Because of safety considerations the excavation was stopped at a depth of 1.1m without reaching the base. The lower part of the feature was filled with a clayey silt (705), in excess of 0.4m deep. Sand and gravel inclusions suggest that this deposit was a mixture of washed in soils and slumped natural gravels. The remainder of the pit appeared to have been deliberately backfilled with redeposited soils and domestic refuse (704). Fragments of bone together with abraded tile, sherds of pottery, a corroded iron nail and a possible copper alloy belt end or bookstrap were recovered. The primary fill (705) contained late 11th century pottery and upper fill (704) contained 13th century pottery. As this feature was not bottomed it is difficult to date precisely: it may have been dug during the 11th century and filled in during the 13th century or it may have been a 13th century feature with residual 11th century pottery.
- 3.3.6 Close to pit 706 were two sub-circular pits (328/352 and 359). Pit 328/352 measured 3m in diameter and 1.18m deep (Fig. 4, section 315; Plate 5). This vertical-sided pit was filled with a sequence of six tip lines (353-358). Pit 359 was similarly steep-sided but somewhat smaller, measuring 0.9m in diameter and 0.9m deep (Fig. 4, section 316; Plate 6). It had a single fill (360).
- 3.3.7 Pits 328 and 352 were sealed by a 0.28m deep layer of reddish brown clayey silt (307). Pottery recovered from this layer dated from the 13th or 14th century. It may represent a medieval cultivated soil.
- 3.3.8 Most of the south-western corner of the excavation area was occupied by a large, irregular feature (420) that measured in excess of 20 x 15m and up to 1.5m deep (Plate 7). This has been interpreted as a probable gravel quarry. Sealing the base of this feature was very silty deposit containing lenses of sand and gravels up to 0.8m in depth (424) which produced fragments of green glazed pottery dated to the 13th century. Its composition suggests that it was a mixture of erosion and soils that had been washed in when the quarry was still open. A layer of silty loam up to 0.4m thick (425) had accumulated over this, again suggesting that the quarry was still open. Similar layers of silty loam had built up over this (426, 427 and 428), all appearing to indicate that this area was inactive during this period. Contexts 426 and 428 produced further fragments of 13th century pottery. Following this period of inactivity, a sequence of deliberate backfilling was undertaken levelling the site (429, 430, 431, 432, 433 and 434), using imported material.

16th century

- 3.3.9 Layer 440, which was observed in the south-western part of the site and was cut by 19th century pit 439, contained a single sherd of 16th century pottery as well as a small quantity of animal bone and oyster shell. The layer was 0.4m thick and may represent a former soil layer, although given the small size of the finds assemblage it is not possible to be certain whether it was 16th century or later in date.

3.4 Post-medieval period

17th century

- 3.4.1 Two pits (400 and 410) were dug into 16th century layer 440 in the south-western part of the excavation area, where they had been preserved within a break in the later quarrying. Pit 400 (Fig. 5, section 400) measured 2m wide and 0.8m deep. The bottom fill comprised a 0.2m thick layer of silty sand (413), probably formed by slumping/erosion of the sides. The remainder of the pit was filled with a layer of clay silt (406) from which were recovered the stem of a 17th century clay tobacco pipe and residual pottery sherds dating from the 13th century.
- 3.4.2 Pit 410 (Fig. 5, section 401) measured 1.5m wide and 0.8m deep. It contained two fills (411 and 412). Fill 411 contained pottery dating from the 17th century.

18th-mid 19th century

- 3.4.3 There were a number of 18th-mid 19th century gravel quarries across the site, some of which ran adjacent to Woodstock Road to the west of the site and parallel with Banbury Road to the east.
- 3.4.4 A large area of gravel extraction pits was situated adjacent to Woodstock Road at the western edge of the excavation area. The earliest pits were situated closest to the road with the later pits extending towards the east. All the extraction pits had been backfilled with a mixture of redeposited and imported material that produced artefacts dating to the late 18th-19th century.
- 3.4.5 A second area of quarrying was situated east of ditch 528. Quarrying here appears to have been less piecemeal in nature and formed a continuous excavation that extended throughout the length of the later western range of Acland Hospital. Finds recovered from the fills suggest that the quarrying was likely to be of 19th century origin.
- 3.4.6 To the east of the site were gravel extraction ditches aligned alongside Banbury Road. These extended approximately 10m in from Banbury Road and along the whole of the eastern edge of the excavation area.

3.5 Modern

Northgate House

- 3.5.1 Part of the foundation of Northgate House, constructed c 1846, was seen in the northern part of the site. Particularly prominent were two large cellars (105, 117; Plate 8). Each had a stone wall and had been backfilled with a loose mixture of demolition material. The notably inferior stone with which cellar 117 had been constructed suggested that it was associated with an outbuilding rather than part of the main residence.
- 3.5.2 A large concentration of pits was observed to the south of the site, many of which lay beneath the southern part of Acland Home (constructed c 1907) and must therefore have been associated with Northgate House. All these features contained similar fills composed of redeposited soils and domestic refuse such as ash, animal bone, fragments of clay pipe and sherds of 19th century pottery. This group included a particularly large feature (620) that truncated some of the earlier pits. The feature was

rectangular in plan and measured 9.0 x 2.9m and c 0.75m deep. Built within this was a rectangular tank consisting of a cement base edged with a brick wall 0.5m wide built using plain machine-made bricks, 0.225m x 0.1m x 0.068m in size, laid using Flemish bond and a lime mortar. The interior of the feature had been backfilled with a loose sandy silt containing much domestic refuse including animal bone, glass, fragments of 19th century pottery and possible demolition debris including brick and stone. The function of the feature is unclear, but its location makes it unlikely to be a cess pit and it is probably a garden feature such as a fish pond.

- 3.5.3 A large rectangular pit with a possible stone lining was situated in the north-western part of the excavation area (559). It measured 1.9m wide and up to 1.4m deep and may have been a cess pit, associated either with Northgate House or with the adjacent Royal Oak public house.
- 3.5.4 A group of features interpreted as planting pits were uncovered in the central part of the site, and are likely to represent garden features associated either with Northgate House or the subsequent hospital. They appear to represent a large central feature, presumably the location of a substantial tree, surrounded by a ring of smaller pits.

Acland Home

- 3.5.5 The foundation of Acland Home overlay the remains of Northgate House and formed four ranges enclosing a rectangular quad. The footings of the associated Lodge were recorded in the north-western corner of the site, fronting onto Woodstock Road. Numerous service trenches associated with the hospital extended throughout the site and truncated earlier features.

4 DISCUSSION

- 4.1.1 The site had been subject to extensive truncation during recent centuries, arising from gravel quarrying and the construction of Northgate House during the 1840s and the subsequent Acland Hospital. Nevertheless, limited evidence survived for activity during the prehistoric, Roman, medieval and early post-medieval periods.

Prehistoric period

- 4.1.2 Prehistoric activity was represented by a single earlier prehistoric flint.

Roman period

- 4.1.3 Ditch 363 contained only a single very small sherd of Roman pottery, but the early date of the feature was also indicated by its NW-SE alignment, which clearly differed from the orientation of later features. It is likely to be a field boundary, and the paucity of artefactual material would suggest that it is situated a considerable distance from the associated settlement. Features on a similar alignment have been recorded as cropmarks in University Parks, c 100m east of the site.

Medieval

- 4.1.4 Medieval activity dated from the 11th-13th centuries and was situated at either end of the site, in proximity to the frontages of Woodstock Road and Banbury Road. The site would have lain beyond the limits of urban development at this time; the suburb of St Giles was established outside the north gate of the city before 1279 (Crossley and Elrington 1979, 25-6) but is not thought to have extended north of the church. The small group of pits and sparse artefactual assemblages contrast with the dense concentration of features within the occupied areas further south (eg Wallis 2014, 159-83) and is likely to represent off-site activity rather than domestic occupation. Alternatively, the features may be associated with an outlying farmstead rather than with the suburb; there are references in the historical records to several such settlements, including the hamlet of 'Buricroft', whose name suggests a proximity to the barrow cemetery (Crossley and Elrington 1979, 275). The location of the hamlet is generally placed further north than Acland Hospital, near Radcliffe Infirmary (ibid., 276), but recent excavations there found no evidence for settlement (MoLA 2011).
- 4.1.5 It is possible that ditch 528 was a roadside ditch associated with Woodstock Road, in which case the road must have either been considerably wider than its current iteration or situated somewhat further east, or alternatively it may represent an agricultural boundary that extended parallel to the road. Quarrying in the south-western corner of the site may have begun as early as the 13th century, since the only pottery recovered was attributed to the 13th century, but only a small quantity of sherds was recovered and they may therefore be residual. The site and the surrounding landscape was certainly employed as ploughed fields during the medieval and later periods, as demonstrated by soil layers recorded by the excavation and the depiction of the area on historic maps (Fig. 3).

Post-medieval

- 4.1.6 No evidence was found for the postulated Civil War bastion that de Gomme's contemporary map indicates should be situated close to the south-western corner of the site. Much of this area had been disturbed by earlier quarrying and it would appear that the bastion lay further south. It may be significant that the quarry, which appears to have lain open and abandoned for some time, was backfilled at about this time, since it was common practice to level the ground outside the defences in order to create a clear field of fire and deny cover to attacking forces (Munby and Simons 2005, 201). It could be speculated that the location of pits 400 and 410 would be consistent with a function as 'pitfalls' - mantraps dug as additional defences in front of the main rampart in order to impede any attempt to storm the earthwork – similar to examples recently excavated at the Tinbergen Building, South Parks Road (Simmonds, Bashford, Martin and Pickard forthcoming). However, they are rather shallow for such features and probably had a more mundane function.
- 4.1.7 The site was farmland until the mid-19th century, although it was evidently exploited for gravel extraction on an increasing scale, presumably to provide construction material for road surfacing and the urban expansion of Oxford. This activity has been noted elsewhere along the Woodstock Road, particularly during work at St Antony's College in 2015 (OA 2015). This land use came to an end with the construction of Northgate House and subsequently the Acland Hospital.

APPENDIX A FINDS REPORTS

A.1 Pottery

By Paul Blinkhorn

Introduction

A.1.1 The pottery assemblage comprised 832 sherds with a total weight of 52,649g. It was mostly of early modern date, but small quantities of Romano-British, medieval and early post-medieval material were also noted. The pottery occurrence by number and weight of sherds per context by fabric type is shown in Tables 1, 2 and 3. Each date should be regarded as a *terminus post quem*.

Medieval and Earlier

A.1.2 The Romano-British and medieval pottery assemblage comprised 78 sherds with a total weight of 886g. The estimated vessel equivalent (EVE), by summation of surviving rim sherd circumference, was 0.32. The post-Roman material was recorded using the conventions of the Oxfordshire County type-series (Mellor 1984; 1994), as follows:

- OXAC:** Cotswold-type Ware, AD 975-1350. 2 sherds, 5g, EVE = 0.
OXBF: North-East Wiltshire Ware, AD 1050-1400. 11 sherds, 157g, EVE = 0.18.
OXY: Medieval Oxford Ware, AD 1075-1350. 23 sherds, 200g, EVE = 0.
OXBK: Medieval Shelly Coarseware, AD 1100-1350. 3 sherds, 41g, EVE = 0.02.
OXAM: Brill/Boarstall Ware, AD 1200-1600. 21 sherds, 273g, EVE = 0.08.
OXBN: Tudor Green Ware, late 14th-16th century. 2 sherds, 7g, EVE = 0.04.
OBX: Late Medieval Brill/Boarstall Ware, 15th-early 17th century. 13 sherds, 195g, EVE = 0.
RB: Romano-British. 3 sherds, 8g

A.1.3 The range of medieval wares is fairly typical of sites in and around the city of Oxford. The complete lack of well-known late Saxon wares such as St Neots Ware (Oxford fabric OXR) and Oxford Shelly Ware (fabric OXB) along with a paucity of OXAC suggests that there was very little post-Roman activity at the site before the late 11th century, and, in all likelihood, before the 13th century, as just two medieval assemblages of three sherds in total date to before that time. The pottery that is present suggests that there was fairly low-level activity at the site throughout the medieval period. Most of it appears reliably stratified with just four sherds (39g) being residual. Nearly all the stratified pottery of this date was recovered from quarry pits or a ditch, and there were very few refits, indicating that it is all the product of secondary deposition.

A.1.4 The medieval assemblage is fairly unremarkable, consisting in the main of body sherds from jars, bowls and glazed jugs. A single non-rim fragment of a lamp and another from a possible roof-finial or louver was also noted. The latter was too small to ascertain the original form of the object. Roof finials and louvers are well known from medieval England (eg Dunning 1967), but are extremely rare finds in Oxford, with no published parallels known.

A.1.5 Just seven rim sherds were present, four from jars (EVE = 0.18), one from a bowl (EVE = 0.02), another from a jug (EVE = 0.08), and a third from a 'Tudor Green' lobed cup. The jars were all in fabric OXBF, with the bowl in OXBK and the jug in OXAM, as was the lamp.

Post-medieval and modern

A.1.6 The post-medieval and modern wares were recorded using the conventions of the Museum of London Type-Series eg. Vince 1985, as follows:

BBAS: Black Basalt Ware, AD 1770-1900. 2 sherds, 29g
BORDG: Green-glazed Border Ware, AD 1550-1700. 1 sherd, 12g
BORDY: Yellow-glazed Border Ware, AD 1550-1700. 2 sherds, 25g
BRILL: Brill Post-medieval Wares, AD 1550-1800. 4 sherds, 82g
CHPO: Chinese Porcelain, AD 1650+. 3 sherds, 97g
CREA: Creamware, AD 1740-1830. 211 sherds, 7166g
DERBS: Derby Stoneware, AD 1700-1900. 2 sherds, 36g
ENGS: English Stoneware, AD 1700-1900. 59 sherds, 15354g
HORT: Horticultural Earthenwares, 19th-20th century. 16 sherds, 904g
METS: Metropolitan-type Slipware, AD 1480-1900. 1 sherd, 88g
MPUR: Midland Purple Ware, AD 1400-1700. 1 sherd, 33g
PEAR TR: Transfer-decorated Pearlware, AD 1770-1830. 73 sherds, 1594g
PMR: Post-medieval Redware, AD 1550+. 80 sherds, 9613g
POCO: Portuguese Micaceous Coarseware, AD 1600-1800. 1 sherd, 263g
REFW: Refined Whiteware, AD 1800-1900. 19 sherds, 3106g
SPAL: Spanish Lid, AD 1500-1800. 1 sherd, 410g
STMB: Staffordshire-type Mottled Ware, AD 1680-1800. sherds, 797g
STSL: Staffordshire Slipware, AD 1650-1800. 1 sherd, 20g
SWSG: Staffordshire White Salt-Glazed Stoneware, AD 1720-1800. 12 sherds, 518g
TGW: English Tin-Glazed Ware, AD 1600-1800. 21 sherds, 539g
TPW: Transfer-printed Whiteware, AD 1830-1900. 237 sherds, 10846g
YELL: Yellow Ware, AD 1840-1900. 5 sherds, 199g

A.1.7 The range of post-medieval wares is fairly typical of sites in the Oxford region. The range of wares and their occurrence suggests that activity at the site continued at a similarly low level as in the medieval period until the late 18th century or thereabouts, after which time large quantities of pottery were deposited.

A.1.8 The 16th-17th century pottery was somewhat sparse. Like the earlier material, it mainly occurred in the back-fills of pits, and there were few refits, indicating that it is all the product of secondary deposition. There are large quantities of PMR, although all but six sherds (324g) of it were deposited in 18th-19th century contexts and probably date to that time, as relatively little other residual early post-medieval pottery occurred was noted. The only other early post-medieval pottery type which was represented by more than a handful of sherds was TGW, but, again, very little of it occurred in contexts of 17th century date (four sherds, 46g). Much of it in the later contexts had plain white or pale blue glazes, which is typical of the later products of

the tradition (Orton 1988, 327), so most of the sherds from 18th-19th century contexts are likely to be broadly contemporary.

- A.1.9 Two sherds worthy of comment are the fragments of Portuguese Micaceous Coarseware and the 'Spanish Lid'. Such pottery are rare finds in Oxford. The former is a sherd from a fairly large vessel with a flat base. It is not from the well-known 'olive jars' of the 17th-19th century, as such vessels usually had rounded or concave bases (James 1988, fig. 1). The fabric is fairly coarse, unlike like that of the lid. Both have a white external 'throwing slip' which is typical of the tradition on the outer surface. Although Iberian coarsewares are fairly well-known at English ports, especially Southampton (eg Brown 2002, fig. 32), no direct parallels for these vessels could be found in England, although it seems likely that the jar was an 'oil jar' similar to the more well-known Italian Montelupo types (Ashdown 1972). A fragment of such a vessel was recently noted from excavations in St Aldates (Blinkhorn 2017).
- A.1.10 The 18th and 19th century material is a very typical domestic assemblage of the period, with large quantities of PMR, mostly in the form of large jars and bowls, along with table wares in white stoneware, Creamware and Pearlware in the 18th century contexts and transfer-printed earthenwares and bottles and jars in stoneware along with a few pieces of flower-pot in the 19th century groups. A large fragment of a Pearlware plate from context 321 has 'Exeter' painted on the base, indicating that it may have once belonged to that college. Other excavations in Oxford, at St Ebbe's, have yielded pottery marked with the names of colleges, including "Exeter Coll" (Mellor and Oakley 1984, plate 4 no. 1), suggesting that old pottery was either given away or sold to, or pilfered by, members of the college's domestic staff (*ibid.*, 209). Other vessels from this site were noted with initials painted on them. A Creamware plate from context 303 had 'TC' painted on the rim, and a large REFW bowl from context 627 had a 'K' on the side.
- A.1.11 A number of vessels had maker's marks on the base. Most of those that were identified were of mid-late 19th century date. The earliest, from context 323 was a Creamware vessel stamped with a 'Davenport' mark datable to 1793-1810.

Table 1: Pottery occurrence by number and weight in g of sherds per context by fabric type, Romano-British and medieval groups

Cntxt	RB		OXAC		OXBF		OXY		OXBK		OXAM		OXBX		OXBN		Date
	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	
307					1	22	2	19			1	10					13thC
308	1	1															RB
354					1	27	8	59	3	41	1	41					13thC
358					2	28											M11thC
390									7	56	3	15					13thC
403					1	17	1	13					8	90			15thC
406											1	15					13thC
413											1	17			2	7	15thC
417											1	28					13thC
424					1	18					1	7					13thC
426			1	1							5	27					13thC
428											1	18					13thC
504													2	28			15thC
523											3	11					13thC
525	2	7															RB
527											1	69					13thC
704					5	45	2	14			1	9					13thC
705							1	10									L11thC
Total	3	8	1	1	11	157	14	115	10	97	20	267	10	118	2	7	

Table 2: Pottery occurrence by number and weight of sherds per context by fabric type, 16th and 17th century groups

Cntxt	Residual		TGW		BRILL		PMR		ENGS		BORDY		Date
	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	
202							1	233					M16thC
411	2	73	3	14			1	4					17thC
440	1	4									1	13	M16thC
502			1	32			2	5	1	7			L17thC
541					1	17							17thC
561							2	82					M16thC
Total	3	77	4	46	1	17	6	324	1	7	1	13	

Table 3: Pottery occurrence by number and weight in g of sherds per context by fabric type, 18th and 19th century groups

Cntxt	Residual		STMB		BRILL		PMR		CHPO		ENGS		DERBS		CREA		BBAS		SWSG		PEAR TR		TPW		REFW		YELL		HORT		Date	
	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt				
102																							10	150	3	409					19thC	
113	1	12													1	34															M18thC	
115																							5	457	1	88					25 Aug 1862	
125																							3	24			1	2			M19thC	
203	5	138												1	21																19thC	
207																							1	3							19thC	
209	2	96										2	327										2	148				1	49			M19thC
218							1	321								1	7															M18thC
221							2	111								1	4															M18thC
229																5	152						6	59	1	17						19thC
302	1	4			1	45	7	932				4	419			22	701			1	18			6	117							19thC
303							3	68	1	10						51	1694			1	18	23	297	12	176				1	103		19thC
305*					1	3	6	993								16	1250					12	401	16	309							19thC
316																15	453					20	386	4	33							19thC
318							7	1111								1	74															M18thC
321	2	52					2	937	1	15	3	124				6	348					2	114	5	97							19thC
323	4	176					17	2160			4	679				50	1591	1	18	4	258	8	254	31	708					3	136	19thC
325							4	844			4	1303				1	44							1	62				1	344		19thC
329	1	12					2	38			1	4				10	23							1	8						19thC	
332																3	20							1	2							19thC
335	2	120	5	668			3	319			3	522				14	658					3	46	4	77				1	153		19thC
342																							1	8								L18thC
436											1	77				1	55							17	197							19thC
438																								1	55							19thC
503									1	72	2	294														1	25					19thC
513																													1	15		19thC
515	2	41					3	140								2	27							4	70							19thC
533											5	1979												9	1251							19thC
534																								3	82			1	61			M19thC

Cntxt	Residual		STMB		BRILL		PMR		CHPO		ENGS		DERBS		CREA		BBAS		SWSG		PEAR TR		TPW		REFW		YELL		HORT		Date
	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt			
536											15	6878											9	1242	7	1821					1879
539											2	602																		19thC	
543																						1	6			2	87	3	30	M19thC	
545					1	17	1	47						4	8													1	36	M18thC	
549																						5	213							19thC	
560	4	50	1	80			1	9			1	11							1	16	1	26								L18thC	
562							5	129																				1	14	18thC	
576														4	19	1	11						1	10							19thC
603																							2	5							19thC
605							1	44					1	15									1	4							19thC
618							1	670			4	612											42	3604	3	728					1837
621	1	1					1	9						2	3								2	20							19thC
623	1	9									1	3											1	2				1	25	19thC	
625																							1	10							19thC
627							6	396			2	97											1	1053				2	35	19thC	
629														1	1								7	152							19thC
631																									4	35					19thC
701			1	49							4	1416																			19thC
710	1	1					1	11																					1	13	18thC
Total	27	712	7	797	3	65	74	9289	3	97	58	15347	2	36	211	7166	2	29	12	518	73	1594	237	10846	20	3123	5	199	16	904	

*- also produced the single sherds of F428 and F429

A.2 Clay tobacco pipes

By John Cotter

Introduction and methodology

A.2.1 A total of 65 pieces of clay pipe weighing 411g were recovered from 25 contexts. These have been catalogued and recorded on an Excel spreadsheet. The catalogue records, per context, the spot-date, the quantity of stem, bowl and mouth fragments, the overall fragment count, weight, and comments on condition and any makers' marks or decoration present. The minimum number of bowls per context was also recorded. Full catalogue details remain in the archive. Most of the pipe bowls can be paralleled with the local Oxford typology based on pipes from St Ebbe's church (Oswald 1984), although this has been updated where necessary. Other bowls are identified, where possible, by codes based on Atkinson and Oswald's (1969) London pipes typology with bowl types assigned to an abbreviated code (eg AO22). As the bowl forms and marks from this site can be paralleled elsewhere none has been illustrated.

Summary of the assemblage

A.2.2 The pipes are mostly in good condition, generally fresh and unstained, with a fairly high proportion of complete bowls (or complete profiles) present and many quite long pieces of stem, up to 104mm long. Some degree of residuality was noted in a few contexts. In total there are 25 pieces of pipe bowl (from 24 separate pipes), no mouthpieces, and 40 stem fragments. Six pipes bear a maker's mark, of which the latest four show decoration. Evidence for smoking on most of the bowls demonstrates that they represent occupation debris. In terms of pipe bowl quantity, the assemblage has quite a strong late 18th- to 19th-century dating emphasis, but also a smaller peak in the late 17th and early 18th centuries. The earliest bowl identified is of Oxford type B (c 1650-90) – the commonest bowl type found in 17th-century Oxford. A few small stem fragments (probably residual) might possibly be even earlier than this, but cannot be dated any closer than the 17th century. A breakdown of bowl types is provided below in Table 4.

Table 4: Number of pipe bowls by type and date

Bowl Type	Date	No. Bowls
Oxford: B	1650-90	1
Oxford: B (developed)	1670-1730	1
Oxford: C	1690-1720	4
West Country style (London AO23, Richard Cutts, c 1690-1731 maker)	1690-1720	1
London: AO26	1730-1800	2
Oxford: D	1750-1790	10
London: AO28	1820-60	5
Total Bowls		24

A.2.3 The highest number of pieces from any context is that from context 203, which produced 18 pieces (weight 156g), including 11 bowls. The pipes from this context,

however, are of mixed date, suggesting redeposition. The seven stem fragments from 203 include fresh slender pieces up to 90mm long – mostly of late 18th- to 19th-century date – and one in a clean white fabric which is probably 19th century. Of the bowls from 203, four are of Oxford type C (c 1690-1720), and five of type D (c 1750-90, while another is of London type AO26 (c 1740-1800, or possibly even AO27, c 1780-1830?).

- A.2.4 One of the five bowls counted as a type D here is complete and of somewhat hybrid early/mid 18th-century style, with a good quality burnish. It has a broad splayed heel bearing a moulded maker's mark 'T/H'. The style is too early to be one of the 'T Huggins' (father and son?) pipemakers from Banbury, who were active c 1851-5 (Oswald 1984, 256), these being the only identified individuals with these initials in the existing list of Oxfordshire pipemakers. It seems more likely that the initials on this pipe belong to one of possibly several unidentified 'TH' makers operating in the county during the 18th century; it is closely matched by a 'TH' marked pipe from St Ebbe's, Oxford, dated to around c 1770-80 (*ibid.*, fig. 56.34B).
- A.2.5 The earliest marked pipe is from context 209. This comprises a damaged West Country bowl profile with a stubby conical spur with 47mm of stem still attached and a very high quality burnish (closest match, London AO23). It has a faint maker's mark on top of the stem (typical of West Country pipes), comprising a roughly oval area containing the name 'RICH/ARD/CVTTS', identifiable as Richard Cutts of East Woodhay, Hampshire, who was active c 1690-1731. This mark does not appear to have been previously noted from Oxford before now but it is fairly widespread in the West Country with examples known, for instance, from Newbury in Berkshire (Cannon 1997, 131) and Marlborough in Wiltshire (Atkinson 1965, fig. 2.75). An unmarked spur bowl from 305, with spur missing, may be another Hampshire or possibly even a Broseley (Shropshire) product of slightly later date. The form is fairly close to London AO26. It has an unusually fine white fabric similar to Broseley pipes. The rim is clearly bottered (button-trimmed) suggesting an end-date of c 1720/30, and the form is similar to other mid-18th century Broseley-type bowls from Oxford (Oswald 1984, fig. 54.20-21 and 25A-B).
- A.2.6 The four remaining marked pipes (from 503 and 515) are probably the latest pieces identified from the site. These are typical 19th-century spur pipes (London type AO28). All four have moulded acorn seams on the front and back of the bowl and the maker's mark 'G/N' on the spur, by the Oxford maker George Norwood, active c 1852-63. This is one of the commonest maker's marks found on 19th-century pipes in Oxford (Oswald 1984, fig. 55.26B).

A.3 Glass

By Ian Scott

Introduction

- A.3.1 The glass was rapidly scanned, sherds counted, weights recorded and the glass identified and spot-dated. The glass assemblage comprises just 88 fragments but weighs in total over 13kg. The glass is almost exclusively from vessels. There are 83

sherds of vessel glass weighing a total of 13,362g, and just five pieces of window glass weighing a total of 159g. The latter includes a bullseye from the centre of disc of crown glass weighing 136g.

- A.3.2 The assemblage comprises largely late 18th- to early 19th-century glass (N sherds=30; Wt= 4753g, av. sherd wt= 158.4g), and late 19th- to early 20th-century glass (N sherds= 43; Wt=7268g; av. sherd wt=169g) (Tables 5 and 6). The only glass that could possibly date earlier than the mid to late 18th century are two small sherds of window glass (W= 10g) from context 113.
- A.3.3 It is clear that most of the glass had been dumped, possibly in two separate episodes, the first comprising late 18th- to early 19th-century glass, much of it large pieces of wine bottles, and the second episode comprising late 19th- or early 20th-century glass. Most of the latter was recovered from contexts 533 and 536. The later assemblages include a number of complete or near complete bottles. Amongst these the more interesting are a complete Codd bottle embossed for Blake & Co Eynsham (115), a complete soda bottle embossed for 'BEDFORD & Co OXFORD' and another Codd bottle embossed 'JONES BROTHERS OXFORD & READING' with the image of a rowing eight (both 533). There is a dark cobalt blue hexagonal section bottle, moulded but hand-finished, and embossed 'NOT TO BE TAKEN' (536) and a complete triple-tiered ink bottle embossed 'JUDSON & SONS / DOUBLE GUM / LONDON' (629). All these bottles date to the later 19th century or at the latest the very early 20th century.

Table 5: Quantification of glass by fragment count

Context	Post- med	M18th- L18thC	L18th- E19thC	E19th- M19thC	19thC	L19th- E20thC	20thC	Undated	Total
113	2								2
115					3				3
121			1						1
202			5						5
203			2						2
218								1	1
302		1	4						5
305			5						5
316			5						5
321			1						1
323			1						1
392								1	1
502								1	1
504								1	1
533				2		7			9
536						23			23
539						1			1
541			1						1
545						6			6
549						1		1	2
561			1						1
567						1			1
605								1	1
618			3			1			4
625			1						1
629						3			3
701							1		1
Total	2	1	30	2	3	43	1	6	88

Table 6: Quantification of glass by weight

Context	Post-med	M18th-L18thC	L18th-E19thC	E19th-M19thC	19thC	L19th-E20thC	20thC	Undated	Total
113	2								2
115					3				3
121			1						1
202			5						5
203			2						2
218								1	1
302		1	4						5
305			5						5
316			5						5
321			1						1
323			1						1
392								1	1
502								1	1
504								1	1
533				2		7			9
536						23			23
539						1			1
541			1						1
545						6			6
549						1		1	2
561			1						1
567						1			1
605								1	1
618			3			1			4
625			1						1
629						3			3
701							1		1
Total	2	1	30	2	3	43	1	6	88

A.4 Ceramic building material

By Cynthia Poole

Introduction and methodology

- A.4.1 A modest quantity of ceramic building material amounting to 71 fragments weighing 8728g was recovered, but only 18 fragments (795g) came from stratified contexts within medieval and 17th century pits, whilst the remainder was found in dumps of debris levelling 18th- to 19th-century gravel quarrying prior to construction of the hospital in the 19th century or modern deposits. The material ranges in date from possible Roman fragments to the 20th century and consists of broken fragmentary pieces, though much of it is in fairly fresh condition with few pieces heavily abraded.
- A.4.2 The assemblage has been fully recorded on an Excel spreadsheet in accordance with guidelines set out by the Archaeological Ceramic Building Materials Group (ACBMG 2007). Fabrics were characterised with the aid of x20 hand lens and medieval material was assigned to the Oxford fabric series, though much of the residual medieval tile in the dumped deposits was not absolutely typical and may indicate it was derived from outside of Oxford. A type series was not formulated for the later material, though a brief description of the fabric for each piece is recorded in the archive.

Medieval and 17th century pits

- A.4.3 The groups from medieval and 17th century pits consisted entirely of medieval roof tile, most of which were plain flat fragments probably from rectangular peg tiles and

characterised by a fairly rough, crude manufacture. The only surviving complete dimension was thickness, which ranged from 12-19mm. The majority of the tile was made in the common red coarse sandy fabric IIIB in use from the 13th- to 15th-century. Only one piece retained evidence of a circular peg hole 17mm in diameter, punched at a diagonal, and was the only piece made in the pink sandy fabric VIIB, distinguished by small shell or limestone inclusions. A tile with splatters of amber glaze on the exterior and knife trimming of the underside was probably part of a ridge tile of angular profile. The earliest piece was made in early fabric IB characterised by frequent small limestone grits, dating from late 12th- to mid-13th-century. The latest piece was made in fabric IVA/B, characterised by cream marl laminations and red iron oxide inclusions and probably produced in the south-east of the county from the 14th century.

18th-20th century quarry pits

- A.4.4 The assemblage was composed of a mixed range of products of widely varying dates and forms. The earliest are two fragments of possible Roman tile, one possibly the corner of an imbrex. Roof tile formed a significant component of the group. Medieval tile occurred in all the standard Oxford fabrics (IB, IIIB, VIIB, VIIBB, IVA/B) and included plain flat fragments, peg tile, curved ridge tile and a few pieces with splashes of glaze. One piece with a band of brown glaze with sharply defined boundary may have been a fragment of glazed peg tile. Later roof tile included a large half-round thick ridge tile, plain flat tile in fabrics that appear to derive from medieval groups III and IV. Fragments of modern roof tile included pieces of Stafford Blue tile and a cement roof tile.
- A.4.5 Brick occurred in red-orange sandy fabrics that also appear to have developed from the medieval groups III and IV. One with a narrow indented border, typical of early stock moulded bricks, measured 54mm thick and is of 16th-17th century date. A near complete 19th century brick measured 71mm thick, 109mm wide and c 227mm long and had a longitudinal hack mark along one stretcher face from stacking to dry. Other brick fragments are broadly of 17th- to 19th-century date.
- A.4.6 Of intrinsic interest were two glazed tiles and an architectural finial. All three of these items were made in a cream clay fabric that is similar to firebrick fabrics from Coal Measures clay: many of the major producers of decorative and glazed tiles such as Doulton, Minton and Wedgwood had their factories in the West Midlands, where both clay and coal were readily accessible. The two glazed tiles, one in a turquoise green and the other a dark red, formed mouldings 82 and 90mm wide, of the type used as a dado or edgings in late Victorian tiled buildings either on exterior street frontages or on interior fittings. A Wedgwood catalogue of 1878 advertises 'tiles for hearths, jambs and wall decorations' (van Lemmen 2000, 22).
- A.4.7 The finial base had a cylindrical hollow stem 76mm diameter with a narrow horizontal half roll moulding 12mm wide separating it from the base, where the stem flares out to form a foot 160mm in diameter. The foot has ribbing around the edge, possibly keying to aid attachment and on the stem above the moulding are a series of thin vertical lines inscribed into the surface. No evidence for the form of the upper section survives. It had split in half vertically and been held together by a copper wire twisted

around its stem. This suggests it was somewhere accessible for repair such as a garden balustrade or gate post, rather than on a roof.

A.5 Metal and worked bone objects

By Leigh Allen

- A.5.1 A total of nine metal objects and two worked bone objects were recovered from the excavation. A perforated copper alloy strip and an iron nail came from the upper fill of quarry pit 706, which produced pottery dating to the 13th century. The remaining metal objects come from contexts dating to the 18th/19th centuries and comprise a teaspoon (701), two moulded drawer/cupboard handles, a backplate (possibly from one of the handles) from 209, a modern light fitting (301) and three iron nails (113, 562 and 712).
- A.5.2 The worked bone object is a rectangular brush-back (L: 86mm) of composite construction recovered from a 19th century landscaping layer (302). The brush is made from two plates attached together by six copper alloy rivets. The lower plate has rows of circular holes in the underside to hold the bristles, the reverse has grooves in it for the copper alloy wires which held the bristles in place. The upper plate covers the heads of the tufts and the wires which secured them. The brush back is lightly polished through wear and bears the name 'Browning' in cursive script. Small brushes such as these have a variety of uses as nail, shoe or clothes brushes and this item was obviously valued enough to have been personalized by its owner. A brush of identical construction was recovered from excavations in London (MacGregor 1985, 183-184, fig 99).
- A.5.3 A rectangular bone handle from a modern table knife was recovered from the 19th century backfill of pit 628.

A.6 Worked stone

By Ruth Shaffrey

- A.6.1 A total of six pieces of stone were retained and submitted for analysis. Full details of these can be found in the project archive in the file OXK16-worked-stone-data.xlsx.
- A.6.2 Four pieces of stone are fragments of probable stone roofing – three of green slate (two fragments from 201 and one from 605) and one of limestone (323). None are diagnostically roofing but are typical roofing materials in Oxford.
- A.6.3 Two pieces of architectural white marble were recovered from context 115. They are probably wall veneer. One is a flat plain polished piece and the other is a carefully moulded piece. These have originated in a high-status building, of probable post-medieval date.

A.7 Flint

By Geraldine Crann

- A.7.1 A single flint was recovered during excavation, as a residual find in ditch fill 364. The size of the assemblage limits interpretation of the material, although technologically the blade removal scars suggest an earlier prehistoric date.

APPENDIX B ENVIRONMENTAL REPORTS

B.1 Environmental samples

By Sharon Cook

Introduction

B.1.1 Five bulk samples were processed. Given the paucity of remains from sample 1, from ditch fill 308, this report concerns only samples 2-5, all of which came from backfill deposits from a cluster of 13th century pits at the eastern end of the site.

Method

B.1.2 The bulk samples were processed in their entirety using a modified Siraf-type water flotation machine to 250µm (flot) and 500µm mesh (residue). The residue fractions were sorted by eye and all bone and artefacts removed while the flot material was sorted using a low power (x10) binocular microscope to extract cereal grains and chaff, smaller seeds and other quantifiable remains. Identifications were carried out using standard morphological criteria for the cereals (Jacomet 2006) and with reference to the Digital Seed Atlas of the Netherlands (Cappers *et al.* 2006) for identification of wild plant remains, as well as comparison with modern reference material. Classification and nomenclature of plant material follows Stace (2010).

B.1.3 Quantification of remains is as follows; cereal grains and the seeds of wild plants were only quantified for items of which more than half was present, this means that all cereal and seed counts may be used to reach an MNI (Minimum number of individual seeds). For legumes and nutshell fragments the count is for all observed fragments, this means these figures are not suitable for use in calculating MNI.

Results and discussion

B.1.4 Table 7 lists the taxa identified from each sample.

B.1.5 The condition of the charred material on the site is generally poor, with grain largely fragmented and presenting a 'clinkered' appearance. While charcoal is present, it is on the whole small in size with the volume of all flots except sample 101 comprising largely modern roots. A few hazelnut shell fragments are present within three of the four samples, providing evidence for the utilisation of wild resources.

B.1.6 Since the majority of charred grains are in extremely poor condition, most are unidentifiable to species. However, the few identifiable grains all appear to be wheat (*Triticum* sp.) and it would seem likely from general shape and size that the unidentified grains are also wheat. No chaff fragments are present but this is not unexpected as the date indicates that the wheat is most likely to be a free-threshing variety such as bread wheat *Triticum aestivum*.

B.1.7 A single large legume (>4mm) in sample 102 is likely to be a pea (*Pisum sativum*) but is too fragmented to positively identify.

B.1.8 The non-cultivated plant seeds are few in number. Some are weeds of arable land such as stinking mayweed (*Anthemis cotula*), which was common in the medieval period and is a plant typically found on heavy soils. Wild radish (*Raphanus raphanistrum*) is a common cereal crop contaminant even today. Although likely to have been accidentally harvested alongside the crop, these weeds can also be found on waste ground or in meadows. The single rush seed and the dock seed are both from plants which tend to prefer a damper environment; they are often found growing at the bases of ditches and in shady damp areas and are also likely to be present in neglected corners of fields. It would seem likely that the charred remains derive from general household waste, possibly the result of floor sweepings or yard clearance with general domestic waste.

Table 7: The charred plant remains

Sample no.		101	102	103	104
Context no.		360	353	704	354
Feature		359	352	706	352
Description		Pit fill	Pit fill	Pit fill	Pit fill
Date		13th C	13th C	13th C	13th C
Volume (L)		40	40	40	40
Flot volume (ml)		20	50	15	15
Flot analysed		100%	100%	100%	100%
Charcoal					
	>4mm	**	*	**	
	2-4mm	****	***	***	***
Cereal grain					
<i>Triticum sp.</i>	wheat	12#	2#		
<i>cf Triticum sp.</i>	cf. wheat	9#			2#
<i>Avena/Bromus</i>	oat/brome	3#		2#	1#
Cerealia	indet cereal	64#	5#	16#	6#
Chaff					
<i>Cerealia</i>	indet detached embryos	1			
Fruit, nutshell etc.					
Fabaceae	pea/bean		1#		
<i>Corylus avellana</i>	hazelnut shell	5#	1#	1#	
<i>Prunus cf avium</i>	wild cherry stone			1#	
Wild species					
<i>Vicia/Lathyrus sp. >2 mm</i>	vetch/vetchling/tare, etc	2#			
<i>Vicia/Lathyrus sp. <2 mm</i>	vetch/vetchling/tare, etc			1#	
<i>Medicago/Trifolium sp.</i>	medick/clover	7#	1#	3#	
<i>Rumex sp.</i>	docks				1#
<i>Anthemis cotula</i>	stinking chamomile	1	1	1	
<i>Juncus sp.</i>	rushes				1

Sample no.		101	102	103	104
Context no.		360	353	704	354
Poaceae	grass seeds (various)		1	1	
Other					
Indet.	seed/fruit			1#	1#
<i>Raphanus raphanistrum</i>	wild radish seed capsule		1#		
*1-4, **5-24, ***25-49, ****50-99, *****100+					
#Denotes fragmented or otherwise damaged/missing external details					

B.2 Animal Bone

By Lee G Broderick

Introduction

B.2.1 A total of 198 animal bones were recovered, mostly dated to the medieval and modern periods.

Medieval and 17th century

B.2.2 Specimens from these phases were recorded and analysed in full, using Oxford Archaeology's reference collection as well as standard identification guides and a diagnostic zone system (Serjeantson 1996, 194-223). Most of the material (NSP=77) was collected by hand but a substantial component (NSP=29) was obtained through environmental samples, which were sieved at 10mm, 4mm, 2mm and 0.5mm fractions.

B.2.3 The assemblage from these phases was generally in moderate condition, although tending to poor in the earlier phase. The material collected by hand was dominated by large mammals, including domestic cattle (*Bos taurus taurus*) and, in the seventeenth century, horse (*Equus caballus*). Caprine (sheep [*Ovis aries*] and/or goat [*Capra hircus*]) and pig (*Sus scrofa domesticus*) were also present.

B.2.4 The cattle specimens included a second phalanx with lipping, as well as a left calcaneum with superficial oblique chop marks to the medial side and a left femur with oblique chops through the caput and through the shaft, below the caput (Table 9). Large and medium mammal ribs also has oblique cutmarks on the blades. These are probably associated with table-waste, while the chopmarks on the cattle bones would be consistent with a very heavy, industrialised approach to breaking up a carcass during primary butchery, with an emphasis on completing the task quickly rather than neatly.

B.2.5 All of the environmental samples came from medieval layers and they substantially increased the diversity of the assemblage. As well as frogs/toads (*Rana temporaria*/*Bufo bufo*), which were also present in the hand-collected material from this phase, the samples contained pig, sheep and indet medium mammal in quantities nearly matching the hand-collected material, as well as several species of bird. The amount of medium mammal recovered, in particular, probably reflects the poor preservation on the site and the species profile is consistent with research suggesting

that recovery of smaller (but denser) elements of medium mammals, as well as small mammals and birds, is significantly increased when recovering material in this way (Payne 1972, 49-62).

- B.2.6 The bird specimens recovered included fragments of swan (*Cygnus* sp., fill 704 of pit 706) and possible partridge (cf. *Perdix perdix/Alectoris rufa*) and wren (cf. *Troglodytes troglodytes*, fill 354 of pit 352). The former may represent food waste whilst the wren probably represents a chance inclusion. Being very catholic in its preferences it is of little use as an environmental indicator, although it is a relatively uncommon find (probably due to its very small size).

18th-20th century

- B.2.7 The assemblage from these phases were assessed following current guidelines (Baker and Worley 2014). In essence, the assemblage was recorded with contexts, rather than individual specimens, forming the unit of analysis. As such, it is best seen as an indicator of potential and cannot be directly compared with the data from the earlier phases, although initial comparison of species presence is justifiable. Condition was approximated by assigning a value 'typical' of all the specimens in a given context and, on this basis, all contexts were recorded as being in moderate condition, (3 on the Behrensmeier (1978) scale).
- B.2.8 In many respects the assemblage from the later phases on the site continues the trends from the earlier phases, with large proportions of domestic cattle and horse, although caprine is the joint most common taxon (along with domestic cattle) in these phases. Also present in the assemblage from this period are cat (*Felis catus*), rabbit (*Oryctolagus cuniculus*) and domestic fowl (*Gallus gallus*). The last two are probably present as food waste whilst the former may be a scavenger or, by this time, a pet.

Discussion

- B.2.9 Given the small amount of material recovered from any phase it is not really possible to analyse any temporal trends or differences and it is entirely possible that species only present in small numbers in the later phases (i.e. cat, rabbit and domestic fowl) were also present on the site in earlier phases - as, indeed, they are on sites from this period elsewhere in Oxford.
- B.2.10 Other sites in Oxford, in fact, probably represent the best lens through which to understand the fauna on the site and it seems that a standardised meat supply and butchery practice was present in the city in the modern period. The most interesting aspect of the assemblage are the bird specimens from the environmental samples, with swan and partridge hinting at a possible high-status source for at least some of the material.

Recommendations for Retention

- B.2.11 Although a small assemblage like this would not normally be considered a priority for retention, the bird bones are unusual and so they, although fragmentary, should at least be considered for retention.

Table 8: NISP (Number of Identified SPecimens) and NSP (Number of SPecimens) figures for each phase of occupation on the site. Note that post 17th century AD and undated material was recorded differently from earlier phases (see text)

	Medieval	17thC	18th-19thC	Modern	Undated	Medieval (sieved)
domestic cattle	6	6	8	4	1	
caprine	2	1	8	4		2
pig	2			1		1
horse		4	2	6		
cat			2			
rabbit				1		
micro mammal						1
small mammal	2					
medium mammal	2	4				2
large mammal	21	17				4
Total Mammal	35	32	20	16	1	10
swan						1
domestic fowl				1		
partridge?						1
wren?						1
Total Bird	0	0	0	1	0	3
amphibian						1
frog/toad	4					1
common frog						1
Total Amphibian	4	0	0	0	0	3
Total NISP	39	32	20	17	1	16
Total NSP	45	32	44	47	1	29

Table 9: NSP with observed non-taxonomic indices from medieval and 17th century contexts

	Butchery marks	Pathologies	Gnawed	Ageing data
domestic cattle	2	1		8
pig				1
horse			1	1
medium mammal	1			
large mammal	2			
Total	5	1	1	10

Table 10: NSP with butchery marks and potential for epiphyseal fusion and biometric data from post-17th century contexts

	Butchery marks	Epiphyseal Fusion	Biometric data
domestic cattle	3	7	1
caprine	1	11	2
horse	2	5	3
other	3	-	1

Table 11: Specimens with pathological, burning and gnawing indices from post-17th century contexts

Gnawed	Pathologies	<50% SP Burned	>50% SP Burned
3	4	0	0

Table 12: NSP and total weight per context

Context	NSP	Weight (g)
113	1	2
121	1	23
125	1	53
204	1	3
302	1	16
303	3	1
318	2	192
329	2	74
353	4	23
354	6	50
358	8	85
360	22	96
403	25	1100
406	14	928
411	11	309
413	7	66
414	21	0
424	3	8
426	5	165
428	5	69
440	3	83
504	1	92
515	1	6
522	2	40
527	9	100
558	1	11
559	4	125
560	2	320

562	7	167
618	1	13
621	1	75
631	1	22
704	14	69
705	4	103
706	1	0
720	3	63

C.1 Fish remains

By Rebecca Nicholson

- C.1.1 Fish remains were extracted and identified from the residues and flots produced after flotation and sorting of the dried residues to 2mm. No fish bones were hand recovered on site. The sieved samples all come from 13th century pits 352, 359 and 706. Bone identifications are given in Table 13.
- C.1.2 Typically for an urban medieval assemblage, the most frequent bones are from herring (*Clupea harengus*) and eel (*Anguilla anguilla*). Herring were usually sold as preserved fish, pickled in brine or smoked. Preservation was essential to avoid the fish becoming rotten in the time taken to transport them inland. Eels may also have been preserved but would have been readily available in the rivers and mill leats around Oxford. The small cyprinid vertebra indicates the consumption of small roach (*Rutilus rutilus*) or related species; bones from these small freshwater fish occur fairly frequently in deposits from medieval Oxford and indicate the presence of a local fishery. Although 3-spined stickleback (*Gasterosteus aculeatus*) seem an unlikely food, bones from these fish also occur quite regularly in urban deposits where fish remains are well preserved; they may have been an accidental catch in fine nets but may have been cooked alongside other small fish as a result. Larger freshwater fish would have been expensive (Dyer 1988) but these small individuals are likely to have been sold very cheaply. Small gadids, in this case probably whiting, and flatfish were often sold as salted fish (Locker 2001), but whitefish spoil less rapidly than the oily herring so fresh fish may have been available in the town but would have had to be transported and eaten quickly if so.

Table 13: Number of identified fish bones

Sample	101	102	103	104	Total
Context	360	353	704	354	
Eel	3		4		7
Herring	11	3	6	2	22
Herring family	1				1
Cyprinid (carp family)	1				1
Gadid (cod family)	3				3
3-spined stickleback	1				1
Plaice, flounder or dab	1				1
Unidentified	1		1		2
Total	22	3	11	2	38

C.2 Marine shell

By Rebecca Nicholson

- C.2.1 A small assemblage of marine shell, all of European flat oyster (*Ostrea edulis* L.), was recovered by hand during the excavations, almost all from 17th-19th century deposits. The shells are generally in good condition but very small numbers of shells were recovered from individual contexts (Table 14) and so the value of the assemblage is very limited. The shells have been briefly recorded with notes on shell size, condition and any evidence of infestation, encrustation or other modification. This record will form part of the project archive.
- C.2.2 In general, the shells are of small size and regular, rounded shape suggesting growth in sheltered, probably managed, beds. This is true for the shell from medieval context 440 as well as those of likely later date, suggesting some mixing of material. Chalky deposits inside some shells hints at growth in estuarine conditions (MacDonald 2011). Evidence of infesting organisms is confined to several examples of internal tunnels or chambering probably caused by the polychaete worm *Polydora hoplura* and two shells with damage similar to that caused by the worm *Polydora ciliata*, as illustrated in Winder (2011).

Recommendations for Retention/Dispersal

- C.2.3 The shells do not warrant retention in the archive as they are few in number and of late date.

Table 14: Number and weight of shells

Context	Phase	Shell weight (g)	No. left valves	No. right valves
303	18th-19th century	20	1	0
305	18th-19th century	9	1	0
403	Modern	34	1	3
406	17th century	44	2	2
411	17th century	51	4	1
413	17th century	32	1	1
426	18th-19th century	6	0	1
428	18th-19th century	37	3	1
440	Medieval	13	0	2
515	18th-19th century	17	0	1
543	18th-19th century	17	0	1
561	18th-19th century	72	1	1
605	18th-19th century	20	0	1
621	18th-19th century	32	1	1

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APPENDIX E SITE SUMMARY DETAILS

Site name:	Former Acland Hospital Site, Keble College, Oxford
Site code:	OXK16
Grid Reference	NGR SP 5132 0639
Type:	Excavation
Date and duration:	March 2016 to January 2017
Area of Site	1.2ha
Location of archive:	The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with Oxfordshire County Museums Service in due course, under the following accession number: OXCMS: 2016.61
Summary of Results:	<p>The excavation uncovered a Roman field boundary ditch and two areas of medieval activity comprising a roadside ditch or boundary ditch parallel to Woodstock Road and a group of three pits on the Banbury Road frontage. The medieval features are situated beyond the northern limit of contemporary suburban development and may represent off-site activity such as gravel quarrying, although they could alternatively be associated with an outlying farmstead, such as the historically-attested hamlet of 'Buricroft'. Three pits dated to the 17th century were also recorded.</p> <p>The site was subject to extensive quarrying during the 18th and early 19th centuries before the construction of Northgate House during the 1840s and the development of Acland Hospital during the late 19th and 20th centuries.</p> <p>No evidence was found for the Civil War bastion shown close to the south-western corner of the site on de Gomme's map, which presumably lies further south.</p>

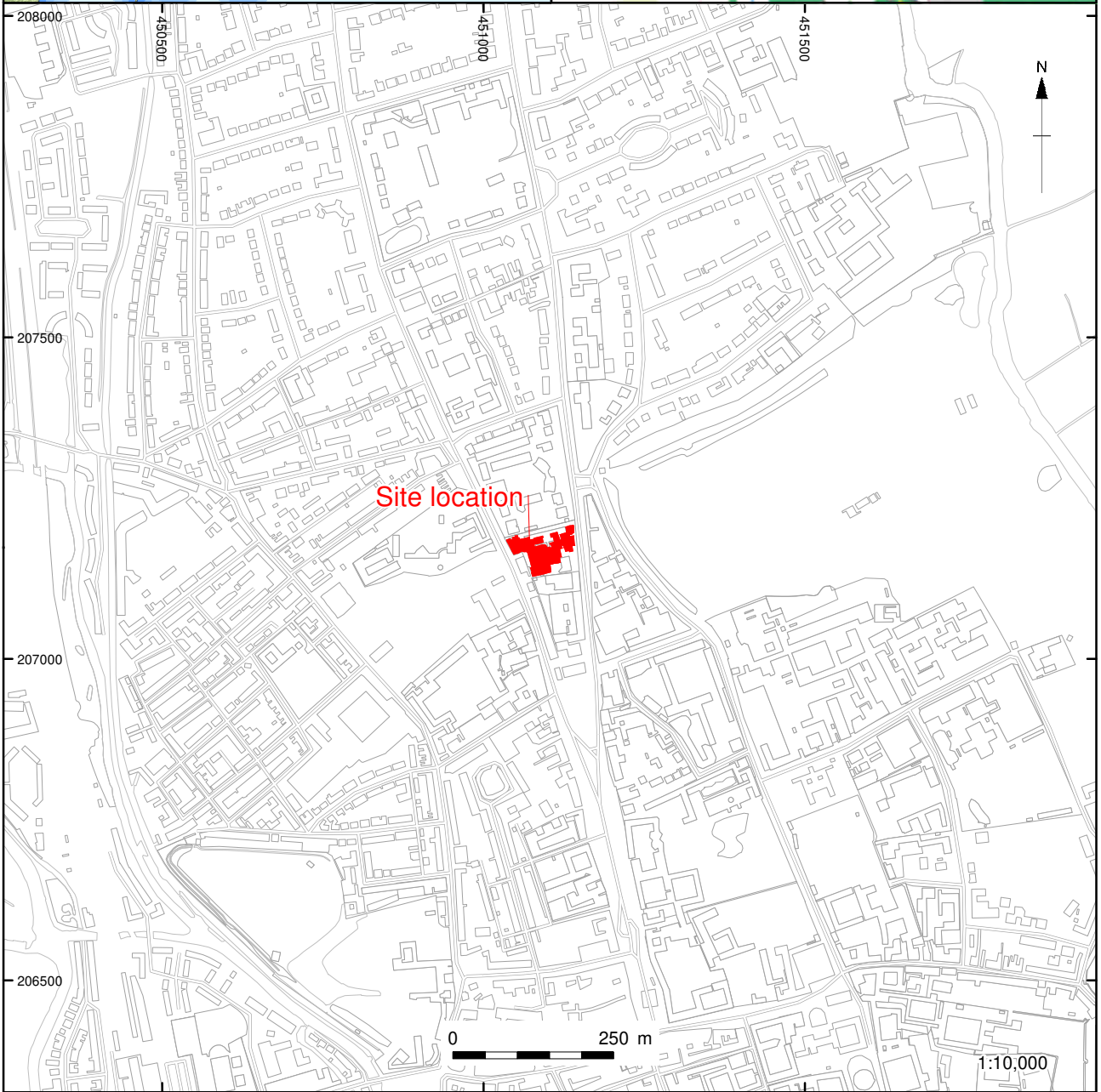
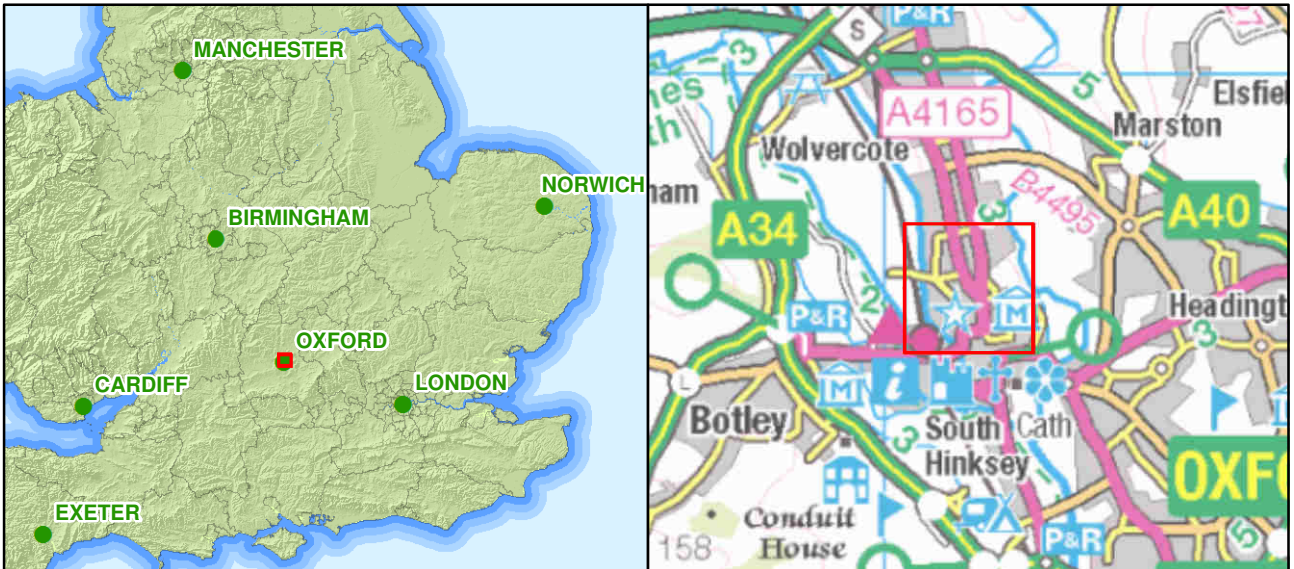


Figure 1: Site location

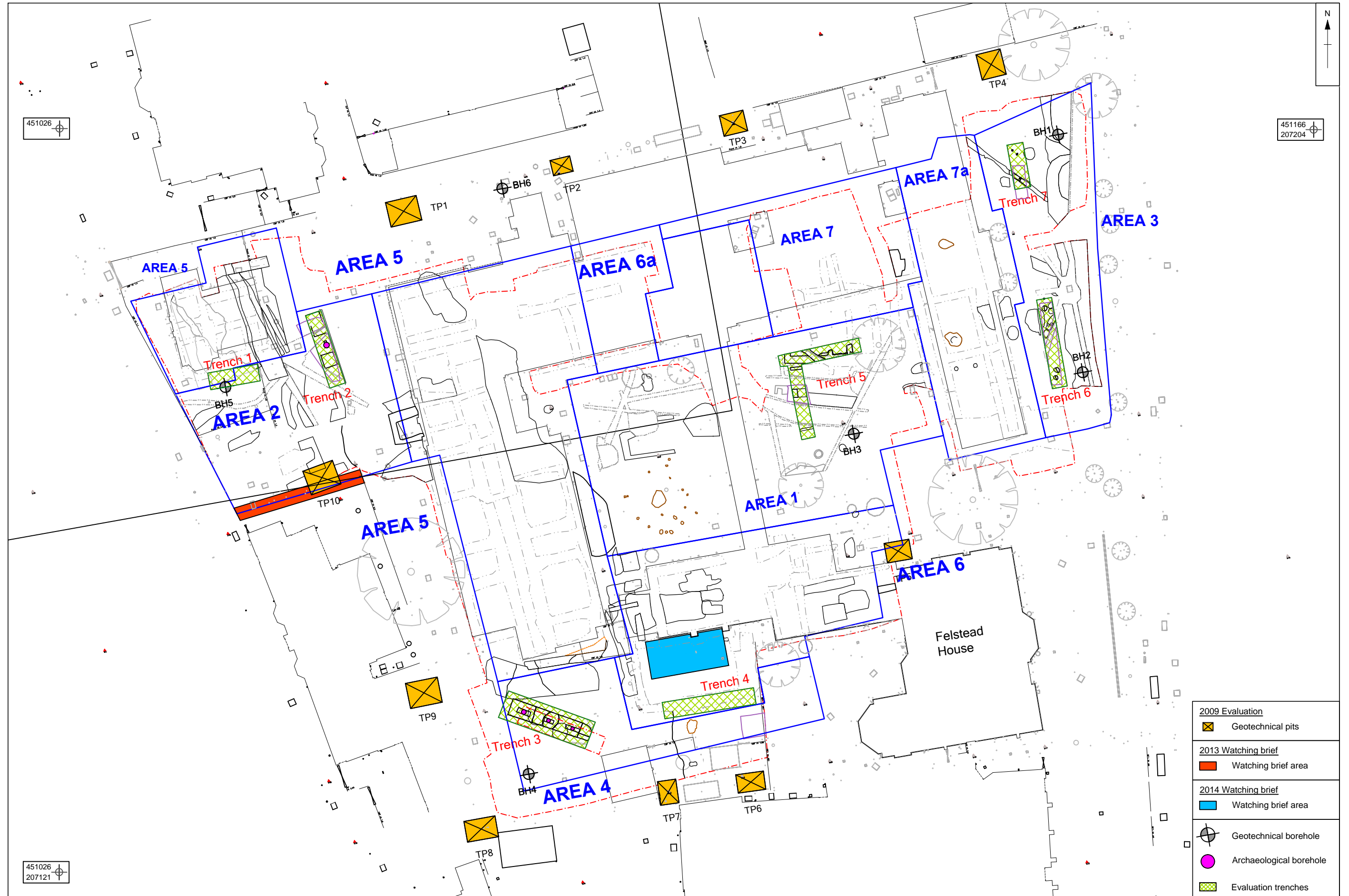


Figure 2: Plan of site showing sequence of excavation areas

- | | |
|-----------------------------|------------------------|
| Archaeological intervention | <i>Phased Features</i> |
| Services | 18th-19th century |
| Archaeological Section | 17th century |
| Acland Hospital foundations | Medieval |
| Northgate House basements | Roman |

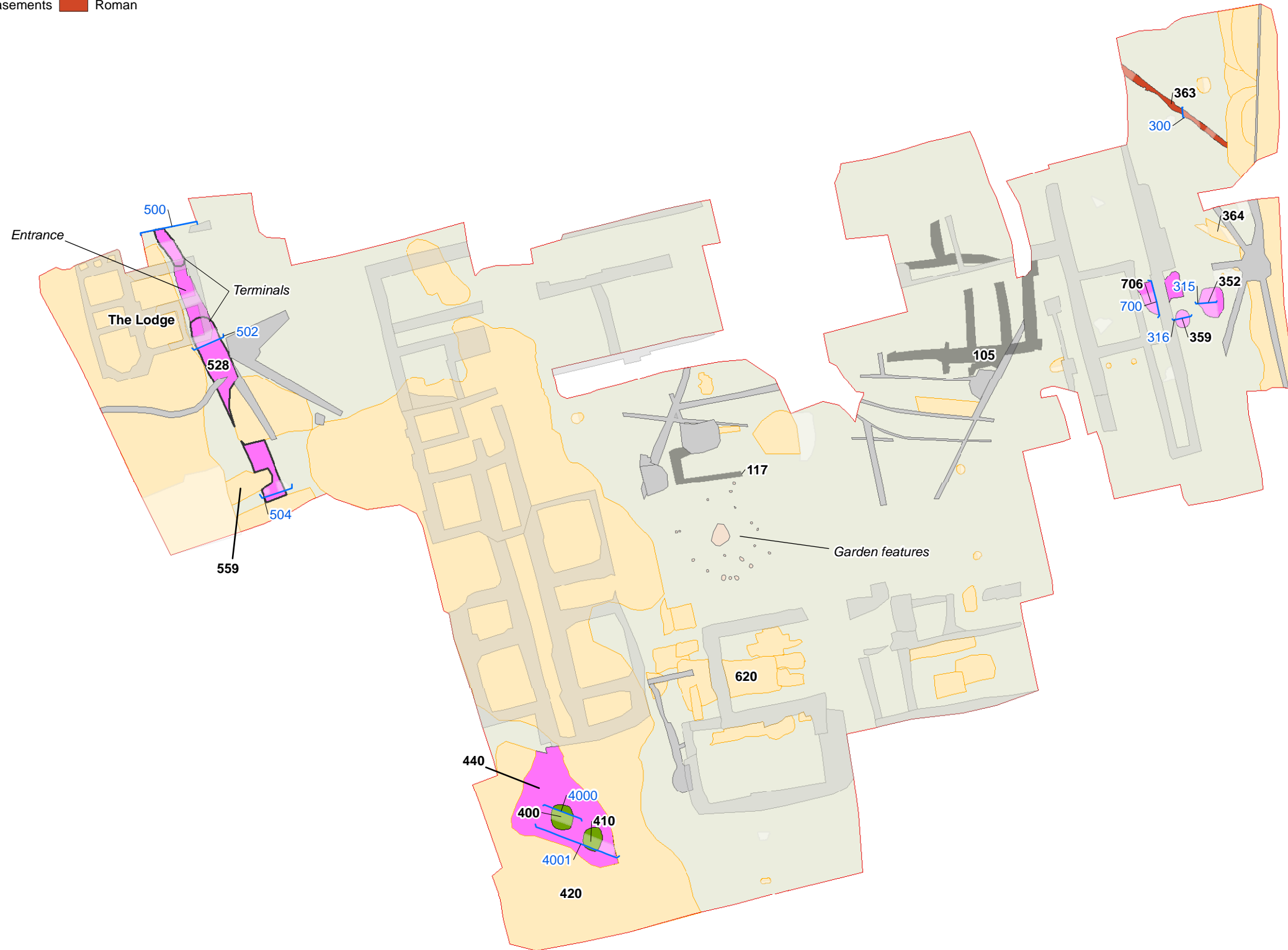


Figure 3: Plan of archaeological features

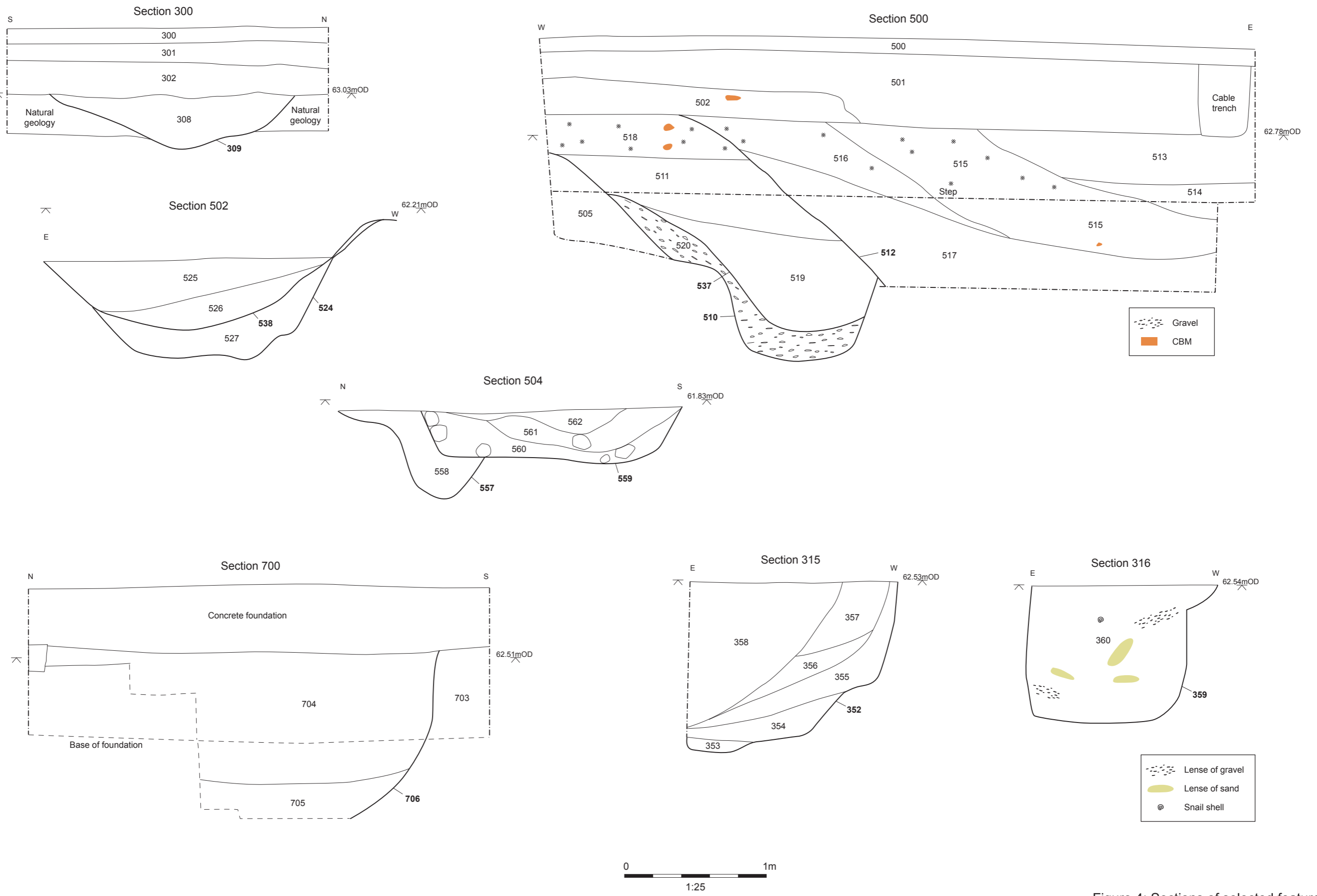


Figure 4: Sections of selected features

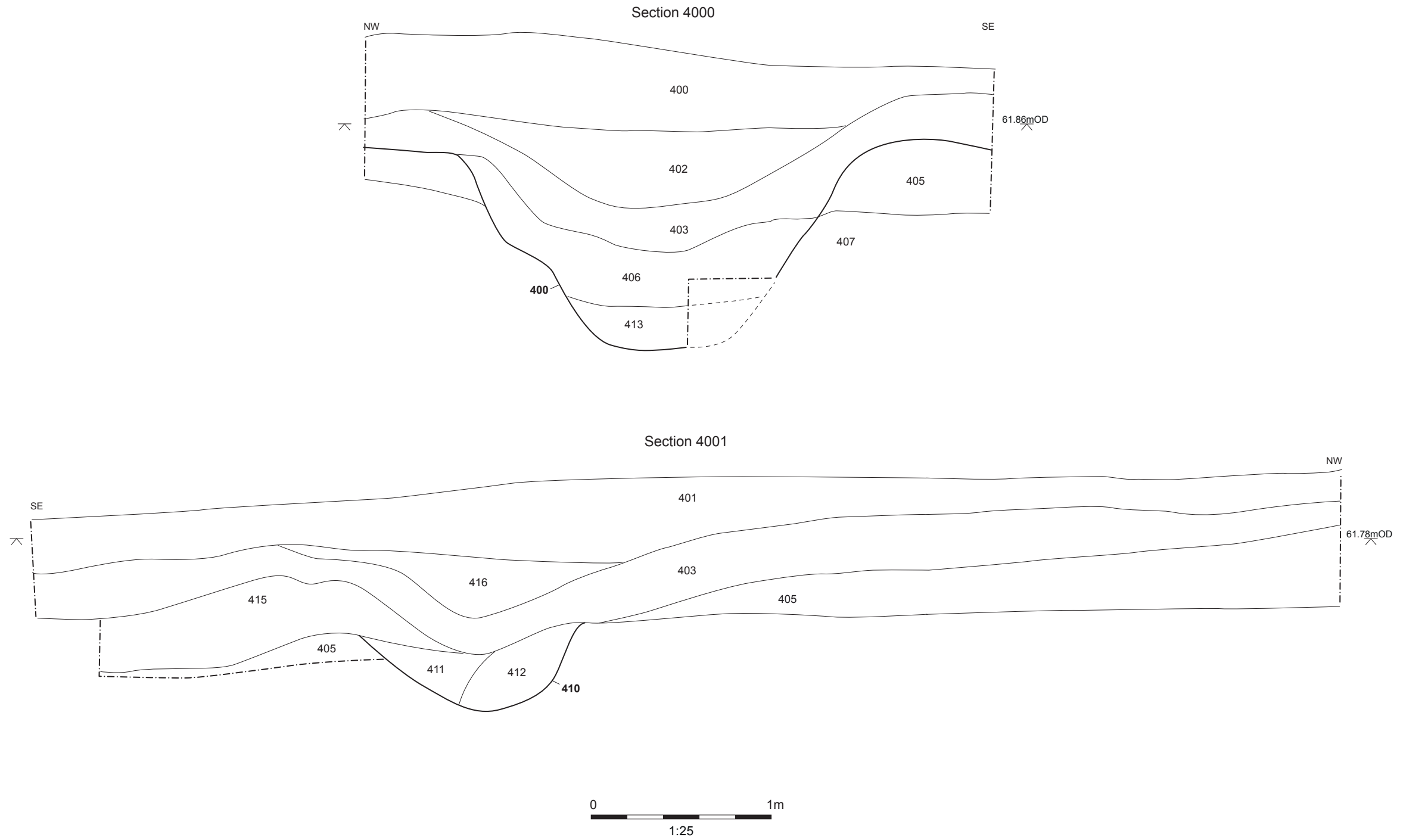


Figure 5: Sections of 17th century pits 400 and 410



Plate 1: Ditch 363, facing south



Plate 2: Ditch 528, facing south with the Royal Oak in the background



Plate 3: Ditch 528, showing terminals of the entrance through the earliest phase of the ditch



Plate 4: Pit 706, facing east



Plate 5: Pit 352, facing west



Plate 6: Pit 359, facing south



Plate 7: Quarrying in south-western corner of the site



Plate 8: Cellar 105 of Northgate House, facing east



**Head Office/Registered Office/
OA South**

Janus House
Osney Mead
Oxford OX2 0ES

t: +44 (0) 1865 263 800
f: +44 (0) 1865 793 496
e: info@oxfordarchaeology.com
w: <http://oxfordarchaeology.com>

OA North

Mill 3
Moor Lane
Lancaster LA1 1QD

t: +44 (0) 1524 541 000
f: +44 (0) 1524 848 606
e: [oanorth@oxfordarchaeology.com](mailto: oanorth@oxfordarchaeology.com)
w: <http://oxfordarchaeology.com>

OA East

15 Trafalgar Way
Bar Hill
Cambridgeshire
CB23 8SQ

t: +44 (0) 1223 850500
e: [oaeast@oxfordarchaeology.com](mailto: oaeast@oxfordarchaeology.com)
w: <http://oxfordarchaeology.com>



Director: Gill Hey, BA PhD FSA MCifA
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