

JOHN MOORE HERITAGE SERVICES

ARCHAEOLOGICAL INVESTIGATIONS

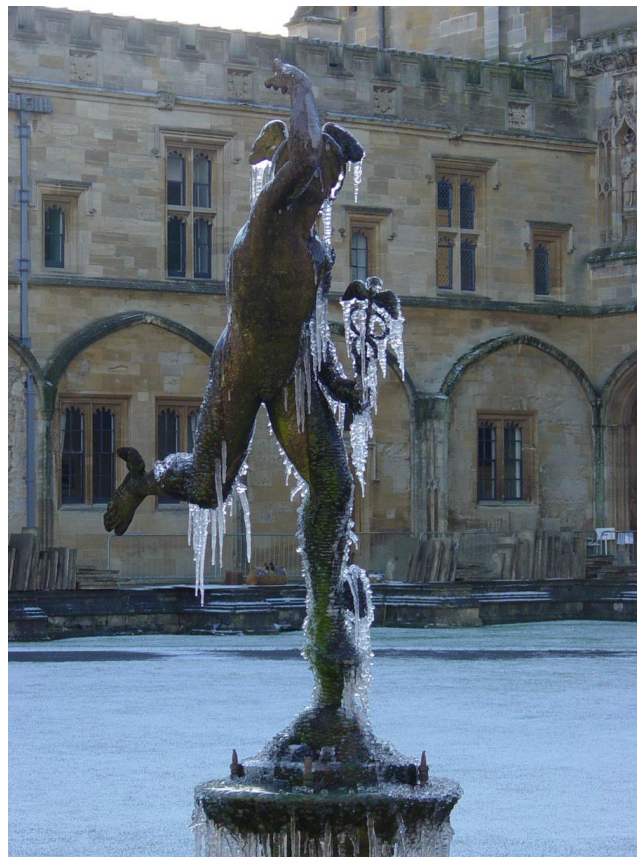
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On behalf of

Christ Church



MARCH 2012

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PREPARED BY	Roy Entwistle John Moore Mick Parsons Adrian M. Chadwick
EDITED BY	Adrian M. Chadwick John Moore
ILLUSTRATION BY	Andrej Čelovský Eoin Fitzsimons David Gilbert
FIELDWORK	Roy Entwistle Eoin FitzSimons Linzi Harvey Daniel Heale Paula Howell Vera Manning John Moore Mick Parsons Dan Sausins Jane Smallridge Ian Travers Gwilym Williams
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ENQUIRES TO	John Moore Heritage Services Hill View Woodperry Road Beckley Oxfordshire OX3 9UZ Tel/Fax 01865 358300 Email: info@jmheritageservices.co.uk
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SUMMARY

From October 2005 to January 2007, ground-works for the installation of new services in Christ Church were the subject of an archaeological watching brief by John Moore Heritage Services. These new services were installed in narrow trenches dug in Tom Quad, through Fell Tower to Peckwater and Canterbury Quads, then to Blue Boar Street via the Canon's Gardens to the west and north. Additional services were laid from Tom Quad southwards to a sub-station, and then eastwards through Long Walk and Meadow Buildings, with a branch passing northwards through the Cathedral graveyard.

Many of the contexts had already been considerably disturbed by earlier services, and many of the structural remains in particular were truncated and fragmented. Nevertheless, artefactual evidence recovered for late Saxon occupation in the area, and burials and other traces of the precinct of St Frideswide's Priory. Possible traces of the St Frideswide's civil law school were also detected, along with a hitherto unknown section of footings for a bastion associated with the medieval city wall.

Important evidence was also recovered regarding the structure and layout of medieval buildings and streets pre-dating the foundation of Christ Church. Remains of metalled surfaces belonging to St Frideswide's Lane, Shitebarne Lane, Jury Lane and Vine Street/St Edward's Street were recorded, along with traces of the structures fronting or backing onto these thoroughfares. Remnants of large well-built stone structures were identified that may have formed part of Cokewald Hall, Burnell's Inn, Leberd Hall and the inn known as The Pike or The Dolphin. Two large buildings fronting onto Vine Street may have represented Vine Hall and Glasen Hall, whilst a garderobe associated with Vine Hall contained a unique assemblage of 14th century ceramic and glass vessels and clay furnace fragments associated with metallurgical, chemical and/or alchemical experimentation. This is one of the earliest and most important groups of such objects ever excavated in Britain.

This same garderobe feature also contained fragments of some extremely rare, imported medieval high-status glass tableware vessels. Other notable artefacts recovered during the watching brief included writing styli and book clasps that reflect academic activities in the wider area prior to the construction of Christ Church.

In addition to the medieval remains, previously unknown evidence was also recorded for the construction of Tom Quadrangle, the reconstruction of Peckwater Inn and the building of Peckwater Quad. The most significant of these remains were probably large semi-circular footings identified just north of Fell Tower that may have been an important component of Wolsey's planned Great Chapel, the construction of which was never completed.

1 INTRODUCTION

1.1 Site Location

Christ Church lies close to Oxford town centre where it is centred on National Grid Reference SP 5150 0600 (Fig. 1). It is bounded to the west by St Aldates and to the north by Blue Boar Street. The northern part of the college occupies the margin of the Second Terrace gravels, which form the Summertown-Radley stage of the upper Thames Pleistocene succession. The southern part of the College lies on First Terrace gravels, while to the south the gravels give way to the Holocene alluvium forming the floodplain of the rivers Thames and Cherwell (BGS 1982).

1.2 The Ground-Works and Planning Background

During October 2005 the ground-works for the installation of new services in Tom Quad exposed archaeological remains, which subsequently were investigated by John Moore Heritage Services. Following the initial investigation, listed building consent was granted subject to the condition that a programme of archaeological work should be carried out in accordance with a written scheme of investigation approved by the Local Planning Authority.

Further written schemes of investigation were approved by the City Council as the programme of works unfolded, with new services passing northwards through Fell Tower to Peckwater and Canterbury Quads, then to Blue Boar Street via the Canon's Gardens to the west and north. Additional services were laid from Tom Quad southwards to a sub-station and then eastwards through Long Walk and Meadow Buildings, with a branch passing northwards through the Cathedral graveyard (Fig. 1). The ground-works were completed in January 2007.

1.3 The Historical and Archaeological Background

Christ Church occupies the site of the former Augustinian Priory dedicated to St Frideswide, in addition to a part of the medieval town. Various archaeological investigations have been carried out previously within the College (e.g. Hassall 1973; Munby 1988; Scull 1988; Sturdy 1988). These include excavations of part of a large cemetery belonging to the Anglo-Saxon minster church, pits associated with the construction of the Augustinian priory buildings, a 16th century timber belfry, a late 12th century 'pre-Latin' Chapel and the early 13th century Lady Chapel, elements of the cloister, and late Saxon and medieval settlement fronting Blue Boar Street.

The Minster Church of St Frideswide is mentioned in three late Saxon charters of AD 1002 (Dodd 2003, 41). Radiocarbon dates from skeletal remains show that a cemetery definitely existed by the 10th century, but perhaps as early as the 9th century (Scull 1988, 60-62). The church was rebuilt under royal patronage during the early 11th century, and changes to the area of St Frideswide's during the first half of the 12th century were associated with the creation of a precinct for the first Augustinians (Blair 1988b, 235-236). Further details and a discussion of the archaeology and history of the priory can be found in Blair (*ibid.*).

On its west side, Tom Quad encompasses a series of medieval tenements that once fronted St Aldates (formerly known as Fish Street). The former St Frideswide's Lane ran east to west across the northern half of the Quad, and the tenements that occupied the north side of the lane are situated under the north terrace. To the east stood the precinct of the Augustinian priory, which extended southwards, and now lies under the eastern part of the south terrace. The line of the city wall crosses the south part of the College, although for the most part its exact course remains uncertain (Blair 1988b, 228-231).

The line of the new service connection from Meadow Quad through the graveyard crossed the conjectured line of the 10th century rampart. The later stone wall of the medieval town is thought to lie immediately to the north of the Meadows Building, where a possible fragment of the wall was found (Blair 1988b, fig. 92). The reconstructed map of the city and suburbs published by the Rev. H.E. Salter in 1960 and referring to documentary evidence for 13th century tenement plots and land holdings (Fig. 67) was based on later maps of Oxford, notably Loggan's map of 1675 (Fig. 71). This shows St Edward Street or Vine Hall Lane leading northwards from the Priory precinct, and extending along the western side of Peckwater Quad. North of the Priory precinct, the College partly overlies the medieval properties that fronted St Edward Street and Shidyerd Street to the east, Little Jury Lane to the north and the halls adjoining Shitebarne Lane. The north-west part of the college occupies the area of the former properties fronting Fish Street to the west, Blue Boar Lane to the north, St Edward Street to the east, and those either side of Jury Lane to the south.

Recent work by John Moore Heritage Services found evidence for medieval properties in the northern range of Peckwater Quad. Excavations in the basements of staircases 3 and 4 revealed the remains of a 13th century building, along with pits and deposits dated between the 10th and 17th centuries (JMHS 2006).

Cardinal Wolsey founded the College as Cardinal College in AD 1525, and its construction required the clearance of several medieval buildings. It would appear from Agas' map of 1578 that this included most buildings on the south side of Jury Lane. By the time of Wolsey's fall from power in 1529, however, just three sides of the Gothic quadrangle had been close to completion, and only the foundations of the chapel planned for the north side were in place. Following Wolsey's death, Henry VIII took over the fabric and endowments of the foundation, which was renamed King Henry VIII College.

Following the dissolution of Oseney Abbey in AD 1546, which had previously served as a cathedral, the former Augustinian Priory of St Frideswide's became Christ Church Cathedral for the new Henrician diocese of Oxford, and served as the chapel for the newly established college of Christ Church. It is thought that the west end of the former priory church was demolished to accommodate the symmetrical Gothic quadrangle (Pevsner and Sherwood 1974).

In the second half of the 1660s the north side of Tom Quad was completed and the terrace built by John Fell, Dean of Christ Church and Vice-Chancellor of the University of Oxford. The centre of the Quad was lowered as part of the work, and the excavated earth was used to build up the Broad Walk on Christ Church Meadow. A water supply was laid between Carfax and Christ Church in the 17th century (Ch. Ch. MS Estates 144, 6 and 8), with the reservoir in Tom Quad being installed in 1670 (Christ Church undated). The terrace and steps were restored in 1841 (Ch. Ch. MS Estates 144; 185-7, 189v, 191, 193, 195, 197).

The reconstruction of the buildings of the former Peckwater Inn began in the early 18th century, with the nine staircases on three sides of Peckwater Quad opened in 1707 and completed in 1714. The library on the fourth side of the Quad was begun in 1717 and the building completed in 1772.

The Meadow Building was constructed between 1862 and 1865, replacing an earlier building by John Fell. The Clerk of Works in charge of the building work at that time reported removing made ground to a depth of '20 feet' (6.09m).

2 STRATEGY

2.1 Research Design

John Moore Heritage Services undertook all stages of the archaeological work in accordance with four Written Schemes of Investigation approved by Oxford City Council. These documents specified the field techniques that were to be employed throughout the project, which included the maintenance of a written record, accompanied by scale plans and section drawings, where appropriate and possible. The recording system complied with the standards then specified by the Institute of Field Archaeologists (1994 and 1995) and the procedures laid down in MAP2 (English Heritage 1991).

2.2 Methodology

An archaeologist was present on-site during the course of all operations likely to disturb or destroy any archaeological remains. The one exception was during the machine digging of Trench 1 along the south side of Tom Quad, which had been carried out prior to the appointment of John Moore Heritage Services. Wherever possible, the recording was undertaken in tandem with the machine excavation or immediately afterwards, in order to ensure that the progress of the ground works was not unduly delayed. Following machine removal of the Wolsey construction level and later deposits, the area in front of the cathedral was hand excavated by a team of archaeologists down to the required level. Additional archaeologists assisted the Project Officer on the numerous other occasions when complex archaeology was uncovered.

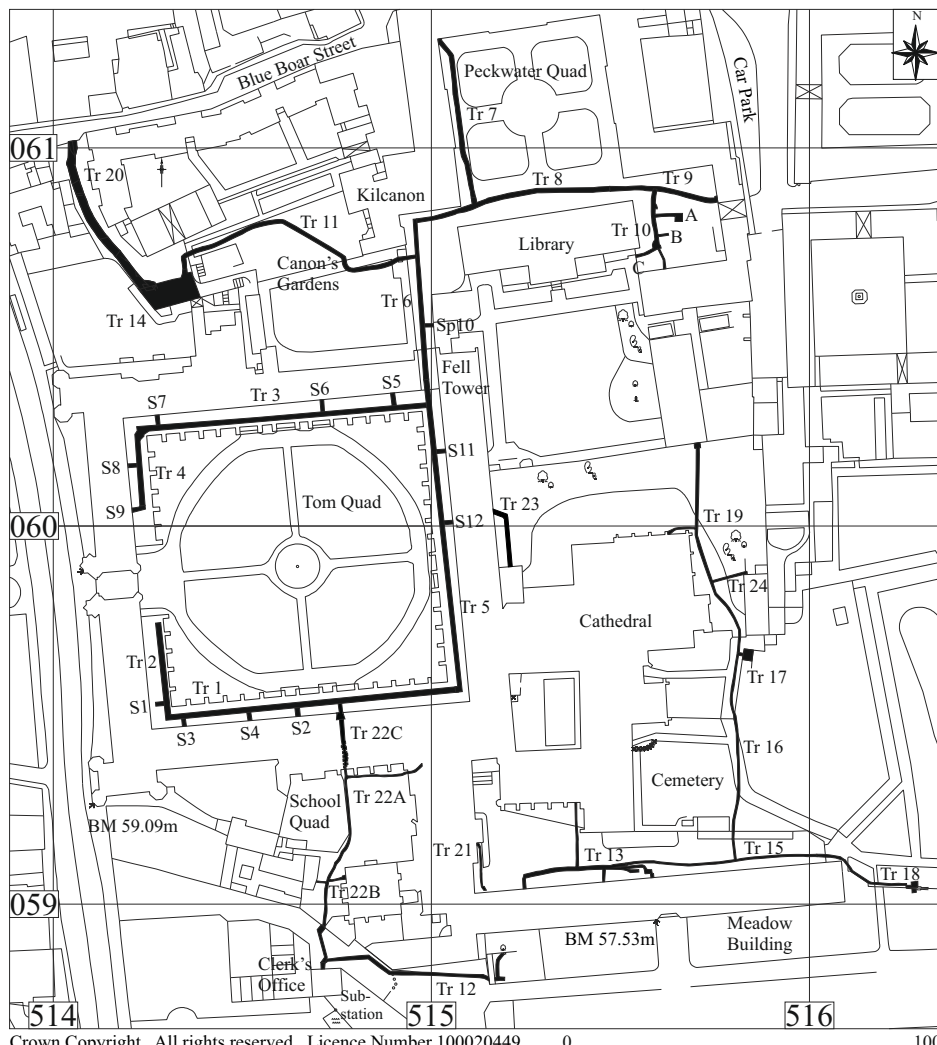
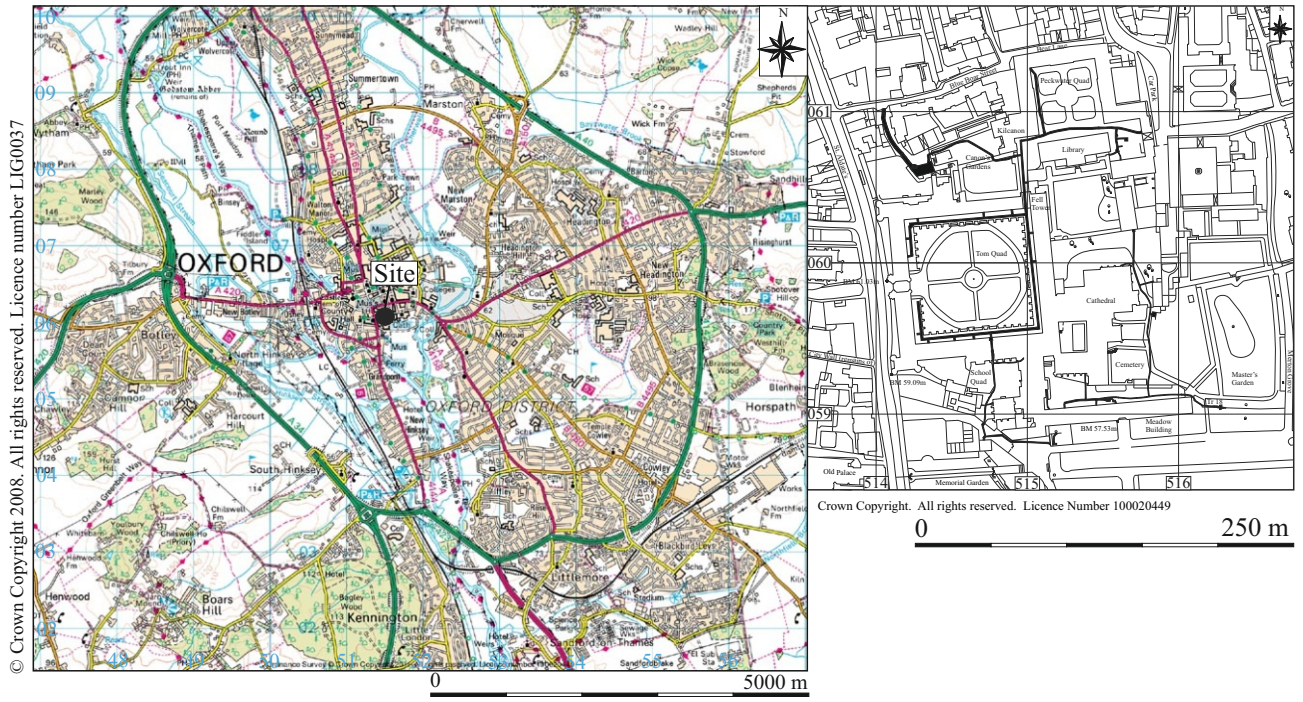
The new service trenches were for gas, water, electricity and a communications conduit. For the most part the trenches were 1.10-1.20 metres wide and 0.65-1.00m deep, and at intervals along the route small 'spurs' linked the main service trenches to various rooms. A greater construction depth was reached at northern end of Trench 7, at the eastern end of Trench 11 (Fig. 1) and where the services had to pass under existing walls; conversely, the trench dimensions were reduced where they carried only electricity cables.

3 RESULTS

3.1 Introduction

In almost all of the trenches, the surviving medieval deposits were severely truncated by the 16th century and later phases of building, and this was compounded by the numerous existing services that in places extended to depths of at least 0.80m below ground level, and which had caused extensive damage to archaeological deposits.

Although the new service trenches effectively formed one continuous network, individual sections were assigned separate trench numbers to facilitate the recording of archaeological remains, and this same general convention has been preserved within the structure of this report. Wherever possible, however, the results have been presented in broad chronological order according to the medieval and later layout of streets and buildings. This inevitably means that the results from individual trenches appear in more than one section of the report, but this is nonetheless a less clumsy structure than detailing each trench separately.



TR = New service trenches
 S = Spur from main trench to building

Figure 1. Site and Trench Locations

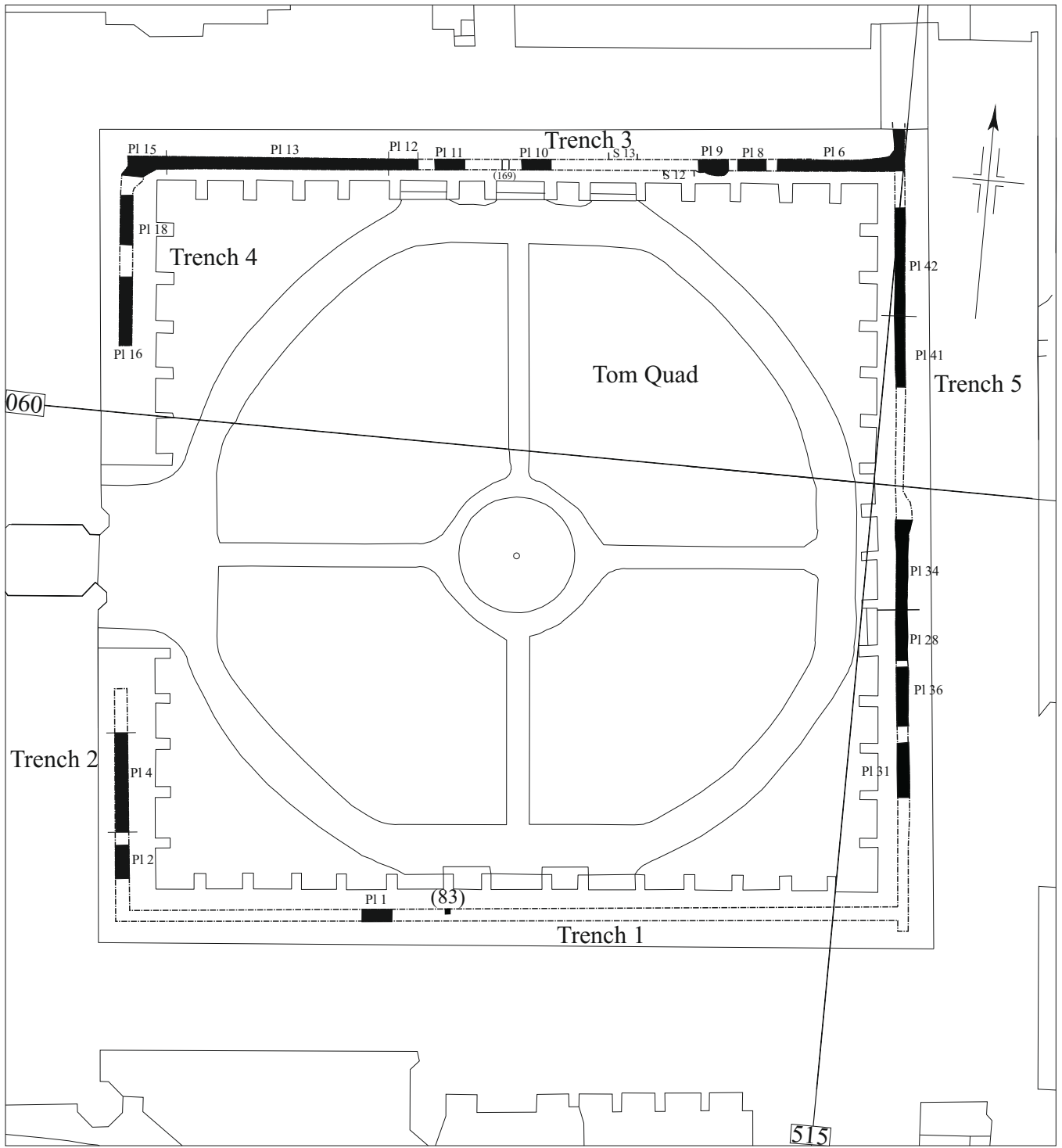


Figure 2. Tom Quad- Location of plans

3.2 St Frideswide's

The earliest evidence spanning the traditional date for the foundation of the nunnery by St Frideswide during the latter part of the 7th century or 8th century was a single residual sherd of early to middle Saxon pottery recovered from 18th to 19th century deposits in Trench 9, in Canterbury Quad, likely to date between AD 450 and the middle of the 9th century. A small assemblage of late Saxon pottery was also recovered from 18th to 19th century layers in Trenches 4, 5, 10 and 20. The late Saxon sherds date between the late 8th and early 11th century, and though redeposited, they are likely to be contemporary with Frideswide's nunnery, and settlement within this part of the town.

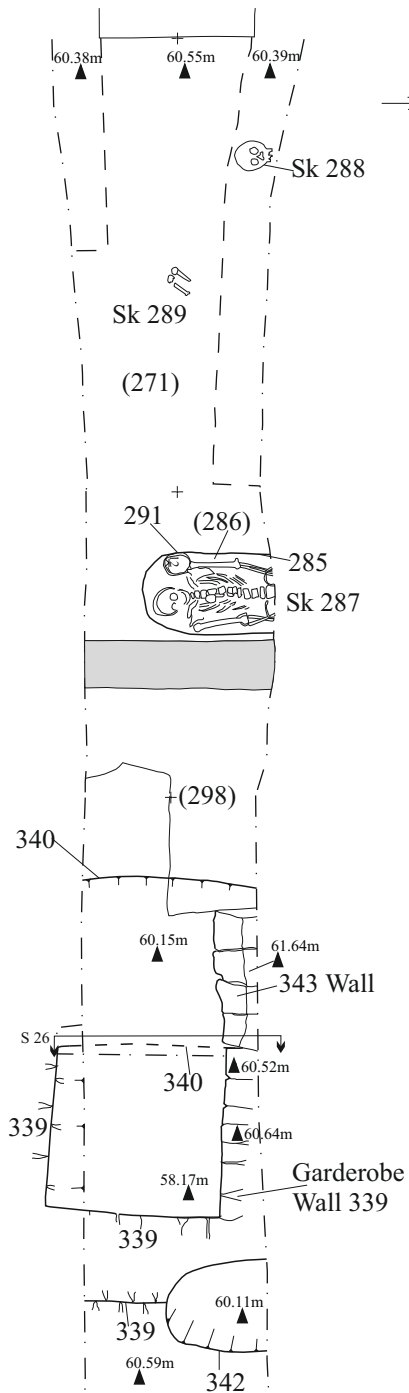
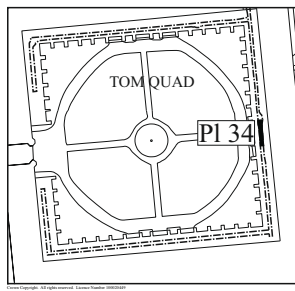
Burials and cemetery soils of medieval and later origin were identified in the eastern part of Trench 1, the southern half of Trench 5 and part of Trenches 16 and 19 (Fig. 1). In Trench 1 the cemetery soils were sealed by variable deposits of limestone fragments, granular limestone dust and thin bands of gravel, which together were up to 1.00m thick – contexts (4), (26-28), (56) and (830). These layers were interpreted as accumulations of masons' debris, possibly associated with the construction of the south side of the quad during Wolsey's initial work. The only dateable find from these deposits was a single residual sherd of early to middle 11th century pottery recovered from (56).

The underlying cemetery soils in Trench 1 were composed of mixed grey-brown, sandy silty loams, recorded as contexts (2, 5, 19, 20, 29, 30, 69-71, 78-81 and 233). Together these deposits produced a large pottery assemblage dominated by 13th to 14th century material, with a minor and probably residual component of late 11th to 12th century sherds; they also contained small amounts of disarticulated human bone and fragments of charcoal.

Extensive cemetery soils were uncovered in Trench 5, where they consisted of dark brown, well-sorted silty sands incorporating pottery sherds with date ranges spanning the 13th to mid-16th century: layers (236, 250, 254, 256, 258, 259, 269, 271, 282, 298, 306, 313, 320 and 331). The later pottery comprises just over 77% by weight of the total assemblage, and while it could have been deposited before the start of Wolsey's construction, such a large quantity seems more likely to have been discarded during the early stages of the building work, before being sealed by the masons' debris. Most of these contexts contained small quantities of disarticulated human bone, with the quantity increasing towards the base of the trench at approximately 60.55 metres above Ordnance Datum (OD).

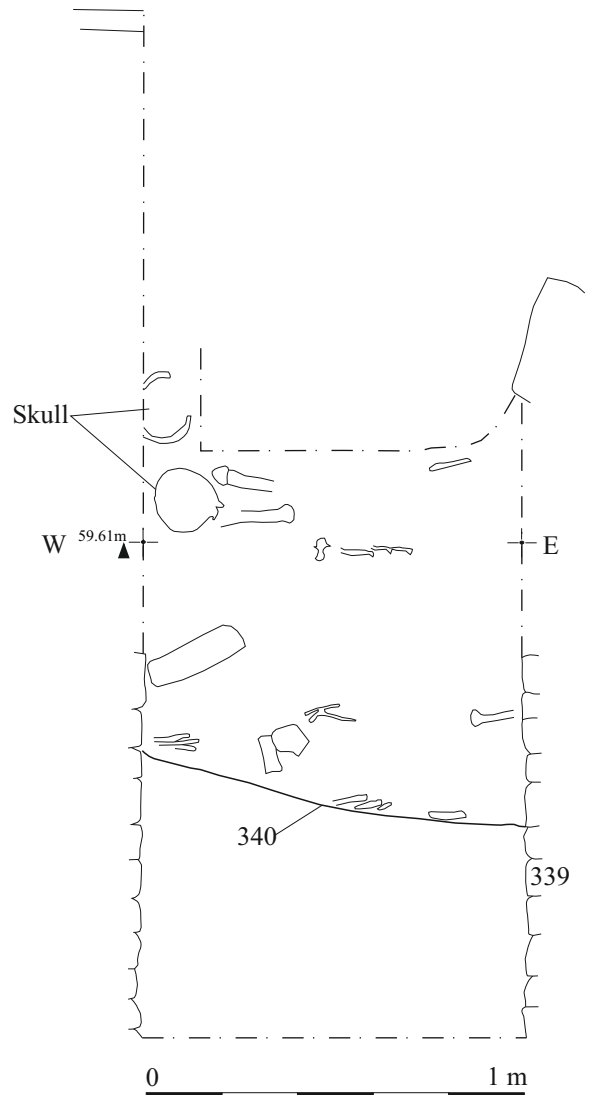
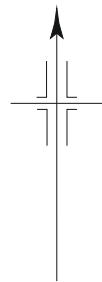
Previous archaeological excavations in the Cathedral cemetery encountered the uppermost level of burials at 0.80-0.90m below the existing ground level, where they were sealed by demolition material containing 13th century pottery (Boyle 2001). During the 2005-2007 work, equivalent deposits were exposed in Trench 5 at 60.55m OD, for example neonate SK 289 (Fig. 3, Plan 34). It is entirely possible that these remains were in grave cuts that could not be distinguished in the narrow, machine-cut trench. Several graves containing articulated burials were defined, however, and the excavated remains submitted for osteological analysis (see 4.6 below).

A partially articulated skeleton (SK 287) was excavated along with several incomplete burials (Fig. 3, Plan 34). The skeleton (SK 287) was found at 60.59m OD and was oriented east to west, with the skull to the west (Plate 1). The legs and pelvis were under the eastern baulk of the trench. A second skull (291) was found in the same grave cut 285, where it lay above the left shoulder of skeleton 287. The fill of grave 285 was grey-brown clayey silt (286), which contained a single sherd of mid 13th to 14th century pottery.



0 2.5 m

Plan 34
Trench 5



Section 26

Key:
 Service

Figure 3. Plan 34 and Section 26

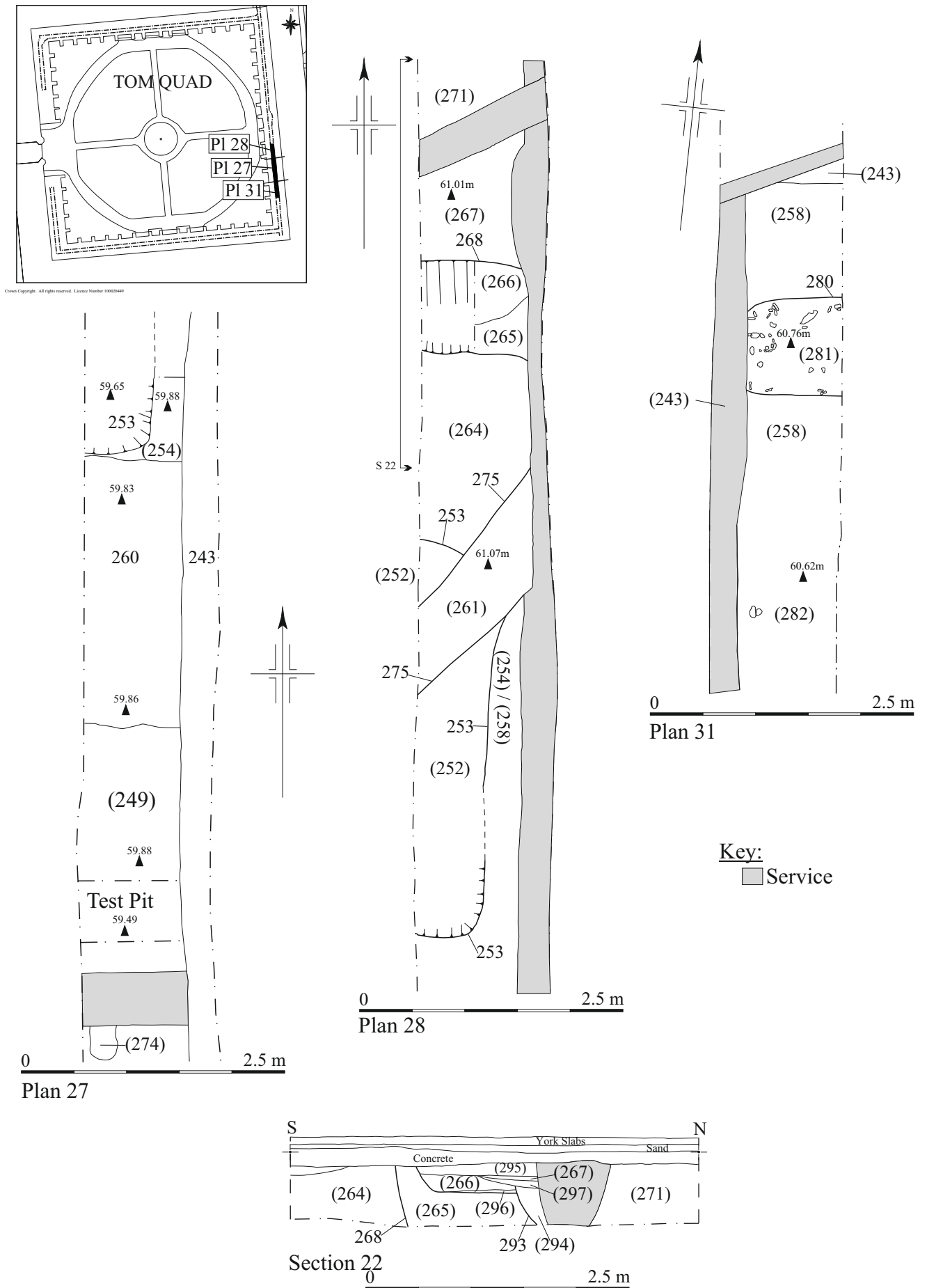


Figure 4. Plans 27, 28, 31 and section 22

No trace of a grave cut was found in association with burial (SK 288). Most of the skeleton lay under the trench baulk, leaving only the skull exposed. A child's skeleton (SK 300) was recovered from grave 301, which had been cut by small charnel pit 303 (Fig. 5, Plan 36). A further small charnel pit 307 was located 2m to the north. Several grave cuts were visible further to the south in Trench 5, at a depth of approximately 60.50m OD. Since these features were below construction level and would not be disturbed, they were planned but not excavated (e.g. 280, Fig. 4, Plan 31; 340 and 342, Fig. 3, Plan 34; and 'G' (Fig. 5, Plan 36; Plate 2).

A rectangular stone-lined pit 339 (Fig. 3, Plan 34, Section 26) in the northern half of Trench 5, just beyond the western end of the cathedral, was interpreted as a garderobe. The walls were of rough limestone blocks and pieces combined with occasional small architectural fragments and re-used floor tile, bonded with stiff mid brown sandy clay. The northern wall had been robbed, exposing grave cut 340 in section. Until an overnight trench collapse revealed the western wall, only the southern and eastern walls were exposed within the trench. The collapse showed that the southern wall measured 0.60m in width and 1.15m in length, while the western wall was shorter at 1.05m. With the addition of four stone blocks 343 at its northern end 343, the eastern wall was 1.70m long. The stone blocks of 343 were approximately 0.20m square and were set at an angle, sloping into the northern side of the feature. The maximum internal dimensions of the pit were *c.* 1.10m by 1.10m. There were two putlog holes in the face of the eastern wall at 59.60m OD, with corresponding holes on the internal face of the western wall. These features measured 0.10m by 0.12m, and penetrated some 0.20m into the wall. A second set of putlog holes at a depth of 58.36m OD indicated that the garderobe was deeper, but for health and safety reasons it was not excavated below 58.17m OD (Plate 3).

The lowest recorded layer (335) within the garderobe was excavated to a depth of 0.50m and consisted of mixed gravel, possibly re-deposited natural subsoil. The single sherd of 13th to 14th century pottery recovered from this layer was probably residual, although there were also two pieces of 'Stabbed Wessex' tile. The layer above (334) was 0.32m thick and consisted of very dark grey-brown, charcoal-rich sediment, with six sherds of 15th century pottery and six worn fragments of both 'Stabbed Wessex' and 'Penn style' floor tile. The overlying layer (333) was a 0.50m thick deposit of compact light grey sandy loam, and contained one sherd of 15th century pottery and 11 fragments of 'Stabbed Wessex' and 'Penn style' floor tiles, including a worn but complete example of a lion with two tails (Haberley 1937, CXXIII; Fig. 57.2). Above this was a 1.00m thick deposit (332) of worked, un-worked and re-used stone, the latter comprising mostly architectural fragments (see section Rodwell below). The final in-fill was a 0.20m thick layer of grey-brown silty sand (331/312), probably derived from the cemetery deposits that had produced pottery with dates extending into the late 15th century. This layer contained 27 fragments of mixed 'Penn style' and plain green-glazed tile, dating from after the late 14th century. The cut number of the garderobe 339 was assigned to six fragments of floor tile including plain green glazed tile, similar to that from the Latin Chapel.

To the south of the garderobe was ditch 268 on an east to west alignment. It was 1.40m wide and excavated to a depth of 0.56m (Fig. 4, Plan 28 and Section 22), but was severely truncated on the northern side by a recut 293 and by a substantial service trench. The lower ditch fill (265) was yellow-brown sandy loam containing degraded limestone and gravel, 20 sherds of late 15th to mid-16th century pottery, and five residual fragments of late 13th to 14th century 'Stabbed Wessex' floor tile. Context (265) was partly overlain by a thin compact layer of grey-brown sandy loam and mixed gravel containing moderate charcoal flecks (296). This deposit may have represented the basal fill of a second recut. The overlying layer (266) was only 0.18m thick and of pale yellow silty sand with frequent limestone pieces, and a single sherd of 15th to mid-16th century pottery, as well as five residual fragments of 'Stabbed Wessex' floor tile dating from the late 13th to 14th centuries. Ditch cut 268 truncated deposit (264), a layer of compact orange-brown silty sand with degraded limestone that only produced one iron nail.

The ditch recut 293 was filled with yellowish brown silty sand and gravel (294), which produced seven sherds of late 15th to mid-16th century pottery. A deposit of grey-brown sandy loam with occasional limestone fragments spread over contexts (294) and (266) and was interpreted as the possible make-up layer for a path (297) (Fig. 4, Section 22). The path itself was composed of compact, light brown sandy silt incorporating degraded yellow mortar and gravel (267). Both layers had slightly subsided into the ditch, and had been subsequently levelled by a 0.12m deep deposit of grey-brown sandy loam containing degraded mortar and mixed gravel (295).

Pit 253 was south of recut ditch 268 (Fig. 4, Plan 28), and was 3.70m long, 0.60m wide and 0.30m deep with vertical sides and a flat base, and filled with light grey-brown sandy silt (252) containing limestone pieces and two sherds of late 15th to mid-16th century pottery. The pit cut through deposit (251), 0.10m thick mid orange-brown sandy clay with late 15th to mid-16th century pot. Underneath deposit (251) was context (246), mid grey-brown loam up to 0.20m thick, which also produced two sherds of pottery in the same date range. This latter deposit overlay cemetery soil (250), as well as a layer of yellow brown clayey silt 0.04m thick (257) that yielded two fragments of 'Stabbed Wessex' tile and two fragments of later 'printed' or 'Penn style' dating from the mid-14th century. This deposit was above gravel surface or makeup layer (260), which to the north contained larger pieces of limestone (Plan 27). The northern end of pit 253 was cut at an acute angle by later ditch cut 275 on a north-east to south-west alignment. This feature was broadly U-shaped and 1.0m wide and 0.30m deep. The single fill (261) was orange-brown sandy loam containing moderate amounts of gravel and three sherds of late 15th to mid-16th century pottery as well as three fragments of tile, two of which were plain green-glazed; and corroded iron objects including a buckle (SF No. 55).

3.3 The Augustinian Priory Precinct

Traces of walls exposed in Trenches 1 and 5 may have been associated with the Augustinian Priory Precinct. In Trench 1, wall 03 was uncovered 0.50m below the terrace flags, and aligned broadly north to south (Fig. 5, Plan 1). It was 0.90m wide with a rubble core bonded with lime mortar, faced on both sides with roughly hewn limestone blocks. An offset foundation was identified on both sides at 60.18m OD, below which the wall was constructed from pitched stones angled to form arch 03 (Fig. 5, Sections 1 and 4; Plate 4). This might have been the western precinct wall (but see Discussion). When the Trench 1 shoring was removed, a second wall 83 was exposed in section, of rough limestone blocks set in lime mortar. This was located approximately 5.15m to the east of wall 03 but followed a broadly parallel alignment. Though a service trench had disturbed the western side, at least three courses survived with a width of approximately 0.70m (Fig. 2). In the southern section of the trench, the wall had been completely destroyed by trenching for other services. The space between the two walls contained a sequence of floors (Fig. 5, Section 4). The lowest of these (18) consisted of a thin layer of sand and gravel 0.05m thick extending to the top of the offset foundation for the precinct wall. Above this was a 0.05-0.08m thick deposit of clayey silt with sand and gravel (17), the make-up for several floor layers (15, 16), composed of mid-grey clays 0.03-0.04m thick.

The possible remains of the northern precinct wall 322 were recorded in Trench 5 approximately 25m to the north of the garderobe 339, where they defined the limit of the cemetery soil (313) (Fig. 13, Plan 41, Section 25). The wall was orientated east to west and the upper stonework had been truncated by later cut 321, 2.10m wide and filled with mid orange-grey clayey silt that incorporated occasional limestone fragments and small quantities of charcoal (315). Where the wall survived to a level of 61.03m OD, the wall was 0.68-0.75m wide and was built from roughly hewn limestone bonded with orange sandy clay. The small pottery assemblage recovered from the fill (315) of the later cut was dated to the 17th century.

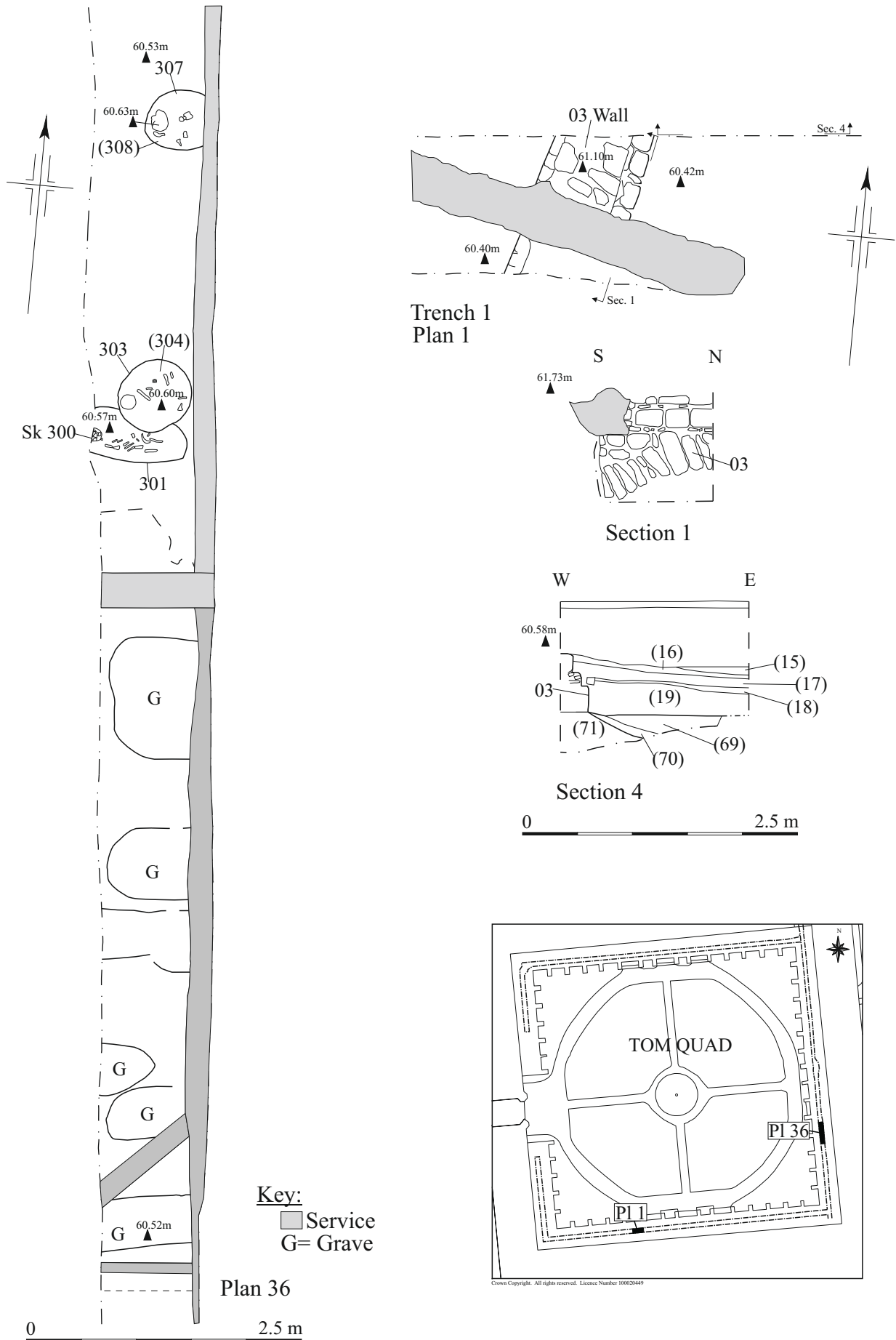


Figure 5. Plan 1 & 36 and Sections 1 and 4

3.4 The Cathedral Garden

To the east of the Cathedral, in Trenches 16 and 19, the cemetery soil (741) consisted of mixed light brown-grey sandy silt incorporating gravel, frequent charcoal pieces and limestone fragments, and a marble fragment. Three skeletons were found in the trench close to the north-eastern corner of the Latin Chapel (Figs. 6 and 7), where they were located 0.26-0.42m below the modern ground surface. Grave 736 contained the skeletal remains of an adult male (735). The skeletal remains of an infant (SK 737) were found in grave 738; whilst grave 740 contained the skeletal remains of an adult female, possibly associated with skull fragments of a neonatal infant (SK 739). Each of the burials was aligned east to west, with the skull to the west, but the grave cuts were indistinct and could not be defined with any certainty. All three burials (735, 737 and 739) incorporated residual human bone, likely to have been derived from other disturbed burials. The only dateable material from the burials consisted of a single sherd of late 11th to 12th century pottery found in association with the skeletal remains in grave 740, where it was almost certainly residual. All of the burials were recorded and left in place.

Within Trench 23, to the rear of and below the Treasurer's Office (Fig. 1) and immediately below 0.15m of topsoil and turf was a 0.30m thick deposit of pale brown sandy silt with some mixed gravels along with frequent limestone fragments and degraded mortar flecks. This overlay a friable off-white deposit of masons' debris consisting of limestone fragments with a lime mortar. No archaeological features were seen or recorded throughout the trench.

3.5 St Michael at the South Gate

Although fragmentary human remains were discovered in Trench 1, no corresponding grave cuts were identified. An incomplete skeleton (80), with the inverted skull lying to the east, was found at 60.40m OD immediately west of the precinct wall. Tunnelling for the pipe trench under the precinct wall prevented full investigation and recording of this deposit. Other disarticulated human remains were found within contexts (71) and (79), while an isolated upper arm bone was recovered from (233) in Spur 4 (Fig. 1) along with a small pottery assemblage comprising three sherds of late 11th to 12th century pottery.

3.6 Fish Street (St Aldates) south of St Fridewide's Lane

Trench 2 was located on the west side of the Tom Quad, just to the south of Tom Gate, where it crossed the site of medieval properties fronting onto Fish Street. The extreme western end of Trench 1, where it joined Trench 2, passed through the rear of a property named as 'Pulton's Chantry' just to the north of St Michael at the South Gate.

A lime mortar floor (36) was exposed at 60.44m OD. Underlying this was a deposit of pale mid brown sandy clay with small patches of white limestone mortar and moderate amounts of small limestone pieces (48). This may have been a make-up layer for floor (36) or the remnants of an earlier phase of floor (Fig. 8, Plan 4). The floor was present to the north of wall 44 and extended for approximately 3.00m, stopping short of a second wall 45. A single sherd of 13th to 14th century pottery was recovered from the mortar floor. A similar patch of mortar (53) was uncovered to the north of wall 45. This mortar surface sloped down slightly from north to south and from west to east. Both surfaces were cut by foundation trenches 43 (for wall 44) and 50 (wall 45) respectively. Above floor 36 was a deposit of pale grey sandy silt 0.02-0.03m thick (35) which had accumulated on the floor, and above this deposit was a layer of soft pale grey-brown gritty clayey silt with some small limestone pieces up to 0.09m thick (34) that had been truncated by pit 33, full of mason's debris (32) (Fig. 8, Section 6).

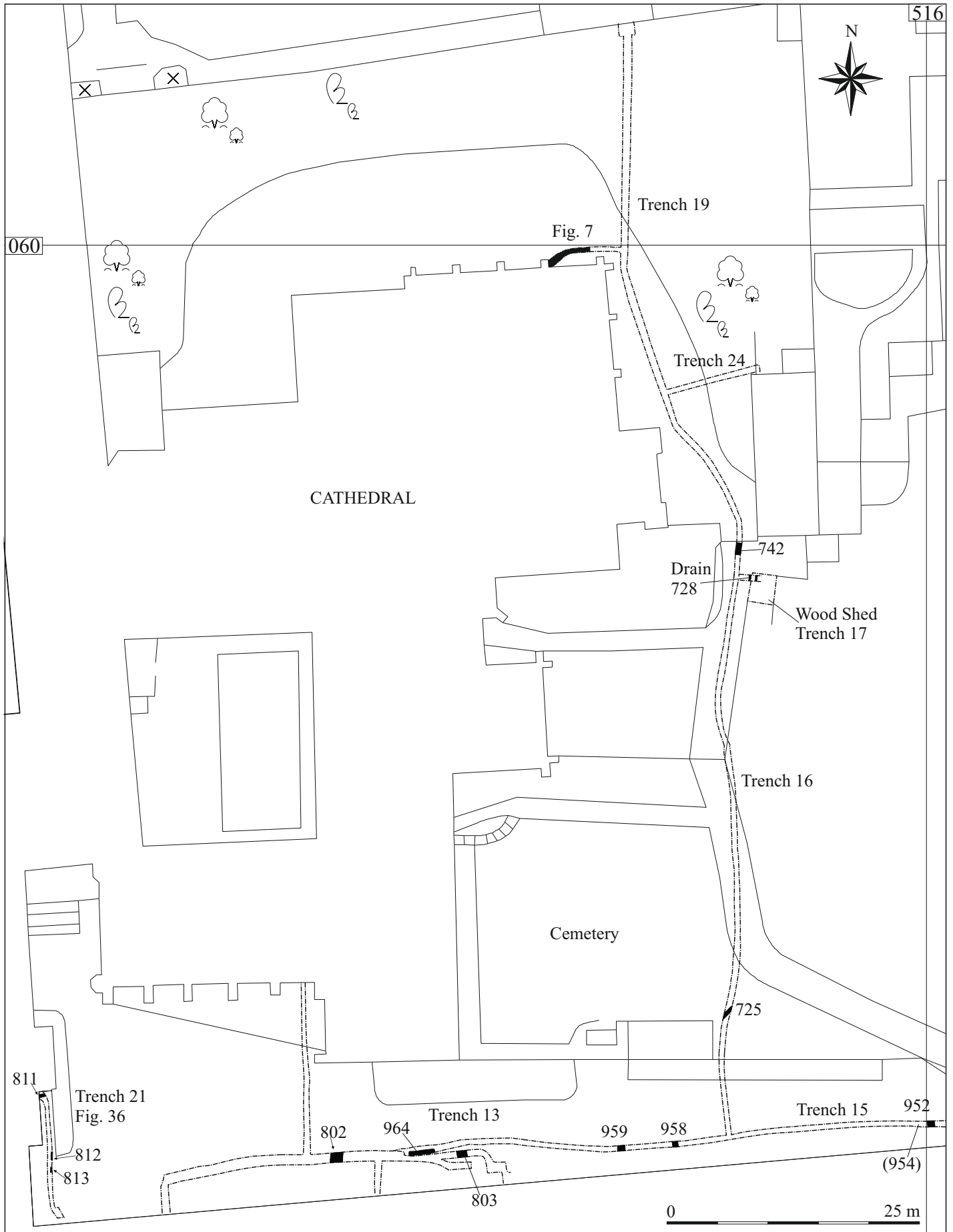


Figure 6. Location of plans north of Meadows Building and east of Cathedral

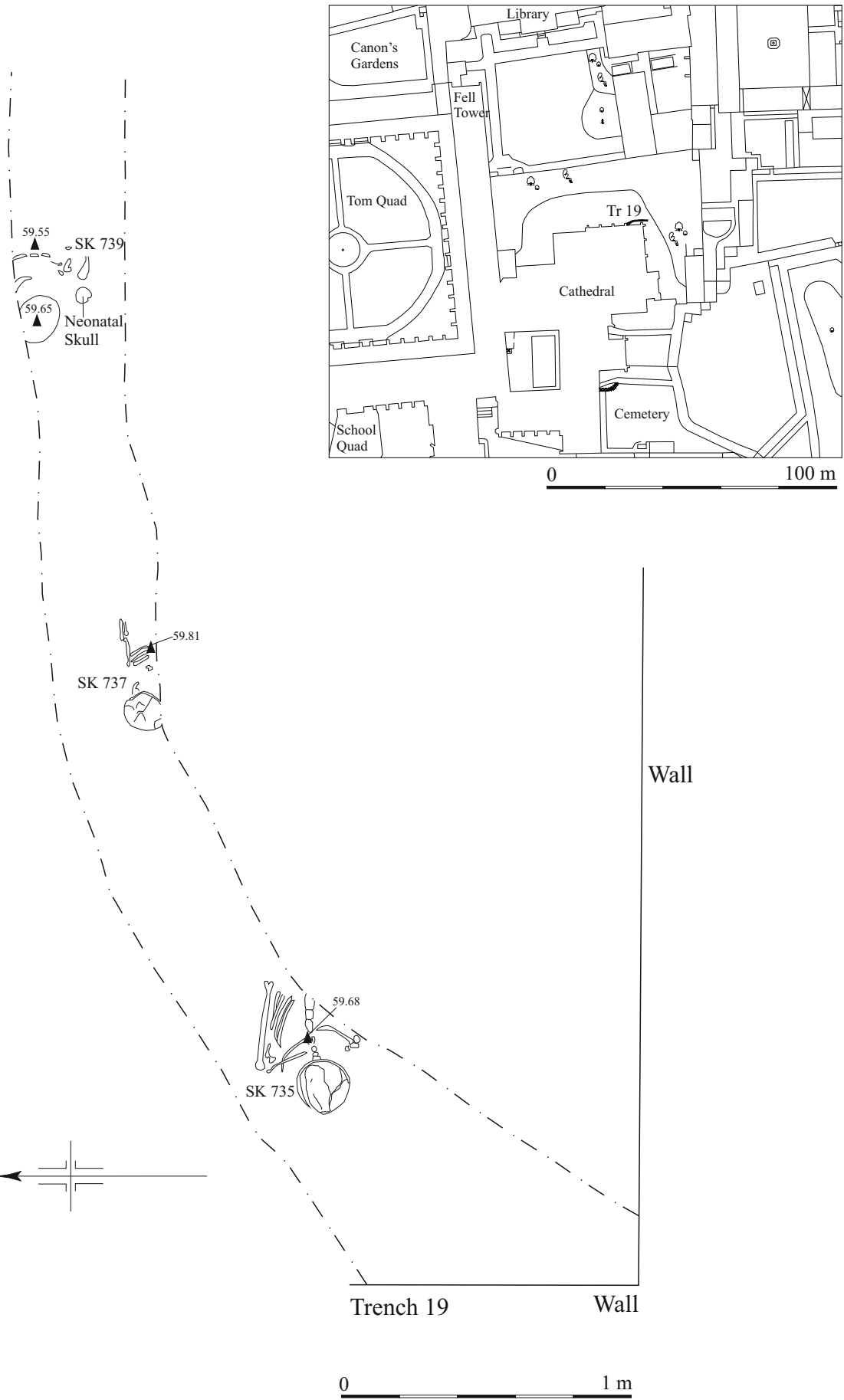


Figure 7. Plan 105

Building 2A

Wall 44 was aligned NWW to SEE and built from limestone blocks roughly hewn on both faces and a limestone rubble core set in pale orange clay. It was 1.00 metre wide and survived to a height of at least 0.20 metres in its foundation trench 43 (Fig. 8, Section 6). The wall appeared to have been robbed by cut 39 down to the top of the surviving two courses at a level of 60.35m OD. No dating was recovered from the wall or the later robber trench 39, but two sherds of 13th to 14th century pottery were recovered from the deposit through which it had been cut (41).

Wall 45 followed the same alignment as wall 44, and was of similar construction. It was 1.05 m wide and survived to a level of 60.87m OD. To the north, cut 67 was filled by small stones and soil (58 and 68) from the robbing of the wall (Fig. 8, Section 7). This rubble produced two sherds of 13th to 14th century pottery. The trench or pit was cut into a 0.36m thick deposit of dark grey-brown silty clay (66) to the north. Overlying (66) was a make-up layer (64) containing numerous tile fragments in a dark grey sand clay loam mixture, interleaved with patches of gravel. Above this was a floor surface of compact light grey granular lime mortar (63) with accumulated sediments of soft mid grey silty clay loam (62), with a further floor (61) of hard white to light grey granular hard mortar above (Fig. 8, Section 7). None of these layers contained dateable material, although the last floor definitely post-dated pit 67.

Wall 9 was a third wall set on an east-west alignment, to the south of the other two walls from Building 2A (Fig. 8, Plan 2). It was narrower than the other two walls, being 0.60m wide at its foundation level, and was of drystone construction using rough limestone blocks and slabs. The wall only survived to a height of 0.20m (at a level of 60.64m OD), and it was overlain by dark grey-brown clay silt containing patches of charcoal and abundant oyster shells (7). The small amount of pottery recovered from (7) comprised eight sherds dated between the late 15th and mid-16th centuries.

At the junction of Trenches 1 and 2 in the south-western corner of Tom Quad, a stretch of wall 54 was recorded in the eastern side of Trench 2. The 2m long surviving stretch of wall was orientated north to south and was constructed from more carefully shaped blocks of limestone bonded with a very hard white mortar. Where it was recorded in the eastern section of Spur 1, the wall was over 1.50m wide and consisted of three courses surviving to a height of 0.65m above the base of the trench. No archaeological remains survived at the southern end of Trench 2, where the insertion of earlier services had resulted in extensive ground disturbance and prevented any determination of the relationship between walls 9 and 54. They were quite different in character, however, and the former may have been an internal wall.

3.7 North of St Frideswide's Lane

Finds and features of medieval date were recorded in Trench 3, which passed through the area previously occupied by a series of medieval properties extending northwards from St Frideswide's Lane. Throughout the trench the early deposits were severely truncated by a series of walls, some of which had subsequently been robbed of their stonework.

Two possible property boundary ditches were recorded, both of which passed through Trench 3 on a north to south alignment. Ditch 151 was 2.50m wide and 0.40m deep (Figs 2 and 9, Section 12). The primary fill (150) was a 0.14m thick deposit incorporating charcoal, oyster shells and two sherds of pottery dated between the late 15th and mid-16th centuries. No dateable finds were recovered from the upper fill (149), composed of mid grey-brown sandy clay loam up to 0.38m thick. The ditch was sealed by mid grey-brown sandy clay loam with lenses of gravel (137), up to 0.23m thick and containing sherds of late 15th to mid-16th century wares.

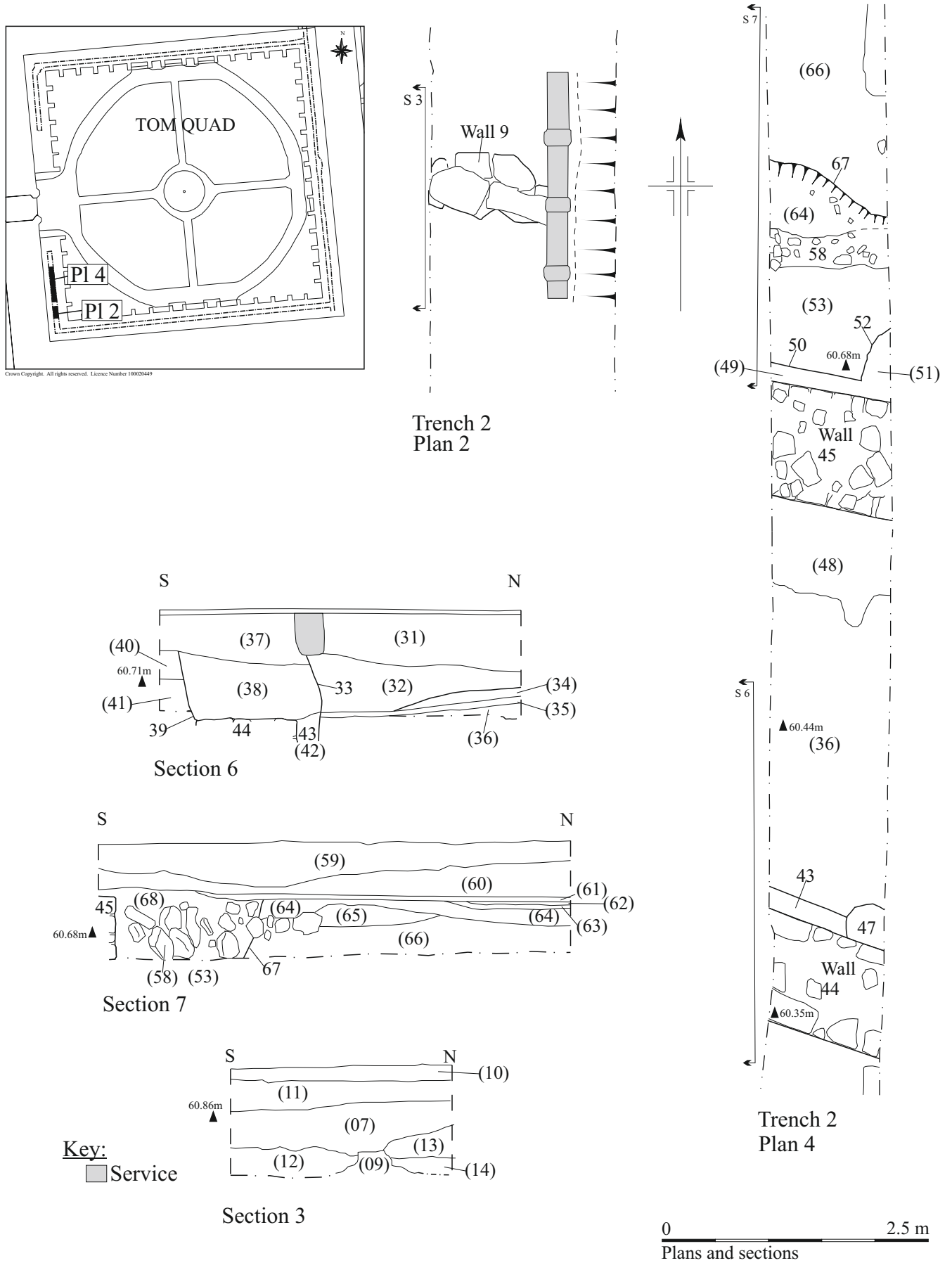


Figure 8. Plans 2 and 4, Sections 3, 6 and 7

The second ditch cut 156 was 1.26m wide and 0.58m deep with a V-shaped profile (Figs 2 and 9, Section 13). It was recorded in the northern trench section, but had been largely truncated by a gas pipe trench that passed through the southern section. The single fill (155) was mid grey-brown sandy silt loam including 5% gravels. Although no dating evidence was recovered from ditch 156, it was cut through a 0.24m thick deposit of mid grey-brown sandy clay loam (158) which produced 26 sherds of late 15th to mid-16th century pottery. Underneath (158) was a very compact orange-grey, coarse sand deposit (157) that may have been a yard or floor surface that had subsided into earlier features, and a resurfacing gravel material (160). A single sherd of late 15th to mid-16th century pottery was recovered from (157), which extended 5m west of ditch 156. The underlying deposit (159) was 0.50m thick and extended below the limit of excavation, and comprised mid grey-brown sandy clay loam that produced 10 sherds of late 15th to mid-16th century pottery.

Building 3A

Wall 110 was aligned approximately north to south and passed through the eastern end of Trench 3 (Fig. 9, Plan 6 and Section 8). It was constructed from roughly hewn limestone facing blocks with a rubble core bonded with dark grey clayey silt. Slightly larger blocks in the eastern face of wall 110 might suggest that this was external, although the mortar surface to the east indicates that it was an internal wall. Unfortunately, there are some discrepancies between the written and drawn records that it made it difficult to resolve the exact stratigraphic sequence.

Wall 110 was 0.65m wide and only survived to a height of 0.08m at a level of 60.50m OD. Part of a doorway present on the northern side was partly visible in the south-facing section (Fig. 9, Section 8) with a thin floor surface of dark grey silt 1-2mm thick extending over the doorway and into the room to the east, where it was laid on a makeup deposit of limestone fragments and gravel 0.02-0.03m thick (119). The earliest floor was overlain by two later floor surfaces – pale orange to grey clayey silt 0.01m thick (118); and then pale yellow clay (117) up to 0.03m thick. It appears that the doorway was enlarged as a later surface of yellow and orange gravel (113) extended across the whole of the exposed wall foundation and into the building by *c.* 0.20 metres becoming a surface of white-yellow mortar and small limestone fragments (126). Surface (113/126) was bedded on a 0.09m thick deposit of sandy silt with small limestone fragments (114). Floor (126) contained three sherds of 13th-14th century pottery.

Cutting surface (113), but possibly from a higher level as deposit (104), was posthole 116 that was 0.35m in diameter and filled with mid grey-brown sandy silt and gravel (115). A thin white mortar surface (125) abutted the eastern side of the wall, which was overlain by a further surface of clean orange gravel (107) containing a pot sherd dated to the 14th century. To the east were two cut features – 109 and 106. The former irregular cut truncated part of wall 110, whilst the latter was a pit with 14th-16th century pottery in its fill (105). A later date does seem more likely for the pit, as the later surfaces associated with the wall were 13th-14th century in date.

Wall 121 passed through Trench 3 *c.* 3.50m to the west of wall 110, and followed a broadly parallel alignment (Fig. 9, Plan 6 and Section 9). It was 0.65m wide and survived to a height of 0.45m at a level of 60.85m OD. The surviving section was built of rough limestone facing blocks enclosing a rubble core bonded by dark grey clayey silt, and was of slightly better construction than wall 110. No surfaces were identified abutting the wall to the east, where deposit 104 was seen to extend to just above the depth of excavation. A sequence of surfaces was recorded to the west of the wall. The earliest consisted of a 0.13m thick deposit of grey-brown clayey silt (131) that produced two sherds of late 11th to 12th century pottery. A layer of orange gravel and sand (130) was found above this, probably a makeup deposit for a cobbled surface of limestone blocks set in grey-brown clayey silt (129). The surface of the limestone cobbles produced two sherds of 13th-14th century pottery. The latest surface recorded was a

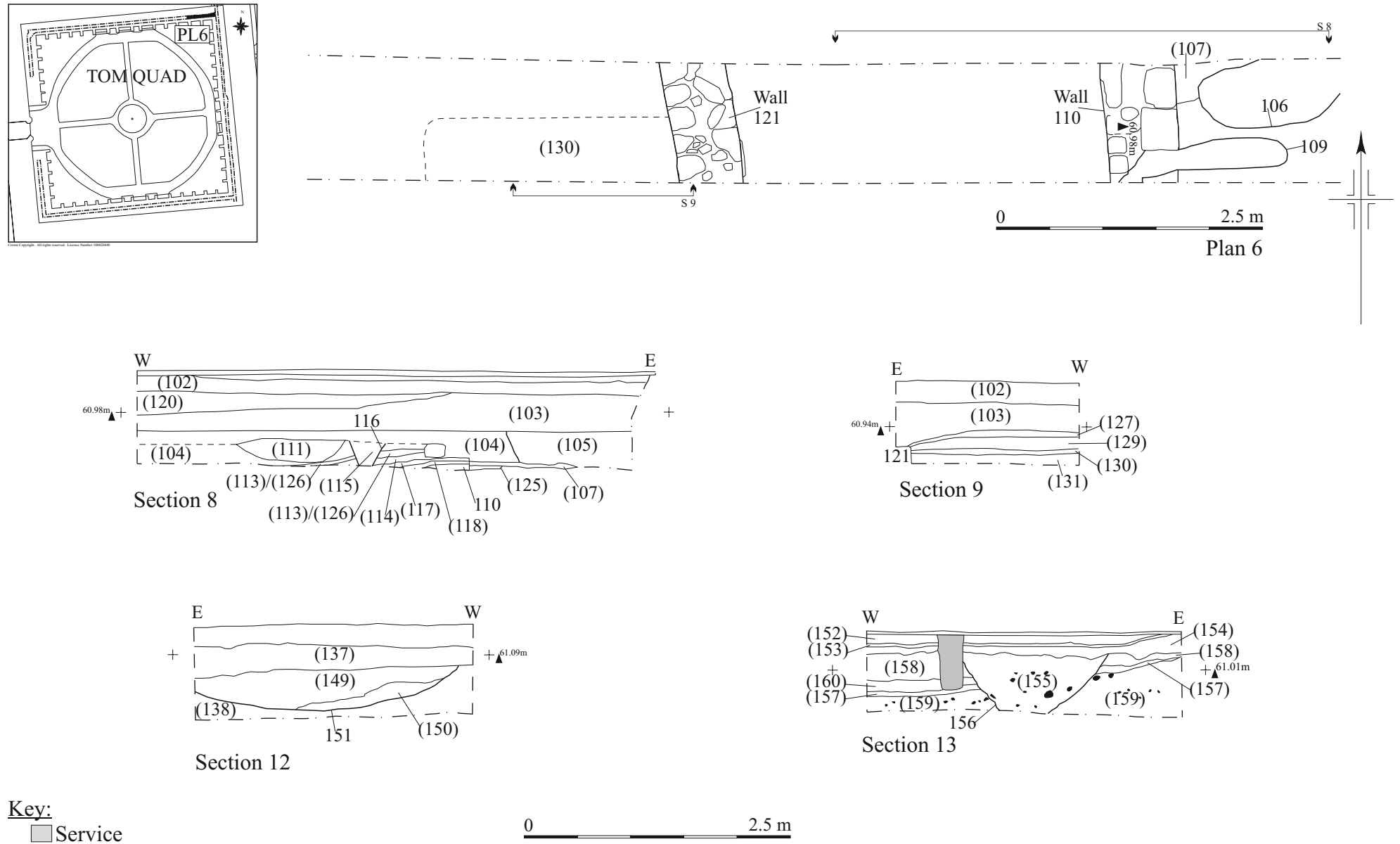


Figure 9. Plan 6 and Sections 8, 9, 12 and 13

0.01m thick layer of orange gravel (127) lying directly above the cobbles of surface (129), and this may have post-dated the robbing or demolition of the wall.

Building 3B

Four sherds of mid-13th to 14th century pottery were found between the limestone blocks of drystone wall 143, situated 4.8m west of wall 121. The wall was seen in the northern trench section, where it was aligned east-west but extended a mere 0.20m into the trench (Fig 10, Plan 8), though it survived for a length of 2.20m and was robbed or cut through by an unidentified pit to the west. Five sherds with the same mid-13th to 14th century date range were recovered from fill (133) of the wall construction trench 134, though both these assemblages consisted of residual sherds incorporated during the construction of the later wall. To the east of wall 143 was a deposit of grey-brown clayey silt (132) interpreted as the partly exposed fill of a pit. The deposit produced five sherds of 14th century pottery.

Underneath the gravel makeup of the Quad terrace in Trench 3, the top of well 136 was exposed consisting of limestone blocks and fragments surviving to a height of 0.60m at a level of 61.18m OD (Fig. 10, Plan 9 and Section 11; Plate 5). The well was capped with two large York stone slabs and sealed by a deposit of grey brown sandy loam (137) that contained ten sherds of late 15th to mid-16th century pottery. Below context (137) and adjacent to the well were traces of a probable cobbled yard surface (139). This was formed from well-worn limestone fragments (0.5m thick) and lay above mid grey-brown sandy clayey loam up to 0.30m thick. This layer (138) produced animal bone and a small assemblage of pottery sherds dating to the 15th century. Below (138), a second cobbled surface (147) was identified, which again was composed of limestone pieces that had been set into a discontinuous layer of compact orange-brown gravel. The excavators thought that both the earlier and the later cobbled surfaces were cut by the well pit, though the surviving records indicate that it is more likely that (139) actually abutted the stone sides of the well. The relationship between the well and surface (147) is more ambiguous.

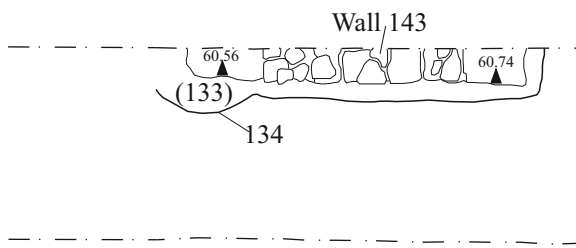
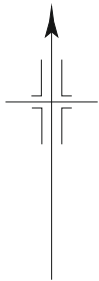
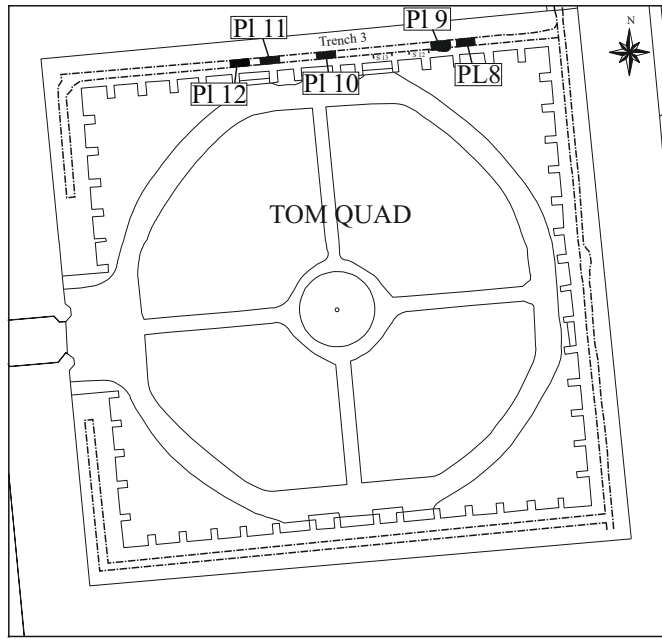
Building 3C

Further west, wall 165 was orientated north-west to south-east and was up to 0.65m wide but only one course survived at a level of 60.60m OD (Fig. 10, Plan 10). It had facing blocks of roughly hewn limestone with a core of cobbles and gravel, along with a few pieces of floor tile and a single architectural fragment (See Rodwell below) of mid-14th to mid-16th century date. A 0.25m thick deposit of pale grey-brown sandy silt (163) lay above the wall, and this produced five residual sherds of mid-13th to 14th century pottery. To the west was a firm level surface of gravel and small limestone fragments (167).

A possible robber trench cut 169 was identified approximately 2.50m west of wall 165 (Fig. 2), aligned north to south and up to 0.65m wide and 0.62m deep with near vertical sides. The single fill (168) was light grey-brown clayey silt with fragments of cream coloured mortar and limestone. A single sherd of pottery from (168) dated from the 12th to mid-14th centuries. This was sealed by debris possibly associated with the construction of the College, which if correct would mean that the robbing could thus be broadly dated to c. 1525.

Building 3D

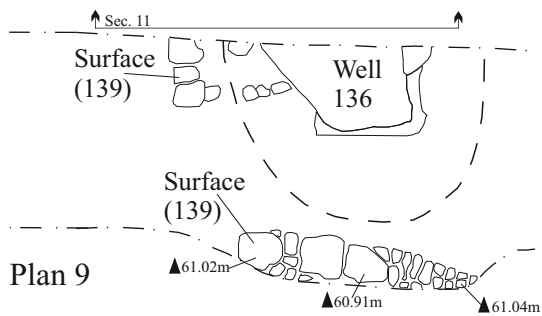
A north-east to south-west orientated drain made of limestone blocks (context 166) was recorded to the east of wall 173 (Fig. 10, Plan 11). The drain had an internal width of 0.45 metres and the surviving three courses were up to 0.31m deep. Since the top of the drain had been disturbed by modern services, it was not possible to determine whether the drain was originally an open drain or if it had been capped. The upper fill (170) was grey-brown sandy silt with fine gravel, and like the underlying layer that was not excavated, it sloped downwards in a southerly direction. On its western side, the drain was abutted by firm reddish grey-brown sandy clay silt (172) 0.30m thick, that contained some gravel and a single sherd of 13th to 14th century pot.



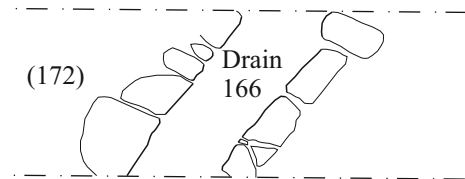
Plan 8



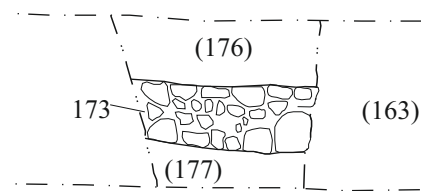
Plan 10



Plan 9

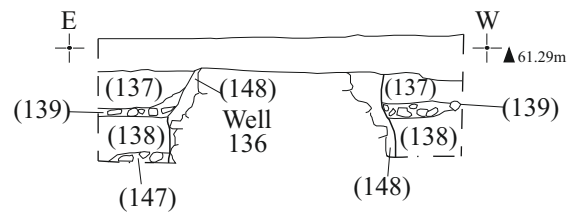


Plan 11



Plan 12

0 2.5 m



Section 11

0 2.5 m

Figure 10. Plans 8 -12 and Section 11

Wall 173 was aligned east-west and consisted of rough limestone facing blocks with a rubble core set in pale grey-brown clayey silt (Fig. 10, Plan 12). It was 0.40m wide but only one course survived, and it had also been truncated at both its eastern and western ends. Deposits (176) and (177) were recorded on either side of the wall, consisting of mid grey-brown sandy silts with gravel and limestone fragments. Deposit (176) was north of the wall and was overlain by (175), soft, pale grey clayey silt up to 0.13m thick. Four sherds of pottery from this layer were dated to between the late 11th and 12th centuries. To the south of the wall, deposit (177) produced a single sherd of 13th to 14th century pottery. Above deposits (175) and (177), and wall footings 173, a 0.17m thick layer of mid grey-brown clayey silt (174) that contained mixed gravel also produced two sherds of late 15th to mid-16th century pottery.

Towards the western end of Trench 3, wall 178 followed a north-east to south-west alignment and was constructed from roughly hewn limestone bonded with light brown sandy clay (Fig. 11, Plan 13). It was 0.40m wide and survived to three courses in height at a level of 60.76m OD. A single, residual sherd of late 11th to 12th century pottery was recovered from the matrix of the wall. This wall was parallel to drain 166, situated c. 9m to the east.

Building 3E

Further to the west along Trench 3, wall 185 had roughly hewn limestone blocks on both faces, with a rubble core bonded with orange-brown clay (Fig. 11, Plan 13). It was 0.90m wide at a level of 60.73m OD. A single sherd of 14th century pottery was recovered from the rubble core of wall 185. A further wall 209 was found some 0.60 metres to the east of wall 185, where it shared the same alignment and construction details. The wall was 0.45m wide and survived to a height of two courses at a level of 60.82m OD. A single sherd of pottery recovered from the core of the wall dates between the late 11th and mid-14th century. Walls 185 and 209 were both cut into the upper fill of pit 204, the upper fill of which (205) was a dark grey silty sand that produced five sherds of pottery dated to between the 13th and 14th centuries.

A surface of tabular limestone slabs set into a dark brown-grey sandy silt (180) was recorded abutting the east side of wall 209 at 60.79m OD. The largest stones were 0.40m long, 0.40m wide and 0.06m thick, with smaller fragments in between. Four sherds of 14th century pottery were recovered from surface (180), which sloped downwards to the east, perhaps subsiding into an earlier underlying feature. A further five sherds of 14th century pottery were found in the underlying layer (184). This deposit was friable grey-brown sandy silt with gravel, limestone and roof tile fragments, and was possible pit fill. Another deposit (179) very similar to (180) was found c. 2m further to the east, where it was recorded at 60.70 metres OD. It was unclear whether this was the remains of a wall, a continuation of surface (180), or a combination of both. It produced a single residual sherd of late 11th to 12th century pottery. Between this structure and wall 178 to the east, deposit (181) consisted of a 0.10m thick layer of friable grey-brown sandy silt with gravel and limestone fragments, and two sherds of 14th century pottery were recovered from it. On the west side of deposit (179) were two pit fills, (182 and 183).

Further to the west, a building rubble deposit (186) of friable orange to yellow mortar with limestone fragments, tile and charcoal produced a single residual sherd of 10th century pottery. It was cut by pit 204, but itself overlay a partially exposed cream-yellow lime mortar floor surface (206). This floor was not fully investigated as it was below the required excavation depth, but it was probably associated with a robbed out wall evidenced by robber trench cut 207. This robber trench also cut (186), and it was 0.90m wide and filled with friable grey-brown sandy silt with gravel and limestone fragments (187). The robber cut was similar in dimensions and parallel to wall 185, and mortar floor (206) may have been laid in a narrow 2m wide corridor between these two walls.

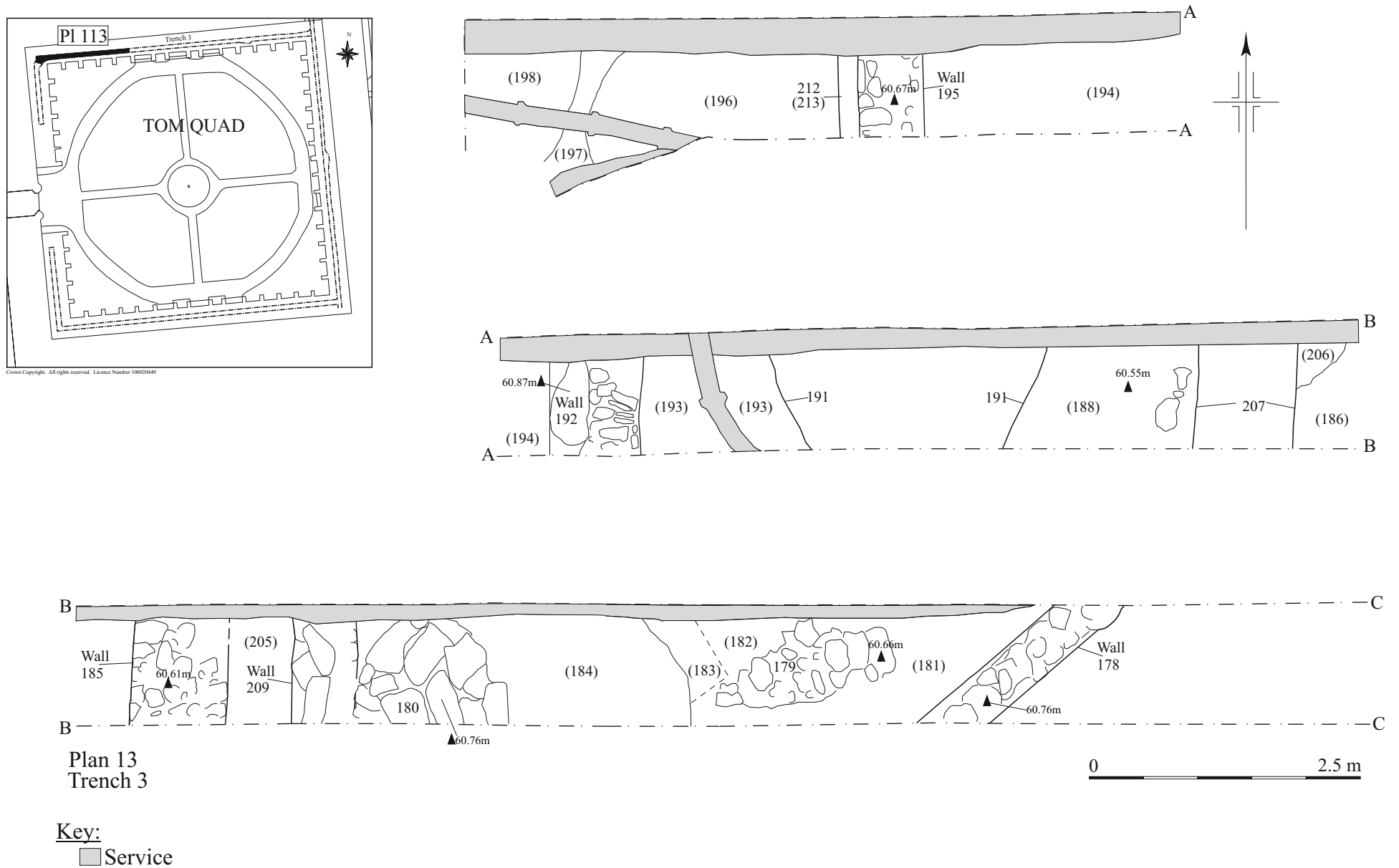


Figure 11. Plan 13

To the west of robber trench 207 was either a hearth or an area of burning (188), consisting of burnt and scorched gravels 0.08-0.15m thick and containing a single sherd of late 11th to 12th century pottery. This overlay a 0.08m thick deposit of sandy silt with gravel (210). This layer produced a substantial assemblage of 96 sherds of late 11th to 12th century pottery, the majority from a single vessel.

Below (210) was a layer of black silt and ash (211) only some 0.06m thick that in turn overlay deposit (216), mid brown-grey sandy silt with gravel at least 0.12m thick and which may have been the fill of a pit. Both (211) and (216) produced several sherds of late 11th to 12th century pot. To the west was large subcircular pit cut 191 that was at least 2.50m across and filled by dark grey-brown silty sand with gravel, and which contained sherds of mid-13th to 14th century date. Pit 191 truncated earlier deposit (193), formed from dark grey-brown sandy silt.

Building 3F

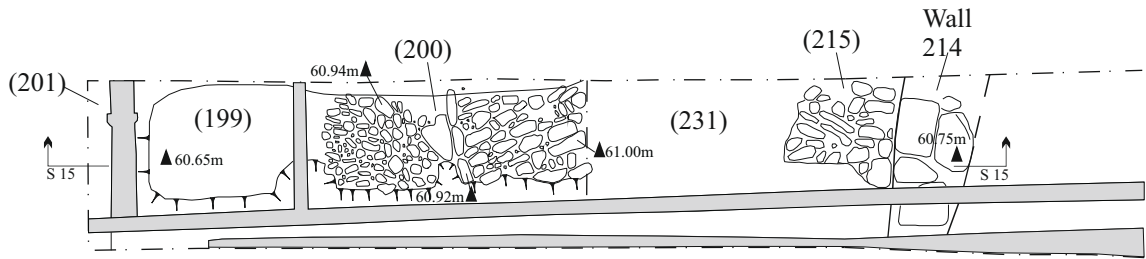
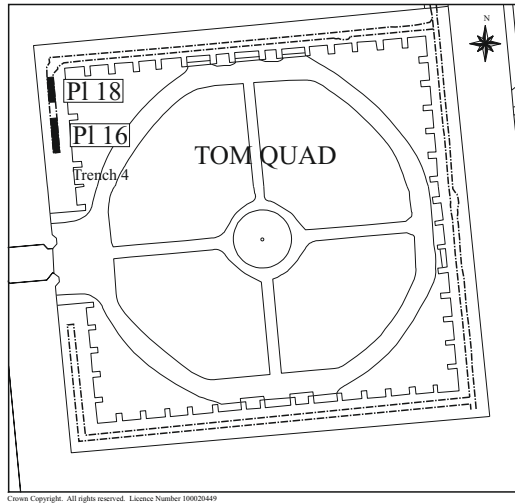
Another wall on a north-south alignment, 192, was found east of pit 191. Wall 192 survived as a single course 0.80m wide and at a height of 60.87m OD. Wall 195 was 0.55m wide though only one course survived at 60.67m OD. A construction cut 212 just 0.20m wide and filled with mid-brown sandy clay silt (231) was recorded on the western side of wall 195. Two sherds of 13th to 14th century pottery came from wall 195. Walls 192 and 195, like wall 185, were built with roughly shaped limestone blocks on both faces, and had rubble cores bonded with orange-brown clay. Between walls 192 and 195 there was a deposit or surface of pale yellow crushed mortar incorporating limestone, tile and occasional brick fragments (194).

The upper fills of three unexcavated pits were recorded at the far western end of the trench (196, 197 and 198) (Fig. 11, Plan 13). The phasing of these features is uncertain since the fills were very similar and it proved difficult to distinguish individual cuts. The small pottery assemblage recovered from the top of the combined upper fills consisted of nine sherds dated between the 13th and 14th centuries.

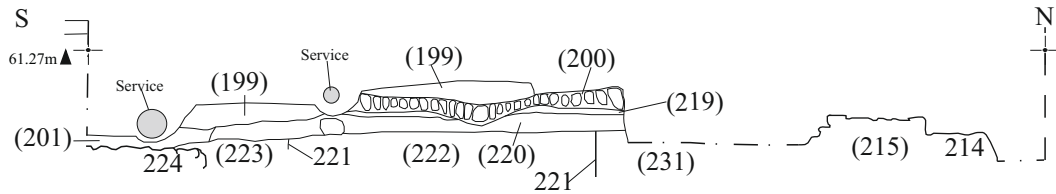
3.8 St Frideswide's Lane

North of Tom Tower in Trench 4, a possible ditch cut 221 was recorded that was 1.96m wide and on an east-west alignment. The fill (222) was dark grey-brown clay silt containing small lumps of yellow clay, large quantities of charcoal and copper-alloy working debris (Fig. 12, Section 15); and also produced six sherds of late 11th to 12th century pottery. The northern edge of 221 cut through a layer of dark grey-brown sandy silt (231) which contained a single, probably residual sherd of early to late 11th century pottery and occasional lumps of copper-alloy working debris. This deposit was partly overlain by pale grey-brown clayey silt (230) that produced three sherds of 12th to 14th century pottery, and which was itself underneath a wall 214 and a cobbled surface (215) (see below).

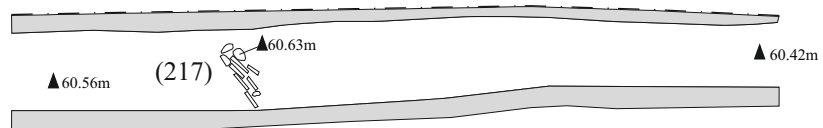
A cobbled lane surface was recorded (200) overlying the possible ditch at the southern end of Trench 4 (Fig. 12, Plan 16; Plate 6), probably the remains of St Frideswide's Lane. It was found in both Trenches 4 and 5, and in Trench 4 consisted of pitched limestone cobbles (200) up to 1.80m wide, though it was truncated on its northern side by a large modern feature. The well-worn cobbled surface sloped down slightly to a central gully 0.30m wide, which was formed by cobbles laid lengthways. The cobbles of 200 were set into orange gravel, and two sherds of 13th to 14th century wares were recovered from between the cobbles. Below this surface, a thin layer of compact silty sand (219) produced 13 sherds of pottery spanning the same period, and this in turn lay above a very compact dark grey sandy silt deposit (220) that contained medieval tile and iron slag.



Trench 4
Plan 16



Section 15



Plan 18

Key:
 Service

0 2.5 m

Figure 12. Plans 16 and 18, and Section 15

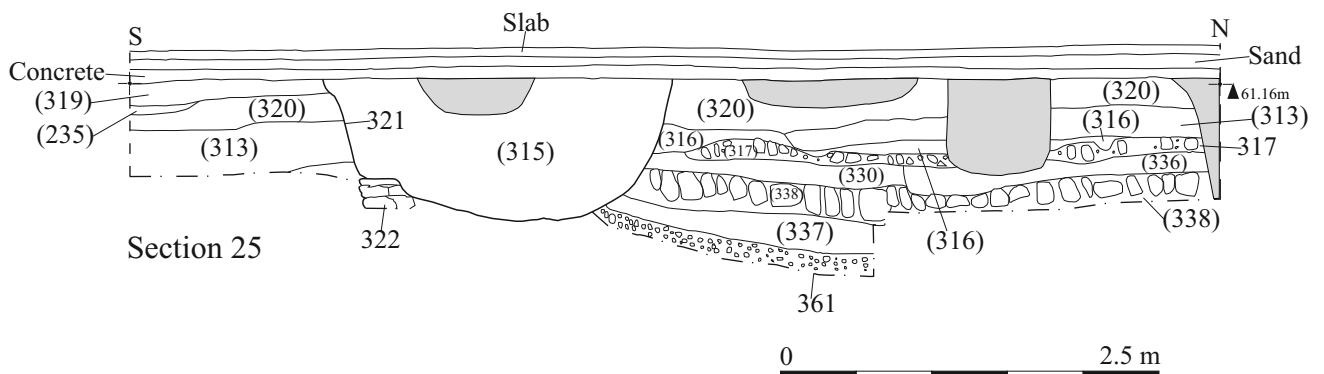
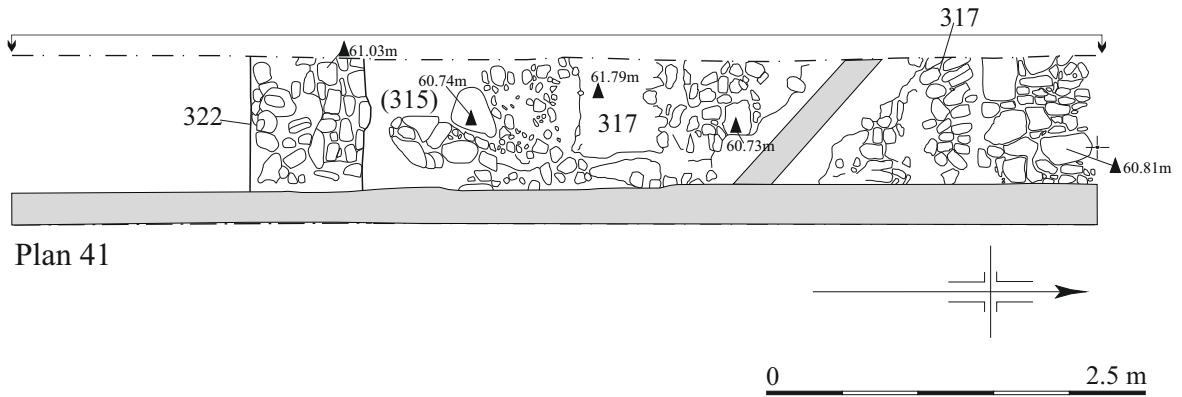
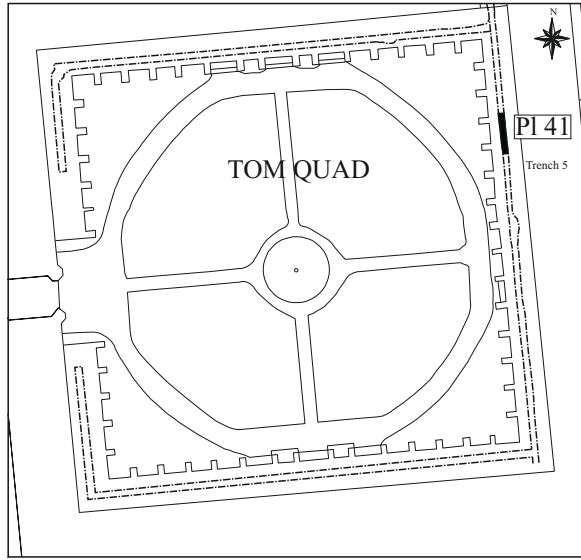
Several service trenches cut surface (200) on its southern side. Its full extent could therefore not be defined with any certainty, though a possible robbed-out wall 201 may have once defined its original southern boundary. The robber cut was filled by (224), pale yellow grey sandy clayey silt with limestone lumps, gravel and occasional roof tile fragments. Above (200), a mortar bedding layer 3.30m wide at a height of 61.03m OD (199) probably represented later repair or remodelling of the lane surface. Although traces of the later cobbled surface of (199) survived it was mostly been robbed-out, leaving a series of depressions where the cobbles had been removed. This surface extended further south than the original lane of 200. A similar two-phase sequence was evident with road surface (317) in Trench 5.

Another probably later cobbled surface was recorded *c.* 1.30m north of deposit (200). The flat cobbles of (215) were set in mid grey-brown clayey silt which contained two sherds of 15th century pottery. Surface (215) abutted the foundations of limestone wall 214, aligned east-west and constructed from roughly hewn limestone blocks set in a grey-brown clay matrix. Wall 214 was 0.55m wide and truncated at both ends by services, only surviving as a single course at a level of 60.77m OD. A very small area of rough, pitched limestone cobbling (217) 0.20m by 0.15m in extent was also recorded at a level of 60.63m OD in the northern half of Trench 4 (Fig. 12, Plan 18). Immediately to the north of wall 214 there was a further area of limestone cobbles (229) at a depth of 60.35m OD within an excavated sondage 0.50m long and 0.30m wide (not illustrated). This surface consisted of tightly packed limestone cobbles beneath a layer of mid grey-brown sandy clayey silt (228) up to 0.17m thick, which in turn was overlain by a thin layer (0.07m) of pale grey orange-brown clayey silt (227). These cobbled surfaces did not produce any dateable finds, but layer (228) contained three sherds of 13th to 14th century pottery.

A better-preserved cobbled surface that also belonged to St Frideswide's Lane extended east-west through Trench 5 (Fig. 13, Plan 41). In a hand-excavated strip adjacent to the western trench section, the earliest surface recorded (361) was a compact layer 0.10m thick of gravel and limestone fragments in a coarse yellow-orange gravel matrix (Fig. 13, Section 25). This was overlain by dark grey silty sand 0.26m thick (337) that produced 37 sherds of 13th to 14th century pottery. This was below another cobbled lane surface (338) up to 3.70m wide. Three sherds of 13th to 14th century pottery were recovered from (338), which might have once extended southwards to the Priory precinct wall 322 indicating an original width of at least 5.30m. Wall 322 had irregularly laid limestone up to 0.30m long and 0.17m wide set in a matrix of hard, cream-coloured mortar. Above cobbled surface (338) was bedding material of pale yellow-grey mortar (330) up to 0.14m thick with 13 sherds of 13th to 14th century wares, and copper-alloy fittings (SF Nos. 4-5). Layer (336) consisted of compact light greyish-brown gravel up to 0.19m deep. The final road surface (317) had compact limestone cobbles bearing the imprint of cartwheels and traces of repairs to the surface, and it lay beneath a 0.22m thick deposit of light grey sandy silt (316), which produced 60 pottery sherds spanning the mid-13th to 14th centuries.

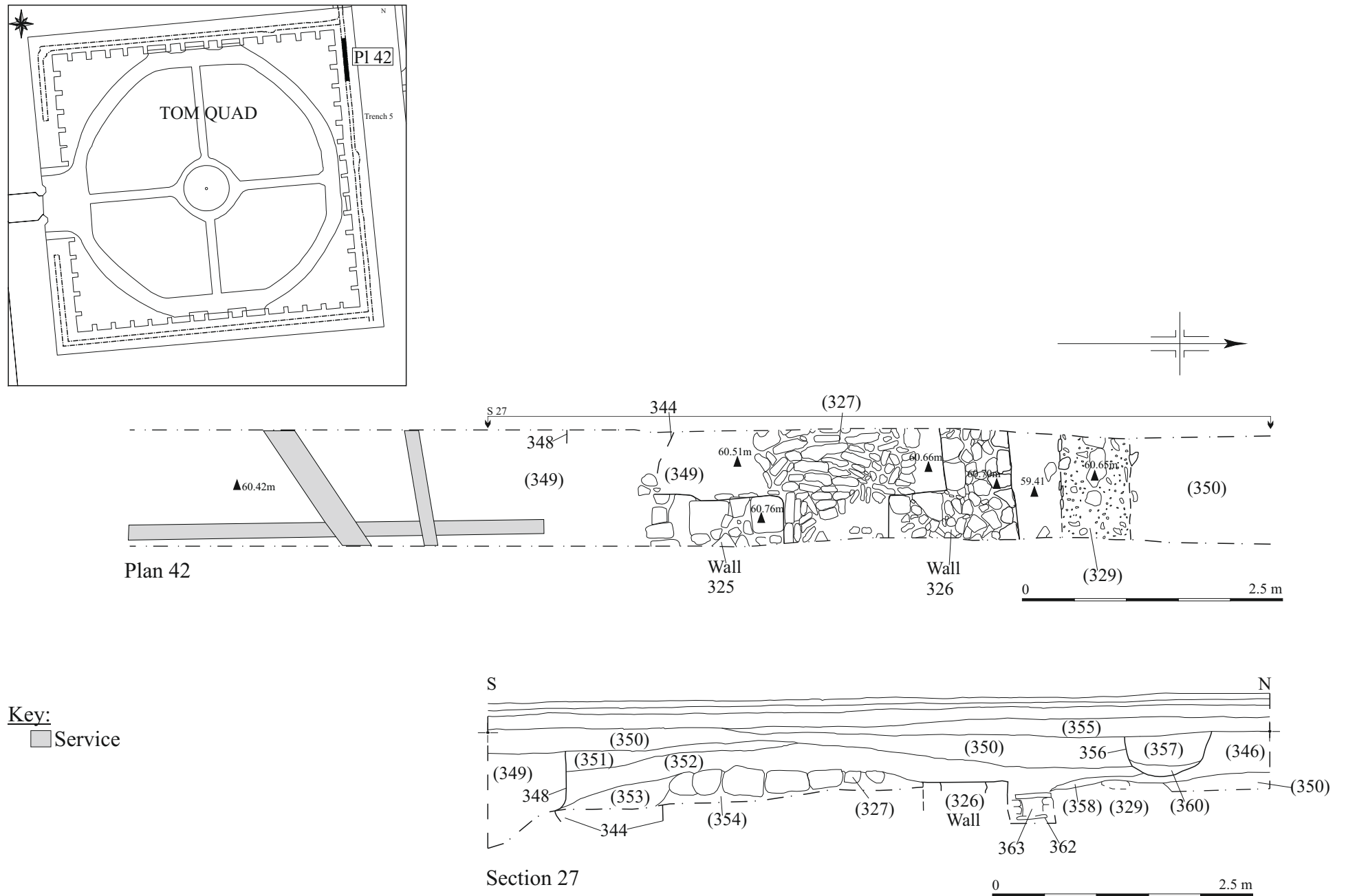
Building 5A

To the north of St Frideswide's Lane in Trench 5, a disturbed layer of orange silty sand up to 0.64m thick (347) extended for *c.* 10m and included lenses of orange clay, gravel, occasional limestone fragments and frequent flecks of charcoal, and nine sherds of 13th to 14th century pottery. The remains of a substantial late medieval building 328 were recorded at the northern extremity of (347), but the relationship between the two could not be determined. The building consisted of a short stretch of wall footing 326 up to 0.65m wide that extended from the west and turned through a right angle to the south in order to form the north-eastern corner of the building (Fig. 14, Plan 42; Plate 7). The wall was constructed from limestone set in orange-brown sandy clay, which included three sherds of 13th to 14th century pottery. Approximately 0.50m from the corner, there was a 1.00m wide entrance in the wall, and it then continued southwards for a further 1.40m as wall 325, up to 0.50m wide. The south-eastern corner of the building and the entire southern wall were destroyed by a possible pit cut 344 (Fig. 14, Section 27), with a



Key:
 Service

Figure 13. Plan 41 and Section 25



Key:
 Service

Figure 14. Plan 42 and Section 27

charcoal-rich layer 0.10m thick as its uppermost fill (353). Six sherds of 15th century pottery were found in this deposit. A lower fill of this feature (345) was not excavated, but a single sherd of 15th century pottery was recovered from its surface. A later feature 348 cut pit 344.

A floor surface (327) formed by stone slabs up to 0.30m by 0.10m in size was edged to the north and south by stone kerbs extending from the entrance to the interior of the building. This surface produced 22 sherds of 15th century pottery. A drain was also recorded against the interior face of wall 326, bounded on its southern side by the kerbing and terminating in the angle of wall. Underlying the stone slabs (327) was a makeup layer or earlier surface of gravel (354). To the north and exterior of wall 326 was stone-lined drain 362, built of small limestone blocks with re-used limestone roof tiles for its base and capping. This was up to 0.35m wide and 0.20m deep. A path 0.65m wide of compacted stone and gravel (329) followed the northern side of the drain, and 12 sherds of 13th to 14th century pottery were recovered from its makeup. From the northern end of building 328 to Fell Tower, no structural remains were encountered and the deposits were very mixed and disturbed by numerous services. These deposits were assigned a generic context number (346), and the 35 sherds of 13th-14th century pottery recovered were probably residual.

Building 6A

In Trench 6 was the north-west corner of a stone building cut by 16th and 17th century foundations (Fig. 15; Fig. 16, Section 29; Plate 8). The drystone wall footings context 400 were 0.70m wide and built from roughly dressed limestone blocks two courses high at a depth of 60.74m OD. The footings extended for 3.60m on a broadly north-south alignment, then turned through a right angle and carried on eastwards beyond the trench edge (Fig. 16). A large section of the internal face of wall 400 was rendered with a pale cream-coloured mortar up to 25mm thick, and the interior of the building had been in-filled with mid-brown sandy silt (401) 0.24m thick that included fragments of limestone and roof tile, and 20 sherds of 15th century pottery.

A narrower wall 405 on an east to west alignment was recorded below the footings 404 of the 17th century Fell Tower itself (see below, also Fig. 16, Section 28). The earlier wall 405 was 0.45m wide and built of roughly dressed limestone blocks bonded with a clayey gravel mortar. It was located 3.50m north of building footings 400 and may represent a property boundary associated with the building to the south, or it may have been part of a second building. A large, north-east to south-west orientated construction or robber cut 412 was recorded towards the northern end of Trench 6 (Figs. 15 and 33). Due to its relationship with other features, this will be described more fully in Section 3.12 below.

3.9 St Edward Street and Shitebarne Lane

The possible junctions of Jury Lane, St Edward Street and Shitebarne Lane were identified within Trenches 7 and 8, although in the narrow trenches it was difficult to establish their full extent and distinguish their edges. A metallised surface (508) at the junction between the southern end of Trench 7 and Trench 8 was at a level of 60.99m OD (Figs. 17-18, Fig. 20 Section 35, Fig. 22 Section 34; Plate 9), and consisted of well-worn limestone fragments and quartz pebbles. Its westernmost extent was possibly part of the medieval thoroughfare of St Edward Street or Vine Hall Lane (Figs. 17 and 18), but much of it was probably Shitebarne Lane. Animal bone, tile fragments and ten sherds of 13th to 14th century pottery were impressed into its surface. A compact layer (507) of dark red-brown sandy silt clay 0.12m thick lay above the cobbled surface, and this was overlain in turn by a stony, dark grey clayey silt layer (506) up to 0.14m thick, which produced three sherds of 13th to 14th century pottery. Overlying deposits comprised mid to dark grey clayey silt with stone fragments (505), dark grey clayey silt 0.30m thick with a lens of yellow sand silt (504); grey-brown sandy clayey silt (509) 0.22m thick; and a 0.02m thick compact layer of orange gravel and sand (510) with 10 sherds of 15th century pottery.

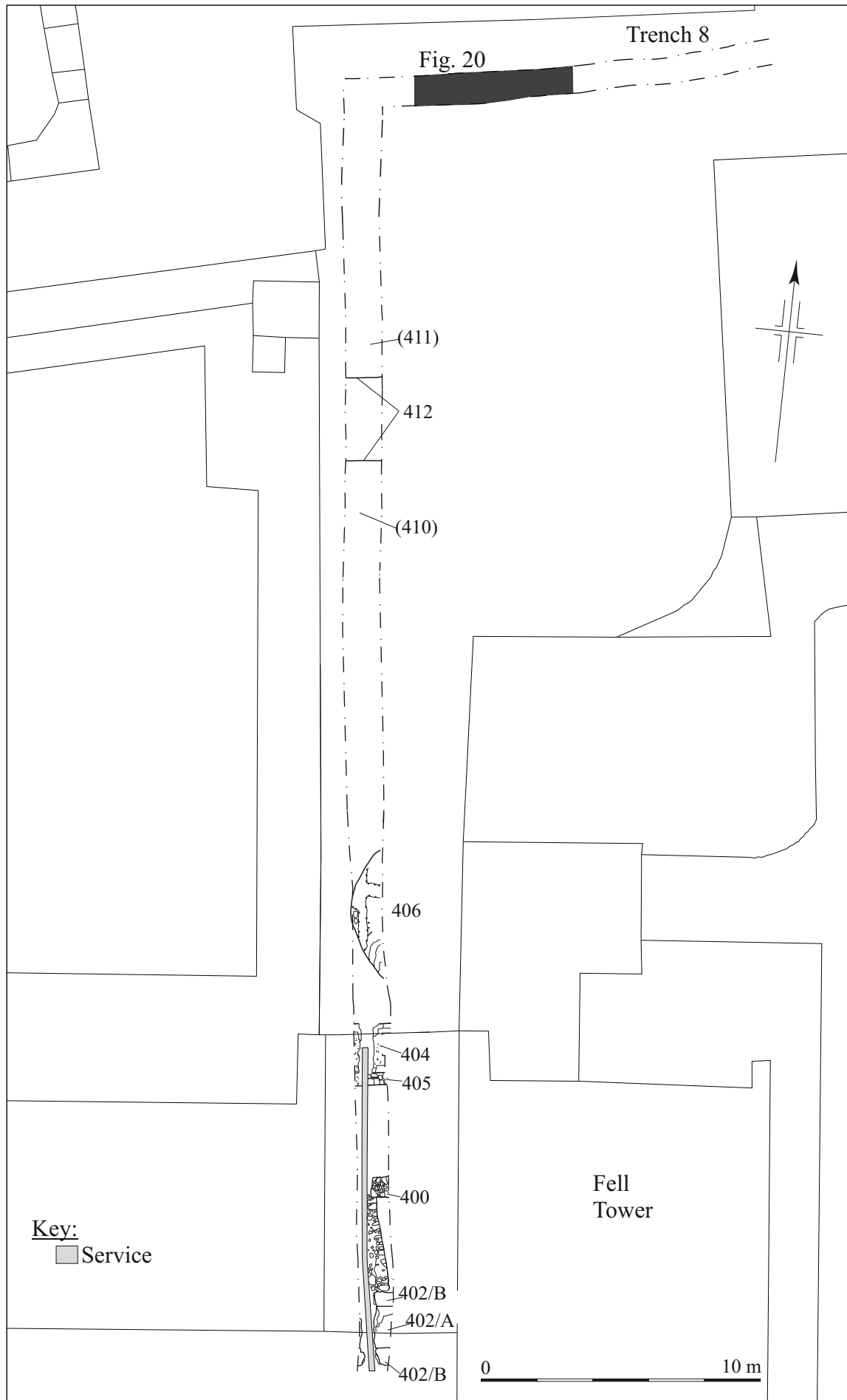


Figure 15. South end of St Edward Street and Wolsey's chapel
29

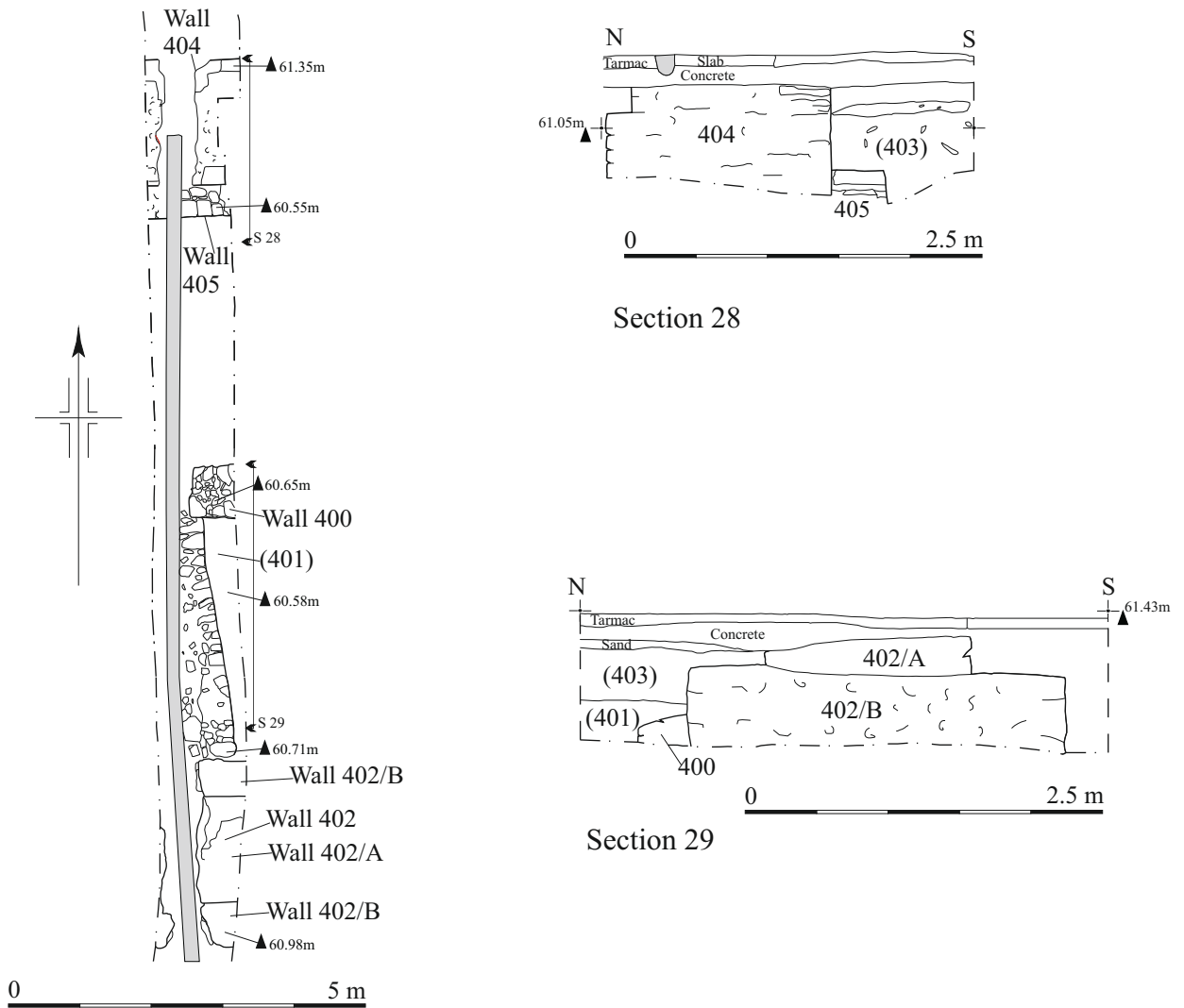


Figure 16. Plan 48, Sections 28 and 29

An additional exposure of the cobbled surface further east in Trench 8 was recorded as (532). If this was the same phase as (508), as seems likely, than this surface was probably part of Shitebarne Lane leading off to the east (Figs. 18 and 20, but see Discussion below). Where surface 532 extended through Trench 8, the eastern edge of the road was cut by a service trench following the much earlier footings of a north to south aligned wall 533, which may have represented the original road boundary. An extensive area of the road surface was destroyed by large pit cut 531, which was 4.25m across. The fill of this pit (530) consisted of mid grey-brown clayey silt with large quantities of oyster and mussel shells, animal bone and some charcoal, in addition to a broken whetstone and 21 sherds of pottery of late 15th to mid-16th century date.

To the east of wall 533 in Trench 8 and overlying it was a deposit of dark brown to black silty loam (541) that produced 42 sherds of late 15th to mid-16th century pottery (Fig. 19). This was underneath an undulating surface of compact gravel and pebbles (540) up to 0.12m thick that probably formed part of Shitebarne Lane. A deposit of limestone cobbles (537) with occasional re-used architectural fragments set in pale grey sand overlay the metallated surface of (540). The cobbles of (537) sloped gently from 61.52m OD along its western edge to 61.19m OD at the eastern side, suggesting that it may have formed part of a more extensive north-south aligned surface. Light grey clayey silt (538) 0.10m thick lay directly above (537) across its western side. Layer (538) was underneath a similar deposit up to 0.50m thick (539) that also overlay cobbled surface (537). These two deposits (538) and (539) contained 61 sherds of late 17th to mid-18th century pottery, and the latter also a bone handle (SF No. 34). These deposits were followed by a series of makeup layers, with the uppermost a compact orange gravel surface probably associated with levelling for the library.

Further to the west at the junction of Trenches 6 and 8, the ground was heavily disturbed by services and there was complex stratigraphy visible in the south facing section including at least two cobbled surfaces (552) and (574). Part of this stratigraphy was hand excavated. The westernmost upper cobbled surface (552) was approximately 4.0m wide and made from worn, small limestone blocks with evidence for repairs to the damaged surface in places (Fig. 20, Section 35). The uppermost level of this surface sloped from 61.46m OD at its eastern side to 61.30m OD at its western margin. Below (552) were earlier dumps, surfaces and patching episodes probably also associated with St Edward Street or Jury Lane; including a layer of sandy silt with gravel (550), clayey silt with gravel (546), gravelly mortar (549), and gravel with silty sand (553). Cobbled surface (574) was recorded towards the eastern side of the section, where it was approximately 3.50m in width. The surface sloped downwards from 61.60m OD to 61.18m OD on the western side, and was constructed from large, roughly dressed rectangular limestone cobbles, some up to 0.25m long, 0.15m wide and 0.15m thick. Below the cobbled surface was a 0.20m thick deposit of light brown-grey silty sand (575), tipping downwards to the west. This layer produced six sherds of 13th to 14th century pottery and overlay part of another, early cobbled surface (508).

It is possible that (552) was a later phase of Jury Lane or St Edward Street/Vine Hall Lane; and that (574) was a later phase of St Edward Street. To the east of (552), deposits (554-557, 560 and 570) were possibly fills, either within a pit or more likely a roadside ditch along the eastern side of St Edward Street, with road surfaces (553) and (562) also slumping into the ditch. There was clearly a very complex series of makeup deposits, road surfaces and resurfacings in this area, however, and unfortunately it was simply not possible to establish a clearly defined sequence. Only two sherds of 13th to 14th century pottery were found in this area, in layers (561) and (568). Six sherds of 13th century pottery were recovered from a compacted yellow gravel surface (569) at the base of the trench below deposits (565) and (568).

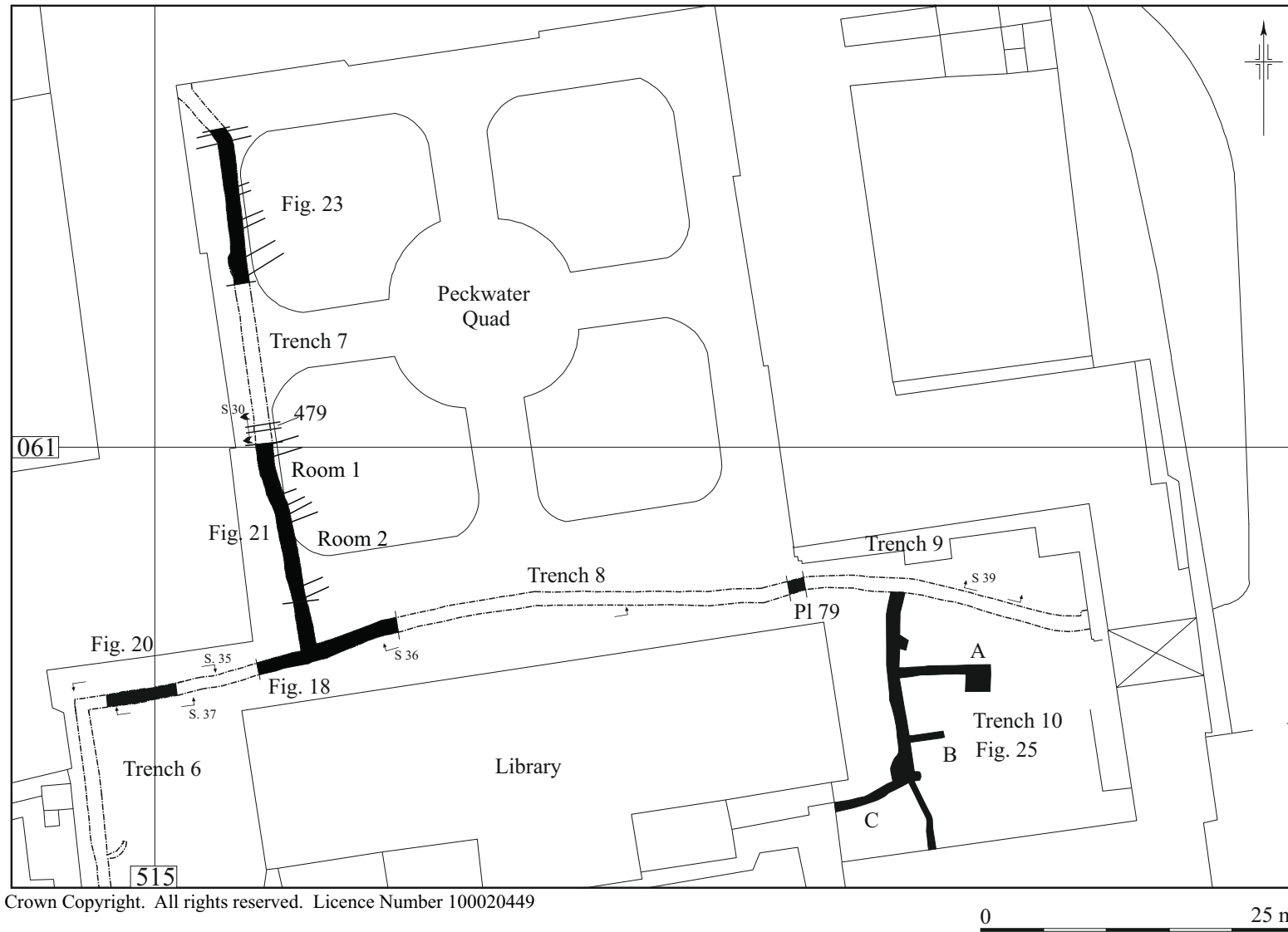


Figure 17. Trenches 7-10

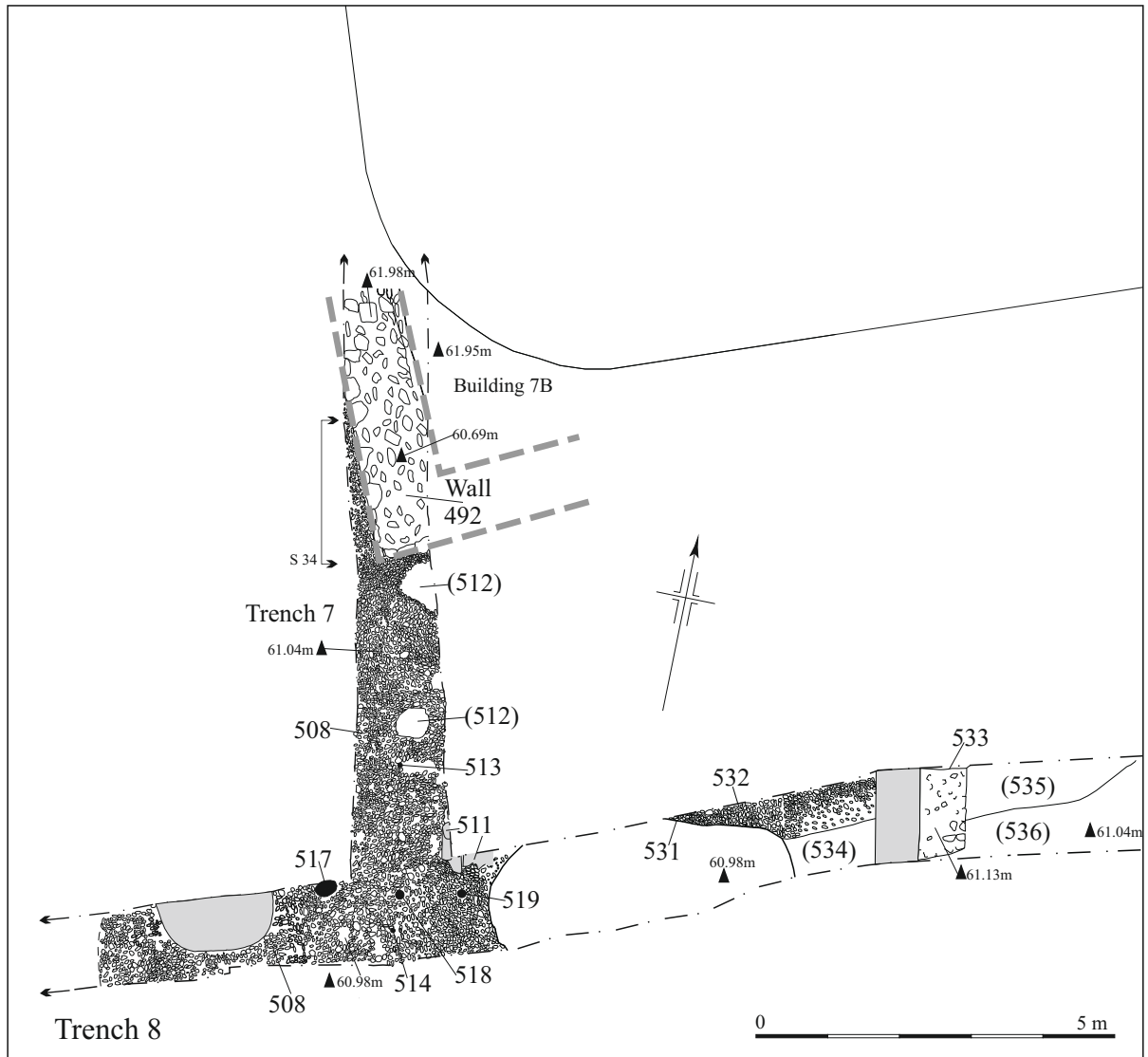


Figure 18. St Edward Street

Another quite complex sequence of disturbed surfaces was recorded in the opposite, north facing section of Trench 8 (Fig. 20, Section 37). The uppermost surface (521) was a mix of weathered and worn limestone fragments along with compact mid-brown silty sand, up to 0.15m thick and at a level of 61.46m OD. It was cut by an undated oval pit 528 filled with mid-brown silty sand (529), but eight sherds of late 15th to mid-16th century pottery were recovered from surface (521), probably the same deposit as surface (552). Beneath (521) was a 0.16m thick deposit of dark brown silty clay (522) with limestone and brick/tile fragments, frequent oyster shells and charcoal, along with five sherds of late 15th to mid-16th century pottery. Of the lower deposits in the stratigraphic sequence below (522), only (523) had finds – this lens of light, yellow-brown clayey sand and gravel 0.10m thick produced 16 sherds of late 15th to mid-16th century wares.

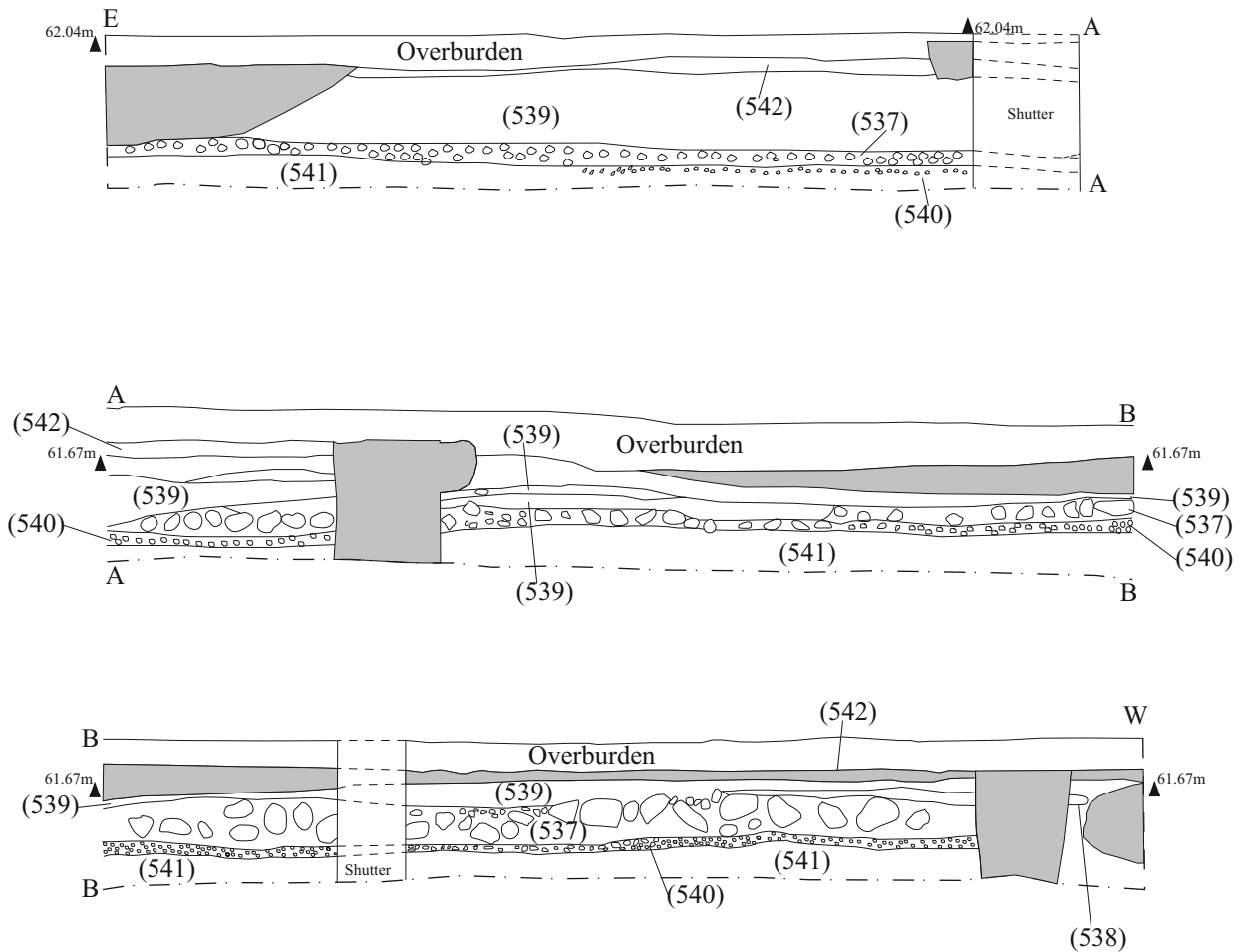
The western side of surface (522) partly lay above the remains of limestone block wall 599, which had been largely destroyed during the construction of well 597 (see below). The underlying layer (526) was dark brown-grey sandy silt with limestone blocks and fragments, and this abutted wall 599, which originally may have formed the western boundary to the surfaces. Two sherds recovered from (526) dated between the 13th and 14th centuries. The underlying layer at the base of the trench (527) produced eleven sherds of mid-13th to 14th century pottery.

Well 597 was 1.80m in diameter and lined with limestone blocks. A brick culvert had been built into the western side (Plate 10) and the entire structure was capped with a dome of limestone slabs set in hard cream coloured mortar. There was an approximate depth of 3.00m to the extant water level. Traces of further surfaces were recorded in the southern trench section as deposits (591) and (592), mixed layers of sandy silt and gravel with bands and lenses of mortar and degraded limestone. The well void was numbered as (596).

The early cobbled surface corresponding to the course of St Edward Street and/or Shitebarne Lane (508) extended northwards through the southern part of Trench 7. At the junction with Trench 8, a 2.20m long section of limestone wall 511 on a north-south alignment was recorded in the eastern section of Trench 7 (Fig. 18). The surviving four courses of the wall were 0.60m high with faces of limestone blocks up to 0.40m long, 0.30m wide and 0.25m thick, and a rubble core set in a sandy clay matrix. The eastern face of the wall was not visible in Trench 7, but the southern end of the wall appeared in Trench 8, where it was 0.80m wide. No foundations were identified and the entire structure appeared to rest directly on cobbled surface (508). It therefore clearly post-dated the street surface, and may reflect a later narrowing or blocking of the lane, or when it became disused. It is not even clear if this was a permanent structure or not.

Close to the trench junction, four stakeholes and a single posthole were recorded in the cobbled surface. Posthole 517 appeared as a void close to the trench edge, and was 0.30m in diameter and 0.20m deep. It formed an east to west alignment with two stakeholes further to the east, cuts 518 and 519 (Fig. 18). Both of these features were voids 0.12m in diameter and 0.15m and 0.18m deep respectively. Stakeholes 513 and 514 were 0.08m and 0.06m in diameter, and 0.34m and 0.08m deep respectively. Like 518 and 519, stakehole 513 was a void, whilst 514 was filled with dark grey sandy silt. These two stakeholes may have formed an alignment at right angles to the posthole and other stakeholes. Further north were two areas of ceramic tile fragments marking repairs of the damaged cobbled road surface, both numbered as (512).

Towards the southern end of Trench 7, the machining exposed the remains of buildings 7A and 7B. Though the dating evidence for building 7A is slight, it was probably contemporary with building 7B, occupied during the 14th century.



Section 36



Figure 19. Section of Shitebarne Lane, Section 36

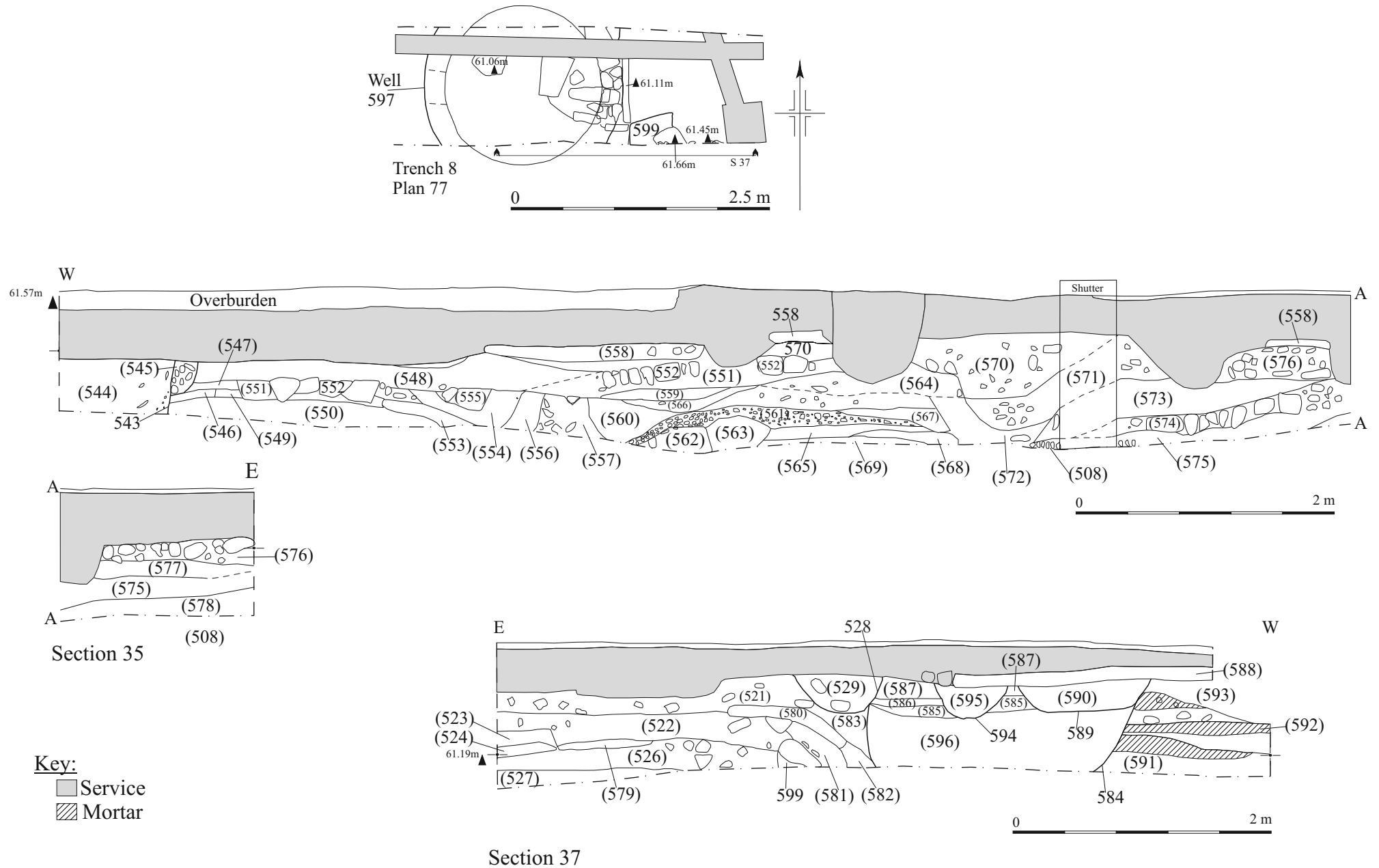


Figure 20. West end of Trench 8, Plan 77 and Section 35 and 37

Building 7B (Figure 21)

To the north of the two road repairs in Trench 7, cobbled surface (508) extended up to the substantial wall of a building with two rooms, numbered as 7B (Figs. 18 and 21). Structure 7B was at least 12.50m long, and its large western wall was on a NNW-SSE alignment. Recorded as masonry structures 481, 490 and 492, this wall survived at a height of 61.89m OD. The northern wall 459 and internal walls 489 and 491 of Building 7B were robbed to a level of 61.29m OD. The main west wall 481/490/492 survived as five courses 0.85m high, and faced with dressed limestone blocks up to 0.30m long, 0.20m wide and 0.20m thick. There were traces of pinkish-white mortar render on the internal faces near the base of the wall (Plate 11), and this same mortar was observed in patches across the floor of the northern room (Room 1) and on the base of wall 489. Room 1 was 3.40m north to south, and its northern wall 493 was robbed down to the footings at 60.84m OD, except where it was bonded to wall 481 where it was better preserved at 0.90m wide, and built from limestone fragments. The top of wall junction 498 had been partially robbed (Fig. 22 Section 33). The southern wall 489 of Room 1 was 1.00m wide and robbed to an average level of 61.18m OD, slightly higher where it was keyed into wall 481.

The junction of walls 489, 490 and 491 formed a rectangular, stone-lined garderobe at least 0.70m wide north to south and 1.40m long east to west (Plate 12). It was excavated to a level of 60.48m OD. The upper deposit (496) was charcoal rich, brown-orange sandy clay, containing a large assemblage of glass vessels and 382 sherds of pottery dating to the 14th century, including some near-complete vessels (see 4.1 and 4.2 below); in addition to fragments of fired clay, possibly from a portable furnace, kiln or oven lining; oyster shells, animal bone, one piece of copper-alloy slag and iron objects including three keys, a spur, an axe, a buckle and nails. The top of deposit (496) produced five sherds of mid-16th to 17th century pottery and was very similar to deposit (480) filling Rooms 1 and 2, perhaps indicating that the garderobe was finally in-filled when the building became disused and was demolished. Below (496) was a 0.20m thick deposit of sandy clay (502), and the lowest excavated deposit was sterile orange-brown clay (503).

Room 2 was the larger of the two rooms in Building 7B, c. 5.00m wide north to south. It was bounded to the west by wall 492, exposed beneath the gravel makeup for the modern tarmac surface. Wall 492 was 1.00m wide and faced with irregular limestone fragments up to 0.26m long, 0.22m wide and 0.10m thick, with a rubble core set in a light brown sandy clay matrix. The northern wall of Room 2, 491, also formed the southern wall of the garderobe. It was 0.80m wide and bonded to wall 492, and a single sherd of residual 11th century pottery was recovered from the wall matrix. It was not clear if Room 2 had been added to Room 1, though this is a possibility. No floor surfaces were identified in Room 2, so either stone flooring had been robbed-out, or it originally had a beaten earth floor. The infill of both rooms was orange-brown silty clay (480), recorded in the eastern trench section. This 0.60m thick deposit contained 11 sherds of mid-16th to 17th century pot and a copper-alloy book clasp (SF No. 21).

Only 1.50m north of Building 7B was east-west wall 479 (Fig. 17), robbed of most stonework, but better preserved to the east with eight courses 0.80m high, 0.60m wide at its foundations and 0.40m wide at the top, and built from roughly hewn blocks of limestone up to 0.30m long, 0.20m wide and 0.10m thick, also incorporating a re-used architectural fragment. It was faced on both sides and bonded with mid-brown clayey sand. Two deposits were recorded on the north side of wall 479 (Fig. 22 Section 30). The lower layer (478) was mid-brown silty sand and gravel, below mid-grey sandy silt with limestone fragments (475). This upper deposit contained 287 late 15th to mid-16th century pottery sherds. A sequence of gravel deposits interspersed with sandy silts was recorded south of wall 479. These were truncated by services on the east side of the trench and were only visible in the western section, where they had a combined thickness of 0.93m. The earliest deposit was (482a), followed in stratigraphic sequence by (482b), (484), (485), (486), (487) and (488). The latter lay directly below gravel makeup for the modern tarmac surface. No dateable artefacts were recovered from these layers.

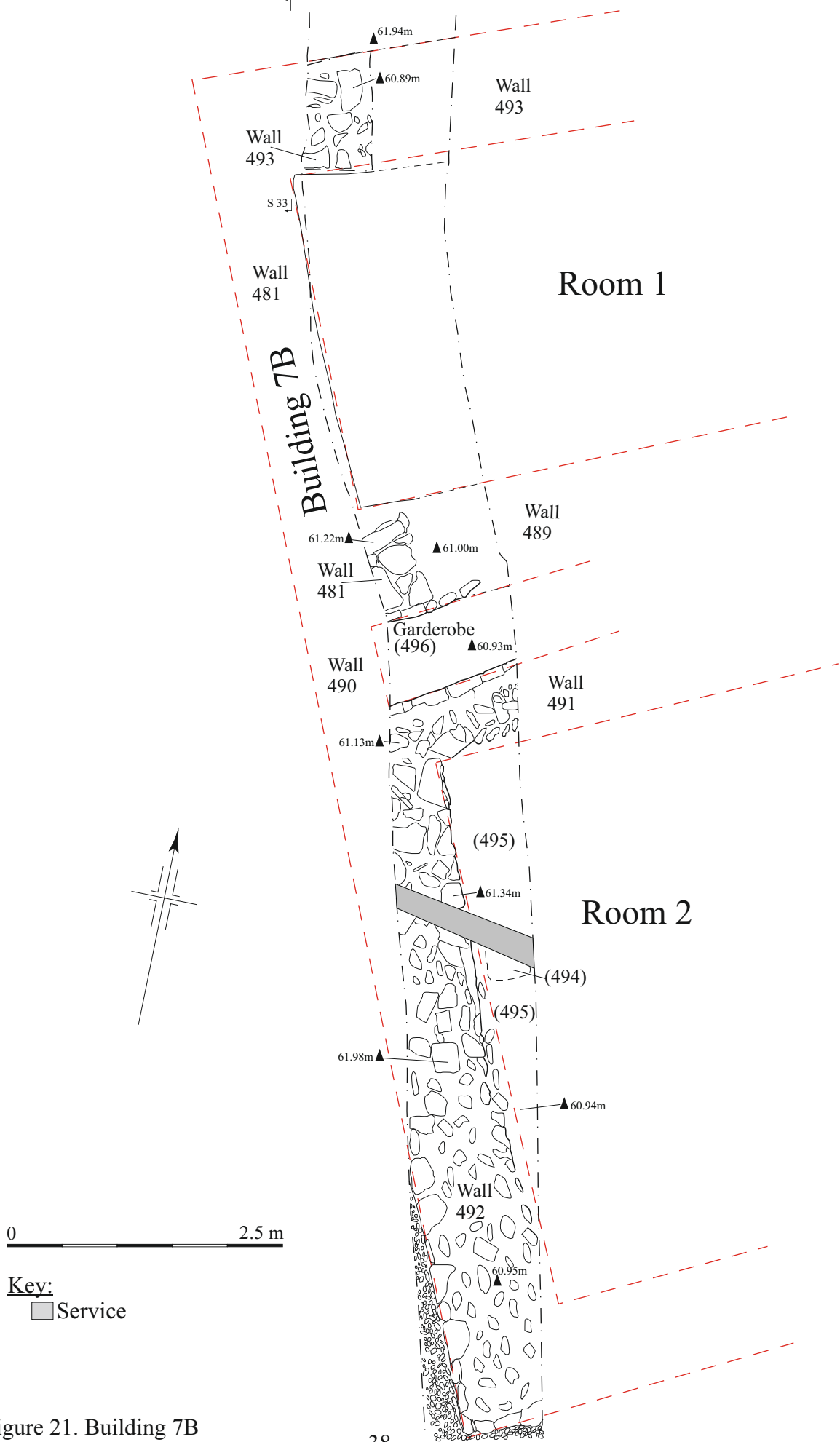


Figure 21. Building 7B

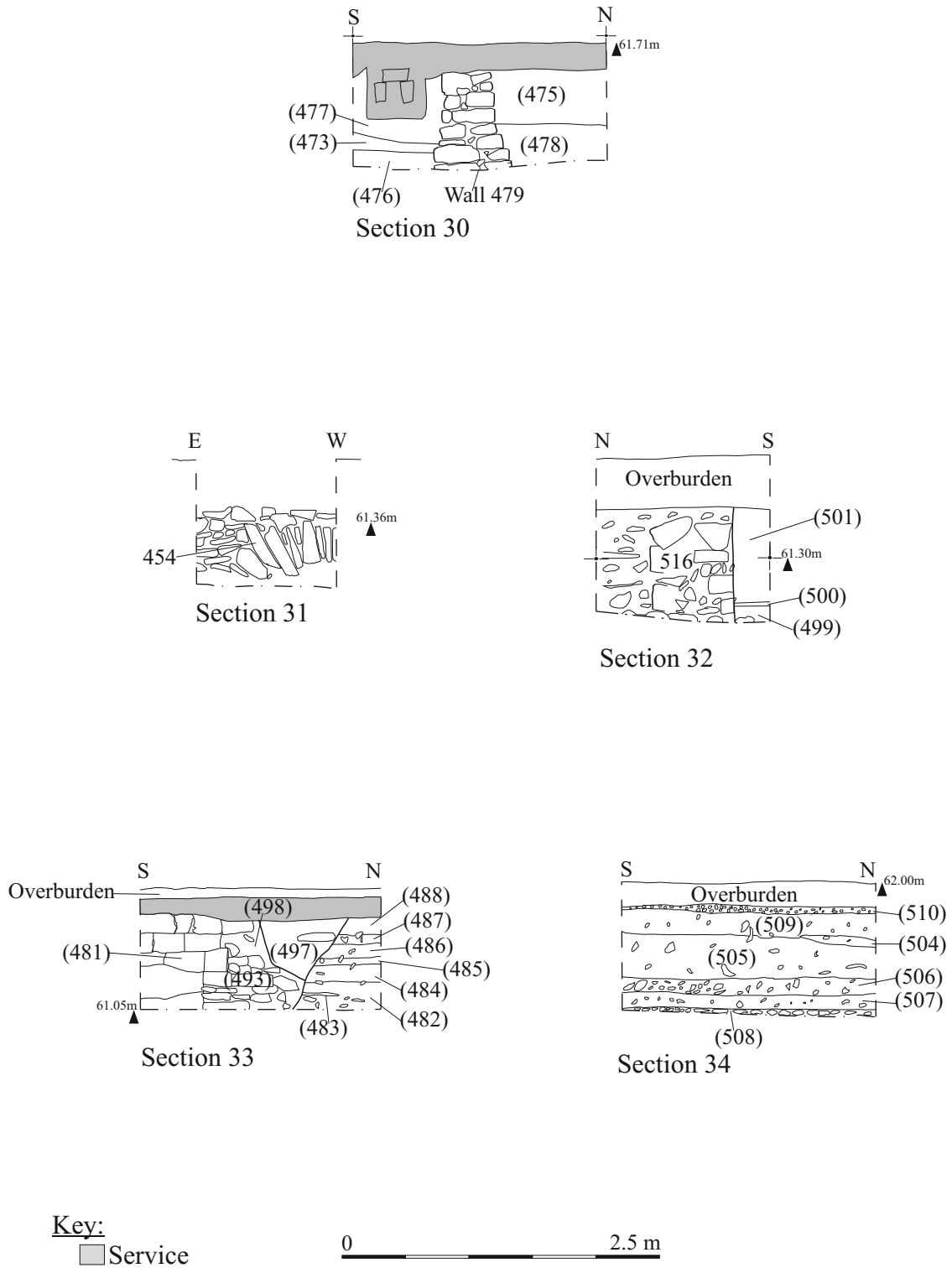


Figure 22. Sections of Trench 7

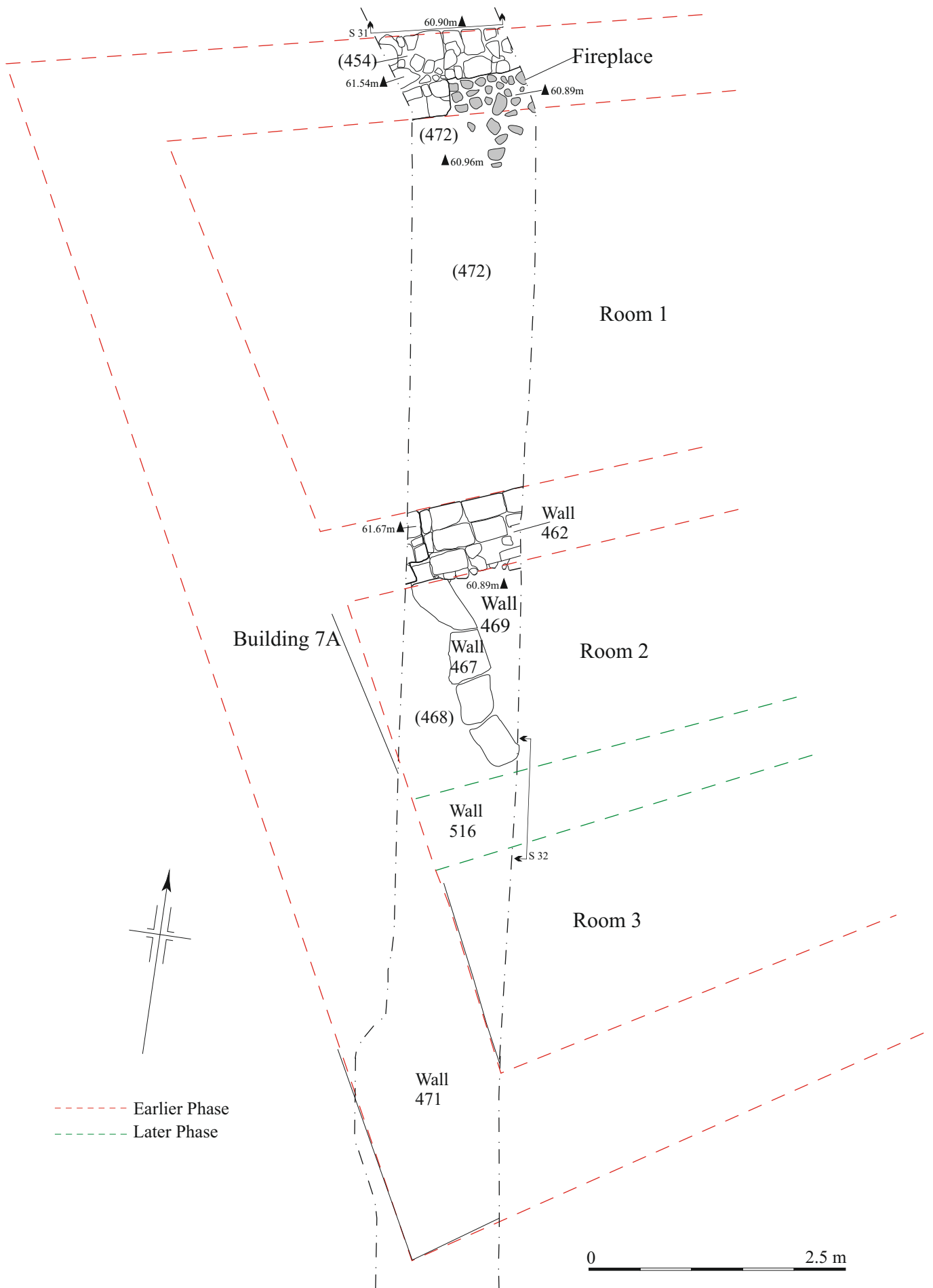


Figure 23. Building 7A

Building 7A (Figure 23)

A second medieval building was recorded north of wall 479, and like building 7B it was 12.50m wide along its St Edward Street frontage and shared the same general alignment. Building 7A also originally consisted of two rooms, though at a later date the southern room was subdivided; and it comprised a substantial western wall 471, northern wall 454 and two internal walls, 462 and 516 (Fig. 23). Wall 471 was 1.50m wide and at a level of 61.50m OD, and again survived just below gravel makeup for the modern tarmac surface. It was built of roughly hewn limestone blocks 0.65m long, 0.33m wide and 0.20m thick, with a rubble core set in pale greyish yellow sandy clayey silt. Wall 454 and the internal walls of Building 7A survived to a height of *c.* 61.45m OD, and wall 454 incorporated re-used architectural fragments (see Rodwell below)

Room 1 was 3.50-4.00m wide north to south, but the angle between walls 454 and 462 suggests that it was trapezoidal rather than rectangular in shape, narrowing to the east. Its northern exterior wall 454 was 0.90m wide and constructed from limestone blocks 0.25m long, 0.20m wide and 0.10m thick, with a core of limestone and tile fragments in a mid-brown sandy matrix with two sherds of 13th to 14th century pottery. A fireplace was identified *c.* 2.75m from the junction with wall 471, 0.90m wide and recessed into the interior face of wall 454 by 0.30m. A small cobbled hearth (472) extended 0.70m south of the fireplace, with a 0.04m thick deposit of ash and charcoal (515). A possible floor (465) was also recorded near the fireplace, consisting of pale grey-brown sandy clay with traces of mortar. It was overlain by (463), mottled grey to orange-brown sandy clay 0.09m thick that contained ten sherds of late 15th to mid-16th century pottery. Surface (465) was cut by pits 458 and 461, filled with demolition deposits (459) and (460) respectively which contained 34 sherds of late 15th to mid-16th century pottery. A copper-alloy book clasp (SF No. 22) was also recovered from fill (460).

Wall 462 formed the southern wall of Room 1, and it was up to 0.70m thick, though it was mostly taken up by a blocked doorway or window (see Discussion), and had two steps on the north side leading up to a threshold that gave access to the doorway on its southern side (Plate 13). The external corner of the doorway incorporated a re-used carved limestone block that probably held the door hanger. The later blocking consisted of limestone fragments bonded with orange clay. On either side of the doorway, wall 462 was built of limestone fragments 0.30m long, 0.20m wide and 0.08m thick with a core of smaller limestone and tile fragments in a pale-brown sandy matrix. Six sherds of late 15th to mid-16th century pottery were recovered from this matrix. The possible doorway led to a walled area south of Room 1 originally 4.70m wide from north to south, but later subdivided by wall 516. This was initially recorded as Room 2, but might have been an enclosed yard (see Discussion). The later wall 516 subdivided the area into two roughly equal halves and was 0.60m wide and built of limestone fragments. It abutted the western wall 471. In section, abutting the south side of wall 516 were decayed remnants of a 0.04m thick wooden floor (500) within Room 3 (Fig. 22 Section 32). The wood was laid over a 0.08m thick clayey silt deposit containing small stone fragments (499).

The abandonment of Building 7A was followed by an accumulation of debris partly derived from collapsed walls, and represented in Room 1 by a 0.60m thick deposit of yellow brown sandy clay incorporating limestone blocks and rubble (459). Overlying layers were (457), 0.2m thick mid grey-brown clay with limestone rubble, mortar, tile, oyster shells and charcoal; and (456), 0.50m thick reddish-brown sandy silt with gravel. The pottery from these two deposits comprised ten sherds dated between the late 15th to mid-16th centuries and (456) also contained a stone mould fragment. Within Room 2 there was a deposit of mid grey-brown sandy silt at least 0.70m thick with limestone rubble (469, 470). This deposit contained a clay pipe fragment and three sherds of late 17th to mid-18th century pottery. Cut into the top of this rubble and between the walls of Room 2 was feature 467, comprising a single course of limestone slabs laid in a line, the largest of which was 0.60m long, 0.38m wide and 0.10m thick. West of 467 was a charcoal-rich deposit (468) from which 13 sherds of late 15th to mid-16th century pottery were recovered.

Above the decayed wooden floor (500) and against the southern face of wall 516 there was a 0.58m thick deposit of loose, light orange to yellow silty sand (501), immediately below the gravel makeup of the modern tarmac surface (Fig. 22 Section 32). This deposit within Room 3 did not produce any dating evidence, but was likely to belong to the same overall post-abandonment phase – see Discussion.

In Trench 9, a series of possible midden deposits were recorded, the earliest of these (632) being visible towards the eastern end of the trench as green-brown silty sand with gravel and limestone fragments (Fig. 24 Section 39). This was overlain by (627), mid-brown sandy silt and gravel up to 0.40m thick with two sherds of 13th to 14th century pottery. The deposit above (630) was 0.25m thick and composed of mid-brown silty sand with large amounts of charcoal and oyster shell, and which produced a further two sherds of 13th to 14th century pottery.

A 0.20m thick deposit of green-grey silt (631) overlay the possible midden deposits at the western end of the trench, but both it and (630) were beneath a rough limestone cobbled surface (629). The latter was at a level of 60.62m OD and was also present further west, where the cobbles were recorded as layer (626) at a level of 60.71m OD. Here the surface was overlain by compact light green silt (625) (Fig. 24 Section 38). Cobbled surfaces (629) and (626) were interpreted as part of Shitebarne Lane that followed an east to west course linking St Edward Street and Shidyerd Street. Above the cobbled surface were deposits (624) and (628) of light brown grey sandy silt with limestone fragments – the former produced a bone stylus SF No. 157, and the latter a single sherd of late 17th to mid-18th century pottery. Layer (628) was itself beneath a deposit of compact orange gravel and sand (623) with a maximum thickness of 0.20m.

North to south aligned wall footings 621 were recorded at the western end of Trench 9 (Fig. 24). At least 0.80m wide, they were constructed from limestone fragments set into pale orange gravel mortar at a depth of 60.91m OD. An east-west aligned drain 622 cut these footings, and the drain was lined with limestone blocks and capped with large York stone slabs. Further cobbled surfaces extended from Trench 9 and were recorded in Trench 10 across Canterbury College Quad, then southwards towards the Picture Gallery. Two smaller trenches (10A and 10B) were dug on the east side of the main trench, and a third (10C) on the west side.

The lowest recorded deposit in Trench 10 was light, orange-brown sandy silt (705), overlain by friable dark grey-brown clayey silt 0.18m thick (704). At the extreme northern end of the section (Fig. 26 Section 40), a compact deposit of limestone cobbles 0.34m wide (723) was recorded, probably the same surface as (626) in Trench 9 and thus possibly also part of Shitebarne Lane. Overlaying the surface and extending c. 2m to the south was 0.06m of dark grey to black clay (703) containing much ash and charcoal. This was in turn overlain by deposit (702), dark grey sandy silt up to 0.26m thick. Above that level, two deposits of orange sand and gravel (701 and 700) were the makeup for the existing quad surface.

3.10 Canterbury College

Near the centre of Trench 10 was a 2.60m long wall 713, consisting of three surviving courses up to 0.48m high and buttressed at both ends (Fig. 25 and 26, Section 41). Wall 713 was constructed from limestone blocks up to 0.30m long and 0.18m wide set in hard, cream-coloured mortar. It was at a level of 60.08m OD and stood on shallow stone foundations at 59.60m OD. A stringer course of chamfered ashlar stonework was recorded at 60.00m OD and this was also visible in the corners, where the wall met buttresses 706 and 714. A small recess 0.10m wide was visible towards the centre of the wall c. 0.80 metres from each of the buttresses, and this was probably where the threshold step of an entrance had been removed. This suggestion was further strengthened by the partially worn and smooth appearance of the upper stonework layer.

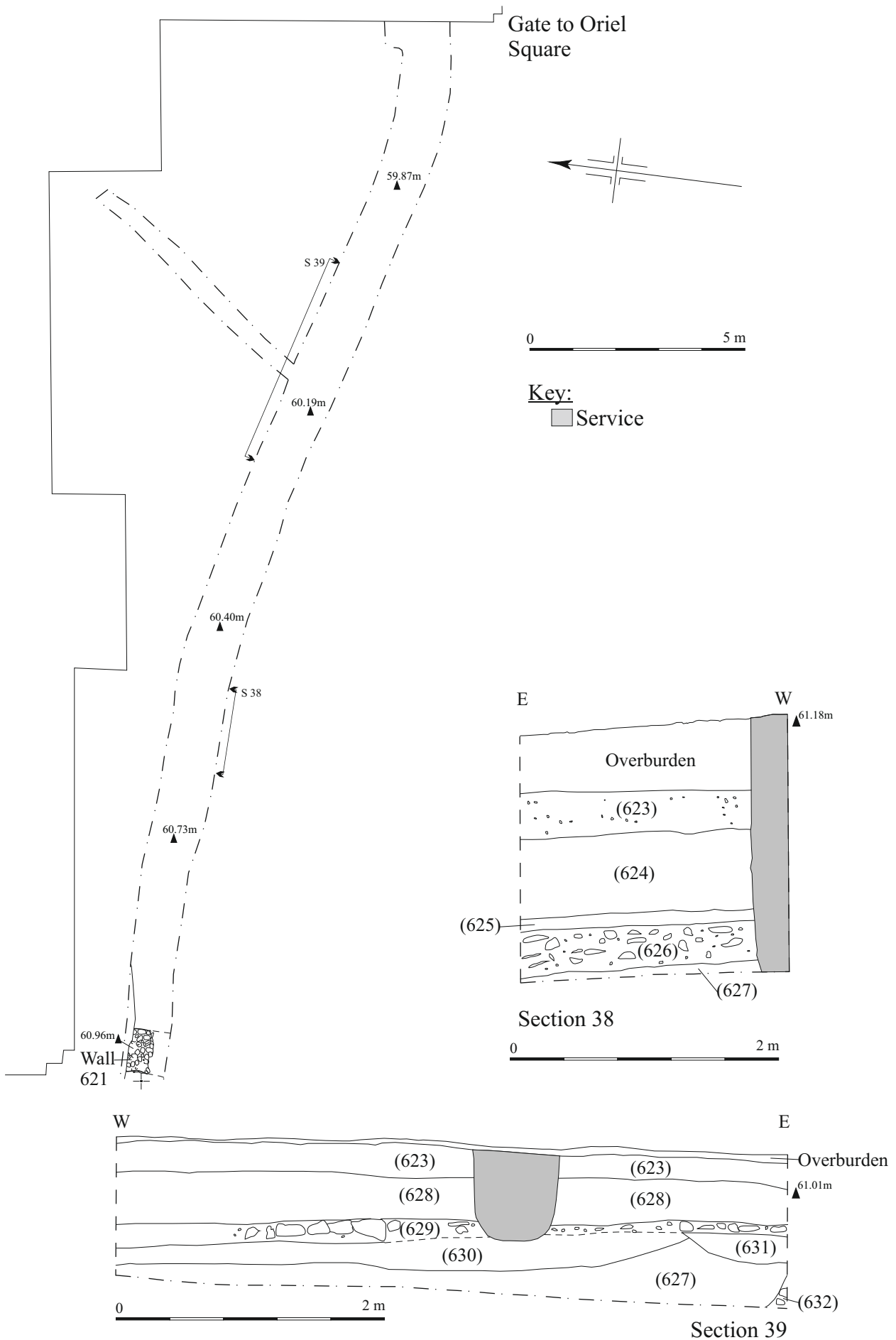


Figure 24. Trench 9 plan and sections

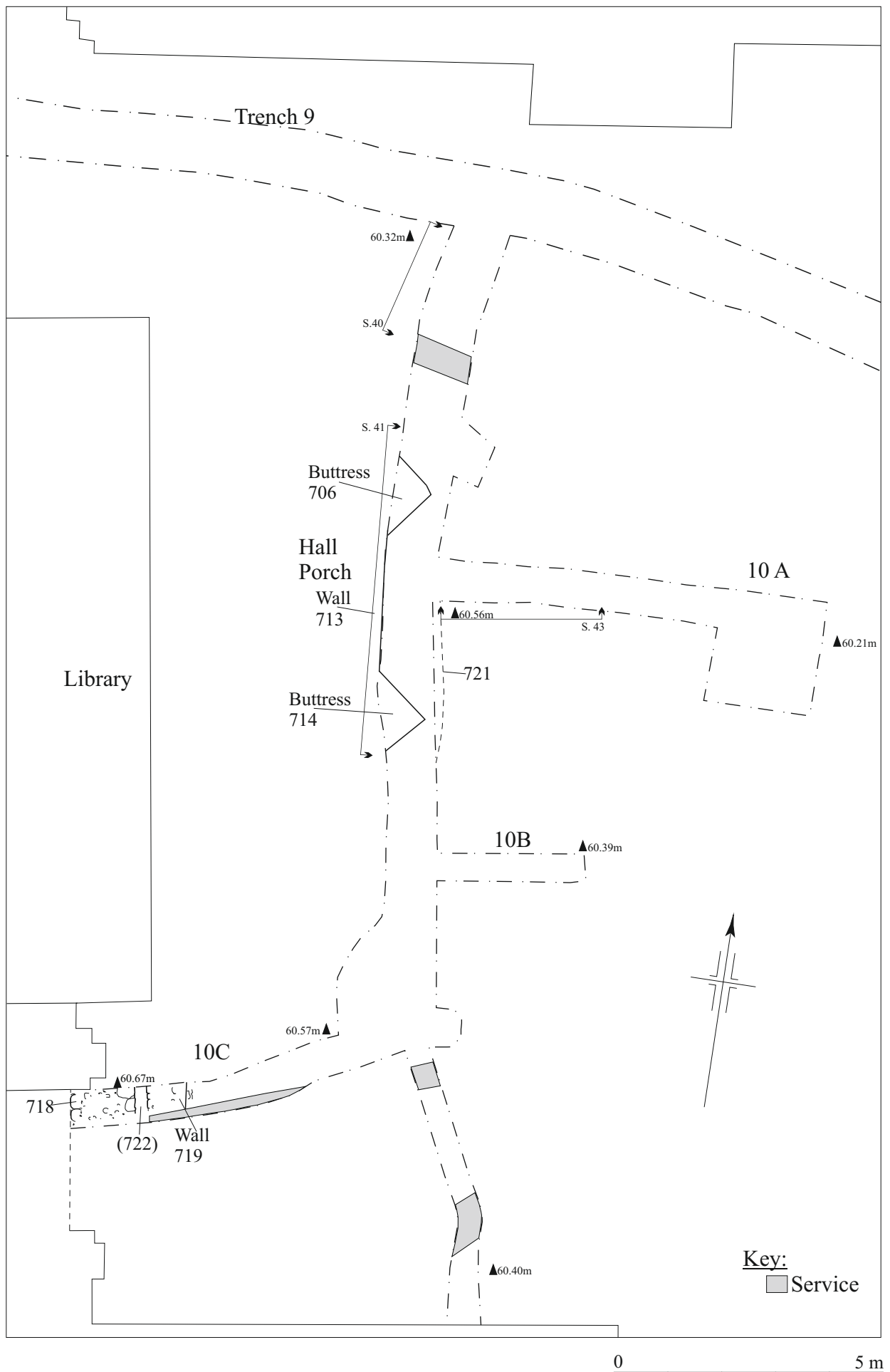


Figure 25. Trench 10 plan

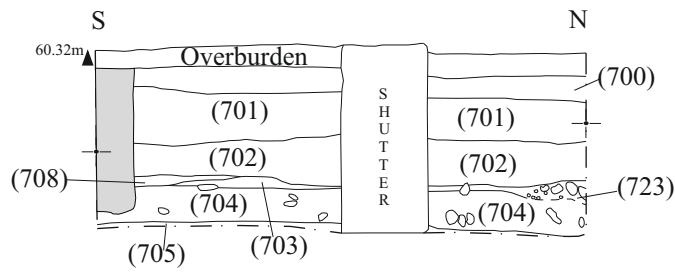
The northern buttress 706 was 1.50m across and extended into the trench for 0.70m, and survived at a level of 59.80m OD or 0.58m below the modern ground surface. The southern buttress 714 was also 1.50m across and extended 0.80m into the trench, at a level of 60.28m OD or 0.30m below the ground surface (Plate 14). Both buttresses were at a 45-degree angle to the wall and were constructed from large blocks of limestone with a single stringer course of chamfered ashlar blocks at the same height as those on the main wall. This building has been interpreted as the porch giving access to the chapel of Canterbury College, depicted on the Agas map of *c.* AD 1578 (Fig. 69). Overlaying these remains was (709), a 0.30m thick deposit of brownish grey sandy silt with 26 sherds of 19th century or later pottery. This deposit was overlain by a thin mortar layer (708) with a single sherd of the same date. The same deposit was also present in Trench 10A, where it sloped downwards in the direction of Canterbury Gate.

The earliest deposit (717) in Trench 10A was grey silt with limestone, brick or tile fragments, and 72 sherds of late 15th to mid-16th century pottery. The layer above was a 0.15m thick deposit of off-white degraded mortar and limestone fragments (711), overlain by (716), a 0.18m thick deposit of light grey silt with 24 sherds of mid-16th to 17th century pottery and a copper-alloy buckle (SF No. 155). At the west end of Trench 10A was a 0.44m thick deposit (715) of compact orange grey sand and gravel with eight sherds of 17th century pottery. This deposit was cut by linear feature 721 that was aligned broadly north-south parallel to wall 713, before turning west around the southern side of buttress 714 (Fig. 26, Sections 41, 43) where it was visible in the west facing section. Cut 721 was 0.40-0.50m deep, and was probably a drainage gully or ditch for the building. It was filled by (710), dark brown sandy silt and gravel with 104 sherds of mid to late 17th century pottery, and a stone spindle whorl fragment (SF 151). Deposit (708) was degraded lime mortar 0.15m thick, whilst deposit (709) was compact brown-grey sandy silt up to 0.11m thick. These two layers produced six pottery sherds, all of 19th century or later date.

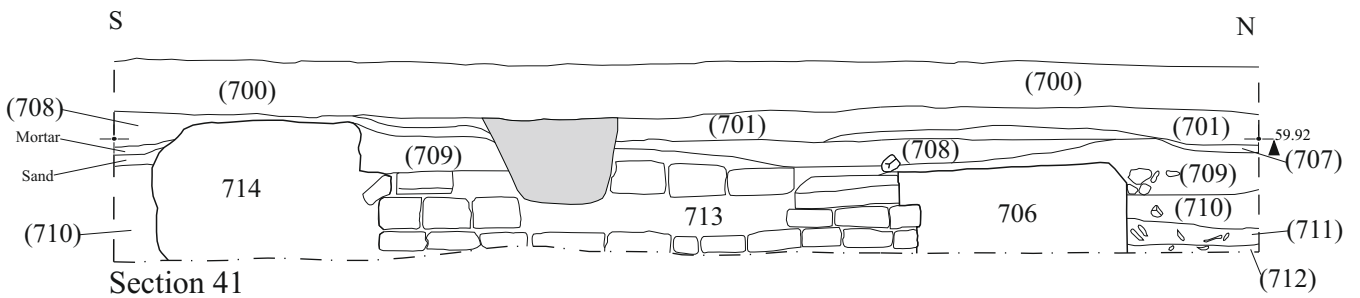
The deposits in Trench 10B were the same as those in the western end of Trench 10A, and the same sequence of deposits appeared in the eastern end of the Trench 10C. At the western end of Trench 10C, two stone walls both aligned north to south were uncovered 0.40m below the existing ground surface. Wall 719 was 0.85m wide and built from limestone fragments, faced on both sides with roughly hewn limestone blocks set in a pale orange gravely mortar. A single chamfered ashlar block was recorded *in situ* on the eastern side of the wall at a level of 60.22m OD. Approximately 0.5m west of wall 719 was wall 718, up to 1.25m wide and with a rubble core faced on both sides by large blocks of limestone up to 0.45m long, 0.30m wide and 0.25m thick, set in very hard white lime mortar. This wall was at a level of 60.27m OD. A mid-brown, silty sand deposit (722) was recorded between walls 718 and 719, both of which had been truncated at the southern side of the trench by a vaulted, brick-built later 19th century drain.

3.11 Jury Lane

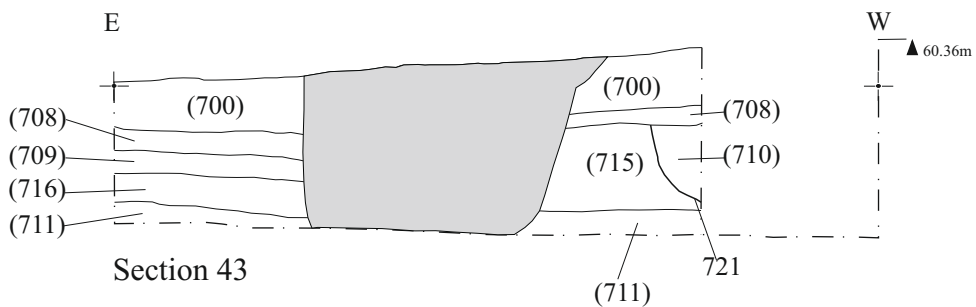
Trench 11 was west of St Edward Street/Vine Hall Lane, south of Jury Lane and the northern wall of the Canon's Gardens. The earliest recorded deposit was (1007), dark brown silty loam possible garden soil with 30 sherds of late 15th to mid-16th century pottery (Fig. 28 Section 44). Layer (1007) lay below a 0.30m thick deposit of crushed mortar and limestone (1006), possibly construction/masons' debris. The two silty layers above (1005 and 1004) contained gravel and limestone fragments and had a combined thickness of 0.58m. These two layers contained 96 sherds from the first half of the 17th century, and (1005) also produced a copper-alloy book mount (SF No. 143), an iron blade and several copper pins. Further construction debris (1003) up to 0.10m thick lay above the silt deposits, consisting mainly of limestone fragments with crushed mortar. Above this was a 0.15m thick deposit of silt (1002) that produced 17 sherds of 19th century or later pottery, underneath the remains of a gravel path (1001) up to 0.25m thick. The contemporary garden soil overlying the path was grey-brown silty loam 0.40m thick.



Section 40



Section 41



Section 43



Key:
 Service

Figure 26. Trench 10, Sections 40, 41 & 43

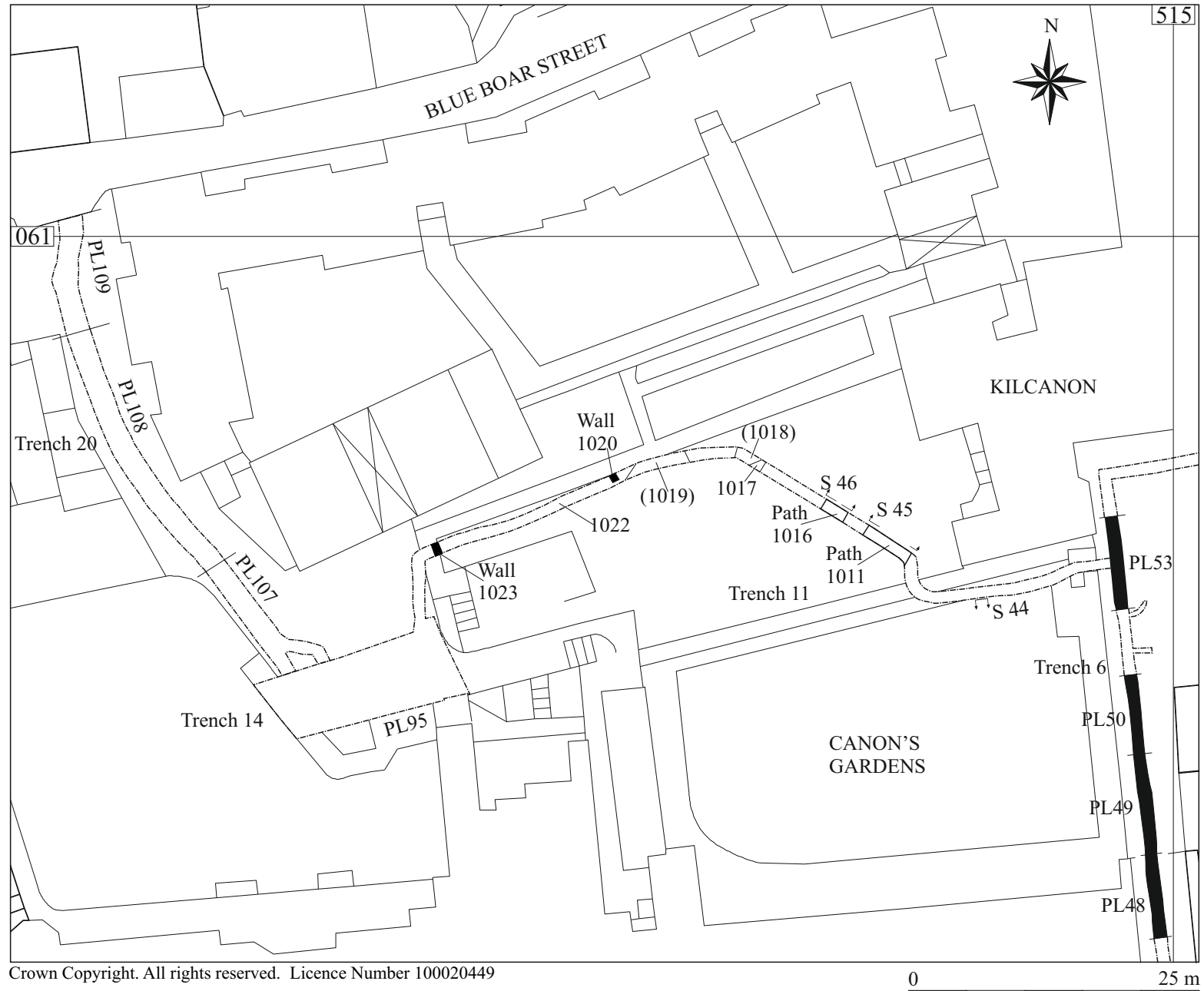
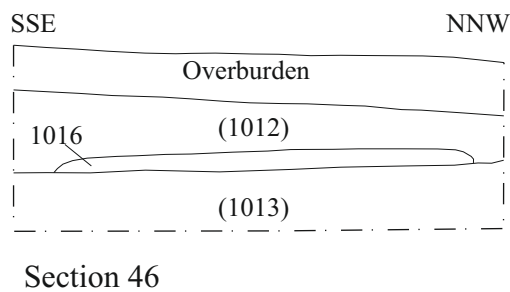
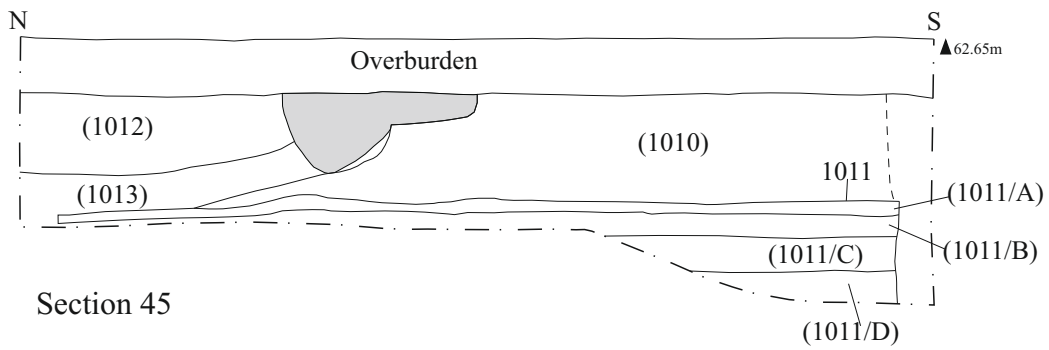
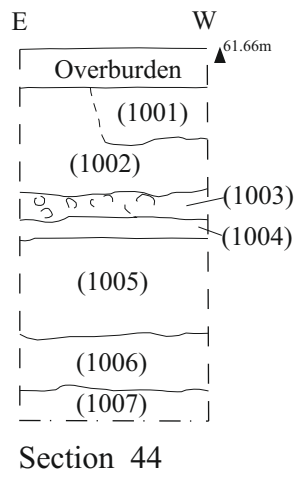


Figure 27. Location of Trenches 11, 14 and 20



Key:
 Service



Figure 28. Sections 44-46

A sequence of cobbled and sandy surfaces was recorded in Trench 11 on the northern side of the wall dividing the Canon's Garden into two separate areas. The lowest deposit (1011D) was a 0.20m thick surface of limestone cobbles set in mid brown sandy silt, below a deposit of orange sandy silt (1011C) up to 0.11m thick, in turn beneath a deposit of cobbles set in a cream coloured mortar (1011B). This was between 0.10-0.12m in thickness. The upper surface of the road (1011A) was at a level of 61.81m OD and consisted of a 0.08m thick deposit of orange gravel and sand (Fig. 28 Section 45).

These deposits lay below a 0.50m thick sandy silt loam (1010) that was probably a garden soil with 17 sherds of mid-16th to 17th century pottery and a copper-alloy crotal bell (SF No. 145), in turn overlain by the remains of a gravel surface (1009). The cobbled and sandy deposits (1011A-D) were interpreted as remnants of Jury Lane, which existed until the early 16th century when it was probably closed off in preparation for the construction of Cardinal's College. The broadly north-east to south-west orientated wall dividing the Canons' Gardens may thus lie on the original southern edge of Jury Lane, although within the narrow trench it was not possible to determine the exact orientation of the edge of the road. The southern side of the road was also truncated by later services.

The northern extent of probable buried garden soil (1010) was overlain by dark brown sandy silt (1013) up to 0.38m thick, with a thin (0.10m) layer above of very compact, coarse sandy silt (1016) approximately 2.20m wide, probably the remains of a garden path (Fig. 28 Sections 45 and 46). Above this surface was up to 0.40m of mid-brown sandy silt with small stones and pebbles (1012), interpreted as a further accumulation of garden soil. The two soil layers and the path produced a small combined assemblage of 13 pottery sherds dated between the mid-16th and 17th centuries. The southern profile of deposit (1013) indicated that there might once have been a raised bank along the north side of the wall between the two gardens.

A linear cut feature 1017 orientated north-east to south-west and 0.60m wide was recorded in the base of the service trench just *c.* 7.00 metres to the north-west of path (1016) (Fig. 27). Filled with rubble, this was a probable robber trench. It cut through the remains of a surface of limestone and quartz cobbles tightly packed into an orange-brown gravel matrix (1018). This surface extended for approximately 2.00m before sloping below the trench excavation level. Above the cobbles was a 0.30m thick layer of mid yellow-brown loam (1015) containing eight sherds of late 15th to mid-16th century pottery. Overlying layer (1015) and the rubble fill of cut 1017 was a 0.75m thick deposit of brown- grey sandy silt with lenses of ash and charcoal (1014), and 13 sherds of mid-16th to 17th century pottery.

Three metres to the west of (1018), a further layer of cobbles (1019) was recorded at a higher level (62.68m OD). Cobbled surface (1019) consisted of limestone blocks up to 0.40m long, 0.20m wide and 0.15m thick set into a hard cream-coloured mortar. Two sherds of 13th to 14th century pottery were found between the cobbles. Overlying this surface was a 0.10m thick compact deposit (1021) of orange gravels and cream-coloured sandy silt, possibly forming another laid surface. These layers were truncated to the west by a modern service trench.

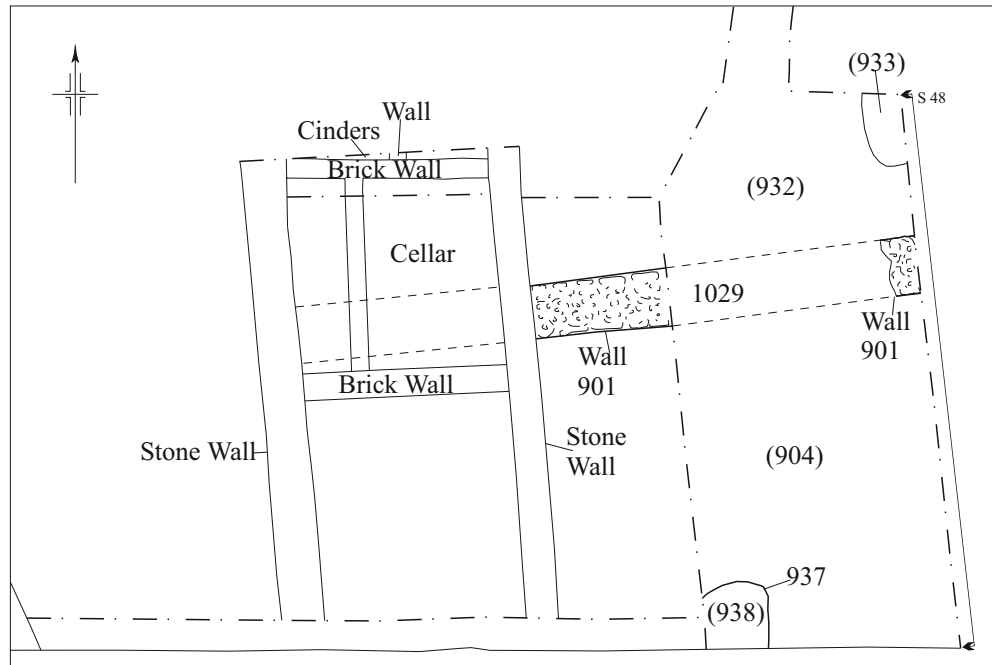
A few metres west of surface (1019) were the footings of a north-south orientated wall 1020, constructed from crumbling limestone pieces set into a cream-coloured mortar. These foundations were up to 2.00m wide and survived to a level of 62.33m OD, and formed one edge of a roughly cobbled area (1022) up to 16.00m wide, and defined at its opposite western edge by wall footings 1023 (Fig. 27). Wall 1023 was 0.60m wide and aligned north-west to south-east, and survived at *c.* 0.50m below the existing ground surface at a level of 62.50m OD. Roughly hewn limestone blocks up to 0.50m long, 0.40m wide and 0.40m thick had been used in its construction, and these were set in hard cream coloured mortar. A single sherd of mid-16th to 17th century pottery was recovered from the matrix of these wall footings.

The cobbled area (1022) between walls 1020 and 1023 consisted of a 0.15m thick layer of tightly packed limestone pieces and orange gravel, at a level of 62.30m OD. Four sherds of mid-16th to 17th century pottery were recovered from surface (1022), which was overlain by a 0.20m thick deposit of compact light orange to yellow sandy gravel (1026). Above this was a 0.15m thick deposit of cream-coloured sandy silt and crushed red brick (1025), succeeded by compact orange sandy gravel up to 0.25m thick (1026). This latter deposit was recorded in section extending westwards from above (1019) towards the existing garden wall, where its relationship with other contexts was completely obscured by services.

Further probable traces of Jury Lane were recorded in Trench 14, adjoining the western end of Trench 11. Trench 14 was 13m long and 6m wide, and was excavated for the construction of a new electricity substation on the site of former garages. The eastern part of this trench was excavated to a depth of 1.20m below the existing ground level at 62.25m OD, but in the western half to a depth of only 0.65m. At the base of Trench 14 there was a surface of a hard cream-coloured lime mortar (932) with gravel and occasional limestone fragments (Fig. 29), sloping gently from north to south from 62.26m OD to 61.96m OD. The area of (932) exposed in the trench was nearly 6.00m long from north to south, and 3.00m wide east to west. The construction trench 931 for the existing garden boundary wall cut the southern edge of surface (932), which could have formed one phase of Jury Lane, or possibly the internal floor of a building. At the southern end of Section 48 there was a thin layer of grey brown silty loam with limestone rubble and brick or tile fragments in lenses (929), up to 0.10m thick. This also appeared to be truncated by construction cut 931. A 0.35m thick deposit of soft mid-brown to light grey-brown sandy silt loam (904) lying above much of surface (932) and over (929) produced 19 sherds of mid-16th to 17th century pottery, consistent with the material obtained from above Jury Lane in Trench 11.

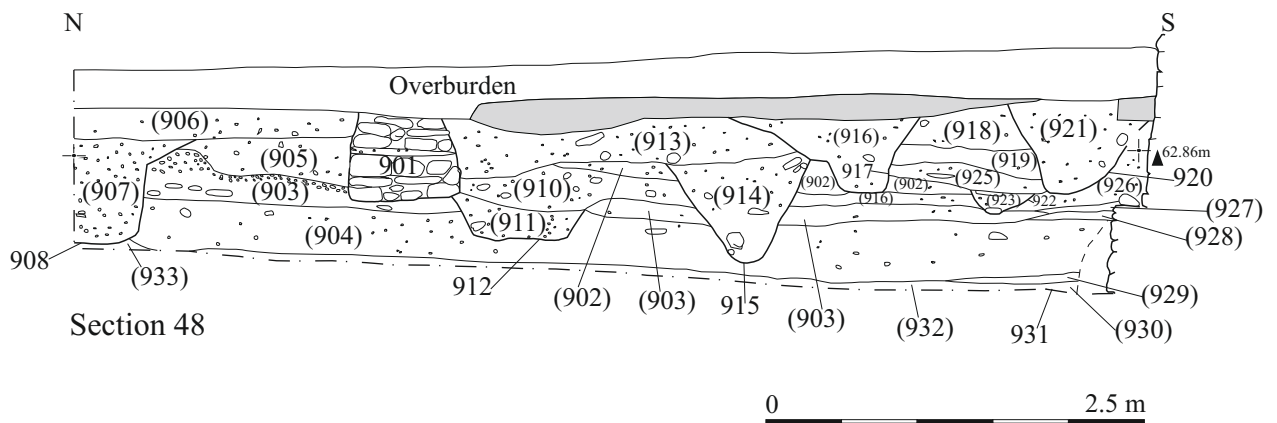
Above (904) was a layer of mid grey-brown sandy silt loam (903) up to 0.30m thick, which produced 11 sherds of mid to late 17th century pottery; and layer (905), a mid-grey brown sandy silt loam up to 0.20m thick that yielded three sherds of 17th century pottery, a worked bone disc and a silver spoon (SF Nos. 159 and 161). This deposit was interleaved with thin layers of sticky grey clayey silt with chalk and gravel up to 0.07m thick (927), and friable yellowish brown gravelly sand up to 0.10m thick (928). Layer (904) was cut by an oval pit 937, 1.00m long and 0.60m deep, and filled with a dark brown, charcoal-rich sandy silt loam (938) also containing clinker and ash. Layer (904) was also cut by feature 912, up to 0.90m wide and 0.25m deep, which might have been a pit or possibly a bedding trench associated with the formal gardens. Cutting layer (903) and the northern side of pit 912 was the construction trench 901 of a north-east to south-west wall 1029 (Fig. 29 Section 48). The wall was 0.75m wide at its foundation narrowing to 0.58m in width at its highest surviving point, and was constructed from limestone blocks up to 0.30m long, 0.20m wide and 0.15m thick, bonded with creamy white lime mortar.

Also overlying deposit (903) and sealing fill (911) of cut feature 912 was a layer of friable mortar and limestone rubble with pale grey sandy silt (910), up to 0.30m thick. It was unclear whether it abutted wall 901 on its southern side, or was truncated by it. Overlying deposits (910) and (916) was a 0.20m thick deposit of soft orange-brown sand and gravel (902), which contained small quantities of copper slag. South of Trench 14 this layer was cut by 922, a small pit or gully 0.40m wide and 0.20m deep with a gently concave profile, containing friable pale grey-brown sandy silt with occasional charcoal and stone tile fragments (923). This was overlain by deposit (925), a friable dark grey brown sandy silt loam up to 0.20m thick which was probably the same as deposit 926, a very similar grey brown sandy silt loam with some brick and tile fragments. Deposit (902) was also cut by pit or ditch cut 915, up to 1.00m wide and 0.70m deep with an almost V-shaped profile. Its fill (914) consisted of friable grey brown sandy silt loam that included a single sherd of late 17th to mid-18th century pottery.



Plan 96

0 5 m



Section 48

0 2.5 m

Key:
 Service

Figure 29. Trench 14 Plan 96 and Section 48

Immediately below the concrete slab floors of the garages were several brick walls, including east-west wall 936 and north-south wall 935 – a copper-alloy dagger chape (SF No. 162) was incorporated into the fabric of the latter. These may have been the footings for an earlier building depicted on the 1st Edition Ordnance Survey map of 1878 (see below), and these brick walls were built on top of and were partly cut into earlier stone walls belonging to the post-medieval occupation.

Trench 20 (Figs. 30-31) passed northwards from the site of the new electricity sub-station towards Blue Boar Street. The service trench was 2.00m wide and 1.00m deep and mostly followed the route of existing services. Although these services had destroyed much of the archaeology, undisturbed remains were preserved in the sides of the new trench that was somewhat wider than its predecessor. All deposits and features appeared to be 19th-20th century in date. A sequence of deposits was recorded at the southern end of Trench 20 in Section 52 (Fig. 31). The lowest layer (754) consisted of mid-brown sandy clay silt with gravel and charcoal flecks, and this was overlain by (755), a 0.10m thick layer of light brown sandy silt with large quantities of degraded mortar, and some gravel and limestone fragments. These two layers produced 36 sherds of 19th century or later date.

Further north in Section 51, the earliest recorded deposit consisted of soft, light brown clay (778) with occasional limestone fragments and a large quantity of butchered animal bone. This may have been similar to or the same as layer (764) in Section 49, a pale brown clayey silt deposit. The overlying layer (759) only produced one sherd of 19th-20th century pottery, possibly intrusive; and this deposit was cut by two undated pits 3001 and 3002, filled by dark grey sandy silt (756) and pale orange-brown sandy silt (757) respectively.

Deposit 759 was also cut by robber trench 791 that had removed most of a 0.70m wide limestone wall 760. A large posthole cut 790 *c.* 0.80m in diameter and filled with loose limestone rubble truncated layers (769) and (759). It was undated, but was cut from beneath the makeup of the modern tarmac surface. Wall 760 was visible in both Sections 49 and 51. Aligned roughly east-west, it was constructed from roughly hewn limestone blocks and fragments up to 0.40m long, 0.20m wide and 0.20m thick, bonded with very hard off-white sandy gravel mortar. The wall itself was up to 0.70m wide and survived to a height of four courses at a level of 62.70m OD in the western section. It was much reduced in the eastern trench section where it had been robbed out by cut 791, filled by mid-grey brown sandy silt (3000). To the south, wall construction cut 3003 appeared to truncate deposit (759).

On the northern side of wall 760, the earliest deposit identified was dark brown grey sandy clayey silt with occasional gravel, small limestone fragments and charcoal flecks (766), which was overlain by a deposit of light, brown-orange sandy silt (767) with some gravel. Above this was loose mid grey-brown silty sand (765) with gravel, and slate and brick and tile fragments. This deposit was truncated by construction cut 3003 for wall 760, which was filled dark grey-brown sandy silt with pea gravel, brick and tile and degraded mortar fragments (762).

Several other walls were recorded in Trench 20 (Fig. 30). The most southerly wall 753 was up to 0.60m wide and recorded on site as being aligned roughly north-south. It was constructed from roughly hewn limestone blocks and limestone fragments up to 0.40m long, 0.40m wide and 0.20m thick. It was abutted at right angles on its eastern face by brick wall 751, built from early modern bricks 0.23m long, 0.11m wide and 0.60m thick (Plate 15). The brick wall turned southwards through 90 degrees to create a small, *c.* 1.60m wide structural space that was subsequently infilled with dumps of black cinder and ash (750). A section through this layer revealed that it was 0.30m thick and had been deposited directly above a blackened brick floor surface. The function of this small structure was not clear, however.

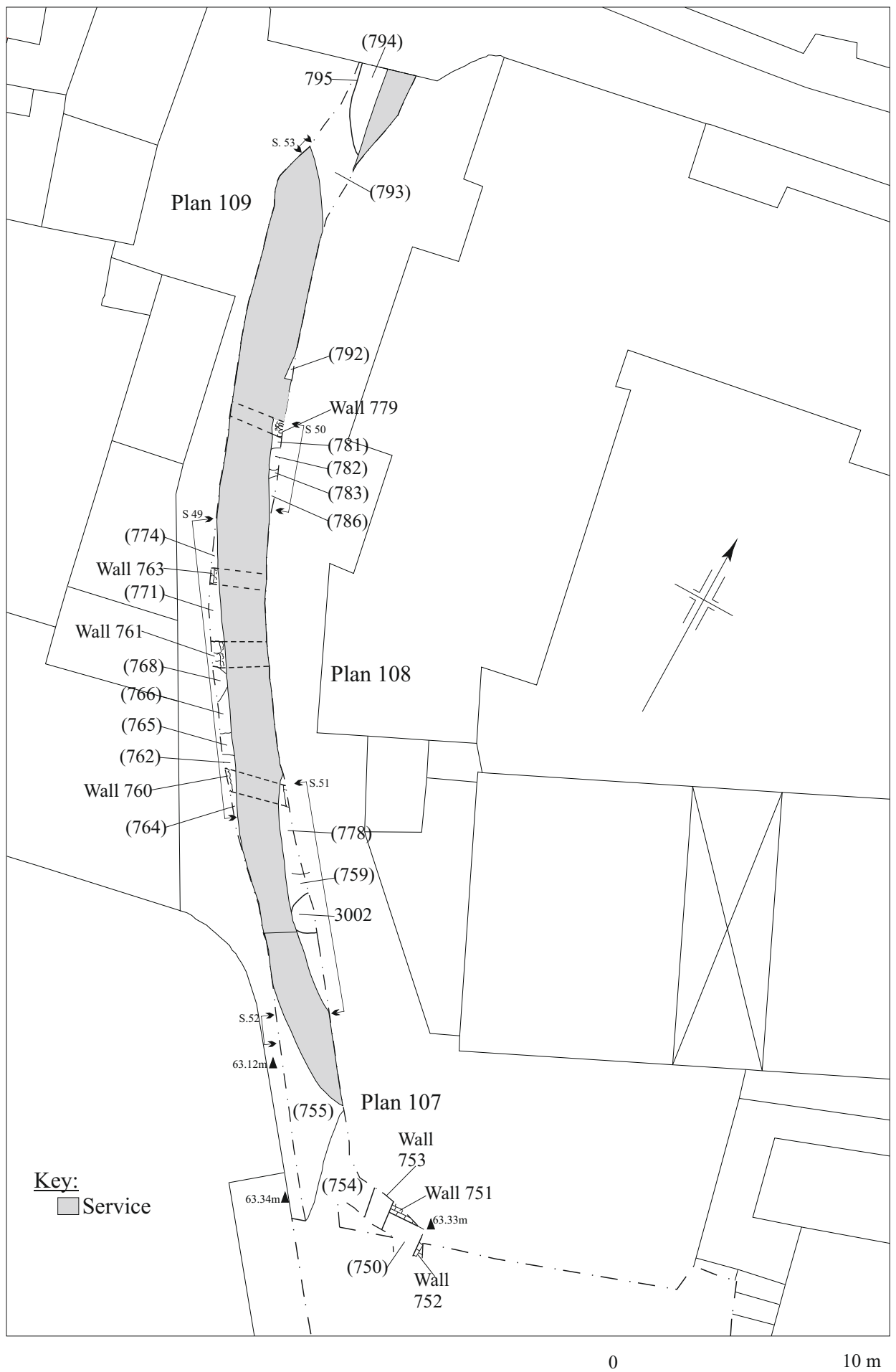
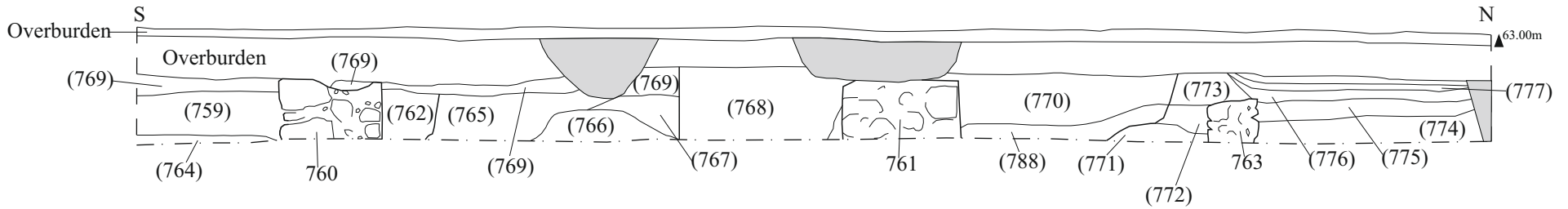
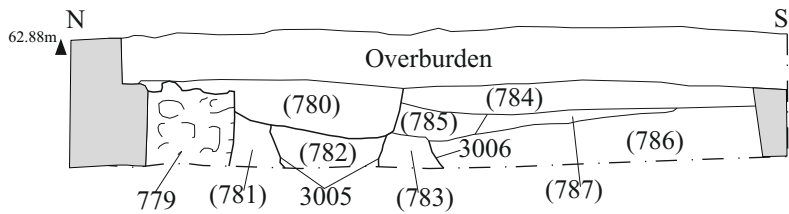


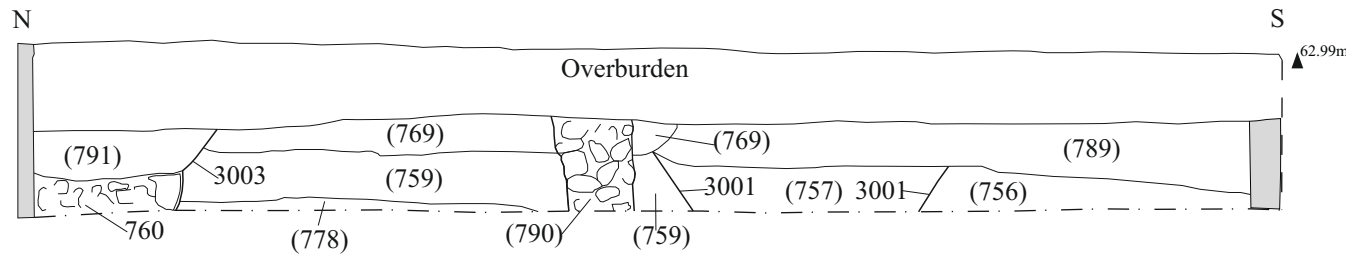
Figure 30. Trench 20 Plan 108



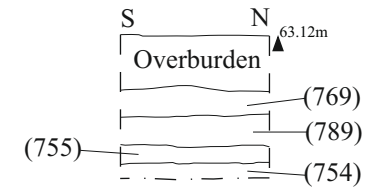
Section 49



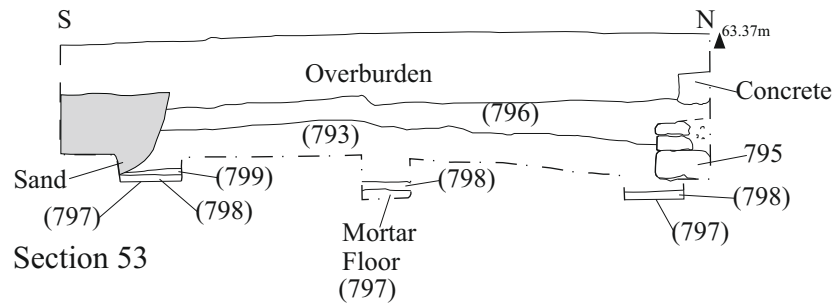
Section 50



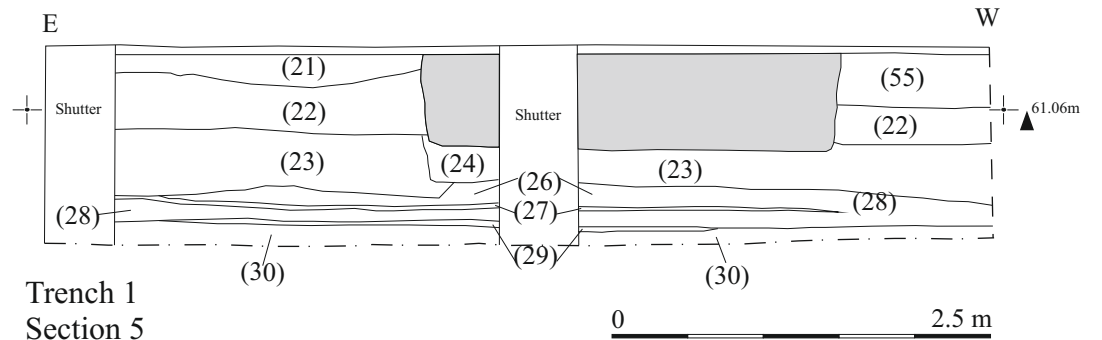
Section 51



Section 52



Section 53



Trench 1
Section 5

Key:
 ■ Service

Figure 31. Trench 20 and Trench 1 sections

Wall 761 was recorded in the western section (Fig. 31, Section 49) of the trench and survived at a level of 62.70m OD. It was 0.95m wide, aligned east to west and constructed from rough limestone blocks and fragments up to 0.25m long, 0.25m wide and 0.20m thick, bonded by dark orange sandy clay. Immediately south of the wall a dump of modern concrete (768) 1.30m long and 0.55m high completely obscured the stratigraphic relationship between walls 760 and 761, as well as the deposits between the two walls. Further north, wall 763 was also orientated east-west and was 0.40m wide, surviving to a height of 0.30m or 62.50m OD. It was built of limestone fragments set in a hard, white lime mortar.

The lowermost deposit between walls 761 and 763 was possible floor surface (771), compact off-white lime mortar and gravel abutting wall 763. The overlying deposit (772) was loose, dark grey silty sand and gravel with charcoal flecks and frequent brick or tile fragments. This deposit was overlain by (773), reddish-brown silty sand and gravel with occasional charcoal flecks that also extended over the remains of wall 763. The earliest deposit (774) north of wall 763 consisted of dark brown-grey sandy silt with gravel, charcoal flecks and occasional limestone fragments. It lay below (775), orange-brown sandy clay with gravel, limestone fragments and occasional lumps of degraded mortar. Layer (773) was truncated to the south by possible pit cut 3004 containing lower fill (788), pale grey sandy silt with limestone fragments, gravel and brick or tile fragments; and fill (770), pale grey-brown sandy silt with gravel and limestone fragments. Deposit (770) also overlay the remains of wall 761. To the north, deposit (773) was overlaid by two thin laminated deposits (776) and (777), the former dark brownish grey sandy silt with gravel, and the latter varied grey, brown and yellow-brown clayey silt with gravel and limestone fragments. It was not clear if these deposits were within a shallow feature that cut (773).

Wall 779 in the west facing section (Fig. 31, Section 50) of Trench 20 was aligned north-west to south-east, and it was constructed from roughly hewn limestone blocks and fragments set in cream coloured lime mortar. It was 0.55m wide and survived to a height of five courses at a level of 62.58m OD, and had been truncated on its northern side by a brick-built manhole.

Between walls 763 and 779 the earliest deposit identified was (781), pale grey clayey silt with frequent charcoal flecking and occasional brick or tile and limestone fragments; and (783) which was a loose dark brown-black sandy clay silt with gravel, limestone fragments, frequent oyster shells and occasional pieces of brick or tile. Cutting into these two deposits were two possible pit cuts 3005 and 3006, the former subcircular in plan with a diameter of at least 0.80m and filled with limestone rubble in a mid brown-green silty clay (782); and the latter more oval in shape with a fill (786) consisting of loose, pale grey-brown silty sand with large quantities of limestone fragments along with some small pieces of mortar and brick or tile. Fill (786) produced two sherds of 13th to 14th century pottery, possibly residual. Overlying pit fill (786) was deposit (787), soft dark grey to black sandy silt with mortar flecks and occasional charcoal pieces. This was overlain by (785), a friable mid-brown sandy silt with gravel, mortar flecks and occasional charcoal. Both (785) and (787) were below deposit (784), a pale brown variable deposit of clay, sand, gravel and silt. These three deposits may have been surface and/or floor makeup layers, but they were truncated at the northern end by a shallow feature 3007 filled with (780) that had destroyed the relationship with wall 779, and which may have been a robber cut of the wall.

At the northern extent of Trench 20 the lowermost deposit identified was a hard off-white to pale yellow lime mortar floor (797), which sloped gradually down northwards from a level of 62.35m OD to 62.25m OD. This lay below deposit (798), a 0.05m thick layer of friable orange-brown silty sand and fine gravel, which in turn was overlain by (799), a thin layer only 0.03m thick of soft, white to yellow mortar. Above these possible floor surfaces was a 0.40m thick dump of ceramic roof tiles (793), which at its northern end appeared to be truncated by the construction cut of wall 795, the most northerly of the walls recorded in Trench 20. This wall seemed to be aligned north-west to south-east and was at least 0.40m wide, surviving to a height of three

courses at a level of 62.77m OD. It was constructed from limestone blocks up to 0.30m long, 0.30m wide and 0.20m thick, set in very hard off-white lime mortar. Although the disturbance created by the numerous service trenches meant that some of the later pottery recovered from Trench 20 may have been intrusive, with the exception of a few medieval sherds the limited dating evidence was predominantly post-medieval to early modern.

3.12 Christ Church Buildings: Tom Quad, Peckwater Quad and School Quad

The upper deposits in Trench 1 followed the southern side of Tom Quad and consisted of thin bands of limestone fragments and crushed limestone alternating with layers of sand and gravel (4, 22-23, 26-29, 56 and 83) (Fig. 31). Together they had a maximum thickness of 0.80m and extended throughout the trench, overlying the cemetery deposits, and were interpreted as masons' debris, originating from the construction of the range of buildings on the southern side of the Quad. Only a single residual sherd of 11th century pottery was recovered from layer (56).

Cemetery soils at the southern end of Trench 5 (235) were above grey-brown silty sand and gravel (259) which yielded a single fragment of 'Printed' tile, dating from after the mid-14th century. Under deposit (235) was layer (313), mid grey-brown silty sand and gravel with three fragments of 'Stabbed Wessex' tiles. In turn, the cemetery soils (235) lay below rushed limestone and mortar 0.18m thick (245), equivalent to the upper deposits in Trench 1, and again interpreted as masons' working debris, possibly from the construction of the east side of Tom Quad sponsored by Cardinal Wolsey. The deposit was paler than those in Trench 1, and was visible in the west facing section of Trench 5 where it petered out after some 50 metres, just short of the cemetery boundary wall 322. Layer (245) was below (244), a 0.09m thick deposit of orange gravel and sand; which was overlain by (249), a 0.01m thick band of limestone chippings containing many copper-alloy pins and chapes. Both these deposits were under (242), a mid grey-brown sandy silt with gravel. Together these deposits produced 44 sherds of late 15th to mid-16th century pottery, and were probably redeposited demolition debris, used to level the ground. They lay below deposit (234), a 0.48m thick layer of mid grey-brown sandy clay.

Towards the south end of Trench 5 and *c.* 5.5m north of the south range of Tom Quad was ditch or robber cut 240, up to 0.95m wide and 0.53m deep with quite steep sides dropping to a slightly concave base. It cut through clayey silt deposit (237) that was at the same level as the upper masons' debris (22) in Trench 1, and was filled with yellow brown silty sand and gravel (241) that produced 17th century pottery. This could have been a feature associated with the short-lived south cloister (Sturdy 2004, fig. 64b). A further deposit of limestone debris 0.07m thick in Trench 5 (278/305) was recorded at a level of 60.70m OD, where it was overlain by a 0.40m wide dump of broken roof tiles (277) that included four sherds of late 15th to mid-16th century pottery. Roughly 2.5m north of dump deposit (277) was a small, undated posthole 283, 0.30m in diameter and 0.20m deep, and filled with grey-brown silty clay (284).

Substantial wall footings 402, up to 2.65m wide and possibly constructed in two separate phases, were exposed in Trench 6. The lower section 402B was aligned NEE-SWW and was recorded at a level of 61.02m OD (Figs. 15-16; Plate 8). It was constructed from large, unworked limestone blocks set in a very hard white gravel mortar, and it cut through the southern end of building 6A. At the southern end of Trench 6 a dark brown silty loam with gravel, limestone fragments and charcoal (403) extended over the lower wall footings and produced 44 sherds of 15th century pottery. A further 20 sherds of the same date were recovered from underlying layers (401) and (400). Layer (403) was probably derived from adjacent deposits through which the foundation trench was cut. The lower footing might have been part of Wolsey's early 16th century college building work, probably associated with the curved footing 406 and robber trench 412 described below (and see Discussion).

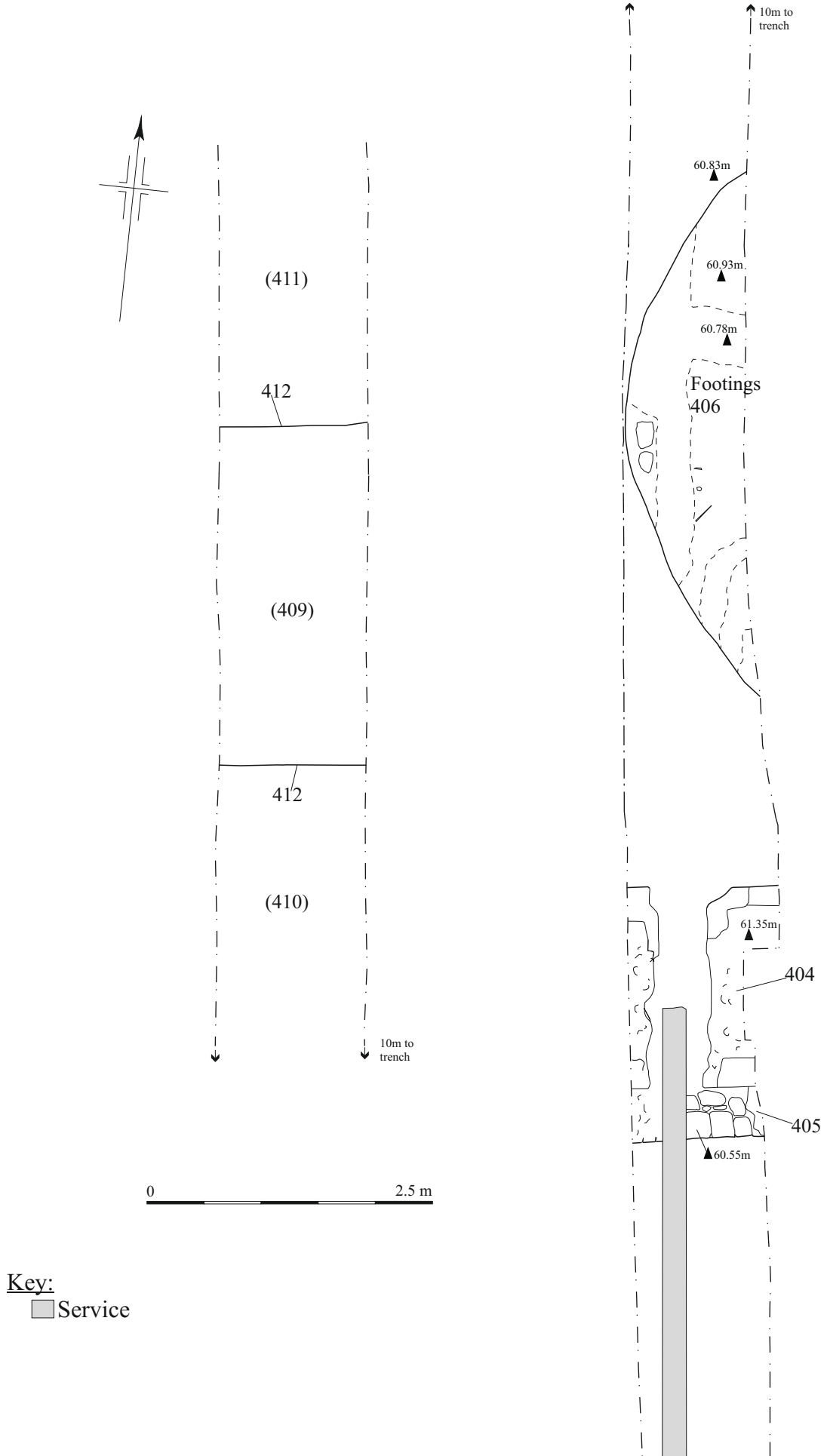


Figure 32. Trench 6 Plan 50

The upper section of masonry 402A was 1.50m wide and 0.25m thick, and constructed from ashlar limestone blocks with a limestone rubble core set in pinkish gravel mortar. This was part of the foundations for the Fell Tower. Footings with this same construction were again recorded underneath the north side of the tower as wall 404, and were 1.50m wide, 0.75m thick and had a small offset foundation on the north side.

A large curved wall footing 406 was recorded 11.30 metres to the north of wall footing 402B (Figs. 15 and 32; Plate 16). It was 4.65m wide on a north-south axis and survived at a level of 61.08m OD. The structure was built of large blocks of limestone set in very hard white gravel mortar, similar to that used for wall 402B. Fifteen sherds of 15th to 16th century pottery were recovered from the matrix of the structure. Approximately 6.70m north of the curved footing was the cut of a possible robber trench 412 on an east-west alignment and up to 2.95m wide. It was filled with dark brown sandy silt containing gravel, limestone rubble and mortar flecks, and four sherds of 15th century pottery (409). These were possibly redeposited, as the robber trench cut through layer (411), pale brown sandy silt and gravel containing 15th century pottery and a single piece of plain green glazed floor tile (see Section 3.9 above). On the southern side the robber cut was dug through a slightly darker deposit with an identical texture (410). Deposit (411) produced 57 sherds dated to the 15th century, whereas (410) was devoid of dateable finds.

The footings of the Peckwater Quad building were exposed at the extreme northern end of Trench 7, and were constructed from rough blocks of limestone set in a firm cream coloured mortar. The foundation trench on the western side of building wall 450 was 1.00m wide and over 2.00m deep, and had been backfilled with loose, pale grey-brown silty gravel (451). This deposit produced 21 probably residual sherds of 13th to 14th century pottery. The foundation trench for wall 450 also cut through a deposit of mid-brown sandy silt (452), a possible pit fill that produced 34 sherds of 13th to 14th century wares.

A length of service trench was dug from the south side of Tom Quad through School Quad, then further south to the sub-station outside the Clerk of the Works office, and for ease of recording this trench was subdivided into three sections (Trench 22A-C). Fragments of human bone found in the backfill of earlier service trenches probably came from either of the cemeteries attached to St Frideswide or St Michael at the South Gate. A brick barrel-vaulted drain 816 orientated north-south was recorded close to the east end of Trench 22A (Fig. 33), and it was 0.60m wide and built from well-fired red bricks 0.23m long, 0.065m wide and 0.11m thick, set in firm, yellow sandy lime mortar. The drain contained mid brown-grey sandy silts and gravels (815), with slate, limestone and brick and tile fragments.

Where Trench 22A passed along the southern side of the Great Hall, wall 817 was recorded below one of the buttresses that lay just outside the trench. Wall 817 was aligned north to south and constructed from limestone pieces 0.20m long, 0.20m wide and 0.05m thick, set in hard yellow lime mortar. It lacked facing stones, however, and may have been truncated on its eastern side. The wall was at least 1.40m wide and it survived at a depth of 0.40m below the modern ground surface or at 60.16m OD. A second wall 820 was recorded 3.60m further to the west, and it too was below one of the Great Hall buttresses, though the buttress itself was not within the trench. The wall was 2.20m wide, aligned north-south, and built of limestone blocks up to 0.30m long, 0.30m wide and 0.20m thick, set in very hard yellow gravelly lime mortar. The wall was present 0.50m below the modern ground surface at a level of 60.12m OD.

Deposit (829) on the eastern side of wall 820 consisted of loose, mid-brown silty sand with limestone rubble and gravel. On the western side of the wall, deposit (821) was friable, mid brown sandy silt and gravel with seven sherds of 13th to 14th century pottery. Above this was a 0.20m thick deposit of compact pale yellow-white mortar with limestone chippings (819), interpreted as masons' debris from the construction of the south range of Tom Quad (Fig. 33).

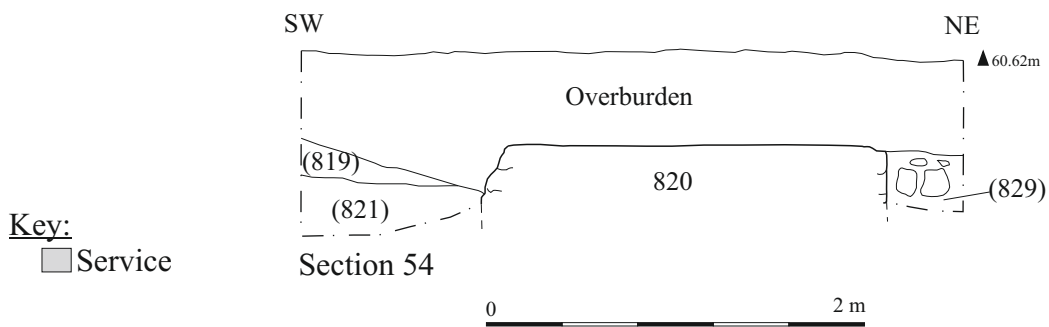
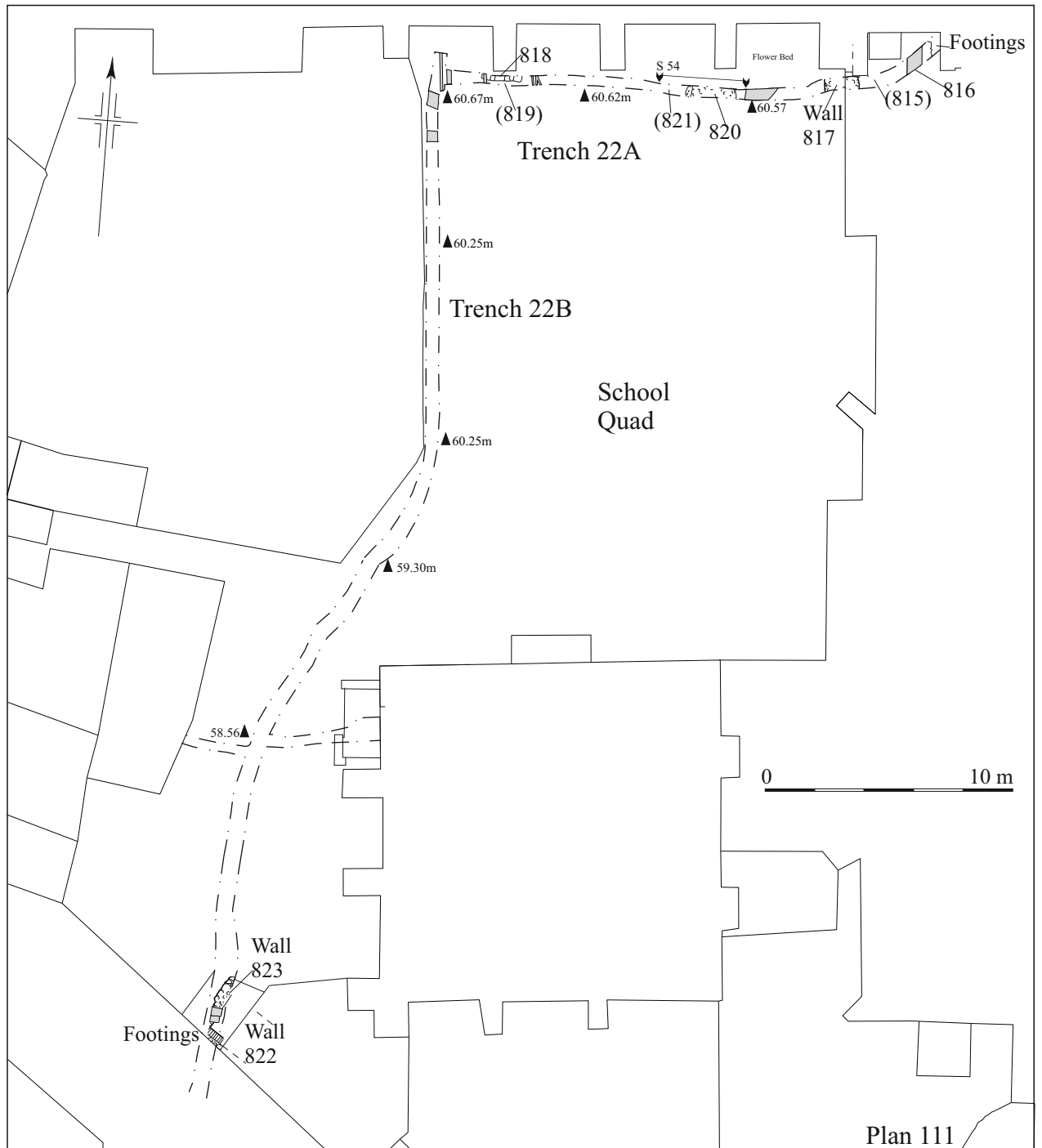


Figure 33. Trenches 22A and 22B Plan 111 and Section 54

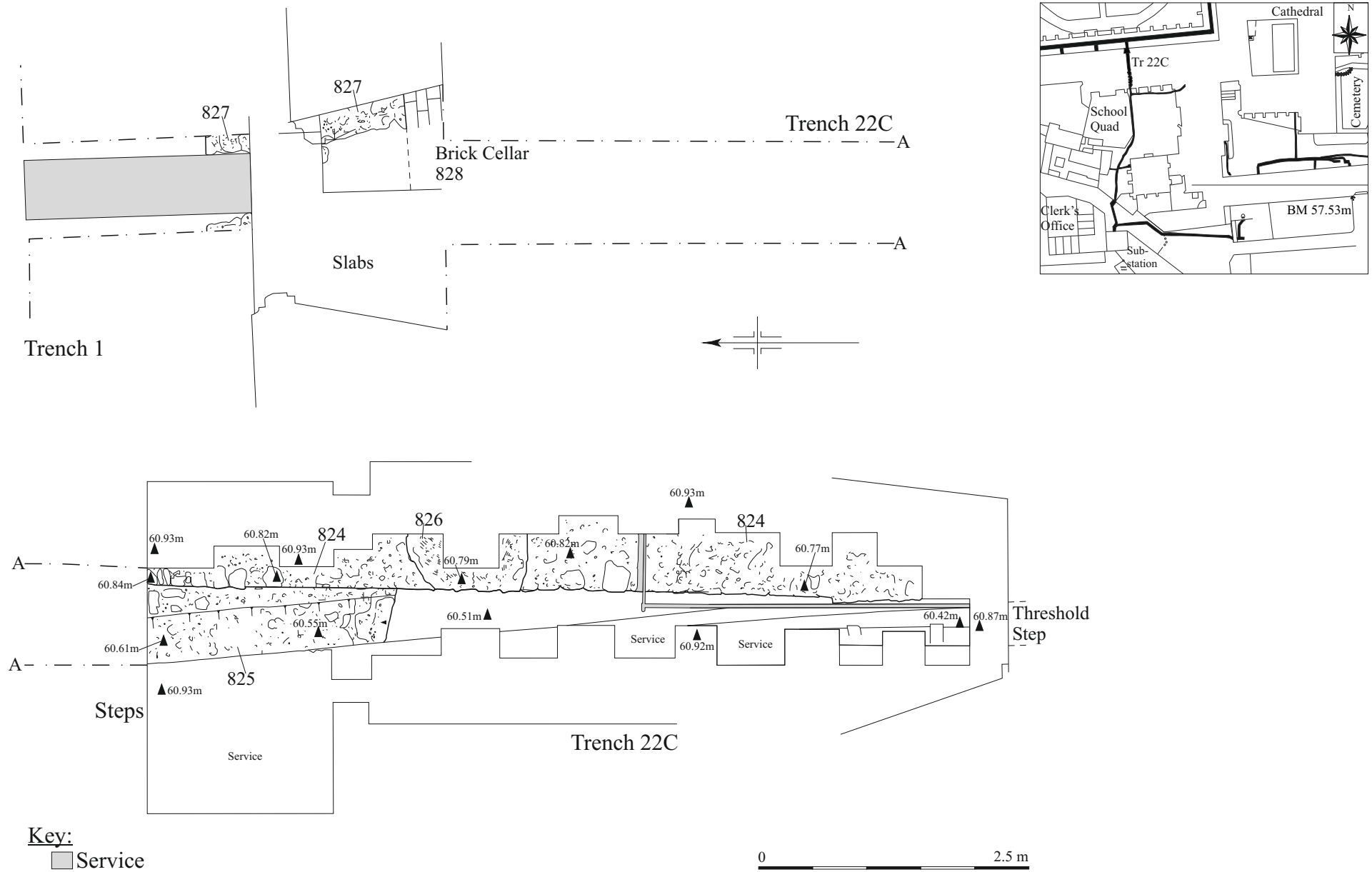


Figure 34. Trench 22C Plan

The only buttress footing that actually extended into the trench was close to the western corner of the Great Hall, where the trench turned southwards. The buttress footing was recorded as 818 and was stepped-out by 0.30 metres from the buttress itself. It was constructed from roughly hewn blocks of limestone and was encountered at a level of 60.07 metres OD.

Further to the south in Trench 22B there were few deposits or structures of archaeological significance, except where the trench passed under the School Quad boundary wall. At this point wall 823 was recorded, 0.50m wide and on a north-east to south-west alignment (Fig. 33). It was constructed from roughly hewn limestone pieces up to 0.40m long, 0.20m wide and 0.20m thick set in creamy white lime mortar. This wall was incorporated into a large brick-built culvert 822 that was aligned east-west and was mentioned in the 'proposed service plan' of c. 1878.

Trench 22C passed through the passageway between Tom Quad and School Quad, where another set of footings for the south range of Tom Quad were recorded in the northern end of the trench (Fig. 34). Wall 827 was 1.8m wide and built from mortared limestone pieces 0.30m long, 0.20m wide and 0.10m thick. These footings were cut on the southern side by brick-built cellar 828, and also further disturbed by services. South of the cellar were two further walls. Wall 824 was at least 0.78m wide as exposed, and built of roughly-shaped limestone blocks up to 0.30m long, 0.20m wide and 0.07m thick, set in hard off-white or cream gravelly mortar. It had a north-south length of c. 7.00m and formed the eastern end of a substantial building, as its southern end turned westwards though 90 degrees. A deposit of creamy white and black/dark brown ashy material with coal fragments (826) marked the probable location of a hearth or fireplace in wall 824. Abutting the north part of wall 824 was a further wall 825, at least 2.20m wide, orientated east-west and constructed from limestone blocks around 0.15m long, 0.10m wide and 0.05m thick set in a hard gravelly cream to yellow coloured mortar. Service trenches had cut into the top and western sides of the wall. It is hard to explain the relationship between these two walls, unless 825 was a northern, external wall constructed after 824 had been built, which seems unlikely. It must thus post-date the use of 824 as part of a building.

A shallow service trench (Trench 21) was dug in Chaplain's Quad to the rear of the kitchen, to a maximum depth of 0.60m. Although the ground works did not disturb any significant archaeological deposits, several small sections of wall were exposed and recorded. Wall 811 was exposed directly under the existing eastern kitchen wall, 0.35m below the existing ground level (Fig. 35). Only the southern side of the wall was fully exposed, but it was 0.50m wide, orientated north-east to south-west and constructed from limestone blocks and fragments set in firm off-white lime mortar. Approximately 6.00m to the south a second wall 812 was recorded in the eastern trench section, 0.80m wide and also built of limestone blocks and fragments, set in yellow sandy mortar. Just to the south of wall 812, a smaller wall 813 was recorded, 0.50 metres wide and partly exposed in the eastern trench section. It was built in much the same way as the other two walls. There was no dating evidence for the walls, and the only pottery collected from general trench fill (810) consisted of seven sherds dated to the 19th century or later.

3.13 Long Walk, Meadow Quad, and Master's Garden

The area crossed by Trench 12 included a road that had been disturbed previously by numerous services. This was evident in the upper trench deposits that consisted of mixed dark brown clayey silts, in places extending to the base of the new service trench. Four sleeper walls were recorded under the floor of the switch room of the sub-station along with several other walls that had been heavily truncated (Fig. 36). Given that the main general fill of the trench was severely mixed, only pottery sherds likely to be diagnostic were collected. These were recorded as unstratified spits (A to E), and comprised sherds spanning the 10th to 19th centuries.

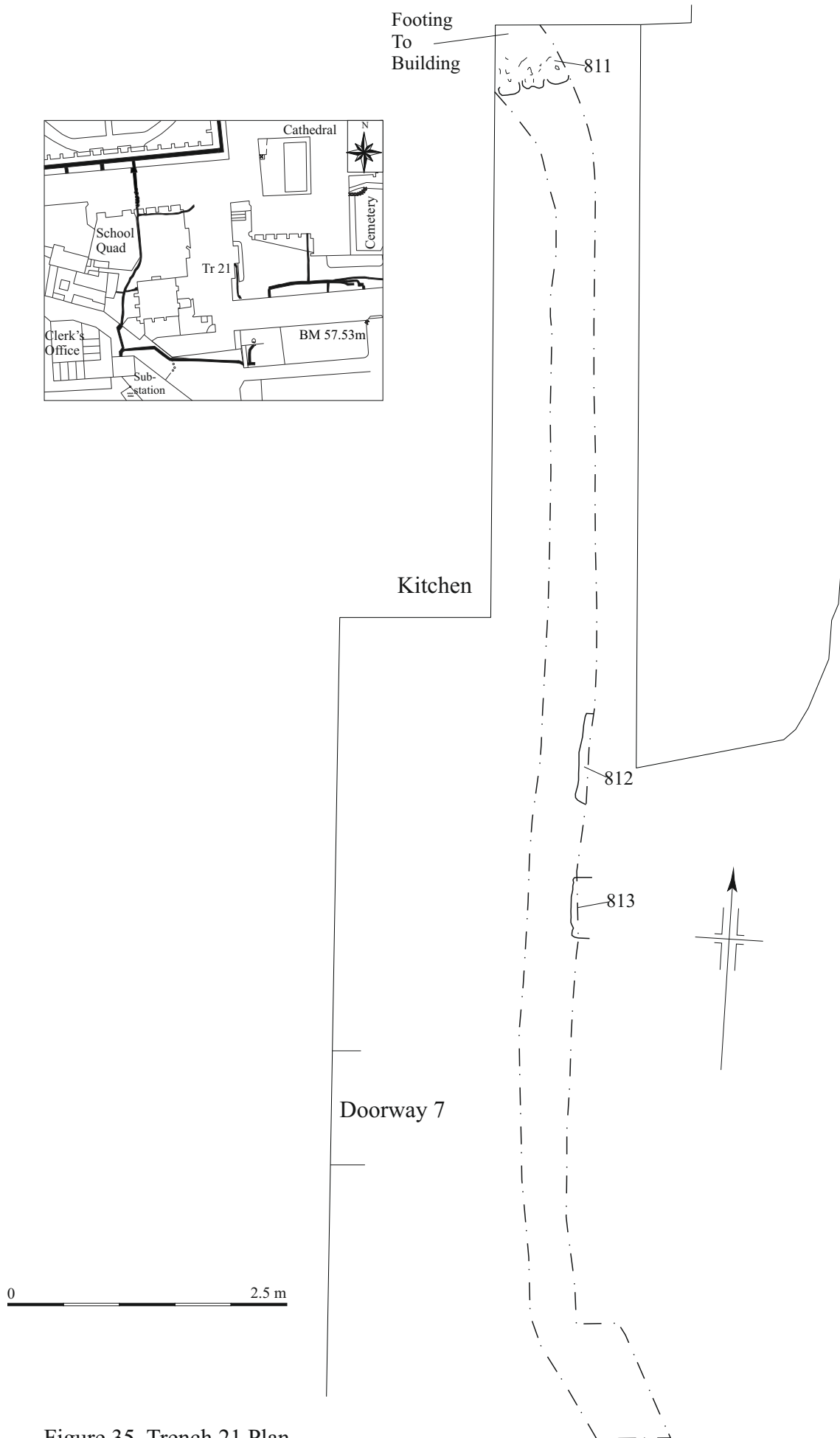


Figure 35. Trench 21 Plan

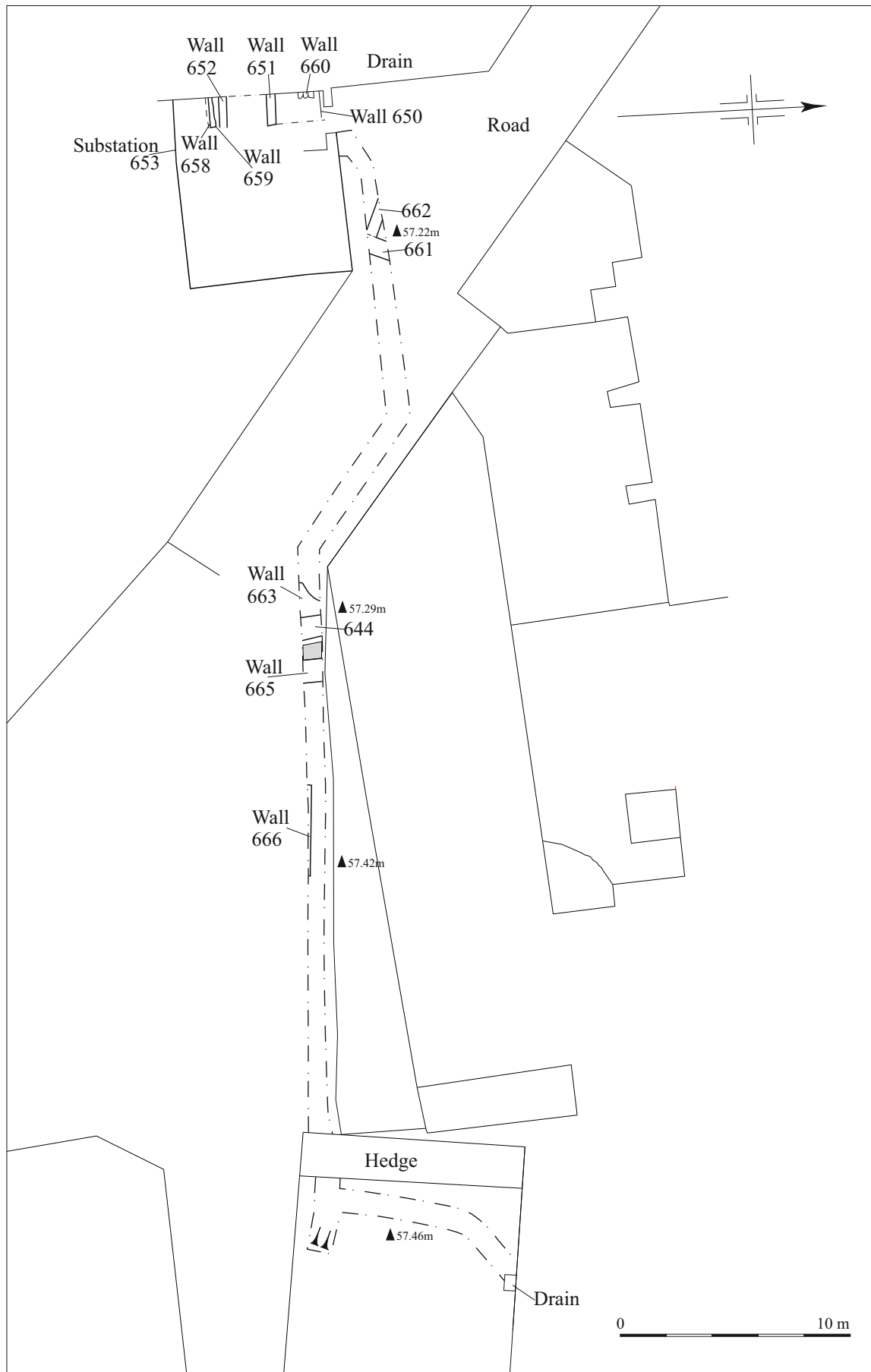


Figure 36. Trench 12 Plan

The earliest stratified deposit recorded in the bottom of the trench below the sub-station floor was (657), mid grey-brown sandy silt that contained six sherds of 14th century pottery. A 0.20m thick layer of pale, grey-brown sandy silt (656) overlay (657), and this contained small quantities of limestone and eight sherds of mid-16th to 17th century pottery. Three walls were cut through this deposit (Fig. 36) – 650, 651 and 652. All three were parallel to one another and aligned east-west, 0.35-0.37m wide and constructed from squared limestone blocks and pieces bonded with cream coloured clay mortar. The spacing between the walls differed, however, with the distance between the northern wall 650 and wall 651 at 2.00m, whilst that between wall 651 and 652 was 1.70m. A limestone-built culvert 660 lay between walls 650 and 651. The northern wall 650 was at least 1m deep below the existing slab level but has been re-used as the foundation for the modern building, extending 0.25m south of the present wall. Walls 651 and 652 survived to a height of at least 0.44m. These might be related to earlier use of this building as a stables.

At the south-western end of Trench 12, wall 658 followed a slightly different NEE-SWW alignment and was set within foundation trench cut 659. The fill of the trench (667) was mid grey-brown sandy silt containing limestone pieces. The extant south wall 653 of the sub-station switch room is abutted by the east and west walls of the room. The lower 1.2m of the wall, however, are earlier footings built of roughly squared limestone blocks up to 0.75m long and 0.22m wide, the largest towards the base of the structure. Above this the wall was of brick. Two walls were recorded outside the sub-station on the southern side of the road, where they approached each other at a right angle. Wall 661 was aligned NNE-SSW, and was 0.80m wide and built of rough limestone blocks up to 0.30m long, 0.20m wide and 0.20m thick. It survived to a height of three courses at a level of 56.72m OD and was bonded with cream-coloured mortar. The second north-west to south-east aligned wall 662 was also constructed from limestone blocks, but bonded with orange gravel mortar. It was 0.50m wide and survived to the same height as 661, but where it extended eastwards to meet wall 661 the junction had been destroyed by services.

Several other walls were recorded in Trench 12, most truncated to the level of footings. Wall 663 was recorded 0.70m below the tarmac surface at a level of 56.59m OD and on a NNW-SSE alignment. It was up to 1.30m wide and constructed from rough limestone blocks, bonded with hard cream mortar, and was severely truncated by a modern service inspection pit on its north-western side. Just *c.* 1m to the east was another NNW-SSE aligned wall 665, 1.00m wide and constructed from rough limestone blocks set in cream mortar. It survived 0.75m below the tarmac surface at a level of 56.60m OD. A drain or culvert 644 abutting the wall on its western side was built from rectangular limestone blocks set on edge with large, squared limestone slabs up to 0.60m long, 0.54m wide and 0.15m thick used as capping.

Structure 666 that protruded from the southern side of the trench was probably a service inspection hole. It was constructed of roughly dressed limestone blocks 0.40m long and 0.20m wide that had been bonded with cream mortar. The overall structure was 2.80m long with a red brick wall attached to the eastern end.

Trench 13 and its continuation recorded as Trench 15 were dug to the north of the Meadow Building towards the Master's Garden. In the western part (Trench 13), the new service trench was dug to a depth of 0.65m through an area heavily disturbed by previous services. Substantial wall foundations had been previously observed in the area of the trench (B. Durham pers. comm.), whilst the John Moore Heritage Services work identified two walls 802 and 803, the former aligned north to south and the latter NNW-SSE (Fig. 6). Wall 802 was 1.20m wide and was constructed from faced limestone blocks up to 0.50m long, 0.30m wide and 0.12m thick. The west side survived intact, but the east face was cut away by services. The wall had a limestone rubble core set in pale brown sandy matrix, and survived 0.40m below the modern ground surface at a level of 57.90m OD. Wall 803 was 0.90m wide and survived at a level of

57.91m OD, 0.40m below ground level. It was constructed from limestone ashlar blocks and pieces, the largest 0.20m long, 0.30m wide and 0.15m thick, bonded with a pink-orange mortar.

Both walls were overlain by deposit (801) that filled the trench and was identical to the fill of the existing service trenches (804), consisting of mid grey-brown sandy clay silt with gravel, oyster shells, and limestone and brick or tile fragments. The pottery from (801) consisted of six sherds dated between the mid-16th and 17th centuries. A further group of sherds collected from the fill of the service trenches (804) were all 19th century or later. Between walls 802 and 803, the northern face of part of an east-west aligned wall 964 was exposed over a 2.35m length along the southern side of the trench. It was constructed from roughly hewn limestone pieces up to 0.35m long, 0.20m wide and 0.20m thick, and survived at least two to three courses high at a level of 57.90m OD.

In the eastern part of the service trench (Trench 15) the subsurface deposits were similarly disturbed, and there was no discernable difference between the main trench fill and the fill of the intercutting service trenches. Several masonry walls (Fig. 6) were recorded that may correspond to walls shown on Loggan's panoramic map of Oxford of AD 1675 (see Discussion). Wall 959 was orientated north to south and was constructed from roughly dressed pieces of limestone, the largest 0.26m long, 0.15m wide and 0.03m thick. The wall was 0.70m wide and recorded in the bottom of the trench at a level of 57.66m OD. Though it lacked a mortar bonding, the interstices were filled with mid brown sandy silt (960), which produced a single sherd of 14th century pottery. The truncated stub of another wall 958 was recorded some 4.00m to the east of wall 959, where it had a width of 0.50m. This too was aligned north to south and survived as a single course at a level of 57.81m OD. It was drystone built using unworked limestone pieces 0.30m long, 0.30m wide and 0.10m thick.

At the eastern end of the trench a 0.30m thick deposit of hard creamy white mortar (954) was recorded extending for 3.50m eastwards where it was cut by ditch 952. The deposit thinned to 0.10m before disappearing below the base of the trench. Ditch 952 was on a north-south alignment and truncated a dark grey-brown sandy loam containing small pebbles and gravel (955). Only the western edge of the ditch was visible as the eastern side lay under the gateway into the Master's Garden. It was at least 1.30m wide and 0.55m deep with a steeply sloping western edge. Its full depth could not be ascertained since its base lay below the limit of excavation, but its upper fill was dark brown silty loam (951).

The part of Trench 15 that passed through the Master's Garden revealed a succession of cultivation soils. The upper soil (961) was 0.20m thick and consisted of dark brown loam with gravel. This lay above a mid-brown sandy loam subsoil (962) that was 0.50m thick. The lowest deposit (963) was a compact yellowish brown sandy loam containing mixed gravel, occasional charcoal flecks and four sherds of 13th to 14th century pottery.

A trench 2.00m long and 2.00m wide was dug to a depth of 1.10m at the eastern end of Trench 15, which was to be the site of a new sub-station. A smaller trench measuring 1.20m by 1.2m was dug on the southern side to accommodate an inspection chamber. Together these were recorded as Trench 18 (Fig. 1). The smaller southern trench was excavated to a depth of 0.75m, revealing a construction cut for the existing garden wall 0.45m wide and filled by (732), pale brown sandy silt containing limestone fragments and a single sherd of late 15th to 16th century pottery. Above layer (732) lay a 0.60m thick deposit of mid-brown sandy clayey silt (731) with gravel, lenses of stiff grey clay, six sherds of mid-16th to 17th century pottery and a fragment of 'Penn style' floor tile.

The larger northern trench revealed the offset foundations for the pier of the garden wall. Just above the bottom of the trench was dark brown silty sandy loam (734) that produced two sherds

of 13th to 14th century pottery and a copper-alloy strap/book clasp (SF No. 171). This lay beneath a 0.65m thick deposit of mid-brown sandy clay silt (733) on the southern side of the wall. Four sherds of pottery dating to the first half of the 17th century were recorded from this deposit.

Just to the north of the Priory Wall, in the southern extent of Trench 16, a small wall 725 orientated north-east to south-west was recorded towards the southern end of this trench. It was 0.35m wide and constructed from limestone pieces set into pale orange lime mortar (Fig. 6). This wall was recorded at a height of 57.72m OD. Further north the trench followed the route of an existing service.

Trench 17 was a small trench 2.35m long and 2.20m wide dug through the floor of the 'Wood Shed' situated on the eastern side of the cemetery boundary wall within the Masters Garden (Fig. 6). Immediately below the modern concrete floor was a 0.60m thick deposit of friable grey sandy concrete (730) with several large sherds of later 19th century Victorian pottery embedded into it including several broken stoneware ink bottles. No archaeological deposits were seen in this trench, as the concrete base was thicker than the maximum excavated depth of the trench. The walls of the 'Wood Shed' are worthy of some comment though. The eastern and southern walls had shallow foundations, as did the western wall that was the cemetery boundary wall. The northern wall, however, had much more substantial footings with a battered foundation sloping on the south side (Plate 18). This might have been originally part of a much more substantial, earlier structure (see Discussion). On the western side of the 'Wood Shed' there was also a stone lined drain 728 that was 0.90m wide and constructed from limestone blocks with a York stone slab as a capping (Fig. 6).

At the southern end of Trench 19 an east-west orientated wall 742 was recorded, 1.00m wide and constructed from limestone fragments up to 0.15m long, 0.15m wide and 0.15m thick bonded with an orange gravelly lime mortar. At least two courses survived to a height of 59.69m OD.

A spur trench was dug from the main trench to join the 'Bethel Building' to the power supply, this was 0.30m wide and 0.45m deep. This again revealed the cemetery soil, but as it was shallow in comparison to the rest of the trench no burials present at the depth excavated. A small wall was recorded at the eastern end of Trench 24. This appears on the 1958 OS map and is a later addition to the western wall of the Bethel Building, extending northwards from it.

4 POTTERY by *Paul Blinkhorn*

4.1 Analytical Methodology

The pottery was initially bulk-sorted and recorded on a computer using DBase IV software. The material from each context was recorded by number and weight (grammes) of sherds per fabric type, whilst the featureless body sherds of the same fabric were counted, weighed and recorded as one database entry. Feature sherds such as rims, bases and lugs were individually recorded, with individual codes used for the various types. Decorated sherds were similarly treated. In the case of the rim sherds, the form, diameter in mm and the percentage remaining of the original complete circumference was all recorded. This figure was summed for each fabric type to obtain the estimated vessel equivalent (EVE).

The terminology used is that defined by the Medieval Pottery Research Group's Guide to the Classification of Medieval Ceramic Forms (MPRG 1998) and to the minimum standards laid out in the Minimum Standards for the Processing, Recording, Analysis and Publication of post-Roman Ceramics (MPRG 2001). All the statistical analyses were carried out using a DBase package written by the author, which interrogated the original or subsidiary databases, with some

of the final calculations made with an electronic calculator. All statistical analyses were carried out to the minimum standards suggested by Orton (1998-9, 135-137).

4.2 Pottery from Tom Quad, Christ Church (OXCCTQ 05)

4.2.1 Introduction

The pottery assemblage comprised 3883 sherds with a total weight of 69657 grammes. The estimated vessel equivalent (EVE), by summation of surviving rim sherd circumference was 34.22. The majority of the material was of medieval date, although six sherds of middle to late Saxon pottery were noted, along with rare late Saxon continental imports from the Andenne region of Belgium and the Pingsdorf area of Germany. Later rarities include a sherd from the shoulder of a mid to late 17th century Spanish Olive jar, only the second known from the city Oxford. A single sherd of early/middle Saxon hand-built pottery was also present.

The most important group of pottery dates to the 14th century, and consists of a range of near-complete vessels that were stratified along with a large assemblage of glass vessels, and which appear to have been used in a distillery or an alchemist's laboratory. They are almost certainly the earliest assemblage of pottery of this type known from medieval England, and probably one of the largest.

4.2.2 Fabric

The pottery was recorded utilising the coding system and chronology of the Oxfordshire County type-series (Mellor 1989, 1994). The 'F' prefixed numerical codes are those used in the database, as follows:

- F100. OXR: *St Neots Ware type*. c. AD 850-1200. 33 sherds, 349g, EVE = 0.32.
 F101. OXB: *Late Saxon Oxford Shelly Ware*. Late 8th-early 11th C. 6 sherds, 144g, EVE = 0.7.
 F110. OXBV: *Pingsdorf-type ware*. 11th-13th C. 1 sherd, 9g, EVE = 0.
 F200. OXAC: *Cotswold-type ware*. AD 975-1350. 214 sherds, 3422g, EVE = 2.62.
 F202. OXBF: *North-East Wiltshire Ware*. AD 1050-1400. 242 sherds, 6624g, EVE = 2.68.
 F300. OXY: *Medieval Oxford Ware*. AD 1075-1350. 462 sherds, 6556g, EVE = 4.30.
 F329. OX68: *Potterspury Ware*. Late 13th-17th C. 3 sherds, 46g, EVE = 0.
 F330. OXBK: *Medieval Shelly Coarseware*. AD 1100-1350. 3 sherds, 23g, EVE = 0.
 F352. OXAM: *Brill/Boarstall Ware*. AD 1200-1600. 1965 sherds, 37703g, EVE = 22.05.
 F355. OXBB: *Minety-type Ware*. Early 13th-16th C. 6 sherds, 76g, EVE = 0.08.
 F356. OXBG: *Surrey Whiteware*. Mid 13th-mid-15th C. 19 sherds, 311g, EVE = 0.06.
 F371. OXAD: *Andenne/Huy-type wares*. 11th-15th century. 1 sherd, 5g, EVE = 0.
 F403. OXBN: *Tudor Green Ware*. Late 14th century- c. 1500. 53 sherds, 231g, EVE = 0.24.
 F404. OXCL: *Cistercian Ware*. AD 1475-1700. 69 sherds, 580g, EVE = 0.68.
 F405. OXST: *Rhenish Stoneware*. AD 1480-1700. 243 sherds, 5120g, EVE = 0.64
 F410. OXAM: *Brill/Boarstall 'Tudor Green' Wares ('BBTG')*. AD 1475-1600. 61 sherds, 532g, EVE = 0.68.
 F411. OXCE: *Tin-glazed Earthenware*. AD 1613-1800. 67 sherds, 408g.
 F412. OXST: *Westerwald stoneware*. c. AD 1590-1800. 4 sherds, 30g.
 F413. OXRESWL: *Polychrome Slipware*. 17th C. 3 sherds, 300g
 F416. OXBESWL: *Staffordshire slip-trailed earthenware*. AD 1650-1750. 2 sherds, 23g.
 F425. OXDR: *Red Earthenwares*. AD 1550+. 149 sherds, 3713g.
 F430. OXFI: *Chinese Porcelain*. c. 1650+. 18 sherds, 131g.
 F436. OXBEW: *Staffordshire manganese wares*. c. AD 1700-1800. 12 sherds, 104g.
 F438. OXEST: *London stoneware*. c. 1680+. 9 sherds, 117g.

F439. CRM: *Creamware*. Mid-18th to early 19th C. 1 sherd, 11g.

F443. OXFM: *Staffordshire White-glazed English Stoneware*. AD 1720 – 1800. 7 sherds, 28g.

F451. OXFH: *Border wares*. AD 1550-1700. 61 sherds, 767g.

F1000. WHEW: *Mass-produced white earthenwares*. 19th - 20th C. 155 sherds, 2186g.

In addition, the following wares, not included in the Oxford type-series, were also noted:

F1. *Early/middle Saxon hand-built ware*. c. AD 450-850. Moderate to dense chaff voids, sparse quartz up to 1mm. 1 sherd, 3g.

F361. *London-type ware*. Late 12th-14th century (Pearce *et al.* 1985). Manufactured at unknown source(s) near London. Reddish brown sandy fabric with occasional sandstone, shell, organic and iron ore fragments. Vessels mainly glazed jugs, some highly decorated. The material is found in small quantities throughout eastern southern England, especially in the earlier medieval period, when many local glazed ware industries had yet to be established. The sherd from this site was from a vessel with white slip stripes and a green glaze, a decorative scheme typical of the industry (*ibid.*). 1 sherd, 11g, EVE = 0.

F440. *Seville-type Olive Jar*. Late 16th-18th century (Hurst *et al.* 1986, 66). Spanish import. Pinkish-buff slightly sandy fabric with sparse gold mica and rock fragments. Pale buff slip on outer surface. 1 sherd, 176g.

A single unstratified sherd (18g) of Romano-British pottery was also present. The sherd of early/middle Saxon pottery is a small but useful addition to the growing corpus of such material in Oxford. It is of a type which could have been in use in the period when St Frideswide is reputed to have founded her nunnery in the 8th century, but equally could date to any time in the period AD 450-850. It was redeposited in a late 18th-19th century context. An assemblage of pottery of this type was noted during excavations at Christ Church Cloister in 1985 (Dodd 2003, 17). Christ Church lies on the southern edge of a series of finds of small groups of early and early/middle Anglo-Saxon pottery from the city, at Oxford Castle (Blinkhorn forthcoming), St Ebbe's (Mellor 1989, 198), and Merton College (Blinkhorn in print). The sherds of middle-late Saxon Oxford ware (fabric OXB) are likely to date to the lifetime of Frideswide's nunnery or the Anglo-Saxon church. Again, these were all redeposited in later contexts.

The range of Saxon and medieval pottery is generally typical of sites of the period in Oxford, apart from the presence of Saxo-Norman imports from the continent. The sherd of Pingsdorf ware (Fig. 37.1 TQ38) is only the fourth from Oxford, with the other finds made at All Saints, All Souls College and 31-34 Church Street, the last-named being a rim and handle with red/purple paint (Blinkhorn in press b; Mellor 1989 fig. 46.2, pers. comm.). All occurred in late 11th to early 12th century contexts. The sherd from context 1005 was redeposited in a 17th century context. Pingsdorf ware is relatively common find in the coastal ports of England, but less so at inland sites (Keller 1995). The Andenne ware is of a similar rarity, with just four other Oxford finds known at St Aldate's, St Ebbe's and Queen Street (Mellor 2003, table 6.7). The presence of small amounts of imported Saxo-Norman pottery at this site shows that was important enough to be attracting trade in the early medieval period at a time when most imported pottery was consumed at the ports of entry. At the time the material was arriving, the Christ Church site was home to the conventual church and shrine of St Frideswide, an important place of pilgrimage. The pottery probably came either from London by river or overland from the south from Southampton, via Winchester (Mellor 2003, 345), where Pingsdorf and Andenne wares occur in relatively large quantities (Vince 1985).

The medieval assemblage generally comprises local and regional wares that are fairly well attested to in the city. The sherd of London Ware is one of only a small number of finds of such

pottery in Oxford. For example, a sherd was noted at the Head of the River site (Whittingham 2003, 302), and three sherds at Oxford Castle (Blinkhorn forthcoming). It is a fairly typical product of the industry, being a fragment of a green-glazed jug with white slip decoration.

In terms of fabrics the post-medieval pottery is also fairly typical of the sites in the city, other than the sherd of the Spanish Olive jar. This is one of only a small number of finds of such pottery in Oxfordshire. A complete rim of such a vessel was noted in the post-medieval assemblage from the New Bodleian site, now in the Ashmolean Museum, and an antiquarian find of a near-complete vessel from Henley is also known (M. Mellor pers. comm.). Single sherds were noted in Oxford at 7-8 Queen Street (Mellor 2003, 326) and 24A St Michael's Street (*ibid.*, 307). As with the earlier imported sherds, Spanish pottery is reasonably well attested from ports such as London (Vince 1985, 81), but is extremely rare inland. The dating of the sherd covers the period in the 17th century when Elizabeth I and Charles I were both sometimes resident at Christ Church, and so it is entirely feasible that the vessel, or at least its contents, were consumed then. Exotic foreign foodstuffs would only have been available to the richest members of society at that date.

Illustrated pottery

Fig. 37.1. TQ38. Context 1005, OXBV. Sherd from the shoulder of a red-painted Pingsdorf ware jug. Grey fabric with slightly darker surfaces.

4.2.3 Chronology

Each stratified, context-specific pottery assemblage was given a ceramic phase ('CP') date based on the range of ware and vessel types present, and adjusted according to the stratigraphic matrix. The chronology, defining wares and the amount of pottery per phase is shown in Table 1.

Table 1. Ceramic phase chronology, occurrence and defining wares

Phase	Defining wares	Date	No Sherds	Wt. Sherds	EVE	Mean Sherd Wt
CP1	OXR	10 th C.	1	5	0	5.0g
CP2	OXAC	E-L 11 th C.	4	43	0	10.8g
CP3	OXY	L 11 th -12 th C.	154	1154	0.25	7.5g
CP4	OXAM	13 th -14 th C.	484	6372	3.21	13.2g
CP4a	OXBG	M 13 th - 14 th C.	128	1630	0.81	12.7g
CP5	OXAM*	14 th C.	428	23772	20.77	55.5g
CP6	OXST, OXBN	15 th - L 15 th C.	425	5030	2.88	12.5g
CP7	OXAM*, OXCL	L 15 th - M 16 th C.	890	10351	5.41	11.8g
CP8	OXDR, OXFH	M 16 th - 17 th C.	126	3034	0.19	24.1g
CP9	OXCE, OXREWSL	17 th C. - M 17 th C.	265	3155	0.08	11.9g
CP10	OXFI, OXBESWL	M - L 17 th C.	115	1828	0	15.9g
CP11	OXEST, OXBEW	L 17 th - M 18 th C.	130	1219	0.08	9.4g
CP12	OXFM, CRM	M 18 th - 19 th C.	85	1172	0	13.8g
MOD	WHEW	19 th C+	327	6006	0.02	18.4g
U/S	-	Unstratified	321	4886	0.52	-
Total			3883	69657	34.22	

The data in Table 1 shows that there was very little activity at the site until the late 11th century, and that most, if not all the possible late Saxon sherds (fabrics OXR, OXBV and OXAC) are likely to date to the early medieval period. The only pottery that can be said with any certainty to date to before the Norman Conquest is the small assemblage of Oxford Shelly Ware (fabric OXB), and all of that was redeposited in contexts dating to the 13th century (CP4) or later. There is a sherd of early/middle Saxon handmade pottery that dates to the period AD 450-850, but it was redeposited in a later context (above).

From CP3 (late 11th century) there is continuous activity at the site, with by far the largest group of pottery dating to CP5 in the 14th century, mainly due to the large deposit of near-complete vessels associated with the alchemist's laboratory (see sections 4.2.4 and 4.2.6 below).

Some of the ceramic phases correspond with known periods of activity at Christ Church, and in some cases there appears to be a reflection of that activity in the size and nature of the ceramic assemblages. For example, the CP7 assemblage, the second-largest phase-specific group from the site, corresponds with the foundation and construction of the college between 1525 and 1546. This and other correlations with the historic record will be examined in greater detail in the descriptions of the phase-specific assemblages (section 4.2.6. below).

4.2.4 Pottery occurrence

The occurrence of the major fabrics per ceramic phase is shown below in Table 2.

Table 2. Pottery occurrence per ceramic phase by fabric type, expressed as a percentage of the total weight per phase (major fabrics only)

Fabric	CP3	CP4	CP4a	CP5	CP6	CP7	CP8	CP9	CP10	CP11	CP12	MOD
OXR	0.7	1.1	0.9	0	1.2	1.0	1.5	0	0	0	0	0.5
OXAC	15.9	14.1	0.7	4.2	4.7	2.8	2.7	10.9	1.6	0.2	5.5	1.6
OXBFB	0.4	15.5	0.9	21.2	4.5	1.5	0.7	0.5	0	0.9	4.4	0.4
OXY	83.0	25.3	8.4	6.9	7.7	6.5	4.3	5.2	5.7	0	17.4	1.5
OXAM	-	42.3	84.0	67.7	73.6	70.1	20.1	42.8	11.9	5.5	68.5	19.8
OXBG	-	-	2.5	0	1.9	1.3	0	0.1	1.3	1.1	0	0
OXBN	-	-	-	-	2.2	1.0	0.2	0	0	0.6	0	0.1
OXST	-	-	-	-	2.9	7.4	24.0	33.7	43.5	15.3	1.7	12.0
OXCL	-	-	-	-	-	3.5	1.4	0.3	2.2	0	0	0.4
BBTG	-	-	-	-	-	4.5	0	0.6	0	0	0	0.3
OXDR	-	-	-	-	-	-	36.5	3.8	27.2	37.8	0	20.4
OXFH	-	-	-	-	-	-	8.6	1.0	2.9	6.3	0	3.2
OXCE	-	-	-	-	-	-	-	0.4	2.6	11.0	1.6	2.4
OXRESWL	-	-	-	-	-	-	-	0	9.8	2.1	0	0
OXBESWL	-	-	-	-	-	-	-	-	0	2.7	0	0
OXFI	-	-	-	-	-	-	-	-	1.5	5.7	0	0.5
OXBFW	-	-	-	-	-	-	-	-	-	4.1	0	0.9
OXEST	-	-	-	-	-	-	-	-	-	6.5	0	0.6
OXFM	-	-	-	-	-	-	-	-	-	-	0.7	0.3
CRM	-	-	-	-	-	-	-	-	-	-	0	0.2
WHEW	-	-	-	-	-	-	-	-	-	-	-	31.4
Total	1154	6372	1630	23772	5030	10351	3034	3155	1828	1219	1172	6006

Shaded cells = residual material

The data in Table 2 show a pattern that is broadly typical of the city of Oxford in terms of the rate at which the different fabric types were consumed, although there are some traits that are probably reflective of activity at the site at the periods in question.

Residuality is generally low in the early phases of the site, with the small quantities of late Saxon material in later contexts suggesting that there was little activity at the site before the medieval period, and thus it is unlikely that deposits of that date were disturbed or destroyed by later activity. Residual material increases as a proportion of the phases' assemblages over time. In CP6, just over 18% of the pottery is residual material, with a slight reduction over the next two phases, but in CP9 this increases to just over 60%. Residuality then decreases sharply until CP12, when it is extremely high, at 87.5%. This again might reflect different phases of construction at the college.

One trait certainly worthy of mention is the very high proportions of Rhenish Stonewares in the form of mugs, jugs and bottles during CP8 (24.0%), CP9 (33.7%) and CP10 (43.5%). Whilst such pottery is usually well-represented at sites in Oxford, these proportions are nonetheless unusually large, even at sites in the city from the late medieval and post-medieval periods where mass catering was the norm and pottery associated with the consumption of drink was common in places such as colleges. For example, at Merton College drinking pottery is unusually common in late medieval and early post-medieval contexts, with 23% of the vessel from the period covering the mid-16th to mid-18th century being mugs or cups, although German Stonewares make up no more than 9.1% of any phase assemblage (Blinkhorn in press b). This is discussed further in section 4.2.6 below.

4.2.5 Vessel use

The vessel occurrence per medieval ceramic phase is shown in Table 3. The pattern in the earlier part of the medieval period, CP3 and CP4/4a, is typical of time, with jars dominating the earliest phase, then jugs and small numbers of bowls appearing. The pattern in CP5 is most untypical of medieval domestic pottery assemblages, however. The bulk of the CP5 assemblage is pottery associated with a possible metallurgical or alchemical laboratory, with vessels that are usually quite rare such as skillets and bottles being very well represented; whilst jugs, the staple of high medieval pottery assemblages, are entirely absent. This particular group of vessels is discussed in more detail below (section 4.2.6).

Table 3: Vessel occurrence per phase, expressed as a percentage of the EVE per phase, including all sub-phases

	CP3	CP4/4a	CP5	CP6	CP7
Jars	100%	53.5%	15.3%	31.3%	27.9%
Bowls	0	2.0%	30.6%	8.3%	14.4%
Jugs	0	41.5%	0	34.0%	37.2%
Lamp	0	3.0%	0	3.1%	0
Skillet	0	0	32.7%	0	0
Bottle	0	0	19.2%	0	0
Crucible	0	0	2.1%	0	0
Cups/Mugs	0	0	0	21.2%	12.9%
Lid	0	0	0	2.1%	3.5%
Total	0.25	4.02	20.77	2.88	5.41

The CP6 assemblage is more typical, comprising mainly jars and jugs in broadly equal proportion, with the rest of the assemblage made up of small numbers of lamps, dripping dishes and lids, but on the fact that there are fairly large quantities of mugs and cups may be of significance. Non-rim sherds from a cauldron and a bunghole cistern were noted, as were three dripping dish rims. A similar pattern is seen in CP7, with a non-rim sherd from a bunghole cistern also present. The presence of large quantities of pottery fabrics associated with vessels used for the consumption of drink is also, as noted above, a feature of ceramic phases CP8-CP10, in this case German Stonewares, although rim sherds are rare. Most of the vessels are from mugs, along with a few flagon/bottle fragments.

In phases CP6 and CP7, German Stonewares are much less common, with the bulk of the cups being in Cistercian Ware (fabric OXCL) or Brill/Boarstall 'Tudor Green' types. These do not form a large proportion of the ware assemblage (Table 2), mainly due to the fact that the vessels are thin-walled and quite fine in comparison to the German stoneware vessels. Large quantities of late medieval and early post-medieval drinking pottery often occur at sites that have evidence of industrial activity. For example, at King Stable Street, Eton, the site was used as a tannery at

the end of the medieval period and drinking pottery made up a large proportion of the assemblage (Blinkhorn 2000, table 5), whilst a similar pattern was seen at an early post-medieval tannery in Northampton (Shaw 1996). It seems likely that both scenarios were responsible for the proliferation of drinking pottery at this site in the late medieval and early post-medieval sites. It is also notable that pottery associated with the cooking, serving and consumption of food is virtually absent from the assemblages that produced so much drinking pottery. Even Red Earthenwares (fabric OXDR), the standard utilitarian pottery of the time, is relatively scarce, particularly in CP9. Just two sherds from this period can be said to be of such a type, both from chafing dishes. These vessels were used for keeping food or drink hot, and it would seem likely that in this case it was to allow individuals to partake of heated food or drink at an area away from the main dining rooms.

The period CP6-CP10 saw a great deal of varied activity at the college. During CP6 and CP7, the Augustinian Priory church occupied the site of Christ Church. The assemblage from that time comprises relatively large numbers of vessels associated with the preparation and consumption of food and drink, which is entirely typical of such an institution, variations in the vessel types notwithstanding. The late medieval pottery from Merton College displayed a similar pattern, with mugs, cups and dripping dishes present in similar proportions to Christ Church, although lamps were much more common at Merton. A large collection of broadly contemporary late medieval pottery at Eynsham Abbey in Oxfordshire (Blinkhorn 2003a) produced jars and jugs, but also included a relatively large number of small, shallow OXAM skillets (ibid. fig. 7.20, nos. 167-174), and pottery bottles were also common at that site (ibid. fig. 7.18, nos. 137-143), although lamps were very rare, with just one fragment of one vessel noted (ibid. table 7.22). Eynsham also produced fragments of 11 dripping dishes, and mugs and cups were also well represented. Finally, fragments of a chafing dish and Martincamp flasks were also noted. Despite the differences in the actual vessel types, which is likely to be due to a number of factors such as dietary regime and the locations of the excavations within the two institutions, both Eynsham and Tom Quad, Christ Church in the later part of the medieval period produced large quantities of vessels associated with the storage, preparation, transportation and consumption of food and drink. It is known that medieval religious houses both produced and consumed large quantities of drink, particularly ale. For example, the monks of Westminster used about 80000 gallons a year, and the malt-house at Fountains Abbey in Yorkshire was capable of producing over 2000 gallons of ale every 10 to 12 days (Hammond 1993, 6).

Ceramic Phase 7 at Tom Quad coincides with Wolsey's period of rebuilding at the college, so the presence of large quantities of drinking pottery is highly likely to be related to this.

The period when the German Stoneware mugs occur here in quantity, CP8- CP10 in the mid-16th to late 17th centuries, saw Christ Church established and increasing numbers of students. In the 1560 there was the first of two visits by Elizabeth I during which she took up residence in the whole of the east side of Tom Quad, whilst her court occupied all the other rooms in the college. The college itself was enlarged in the early years of the 17th century, and Charles I and parliament took up residence in 1625 to avoid the plague. The king, his privy council and parliament returned during the Civil War, and Charles made Christ Church his temporary capital. The cathedral was used for court weddings and funerals, and Tom Quad itself was used as a parade ground for Royalist troops. As with the earlier monasteries, large households would have consumed a lot of ale. The records of Humphrey Stafford, Duke of Buckingham indicate consumption of over 40000 gallons of ale in a year between 1452-3, with the evidence from the records of the Earl of Northumberland's household suggesting that this represented a ration of around three pints per day per person (Hammond 1993, 6). Those doing heavy manual work, perhaps unsurprisingly, appeared to have consumed a lot more – the harvest workers at Sedgeford in Norfolk in 1424 had a daily allowance of over six pints of ale (Dyer 2000, 83). This ale, weaker than later beers, would have been an important and safe source of water and

nutrition. Manual workers were doubtless a feature of life at Christ Church for many years, for as well as Wolsey's earlier building works the 1660s to 1680s saw major building works at Christ Church including the construction of Tom Tower and the installation of the reservoir in Tom Quad.

Historical records and archaeological evidence all indicate that drink was consumed in large quantities by religious, elite, military and artisan communities. Over the period represented by ceramic phases CP6-CP10, Christ Church was occupied at various times by monks, students, royal households, soldiers, artisans and labourers. That the amounts of pottery associated with the consumption of drink were even larger than expected no doubt reflected this.

Fragments of three dripping dishes were noted in CP6 and another in CP7. Such vessels are broadly rectangular or oval, and the EVE cannot be calculated.

4.2.6 The assemblages

Ceramic Phases 1 and 2, 10th - late 11th century

Stratified pottery was quite scarce from this period. CP1 produced just a single small sherd of St Neots ware (5g), and is entirely possible that this was residual in a context which lacks contemporary pottery. The CP2 assemblage was almost as small, comprising just four sherds of OXAC (43g). Again, these could conceivably be later than the given date.

Ceramic Phase 3, late 11th - 12th century. 154 sherds, 1154g, EVE = 0.25

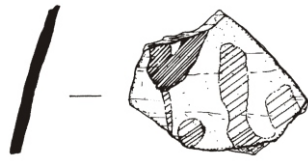
This phase saw the site occupied by the conventual church of St Frideswide Priory, although the assemblage is still fairly small when compared to that from later deposits. It is possible that this is due to large-scale disturbance of strata of this date by later activity.

The assemblage was in many ways typical of early medieval Oxford, being dominated by Oxford ware (fabric OXY), which comprised 83.0% of the group, along with small quantities of OXAC (15.9%), and a small amount of OXR (0.7%) and OXBF (0.4%). No other pottery types were present. Just three rim sherds were noted, all jars in fabric OXY. The rest of the group was made up of plain body sherds and was generally small and scattered, although one jar was well-represented but not in sufficient quantities to allow reconstruction. No cross-fits were noted.

Ceramic Phase 4, 13th - 14th century. 484 sherds, 6372g, EVE = 3.21

This assemblage was both larger and of a better quality in terms of preservation than the sherds in Phase 3. Once again, it was fairly typical of sites of the period in Oxford. Brill/Boarstall ware (fabric OXAM) was the dominant ware type (42.3%), with OXY still well-represented (25.3%), as were OXBF (15.5%) and OXAC (14.1%). The sherd of Andenne ware (OXAD) occurred in a context dating to this phase. St Neots ware (OXR) was residual by this time, but made up 1.1% of the assemblage, and two sherds of residual OXB were also present, suggesting that there was a degree of disturbance of earlier strata. No other wares were present.

Jars were still the major vessel type (59.2%), but jugs were well-represented, as is often the case with assemblages of this period, making up 37.1% of the assemblage. No bowls were noted, with the only other vessel represented by a rim being a single fragment of a lamp, comprising 3.7% of the assemblage. A base from another lamp in the same fabric was also recorded. A few unusual sherds were identified. These consisted of a sherd of OXAC with a segmented circle stamp, a longitudinal, body-mounted lug with stabbed decoration in the same fabric, and an OXAM jug rim and spout, also with stamping (Figs. 37.2-37.3). Stamped OXAC jars are rare finds, but other examples are known such as that from Witney Bishop's Palace (Mellor 1994, fig. 13 no. 4), which was dated to the mid to late 12th century. Lugged vessels in OXAC are

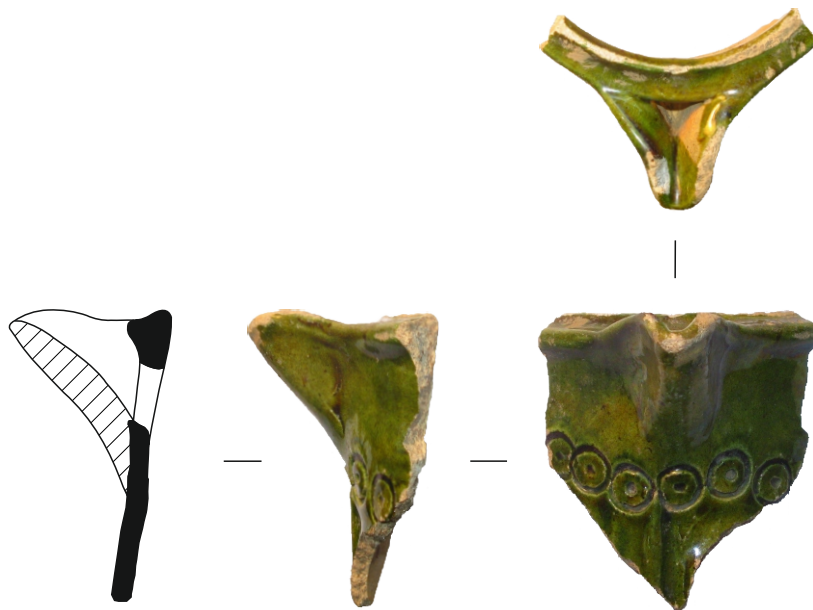


Dark red

37.1 TQ38



37.2 TQ16



37.3 TQ17



Figure 37. TQ38, TQ16 and TQ17.

extremely unusual, with no obvious parallels known. Such vessels are more typical of the early and middle Saxon period, at so it is possible that this vessel is of such a date, with a source in the same region as the OXAC potters were operating. The OXAM sherd is doubly unusual, as both bridge spouts and stamping are rarely found on jugs of this type.

No other decorated sherds were noted, other than glazed and/or slip decorated jug fragments, which were common at that time.

Illustrated pottery

Fig. 37.2. TQ16: Context 535, fabric OXAC. Longitudinal pierced lug with stabbed decoration. Uniform dark grey fabric.

Fig. 37.3. TQ17: Context 346, fabric OXAM. Rim and bridge spout from jug. Buff fabric with a pale grey core, highly glossy glaze on outer surface, line of ring-and-dot stamps below the spout.

Ceramic Phase 4a, mid 13th-14th century. 128 sherds, 1630g, EVE = 0.81

This phase saw the same basic range of pottery types, along with small quantities of Surrey Whitewares (fabric OXBG), the defining ware for the phase. Brill/Boarstall wares dominated the assemblage, comprising 84.0% of the material, with the minor wares consisting of OXY (8.4%), OXBG (2.5%), OXBF (0.9%) and OXAC (0.7%). Two sherds of Potterspury ware (OX68) were also noted. Small quantities of residual pottery were again present, consisting mainly of OXR (0.9%).

Vessel rims were limited to a single jar rim in OXY, an OXAM bowl, and two jug rims in the same fabric. A skillet handle in Surrey Whiteware was also present. This phase assemblage was otherwise unremarkable.

Ceramic Phase 5, 14th century. 428 sherds, 23772g, EVE = 20.77

This was by far the largest phase-specific assemblage from the investigations at Christ Church, and it was dominated by a group of complete and near complete pots from context (496), associated with the glass and other material which is thought to have been used in an alchemical laboratory. This group of pottery comprised most of the assemblage at 382 sherds, 22992g, EVE = 20.63.

The assemblage again largely consisted of OXAM (67.7%), but OXBF was also very common (21.2%), although mainly due to the presence of a number of large fragments of large jars in this fabric (eg. Fig. 38.2). OXY (6.9%) and OXAC (4.2%) were the largest of the minor wares. No other ware types were present.

The group from context (496) aside, the assemblage was fairly typical of the period, although rather small. A single rim sherd was present from an OXAM jar, and a skillet handle in the same fabric was also noted.

The assemblage from context (496)

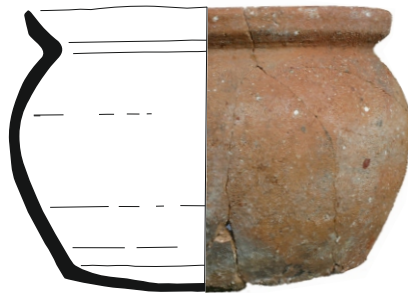
This large assemblage of complete and near complete pots from the upper fill of a stone-lined garderobe was remarkable in many ways. It mainly comprised Brill/Boarstall ware, but a near-complete OXY skillet was also present (Fig. 40.2 TQ2) along with fragments of another, as were two near-complete jars in OXBF (Fig. 38.3 TQ15) and another in OXAC. It is these vessels which are crucial for the dating of the assemblage. Mellor (1994, 71) noted that OXY may be residual at most 14th century sites in Oxford, although it does occur in both Oxford and Banbury in small quantities at that time. The complete jar in OXBF may thus be as late as the mid-14th century. Flint-and-limestone tempered vessels such as this were originally given two separate codes in the Oxfordshire type series, OXBF and OXAQ. It seems now that both are in fact part

of the same tradition, manufactured in the Savernake Forest region, originally known as Newbury A/B ware (Mephram 1997, 51-2), but now called Kennett Valley ware (L. Mephram pers. comm.), and with a date range of the late 11th-late 14th century. As both vessels are near complete, this would suggest that they were deposited at a time when both industries were still operating. The OXAM assemblage suggests a date at the late end of the chronology of the other two ware types. Brill/Boarstall skillets seem to first appear in the 14th century (e.g. Mellor 1994 fig. 54 no. 11), and seven near-complete examples were identified from this deposit (496) (Figs. 40.1, 40.3, 40.4-40.7, 40.9 TQ1, TQ3, TQ8-11, TQ32). Furthermore, OXAM bowls make up the bulk of the assemblage, but these are rare before the end of the 13th century (Mellor 1994 nos. 1-3). The presence of a near-complete OXAC jar (Fig. 38.1 TQ14) is slightly perplexing. Such pottery had all but fallen out of use in Oxford by the middle of the 13th century, although it is possible that it continued later at sites in more westerly parts of the county such as Witney (ibid., 52). In the production heartland of the Cotswolds region, however, oolitic limestone tempered wares such as Minety-type (Oxford fabric OXBB) continued to be made until the middle of the 16th century, and another oolitic ware in the form of Wychwood ware (Oxford fabric OXCX) was being made in the Wychwood Forest area of Oxfordshire until at least the late 14th century, and probably into the 15th century (Mellor 1994, 111).

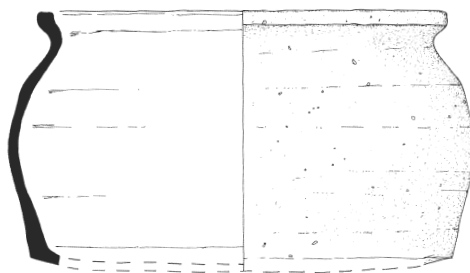
It is notable, given the large deposit of glass distillation equipment which occurred in this context, that specialist pottery vessels associated with distilling such as alembics, curcubits and bifid-rim vessels or 'distilling-bases' (McCarthy and Brooks 1988, 120-121) were entirely absent from this assemblage. Of these types, only bifid-rim jars have been noted as products of the Brill/Boarstall tradition, and these appear to date to the later 14th century at the earliest (Mellor 1994, 118). Two bifid-rim vessels occurred at this site – one in Surrey Whiteware from a CP6 assemblage, the other in Brill/Boarstall Ware from CP7. Bifid-rim vessels were not introduced as a product of the Surrey Whiteware industries until the later 14th century, and were common in the earlier 15th century (Pearce and Vince 1988, 85). This evidence all suggests that the assemblage from deposit (496) must therefore date to the early to mid-14th century, with the presence of two OXY vessels suggesting that it very likely dates to the period AD 1300-1350.

Although the vessels in context (496) are all types which are known products of the respective industries, the range of types and the proportions in which they occur is unusual, indeed, unprecedented amongst medieval pottery assemblages from the city of Oxford. Jugs were a staple of the period, usually forming between a third and a half of the vessels from contemporary groups, yet were entirely absent from this group. This indicates that the group of pots from this context had a highly specialised and unusual use.

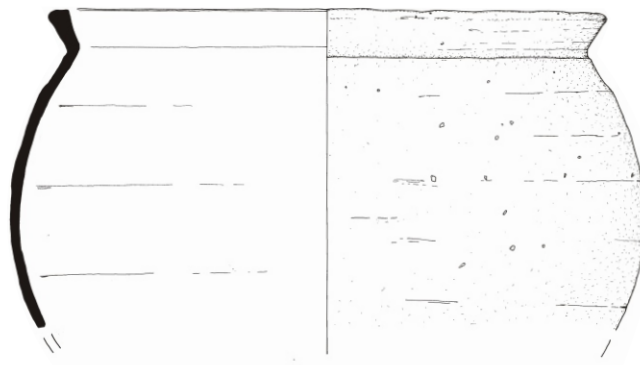
Five ceramic bottles (Figs. 42.2-42.6 TQ18-TQ22) are typical OXAM vessels in form (e.g. Mellor 1994, fig. 55, nos. 13-16), but appear to have been used in a way not recorded before. All the larger vessels of this type in this assemblage were subjected to fierce heat and in most cases the fabric is partly or wholly vitrified producing a glassy green appearance. They appear to have been used in the distillation process, as two of them have pierced clay plugs surviving *in situ* at the neck (Fig. 42.6 TQ22), and two other plugs of broadly the same size were also present (Figs. 42.7-42.8 TQ23-TQ24). Two bottle bases were also noted, and had been subject to similarly fierce heat. A sixth bottle (Fig. 42.1 TQ13) had not been heated, and it is much smaller than those that were. At least three vessels of unusual form (Figs. 43.1-43.3 TQ25-TQ27) categorised in the past as 'cruets' (ibid. fig. 55 nos. 12, 17 and 18) were also present. At least two of the 'cruets', however, like the large bottles, had been subject to intense heat and were partially vitrified, and one of these vessels had a thick white residue on the inner surface. There is, like the bottles, a much smaller version of these vessels (Fig. 43.3 TQ27), and it too had not been heated to any degree. The cruets and the bottles were the only vessels from this assemblage that had been subjected to such fierce heat, indicating that this was the result of a specialist function and not because of any uncontrolled conflagration which may have taken place.



38.1 TQ14



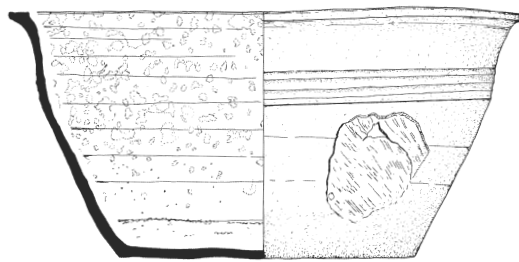
38.2 TQ15



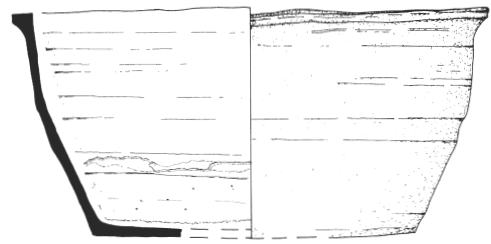
38.3 TQ37



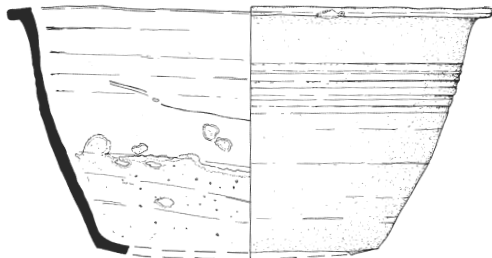
Figure 38. Jars TQ14, TQ15 and TQ37.



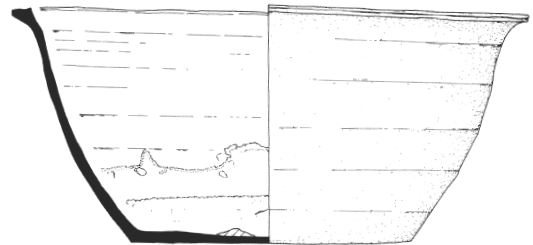
39.1 TQ4



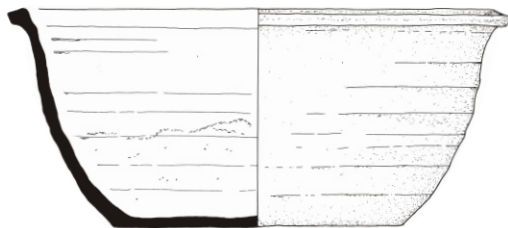
39.2 TQ5



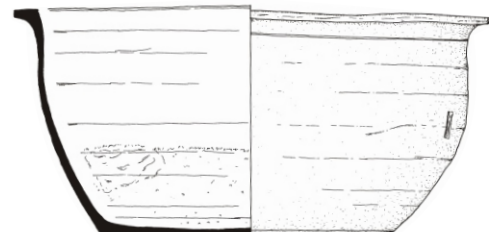
39.3 TQ6



39.4 TQ7



39.5 TQ28



39.6 TQ29



Figure 39. Bowls TQ4, TQ5, TQ6, TQ7, TQ28 and TQ29.

The assemblage also produced what is almost certainly the largest group of near-complete skillets from the city of Oxford. As with the bottles and ‘cruets’, the eight vessels occur in two sizes, six being large (Figs. 40.1-40.3, TQ1-TQ3, 40.4 TQ8, 40.8 TQ31, 40.9 TQ32) and three small (Figs. 40.5-40.7 TQ9-TQ11). All the vessels were of Brill/Boarstall type, except for two Oxford ware examples (Figs. 40.2 and 40.8 TQ2, TQ31). The most numerous vessels though were bowls, of which there were six near complete examples (Figs. 39.1-39.4 TQ4-TQ7, Figs. 39.5-39.6 TQ28-TQ29). They are all fairly typical products of the Brill/Boarstall industry.

Four vessels (Figs. 44.1-44.4 TQ33-TQ36) that were present appear likely to have been the bottom parts of fairly large globular jugs or jars that were reused as bowls. The top edge of each of the vessels appears to have been crimped or ‘nibbled’ with some sort of tool to even them up, as the jagged edge which has resulted is most untypical of Brill/Boarstall ware, which usually has fairly smooth, curved fractures. The curvature of the sides of the deeper examples is also untypical of OXAM bowls, and two of the vessels (Figs. 44.1-44.2 TQ33-TQ34) have incised grooves just below the point of fracture. Such decoration is not unusual on jugs or jars of this type (e.g. Mellor 1994, fig. 52, no. 3; fig. 59 no. 1), but is very unusual on bowls or skillets – none of the reconstructed examples from this assemblage have such decoration. The vessels do, however, have glaze on their lower inner surfaces and base-pads, which almost certainly indicates that the vessels are jars, albeit, in some cases, extremely large ones. Certainly, OXAM jars with glaze on the inner surface are fairly well-known (ibid., 118), whereas this is not a trait which has been noted on jugs of the period. In addition, Mellor noted that Brill jars were sometimes knife-trimmed around the base, and one of the vessels from context (496) (Fig. 44.2 TQ34) had been treated in this manner. It thus appears most likely that these vessels were in fact jars that were cut down to allow them to function as bowls.

Five jars were also present, one near-complete with the rest consisting of large fragments. The near-complete vessel is of Cotswolds type (fabric OXAC, Fig. 38.1 TQ14), the four all fragmentary vessels were OXBF. Only two are illustrated here (Figs. 38.2-38.3 TQ15, TQ37).

Table 4: Vessel Occurrence, by EVE, context (496)

Fabric	Jars	Bowls	Skillets	Pipkin	Crucible	Bottle
OXAC	1.00	0	0	0	0	0
OXBF	2.04	0	0	0	0	0
OXY	0	0	1.68	0.21	0	0
OXAM	0	6.36	4.91	0	0.44	3.99
Total EVE	3.04	6.36	6.80	0.21	0.44	3.99

All of this pottery was found in association with fragments of glass distilling apparatus, one of the largest such assemblages known from medieval England. This strongly suggests that the ceramic vessels were used alongside the glass examples. There seems little doubt that the ceramic bottles and ‘cruets’ with their heavily degraded, glazed vitrified fabric and clay plugs and glass rods in the apertures must have been used in a fire or furnace to contain substances being heated. The fact that the clay fabric of at least some of these vessels had completely vitrified shows that they had been subjected to intense heat in the region of at least *c.* 1000 degrees Celsius or higher (Rice 1987, 86). As noted above, these were the only vessel types so affected in the whole assemblage so it is unlikely that this heat was due to a general laboratory conflagration. It is noteworthy that a number of bowls and skillets have heavily degraded glaze on the inner surface, but little sign of heating on the outer. This might suggest that these particular vessels had come in contact with a strongly acidic substance rather than extreme heat.

What uses the skillets and bowls (including the cut-down jars) were put to is less clear. Both types of vessel undoubtedly had a plethora of possible uses, but some later paintings and engravings, most notably Jan van der Straet’s *An Alchemist’s Laboratory* painted in 1570, show

such vessels used for distilling (Fig. 45). The painting features an assistant stirring liquid in a skillet, almost certainly made of pottery, on top of a portable stove. Several bowl-shaped pottery vessels are also apparent around the furnaces as supports for glass receiving vessels. One bowl is even depicted in the top of a furnace, this time supporting a metal still. A slightly later 1580 work of van der Straet's called *Distillatio* also bowls being used in a similar fashion (Fig. 51). It comes from a work entitled *Nova Reparta* (New Discoveries), which shows the industrial and technological wonders of the (then) modern age, and appears to have been intended as a catalogue of inventions and discoveries rather than a work laden with symbolism, as was often the case with the formal art of that time. A number of other 16th century works exist showing what appear to be bowls being used as supports for receiving vessels, including an illustration in a work of Janus Lacinius, published in 1583. While a certain amount of extrapolation is required to jump from the 14th to late 16th century, there seems little or no reason why the bowls and skillets from Christ Church were not used in the manner shown in the later manuscripts.

Illustrated pottery

Jars

Fig. 38.1. TQ14: Context (496), fabric OXAC. Near complete jar. Orange fabric with grey patches on outer surface. Remains of limescale on interior.

Fig. 38.2. TQ15: Context (496), fabric OXBF. Full profile of jar. Grey fabric with orange base pad. Extensively burnt and semi vitrified. Thick white residue on interior.

Fig. 38.3. TQ37: Context (496), fabric OXBF. Large fragment of upper part of jar. Brick red fabric with browner inner surface.

Bowls

Fig. 39.1. TQ4: Context (496), fabric OXAM. Near-complete deep bowl. Uniform pale orange fabric. Thin orange and green mottled glaze on inner surface. Glaze on inner base partly unvitrified.

Fig. 39.2. TQ5: Context (496), fabric OXAM. Near-complete deep bowl. Buff fabric with orange core. Green glaze on inner surface. Unvitrified on base pad.

Fig. 39.3. TQ6: Context (496), fabric OXAM. Near-complete deep bowl. Orange fabric with darker surfaces. Green glaze on inner surface. Partly unvitrified on base pad.

Fig. 39.4. TQ7: Context (496), fabric OXAM. Near-complete deep bowl. Orange fabric with buff surfaces. Green glaze on inner surface. Partly unvitrified on base pad. Thick burnt white residue adhering to inner base pad.

Fig. 39.5. TQ28: Context (496), fabric OXAM. Partially complete deep bowl. Brick red fabric with grey core in the thicker parts of the body. Base-pad and lower body sooted, white residue on interior of base and lower body.

Fig. 39.6. TQ29: Context (496), fabric OXAM. Partially complete deep bowl. Orange-pink fabric with grey core in the thicker parts of the body. White residue on interior of base and lower body.

Skillets

Fig. 40.1. TQ1: Context (496), fabric OXAM. Near complete skillet. Orange fabric with paler outer surface. Brown speckled orange glaze on inner surface. Outer base pad sooted.

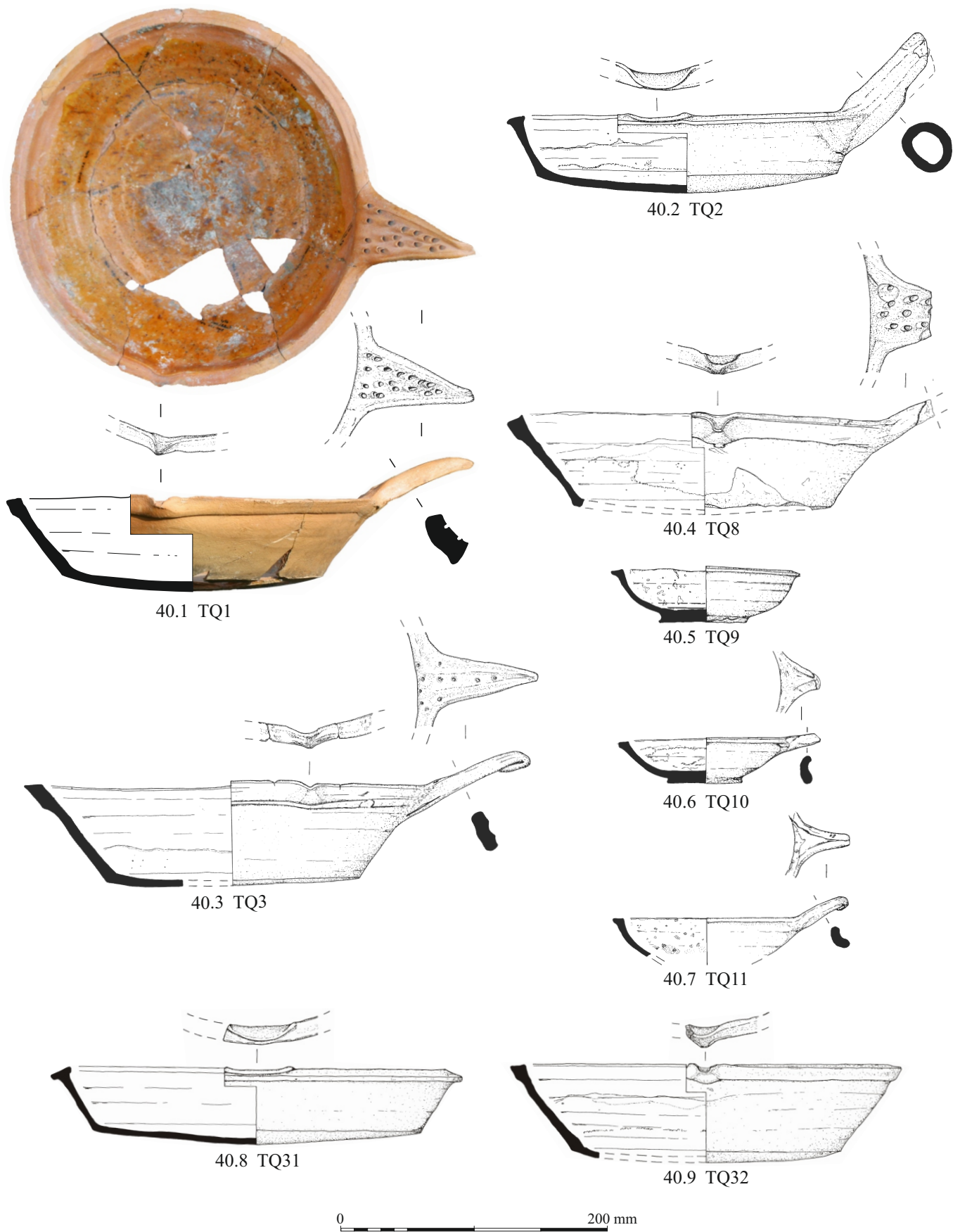


Figure 40. Skillets TQ1, TQ2, TQ3, TQ8, TQ9, TQ10, TQ31 and TQ32.

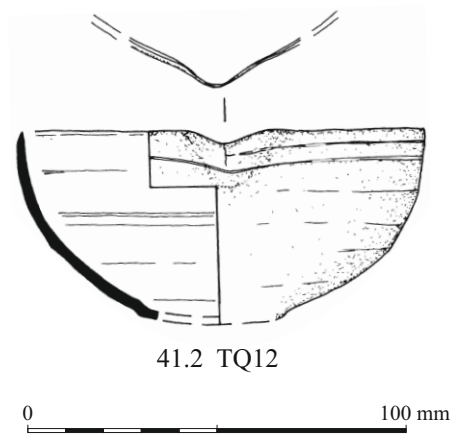
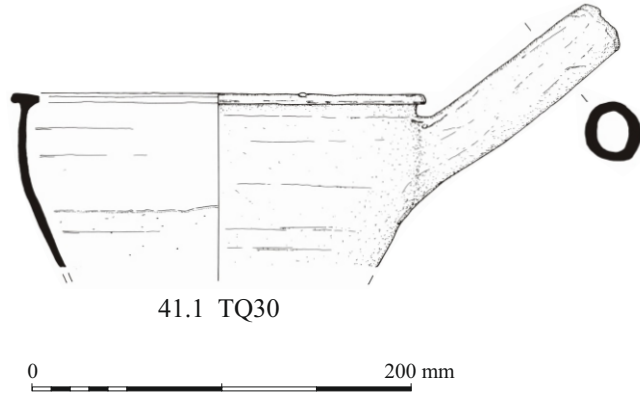


Figure 41. Pipkin TQ30 and crucible TQ12.

Fig. 40.2. TQ2: Context (496), fabric OXY. Near-complete, hollow-handled skillet. Dark grey fabric with greyish-brown surfaces. Poor quality thin burnt green glaze on inner surface. Extensive sooting on outer surface.

Fig. 40.3. TQ3: Context (496), fabric OXAM. Near-complete skillet. Pale grey fabric with orange buff surfaces. Glossy green glaze on inner surface. Patches of sooting on outer surface.

Fig. 40.4. TQ8: Context (496), fabric OXAM. Near-complete skillet. Uniform orange fabric. Greenish-orange glaze on inner surface. Outer surface sooted and spalled.

Fig. 40.5. TQ9: Context (496), fabric OXAM. Near-complete small skillet. Pale orange fabric with darker surfaces. Glossy copper-spotted green glaze on inner surfaces.

Fig. 40.6. TQ10: Context (496), fabric OXAM. Full profile small skillet. Uniform orange fabric. Partially unvitriified glaze on inner surface.

Fig. 40.7. TQ11: Context (496), fabric OXAM. Handle and rim from small skillet. Buff fabric, yellow copper spotted glaze on inner surface.

Fig. 40.8. TQ31: Context (496), fabric OXY. Three non-joining rim sherds from a skillet. Orange-brown fabric with a grey core, outer surface sooted. Partially unvitriified green glaze on lower inner surface and base-pad.

Fig. 40.9. TQ32: Context (496), fabric OXAM. Full profile of a skillet. Orange fabric with a grey core. Outer surface extensively sooted, inner has partially unvitriified green glaze on the inner lower surface and base-pad.

Pipkin

Fig. 41.1. TQ30: Context (496), fabric OXY. Large fragment of hollow-handled pipkin. Orange-buff fabric, thin green glaze on lower inner surface, light sooting on outer surface.

Crucible

Fig. 41.2. TQ12: Context (496), fabric OXAM. Crucible? Uniform orange fabric. Outer surface scorched and spalled.

Bottles

Fig. 42.1. TQ13: Context (496), fabric OXAM. Full profile of small bottle. Over-fired Midland Purple type fabric. Orange fabric with purplish brown surfaces. Dark green copper spotted glaze on shoulders.

Fig. 42.2. TQ18: Context (496), fabric OXAM. Full profile of a large bottle. Uniform grey fabric. The broken sections of the vessel show that parts of the lower body are fully vitrified, and are glassy and dark green. Large areas of the outer surface are partially vitrified, giving the appearance of it being covered in a white residue.

Fig. 42.3. TQ19: Context (496), fabric OXAM. Near-full profile of a large bottle. Fabric and vitrification as TQ18. On the illustration, the inset shows detail of vitrification of outer surface.

Fig. 42.4. TQ20: Context (496), fabric OXAM. Near-full profile of a large bottle. Similar to TQ18. Fabric not fully vitrified, although there are glassy patches on the outer lower body which could either be vitrification, or 'refired' glaze.

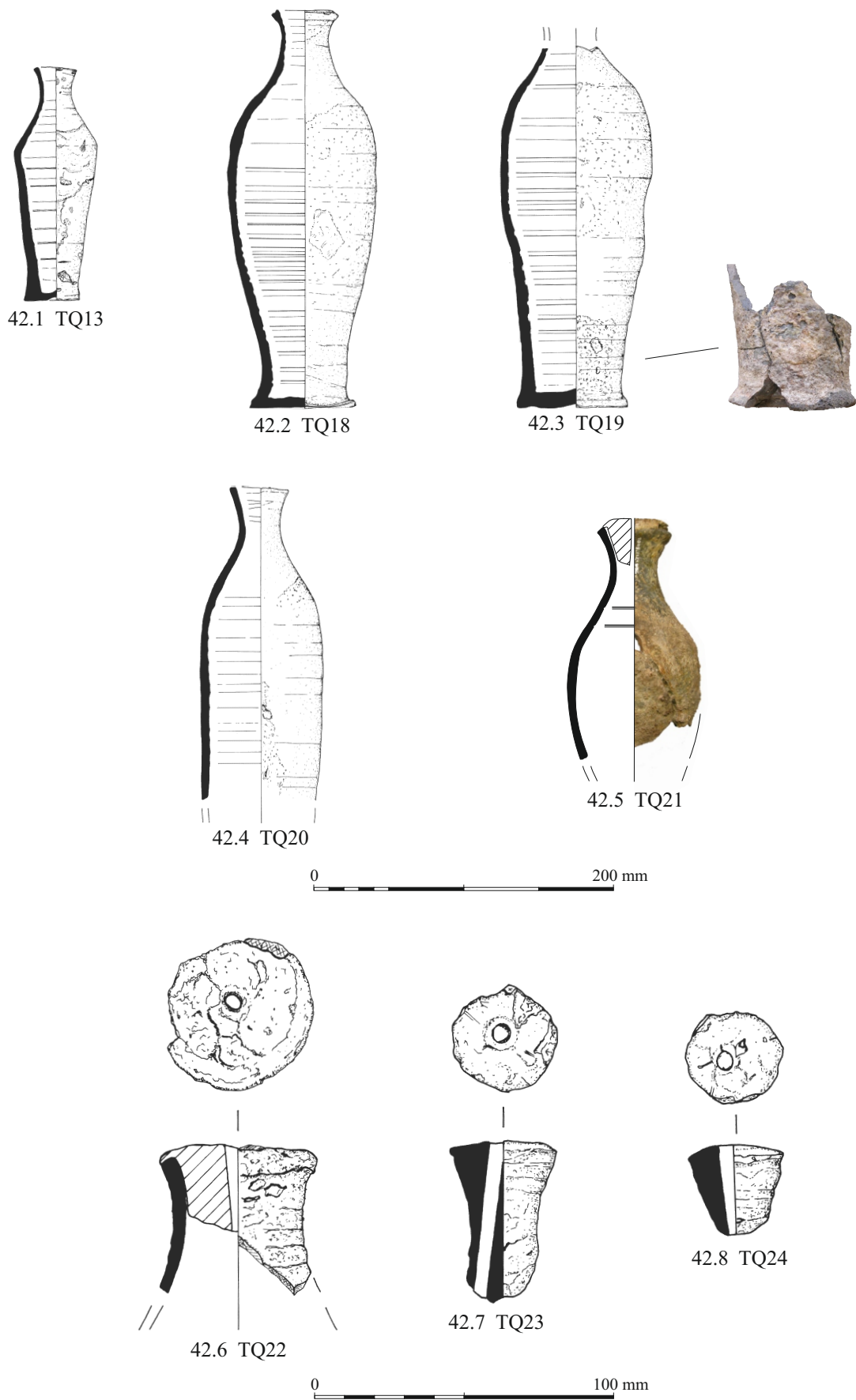
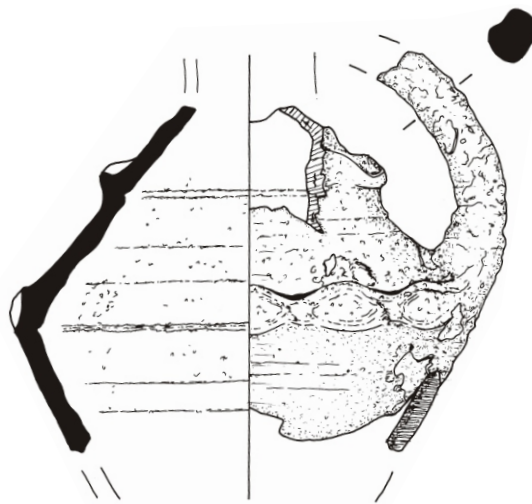


Figure 42. Ceramic bottles TQ13, TQ18 - TQ24.



43.1 TQ25



43.2 TQ26



43.3 TQ27



Figure 43. Cruets TQ25 - TQ27.

Fig. 42.5. TQ21: Context (496), fabric OXAM. Upper part of a large bottle. Fabric almost completely vitrified to a glassy green. The vessel has a pale grey-green, partially vitrified pierced clay plug *in situ* in the top.

Fig. 42.6. TQ22: Context (496), fabric OXAM. Neck of a large bottle. Fabric almost completely vitrified to a glassy green. Pale grey-green, partially vitrified pierced clay plug *in situ* in the top.

Fig. 42.7. TQ23: Context (496). Pierced clay plug from a bottle. Pale grey sandy fabric.

Fig. 42.8. TQ24: Context (496). Pierced clay plug from a bottle. Pale grey sandy fabric.

'Cruets'

Fig. 43.1. TQ25: Context (496), fabric OXAM. Fragmented 'cruet'. Hard grey fabric, outer surface partly vitrified, thick white residue on most of the inner surface.

Fig. 43.2. TQ26: Context (496), fabric OXAM. Fragmented 'cruet'. Hard grey fabric, outer surface extensively vitrified.

Fig. 43.3. TQ27: Context (496), fabric OXAM. Base of 'cruet'. Orange brown fabric with splashes of copper-speckled orange glaze.

Modified Jars

Fig. 44.1. TQ33: Context (496), fabric OXAM. Base of a jar. Orange buff fabric with a grey core. Degraded yellow-green glaze on inner lower body and base-pad. Sooting on upper part of the outer body.

Fig. 44.2. TQ34: Context (496), fabric OXAM. Base of a jar. Orange buff fabric with a grey core. Degraded green glaze on inner lower body and base-pad. Areas of knife-trimming on the lower outer surface.

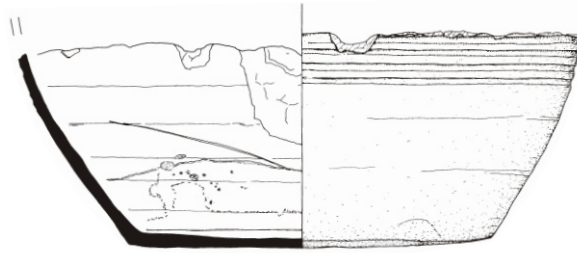
Fig. 44.3. TQ35: Context (496), fabric OXAM. Base of a jar. Orange buff fabric with a grey core. Degraded yellow-green glaze on inner lower body and base-pad. Sooting on upper part of the outer body.

Fig. 44.4. TQ36: Context (496), fabric OXAM. Base of a jar. Orange buff fabric with a grey core. Degraded green glaze on inner lower body and base-pad. Sooting on upper part of the outer body.

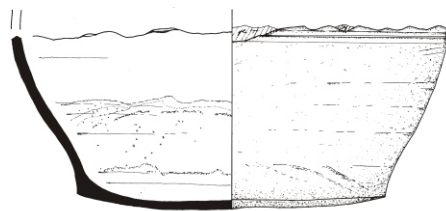
Ceramic Phase 6, 15th-late 15th century. 425 sherds, 5,030g, EVE = 2.88

This phase was again dominated by Brill/Boarstall Wares (73.6%), with the rest of the current pottery made up of regional imports in the form of Surrey Whitewares (1.9%), Surrey/Hampshire 'Tudor Green' (2.2%), German Stonewares (2.9%) and a single sherd of Potterspury Ware. Residuality was fairly high, with the earlier medieval wares (OXR, OXAC, OXBF and OXY) comprising 18.1% of the phase group. The material was largely fragmented, and it was not possible to reconstruct any vessels to a full profile.

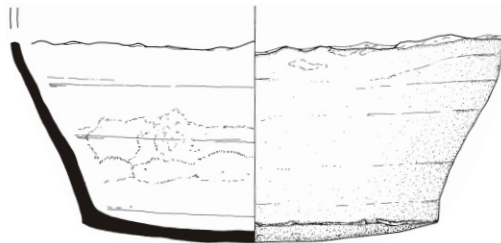
The main vessel forms were jugs (37.2%), closely followed by jars (31.3%). Unusually, cups and mugs were also very common, making up 21.2% of the assemblage. The rest of the rim assemblage comprised bowls (8.3%), lamps (3.1%) and lids (2.1%). In addition to the rims, a single handle from a skillet or a dripping dish was noted, as were three dripping dish rims, a cauldron base, a bifid-rim jar, two lamp stems and a cistern bung-hole. The significance of the vessel consumption pattern for this and succeeding phases is discussed in section 4.2.4 above.



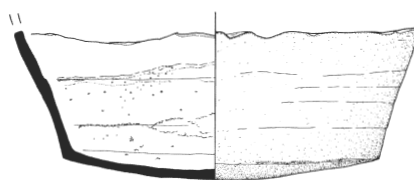
44.1 TQ33



44.2 TQ34



44.3 TQ35



44.4 TQ36



Figure 44. Modified jars TQ33 - TQ36.

The assemblage is fairly typical of sites of the period in Oxford, the vessel occurrence data notwithstanding. The range of fabrics, dominated by OXAM along with smaller quantities of regional and international imports, can be paralleled at numerous other sites in the city.



Figure 45. *An Alchemist's Laboratory* by Jan van der Straet, 1570.

Ceramic Phase 7, late 15th to mid-16th century. 890 sherds, 10,351g, EVE = 5.41

This is the second largest phase assemblage from the entire site. Brill/Boarstall wares continued to be the dominant fabric, making up 70.1% of the pottery, with OXAM 'Tudor Green' wares making up a further 4.5%. Residuality was slightly lower at 11.8%, despite the extensive demolition which took place at Christ Church in the first half of the 16th century, whilst the rest of the assemblage was once again made up from regional and international imports such as Surrey Whiteware (1.3%), Surrey/Hampshire 'Tudor Green' wares (1.0%), Cistercian Ware (3.5%) and German Stoneware (7.4%). The only other pottery type present which may have been current was a single sherd of Minety-type ware. As with the preceding phase, it was not possible to reconstruct any vessels to their full profile.

Jugs were again the major vessel type (37.2%), with jars also significant (27.9%), but mugs too were once again quite common, making up 12.9% of the vessel rims. One of the jar rims was of bifid form. A further 3.5% of the rims were from lids, but no lamp rims were noted from this phase, although a fragment from a dripping dish was present. Non-rim fragments included a cistern bunghole and a dripping dish or skillet handle. Two fragments of decorated Cologne/Frechen Stoneware vessels were noted, one with an impressed roundel and the other with a modelled face from a *Bartmann* jug (Figs. 46.1-46.2 TQ39-TQ40). These probably date to the later part of the ceramic phase, as they are typical mid-16th century products of the industry (Gaimster 1997, 208-209), although small numbers of stratified *Bartmann* vessels are known from England which date to the first half of the 16th century (ibid., 91).

Illustrated pottery

Fig. 46.1. TQ39: Context (707), fabric OXST. Fragment of a facemask from a *Bartmann* jug. Grey fabric, reddish-brown iron-wash on inner surface, grey and brown speckled salt glaze on outer.

Fig. 46.2. TQ40: Context (707), fabric OXST. Fragment of a moulded roundel from a jug or bottle. Grey fabric with grey and brown speckled salt glaze on outer.

Ceramic Phase 8, mid-16th to 17th century. 126 sherds, 3034g, EVE = 0.19

Christ Church began its life as a college in earnest during this phase, and there were also a number of royal visits. There is little direct evidence for this from the pottery assemblage, which was small in size and fragmented, and made up of pottery typical of the period. The main pottery type was Red Earthenware (36.5%), a purely utilitarian pottery type, with German Stonewares (24.0%), Brill/Boarstall Wares (20.1%) and Border Wares (8.6%) making up most of the rest of the group. The minor wares comprise Cistercian Wares (1.4%) and Surrey/Hampshire 'Tudor Green' types (0.2%). No other ware types were noted. Residuality was again low, at 9.2%.

Only two rim sherds were noted, one of which was residual and the other from a Cistercian Ware cup or tyg, although a fragment of a Border Ware chafing dish was present.

Ceramic Phase 9, 17th to mid-17th century. 265 sherds, 3155g, EVE = 0.08

This phase featured a dramatic rise in residual pottery, which made up 59.5% of the assemblage. The sherd of Pingsdorf Ware was redeposited in a context of this phase. In the stratified material, German Stoneware was the dominant pottery type making up 33.7% of the assemblage, with most other types poorly represented – Red Earthenware comprised 3.8%, Border Ware 1.0%, Tin-glazed Earthenware 0.4% and Cistercian Ware 0.3%. In addition, two sherds (1g) of Cologne/Westerwald Stoneware occurred.

As noted above, this phase was dominated by pottery types associated with the consumption of drink. A Brill/Boarstall chafing dish fragment is present, but this is likely to be residual.

Illustrated pottery

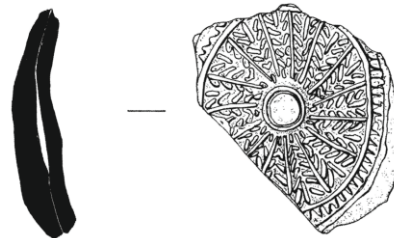
Fig. 46.3. TQ41: Context (1005), fabric OXAM. Fragment from the rim of a chafing dish. Pale buff fabric with darker surfaces, dirty yellow glaze on inner surface.

Ceramic Phase 10, mid to late 17th century. 115 sherds, 1828g, EVE = 0.

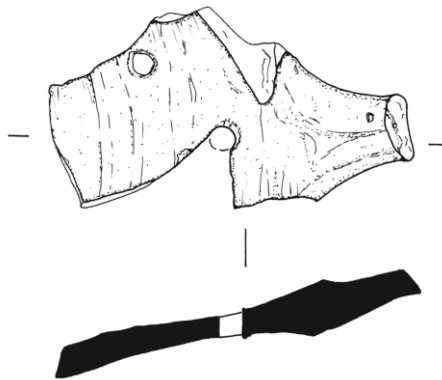
Residuality was lower during this phase, but was still fairly high at 20.5%. German Stonewares were even more dominant at 43.3% of the assemblage, but Red Earthenwares were also more common at 27.2%. Slip-decorated Redwares were well-represented (9.8%), with Tin-Glazed Earthenwares (2.6%), Border Wares (2.9%), Cistercian Wares (2.2%), Chinese Porcelain (1.5%) making up the rest of the group, along with a single sherd of Westerwald/Cologne Stoneware.



46.1 TQ39



46.2 TQ40



46.3 TQ41



Figure 46. TQ39 - TQ41.

Again, the assemblage was dominated by pottery types associated with the consumption of drink. The range of wares is typical of the period, comprising a combination of drinking pottery, utilitarian wares and fine tablewares.

Ceramic Phase 11, late 17th to mid-18th century. 130 sherds, 1219g, EVE = 0.08

Residuality was quite low during this phase at 8.3%. Perhaps the most significant feature is that German Stonewares made up a much smaller proportion of the assemblage at 15.3%, with Red Earthenwares the major ware comprising 37.8% of the group. Tin-Glazed Earthenwares were also better-represented at 11.0%, with English Stonewares (6.5%), Border Ware (6.3%), Chinese Porcelain (5.7%), Staffordshire Manganese ware (4.1%), Slipware (2.7%) and Slipped Redwares (2.1%) making up the rest of the group.

This is an assemblage which is absolutely typical of higher status sites in Oxford at the time. Whilst utilitarian wares such as Redware were well-represented, fine tablewares were also very common, particularly porcelain and display earthenwares such as Tin-glazed ware and the slipwares.

Ceramic Phase 12, mid 18th-early 19th century. 85 sherds, 1172g

All the pottery from this phase was derived from a single context (620), a mixed service trench fill. It is almost entirely residual, apart from three small sherds of White Salt-Glazed Stoneware and four sherds of Tin-Glazed earthenware, and the latter could also date to before the beginning of the phase.

MOD (Modern), 19th century +. 327 sherds, 6006g, EVE = 0.02

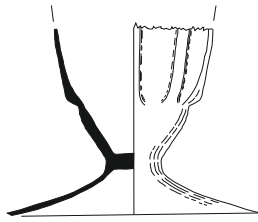
A total of 67.5% of the pottery from this phase was residual. The rest of the assemblage comprised mass-produced transfer-printed and white earthenwares, late stonewares and a few sherds of porcelain.

5 GLASS by Rachel Tyson, with a contribution by Hayley McParland

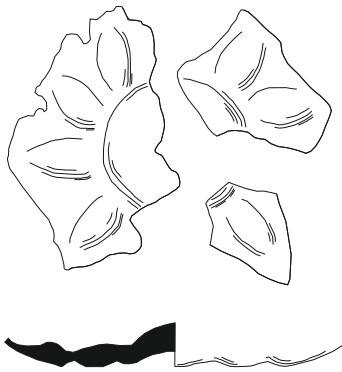
5.1 Introduction

Six hundred and sixteen fragments of glass were excavated from the upper fill (496) of a stone-lined garderobe forming part of Building 7B, Trench 7, Christ Church, Oxford. This context is dated by the pottery to the 14th century, probably before 1350. The glass consisted mainly of distilling or other industrial vessels, as well as fragments from three uncommon table vessels and one piece of window glass. The early date of the glass distilling vessels is highly significant and makes it exceptionally important as no other similar assemblage in England has previously been dated earlier than the 15th century. The nature of the assemblage is also interesting, whether they were used in a 'domestic' context for general medical or household preparations and craft recipes; or more likely that they were part of an experimental 'laboratory' or alchemical workshop. Medieval ceramics were sometimes used in combination with glass distilling equipment, and it is likely that some of the pottery was associated with distilling even though there is no evidence for ceramic components of the distilling set itself (see Blinkhorn above).

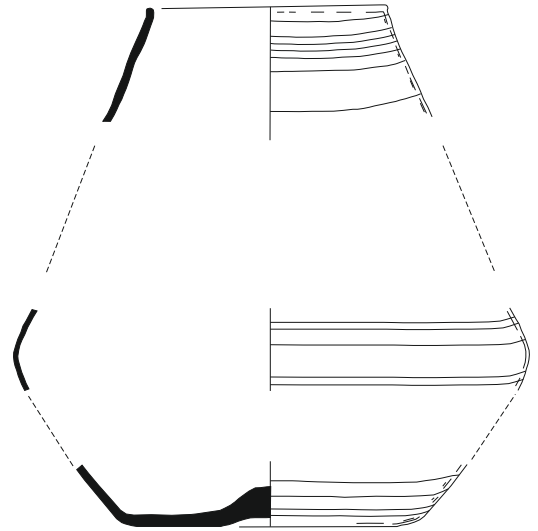
Glass distilling vessels were purely functional vessels which were made in the same undecorated forms from their first use in England in the medieval period, up to the 17th or 18th century. Tablewares were decorative vessels whose fashion changed more frequently, so they can be given a more precise date. The forms, place of manufacture and dating of the glass are discussed below together with a summarised description of the finds, followed by an interpretation of what they were used for and their social significance. A complete catalogue of the glass is deposited with the site archive.



47.1 Footed Goblet of Green Glass



47.2 Beaker of green glass



47.4 Bulbous bowl of greenish glass decorated with opaque red trails



47.3 Beaker or goblet of greenish glass



All of the glass is affected by surface decomposition to some degree, more severe on some fragments than others; it is not described individually here. The glass is all hand-blown, and therefore all of the bases have a pontil scar on the underside, not referred to unless there is a significant reason. Estimated vessels equivalents (EVEs) were calculated from surviving rim fragments for the distilling vessels by calculating the fraction of the rim that survives. While this method of quantification is not ideal for glass since the rims are often the most fragile part of the vessel, it is useful for a rough comparison of vessel numbers when so many fragments of similar green undecorated glass are present. It provides an absolute minimum of vessels – in reality it is likely that more are represented. It is not used for the table vessels where a more individual approach to the fragments is possible. Examples of each type are listed and illustrated below.

5.2 Tablewares

Twenty-one fragments of glass were found from three different tablewares. They comprise a footed goblet, a beaker and a bowl, of 13th or early 14th century date. All three vessels would have originally been pale greenish in colour, although the glass now displays various stages of decomposition.

Part of a goblet bowl on a separately attached wide shallow foot is highly unusual (Fig. 47.1). The bowl is decorated with vertical mould-blown fins, rather irregular in their execution. A separate foot rim fragment with a plain fire-smoothed edge is likely to belong to the same vessel. Mould-blown fins or prominent ribs are a relatively common decorative feature on medieval glass, particularly on goblets with tall thin solid or hollow stems (Baumgartner and Krueger 1988, 240-249). These can be dated to the 14th century and are attributed to glassmakers working between the Rhine and the Meuse in eastern France, Belgium and the Netherlands. In England these finned goblets include examples from Southampton, Ludgershall Castle, Exeter and London (Tyson 2000, 53-56). The Christ Church goblet, however, is more similar to rarer, slightly earlier footed examples such as those excavated in Cologne and Worms, dated to the 13th or early 14th century (Baumgartner and Krueger 1988, 239-240, nos. 231-2 and foot of 233). These have a narrower bowl and a wider shorter foot which flares out widely at the base. The foot rim is smoothed and plain.

Three fragments from the base of a beaker (Fig. 47.2) are also decorated with mould-blown ribs, thick at their origin on the underside of the base, becoming thinner and shallower and probably forming vertical ribs on the side of the vessel. Beakers of this type dating to the 14th or 15th centuries are known across northern Europe and were made in the Rhine-Meuse area as above (Baumgartner and Krueger 1988, 299-304). Most of these have the thickest part of the ribs visible at the base of the beaker wall, however, rather than hidden on the underside as on the Christ Church example. Only a few known from England – the rim of one ribbed beaker was excavated from a context in Exeter dated to *c.* 1300 (Tyson 2000, 78 and 80, g95). The pottery suggests that the Christ Church beaker dates to the first half of the 14th century rather than later. A rim fragment of colourless glass with very slight greenish tinge (Fig. 47.3) may be part of the same vessel, along with two additional fragments.

The third vessel (Fig. 47.4) is more difficult to parallel. Fragments from a bowl decorated with concentric opaque red trailing consisting of a base, almost flat but very slightly pushed in on the underside, and an in-turned rim. Bowls of this form are rare, and other bowls with in-turned rims have been dated to the 12th and 13th centuries (Tyson 2000, 104-105). Glass bowls of the 13th to 15th centuries generally have an 'open' profile, with vertical or everted rims. Decorating glass vessels with concentric trailing applied to the surface is a technique used throughout the medieval period in Europe, although blue or colourless trailing is more common. Opaque red trailing has been found on a 14th-century jug in Southampton (Tyson 2000, 119-120, g265). It is

also seen on late medieval vessels such as a 'kuttrolf' from London dating to the late 15th or early 16th century, probably German (ibid., 113, fig. 18; 129, g300) and in the early 16th century in Germany (e.g. Baumgartner and Krueger 1988, 357, no. 437; 361, no. 443). Earlier vessels, such as two jugs from Pevensey Castle in Sussex and Lincoln, have red trailing 'marvered' into the surface, and are thought to date to the 12th or 13th centuries (Tyson 2000, 119-121, nos. g268-269). The bowl's place of manufacture is also uncertain but possibilities include Germany or perhaps England.

The precise function of the glass bowl is not clear given its uncommon form, although it is not inconceivable that it was used for drinking. Its in-turned rim is similar to the rims of other drinking vessels including Anglo-Saxon 'globular beakers' (e.g. Evison 2000, 52-53) and 16th century German barrel-beakers (e.g. Willmott 2002, 42-43). Based on the form the dating is more likely to be 13th century than later.

Illustrated glass vessels

Fig. 47.1. Part of the foot and lower bowl of a goblet of green glass (also see Fig. 74). Separately attached foot flares out. Bowl and foot rims both broken off. Bowl decorated with 8 vertical mould-blown ribs, pronounced at base, almost like fins, which become thinner and shallower as they go up. Slightly irregular execution. Extant bowl diameter c. 40 mm. Body fragment showing thinner vertical ribs possibly from same vessel (c. 26 by 29 mm). Base rim fragment of greenish glass probably from same vessel, very widely everted. Plain fire-rounded rim edge. Rim diameter c. 110mm, turning sharply upwards towards a central hollow stem. Another similar base rim fragment.

Fig. 47.2. Three fragments, two adjoining, from the base of a green glass vessel, probably a beaker. Kicked on the underside, decorated with mould-blown ribs, thickest at origin on underside (c. 6mm wide), becoming shallower towards broken edge, and presumably continue as shallow ribs on the side of the vessel. Extant base diameter c. 75-80mm. Larger fragment has four ribs, smaller two adjoining fragments have one and two ribs.

Fig. 47.3. Rim fragment of colourless glass with very slight greenish tinge. Top of a shallow vertical rib below a slight vertical swelling below rim edge; may be associated with ribbed base above. Rim diameter c. 120mm. Two further fragments probably from same vessel.

Fig. 47.4. Eleven fragments from a bulbous bowl with in-turned rim, and an almost flat, slightly pushed-in base (also see Fig. 75). Colourless glass with a pale green tinge, decorated with concentric trails of opaque red glass. Trails start on underside of base, and end just below rim edge. Rim diameter slightly irregular, c. 74-78mm. Base diameter c. 65-70mm.

5.3 Distilling vessels and other 'industrial' equipment

5.3.1 Alembic fragments

The alembic is the upper vessel of the basic distilling set (Fig. 48), into which the boiled liquid from the cucurbit condenses onto the inside surface of the upper dome. The condensation runs down into a collecting channel above the rim, and down the tubing into a receiver. Identifiable parts of the alembic from Christ Church include lengths of tubing from at least two vessels, and fragments of the curve of the collecting channel. Three rim fragments survive with the start of the collecting channel still visible. Other rims that could have formed part of alembics but lack any trace of the collecting channel are listed separately since they cannot be exclusively identified as such.

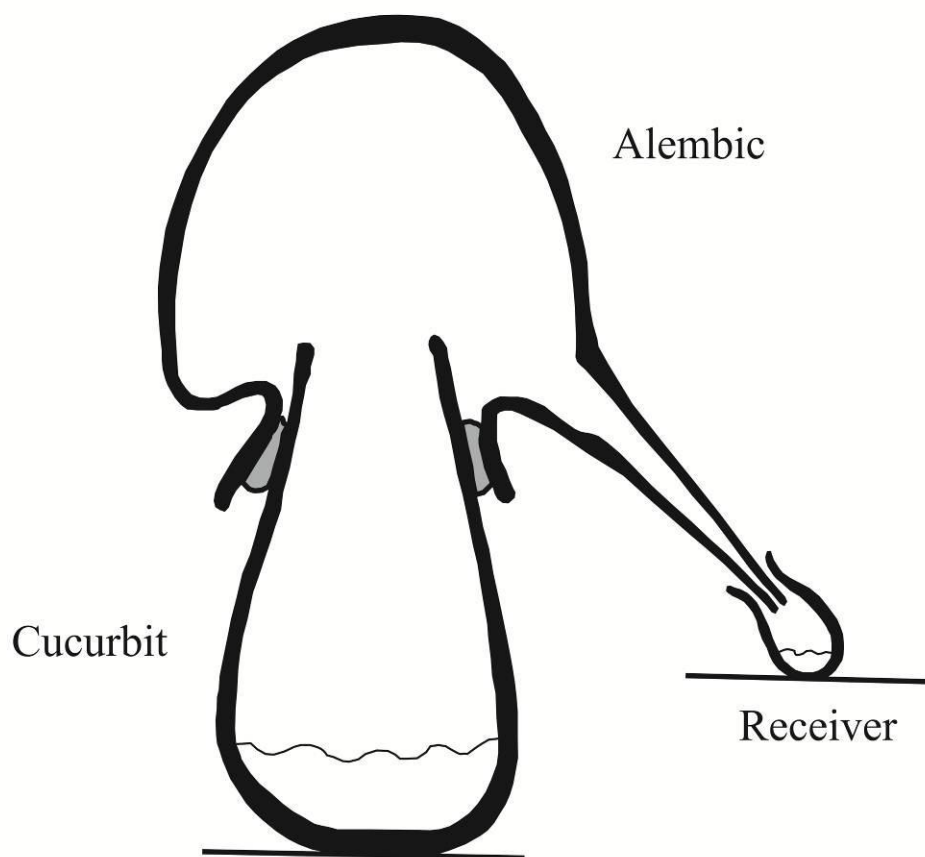


Figure 48. The distilling set (after Moore in Moorhouse *et al.* 1972, 88, fig. 25).

Medieval alembics such as those excavated from Pontefract and Selborne priories have plain convex domes (Moorhouse *et al.* 1972). Other examples have finials or knobs on top of the dome for lifting, and a hollow finial that may come from an alembic is discussed below (Fig. 50.12). It is difficult to identify a convex fragment specifically as a dome from an alembic as it could equally be the convex base from vessels such as urinals or cucurbits, so these are listed separately below.

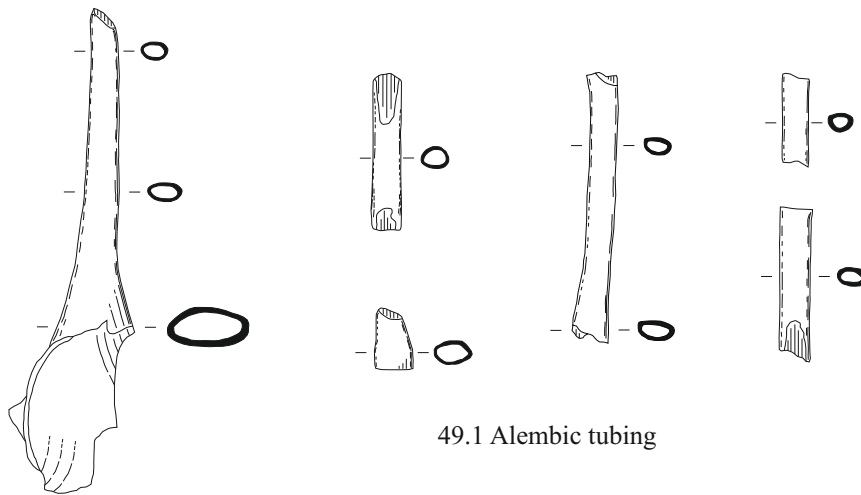
Illustrated glass alembics

Fig. 49.1. Ten fragments of alembic tubing of pale green glass from at least two vessels. The largest example has two adjoining fragments, showing wide end of alembic tubing and attachment to body wall. Tubing has a slightly oval-shaped profile. Extant length *c.* 120mm. Diameter of tubing *c.* 35mm by 40mm at wider end; *c.* 8mm by 7mm at narrow end.

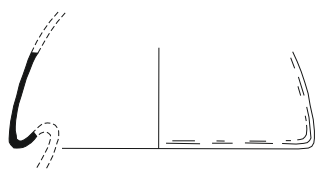
Six more pieces of tubing, two of which have two adjoining fragments. At least two alembics represented. Some pieces slightly curved. None can be confirmed as the narrow end of the tubing.

Fig. 49.2. Two adjoining fragments of the curve of a collecting channel from an alembic. Green glass. External diameter of curve *c.* 100mm.

Fig. 49.3. Rim fragment, very slightly everted, with a fire-smoothed rim. Extant height *c.* 47mm where it turns sharply outwards probably to a collecting channel. Irregular rim diameter *c.* 85mm. EVE 0.34. Two similar rim fragments. EVE 0.21 and 0.14-0.15.



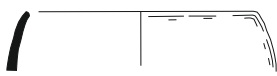
49.1 Alembic tubing



49.2 Collecting channel from an alembic



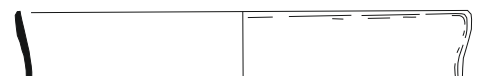
49.3 Rim from alembic with trace of curve to collection channel



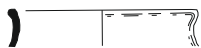
49.4 In-turned rim



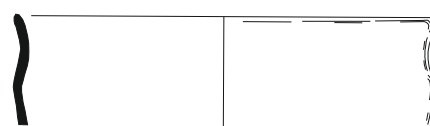
49.5 In-turned rim



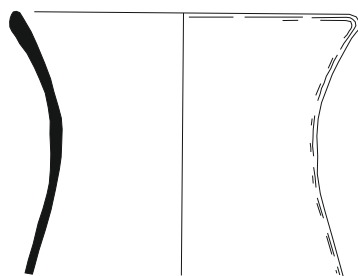
49.6 Slightly everted rim



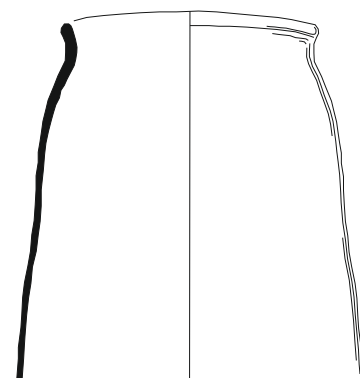
49.7 Slightly everted rim



49.8 Slightly everted rim



49.9 Everted rim



49.10 Everted rim



Figure 49. Distilling vessels.

5.3.2 In-turned rims (including cucurbits)

The vessels represented by these in-turned rims are probably cucurbits (e.g. Fig. 49.4), though one possible exception (Fig. 49.5) flares out to a much wider body and it is uncertain what form this represents. A complete cucurbit with a similar rim profile to these fragments came from a 17th century context at Nonsuch Palace (Charleston 2005, 258-259, no. 149), and other similar rims interpreted as cucurbits were amongst the 15th century distilling assemblage from St John's Priory, Pontefract (Bellamy and Nicholson 1972, 92-93, nos. 14-15) and a late 13th to early 15th century group from the Louvre, Paris (Barrera 1993, 366-367, nos. 74-6). A similar rim was found at a 16th century glasshouse site at Knightons, Surrey (Wood 1982, 33-35, fig. 22, no. 41).

The Christ Church assemblage has no evidence for any cucurbits with ledges or rings below the rim to support the alembic, as found on some other cucurbits. At Pontefract two cucurbit rims had features interpreted as ledges (Bellamy and Nicholson 1972, 92-93, no. 13). Seventeenth century examples from the Netherlands show a ring applied below the rim of the cucurbit which may break off with little trace after deposition (Henkes 1994, 323-324). Pottery vessels interpreted as having been used as cucurbits may also have a flange below the rim (Moorhouse 1972, 111-112). Not all show this feature, however. Once the alembic was placed on the cucurbit the gap would have been sealed. Chaucer mentions the process of 'enlutyng', or sealing the junction between 'an erthen pot' which was 'ycovered with a lampe of glas' in *The Canon's Yeoman's Tale* from *The Canterbury Tales* written in the 1380s or 1390s.

Illustrated glass in-turned rims

Fig. 49.4. In-turned rim, irregular diameter, leading down to wider body with a slightly uneven profile including a bulge below the rim before flaring out further at broken edge. Rim is partially fire-smoothed although angular edges are visible. EVE 1. Rim diameter 70mm by 80mm.

Fourteen further rims as above, rim diameters c. 55-100 mm, total summation of EVE: 5.88.

Fig. 49.5. In-turned rim fragment flaring out to much wider body. Rim edge irregular and angular. Rim diameter c. 80mm. EVE 0.1.

5.3.3 Slightly everted rims (including alembics)

These rims are only very slightly everted, with some almost vertical in profile. It is possible that some may come from alembics as they resemble the rim fragments which show the start of a collecting channel (see above, Fig. 49.3). Those rims, like some here, have smooth fire-rounded edges. One example is significantly smaller than the others (Fig. 49.7). Other fragments have more angular unsmoothed edges, and it is uncertain whether they are from the same vessel form, or one with a different function. The sizes of the rim diameters support the theory that these may be alembics: they range from a small 58mm, but generally 85-120mm. The suggested cucurbit rims (e.g. Fig. 49.4) are slightly smaller, ranging from 55mm to 100 mm, which would fit inside the proposed alembic rims.

Illustrated glass slightly everted rims

Fig. 49.6. Very slightly everted rim, fire-rounded edge. Rim diameter c. 58 mm, EVE 0.35.

Fig. 49.7. Slightly everted rim, almost vertical. Fire-rounded rim. Rim diameter c. 160mm. EVE 0.07.

Fig. 49.8. Slightly everted rim, almost vertical. Partially fire-rounded rim, partly angular. Rim diameter c. 90mm. EVE 0.22.

Ten further similar fragments, most with edges partially fire-rounded but angular edges visible. Rim diameters 90-120mm. Total summation of EVE: 1.63.

5.3.4 Everted rims

These rims are difficult to classify. They are not widely everted like those below which are suspected to come from flasks, nor are they almost vertical like those rims above, but appear to be somewhere in between in profile and their complete form is unknown.

Illustrated glass everted rims

Fig. 49.9. Everted rim with a fire-rounded rim. Rim diameter 90mm, EVE 0.44.

Fig. 49.10. Everted rim with a fire-rounded rim. Rim diameter 160mm, EVE 0.07.

Twelve further fragments, rim diameter of six: 220mm, 200mm, 160mm, 120mm, 100mm, 80mm. EVE summation of six fragments is 1, and remaining six are too small to measure.

5.3.5 Widely everted rims (including urinals and wide-necked flasks)

There is a noticeable difference between 'thick' rim fragments (2-6mm) and the 'thin' examples (0.6-2.5mm) but all have a widely everted rim which is almost horizontal in some cases. They may come from vessels with either convex or kicked bases listed below. Some of the thinner rim fragments probably come from urinals. These had a wide neck with a widely everted rim, a rounded convex base and thinly blown glass for a clear view of the contents. Uroscopy, the examination of the colour and consistency of the urine, was the main method of diagnosing and monitoring health in the medieval period (Tyson 2000, 149-153). The urinal is the most common glass vessel found in the medieval period, particularly in the 15th and early 16th centuries. Since it was central to medieval health it would have been found in wealthy households, as well as in the ownership of physicians and non-graduate barbers, surgeons and apothecaries, and in monastic infirmaries. In c. 1420, for example, Norwich Cathedral Priory employed Master Mark, a graduate physician, expressly 'for the examination of urine' (Rawcliffe 1995, 49). These vessels were also used for other purposes. For example, a 15th century recipe for vermilion requires the use of 'a good thick jordan of glass', and the scribe has illustrated a urinal-shape vessel in the margin (Moorhouse 1993, 147, no. 9). Wide-necked flasks also had kicked bases for standing. One is shown on the top shelf of a scholar's study in a Bruges manuscript of 1479 (Basing 1990, 99, pl. xiii). Moorhouse draws attention to the diverse range of glass vessels used for various 'industrial' and pharmaceutical preparations (Moorhouse 1993) and these wide-necked vessels must have had many uses.

The thinner rim fragments give particularly large readings when estimating their rim measurements; this is probably because only small fragments survive of these thinner rims (maximum EVE 0.15), and the rims are irregular so the readings given (up to 280mm rim diameter) are probably not true representations.

Illustrated glass widely everted rims

Fig. 50.1. Thick, widely everted rim of a wide-necked vessel. Slightly irregular rim diameter. Rim diameter c. 106-108mm. Thickness 3-6mm. EVE 1.

Sixteen rim fragments of similar vessels. Rim diameters range from 100 to 120mm. Thickness 2-4mm. EVE 4.42.

Fig. 50.2. Thin widely-everted rim fragment, upturned at rim edge, and fire-smoothed. Rim diameter 100mm, thickness 0.6-2mm, EVE 0.15.

Fig. 50.3. Thin widely-everted rim fragment, fire-smoothed edge. Rim diameter c. 260mm, thickness 1.5-2mm, EVE 0.1.

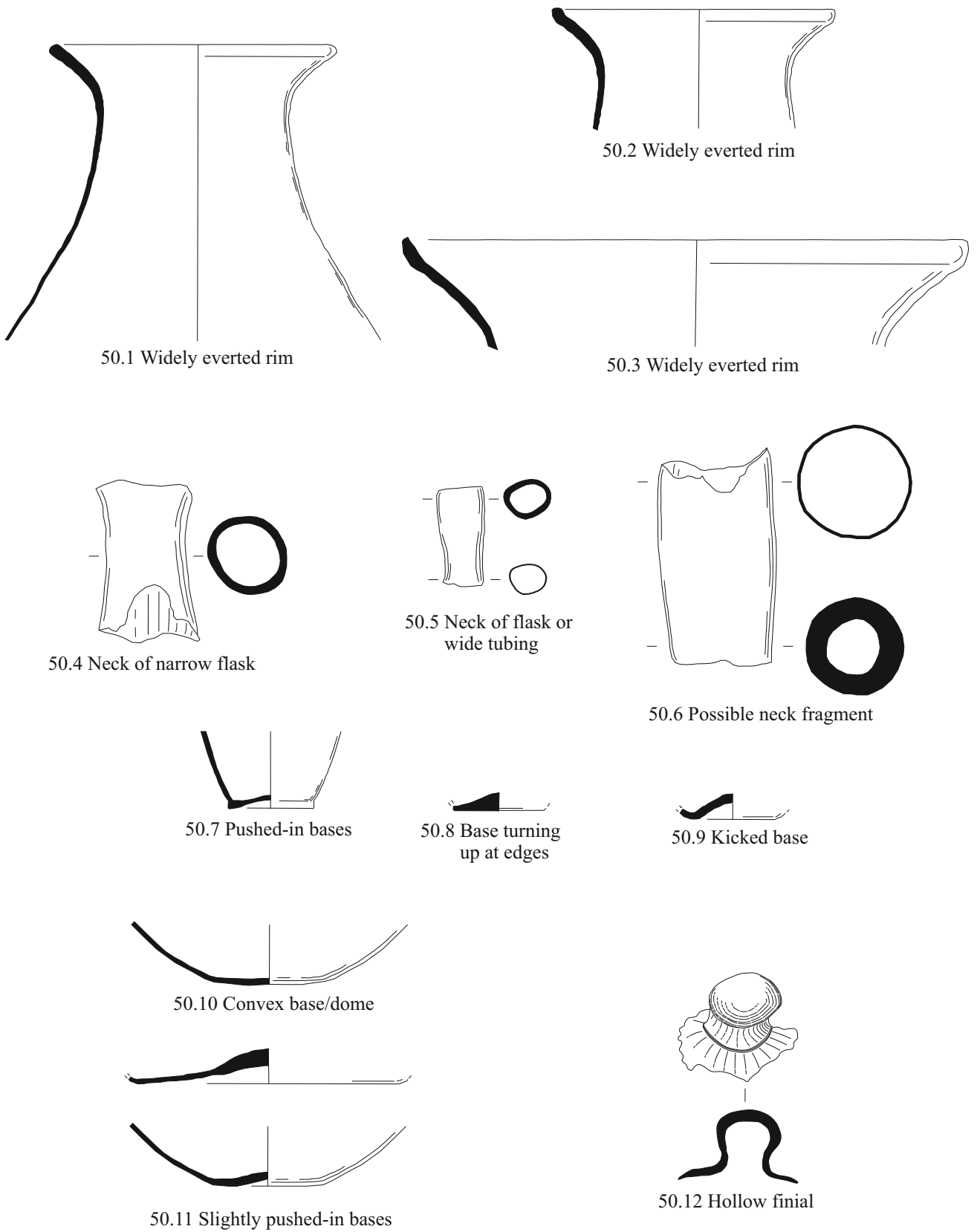


Figure 50. Distilling vessels and finial.

Eleven further thin widely-everted rim fragments, thickness from 0.6mm to 2.5mm. EVE 0.67. Rim diameters difficult to measure, but appear to range from 100-280mm. Some slightly upturned at edge. Two further fragments too small to measure.

5.3.6 Narrow-necked flasks (including receivers)

These narrow-necked rim fragments are crudely finished, and given their context it is likely that they acted as receivers to catch the distillate running out of the alembic tubing. Few receivers have been identified archaeologically, probably because a variety of forms could be used. Similar rims were found at the 16th century glasshouse excavated at Knights (Wood 1982, 33-35, fig. 22, nos. 46-7), where distilling and other vessels were made. No similar fragments were found amongst the distilling equipment at Pontefract or Selborne, though a gourd-shaped receiver was identified at Selborne (Moorhouse *et al.* 1972, fig. 30, no. 14). Many different forms, including unspecific household forms could have been used as receivers, including ceramic vessels.

One narrow-necked fragment has a very thin wall at one end, suggesting it is from a thin-walled vessel. The other neck fragment is extremely thick. Manuscript illustrations show a range of glass vessels with narrow necks being used for a variety of chemical processes, many of which have not been identified archaeologically (Moorhouse 1993, 141, fig. 10.10). A 15th century alchemical treatise on quintessence advocates the use of 'a glass called an amphora, with a long neck' (*ibid.*, 147), and this may also be a narrow-necked flask.

Illustrated glass narrow necked flasks

Fig. 50.4. Neck of flask, slightly narrowing towards top, then slightly everted rim edge. Rim cut sloping down on one side. Rim diameter *c.* 33mm. EVE 1.

Nine further similar rims from narrow-necked flasks. Rim diameters range from *c.* 18mm to 30mm. Total summation of EVE: 7.7.

Fig. 50.5. Possible neck fragment, or possibly wide tubing. Diameter 16mm by 17mm, thickness *c.* 2mm at one end, to 16mm by 16mm, thinning to 0.4mm at other end. Extant length 43mm.

Fig. 50.6. Very thick possible neck fragment. At one end, diameter 35mm by 34mm, thickness 6-9mm; at other end 40mm by 39mm, thickness 2-2.1mm. Extant length 79mm.

5.3.7 Bases and domes (including urinals, cucurbits, alembics, flasks and receivers)

The 48 bases recovered from deposit (146) at Christ Church have been listed separately from rims because, while the possible combinations of some rims and bases can be inferred, not all the vessel forms can be reconstructed with certainty. Moorhouse's research into the variety of medieval utilitarian vessels and their uses indicates that vessel forms existed that were described and illustrated in medieval recipes yet which have not yet been identified archaeologically, and that vessels would have probably had many more uses than can be inferred from a modern perspective (Moorhouse 1993, 137-142, 146-148). More forms surely remain unknown to us.

The convex bases found here (e.g. Fig. 50.10) may include alembic domes and urinal bases, both of which are discussed above. One comes from a much smaller vessel (Fig. 50.8).

The pushed-in bases from Christ Church (e.g. Fig. 50.11) have a large flattened pontil mark on the underside but are effectively flat, although they may stand better than a convex base. Could they have belonged to cucurbits? Few complete cucurbits exist, but a late 16th-17th century example from Nonsuch Palace is described as having a 'wide flattened pontil mark under base'

(Charleston 2005, 258-259, no. 149), which resembles the pushed-in bases at Christ Church. The process of heating the contents would mean that it would need to be relatively flat rather than having a high internal kick such as flasks and bottles tend to have, and alternatively could have had a convex base. The cucurbit would probably have been seated in a sand or water bath to distribute the heat evenly around the base. Two of the pushed-in bases have walls which turn up particularly sharply above the base (e.g. Fig. 50.7).

Two small bases have higher kicks and may come from small flasks or phials, perhaps for storing the distillate or other liquids (e.g. Fig. 50.9).

Illustrated glass bases and domes

Fig. 50.7. Complete small base, and start of walls which turn up sharply. Silvery surface layer on inner surface. Pontil scar indented into base across whole diameter. Base diameter c. 29mm by 24mm.

Complete small base, and start of walls which turn up sharply. Base diameter c. 27mm by 25mm, relatively thick. Pontil scar indented into base across whole diameter. Extant diameter c. 55mm.

Fig. 50.8. Denatured small convex base with pontil mark on underside. Starts to turn up at edges. Extant diameter c. 26mm by 28mm.

Fig. 50.9. Small green kicked base, pontil scar not really visible, starts to turn up at edges. Extant diameter c. 40mm. Another with diameter of c. 30mm.

Fig. 50.10. Eighteen fragments from convex bases, 14 of which have over 50% of the base. These could also represent alembic domes.

Fig. 50.11. Twenty-five fragments from slightly pushed-in bases, pontil mark not quite in contact with surface, 21 of which have over 50% surviving.

5.4 Miscellaneous

5.4.1 Finial (from lid or alembic)

A hollow rounded finial or knop on the top of a green piece of glass curving down at the edges has two possibilities for its original source. Firstly, it may come from the dome of an alembic. Finials for lifting the alembic can be seen in 15th century illustrations such as those from Thomas Norton's *The Ordinal of Alchemy*, c. 1490 (British Library Add. Ms. 10302, f.1, f.37; Basing 1990, 120). Surviving examples include a late 13th to early 15th century finial on an alembic from excavations at the Louvre, Paris (Barrera 1993, 366, no. 73), as well as on 16th century alembics from Strasbourg and Lübeck (Baumgartner and Krueger 1988, 434, nos. 547-8). On these few examples the finials are solid. Whether the finial is hollow and formed as part of the same piece of glass or added separately may simply be down to the individual glassmaker's technique since it would not affect the process of distilling. Late medieval ceramic alembics are found with hollow finials (see Moorhouse 1972, 108, fig. 31, nos. 1 & 5).

Thomas Norton's *Ordinal* also shows lids with finials over vessels (BL Ms 10302, f.1; Basing 1990, 120), perhaps used for sublimation where a solid distillate was collected above the cucurbit with no need for tubing. Alternatively, lids with hollow finials have been found which belong to decorated goblets (Tyson 2000, 70-72). These include 13th to 14th century examples of colourless glass decorated with trails, and an animal-shaped finial of green glass thought to come from a lid. They imitate precious metal lidded goblets and chalices of the same date.

Illustrated glass finial

Fig. 50.12. Hollow rounded finial of green glass, either from the top of an alembic dome or a goblet lid. Unsmoothed pontil mark on top of finial, wall starts to curve sharply downwards at broken edge. Finial diameter *c.* 23 mm.

5.4.2 Window fragment

The grozed edge indicates that this fragment of window glass was probably medieval. The diamond cutter which produced cleaner and faster cut edges was introduced in the mid-16th century, although the grozing iron was still occasionally used.

Flat greenish window fragment *c.* 2.1mm thick. Dimensions *c.* 69mm by 39mm. Grozed edge 9mm long.

5.4.3 Glass bead by Hayley McParland

Poorly preserved, degraded and fragmentary round glass bead with a diameter of 8mm, featuring a central hole through the centre of the bead with a diameter of 3mm. No diagnostic features are identifiable due to degradation.

Trench 5, layer (249), SF No. 13. Date: *c.* mid-15th to mid-16th century.

5.5 Undiagnostic fragments

There were 442 green glass body fragments of varying sizes, some as thin as 0.3mm and likely to come from vessels such as uroscopy vessels which were required to be blown as thinly as possible; and some much thicker, probably from close to the base of vessels described above. Six body fragments had a bulge within their profile, but it is uncertain which form they are from. Three rim fragments could not be assigned to any of the groups above.

5.6 Summary of glass found

Table 5: Recorded glass from Christ Church

Form	Number of fragments	EVE
Goblet (1)	4	-
Beaker (1)	3	-
Bowl (1)	11	-
Other tableware	3	-
Alembics	15	0.7
In-turned rims	16	6.98
Slightly everted rims	13	2.27
Everted rims	14	1.51
Widely-everted rims:		
Thick	17	5.52
Thin	13	0.92
Narrow-necked flasks	12	8.7
Bases/Domes	48	-
Finial	1	-
Window	1	-
Undiagnostic	445	-
Total	616	26.6*

*Based on rim fraction only; not including tablewares

5.7 Interpretation

Medieval glass vessels are relatively rare finds, partly because their survival rate is poor due to the unstable nature of medieval glass, but also because their use was restricted to the higher classes of society. Typical findspots include castles, manor houses, monastic sites and wealthy urban sites (Tyson 2000). Surprisingly little medieval glass has been excavated in Oxford to date, the most notable find being a 13th to early 14th century decorated high-lead glass beaker excavated at Merton College, probably manufactured in Germany (Tyson 2006, forthcoming).

The tablewares recovered from Christ Church comprised two drinking vessels and a bowl that may have been used either for foodstuffs or drinking, but was certainly part of the tableware repertoire. Wine was the preferred drink from glass goblets and beakers at this date. The drinking vessels were imported from the area between the Rhine and the Meuse, but the origin of the bowl is uncertain. In a monastic setting the use of glass tablewares may have been restricted to the prior or abbot's table, or they were used during the entertaining of guests.

The utilitarian wares included alembics, cucurbits and probable receivers which made up the basic still. There were wide-necked flasks which include uroscopy vessels as well as others used in association with the still or in other practices. Some fragments may have been derived from vessel types not yet identified archaeologically. Only one small window fragment was present, more characteristic of accidental damage than building debris.

Presuming the distilling equipment is contemporary with the more dateable glass and pottery, it is no later than the mid-14th century. These finds are therefore exceptional as the earliest assemblage of glass distilling vessels known from England. Other assemblages of glass distilling vessels are later in date from the 15th century and are monastic in nature – St John's Priory, Pontefract, Selborne Priory in Hampshire, and St Leonard's Priory in Stamford (Tyson 2000, 168-178). A few earlier fragments *may* come from distilling vessels, including tubing from a 14th century pit at Ludgershall Castle (ibid., 174), but these finds are ambiguous. The documentary evidence attests to an earlier use of glass distilling equipment, such as that described in Chaucer's *Canon's Yeoman's Tale*, written in the 1380s or 1390s. The Christ Church assemblage is the second largest deposit of glass distilling vessels found in Britain, exceeded only by St John's Priory, Pontefract where 640 fragments were excavated which represent a wider range of vessels (Bellamy and Nicholson 1972).

The ceramic vessels should also be considered in association with the glass for a more complete picture of the activities represented here. A number had been subjected to intense heat around the base or had degraded inner surfaces caused by whatever substance they had contained (see Blinkhorn above). There are a number of possibilities as to what these distilling vessels were being used for. Unfortunately, no residues were recovered from the vessels which can sometimes be analysed for a more definite picture. Distillation was used most commonly to prepare medicinal remedies such as oil of Benedict and flower oils. Practitioners included monastic communities and apothecaries. John Hexham, a 15th century apothecary, listed a still as well as one hundred bottles containing 'various waters' in his inventory (Trease and Hodson 1965). On a smaller scale such practices were sometimes undertaken within individual households – in 1416-17, for example, Bishop Richard Mitford's household purchased a glass still 'to distil the medicine' (Moorhouse 1987, 370). Alcoholic liqueurs and aqua-vitae required distillation, for which the monastic orders became particularly well known, with some still famous liqueurs such as Benedictine and Chartreuse. Monastic houses would have distilled colours such as vermilion and 'water of silver' with which 'you shall write gold as fast as with ink' (Moorhouse 1993, 147-148).

Distilling vessels were used for a variety of chemical processes and experiments but also for alchemy, part of whose aim was often to turn base metals into silver or gold using intermediary acids; the still was required to create the elixir or ‘philosopher’s stone’ for effecting this transformation. Slightly later depictions of glass vessels associated with such practices can be seen in Jan van der Straet’s painting *An Alchemist’s Laboratory* of 1570 (Fig. 45) and his related illustration *Distillatio* of c. 1580 (Fig. 51). Robert of Chester is credited with introducing alchemy into Europe by translating the first Islamic treatise into Latin, *The Book of the Composition of Alchemy*, in 1144 (Holmyard 1957, 103). Alchemy was a complex and profound philosophical exploration of the nature of the universe rather than its more popular stereotype of seeking to change base metals into gold purely for financial gain. The search for the elixir to transform metals was symbolic of man’s search for a transformation into a perfect being through prayer and god’s grace, and it is no coincidence that alchemy was practised by many religious figures. These included William Holloway, last prior of Bath Abbey, and George Ripley, a canon at the Augustinian priory at Bridlington in 1471 (*ibid.*, 183-185).

Alchemy was practised in Oxford in the medieval period – alchemists connected with Oxford include Robert Grosseteste, Chancellor of Oxford and Bishop of Lincoln in the 13th century, and Roger Bacon who studied at and was buried in Oxford in the 13th century. His laboratory was allegedly on Folly Bridge (*ibid.*, 115-119). Bacon’s interpretation of alchemy was broader in scope than merely the search for the elixir, but covered a wider knowledge of chemistry, and he was known as a ‘master of experiments’ (*ibid.*). While the Christ Church distilling vessels may have been used for alchemy, this may have involved more general chemical experimentation rather than the more sensational search for the philosopher’s stone.



Figure 51. *Distillatio* by Jan van der Straet, c. 1580.

Distilling equipment was also frequently used in metallurgical assaying to test the purity of gold and silver, important in regulating coinage (Greenaway 1972, 84-87). It is thought that this may have been carried out at St Leonard's Priory in Stamford where silver coin clippings were found adjacent to 15th century distilling vessels (Mahany 1977). There is little evidence to suggest that this was being undertaken at Christ Church, although some small lumps of copper-alloy slag were also found in garderobe deposit (496).

It is probable that the distilling vessels were made in English glasshouses. These were in operation from at least the 13th century in areas such as the Surrey/Sussex Weald and Staffordshire, with archaeological evidence for furnaces surviving from the 14th century onwards (Tyson 2000, 7-8). Medieval glasshouse excavation sites are notoriously lacking in evidence for their products, although there is some evidence for utilitarian vessels. Physical evidence of distilling vessels at English glasshouses exists in the 16th century, as at a furnace site at Knights in Surrey where fragments of alembics (Wood 1982, 33, fig. 21, nos. 37-39) and a possible cucurbit rim were found (*ibid.*, 33-35, fig. 22, no. 41), and possible receiver rims (*ibid.*, 33-35, fig. 22, nos. 46-47). Thomas Norton's *The Ordinal of Alchimy* of c. 1477, however, indicates that alchemical glass was certainly being made in England in the late 15th century. He recommends glass as one of the major materials used for alchemical equipment, and states that English glass is made from fern ash (Reidy 1975, 87). It seems likely that it was also made before this date in England.

6 FIRED CLAY FURNACE FRAGMENTS by Gwilym Williams

During the excavation of the garderobe over 48 pieces of fired clay were recovered from deposit (502) in the garderobe associated with Building 7B in Trench 7, weighing 2139g. Although no other finds were identified from this layer, deposit (496) above contained mid-14th pottery and glass, although there was a small number of 16th to 17th sherds from the upper part of this deposit (see Discussion below). The fired clay cannot be dated on stylistic grounds.

The fragments were in a mid-orange biscuity clay fabric, with some fragments being more brown-orange and others more pink-orange, but there were also a small number of fragments which were pale grey as a result of the reducing atmosphere of the furnace, and a single vesicular piece that had been almost entirely vitrified by the high temperatures of the furnace, and as a consequence resembled fuel ash slag (Fig. 53.2). Small quantities of quartz, chalk and rolled limestone grits were also present in the fabric, along with vesicles left where organic material such as straw had burnt up.

Most fragments had at least one face – more often than not two faces – that was beige in colour and wiped smooth (e.g. Figs. 52.1-52.2). The other surfaces were broken faces of the clay. No one piece had both an 'inner' and an 'outer' surface, so the thickness of the original structure cannot be ascertained. The beige reduced clay, which could be seen in the broken face, was generally c. 10mm thick, although occasionally there were clear bands of differing colour which indicated sequential firings. Several clay fragments recovered from the garderobe had what appeared to be part of one or more holes that would have penetrated the wall of the clay furnace (e.g. Figs. 52.2, 52.5). There were no complete examples of these, and it was not clear if these were tuyères or for escaping gasses to vent outwards. It is not clear if the clay fragments would have formed a square or a circular structure, although some seem to have had a gently curved inner surface. It is also uncertain if the clay fragments were part of an upper dome or cupola, or part of a lower bowl structure. Unfortunately, none of the pieces fit together, and so is also not clear whether these clay fragments were derived from a single furnace, or from several.

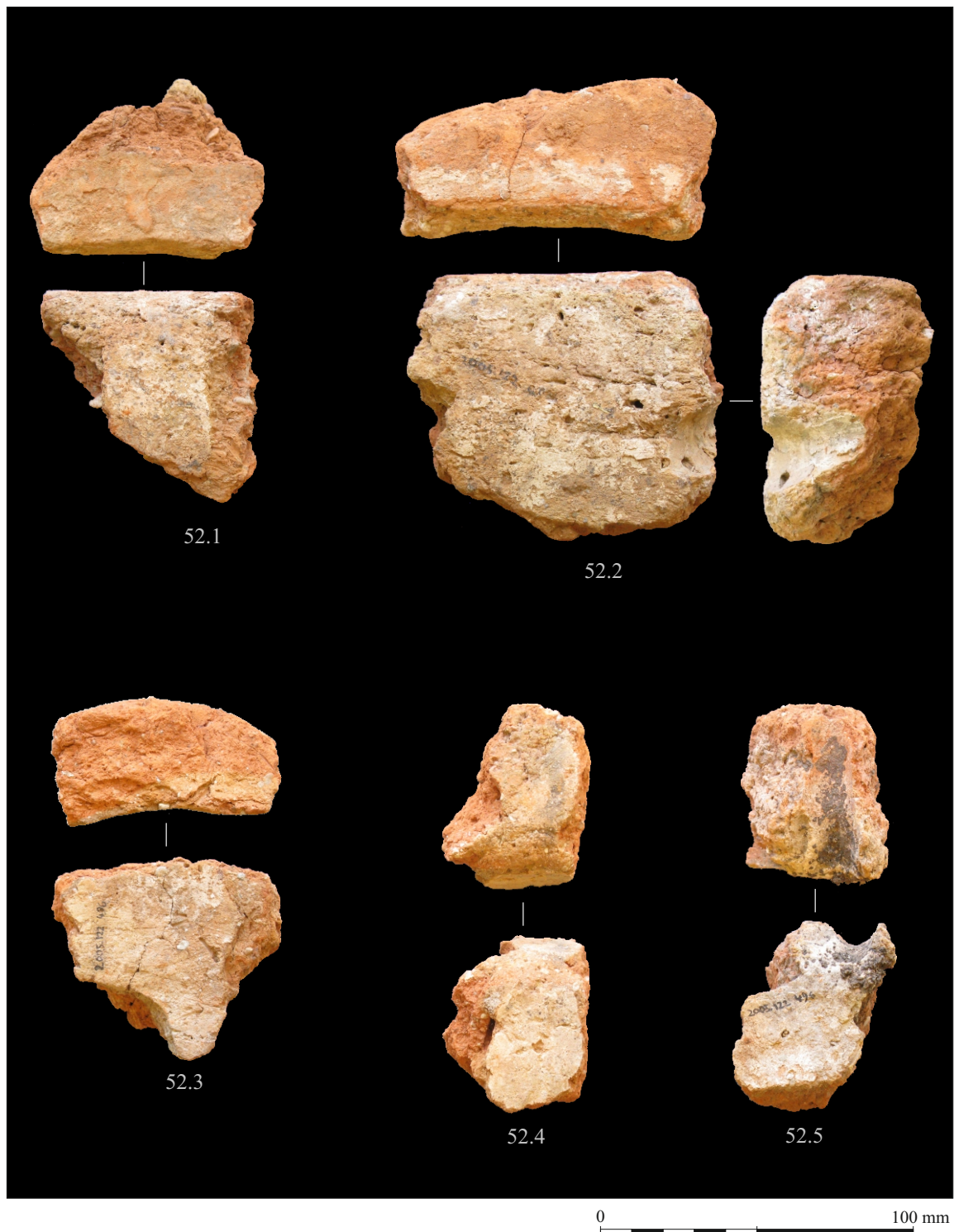
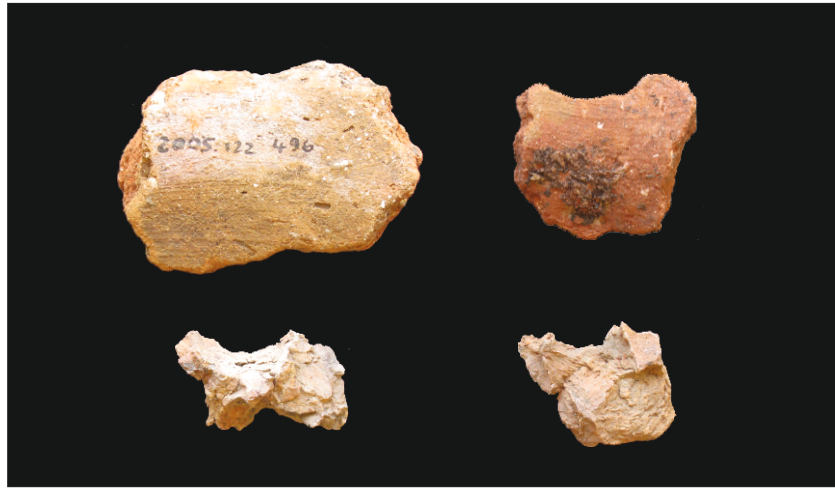
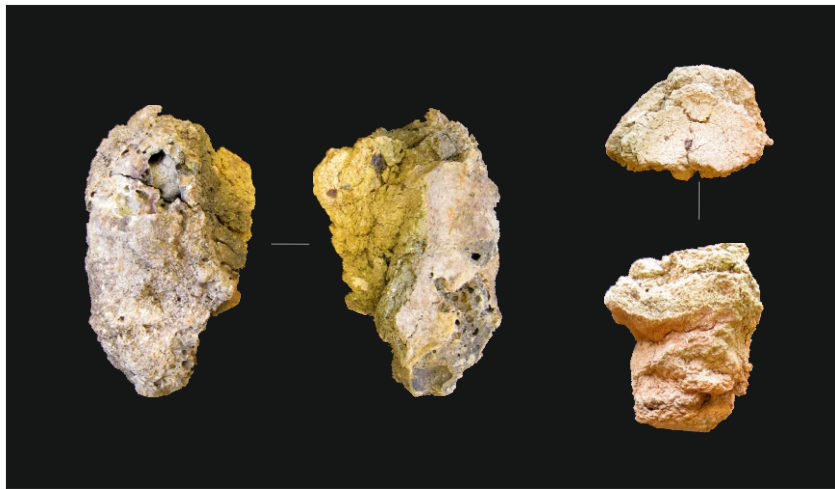


Figure 52. Clay furnace fragments 52.1 - 52.5.
106



53.1



53.2



53.3

0 100 mm

Figure 53. Clay furnace fragments 53.1 - 53.3.

The clay fragments probably represented parts of a portable hearth or furnace. Later 16th and 17th century illustrations of chemical, metallurgical and alchemical practices indicate that there were two main forms of furnace. Firstly, there were large brick-built furnaces at which people stood – these are often called an *athenor* or *athanar*, and included fixatory and calcinatory furnaces (see Discussion). These resemble broadly contemporary blacksmith's hearths, at which smiths stood facing the flame. There was also a range of smaller portable structures made of clay for a series of different processes including sublimatory, distillatory, descensory and fusion furnaces. Sublimatory furnaces were for large vessels which were put on a perforated bottom-plate and heated by flue-gases. Distillatory furnaces were essentially the same, whilst descensory furnaces only varied slightly with details caused by the apparatus to be heated. The melting furnace or fusory was for the strong heating of crucibles (Forbes 1948, 83). The clay fragments excavated at Christ Church would appear to be from the latter group of portable furnaces. These portable furnaces appear to have been circular or square in shape and 1-1.5m high and c. 0.5m in diameter/width. Later 16th and 17th century illustrations suggest that these furnaces were modular, comprising rings, pierced plates and the body of the furnace. Several of the excavated fired clay fragments had the flattened, oxidised surface at right angles to the internal slightly reduced face, and this corroborates the images from some later illustrations, as in the foreground of the 1570 painting *An Alchemist's Laboratory* by Jan van der Straet (Fig. 45). Slightly older illustrations, particularly those of Geber (1541) and vom Hoff (1557) (see Discussion) indicate larger structures, but this may have been artistic licence.

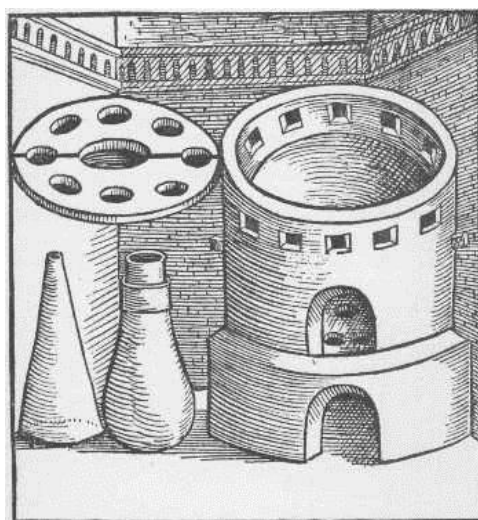


Figure 54 (left). A circular clay sublimatory furnace (from *De Alchemia* by 'Geber', 1541). Figure 55 (right). A square clay furnace associated with distilling apparatus (from *Das Vade mecum* by Caspar Harttung vom Hoff, 1557).

It is apparent from 16th century illustrations that some holes such as those on the fragments from the garderobe were for tuyères, but in others it seems to have been to allow flue gases to escape, as in Geber's illustration of the sublimatory furnace (Fig. 54). It would also appear from illustrations that several such small furnaces were desirable for different metallurgical, chemical and alchemical investigations, and this might indicate that the fragments recovered from garderobe deposit (502) were perhaps from several such portable furnaces. In contrast to the Old Ashmolean Museum/Museum of the History of Science excavation at Broad Street in Oxford where the only structural ceramics were of brick (Hull 2003), the fragments of fired clay from Christ Church indicate that 16th and 17th century illustrations of portable clay furnaces were perhaps quite accurate, and that there was a real difference between brick built and clay furnaces during the later medieval and early post-medieval periods. This assemblage of clay fragments may be the sole example of excavated medieval alchemical furnace(s) excavated in Britain.

7 CERAMIC FLOOR TILE by Clare Roberts and Gwilym Williams

7.1 Introduction

This report is based on Clare Roberts' original recording, notes and draft report prepared in 2008, with additions by Gwilym Williams. While some elements have been reviewed and rewritten, the tile was not re-recorded, with the result that only a limited number of the tiles – i.e. the better preserved – have been integrated into the typologies established by Haberly (1937) and Hohler (1942) during the review of the original report.

There were 256 fragments of floor tile, weighing 25361kg, recovered during the 2005-2007 investigations from various service trenches across Christ Church. Of these, 20 fragments weighing 2805g were unstratified, and were located at best only to the trench or trench-section from which they were recovered. Tile was recovered from 16 trenches within the College precincts, although the majority was recovered from Trench 5 along the eastern side of Tom Quad and west of the cathedral; in other cases, concentrations such as one in Trench 20 were associated with later service trenches

The tile was washed and marked prior to preparing the assessment. The collection policy on site is not recorded, which may have resulted in an over-representation of decorated, rare and more complete examples, although this cannot now be ascertained.

The assemblage was in generally quite poor condition, and the tile was frequently very fragmented, ranging in size from nearly complete tiles to large chips. The tile surfaces and edges were often abraded; the former sometimes to such an extent that they clearly indicated extensive use prior to removal and/or replacement. Most tiles showed wear ranging from the glaze being worn thin to tiles being concave with no evidence of decoration surviving at all. There were few tiles in very good condition.

The different designs were also described and recorded. The fragmentary nature of the assemblage made it difficult to work out the complete design for many of the tiles, although where possible reference was made to the typologies of both Haberly (1937) and Hohler (1941-2). The 'Stabbed Wessex' group of early tiles was well represented, although there were later 'Penn style' designs also present. Plain green glazed tiles are recorded as having been present in the Latin Chapel (Green *et al.* 1988), and they were recovered during the 2005-2007 investigations as well. Tile from the two major production sites has previously been identified in Oxford (Cotter 2006; Emden 1969; Lambrick and Mellor 1985) and Christ Church in particular, (Green *et al.* 1988); this material formed the comparative material, as did the tile from Bicester Priory (Hinton 1969). There were insufficient tiles in well-stratified and undisturbed contemporary archaeological contexts, however, to permit any formal analysis.

7.2 Methodology

Tiles were recorded individually onto an Access database. Dimensions were recorded if complete or one edge survived. The depth of each tile was also recorded unless it had spalled (split laterally). Other attributes that were recorded were fabric type; glaze colours, on body and on slip; quality of the surfaces; angle of bevel; whether the tile had been scored for splitting; and the presence of keys on the base (Stopford 1990). Table 6 below lists the recorded ceramic floor tile from the Christ Church investigations.

Table 6: Recorded ceramic floor tile

Context	Frag	Wt (g)	Date	Pot/context date	Type	Diagnostic tiles	Other provenances
69	1	130	13 th -14 th	13 th			
235	5	380	L14 th +	pre-15 th -M16 th		4 'Stabbed Wessex' frags	
236	3	490	L14 th +	13 th -M16 th		3 plain green glazed frags	
240	1	120	L14 th +	17 th		1 'Printed' tile	
243	13	920	L14 th +	U/S		8 residual 'Stabbed Wessex'; 3 plain 'Penn style'	
244	1	80	13 th -14 th	L15 th -M16 th		1 'Stabbed Wessex'	
246	12	357	13 th -14 th	L15 th -M16 th		'Stabbed Wessex'	
250	1	15	13 th -14 th	L15 th -M16 th			
252	3	443	L14 th +	L15 th -M16 th		3 plain glazed tiles	
254	2	65	13 th -14 th	13 th -M16 th		2 'Stabbed Wessex'	
257	4	180	L14 th +	?		2 'Stabbed Wessex'; 2 'Printed'	
258	44	2427	14 th	13 th -M16 th	Haberley XLIX	25 'Stabbed Wessex'; 7 'Printed'	
259	1	100	L14 th +	13 th -M 16 th		1 'Printed'	
261	3	65	L14 th +	L15 th -M16 th		2 plain green glazed	
265	5	380	13 th -14 th	L15 th -M16 th		5 'Stabbed Wessex'	
266	1	25	13 th -14 th	15 th -M16 th			
269	1	40	13 th -14 th	13 th -M16 th			
271	13	970	13 th -14 th	13 th -M16 th	Haberly XXVIII; Hohler W19	12 'Stabbed Wessex'; 1 plain 'Penn style' frag?	St Frideswide's; Godstow Abbey
273	1	80	13 th -14 th	?		1 'Stabbed Wessex'	
292	12	90	13 th -14 th	?		8 frags 'Stabbed Wessex' style	
294	2	47	L14 th +	L15 th -M16 th			
298	2	174	13 th -14 th	13 th -M16 th		1 'Stabbed Wessex' frag	
299	4	180	13 th -14 th	?	Variant Haberly XXIV/XXV; Hohler W39	'Stabbed Wessex'	St Frideswide's; St Peter's in the East; St Martin's; Beaumont Palace site; Hertford College; Rewley Abbey; Blackfriars
311	11	1015	L14 th +	pre-15 th		'Printed' and plain frags	
312	16	1881	L14 th +	pre-15 th		Plain green glazed tile;	Latin Chapel
313	3	290	13 th -14 th	?	Haberley XLIX		
333	11	2204	L14 th +	15 th	Variant Haberly CXXIII	'Printed'; 'Stabbed Wessex' frags	St Frideswide's
334	6	310	L14 th +	15 th		Mixed 'Stabbed Wessex', 'Penn style' printed - all worn glaze free	
335	2	180	13 th -14 th	13 th -14 th (residual)		'Stabbed Wessex'; writing	
339	6	1495	L14 th +	pre-15 th		Plain green glazed tile	Latin Chapel
364	4	220	L14 th +	U/S		1 'Stabbed Wessex'; 1 'Printed' style	
411	1	115	L14 th +	15 th		'Stabbed Wessex'; plain pale green	
520	1	150	L14 th +	L15 th -M16 th		'Plain 'Penn Style'	
598	1	45	L14 th +	U/S	Haberly CCXLIII	relief tile	St Frideswide's

Context	Frag	Wt (g)	Date	Pot/context date	Type	Diagnostic tiles	Found prev. at St Frideswide's
710	2	210	L14 th +	17 th		1 'Stabbed Wessex'; 1 plain 'Penn Style'	
715	1	260	L14 th +	17 th		1 'Printed'? tile	
727	1	170	13 th -14 th			1 'Stabbed Wessex'	
731	1	140	L14 th +	M16 th		1 'Printed'? tile	
741	2	180	L14 th +			2 plain green glazed tiles	
758	16	3285	Mod		Haberly L	1 'Stabbed Wessex' 3 'Penn Style'; 1 'Latin Chapel plain'; 1 modern technical tile	
788	1	130	L14 th +			1 'Penn style'	
801	3	385	13 th -14 th	M16 th		'Stabbed Wessex'; 1 worn	
1002	1	128	L14 th +	19 th		1 'Printed'? tile	
1010	1	100	L14 th +	M16 th		'Penn style'	
1014	1	310	13 th -14 th	M16 th	Haberley XXII; Hohler W 31	'Stabbed Wessex'	St Frideswide's; St Peter in the East; Oseney Abbey
1022	2	335	L14 th +	M16 th		Plain green glazed tile;	Latin Chapel
Spur 8	7	1260	L14 th +	U/S		4 'Stabbed Wessex'; 3 plain 'Penn Style'	
TR10 US	1	155	13 th -14 th	U/S		1 v. worn 'Stabbed Wessex'	
TR11 US	1	260	L14 th +	U/S		Plain	
TR12/D	2	260	13 th -14 th	U/S	Haberley XXII; Hohler W 31	'Stabbed Wessex'	St Frideswide's; St Peter in the East; Oseney Abbey
TR16/A	3	460	L14 th +	U/S			
TR16/B	7	925	13 th -14 th	U/S	Haberly XXVI	6 'Stabbed Wessex'; 1 plain	St Frideswide's; St Peter in the East; Oseney Abbey; Rewley Abbey; Blackfriars
TR22	4	305	L14 th +	U/S			
Tr22/B	1	220	L14 th +	U/S			
U/S	1	220	13 th -14 th	U/S			
Total	256	25361					

7.3 Results

Of the 256 fragments of tiles recovered, the majority (152 fragments) were decorated, mainly with a stamped design which had been filled with slip before glazing. A single fragment was recovered from context (598), however, of a stamped design of a squirrel (Haberly CCXLIII) where the image is displayed in relief. Of the remaining fragments 48 were plain glazed, 19 were plain slip and glazed, and 37 fragments were too abraded to tell either way.

Shape and Size

Three main tile shapes were evident; square, rectangular and triangular (Figs 56-58; Table 7). Both the triangular and rectangular shaped tiles were split from an original square shaped tile scored before firing (Fig. 56.1, 56.4 and 56.5). Dimensions of those complete examples and tiles with one complete edge are included in Table 7 below.

Table 7: Tile shapes with range of dimensions

Shape	Square (full tile)	Square (scored and split)	Rectangular	Triangular
Complete dimensions (mm):	109 × 109	58 × 58	118 × 28	108 × 77 × 78
	116 × 116	62 × 60		
	169 × 168			
One edge measured (mm):	113		62	117
	124		65	66
	126		66	
	128			

The square tiles ranged from 109 × 109 mm up to *c.* 168 × 168mm. Four examples out of the seven measurable were decorated, but the rest were too worn to identify any decoration. The small square scored and split types measured around *c.* 60 × 60mm, which is roughly half the width of a complete square tile.

The rectangular scored and split types were made either by splitting a standard square tile in half lengthways, giving the width of around 62-66mm; or by scoring the tile four times lengthways giving a width of 28mm. The majority of the rectangular tiles were plain glazed, more often in darker colours – these were generally used to provide an outline for a design group, or to form a border edge for a floor. The scored and split tiles were scored before firing, and split on site when the floor was laid.

The triangular tiles were made either by scoring before firing and splitting a standard square tile in half diagonally once with one edge measuring 117mm, but one example recovered had been scored into four squares first, then each square had been split diagonally, one triangle measuring 108 × 77 × 78mm. These could have been intended for a simple mosaic style pattern, or border fillers for corners. The majority of the large triangular shaped tiles were decorated, mostly with simple multifoil designs (Fig. 56.6). Several were decorated before scoring in half, presumably to fit in a pre-ordained design planned ahead of firing.

Fabric Types

There were six fabric types identified during the assessment. Table 8 below contains details of the fabric types.

By far the most common fabric type found on this site was S1 (170 fragments), with C2 and C1 the next most common (44 and 21 fragments respectively).

The less common fabric types such as the organic tempered S2, the white clay marbling seen in S3 and the quartzite and ironstone mixed C3 (21 fragments in total) are more likely to be accidental inclusions, or ‘end of the line’ clay used towards the end of the tile making process.

It was common practice to leave the clay for the tiles outside for a few months over winter, to process it by natural weathering and frost action before use. Apart from occasionally turning of the clay and the removal of large stone and foreign matter, it was generally untreated (Eames 1985, 9). Further work on sourcing the clay would involve carrying out more detailed petrologic and ICPS analysis on the collection, which was not budgeted for within the project.

Table 8: Fabric types

Fabric Code	Fabric Type	Description
C1	Clay	Clay fabric
C2	Clay with light clay inclusions	Clay with white clay lumps and streaks, occasional small ironstone, rare small rounded grog inclusions
C3	Clay with quartzite and ironstone	Clay with small rounded quartzite, small ironstone, occasional sand
S1	Sandy clay	Clay with common sand throughout
S2	Sandy clay with organic inclusions	Sandy clay with small common organic inclusions
S3	Sandy clay with light clay inclusions	Sandy clay with white clay streaks and lumps

The S1 fabric was the most commonly used for the decorated tiles, although decorated tiles were also found in the C2 fabric. This tends to suggest two sources of tile manufacture, the main one being the sandy clay (S1-3) and a smaller source of clay fabric (C1-3). These can be equated typologically to ‘Stabbed Wessex’ for the sandy fabric and ‘Penn style’ for the clay fabric.

Firing

The majority (70%) of the tiles were oxidised, while 22% were reduced. The final 17% were made up of tile which had notable variations in the quality of firing – reduced areas were seen on the upper surface due to the presence of the glaze, which once fused to the tile prevented oxygen getting to these areas. This was generally more prevalent in the 13th and 14th century tile manufacture (Eames 1985). This assemblage was overall more consistently fired. This could either be indicative of the decorative effect intended, differing from the usual chequer-board effect found elsewhere; or might possibly have reflected slightly later 14th-early 15th century tile manufacture using better controlled kilns.

Keys

There was no evidence for the earliest floor tiles with scooped keys (Eames 1991, 94) such as those identified from the kiln excavated in 1937 at Clarendon Palace, which dated from the first half of the 13th century. The assemblage was dominated by ‘Stabbed Wessex’ style tile, which date from middle of the 13th century onwards. These tiles are characterised by stabbed keys in the base; the number of tile fragments with stabbed keys is greater than tiles without stabbed keys, as Table 9 below illustrates. This total excludes the smaller undiagnostic tile fragments which were spalled or had mortar adhering. The majority (84%) of the tiles with stabbed keys were also found to be decorated. The plain glazed and plain slip glazed tiles had stabbed keys on 4% each; whilst the remaining 7% of keyed tiles were too abraded to identify.

Keys were made both to hasten the drying process before firing and to strengthen the bond between the tile and the mortar bed. Most of them had been stabbed with a sharp thin (around 5mm) awl, mostly with a circular profile, although two examples of use of a square profile awl were found from contexts (758) and (271). The latter example was a much thinner 2mm wide square-profiled implement, possibly some form of blunt awl. One example found in context (339) had stabbed keys 5mm across with a triangular profile across. The type of key and the number of keys that were used on the base of each tile were likely to be individual to the maker, and comparisons with decoration type or fabric cannot be inferred. The practise of keying died out by the 14th century (Eames 1985) and is not represented on the ‘Penn style’ tiles.

It was observed that none of tiles made from the clay fabric (C1-3) were keyed, although about 15% of these were spalled or had mortar adhering to them; this does tend to suggest a different source of manufacture for tiles in this fabric.

Table 9: Keyed tiles

Keys	Count
Stabbed	96
None	50
Unknown	105

Glazes

The type of glaze used was a basic lead glaze, and varying amounts of copper would have been added to this in order to produce shades of black to green. If iron were added this would produce a yellow colour. The basic colours available to medieval tilers were yellow, green, olive, brown, dark green and black (Fig. 56), but the shade produced would depend on whether it was applied onto slip or direct to the main tile fabric, and the firing of the tile fabric.

The plain glazed tiles were mainly green, with only a small number of dark brown/black colour, and two examples of yellow glazed tiles. The plain slip glazed tiles had roughly equal amounts of yellow and green glazed tiles, with one example of brown glazing. The darker tiles in this assemblage were mainly the scored and split rectangular border tile types. Darker shades of tile would generally be used as a border to panels of decorated tiles. Other styles involved laying contrasting coloured tiles in a simple chequerboard pattern. Of the decorated tiles the predominant colours were also greens and yellows, with some examples of brown, and combinations of brown and yellow colouring.

Designs

The decorated tile illustrates a range of designs (Figs 57-58). Many have been found at other sites in Oxford, including Christ Church, Blackfriars, Rewley Abbey and some of the colleges. The assemblage was very fragmentary and abraded, however, with only a few complete examples. Whilst it was too difficult to confidently attribute specific design codes to all of the tiles, it was possible to group them into more general style groups, and a table of those described is included below (Table 10). Unfortunately, it was not possible to revisit the assemblage and identify which were ‘Stabbed Wessex’ style and which were ‘Penn’ style tiles.

Table 10: summary of designs identified by Clare Roberts; Haberly types appended

Design Description	Contexts
Squirrel relief tile (variant Haberly CCXLIII)	598 (Fig. 57.1)
Leopard passant with split tail (Haberly CXXIII variant)	333 (Fig. 57.2)
Haberly L	758 (Fig. 57.3)
Variant (Haberly XXIV/XXV; Hohler W39)	299 (Fig. 57.4)
Griffon (Haberly XXXVI)	258 (Fig. 57.5/5a)
Haberly XXVI	Tr 16/B (Fig. 57.6)
Haberly XXII; Hohler W 31	1014; Tr 12/D(Fig. 57.7)
Cruciform fret with four studded quadrants (Haberly XXVIII; Hohler W19)	271 (Fig. 57.8)
Central floral motif within concave surround (Haberly XLIX)	313 (Fig. 56.6), 258 (Fig. 58.1)
Fleur-de-lis types (*including Haberly LIV; Hohler W42)	243, *258 (Figure 58.2), 271, 292, 312, 313, 333, 520 (Figure 58.3), 710, 727, 758, 1014, Spur 8, TR16/B, TR22
Geometric design	258 (Figure 58.4)
Circular border of writing with central unknown design	243 (Figure 58.5), 246, 335 (Figure 58.6)
Multifoil designs	240, 246, 258, 271, 313, 758
General foliate designs	235, 243, 258 (Figure 58.7), 271, 273, 298, 339, 364, 758, 788, TR16/B, Spur 8 (Figure 58.7)
Circular border of writing- with central animal design	246, 312
Lion/griffin (unclear)	100, 240, 312

Table 10 above shows that the fleur-de-lis and general foliate designs dominated this assemblage, perhaps indicating the decorative theme for the floors, although as all the tile was recovered from secondary contexts rather than any *in situ* floors, it is impossible to be certain. Moreover, it is possible given the chronological spread of the contexts from which the tile was recovered that whilst some of the tile was undoubtedly from St Frideswide's, other elements of the assemblage may well have come from additional high status structures in the wider precinct or Area Predicatorum St Frideswide's. Trenches 10 and 10A which were geographically associated with Canterbury College yielded a small quantity of tile, as did Trench 11 which was in the same general location as Ape Hall, White Hall and the Magna Schola Juris Civilis (Salter 1960, map SE I). Trench 20 also produced a large quantity of re-deposited tiles from the fill of a service trench, and this too was located in the general area of the St Frideswide's priory precinct.

The more unusual tile designs included a relief-decorated tile from context (598), which had been stamped leaving a design in relief on the upper surface, before it was glazed with dark green (Fig. 57.1). It was only a small fragment of the design, but it has been identified as a possible squirrel tail, similar to the tile fragment found in Cathedral Gardens which was identified as corresponding to Haberly CCXLIII, but in relief (Green 1988, 107). The tile probably came from contexts associated with the restoration undertaken in the Latin Chapel during the 19th century (Green 1988, 103). The technique of relief and counter relief tile making was used for longer than any other technique, but it was not as popular during the medieval period. Relief decoration was more elaborate in its earlier days, with carved designs being rounded off and more intricately designed, later becoming simpler with flat surfaces and straight sides to the cavities. Although this fragment was quite worn, when compared with the similar fragment from Cathedral Gardens the detail corresponded quite well. The carving of the tail was finely executed and in neither example was there evidence for heavy wear. Green (1988, 104) indicated that it might have come from elsewhere in the priory as it was a unique fragment, although it is possible that such relief tiles were only very few in number in the first place. The presence of a second tile, albeit found at some distance from the first, is therefore of note.

The largest, most complete tile from the assemblage was a variant of Haberly CXXIII. The design depicts a passant lion facing right with long double folded tail, it has two small circular rings set above it at the head and back ends, and is bordered above and below with indented band (Fig. 57.2; Green 1988, fig. 50 no. 18). This is a 'Penn' style tile, dating from the 1330-80s, like the relief-decorated tile Haberly CCXLIII above. This was recovered from Trench 5 within Tom Quad, and may well have originally been associated with the 16 similar fragments found previously at Christ Church (Green 1988, 113), and attributed to the later tile floor in the Latin Chapel. It is not unreasonable that this tile was part of the same floor.

7.4 Discussion

It has been proposed elsewhere (Cotter 2007, 55; Tibbles 2007) that the main period of production and laying of the decorated tile excavated from the various abbeys and collegiate buildings in Oxford extended from the mid or late 13th century to the late 14th century, and comprised two distinct traditions. The earlier tradition known as 'Stabbed Wessex' was identified during excavations at Clarendon Palace, Wiltshire (Cherry 1991, 197-198; Eames 1991, 96), on account of the many small stab-holes in the reverse of the tile. This earlier tradition was also notable for the deep slip in the impressed design which could be up to 5mm thick. The later 'Penn style' takes its name from Penn in Buckinghamshire, a production centre which made extraordinary quantities of floor tile for the Crown, the Church and wealthier private individuals during the 14th century. These were a cheaper and more popular form of tile, characterised by a thinner slip. For many years, these tiles were referred to as 'printed' to differentiate them from the earlier 'Stabbed Wessex' style.

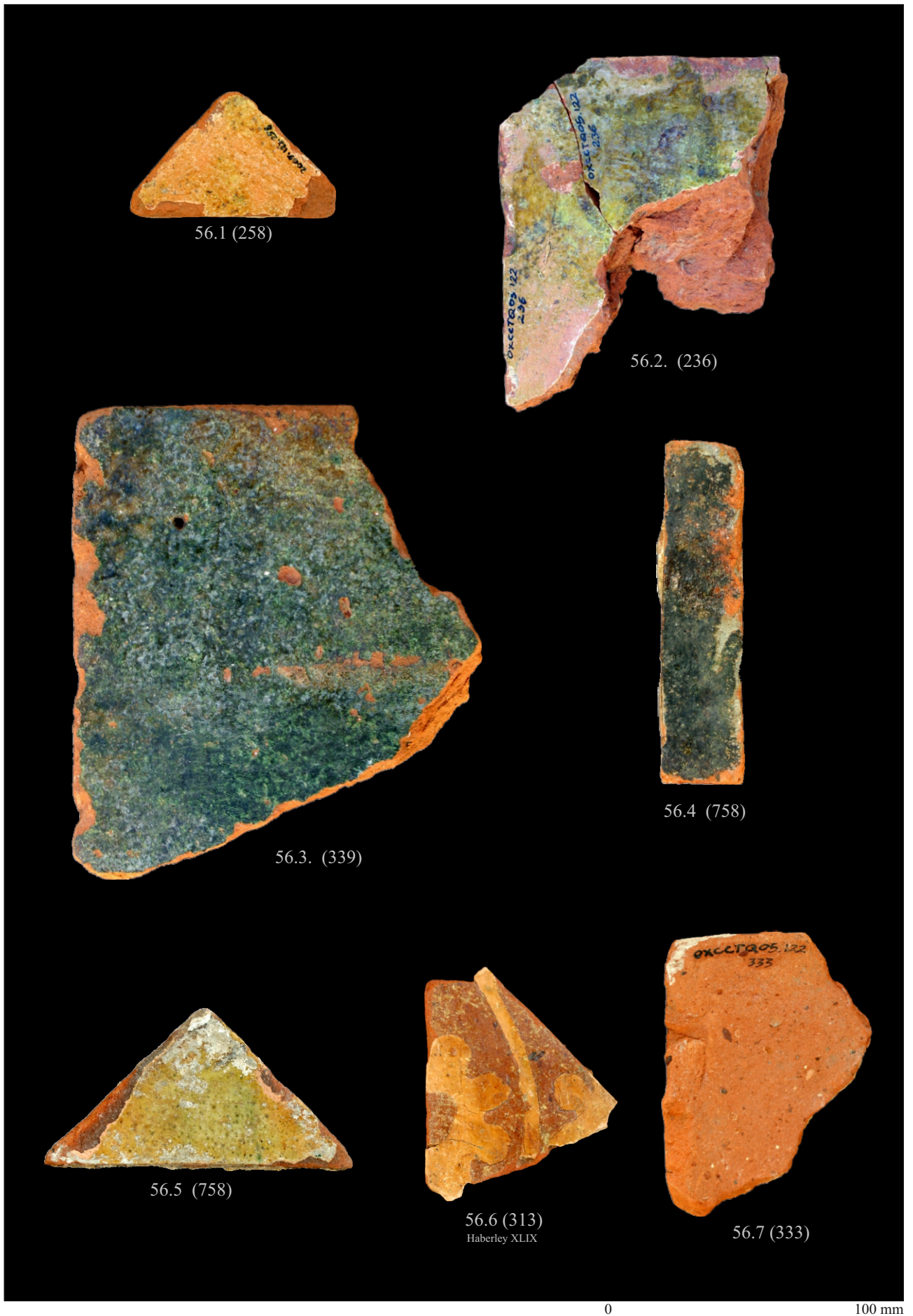


Figure 56. Decorated floor tiles.



Figure 57. Decorated floor tiles.



Figure 58. Decorated floor tiles

The vast majority of the tiles recovered during the 2005-2007 investigations are attributable to the 'Stabbed Wessex' series, with a likely date range of c. 1280 until the 1320s. These tiles displayed a wide range of wear, and indicate that the examples recovered during the watching brief were probably originally located both in intensively used parts of St Frideswide's priory as well as in more sheltered corners or along walls. Unworn triangular tiles are further indications of the original positioning of some of the tiles, as these would have been placed in corners too. By way of contrast, some of the other 'Stabbed Wessex' tiles recovered from Christ Church had been concave worn upper surfaces. Many of the religious houses in Oxford had 'Stabbed Wessex' tiles, and these are frequently recorded as residual finds although there have not been any *in situ* tile floors excavated from this period in Oxford.

The later 'Penn style', which were also once characterised as 'printed tiles' (Green *et al.* 1988, 113, 114), had notably thinner slip decoration. These also lacked the stabbing holes of the 'Stabbed Wessex' tiles. There were 19 fragments or whole tiles decorated in the 'Penn style' recovered from the 2005-2007 investigations at Christ Church, and 41 fragments of the plain green tiles, which ranged from a pale olive to a very dark, almost black, green. Both square and rectangular tiles were represented. Wear was visible on the 'Penn style' tiles, though rarely as much wear as was often visible on some of the 'Stabbed Wessex' tiles, but in some instances the white slip had been left proud of the tile matrix (Figs 57.5/5a, 57.8, 58.4-6) although not always (Fig. 58.1-2). The glaze was frequently worn thin or worn away altogether, as is very clear from the example of the lion tile (CXXIII) (Fig. 57.2) amongst others (Figs 57.6-7, 58.7-8).

8 CERAMIC ROOF TILE by Clare Roberts and Gwilym Williams

This report is based on notes by Clare Roberts and has not involved any re-examination of the material. The assemblage was visually examined in 2009, and all results were entered onto an Access database. In total, 46 fragments weighing 4196g were examined. Many of the fragments were small, although there were a few fragments of ridge tile which were moderately well preserved, but not sufficiently fine to warrant further work. The range of fabrics was diverse and no attempt was made to compare them. Indeed, it was clear that the likely residual nature of much of the tile recovered, coupled with it being such a small assemblage and its potentially wide date range between the 14th to 17th centuries, meant that any more detailed analysis would not produce valuable results for the time it would take to carry out.

The on-site retrieval policy is not clear – for example, there are single examples of tiles from contexts recorded as tile dumps or construction debris such as deposit (793) with three fragments; (1005) with eight fragments and (1007) with just one fragment; which logically ought to have comprised much larger assemblages. It is thought that in these instances, just a few representative examples of tiles were retained from much larger groups. Some fragments were unstratified, and their provenance can only be attributed to trench only, as for example with Trench 4 with one fragment, Trench 11 with five fragments, and Spur 13 with two fragments. Further fragments recovered from cemetery soils such as (236) (three fragments) and (254) (one fragment) were to all intents and purposes unstratified and/or residual in nature, given the disturbed nature of these cemetery soils and the extremely wide date range (13th to 17th century) of the pottery recovered from these contexts. The majority of other roof tile fragments were, like the cemetery soil examples, undoubtedly residual. Many appear to have been retained solely as they were more visually distinctive ridge tiles (Table 11) or were otherwise 'unusual' in some way, such as having paw prints or failed peg holes.

The roof tile assemblage reflected an area of Oxford where late medieval to post-medieval buildings were built, demolished and re-erected. The apparent paucity of material as noted above may well have been due to the collection policy on-site, rather than the original its quality.

Table 11: Ceramic roof tile

Trench	Context	Frag	Wt (g)	Fabric	Comments
4	327	1	74	Dark red, gritty clay, slightly reduced core	ridge tile
4	4 U/S	1	230	Buff, pale grey core, light green glaze	ridge tile
5	236	3	437	Red surface, reduced core, occasional small gravel silty clay; red slip on ridge top and green glaze	ridge tile
5	252	1	164	Pale orange to red silty clay, reduced core, pale green glaze	ridge tile
5	252	1	8	Red silty clay, mortar adhering	
5	254	1	230	Pale buff silty clay, occ. haematite and flint, reduced core, slightly corky underside, bright green glaze	ridge tile
6	411	1	113	Pink to pink/grey gritty clay fabric,	ridge tile
7	496	2	112	Silty clay, pale buff colour, occ. haematite	
7	496	1	153	Clay, pale buff, red core, slightly corky fabric	
7	496	1	168	Pink to pink/grey gritty clay fabric,	ridge tile
10A	710	1	15	Pale buff silty clay, blue tin glaze	17 th or 18 th C
11	1005	1	170	Silty clay, haematite and small white clay lumps	peghole, and failed peghole
11	1005	6	205	mixed fabrics	some glazed, inc spalls
11	1005	1	212	Silty clay, Reduced core, dull green glaze	
11	1007	1	12	Clay, reduced core, bright green glaze, occ. flint inclusions	
11	1010	1	196	Pink, gritty fabric, dark reduced core, corky surface	
11	1016	1	61	Grey reduced core, red upper surface green glaze, silty clay	spall
11	1020	1	14	Red silty clay, occ. flint	
11	1022	1	27	Red silty clay	
11	11 U/S	1	20	Pink orange silty clay, dark green glaze	ridge tile
11	11 U/S	1	19	Grey pink, silty clay, slightly reduced, bright green glaze	
11	11 U/S	1	36	Grey pink, silty clay, occ., flint, slightly reduced, dull green glaze	
11	11 U/S	2	32	mixed fabrics	
12	656	1	70	Hard dark red silty clay	
12	657	6	174	mixed fabrics	not distinguished as small fragments
13	801	2	38	Clay, reduced core, bright green glaze, occ. flint inclusions	
13	801	1	417	Silty clay, Reduced core, dull green glaze	
Spur 13	Spur 13	1	66	Grey reduced core, red upper surface green glaze, silty clay	spall
Spur 13	Spur 13	1	138	Pink, silty clay fabric, reduced core, aerated, green glaze splashes	
20	793	2	530	Silty clay; hard fired	dog paw-print on 1; peghole on other
20	793	1	55	Clay, aerated, and haematite	peghole
Total		47	4196		

9 COINS AND TOKENS *by Hayley McParland*

Four copper-alloy post-medieval jettons dated to the 16th and 17th centuries were recovered during the 2005-2007 investigations at Christ Church. Official English jettons that were punched or pierced through the centre were produced from the late 13th century to the 14th century, but the examples from Christ Church are later jettons from mainland Europe, produced mainly from the mid-14th century onwards (Mernick and Algar 2001, 215). The production of English jettons then declined due to French jetton imports from Tournai, whilst from the mid-16th to 17th centuries the main production centre was at Nuremberg, which provided jettons for all customers other than the French government. From the early 17th century, improved counting methods led to a decline in the demand for jettons in England, with their use gradually becoming restricted to card counting (Mernick and Algar 2001, 216). Jettons are generally quite common finds from urban and/or high status sites, and several examples have been recovered from Oxford, including a range of Nuremberg jettons from excavations at All Saints Church, 4 Queen Street, 7-8 Queen Street, 33-35 Queen Street and the High Street Surface Water Drain (Allen, Durham and Goodall 2003, 12); the west gate of Oxford Castle (Allen 2003); the Westgate Redevelopment and the Ashmolean Extensions (Allen 2009; Beckley and Radford 2011b, 61; Mayhew 1984).

Catalogue of objects

9.1. Copper-alloy coin or token: Complete.

Copper-alloy coin or token, heavily corroded with no diagnostic features, with the exception of a small amount of lettering visible around the edge of the coin, and a central cross motif on the reverse of the coin.

Context: Trench 22, U/S, SF No. 173. Date: unknown. Diameter: 25mm.

9.2. Copper-alloy Nuremberg jetton: Complete.

Copper-alloy Nuremberg jetton produced by the Krauwinkel family during 1586-1635. The jetton features a rose and orb design, with the obverse face displaying a circular inscription following the rim and an interior circular design of alternating crowns and fleur-de-lis surrounding a central rose. The reverse design features a central orb with decorative border and circular inscription following the rim. A similar example is held by Winchester Museum (Object no: WINCM:C2500), an example was noted by the Portable Antiquities Scheme (PAS ID: BH-03CE45) and parallels were recovered during excavations at St Bartholomew's Hospital, Bristol (Dawson 1998) and excavations along Queen Street, All Saints Church and the High Street, Oxford (Allen and Durham 2003, 312).

Context: Trench 12 B, U/S, SF No. 149. Date: 16th-17th century. Diameter: 25mm.

9.3. Copper-alloy jetton: Complete.

Copper-alloy jetton, a French example featuring a Moor's head design on the obverse face, facing right. Though usually described as a Moor's head, this design was actually derived from the bust on Constantinian bronze coins (Mernick and Algar 2001, 225). The head is bordered with a circular inscription following the edge of the coin. The reverse face features a similar inscription bordering a cross fleuretty design. The Portable Antiquities Scheme has noted several examples (e.g. PAS nos. BH-1C59D2, GLO-65DB91) and a similar example has been recorded by Salisbury and South Wiltshire Museum (Mernick and Algar 2001, 254, fig. 82 nos. 54-57). The jetton is generally in fair condition, but the edges are damaged and the majority of the inscription is illegible.

Context: Trench 3, layer (138), SF No. 16. Date: 16th century. Diameter: 20mm.

9.4. Copper-alloy jetton

Copper-alloy French jetton, featuring the Shield of France, a shield with three fleur-de-lis insignia surmounted by a crown, and a bordering inscription following the edge of the coin on

the obverse face. The reverse face features a similar inscription bordering a triple stranded cross fleuretty design with central sexfoil. The object measures 27mm in diameter. No direct parallels have been found, although a similar example is recorded by the Portable Antiquities Scheme (PAS no.: SUSS-268308), which notes that the obverse design more commonly occurred with more than three lis on the shield. Similar examples are also recorded by Salisbury and South Wiltshire Museum (Mernick and Algar 2001, 256, fig. 84).

Context: Trench 11, layer (1005), SF No. 143. Date: late 15th-17th century. Diameter: 27mm.

10 METAL OBJECTS *by Hayley McParland and Adrian M. Chadwick*

Silver Objects

Catalogue of objects

10.1 Silver spoon: Complete.* (denotes illustrated items)

Silver spoon with an oval bowl and a thin handle broadening to an oval terminus, bearing three hallmarks on the underside of the handle – a lion passant in an oval with outstretched paws, an ‘r’ and an unidentifiable bust (Figure 59.1). There is no mark of origin, and insufficient detail to be specific, but it is likely that the spoon is post-medieval in date, possibly post-1720. The upper side of the handle is initialled with a possible B or C and a clear B. The bowl measures 45mm in length and 25mm in width, with the handle measuring 83mm in length and 10mm in width.

Context: Trench 14, layer (905), SF No. 159. Date: post-medieval/early modern. Length: 123mm (max.), width: 25mm (max.).

Copper-alloy and Iron Objects

Scientific or measuring instruments

Catalogue of objects

10.2 Scientific/surveying instrument: Incomplete.*

Flat copper-alloy disc 31 millimetres in diameter and between 0.05-0.08mm in thickness, with two trapezoidal flanges emerging from its opposing poles, up to 7mm wide on the outer edges but 6mm wide where they meet the disc edge (Figure 59.2). Both flanges are damaged and neither is complete. The most well-preserved is 6mm long, but the opposite flange has been cut or clipped off so there is no certainty that this was originally symmetrical.

The obverse face of the disc has some corrosion products adhering to it, and there is an irregular hole 4.50mm long and 3.50mm wide which extends as a split 2mm to the edge of the disc, where the two sides of the split do not meet. The upper edge of the hole on the obverse face is the most ragged and damaged, so it appears that some force was involved in this damage rather than simply corrosion alone. The arc edge of the disc is also corroded at this point, however.

At the centre of the disc there is a slightly irregular sub-oval hole 1.40mm long and 1.10mm wide, which was struck through from the obverse side as on this face there is a slight depression around the rim of the hole, but on the reverse side a minute raised lip is apparent, indicating the direction of force. Extending outwards from this central hole to the edge of the disc are a series of finely incised radial lines dividing the obverse ‘face’ into 24 narrow triangular sectors. Twenty-two of the radii are single lines less than 0.01mm in width and depth, and some are extremely faint and one is almost completely rubbed or worn off altogether. Two lines pass through the centre lines of the trapezoidal flanges, and these are slightly more pronounced. At 90 degree angles to the two flanges there are two radii which are different in form to the other 22 examples. One consists of two lines initially 0.04mm apart at the central hole but diverging

away from each other slightly to 0.08mm near the arc edge of the disc; whilst the other opposite example also consists of two faint lines, but these are 0.02-0.03mm apart at the central holes, and converge to a point at the edge of the disc. Initially these two different radii were thought to represent lines that were poorly or incorrectly incised, but the fact that they are placed opposite to one another and that they are opposite in their form (one tapering inwards, one outwards) suggests that this was a deliberate feature.

Placed around the 24 radii of the obverse face of the disc, between 1.10-1.80mm from its edge, are 24 small, circular or sub-circular concave indentations or depressions, 0.06-0.10mm across, and up to 0.10mm deep. These were punched into the obverse face, as the reverse of the disc features at least 13 small convex bumps where the most forceful strikes have deformed the metal downwards. Although some of the finely incised radial lines match the centre lines of these depressions and extend beyond them to the arcing edge of the disc, there are instances where the line passes through the edge of a depression, and at least three examples of where the line almost misses the edge of the depression altogether. The lines rather than the circular depressions are more evenly spaced, and there are several examples where a radial line is just visible on the base of an indentation. This implies that the lines were engraved after the circular depressions.

On the obverse face of the disc there is also a circular concave groove 27mm in diameter and 1.10-1.50mm from the edge of the disc, created by an incised line 0.01-0.02mm wide and 0.01mm deep. Around most but not all of its diameter, however, this groove has a very slight 'lip' along both its edges where the incised engraving that created it pushed minute folds of metal up on either side of the line. There are two much fainter incised lines parallel to and on either side of this incised groove, 0.01-0.02m distant from it, though these are not continuous and in places only one very faint line is visible. In other places there are two faint lines on the same (internal) side of the larger incised groove. It is unclear if these were a decorative or design feature and/or fulfilled some specific purpose, or even if they were just rough 'mark-up' lines that were incised onto the disc with a compass prior to the main groove being created. Given the irregularity of their position, the latter seems more likely.

Like the fine radial lines, the incised circular groove appears to have been created after the series of small depressions were punched into the obverse face of the disc, as on the bottoms of some of the punched depressions the base of the groove is visible, and on the sides of other depressions the incised groove has 'pushed' lower concave lips of metal slightly into the depressions. Apart from the small circular and sub-circular concave bumps created by some of the concave depressions on the obverse side, and two lumps of corrosion products, the reverse side of the copper-alloy disc is blank and featureless.

This object was found unstratified in Spur 5 off the north-east corner of Tom Quad. Dr Jim Bennett and Dr Stephen Johnston of the Museum of the History of Science, Oxford examined this object, but were unable to provide a definitive identification. The 24 radial divisions dividing the disc up into 15 degree sectors and the central hole, may indicate that it was either a compass or some other form of surveying instrument designed to measure degrees of arc in the horizontal plane, with the central hole for a needle or a dial of some description, but how the disc was originally mounted remains unclear. The opposed flanges may have held it within a wooden or metal casing, and it may even have formed part of a larger composite piece of surveying equipment. Although it was unstratified and thus from a undated context, the lack of corrosion suggests that it is not medieval, though the relative crudity of its execution indicates that it is probably post-medieval rather than early modern in date, and that it was not made by the professional scientific instrument makers in post-medieval Europe.

Context: U/S Spur 5, SF No. 8. Length: 39.50mm, width: 31mm.

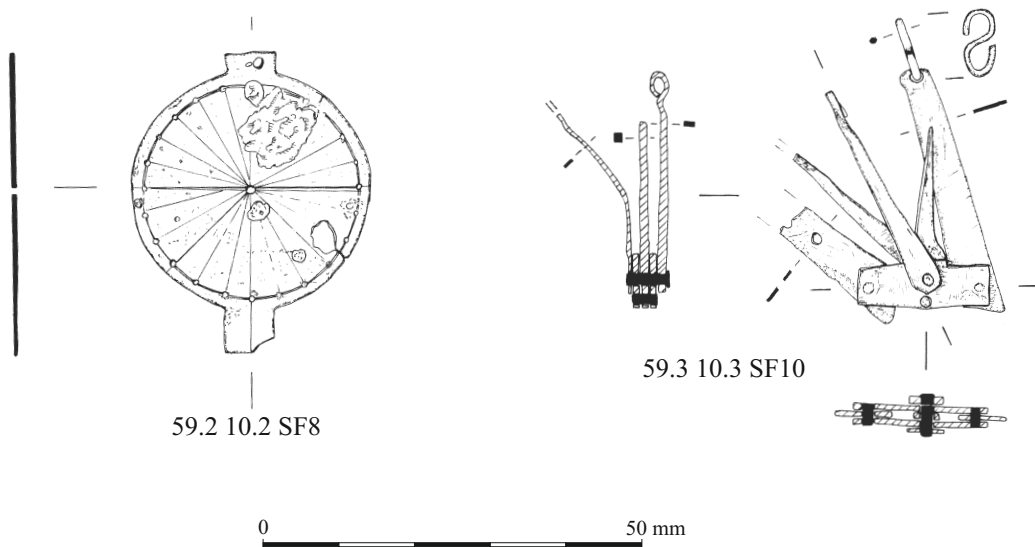


Figure 59. Silver spoon SF 159, and copper-alloy objects SF 8 and SF 10.

10.3 Scientific instrument/folding balance: Incomplete.*

Copper-alloy composite artefact (Figure 59.3). There is one flat, roughly rectilinear and slightly bent 'arm' up to 32mm long and 0.05mm thick, narrowing from 5.50mm at its angled distal end to 3.50mm in width towards its proximal end, at which point it extends outwards again slightly to form an angled, three-sided end 4mm in width. This end has a circular perforation 1.10mm in diameter, 0.05mm from the end of the arm, forming the setting for a small S-shaped hook 9mm long, 4mm wide and 0.09mm thick, and with a circular cross-section.

The widest, distal end of this flat arm is sandwiched between two broadly sub-rectangular side plates up to 17mm long, 11.50mm wide and 1.00mm thick with slightly curved ends, with both featuring a distinct near right-angled 'step' on their proximal edges. How the rectilinear arm is fastened between the two plates is unclear, though on the side of one of the plates a slightly rough, irregular area above the location of the arm hints at a possible rivet. The flat arm forms an acutely-angled L-shape with the two sub-rectangular side plates of approximately 70 degrees.

Two further arms are also sandwiched in between the two copper-alloy plates. At the opposite end of the plates to the first arm there is another rectilinear arm up to 1.10mm in thickness, with a slightly angled distal end 5.50mm wide narrowing towards its incomplete proximal end which has been broken or cut off leaving a width of 4.50mm. This arm has two circular perforations. One is situated near the centre line of the arm towards its proximal end, and is 1.20mm in diameter with slightly bevelled edges on both sides. The second circular perforation of similar size is located where the arm has broken or been cut away. There are some corrosion products present along the arm, and on one side a sub-circular rivet approximately 2mm long is the visible means of attachment to the two sub-rectangular side plates, though this appears to have been a fixed setting leaving the arm permanently at an angle of c. 45 degrees to the side plates.

Near the middle of the two metal plates are two further rivets up to 1.20mm wide. One is only 0.02mm from the distal edge of the plates and is flush with them, whilst the second is c. 2mm from their proximal edge and protrudes slightly on each side. Three separate components hinge on these rivets – one in between the two metal plates and hinged on the distal, flush-set rivet; and the other two hinged on the protruding proximal rivet and set between the rivet heads and the external surfaces of the plates. The central component is another flat arm up to 1mm thick and 22mm long. Around the distal rivet it consists of a sub-circular shape up to 8mm across, but it then narrows to a sharply acute point, with both sides having bevelled edges. This pointer is immobile as a result of corrosion, and actually overlaps with the flat, angled rectilinear arm.

On one side of the object, the external, proximal riveted component again has a cross-section up to 1mm thick, and is flat on its 'inner' face but with bevelled edges on its outer face. It has a three sided angular proximal end up to 3.80mm wide where it attaches to the rivet. It then narrows considerably to 1mm in width, and first bends slightly inwards and is then folded inwards to form an oval loop 2.5mm long. The very end of the looped section is cut off, and is folded over so that it does not quite meet the inward bend along its centre line. Unlike the central pointer, this 22mm long component still articulates and swivels relatively freely. On the opposite side of the instrument is a second very similar component, flat on the inner face and with bevelled edges on the outer side, but although this one is slightly longer at 23mm its original end appears to have been cut or broken off, near an inward curve which may indicate that there was once another loop present. This second external component bends outward slightly from the centre of the instrument, but it is unclear if this reflects the original alignment of this element. Most of the external surfaces of this object are covered in fine striations, many clearly marks from a fine file.

This object was found in the backfill of a relatively modern service trench in Trench 5 in Tom Quad, so its original context is unknown. The relative lack of corrosion suggests that it might be

post-medieval rather than medieval in date, but once again it is also relatively crude in execution which may indicate an earlier date. Although the centrally riveted pointer is similar to those on some medieval and post-medieval toiletry and chatelaine sets, the other arms or components do not match toiletry instruments. This 'pointer' may have rotated as part of some sort of surveying instrument, although it could not ever have rotated more than *c.* 280 degrees because of the flat acutely angled arm next to it. As with 7.2 SF No. 8 above, this object may have formed part of a much larger composite instrument.

The S-shaped loop and the loop at the end of the one arm or component suggest that it was designed to hang off another object, or alternatively, that other objects were to be suspended off it. This may indicate scales or balances of some sort, and the object has many features in common with two copper-alloy folding balances found in Norwich of late medieval or early post-medieval date, especially number 1572, which has one arm with several small round holes pierced through it, and a pointer (Margeson 1993, 203, fig. 155, nos. 1572 and 1573). It is also similar to another folding balance excavated from an early 15th century context at the Foundry site in York (Ottaway and Rogers 2002, 2952, fig. 1519, no. 13402). A geographically closer example was recovered from excavations at All Saints Church in Oxford (Allen, Durham and Goodall 2003, 313, fig. 6.17 no. 8), from either a late Saxon or early Norman context.

Context: Trench 5, service trench fill (243), SF No. 15. Length: 57mm (max.), width: 27mm (max.), thickness: 9.50mm (max.).

Scholarly Practices

Book Mounts and Clasps

Catalogue of objects

A total of six book mounts or clasps were recovered from a range of contexts, and the majority are dated to the later medieval and early post-medieval periods. Book clasps were riveted in position on the cover of the book to keep it closed (Allen 1999, 295). Isolated book clasps are fairly common finds on high status medieval and post-medieval sites, particularly ecclesiastical and monastic sites. There are several examples from excavations in Oxford, including from the Hospital of St John the Baptist and the Oxford City Ditch (Rogers 1991, 55), St Thomas Street (Allen 2006b, 376) and 4 Queen Street Oxford (Goodall 2003, 314). Several examples of flared book clasps are also noted in the Norwich Households volume, though there are no direct parallels (Margeson and Goodall 1993, 74-75). It is unusual to recover such a quantity of book clasps from a single site, however. The majority of the book clasps are dated to the 14th-17th century, demonstrating the high status of the site over a protracted period.

10.4. Copper-alloy book clasp: Incomplete.*

Copper-alloy sub-rectangular book clasp, with a flared terminal end (Fig. 60.1). The book clasp is incomplete, missing the lower plate and 'collar' joining the two plates and the integral hook, as well as part of the flared end which features scalloped edging. The upper plate survives and features a flared terminal end with scalloped design to the edges. The upper clasp is patterned across the width of the flared terminal end with three holes and a feather decoration, running upwards to a 'central stamped circle and dot motif of a hollow circle in the centre and raised circumscribing circle set within the clasp plate' (see PAS record: NCL-08C584). A linear pattern of three lines runs from the 'collar' end of the clasp to the central circular pattern, with shallower infilling linear patterning closer to the 'collar'. A similar example was recorded at Carthorpe, North Yorkshire (see PAS record: NCL-08C584), with a more local parallel recovered from St Thomas' Street, Oxford (Allen 1999, 295, fig. 6).

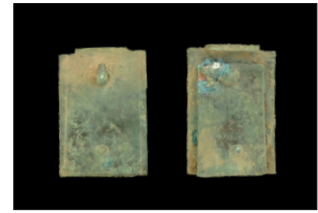
Context: Trench 9, service trench fill (620), SF No. 20. Date: *c.* 14th-15th century. Length: 50mm, width: 16-35mm.



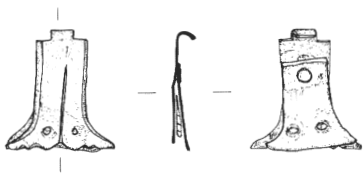
60.1 10.4 SF20



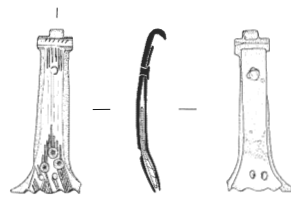
60.2 10.5 SF21



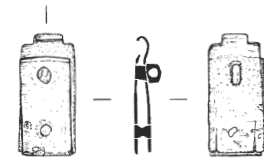
60.3 10.6 SF22



60.4 10.7 SF141



60.5 10.8 SF144



60.6 10.9 SF171



60.7 10.10 SF53



60.8 10.13 SF14



60.9 10.16 SF128



60.10 10.17 SF162



Figure 60. Copper-alloy objects.

10.5. Copper-alloy book clasp: Incomplete.*

Cast copper-alloy sub-rectangular book clasp with flared terminal end (Fig. 60.2). The book clasp is incomplete, missing the lower plate and 'collar' joining the two plates, as well as part of the flared end, the latter featuring scalloped edging. The upper plate survives and features a flared terminal end with scalloped design to the edges with two adjacent and equally spaced rivet attachment holes. The centre of the clasp features three rivet or decoration holes in a triangular pattern, with two holes closest to the terminal end and one hole closest to the central pattern. There is a central stamped circle and dot motif with a hollow circle in the centre and a raised circumscribing circle set within the clasp plate (see PAS record: NCL-08C584). Three lines are inscribed on the outer edges of the circle, repeated four times at regular intervals around the circumference, creating a sunburst-style pattern. Linear patterning also features towards the integral hook clasp, with lines spaced at close intervals travelling towards the central circle, though these stop short of the circle the exact pattern is indiscernible due to corrosion. There is no patterning to the underside of the clasp. Found within Building 7B in a deposit that also contained mid-16th to 17th century pottery.

Context: Trench 7, dump/demolition deposit (480), SF No. 21. Date: mid-16th to 17th century. Length: 75mm (max.), width: 20-35mm.

10.6. Copper-alloy book clasp: Complete.*

Copper-alloy book clasp of rectangular design consisting of two plates (Fig. 60.3). Upper plate features a drilled loop extending vertically from the plate surface; one end of the plate features a shallow hooked tab. The terminal end of the upper plate is plain, with the exception of a single rivet. The upper plate is decorated with two parallel engraved lines extending along the long edge. No other decoration is evident, although concretions within the corrosion suggest that the clasp may once have been enamelled, although there is no definitive evidence for this. The lower plate is plain with the exception of two rivets fixing the lower plate to the upper plate, in the centre of the plate at opposite ends. Found in garderobe deposit (496) in Building 7B, and this deposit also contained early to mid-14th century pottery, though the upper part of this deposit containing later material. It is not clear at what level this find was retrieved from.

Context: Trench 7, garderobe fill (496), SF No. 22. Date: late 15th to mid-16th century. Upper plate: length: 34mm, width: 22mm. Lower plate: length: 27mm, width: 15mm.

10.7. Copper-alloy book mount: Complete.*

Copper-alloy book mount of flared design consisting of two sheets, the facing sheet is engraved with a central horizontal line stemming from the long edge, with the two rivets of the clasp on either side (Fig. 60.4). The flared edge of the sheet is scalloped, with the opposite end featuring a narrow hooked tab. The edges of the upper sheet are bevelled. The lower sheet is plain and is attached to the upper sheet by three rivets. Some traces of leather binding survive. Recovered from layer (1005), a silty deposit above a probable buried garden soil but also containing stone working debris, and early 17th century pottery.

Context: Trench 11, layer (1005), SF No. 141. Date: c. 17th century. Upper plate: length 30mm, width: 1.5mm. Lower plate: length: 23mm, width: 13-25mm.

10.8. Copper-alloy book clasp: Complete.*

Cast copper-alloy sub-rectangular book clasp with flared terminal end (Fig. 60.5). The book clasp is complete, consisting of an upper plate with integral hook at the terminal end, and a lower plate attached by three rivets. The upper plate features a flared terminal end with damaged scalloped design to the edges, and two holes to support the rivets to attach the lower plate. The upper clasp is patterned across the width of the flared terminal end with three holes and a feather decoration and tapering towards a linear pattern of seven vertical lines running towards the integral hook. Three holes, with a diameter of 1mm have been drilled into the upper plate through the pattern, suggesting that this action was retrospective, forming a triangular shape near to the two rivet attachments at the flared end. The terminal end features a T-shaped collar with

incised horizontal lines running along the width. The collar features a v-shaped pattern with upper inverted row. The lower plate is undecorated, with the exception of scalloping and flaring to match the upper plate; it is attached to the upper plate by three rivets. The clasp is in excellent condition. Some traces of leather binding survive. Found within a possible garden soil or levelling deposit that also produced mid-16th and 17th century pottery.

Context: Trench 11, layer (1013), SF No. 144. Date: mid-16th to 17th century. Upper plate: length: 45mm, width: 5-20mm. Lower plate: length: 35mm, width: 5-14mm.

10.9. Copper-alloy book/strap clasp: Complete.*

Copper-alloy rectangular book or strap clasp consisting of two plates secured by two rivets (Fig. 60.6). The upper plate features an integral hook, a central cast loop protruding vertically from the upper plate with a central drilled hole. Two parallel lines are inscribed in line with the long edge of the clasp and either side of the central rivet, stemming from the plain, terminal end. The lower plate is plain and features two rivets connecting upper and lower plates. The object might be a strap clasp, although the integral hook may suggest that it was used as a book clasp (Ottaway and Rogers 2002, 2898, fig. 1474 no. 15197). This object was found in a layer (734) that might have been a garden soil deposit, and although this contained 13th to 14th century pottery, the layer immediately above contained 17th century pottery, perhaps indicating that the medieval wares were re-deposited.

Context: Trench 18, layer (734), Layer, SF No. 171. Upper plate: length: 32mm, width: 15mm. Lower plate: length: 25mm, width: 12mm.

Dress Objects and Fittings

A large quantity of dress objects and dress fittings were recovered from Christ Church, ranging from personal adornments such as an earring and a copper-alloy dagger chape, to functional yet decorative items such as buckles and buttons. A single decorated copper-alloy earring was recovered (SF No. 53), probably of post-medieval date. A single button with a loop and formed of two halves (SF No. 55) is similar to examples found during the York Coppergate excavations (Ottaway and Rogers 2002, 2898, fig. 2919 no. 14452). The single dagger or rapier chape formed of a single folded sheet of copper-alloy (SF No. 162) is unusual in that the patterning is different on each side, suggesting that this was added after construction once the sheet had been folded or rolled over. Some traces of the original leather lining of the chape are partly preserved by the corrosion products are visible inside the chape.

Five examples of strap ends and belt fittings were found at Christ Church, including two decorative strap ends, a possible undecorated belt mount and two decorative belt fittings, the latter including a domed copper-alloy stud and a sexfoil flower fitting. Six buckles were also recovered, with two double-looped examples and one rectangular buckle. One of the copper-alloy buckles (SF No. 155) dated to the 16th-17th century shows evidence of possible repair.

Three spurs were recovered, and it is possible that the two rowel spurs from deposit (540) may have originally formed a pair, although both spurs are too corroded to establish this. The buckle, often the only indicator (Ellis 1991, 57), is missing from both spurs, along with the strap terminal. Men and women from all classes of society would have worn spurs, from less common high status copper-alloy spurs to less ornate tin-plated iron spurs, partly for functional reasons but also as status symbols and fashion accessories (Ellis 1991, 54). All of the spurs recovered were of iron. Many iron spurs would have been decorated and protected from rust by a layer of tin, for which there is no evidence on the heavily corroded Christ Church examples. Most spurs would have had hooked attachments at the terminal ends of the arms of the spurs, but there is no evidence for these on those from Christ Church. Rowel spurs were introduced during the early 13th century, gradually replacing the use of prick spurs (Ellis 1991, 58). It is likely that the

Christ Church rowel spurs were later in date than this, though due to their corrosion and subsequent fragmentation it was impossible to investigate them from a typological perspective.

A large quantity of copper-alloy pins and lace chapes were recovered, many from the 13th to 17th century cemetery soils in Trench 5. Most of the copper-alloy pins featured a wound wire head, although some examples had a globular head with incised lines. Although lace chapes and pins are common finds on medieval sites, the occurrence of so many examples in Trench 5 suggests that these had been included in burials. It is not clear whether the lace chapes and pins might have been included on items of clothing worn by the deceased, or if the latter could have been re-used as shroud pins.

In addition, a single shoe heel protector was found in Trench 9 (SF No. 24) thought to be of 19th century date, although a similar example dated to the late 18th to early 19th century is noted in the *Norwich Households* publication (Goodall 1993, 63, fig. 31 no. 395).

Jewellery

Catalogue of objects

10.10. Copper-alloy ring/earring: Complete.*

Copper-alloy ring featuring an outer edge decorated with a series of small raised 'reeded' points (Fig. 60.7). The object is an open ring, and features a clasp at one end and a broken loop at the other. The object has been interpreted as an earring. The object was discovered within layer (313), a layer of cemetery soil, and it is possible that the item was part of a disturbed burial assemblage. No close parallel could be found for the earring, though it is most likely post-medieval in date.

Context: Trench 5, layer/cemetery soil (313), SF No. 53. Diameter: 20mm, thickness 1mm.

Fasteners, belt fittings and dress accessories

Catalogue of objects

10.11. Copper-alloy button: Complete.

Copper-alloy button or decorative fitting, globular in shape, with a tapering neck for attachment to another object. The object is likely decorative in function and has been tentatively interpreted as a button, a similar example has been noted from excavations at Coppergate, York (Ottaway and Rogers 2002, 2898, fig. 2919 no. 14452). As it was recovered from a cemetery soil, it is always possible that this was once actually associated with an inhumation.

Context: Trench 5, layer/cemetery soil (258), SF No. 55. Date: 13th to mid-16th century. Length (including mount shaft): 9mm, diameter: 7mm.

10.12. Decorative copper-alloy strap ornament: Complete.

Decorative copper-alloy disc, identified as a possible strap ornament. The disc features a central hand punched hole within a hexagonal depression, with raised edges, which suggests the possibility that the disc was attached to an object through this central hole. A similar example is identified as a strap ornament, recorded at Barentin's Manor, Oxfordshire (Goodall and Atherton 2005, 80, 86, fig. 3.8 no 23). Recovered from the makeup deposit for a cobbled surface which was probably St Fridewide's Lane.

Context: Trench 5, makeup layer (330), SF No. 05. Date: c. 13th-14th century. Diameter: 15mm.

10.13. Copper-alloy strap end: Incomplete.*

Copper-alloy strap end consisting of an openwork rectangular plate with decorative terminal knob (Fig. 60.8). The strap end consists of two identical plates, an upper plate and a lower plate featuring identical openwork panels and secured with three rivets, centrally placed and equidistant from one another along the length of the strap. The openwork panels have small

rounded features at either end, with constricted necks; this is interpreted either as decoration or as a fixture to secure a lower fixture to secure the belt. The terminal knob features a small type of fleur-de-lis pattern. The strap end is fine and the lower plate features two 'collars' or spacers between the openwork panels. An essentially unstratified find from a service trench fill.

Context: Trench 5, service trench fill (243), SF No. 14. Length: 55mm (max.), Width: 8mm (max.), thickness: 4mm. Openwork panels: Length: 15mm, width: 4mm.

10.14. Copper-alloy stud: Complete.

Copper-alloy domed stud or decorative fixture or fitting, featuring a scalloped rim and secured with a rivet through the central apex of the dome. The rivet is still in place, and is flush with the outer upper surface of the dome.

Context: Trench 5, layer/cemetery soil (254), SF No. 30. Date: 13th to mid-16th century. Diameter: 13mm, depth: 8mm. Rivet length: 8mm, width: 1mm.

10.15. Copper-alloy decorative belt fitting: Complete.

Copper-alloy decorative fitting featuring a sixfoil flower – the petals are heart-shaped, and concave on the reverse. The fitting has a punched central hole and is possibly a decorative fitting or belt mount. There is no evidence of a superstructure. A similar example has been noted from excavations at York Coppergate (Ottaway and Rogers 2002, 2939 fig. 1506 no. 1462), with a local example from Mount House, Witney (Allen *et al.* 2002, 143, fig. 3.13 no. 580).

Context: Trench 5, fill (273), SF No. 57. Outer diameter: 7mm, inner diameter: 3mm.

10.16. Copper-alloy plate: Complete.*

Copper-alloy rectangular plate, featuring four punched holes with a diameter of 2mm in each corner, and a central punched hole with a diameter of 4mm (Fig. 60.9). The plate has been torn from the central perforation to the outer edges of the plate. It is interpreted as a possible belt mount (cf. Margeson 1993, 39, no. 266), fixture or fitting.

Context: Trench 11, U/S, SF No. 128. Length 30mm, width: 20mm.

10.17. Copper-alloy chape: Complete.*

Copper-alloy dagger or rapier chape, tubular in cross-section and formed from a single shaped copper-alloy sheet seamed on one side, with an oval base (Fig. 60.10). The terminal end of the chape is scalloped and features three decorative incised lines on the obverse, with a further two lines across the mid-section followed with hashed marks towards the base, two decorative incised lines on the neck of the reverse, and a single incised line across the mid-section, there are no hash marks. It is notable that the two sides are not the same and do not line up with one another, as the object is made from a single sheet of copper-alloy, it suggests that the decoration was added after the chape had been formed, the difference in patterning on either side may indicate an outer and an inner side, or perhaps the object is unfinished or defective. The inside of the chape shows traces of a potentially complete leather lining. Another example of a dagger chape was recovered from the excavations at the Hospital of St John the Baptist, Oxford (Rogers 1991, 55-56, fig. 15 no. 1). The chape is most likely post-medieval in date, and it was incorporated within the fabric of a brick wall.

Context: Trench 14, Trench 14, wall 935, SF No. 162. Length: 145mm (max.), width: 20mm (max.), thickness 10mm.

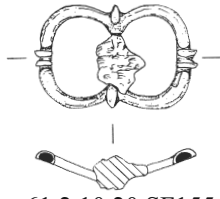
10.18. Copper-alloy object: Incomplete.

Two tubular fragments of copper-alloy, the longer of which is bowed and has a central drilled hole. The object may form part of a purse frame.

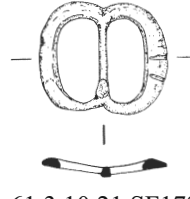
Context: Trench 7, layer (474), SF No. 26. Length: 30-60mm, width: 4mm.



61.1 10.19 SF23



61.2 10.20 SF155



61.3 10.21 SF172



61.4 10.23 SF123



61.5 10.25 SF42



61.6 10.26 SF43



61.7 10.33 SF88



61.8 10.93 SF158



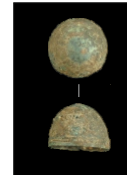
61.9 10.94 SF145



61.10 10.97 SF47



61.11 10.99 SF48



61.12 10.100 SF17



61.13 10.110 SF1



61.14 10.111 SF2



61.15 10.112 SF3



Figure 61. Copper-alloy and iron objects. 132

10.19. Copper-alloy buckle: Incomplete.*

Copper-alloy buckle, incomplete and fragmentary (Fig. 61.1).

Context: Trench 8, layer (541), SF No. 23. Date: late 15th to mid-16th century. Length: 40mm, width: 30mm, thickness: 5mm.

10.20. Copper-alloy buckle frame: Incomplete.*

Copper-alloy double-looped buckle frame with moulded pin rests (Fig. 61.2). The frame features heavy iron corrosion on the central pin bar, suggesting that the pin was iron. Given the good quality of the buckle, it seems unusual that the pin would be iron, and this might indicate that the original pin had been broken and then repaired using an iron pin. The buckle is of good quality copper-alloy and is most likely post-medieval in date.

Context: Trench 10A, layer (716), SF No. 155. Date: mid-16th to 17th century. Length: 40mm, width: 30mm, thickness: 1mm.

10.21. Copper-alloy buckle frame: Incomplete.*

Copper-alloy double-looped buckle frame with moulded pin rests (Fig. 61.3). The buckle is of good quality copper-alloy, perhaps bronze. This object was recovered from a mixed service trench fill and is thus essentially unstratified.

Context: Trench 20, service trench fill (758), SF No. 172. Length: 35mm, width: 30mm, thickness: 1mm.

10.22. Iron buckle: Complete.

Iron buckle, consisting of a rectangular frame and a pin. The object is in poor condition, being fragmentary and heavily corroded.

Context: Trench 5, ditch fill (261), SF No. 40. Date: late 15th to mid-16th century. Length: 35mm, width: 30mm, thickness: 4mm.

10.23. Iron buckle: Complete.*

Cast iron buckle, consisting of a frame and a single loop pin (Fig. 61.4). The object is in poor condition, being fragmentary and heavily corroded.

Context: Trench 7, garderobe fill (496), SF No. 123. Date: early to mid-14th century. Buckle: length: 60mm, width: 50mm, thickness: 10mm. Pin: length: 45mm, width: 15mm, thickness: 5mm.

Spurs

Catalogue of objects

10.24. Iron rowel spur: Incomplete.

Fragmentary and corroded iron boot spur. The object is tentatively identified as a rowel-type spur, but the object is in an extremely poor condition and it is impossible to measure or accurately describe it in any detail.

Context: Trench 7, garderobe fill (496), SF No. 41. Date: early to mid-14th century.

10.25. Iron rowel spur: Incomplete.*

Iron rowel spur, in good condition though missing the rowel attachment (Fig. 61.5). Originally D-shaped in section, one of the arms of the spur is broken and has been bent horizontal to the spur terminal. The spur terminal, neck or shank is missing the rowel, though it features a slit and rounded points to which the rowel would have been attached. The spur curves upwards at an approximately 45° angle, known as a 'swan neck', before tapering horizontally to the terminal attachment.

Context: Trench 8, pit fill (540), SF No. 42. Length of arms: 65mm, width: 5-20mm (max.), spur terminal: length: 25mm, width 5mm.

10.26. Iron rowel spur: Incomplete.*

Iron rowel spur, in relatively good condition, originally complete with diagnostic rowel attached to the spur terminal with a single rivet, though this is now separate (Fig. 61.6). Originally D-shaped in section, one arm of the spur is misshapen and has been bent inwards. The undamaged arm forms a D-shaped section, with the terminal end bent outwards from the arm at right angles. The spur terminal, neck or shank features a slit and rounded points of attachment for the rowel, which is attached with a single rivet. The spur terminal is horizontal to the spur, tapering to the rowel attachment. The rowel spur, though corroded, probably originally featured five points. The spur, terminal and rowel are understated and barely functional.

Context: Trench 8, pit fill (540), SF No. 43. Length of arms: 45mm, width: 5-20mm, spur terminal: length: 10mm, width: 5mm. Rowel diameter: 8mm.

Shoe Accessories

Catalogue of objects

10.27. Copper-alloy heel protector: Complete.

Copper-alloy object, flat, curved and featuring three equally spaced drilled holes, possibly a shoe heel protector. The object measures 45mm in length, 80mm in width and 1mm in thickness.

Context: Trench 9, service trench fill (620), SF No. 24. Length: 45mm, width: 80mm, thickness: 1mm.

Pins

Catalogue of objects

10.28. Copper-alloy pin: Complete.

Copper-alloy pin.

Context: Trench 5, layer (246), SF No. 63. Date: *c.* late 15th to mid-16th century. Length: 70mm.

10.29. Copper-alloy pin: Complete.

Copper-alloy pin with spherical head.

Context: Trench 5, service trench fill (243), SF No. 66. Length: 45mm.

10.30. Copper-alloy pin: Complete.

Copper-alloy pin, flat topped with wire-coiled head.

Context: Trench 5, layer (257), SF No. 67. Date: mid-14th century? Length: 45mm.

10.31. Copper-alloy pin: Complete.

Copper-alloy pin or tack, robust and with a flat head.

Context: Trench 5, layer (249), SF No. 68. Date: *c.* mid-15th to mid-16th century. Length: 50mm.

10.32. Copper-alloy pin: Incomplete.

Two fragments of copper-alloy wire, possibly shanks of pins that have lost their diagnostic ends.

Context: Trench 8, layer (538), SF No. 87. Date: *c.* late 17th to mid-18th century. Lengths: 30-35mm.

10.33. Copper-alloy pin: Complete.*

Copper-alloy pin with spherical head, misshapen (Fig. 61.7).

Context: Trench 5, layer/cemetery soil (258), SF No. 88. Length: 65mm.

10.34. Copper-alloy pin: Complete.

Copper-alloy pin with flat head.

Context: Trench 5, layer/cemetery soil (258), SF No. 90. Length: 40mm.

- 10.35. Copper-alloy pin: Incomplete.
Copper-alloy pin or needle, missing the diagnostic parts.
Context: Trench 5, layer (299), SF No. 92. Length: 40mm.
- 10.36. Copper-alloy pin: Complete.
Copper-alloy pin.
Context: Trench 5, layer/cemetery soil (250) SF No. 093. Date: mid-13th to mid-16th century.
Length: 40mm.
- 10.37. Copper-alloy pin: Complete.
Copper-alloy pin.
Context: Trench 5, layer (299), SF No. 94. Length: 35mm.
- 10.38. Copper-alloy pin: Complete.
Copper-alloy pin with flat head.
Context: Trench 5, pit fill (252), SF No. 95. Date: late 15th to mid-16th century. Length: 25mm.
- 10.39. Copper-alloy pin: Complete.
Copper-alloy pin, misshapen.
Context: Trench 6, circular stone base/footing (406), SF No. 96. Date: 15th-16th century.
Length: 40mm.
- 10.40. Copper-alloy pin: Complete.
Copper-alloy pin with flat head.
Context: Trench 5, layer/cemetery soil (258), SF No. 97. Date: mid-13th to mid-16th century.
Length: 30mm.
- 10.41. Copper-alloy pin: Complete.
Copper-alloy pin.
Context: Trench 5, layer/cemetery soil (258), SF No. 98. Date: mid-13th to mid-16th century.
Length: 35mm.
- 10.42. Copper-alloy pin: Complete.
Copper-alloy pin.
Context: Trench 5, layer/cemetery soil (258), SF 99. Date: mid-13th to mid-16th century. Length: 25mm.
- 10.43. Copper-alloy pin: Complete.
Copper-alloy pin, misshapen.
Context: Trench 5, service trench fill (243), SF No. 100. Length: 76mm.
- 10.44. Copper-alloy pin: Complete.
Copper-alloy pin, misshapen, with spherical head.
Context: Trench 5, layer (249), SF No. 102. Date: mid-15th to mid-16th century. Length: 40mm.
- 10.45. Copper-alloy pin: Complete.
Copper-alloy pin with a spherical head.
Context: Trench 5, layer/cemetery soil (250), SF No. 103. Date: mid-13th to mid-16th century.
Length: 50mm.
- 10.46. Copper-alloy pin: Complete.
Copper-alloy pin missing the diagnostic head.
Context: Trench 5, layer (257), SF No. 105. Date: mid-14th century? Length: 50mm.

10.47. Copper-alloy pin: Complete.

Copper-alloy pin, missing the diagnostic head.

Context: Trench 5, layer (257), SF No. 107. Date: mid-14th century? Length: 43mm.

10.48. Copper-alloy pin: Complete.

Copper-alloy pin.

Context: Trench 5, layer/cemetery soil (258), SF No. 108. Date: mid-13th to mid-16th century.

Length: 45mm.

10.49. Copper-alloy pin: Complete.

Copper-alloy pin, misshapen.

Context: Trench 5, layer/cemetery soil (258), SF No. 109. Date: mid-13th to mid-16th century.

Length: 60mm.

10.50. Copper-alloy pin: Complete.

Copper-alloy pin.

Context: Trench 5, layer/cemetery soil (258), SF No. 110. Date: mid-13th to mid-16th century.

Length: 45mm.

10.51. Copper-alloy pin: Complete.

Copper-alloy pin with flat head.

Context: Trench 5, layer/cemetery soil (258), SF No. 111. Date: mid-13th to mid-16th century.

Length: 45mm.

10.52. Copper-alloy pin: Complete.

Copper-alloy pin.

Context: Trench 5, layer/cemetery soil (258), SF No. 113. Date: mid-13th to mid-16th century.

Length: 35mm.

10.53. Copper-alloy pin: Complete.

Copper-alloy pin with spherical head.

Context: Trench 5, layer/cemetery soil (258), SF No. 114. Date: mid-13th to mid-16th century.

Length: 32mm.

10.54. Copper-alloy pin: Complete.

Copper-alloy pin with spherical head.

Context: Trench 5, layer/cemetery soil (258), SF No. 115. Date: mid-13th to mid-16th century.

Length: 35mm.

10.55. Copper-alloy pin: Complete.

Copper-alloy pin with spherical head.

Context: Trench 5, ditch fill (294), SF No. 116. Date: late 15th to mid-16th century. Length:

45mm.

10.56. Copper-alloy pin: Complete.

Copper-alloy pin, misshapen.

Context: Trench 11, layer (1005), SF No. 135. Date: 17th century. Length: 35mm.

10.57. Copper-alloy pin: Complete.

Copper-alloy pin with spherical head.

Context: Trench 11, layer (1005), SF No. 139. Date: 17th century. Length: 45mm.

10.58. Copper-alloy pin: Complete.

Copper-alloy pin.

Context: Trench 11, layer (1005), SF No. 140. Date: 17th century. Length: 35mm.

10.59. Copper-alloy pin: Complete.

Copper-alloy pin, with round wire coiled head, misshapen.

Context: Trench 10A, ditch/gully fill (710), SF No. 153. Date: 17th century. Length: 45mm.

10.60. Copper-alloy pin: Complete.

Copper-alloy pin, with spherical head.

Context: U/S, SF No. 166. Length: 40mm.

10.61. Copper-alloy pin: Complete.

Copper-alloy pin measuring 25mm in length.

Context: U/S, SF No. 167. Length: 25mm.

10.62. Copper-alloy pin: Complete.

Copper-alloy pin with rounded head.

Context: Trench 22B, U/S. Date: Unknown. Length: 35mm.

Lace chapes or tags

Catalogue of objects

10.63. Copper-alloy lace chapes.

Two fragments of rolled copper-alloy sheeting of uncertain function, tentatively interpreted as lace chapes or tags.

Context: Trench 8, layer (538) SF No. 27. Date: late 17th to mid-18th century. Length: 45-60mm, width: 10mm.

10.64. Copper-alloy lace chape.

A single fragment of rolled copper-alloy sheeting interpreted as a lace chape or tag, with a single hole drilled 25mm from the terminal end prior to the object being rolled.

Context: Trench 5, layer (249), SF No. 29. Date: mid-15th to mid-16th century. Length: 90mm, width: 7mm.

10.65. Copper-alloy lace chape.

A fragment of a rolled copper-alloy sheet, interpreted as a possible lace chape or tag.

Context: Trench 8, layer (539), SF No. 52. Date: late 17th to mid-18th century. Length: 15mm, width: 7mm.

10.66. Copper-alloy lace chape.

An undecorated tubular fragment, tentatively identified as a possible lace chape or tag.

Context: Trench 5, ditch fill (261), SF No. 54. Date: late 15th to mid-16th century. Length: 26mm, width: 1mm.

10.67. Copper-alloy lace chape.

A thin sheet of undecorated copper-alloy with 'curled' edges forming a tubular shape, interpreted as a possible lace chape or tag. The terminal end of the sheet is curled towards the middle and features a single perforation.

Context: Trench 5, service trench fill (243), SF No. 61. Length: 80mm, width: 5mm.

10.68. Copper-alloy lace chape.

An undecorated tubular fragment of copper-alloy measuring, a possible lace chape or tag.

Context: Trench 5, layer (249), SF No. 70. Date: mid-15th to mid-16th century. Length: 25mm, width: 1mm.

10.69. Copper-alloy lace chape.

An undecorated tubular fragment of copper-alloy, a possible lace chape or tag.

Context: Trench 5, layer/cemetery soil (254), SF No. 71. Date: 13th to mid-16th century. Length: 25mm, width: 1mm.

10.70 Copper-alloy lace chape.

A tubular fragment of undecorated copper-alloy, a possible lace chape or tag.

Context: Trench 5, layer/cemetery soil (259), SF No. 72. Date: 13th to mid-16th century. Length: 20mm, width: 1mm.

10.71. Copper-alloy lace chape.

A tubular fragment of undecorated copper-alloy, a possible lace chape or tag.

Context: Trench 5, layer (249), SF No. 73. Date: mid 15th to mid-16th century. Length: 25mm, width: 1mm.

10.72. Copper-alloy lace chape.

Two fragments of a single undecorated tubular fragment of copper-alloy, a possible lace chape or tag.

Context: Trench 5, layer (311), SF No. 74. Length: 25mm, width: 1mm.

10.73. Copper-alloy lace chape.

A tubular fragment of undecorated copper-alloy, a possible lace chape or tag.

Context: Trench 5, layer/cemetery soil (258), SF No. 75. Date: 13th to mid-16th Century. Length: 35mm, width: 1mm.

10.74. Copper-alloy lace chape.

An undecorated tubular fragment of copper-alloy, a possible lace chape or tag.

Context: Trench 5, layer (249), SF No. 76. Date: mid 15th to mid-16th century. Length: 25mm, width: 1mm.

10.75. Copper-alloy lace chape.

A tubular fragment of undecorated copper-alloy, a possible lace chape or tag.

Context: Trench 5, layer/cemetery soil (258), SF No. 77. Date: 13th to mid-16th century. Length: 25mm, width 1mm.

10.76. Copper-alloy lace chape.

A tubular fragment of undecorated copper-alloy, tentatively identified as a possible lace chape or tag.

Context: Trench 5, layer/cemetery soil (258), SF No. 78. Date: 13th to mid-16th century. Length: 25mm, width: 1mm.

10.77. Copper-alloy lace chape.

A tubular fragment of undecorated copper-alloy, a possible lace chape or tag.

Context: Trench 5, layer/cemetery soil (250), SF No. 79. Date: 13th to mid-16th century. Length: 35mm, width: 1mm.

10.78. Copper-alloy lace chape.

A tubular fragment of undecorated of copper-alloy, a possible lace chape or tag.

Context: Trench 5, layer (277), SF No. 80. Date: late 15th to mid-16th century. Length: 25mm, width: 1mm.

10.79. Copper-alloy lace chape.

An undecorated tubular fragment of copper-alloy measuring, a possible lace chape or tag.

Context: Trench 5, service trench fill (243), SF No. 81. Length: 26mm, width: 1mm.

10.80. Copper-alloy lace chape.

An undecorated tubular fragment of copper-alloy, a possible lace chape or tag.

Context: Trench 5, layer (299), SF No. 82. Length: 30mm, width: 1mm.

10.81. Copper-alloy lace chape.

A tubular fragment of undecorated copper-alloy, a possible lace chape or tag.

Context: Trench 5, fill (273), SF No. 83. Length: 20mm, width: 1mm.

10.82. Copper-alloy lace chape.

A fragment of undecorated tubular fragment of copper-alloy, identified as a possible lace chape or tag.

Context: Trench 5, layer/cemetery soil (258), SF No. 84. Date: 13th to mid-16th century. Length: 25mm, width: 1mm.

10.83. Copper-alloy lace chape.

An undecorated tubular fragment of copper-alloy, identified as a lace chape or tag.

Context: Trench 5, fill (273), SF No. 85. Length: 25mm, width: 1mm.

10.84. Copper-alloy lace chape.

A tubular fragment of undecorated copper-alloy, a possible lace chape or tag.

Context: Trench 6, layer (401), SF No. 86. Date: 15th century. Length: 22mm, width: 1mm.

10.85. Copper-alloy lace chapes.

Four undecorated tubular fragments of copper-alloy, possible lace chapes or tags.

Context: Trench 11, layer (1005), SF No. 134. Date: 17th century. Length: 25mm, width: 1mm.

10.86. Copper-alloy lace chapes.

Two fragments of undecorated tubular copper-alloy measuring, possible lace chapes or tags.

Context: U/S, SF 130. Length: 20-25mm, width: 1mm.

10.87. Copper-alloy lace chapes.

Two undecorated tubular fragments of copper-alloy measuring, possible lace chapes or tags.

Context: Trench 11, layer (1005), SF No. 138. Date: 17th century. Length: 25mm, width: 1mm.

10.88. Copper-alloy lace chapes.

Two fragments of a single undecorated tubular fragment of copper-alloy, a possible lace chape or tag.

Context: Trench 13, layer (801) SF No. 164. Date: mid-16th to 17th century? Length: 25mm, width: 1mm.

10.89. Copper-alloy lace chape.

A fragment of undecorated tubular fragment of copper-alloy, a possible lace chape or tag.

Context: Trench 10A, ditch/gully fill (710), SF No. 165. Date: 17th century. Length: 25mm, width: 1mm.

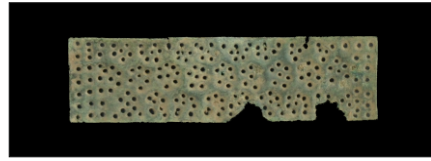
10.90. Copper-alloy lace chape.

An undecorated tubular fragment of copper-alloy, a possible lace chape or tag.

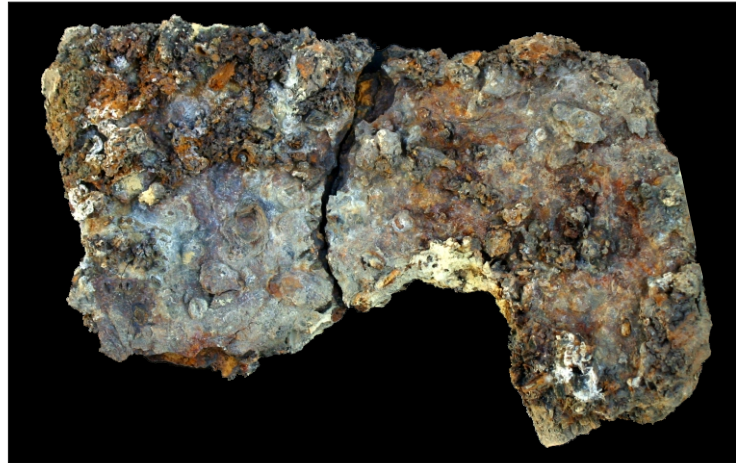
Context: U/S, SF No. 168. Length: 26mm, width: 1mm.



62.1 10.113 SF4



62.2 10.118 SF25



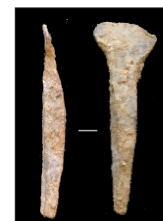
62.3 10.121 SF126



62.4 10.122 SF127



62.5 10.127 SF37



62.6 10.254 SF33



Figure 62. Copper-alloy, iron and lead objects.
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10.91. Copper-alloy lace chape.

A single fragment of rolled copper-alloy sheeting, interpreted as a probable lace chape or tag.

Context: Trench 20, layer (781), SF 179. Length: 50mm, width: 10mm.

10.92. Copper-alloy lace chape.

Copper-alloy lace chape.

Context: Trench 22B, U/S. Length: 25mm, width: 1-4mm.

Toiletry Articles

Catalogue of objects

10.93. Copper-alloy ear scoop: Complete.*

Copper-alloy ear scoop featuring a spatulated end and a twisted shaft, tapering to a sharp point – possibly a toothpick or nail cleaner (Fig. 61.8). The terminal end features a shallow oval bowl or scoop and the shank is flat, with two decorative s-twists separating the scoop. A patterned area on the shank features a single small and barely visible double line and cross pattern ||X||, before tapering to a pointed end. There is no evidence of gilding and the scoop is slightly misshapen. Another example, though not a close parallel, was recovered from the garderobe deposits at Merton College, Oxford and similar examples have also been noted in the *Norwich Households* volume (Allen 2006a, 281-283, fig. 19 no. 1; Goodall 1993, 64, fig. 32 nos. 397-399, 402).

Context: Trench 9, layer (624), SF No. 158. Length: 60mm, width: 5mm.

Horse furniture

Catalogue of objects

10.94. Copper-alloy crotal bell: Complete.*

Cast one-piece spherical copper-alloy crotal bell with a cast and drilled suspension loop, two circular sound holes in the upper hemisphere, and a sound bow in the lower hemisphere (Fig. 61.9). There are no vertical mould joints, though a girth rib separates the spheres, and the lower hemisphere features a barely visible possible sunburst pattern.

Context: Trench 11, layer (1010), SF No. 145. Date: mid-16th to 17th century. Diameter: 30mm, height: 35mm.

10.95. Iron horseshoe.

Iron horseshoe, complete but too corroded to note any distinguishing features such as nail holes.

Context: Trench 8, U/S, SF No. 137. Length: 140mm, width: 120mm.

10.96. Iron bar.

Iron bar with rounded ends, measuring 130mm in length, with a thickness of 7mm and an end diameter of 15mm. The object is unidentified, but may be part of horse trappings.

Context: Trench 3, hearth/burnt layer (188). Length: 130mm, width: 15mm, thickness: 7mm.

Craft and Occupational Objects

Bodkin Pins

10.97. Copper-alloy object: Incomplete.*

Copper-alloy object similar to a needle, with a closed loop, and a twisted shank (Fig. 61.10).

The object is truncated before the terminal end. Possibly a bodkin pin.

Context: Trench 5, layer (249), SF No. 47. Tom Quad, Layer, Date: mid-15th to mid-16th century. Length: 25mm, width: 1mm.

10.98. Copper-alloy object: Incomplete.

Copper-alloy object similar to a needle with a closed loop and twisted shank, the object is truncated before the terminal end. Possibly a bodkin pin.

Context: Trench 5, layer (249), SF No. 49. Date: mid-15th to mid-16th century. Length: 25mm, width: 1mm.

10.99. Copper-alloy object: Incomplete*.

Copper-alloy object similar to a needle, with a closed loop, and a twisted shank (Fig. 61.11). The object is truncated before the terminal end. Possibly a bodkin pin.

Context: Trench 5, layer/cemetery soil (258), SF No. 48. Date: 13th to mid-16th century. Length: 40mm, Width: 1mm.

Thimbles

Catalogue of objects

10.100. Cast copper-alloy thimble: Complete.*

Cast copper-alloy 'beehive' thimble, featuring a hand-punched pattern of indentations running in vertical lines over the main body, excluding the apex which is plain (Fig. 61.12). The thimble features a crude incised decoration of two or more lines running parallel to the rim. There is no evidence for a hole in the apex of the thimble.

Context: Trench 5, layer/cemetery soil (254), SF No. 17. Date: 13th to mid-16th century. Diameter: 15mm, height: 13mm.

10.101. Cast copper-alloy thimble: Complete.

Cast copper-alloy 'beehive' thimble, similar to SF 17, with a hand-punched pattern of indentations in vertical lines over the main body, excluding the apex which is plain, and crudely incised decoration of two or more lines parallel to the rim. There is no evidence for a hole in the apex of the thimble. The thimble is in poor condition, misshapen and with sections missing.

Context: Trench 6, layer (403), SF No. 44. Date: c. 15th century. Diameter: 20mm, height: 13mm.

Needles

Catalogue of objects

10.102. Copper-alloy needle: Complete.

Copper-alloy needle.

Context: Trench 5, layer/cemetery soil (258), SF No. 65. Date: 13th to mid-16th century. Length: 70mm.

10.103. Copper-alloy needle: Complete.

Copper-alloy needle, misshapen.

Context: Trench 5, service trench fill (243), SF No. 64. Length: 80mm.

10.104. Copper-alloy needle: Complete.

Copper-alloy needle.

Context: Trench 5, service trench fill (243), SF No. 101. Length: 55mm.

10.105. Copper-alloy needle or pin: Incomplete.

Copper-alloy needle or pin, damaged, and missing the diagnostic head.

Context: Trench 5, service trench fill (243), SF No. 104. Length: 40mm.

10.106. Copper-alloy needle: Complete.

Copper-alloy needle.

Context: Trench 5, layer (257), SF No. 106. Date: mid-14th century? Length: 45mm.

10.107. Copper-alloy needle or pin: Incomplete.

Copper-alloy needle or pin, damaged and missing the diagnostic head.

Context: Trench 5, layer/cemetery soil (258), SF No. 112. Date: 13th to mid-16th century. Length: 55mm.

10.108. Copper-alloy needle or pin: Incomplete.

Two fragments of copper-alloy pin or needle, damaged and missing the diagnostic head.

Context: Trench 5, service trench fill (243), SF No. 91. Length: 15mm.

10.109. Copper-alloy needle: Complete

Copper-alloy needle.

Context: Trench 5, layer (257), SF No. 50. Date: 13th to mid-16th century. Length: 40mm.

Decorative Fittings

Catalogue of objects

10.110. Copper-alloy decorative fitting: Complete.*

Copper-alloy decorative fitting in the shape of a fleur-de-lis, possibly a decorative door or furniture hinge mount (Fig. 61.13).

Context: Trench 5, garderobe fill (333), SF No. 01. Date: c. 15th century. Length: 110mm, width: 135mm, thickness: 1mm.

10.111. Copper-alloy or brass object: Complete.*

Copper-alloy or brass object, shaped like the letter 'I' or the Roman numeral one (Fig. 61.14). No visible decoration or fixture points are noted, suggesting the object could have been set into stonework or soldered. The object may be interpreted as decorative fixture or monumental fixture, perhaps a brass letter or numeral fitting for a room door or wall, as it is weighted slightly to one end. It has one polished, slightly concave 'outer' surface, and a rough 'internal' surface.

Context: Trench 5, garderobe fill (333), SF No. 02. Date: c. 15th century. Length: 60mm, width: 8-20mm, thickness: 2mm.

10.112. Copper-alloy object: Incomplete.*

Copper-alloy object, possibly the broken tip of a decorative object (Fig. 61.15). Pointed or leaf shaped, with an uneven terminal end.

Context: Trench 5, garderobe fill (333), SF No. 03. Date: c. 15th century? Width: 10mm, thickness: 1mm.

10.113. Copper-alloy decorative strip: Complete.*

Copper-alloy decorative strip with a decorative terminal end (Fig. 62.1). The terminal end of this fine strip features a 'collar' across its width, forming a T-shaped intersection with two punched holes either side, and a triangular terminal featuring a single punched hole. The function of the item is unknown, though it may be a binding plate or a decorative fixture.

Context: Trench 5, makeup layer (330), SF No. 04. Date: 13th-14th century. Length: 47mm, width: 6-10mm.

10.114. Copper-alloy ring: Complete.

Copper-alloy ring, open and misshapen, interpreted as a possible binding ring or a coffin fitting.

Context: Trench 8, layer (539), SF No. 52. Date: late 17th to mid-18th century. Length: 50mm, Thickness: 1mm.

10.115. Copper-alloy ring: Complete.

Open copper-alloy ring, the item could be interpreted as a binding ring or a coffin fitting, it does not feature any decoration or patterning.

Context: Trench 11, cobbled surface (1019), SF No. 150. Date: 13th-14th century? Diameter: 20mm, thickness: 1mm.

10.116. Copper-alloy ring: Complete.

Copper-alloy ring, open and misshapen. The item could be interpreted as a binding ring or a coffin fitting, and it does not feature any decoration or patterning and is heavily corroded.

Context: Trench 12, Spit C, U/S, SF No. 148. Length: 25mm, thickness: 3mm.

10.117. Copper-alloy ring: Complete.

Copper-alloy ring, with a flat profile possibly a binding ring, fitting or ferrule. No wear or decoration is noted.

Context: Trench 7, Building 7A, layer (460), SF No. 45. Date: late 15th to mid-16th century. Diameter: 22mm, thickness: 2mm.

10.118. Copper-alloy pierced rectangular sheet: Complete.*

Copper-alloy pierced rectangular sheet featuring hand pierced holes, possibly a binding strip (Fig. 62.2). The ends of the sheet feature two vertical rows of pierced holes, with the remainder of the piercing forming a hexagonal pattern of six to seven holes arranged around a central hole around it. The unpierced sections form a hexagonal pattern, of which there are three rows. There is some damage to the sheet along one of the edges where the pattern has become weakened and has broken off in a modular fashion. A similar example with a leaf-punched design is noted in the Norwich Households volume, dated to the early-mid 17th century (Margeson and Goodall 1993, 77-78).

Context: Trench 5, layer (277), SF 25. Date: late 15th to mid-16th century. Length: 80mm, width: 20mm, thickness: 0.01mm.

10.119. Circular copper-alloy object: Complete.

Circular copper-alloy object interpreted as a possible boss. The object features a raised circular 'dome' with a flattened rim. No fixture points are visible and the object does not feature decoration. The object is in poor condition, with damage to the 'dome' and 'rim'.

Context: Trench 11, layer (1007), SF 131. Date: late 15th to mid-16th century. Outer rim diameter: 25mm, inner rim diameter: 12mm, depth: 7mm.

10.120. Copper-alloy fitting: Complete.

Circular copper-alloy fitting with raised rim and centrally raised inner rim with concave centre, the underside of the object is convex and solid, with the exception of an area of damage causing a hole, revealing a hollow interior. The object is of unknown function but is possibly a fitting, or perhaps a caster. The underside of the object has evidence of iron corrosion, suggesting that the object was in close proximity to or perhaps formed part of an iron object.

Context: Trench 20, mixed service trench fill (758), SF No. 176. Outer ring diameter: 50mm, inner ring diameter: 25mm, depth: 10mm.

Blades

A single axe blade was recovered from garderobe deposit (496), thought to be a felling axe, though it is in poor condition, fragmentary and heavily corroded. In addition, five knife blades

were recovered, though these were also in poor condition, heavily corroded and fragmentary, making further assessment impossible.

Axe Blades

Catalogue of objects

10.121. Iron axe head: Incomplete.*

Iron axe head, much corroded, fragmentary and in extremely poor condition (Fig. 62.3). The axe is split across the cheek through corrosion. It was hafted at the poll or butt, with a wooden handle, traces of which are preserved in the iron corrosion through mineralisation.

It is possible that the axe was a felling axe of post-medieval date *c.* 16th-19th century, although it may predate this.

Context: Trench 7, garderobe fill (496), SF No. 126. Length: 150mm, width: 80mm (max.), thickness: 15mm, weight: 577g.

Knife Blades

Catalogue of objects

10.122. Iron blade: Complete.*

Iron knife blade, heavily corroded though complete (Fig. 62.4). There is no evidence of a handle or hafting. The blade features a sharp point and a slightly trapezoidal tang.

Context: Trench 11, U/S, SF No. 127. Length: 175mm, width: 15-20mm.

10.123. Iron blade: Incomplete.

Heavily corroded and fragmentary iron blade. No further identifications are possible due to corrosion.

Context: Trench 7, layer (474). Length: 60mm, width: 15mm, thickness: 2mm.

10.124. Iron blade: Incomplete.

Heavily corroded blade fragment, the object is too heavily corroded for further identification.

Context: Trench 10A, ditch/gully fill (710). Date: 17th century? Length: 35mm, width: 10mm.

10.125. Iron blade: Incomplete.

Heavily corroded iron blade, featuring three consecutive circular perforations or indentations, each with a diameter of 3mm. The blade is too heavily corroded for further identification, though the circular perforations suggest the object may be the blade of a scale tang knife.

Context: Trench 11, layer (1005). Date: *c.* 17th century. Length: 60mm, width: 10mm.

10.126. Iron knife blade: Incomplete.

Heavily corroded and fragmentary iron knife blade. The blade is too corroded to display any specific diagnostic features and is in a very poor state of preservation.

Context: Trench unknown, context (2002). Length: 190mm, width: 25mm.

Door Furniture

In total three iron keys were recovered from layer (496), a mid-14th century garderobe deposit, although these might have been from a later, upper part of this context comprising demolition debris – their exact location within the feature is unknown. It is impossible to say whether the keys formed a set and were on a ring when deposited, or were deposited individually. All of the keys are fragmentary and heavily corroded. There are some indications from the blade of the most well-preserved that they are post-medieval rather than medieval in date and might have been contained within the demolition debris in the upper part of this deposit, but further identification or typology is not possible. A single hinge was also recovered from this deposit.

Keys

Catalogue of objects

10.127. Iron key: Incomplete.*

Iron key featuring a broken oval bow and a shaft with a circular profile, with a bow width of 30mm and a blade length of 30mm (Fig. 62.5). The key is heavily corroded and is fragmentary. Context: Trench 7, garderobe fill (496) SF No. 37. Date: mid-14th century? Length: 110mm (max.), width: 35mm (max.).

10.128. Iron key: Incomplete.

Fragmentary iron key. Too corroded and fragmented to discern any diagnostic elements, with a small surviving fragment of the bow, and a fragment of the shaft including the blade which is too corroded and fragile to be examined in any detail.

Context: Trench 7, garderobe fill (496), SF No. 38. Date: mid-14th century? Length: 65mm.

10.129. Iron key: Incomplete.

The object is thought to be an iron key, though it is too corroded and fragmentary to provide any diagnostic details or measurements.

Context: Trench 7, garderobe fill (496), SF No. 39. Date: mid-14th century?

Hinges

Catalogue of objects

10.130. Iron hinge: Incomplete.

Iron hinge with an L-shaped profile, perhaps due to post-depositional damage. The hinge has three barrels for the pin, flaring out towards the terminal end. The hinge features two holes for attachment along the strap, one of which is on the apex of the bend, suggesting that the hinge is a strap hinge that has been misshapen. It may be post-medieval in date.

Context: Trench 11, U/S, SF No. 129. Length: 95mm, width: 25-35mm.

Fixtures and Fittings

At least 214 iron nails were recovered from a wide range of contexts across the Christ Church sites, the majority with square heads and square shanks, though a significant number had flat, circular or sub-circular heads and rounded shanks. Other types of nails have been noted in the catalogue below. No nails were retained. Three fittings were also recovered, including an iron washer from deposit (159), and a nail and washer from redeposited fill (620). Trench 23 contained an unstratified late 19th or early 20th century General Post Office tag, which may have been derived from sacks of mail delivered to the college.

Nails

Catalogue of objects

10.131. Iron nail: Complete.

Heavily corroded iron nail with a flat head, a rounded shank and a point.

Context: Trench 7, U/S. Length: 50mm, diameter: 25mm.

10.132. Iron nail: Incomplete.

Heavily corroded and fragmentary iron nail. No further identifications or measurements are possible due to heavy corrosion.

Context: Trench 4, cobbled surface (199). Length: 45mm.

10.133. Iron nail: Complete.

Heavily corroded and fragmented iron nail with a round head, with surviving shank and point.
Context: Trench 4, layer (220). Length: 50mm, width: 10mm, diameter: 25mm.

10.134. Iron nails: Complete.

Three heavily corroded iron nails, the first of which has a square head and shank, the remainder feature rounded heads.

Context: Trench 5, layer/cemetery soil (235). Nail 1: Length: 65mm, width: 20mm, diameter 25mm; Nails 2 and 3: Length: 40mm, width: 12mm, diameter: 20mm.

10.135. Iron nails: Complete.

Four heavily corroded and fragmentary nails with flat, round heads.

Context: Trench 5, service trench fill (243). Length: 28mm (max.), width: 10mm, diameter: 17mm.

10.136. Iron nails: Complete.

Two heavily corroded iron nails with flat, round heads.

Context: Trench 5, service trench fill (243). Length: 50mm, width: 8mm, diameter: 15mm.

10.137. Iron nails: Complete.

Three heavily corroded iron nails, with square head and shank.

Context: Trench 5, service trench fill (243). Length: 30mm, width: 5mm, head width: 10mm.

10.138. Iron nails: Complete.

Three heavily corroded iron nails, with flat round head and rectangular shank.

Context: Trench 5, service trench fill (243). Length: 40mm (max.), width: 5mm, diameter: 15mm.

10.139. Iron nails: Complete.

Two heavily corroded iron nails, with square heads.

Context: Trench 5, service trench fill (243). Length: 40mm, width: 7mm, head width: 10mm.

10.140. Iron nails: Complete.

Two heavily corroded iron nails, with square head and shank.

Context: Trench 5, service trench fill (243). Length: 80mm, width: 5mm, head width: 10mm.

10.141. Iron nails: Complete.

Eight fragments of heavily corroded iron nails, featuring square heads and square shanks.

Context: Trench 5, layer (246). Length (average): 20-30mm, width: 5mm, head width: 10-15mm.

10.142. Iron nails: Complete.

Eight iron nails consisting of square head and square shank, no further identifications or measurements are possible due to heavy corrosion.

Context: Trench 5, layer/cemetery soil (249). Length: 30mm, width: 5mm, head width: 15mm.

10.143. Iron nails: Complete.

Three heavily corroded iron nails, consisting of square head, square shank and point. No further identifications or measurements are possible due to heavy corrosion.

Context: Trench 5, layer/cemetery soil (249). Length: 45-60mm, width: 7-10mm, head width: 15mm.

10.144. Iron nail: Incomplete.

Heavily corroded iron nail, with flat, round head and square shank, truncated before the point.

Context: Trench 5, layer/cemetery soil (249). Length: 25mm, width: 12mm, diameter: 25mm.

10.145. Iron nails: Complete.

Four heavily corroded iron nails, consisting of a round, flat head, shank and point.

Context: Trench 5, layer/cemetery soil (250). Length: 35mm, width: 7mm, diameter: 10mm.

10.146. Iron nails: Incomplete.

Six heavily corroded iron nails; no further identifications or measurements are possible due to heavy corrosion.

Context: Trench 5, layer/cemetery soil (250). Length: 30mm.

10.147. Iron nail: Complete.

Heavily corroded iron nail, with a round flat head, shank and point preserved.

Context: Trench 5, layer/cemetery soil (250). Length: 70mm, width: 7mm, diameter: 17mm.

10.148. Iron nails: Complete.

Nineteen heavily corroded iron nails consisting of square heads and square shanks, most including the point.

Context: Trench 5, layer (257). Length (average): 30mm, width (average): 7mm, head width (average): 10mm.

10.149. Iron nails: Complete.

Six heavily corroded iron nails, consisting of a square head and square shank.

Context: Trench 5, layer (257). Length: 35mm, width: 5mm, head width: 10mm.

10.150. Iron nails: Complete.

Ten iron nails with square shanks and square heads.

Context: Trench 5, layer/cemetery soil (258). Length: 35mm, width: 5mm, head width: 10mm.

10.151. Iron nails: Incomplete.

Five heavily corroded iron nails, with rounded heads. No further identifications or measurements are possible due to heavy corrosion.

Context: Trench 5, layer/cemetery soil (258). Length: 25-40mm, diameter: 15-20mm.

10.152. Iron nails: Complete.

Two heavily corroded iron nail fragments consisting of a shaft and rounded head. No further identifications or measurements are possible due to heavy corrosion.

Context: Trench 5, layer/cemetery soil (258). Length: 35mm, width: 10mm, diameter: 15mm.

10.153. Iron nail: Incomplete.

Heavily corroded iron nail. No further identifications or measurements are possible due to heavy corrosion.

Context: Trench 5, layer/cemetery soil (258). Length: 35mm, head width: 15mm.

10.154. Iron nail: Incomplete.

Heavily corroded iron nail shank. No further identifications or measurements are possible due to heavy corrosion.

Context: Trench 5, layer/cemetery soil (258). Length: 65mm, width: 15mm.

10.155. Iron nails: Incomplete.

Twenty iron nails, all heavily corroded and in a poor state of preservation. The nails can be loosely grouped according to type. The first set of nails consists of sixteen nails, with square heads and shanks. The second group consists of three nails, with square heads and shanks. The remaining nail has a flat, round head.

Context: Trench 5, layer/cemetery soil (258). First set: Length: 40mm, width: 3mm, head width: 10mm. Second set: Length: 50mm, width: 7mm, head width: 10mm. Third set: Length: 50mm, width: 7mm, head width: 2mm.

10.156. Iron nails: Incomplete.

Three heavily corroded and fragmentary iron nails.

Context: Trench 5, ditch fill (261). Length: 20mm, width: 5mm, diameter: 15mm.

10.157. Iron nail: Complete.

Heavily corroded iron nail, with round flat head.

Context: Trench 5, layer (264). Length: 35mm, width: 10mm, diameter: 20mm.

10.158. Iron nail: Incomplete.

Heavily corroded iron nail shank and point. No further identifications or measurements can be made due to the level of corrosion.

Context: Trench 5, posthole fill (284). Length: 35mm, Width: 10mm.

10.159. Iron nails: Incomplete.

Twenty-four fragments of iron nails, all heavily corroded, unidentifiable and un-measurable.

Context: Trench 5, layer (299).

10.160. Iron nail: Complete.

Iron nail with square head and shank. The nail is heavily corroded and is likely a coffin nail.

Context: Trench 5, grave fill (300). Length: 72mm, width: 5mm, head width: 13mm.

10.161. Iron nails: Incomplete.

Three fragmentary and heavily corroded iron nails, the first and second featuring square shanks, points and flat round heads. The third consists of shank and point only, and is bowed.

Context: Trench 5, layer (311). Length: 30-50mm, width: 5mm, diameter: 15mm.

10.162. Iron nails: Incomplete.

Two fragments of iron nails, the first consisting of head and shank and the second consisting of shank and point, bent at right angles in the middle of the shank. Though it is assumed that these fragments are from two separate objects based on shank thickness, the level of corrosion is high and it is possible that the two objects could be part of the same nail, with the extra thickening caused by corrosion product.

Context: Trench 5, stone slab floor (327). Fragment 1: Length: 30mm, width: 9mm, diameter: 15mm. Fragment 2: Length: 50mm, width: 12mm.

10.163. Iron nails: Complete.

Two iron nails, measuring 35mm in length, featuring square shanks and rounded heads.

Context: Trench 5, makeup layer (330). Length: 35mm, width: 5mm, diameter: 10mm.

10.164. Iron nails: Incomplete.

Two heavily corroded iron nails. No further identifications or measurements are possible due to heavy corrosion. The second features a flat, round head and shank.

Context: Trench 5, service trench fill (364). Object 1: Length: 65mm. Object 2: Length: 50mm, width: 5mm, diameter: 18mm.

10.165. Iron nails: Incomplete.

Three heavily corroded iron nails, the first of which features a square head and shank, with a length of 70mm, and a shank width of 10mm and a head width of 10mm. The remainder of the nails have round heads.

Context: Trench 6, layer (401). Length: 70mm, width: 10mm, diameter: 10mm.

10.166. Iron nail: Complete.

Heavily corroded iron nail consisting of round head, shank and point.

Context: Trench 7, wall cut fill (451). Length: 65mm, width: 10mm, diameter: 20mm.

10.167. Iron nail: Incomplete.

Heavily corroded iron nail, featuring shank only. No further identifications or measurements can be made due to the level of corrosion.

Context: Trench 7, wall (462). Length: 65mm, width: 12mm.

10.168. Iron nail: Complete.

Heavily corroded iron nail featuring a round flat head.

Context: Trench 7, layer (474). Length: 70mm, width: 10mm, diameter: 20mm.

10.169. Iron nails: Complete.

Two heavily corroded iron nails, further identification is not possible due to corrosion.

Context: Trench 7, garderobe fill (496). Length: 50mm, width: 7mm.

10.170. Iron nails: Incomplete.

Six iron nails or tacks, heavily corroded and consisting of shank and point. Further identification is not possible due to corrosion.

Context: Trench 7, garderobe fill (496). Length: 40mm, width: 6mm.

10.171. Iron nails: Complete.

Iron nail, consisting of flat head and shank, further identification is not possible due to corrosion.

Context: Trench 7, garderobe fill (496). Length: 30mm, width: 4mm, diameter: 15mm.

10.172. Iron nails: Incomplete.

Two heavily corroded iron nails consisting of flat head and shank, further identification is not possible due to corrosion.

Context: Trench 7, garderobe fill (496). Length: 30mm, width: 5mm, diameter: 10mm.

10.173. Iron nails: Incomplete.

Two heavily corroded and fragmentary iron nails.

Context: Trench 7, garderobe fill (496). Length: 55-70mm, width: 10-12mm.

10.174. Iron nails: Incomplete.

Five heavily corroded iron nails, all featuring round, flat heads, and some but not all featuring preserved shanks and points.

Context: Trench 7, garderobe fill (496). Length: 25-50mm, width: 10mm, diameter: 10-15mm.

10.175. Iron nails: Incomplete.

Two heavily corroded iron nail fragments. Further measurements or identifications are possible due to heavy corrosion.

Context: Trench 8, layer (523). Length: 30-50mm, width: 5-10mm.

10.176. Iron nail: Incomplete.

Heavily corroded iron nail. No further identifications or measurements can be made due to the level of corrosion.

Context: Trench 8, layer (539). Length: 42mm, width: 10mm.

10.177. Iron nail: Complete.

Heavily corroded round-headed iron nail. No further identifications or measurements can be made due to the level of corrosion.

Context: Trench 8, layer (575). Length: 45mm, width: 10mm, diameter: 16mm.

10.178. Iron nail: Complete.

Large flat shanked iron nail, with flat head.

Context: Trench 8, layer (598). Length: 150mm, Width: 8mm, Diameter: 25mm.

10.179. Iron nail: Complete.

Heavily corroded iron nail with a flat square head.

Context: Trench 8, layer (598). Length: 115mm, width: 10mm, head width: 12mm.

10.180. Iron nail: Incomplete.

Heavily corroded iron nail. No further identifications or measurements can be made due to the level of corrosion.

Context: Trench 8, layer (598). Length: 45mm, width: 10mm.

10.181. Iron nail: Incomplete.

Heavily corroded iron nail. No further identifications or measurements can be made due to the level of corrosion.

Context: Trench 8, layer (598). Length: 45mm, width: 7mm.

10.182. Iron nail: Complete.

A single iron nail, heavily corroded.

Context: Trench 12, layer (657). Length: 105mm, width: 10mm.

10.183. Iron nails: Incomplete.

Three fragmented, heavily corroded iron nails. One nail is near complete, though further measurement or identification is not possible due to corrosion.

Context: Trench 10A, ditch/gully fill (710). Length: 50mm, width: 20mm.

10.184. Iron nail: Complete.

Iron nail, featuring round, flat head, shank and point.

Context: Trench 10A, ditch/gully fill (710). Length: 65mm, width: 7mm, diameter: 15mm.

10.185. Iron nail: Complete.

Iron nail fragment featuring round, flat head, shank and point.

Context: Trench 10A, ditch/gully fill (710). Length: 42mm, width: 5mm, diameter: 12mm.

10.186. Iron nail: Complete.

Iron nail with a round, flat head, shank and point.

Context: Trench 11, layer (1005). Length: 60mm, width: 7mm, diameter: 20mm.

10.187. Iron nail: Complete.

Square cut nail, with shank bent at a right angle.

Context: Trench 11, U/S. Length: 90mm, width: 12mm.

10.188. Iron nail: Complete.

Iron nail with a flat round head, shank and point.

Context: Trench 11, U/S. Length: 65mm, width: 5mm, diameter: 15mm.

10.189. Iron nail: Complete.

Iron nail with a round head, shank and point.

Context: Trench 11, U/S. Length: 55mm, width: 5mm, diameter: 18mm.

10.190. Iron nail: Complete.

Iron nail featuring a rounded head, shank and point.

Context: Trench 11, U/S. Length: 45mm, width: 5mm, diameter: 15mm.

10.191. Iron nail: Complete.

Iron nail or tack with barely distinguishable head, the shank is bent at a right angle.

Context: Trench 11, U/S. Length: 40mm, width: 5mm.

10.192. Iron nail: Incomplete.

Iron nail shank, missing the diagnostic head and point.

Context: Trench 11, U/S. Length: 35mm, width: 5mm.

Fittings

Catalogue of objects

10.193. Iron nail and washer: Complete.

Iron nail with flat rounded head with an iron 'washer'. The 'washer' is a square iron sheet, with a centrally cut sub-circular hole, with a diameter of 5mm.

Context: Trench 9, service trench fill (620), SF No. 124. Nail length: 65mm, nail head diameter: 5mm. Sheet length: 35mm, sheet width: 35mm.

10.194. Iron washer: Complete.

Iron washer or fitting, circular with a central perforation.

Context: Trench 3, layer (159), SF No. 132. Outer diameter: 50mm, inner diameter: 20mm, thickness: 5mm.

10.195. Iron fitting: Complete.

An iron nail or fitting with alloy tag attached, stamped with the General Post Office logo (GPO) and the Government Broad Arrow symbol, likely 19th to early 20th century in date, but assigned a broad date of mid-17th century to mid-20th century, the date from which the GPO came into being using the Broad Arrow symbol, to the date that the GPO closed. Oxford General Post Office was located on St Aldates near to Christ Church, but the object was found in Trench 23 behind the Clerk's Office, and may have been attached to postal sacks or telephone equipment.

Context: Trench 23, U/S. Date: mid-17th to mid-20th century.

Miscellaneous Objects

Catalogue of objects

10.196. Copper-alloy plate: Incomplete

Copper-alloy plate, thin, rectangular, un-perforated and undecorated with uneven edges. One outer edge of the plate is folded inwards, a possible waste product from manufacture.

Context: Trench 7, layer (475), SF No. 028. Date: late 15th to mid-16th century. Length: 40mm, width: 25mm.

10.197. Copper-alloy sheet: Incomplete.

Copper-alloy sheet with pierced hole at one end, terminal end is truncated. The object does not feature any decoration or diagnostic features.

Context: Trench 5, layer/cemetery soil (254), SF No. 30. Date: 13th to mid-16th century. Length: 45mm, width: 10mm.

10.198. Copper-alloy plate: Incomplete.

Thin, sub-rectangular, un-perforated and undecorated copper-alloy plate with uneven edges. A possible off-cut waste product from manufacture.

Context: Trench 9, service trench fill (620), SF No. 031. Length: 30mm, width: 24mm/

10.199. Copper-alloy nail: Complete.

Robust copper-alloy nail with flat, round head and square shaft.

Context: Trench 9, service trench fill (620), SF No. 32. Length: 45mm, diameter: 10mm.

10.200. Copper-alloy wire: Complete.

Copper-alloy wire bent in to a rounded hook at one end, and a sharper bend at the opposing end. No decoration is visible. It is possible that the object was bent into this shape post-deposition, however, the shape of the rounded hook appears deliberate.

Context: Trench 5, ditch fill (294), SF No. 51. Date: late 15th to mid-16th century. Length: 115mm.

10.201. Copper-alloy sheeting: Incomplete.

Copper-alloy sheeting folded inwards forming a trapezoidal shape.

Context: Trench 5, layer/cemetery soil (258), SF No. 55. Date: 13th to mid-16th century. Length: 35mm, width: 15-24mm, thickness: 1mm.

10.202. Copper-alloy object: Incomplete.

Copper-alloy object consisting of a cast rounded length of copper-alloy with a diameter of 1mm, broadening to a diameter of 7mm before tapering to a point. The object features heavy copper corrosion at the wider, terminal end. The terminal end is damaged, with approximately fifty percent of the terminal end having sheared off at the point of rivet attachment. The presence of a rivet attachment suggests that this object was attached to an object or featured an attachment. The object type is unknown.

Context: Trench 11, layer (1005), SF No. 136. Date: *c.* 17th century. Diameter: 1-7mm.

10.203. Copper-alloy object: Incomplete.

Copper-alloy object, rectangular with a triangular section. The object has a notch cut from one end at the apex of the section. The notch is suggestive of a hole and may indicate that the object has broken at the weakest point, and the object has also been truncated at the terminal end. The function of the object is unclear.

Context: Trench 26B, U/S, SF No. 175. Length: 25mm, width: 10mm, thickness: 3mm.

10.204. Copper-alloy object: Incomplete.

Heavily corroded copper-alloy tubular rod, bent at right angles.

Context: Trench 19, layer/cemetery soil (741). Length: 25mm, diameter: 1mm.

10.205. Copper-alloy fitting: Incomplete.

Copper-alloy fitting bar, rounded and with evidence of central fixative point.

Context: Trench 20, mixed service trench fill (758). Length: 25mm, diameter: 1mm.

10.206. Iron object: Incomplete

Iron object consisting of two flattened sub-rectangular iron rods, which form two gently curving arcs or bows opposite one another, and fused at one end. It is unclear due to corrosion whether

the object has been manufactured in this way or whether the object has fused due to corrosion. The object may be a Jew's harp, or alternatively merely some form of fitting. It appears to be incomplete, with some evidence that part of the object has snapped off.

Context: Trench 7, garderobe fill (496), SF No. 36. Date: mid-14th century? Length: 65mm, total width: 25mm, thickness: 5mm.

10.207. Iron object: Incomplete

Heavily corroded fragmentary Iron object with no discernible features, it is not possible to measure or identify this object due to poor preservation.

Context: SF 177, Trench 16B, (u/s) Tom Quad, Date: Unknown.

10.208. Iron object: Incomplete

Heavily corroded and unidentifiable iron object.

Context: Trench 3, (137) Tom Quad, Deposit, Date: 15th – mid 16th Century. Length: 35mm, Width: 20mm, Thickness: 10mm.

10.209. Iron bars

Two heavily corroded unidentifiable Iron bars, the shorter of which is straight; the longer of which is bent at right angles near to the terminal end.

Context: Trench 3, (150) Tom Quad, Deposit, Date: Unknown. Object one: Length: 160mm, Width: 25mm. Object two: Length: 130mm, Width: 20mm.

10.210. Iron object: Incomplete

An iron lump, heavily corroded and unidentifiable.

Context: Trench 5, layer/cemetery soil (235). Length: 50mm, width: 35mm, thickness: 20mm.

10.211. Iron objects: Incomplete

Twenty-five fragments of iron, all heavily corroded, unidentifiable and un-measurable.

Context: Trench 5, layer (242).

10.212. Iron objects: Incomplete

Twenty-nine fragments of iron, most likely from corroded nails. No further identifications or measurements are possible due to heavy corrosion.

Context: Trench 5, service trench fill (243).

10.213. Iron objects: Incomplete

Nine fragments of unidentified iron objects. No further identifications or measurements are possible due to heavy corrosion.

Context: Trench 5, layer (246). Date: late 15th–early 16th Century.

10.214. Iron objects: Incomplete

Fifty-two fragments of Iron, most likely from corroded Iron nails. No further identifications or measurements are possible due to heavy corrosion.

Context: Trench 5, layer/cemetery soil (249). Date: 13th to mid-16th century.

10.215. Iron objects: Incomplete

Forty-two fragments of iron, most likely from corroded nails. No further identifications or measurements are possible due to heavy corrosion.

Context: Trench 5, layer/cemetery soil (250). Date: 13th to mid-16th century.

10.216. Iron objects: Incomplete

Nineteen fragments of iron, all heavily corroded, unidentifiable and un-measurable.

Context: Trench 5, layer (251). Date: late 15th to mid-16th century.

10.217. Iron objects: Incomplete

Five fragments of iron. No further identifications or measurements are possible due to heavy corrosion.

Context: Trench 5, pit fill (252). Date: late 15th to mid-16th century.

10.218. Iron objects: Incomplete

Sixty-two fragments of iron, most likely from corroded iron nails. No further identifications or measurements are possible due to heavy corrosion.

Context: Trench 5, layer (257). Date: mid-14th century?

10.219. Iron objects: Incomplete

Forty-nine fragments of iron, thought to be fragments of iron nails, unidentifiable and un-measurable due to high levels of corrosion and fragmentation.

Context: Trench 5, layer/cemetery soil (258). Date: 13th to mid-16th century.

10.220. Iron object: Incomplete

Heavily corroded and unidentifiable iron object, bent at a right angle to the main body.

Context: Trench 5, layer/cemetery soil (259). Date: 13th to mid-16th century. Length: 70mm, thickness: 20mm.

10.221. Iron objects: Incomplete

Eight fragments of iron, most likely from corroded nails. No further identifications or measurements are possible due to heavy corrosion.

Context: Trench 5, ditch fill (261). Date: late 15th to mid-16th century.

10.222. Iron objects: Incomplete

Forty-three fragments of iron. No further identifications or measurements are possible due to heavy corrosion.

Context: Trench 5, ditch fill (261). Date: late 15th to mid-16th century.

10.223. Iron objects: Incomplete

Nine fragments of iron, all heavily corroded, unidentifiable and un-measurable.

Context: Trench 5, ditch fill (265). Date: late 15th to mid-16th century.

10.224. Iron objects: Incomplete

Three fragments of iron, unidentifiable and un-measurable due to high levels of corrosion and fragmentation.

Context: Trench 5, layer/cemetery soil (271). Date: 13th to mid-16th century.

10.225. Iron objects: Incomplete

Twenty-four fragments of iron, all heavily corroded, unidentifiable and un-measurable.

Context: Trench 5, fill (273).

10.226. Iron objects: Incomplete

Twenty-eight fragments of iron, all heavily corroded, unidentifiable and un-measurable.

Context: Trench 5, layer (277). Date: late 15th to mid-16th century.

10.227. Iron objects: Incomplete

Two unidentifiable fragments of an iron object. The fragments are small and heavily corroded so further measurement and identification are not possible, though they are likely coffin fittings or nails.

Context: Trench 5, skeleton (291). Date: mid-13th to 14th century.

10.228. Iron objects: Incomplete

Twenty-nine fragments of iron, all heavily corroded, unidentifiable and un-measurable.
Trench 5, layer (292).

10.229. Iron objects: Incomplete

Four fragments of iron, all heavily corroded, unidentifiable and un-measurable.
Context: Trench 5, ditch fill (294). Date: late 15th to mid-16th century.

10.230. Iron objects: Incomplete

Seven fragments of iron, all heavily corroded, unidentifiable and un-measurable.
Context: Trench 5, layer (305). Date: late 15th to mid-16th century.

10.231. Iron objects: Incomplete

Four heavily corroded fragments of an iron object; the fragments are unidentifiable due to the high level of corrosion.
Context: Trench 5, layer (311). Length: 35-45mm, width: 25-30mm.

10.232. Iron objects: Incomplete

Three fragments of iron, all heavily corroded, unidentifiable and un-measurable.
Context: Trench 5, fill (315). Date: 17th century.

10.233. Iron objects: Incomplete

Four unidentifiable fragments of an iron object. The fragments are small and heavily corroded so further measurement and identification are not possible.
Context: Trench 5, stone slab floor (327). Date: 15th century.

10.234. Iron objects: Incomplete

Twenty-nine miscellaneous fragments of iron, potentially a product of corroded iron nails. No further identifications or measurements possible due to heavy corrosion.
Context: Trench 5, makeup layer (330). Date: c. 13th-14th century.

10.235. Iron objects: Incomplete

Two fragments of iron, all heavily corroded, unidentifiable and un-measurable.
Context: Trench 5, layer (353).

10.236. Iron object: Incomplete

Heavily corroded iron plate.
Context: Trench 5, service trench fill (364). Length: 90mm, width: 30mm, thickness: 2mm.

10.237. Iron object: Incomplete

Heavily corroded iron object of unknown function.
Context: Trench 6, layer (401). Length: 30mm, width: 15mm, thickness: 5mm.

10.238. Iron object: Incomplete

Heavily corroded and unidentifiable iron object.
Context: Trench 7, layer (460). Date: late 15th to mid-16th century. Length: 55mm, width: 25mm, thickness: 10mm.

10.239. Iron objects: Incomplete

Six miscellaneous iron fragments. No identification or measurements possible due to heavy corrosion.
Context: Trench 7, layer (474).

10.240. Iron object: Incomplete

Heavily corroded and unidentifiable iron object, consisting of nine larger fragments and many smaller fragments, making further identification or assessment impossible.

Context: Trench 7, layer (475). Late 15th to 16th century.

10.241. Iron object: Incomplete

A trapezoidal fragment of an iron object with no diagnostic marks or features. The object is heavily corroded and fragmentary and further identification has not been possible.

Context: Trench 7, garderobe fill (496). Date: mid-14th century? Length: 45mm, width: 20mm, thickness: 3mm.

10.242. Iron objects: Incomplete

Three fragments of iron, all heavily corroded, unidentifiable and un-measurable.

Context: Trench 8, surface (521). Date: late 15th to mid-16th century.

10.243. Iron objects: Incomplete

Ten fragments of an iron object or objects. The object is corroded, unidentifiable and un-measurable.

Context: Trench 8, layer (522). Date: late 15th to mid-16th century.

10.244. Iron objects: Incomplete

Eight fragments of an iron object/objects, all heavily corroded, unidentifiable and un-measurable.

Context: Trench 8, layer (541). Date: late 15th to mid-16th century.

10.245. Iron object: Incomplete

Unidentifiable heavily corroded and fragmentary object, consisting of six fragments of iron, further identification or measurement is not possible due to the level of corrosion.

Context: Trench 9, service trench fill (620).

10.246. Iron object: Incomplete

Iron object, heavily corroded, possibly an iron nail shank. Further identification is not possible due to corrosion.

Context: Trench 9, late (628). Date: late 17th to mid-18th century. Length: 50mm, Width: 6mm.

10.247. Iron object: Incomplete

Long iron object, heavily corroded, possibly the shank of a nail missing the head.

Context: Trench 11, layer (1005). Date: c. 17th century. Length: 112mm, width: 7mm.

10.248. Iron object: Incomplete

Fragmentary and heavily corroded iron object, possibly the shank of an iron nail.

Context: Trench 11, layer (1007). Date: late 15th to mid-16th century. Length: 50mm, width: 10mm.

10.249. Iron object: Incomplete

Heavily corroded iron object. Due to corrosion further identification is not possible.

Context: Trench 11, cobbled surface (1022). Length: 50mm, width: 30mm, thickness: 3mm.

10.250. Iron object: Incomplete

Unidentifiable heavily corroded and fragmentary object, consisting of ten fragments of iron, two of which are curved. Further identification or measurement not possible due to corrosion.

Context: Trench 2, U/S.

10.251. Iron object: Incomplete

Heavily corroded Iron object, possibly an Iron plate fragment, or a blade, further identification is not possible due to the level of corrosion.

Context: Trench 11, U/S. Length: 110mm, width: 40mm, thickness: 3mm.

10.252. Iron object: Incomplete

Heavily corroded iron object, possibly an iron blade. Further identification is not possible due to the level of corrosion.

Context: Trench 11, U/S. Length: 95mm, width: 25mm, thickness: 1mm.

10.253. Iron object: Incomplete

Lump of iron, heavily corroded and concreted. Further identification is not possible due to corrosion, though the object may be a waste product of metalworking.

Context: Spur 1, U/S. Length: 60mm, width: 30mm, thickness: 20mm.

10.254. Lead object: Incomplete*

Slightly corroded lead object, consisting of a shaft that is square in cross-section and slightly bow-shaped in profile, with a flattened, flanged head at one end that is slightly damaged (Fig. 62.6). The shaft appears to be narrowing to a point, but this is corroded away. Either some form of fitting, or possibly a lead writing stylus. A lead stylus was found in a 15th or early 16th century grave at St Saviour's Hospital, Bury St Edmunds (Caruth and Anderson 1997, 3.3.7).

Context: Trench 9, service trench fill (620), SF No. 33. Length: 50mm, width at head: 16mm, width of shaft: 5.5mm (max.).

Composite Objects**10.255. Copper-alloy and lead composite object: Incomplete.**

Copper-alloy and lead composite object consisting of two lengths of rolled copper-alloy tubing around a possible lead sheet. The object is slightly curved and is of unknown function though it possibly formed a decorative strip or edging.

Context: Trench 12B, U/S, SF No. 147. Length: 30mm, width: 5mm.

10.256. Iron and pottery composite object: Incomplete.

Two sherds of pottery conjoined by the corrosion product of an iron nail, which has a round, flat head.

Context: Trench 7, layer (460). Date: late 15th to mid-16th century. Length: 65mm, width: 15mm, diameter: 18mm.

11 WORKED IVORY, BONE AND ANTLER OBJECTS *by Rosemary Grant*

A total of 11 worked bone objects were recovered from excavation at Christ Church, Oxford. Five bone styli or so-called 'parchment prickers' were identified. Bone styli are commonly associated with ecclesiastical contexts, and many examples have been found in Winchester, York and London. Three of the five bone styli (SF Nos. 9, 10 and 11) were recovered from context 258 which was cemetery soil relating to St Frideswide's, and had associated ceramic dating of the 13th to mid-16th centuries. The other two examples of bone styli had no direct dating associated with them. Object SF No. 6 was recovered from context 364, the fill of a modern service cut; and SF No. 157 was recovered from context 624.

Other finds include two whittle tang handles, one of ivory and one of bone; part of a single sided composite comb, a bone disk and two unidentifiable objects, one of antler and one of bone.

The ivory handle SF No. 160 was unstratified, but is similar to an ivory cutlery handle recovered from excavations at St Ebbe's in Oxford and thought to date to the 18th century (Egan et al. 1984, 229, 231, fig. 40 no. 8). The example from Christ Church could easily span the 17th to 19th centuries.

The bone handle SF No. 34 was recovered from context (539) and had associated pottery dating to between the late 17th to the mid-18th century. The shaft is rectangular in shape and tapers towards one end. There is evidence of an iron tang through the centre of the handle.

The single-sided composite comb SF No. 5 was recovered from context (216), the fill of a pit. It has coarse teeth and has evidence of a rivet hole, which could be where the comb was formed of plates riveted together, or where a plate of decorated bone was attached. Pottery of late 11th to 12th century date was also recovered from this fill, and such composite bone combs are frequently found in Saxo-Norman contexts.

Bone disk SF No. 161 was recovered from context (905) and had pottery of mid to late 17th century date associated with it. This example was undecorated. It was lathe turned with a central hole (diameter 10mm).

Catalogue of objects

11.1. Handle: Incomplete.* (denotes illustrated items)

Ivory whittle tang handle (Fig. 63.1). The shaft is cylindrical in shape and tapers towards the tang end. It has a domed top. It is plain with no decoration but is highly polished. It has a central hole for a tang to be inserted but there is no evidence of the metal tang remaining. Though some of the ivory grain can be discerned, the type of ivory could not be ascertained. Context: U/S, SF No. 160. Length: 40mm.

11.2. Stylus: Incomplete.*

Bone stylus (Fig. 63.2). The styli has a small ovoid head with a simple collar. The shaft is straight with three horizontal bands for decoration below the collar. The tip no longer remains. Context: Trench 5, layer/cemetery soil (258), SF No. 09. Length: 56mm.

11.3. Stylus: Incomplete.*

Bone stylus (Fig. 63.3). The tip end of the stylus remains. The shaft is plain and tapers toward the tip. There is a copper-alloy point inserted into the tip of the shaft. Context: Trench 5, layer/cemetery soil (258), SF No. 10. Length: 53mm.

11.4. Stylus: Incomplete.

Bone styli. The shaft is roughly carved so it is not a smooth cylindrical shape. It tapers slightly towards the tip. The tip no longer remains. Context: Trench 5, layer/cemetery soil (258), SF No. 11. Length: 57mm.

11.5. Stylus: Incomplete.

Bone styli. No point or head remaining. The remainder of the shaft is cylindrical and tapers towards one end. Context: Trench 5, service trench fill (364), SF No. 06. Length: 43mm.

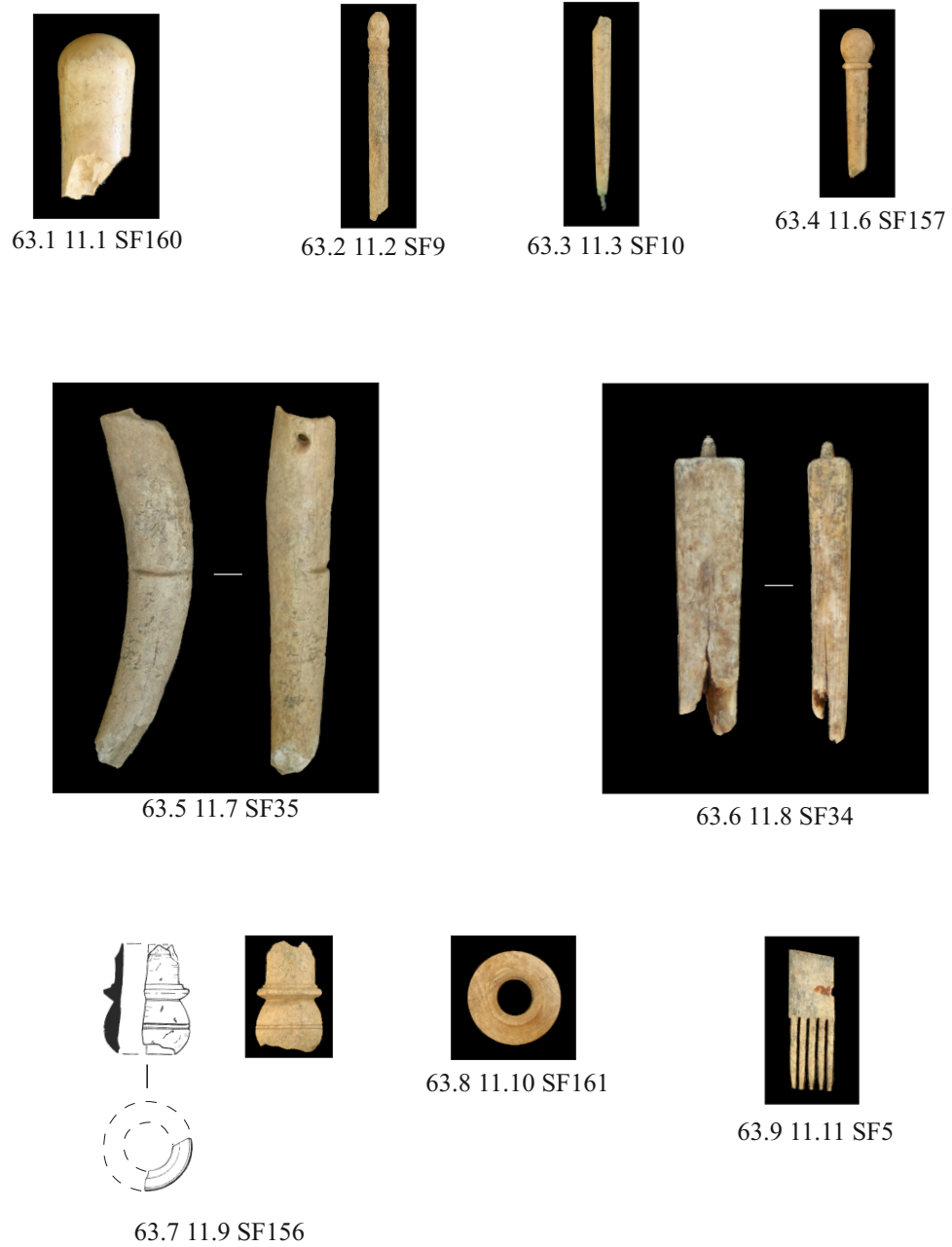


Figure 63. Worked ivory, bone and antler objects.
160

11.6. Stylus: Incomplete.*

Bone styli (Fig. 63.4). No tip remaining. This example has a spherical head and simple collar. The shaft is cylindrical and tapers towards the tip. Recovered from a layer of silt that had built up over a cobbled street surface.

Context: Trench 9, layer (624), SF No. 157. Length: 40mm.

11.7. Antler object: Incomplete.*

Antler tyne, cut at the top and perforated once through one side (Fig. 63.5). Possible handle.

Context: Trench 7, layer (505), SF No. 35. Length: 95mm.

11.8. Handle: Incomplete.*

Whittle tang handle (Fig. 63.6). Evidence of iron tang through central hole. The shaft is rectangular in cross-section although it tapers slightly towards one end, and at the other features a projecting peg. This object was recovered from a layer of clayey silt that had formed above a cobbled street surface, and which also contained sherds of late 17th to mid-18th century pottery.

Context: Trench 8, layer (539), SF No. 34. Length: 79mm.

11.9. Object: Incomplete.*

Possible whistle or mouthpiece for musical instrument (Fig. 63.7). Spherical head with a single shoulder. The head has double horizontal banding for decoration. There is evidence that the object would have been hollow or had a round hole through its middle. Found in the fill of a possible drainage ditch or gully that also produced mid to late 17th century pottery

Context: Trench 10A, ditch/gully fill (710), SF No. 156. Length: 30mm.

11.10. Disc: Complete.*

Lathe-turned disc with a central hole 10mm in diameter (Fig. 63.8). This example is undecorated. Found in layer (905), a possible garden soil that also yielded three sherds of 17th century pottery and a silver spoon (SF No. 159).

Context: Trench 14, layer (905), SF No. 161. Maximum diameter: 25mm

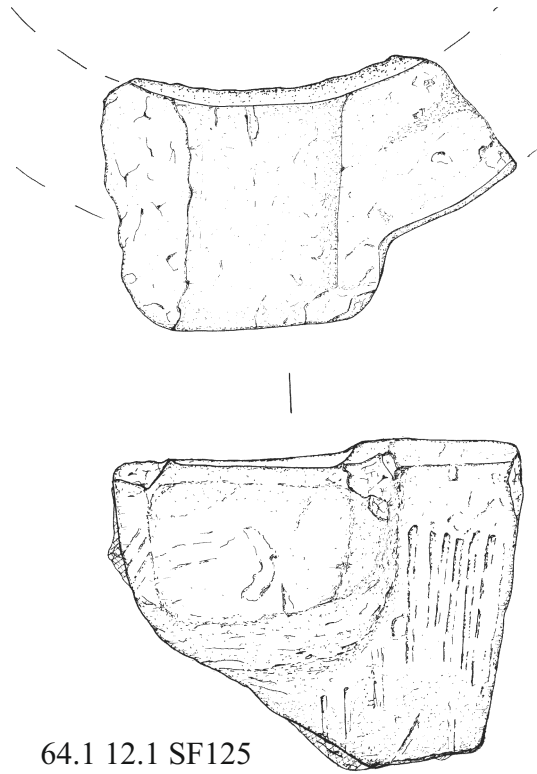
11.11. Comb: Incomplete.*

Single-sided, simple bone comb fragment with coarse teeth up to 3mm wide (Fig. 63.9). There is evidence of a rivet hole. This could be where the comb was formed of plates riveted together, or where a plate of decorated bone was attached. Found in what was either a layer or pit fill that also contained late 11th to 12th century pottery.

Context: Trench 3, layer/pit fill (216), SF No. 05. Length: 11mm.

12 WORKED STONE OBJECTS *by Adrian M. Chadwick**Catalogue of objects***12.1. Stone mortar: Incomplete.*** (denotes illustrated items)

Stone mortar fragment, part of a large circular mortar originally *c.* 130-140mm in diameter (Fig. 64.1). The width of the mortar between its inner and outer faces is 32-35mm. The external face is relatively coarse and has traces of vertical tooling, but the internal surface is highly polished and smooth. There is one surviving squared lug 67mm wide, 56mm high and projecting up to 20mm from the curving arc of the external rim. The lower rib of the lug is angled in towards the external face of the mortar at *c.* 50 degrees. The upper surface of the lug has a shallow sub-rectangular runnel or spout up to 5mm deep and 45mm wide, with sides angled at *c.* 45 degrees. Assuming that the top of the flattened rim was horizontal, the external and internal faces were angled at *c.* 60 degrees. There is some damage to the surviving rim and lug.



64.1 12.1 SF125

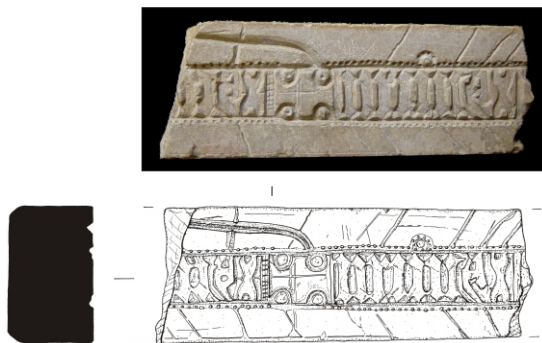


64.2 12.3 SF59

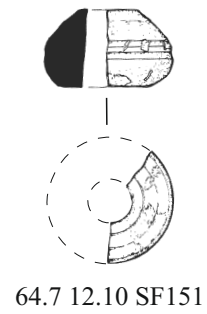
64.3 12.4 SF62

64.4 12.6 SF163

64.5 12.7 SF169



64.6 12.9 SF60



64.7 12.10 SF151



Figure 64. Worked stone objects.

The stone is Purbeck marble with numerous rounded fossiliferous gastropod inclusions. It is almost identical to a stone mortar recently recorded from Abingdon (Riccoboni 2012), and was probably derived from the same stone source and/or quarry. The Abingdon example was associated with late 11th to early 13th century pottery, but the Christ Church mortar fragment was unstratified. It is different in form to a Purbeck marble example found at Bell Street, Henley-on-Thames (Scott 1997, 128, fig. 7), thought to be 13th to 14th century in date. Stone mortars were used with a pestle for grinding ingredients for cooking or in the preparation of medicines, and were associated with larger medieval and post-medieval households and monastic institutions. This object was essentially unstratified within a 'spur' off Trench 4 in Tom Quad. Context: Trench 4, Spur 9, U/S, SF No. 125. Length: 104mm, width 63mm, height 84mm. Weight: 787 grammes.

12.2. Hone/whetstone: Incomplete.

Rectilinear stone hone or whetstone, roughly rectangular in cross-section but fractured longitudinally so that only one original side with rounded edges is present. Broken at one end, and the other end has two worn sub-triangular notches cut into it, though it is unclear if there was once a suspension hole present. On one side there are at least three fine striations at right angles to the edge, and both the obverse and reverse surfaces show gentle undulations from sharpening wear. The stone is fine-grained, light grey-brown schist. This whetstone was recovered from the fill of a pit that also contained late 15th to mid-16th century pottery. Context: Trench 8, fill (530), pit cut 531, SF No. 58. Length: 73mm (max.), width 15mm (max.), thickness 8.50mm (max.).

12.3. Hone/whetstone: Incomplete.*

Rectilinear stone hone or whetstone, roughly rectangular in cross-section with rounded edges, but fractured horizontally so that only one original squared end is present (Fig. 64.2). This has some wear or damage on it. Approximately 8-10mm from the end there is an oval, slightly irregular suspension hole bored through the whetstone, up to 7.5mm long and 6mm wide, with bevelled edges on both sides. This hole has been drilled through the stone at an angle of c. 60-70 degrees. The stone is relatively fine-grained, micaceous schist with light grey, mid-grey and silver grey mottling and streaks. This whetstone was recovered from a layer that was probably the fill of an unidentified pit, which also produced 13th to 14th century pottery. Context: Layer/fill (452), SF No. 59. Length: 48mm (max.), width 15mm (max.), thickness 10mm (max.).

12.4. Hone/whetstone: Incomplete.*

Rectilinear stone hone or whetstone, roughly rectangular in cross-section with rounded edges, some with notches and damage along their lengths (Fig. 64.3). It is fractionally wider in the middle, and may have originally narrowed at each end, though both ends are broken off. One of the narrower sides is heavily damaged, but the other is quite smooth. One of the wider sides is slightly concave and relatively rough, the other flat and with some striations caused by the natural grain of the stone. This face also has some ferric staining and concretion caused by contact with iron. On the smoothest side there are several fine angled striations at c. 45 degrees to the edge which are probably sharpening marks. The stone is medium-grained, micaceous schist with mid-grey and silver grey mottling and streaks. This object was recovered from a layer of clayey silt that had formed above a cobbled street surface, and which also contained sherds of late 17th to mid-18th century pottery. Context: Trench 8, layer (539), SF No. 62. Length: 86mm (max.), width 28mm (max.), thickness 14mm (max.).

12.5. Hone/whetstone?: Incomplete.

Possible rectilinear stone hone or whetstone, roughly rectangular in cross-section with quite sharp edges, some with small notches along their lengths. Three sides are quite smooth and

polished, with only one side slightly rough and irregular. It has been fractured or more likely cut horizontally at both ends, and the numerous striations from the tool marks are visible, set at *c.* 40-45 degrees to the central longitudinal plane of the whetstone, but in opposite directions at each end. One side has been partly cut down by 2mm, leaving a narrow, curving remnant of the original face. This cut has curvilinear striations within it, and was probably made by a powered circular saw. On another side, deeper parallel striations up to 0.08mm wide and 0.5mm apart are present at one end, and these were probably made by a coarse metal file. A chalky paste adheres to one end of the stone. The stone is fine-grained, dense and hard, very dark grey shale. This object was recovered from a mixed service trench fill that included mid-18th to early 19th century pottery, but the machine-cut marks and file marks suggest that it may be more recent in date. Context: Trench 9, service trench fill (620), SF No. 69. Length: 52mm (max.), width 25mm (max.), thickness 22.50mm (max.).

12.6. Hone/whetstone: Incomplete.*

Rectilinear stone hone or whetstone, roughly lenticular in cross-section (Fig. 64.4). The lenticular cross-section is partly produced by two quite pronounced asymmetrical facets on the one wide face, and two more gradual facets on the other wide side. It is broken at both ends, and one of these breaks is sub-rectangular in cross-section with rounded corners, so it may be that the lenticular section was only in the middle of the original whetstone. Whilst one of the wider faces is flat in between the two side facets, the other is gently concave. The stone is fine-grained, hard light grey-brown sandstone with a slightly pitted surface. This object was unstratified.

Context: Trench 11, U/S, SF No. 163. Length: 64mm (max.), width 69mm (max.), thickness 26.50mm (max.).

12.7. Hone/whetstone: Incomplete.*

Rectilinear stone hone or whetstone, roughly sub-rectangular in cross-section but widening noticeably towards one end (Fig. 64.5). Both ends are broken, however, and it is quite worn. Towards the narrower end three of the sides become gently concave. The stone is quite coarsely-grained and slightly micaceous, hard light yellow-brown sandstone? with a pitted surface. This object was recovered from a mixed service trench fill and is thus essentially unstratified.

Context: Trench 20, mixed service trench fill (758), SF No. 169. Length: 72mm (max.), width 30mm (max.), thickness 25mm (max.).

12.8. Moulding/carving fragment: Incomplete.

Fragment of stone moulding or carving, irregular in shape. Three original 'external' sides or faces are present – two of these are very smooth and polished, and meet at an angle of approximately 30 degrees. There is edge damage where they meet, and along one edge of one smooth face there is a straight, incised line up to 0.04mm wide and 0.02mm deep, with a U-shaped concave profile. This line is 1-1.5mm away from the right-angled edge with the third side or face, which is rougher and slightly pitted. These three faces are all damaged, and the remainder of the object is an irregular damaged surface where it has broken off. The fragment may be from the base of a statue, or part of decorative moulding. The stone is fine-grained, micaceous white to cream marble, polished on two faces. This object was recovered from a cemetery soil in the Cathedral Garden, and may represent re-deposited masons' debris or a broken fragment of a funerary memorial.

Context: Trench 19, layer/cemetery soil (741), SF No. 178. Length: 53mm (max.), width 56mm (max.), thickness 24mm (max.).

12.9. Stone mould for decorative fitting: Incomplete.*

Rectilinear fragment of a stone mould, rectangular in cross-section with two chamfered edges along the reverse face, and two sharper edges on the obverse face. There are notches and damage along their lengths, and both ends are broken off. Extending lengthways down the flat obverse face is a finely carved rectilinear band of incised decoration, forming the 'negative' for a

moulded metal strip, perhaps for some form of horse furniture, belt or strap fitting or some other form of personal ornamentation (Fig. 64.6). There is a curvilinear runnel extending out from one side of the carved design, 1.5mm deep and triangular in profile, which was to tap off excess metal. There are at least nine finer additional runnels leading off from the negative decoration at angles of between 45-70 degrees – four on one side, five on the other. The design itself is 15-17mm wide along most of its length. It includes a cross, an 'X' shape, and a series of triangular-headed rectilinear indentations. The linear band has a finely beaded rim, the circular negative indentations for what would have been positive raised beaded elements being arranged along the inner sloping edges of two bordering triangular grooved bands.

In addition to the obvious damage, there are fine striations present on all four flat surfaces of the object. Whilst some of this wear might have resulted from prising apart two halves of a mould and/or cleaning out the mould ready for another casting, many of the striations may reflect later re-use of the object as a hone or whetstone. The stone is fine-grained, hard light grey-brown limestone and fine laminations are visible within the stone at both broken ends. This object was recovered from a demolition or abandonment deposit in Building 7A that also contained late 15th to mid-16th century pottery.

Context: Trench 7, Building 7A, Room 1, layer (456), SF No. 60. Length: 99mm (max.), width 36mm (max.), thickness 24mm (max.).

12.10. Stone spindle whorl: Incomplete.*

Approximately 45% of a stone spindle whorl, fractured almost down the middle, with a central hole up to 10mm across, narrowing slightly to 9mm near the middle of the object (Fig. 64.7). The outer face would have been slightly domed in profile with flattened dorsal and ventral surfaces, and featured two possibly decorative horizontal grooves with concave profiles up to 1.5mm wide and 0.5mm deep. There are also traces of thinner grooves and slight raised ridges, and this object might have been turned on a pole lathe. The stone is fine-grained off-white limestone, but the outer surface of the spindle whorl and the inner surface of its central hole appear to have been painted with a dark reddish-grey pigment. The outer face has several spalls and other evidence for wear. The object was found in the fill (710) of a possible drainage ditch or gully that also produced mid to late 17th century pottery, but it may be residual.

Context: Trench 10A, ditch/gully fill (710), SF No. 151. Length: 30mm (max.), width 15mm (max.), thickness 20mm (max.).

13 ARCHITECTURAL FRAGMENTS *by Kirsty Ann Rodwell*

Twenty-five worked stone fragments were recovered from excavations in Christ Church. All fragments were limestone. Many of these fragments are insufficiently distinctive to be closely dateable; of the remainder the angle roll mouldings (no. 3) could be 12th century, (cf. Rodwell 2001, 421, 19-21); the keeled mouldings and hood mould (nos. 4-6) are 13th century (cf. Heighway and Bryant 1999, 186, 94) and the window mullion (no. 1) and roof finial (no. 7) are of standard Perpendicular type. The reworked block (no. 14) seems to have remained unfinished; the stiff leaves are of 13th century type (cf. Rodwell 2001, 434, 490) but their random distribution and the shape of the block suggests a test piece rather than a finished carving. The block was subsequently reworked as a string or coping with a drip mould which seems also to have remained unfinished.

Catalogue of objects

13.1. A length of rebated and hollow-chamfered window mullion of Perpendicular type.

Context: Trench 5, garderobe 339.

13.2. Two fragments of a double-ogee moulded pilaster.

Context: Trench 6, layer (410).

13.3. Eight fragments of angle roll mouldings 110mm in diameter.

Context: Trench 5, garderobe fill (332).

13.4. Fragment of keeled roll moulding 90mm in diameter.

Context: Trench 5, garderobe fill (332).

13.5. Fragment of keeled roll moulding 120mm in diameter.

Context: Trench 8, cobbled surface (537).

13.6. Hood mould with half roll and frontal fillet of 13th century type.

Context: Trench 8, cobbled surface (537).

13.7. Weathered tapered roof finial with a base of upstanding leaves (Fig. 65).

Context: Trench 3, wall 165.

13.8. Tapered chamfered block of coarse shelly limestone, probably part of a finial.

Context: Trench 5, garderobe 339.

13.9. Length of chamfered door jamb.

Context: Trench 7, Building 7A, wall 454. Width: 310mm, depth: 230mm.

13.10. Block chamfered on two edges.

Context: Trench 7, wall 479. Width: 250mm.

13.11. Block with a curved chamfered cut-out in one corner.

Context: Trench 7, Building 7A, wall 462. Length: 280mm.

13.12. Roughly worked L-shaped block of coarse shelly limestone with sides 260mm long, possibly a gutter block.

Context: U/S.

13.13. Two fragments of coarse shelly limestone slab 120mm deep with a worn raised edge moulding; part of a hearth or grave slab.

Context: Trench 7, Building 7A, wall 454.

13.14. Block in three pieces with hollow drip mould on the lower edge and a partly-dressed chamfered moulding petering out into a rough surface towards the top of the face; a roughly dressed right-angled rebate is cut longitudinally into the face of the chamfer; the back, base and ends are roughly worked. The top is roughly worked to a curved profile running the length of the stone; on one edge there is a pair of confronted trefoiled stiff leaves in low relief and there is part of a third leaf on one of the smaller fragments (Fig. 66). These are reminiscent of the floriated crosses on 13th century tomb slabs but the block seems too thick and poorly finished to have been such. There appears to have been an attempt to rework the block as length of string course or coping, also incomplete.

Context: Trench 5, garderobe fill (332). Length: 720mm, width: 270mm, depth: 160-200mm.



Figure 65. Tapered roof finial with a base of upstanding leaves

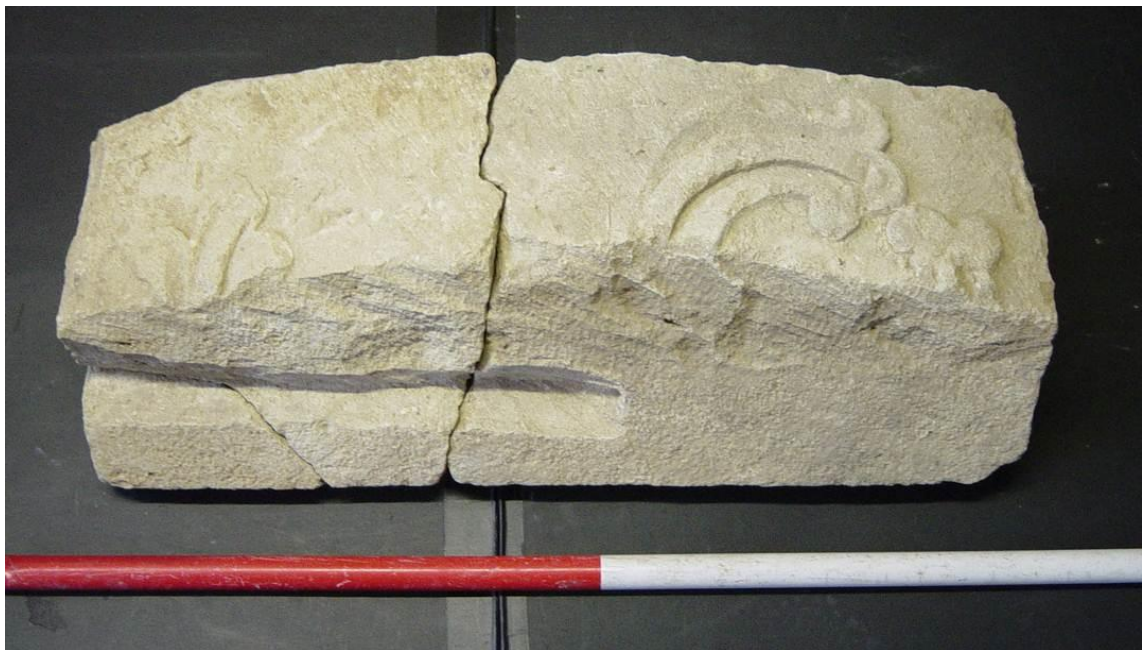


Figure 66. Block with hollow drip mould on the lower edge and a partly-dressed chamfered moulding, also showing relief decoration of a pair of confronted trefoiled stiff leaves.

14 CLAY PIPE by Hayley McParland

Table 12 Christ Church Clay Pipes										
Trench	Ctxt	Qty	Diameter (bowl) (mm)	Length (stem) (mm)	Diameter (stem) (mm)	Weight (g)	Rim Decoration	Stamp	Date	Comments
2	36	1	n/a	123	10-11	21	Unknown	None	Unknown	Incomplete, undecorated stem fragment
7	451	6	n/a	19-71	6-9	24	Unknown	None	Unknown	Incomplete, undecorated stem frags, 5 at 9mm diam., 1 at 6mm diam.
8	520	1	n/a	15	9	6	Unknown	None	Unknown	Incomplete, undecorated stem fragment
8	524	1	n/a	30	7	5	Unknown	None	Unknown	Coated in a thin layer of mortar, no visible decoration
8	538	44	n/a	16-100	6-10	218	Unknown	None	Unknown	Incomplete, undecorated stem frags., 7 at 10mm diameter, 13 at 8mm diam., 15 at 7mm diam., 9 at 6mm diam..
8	539	27	n/a	20-70	4-10	105	Unknown	None	Unknown	Incomplete stem frags., 16 at 10mm diameter, 10 at 6mm diam., 1 at 4mm diam.
8	539	3	n/a	45	19	14	Unknown	None	Unknown	Incomplete bowl frags., only one of which was measurable.
8	598	2	n/a	n/a	n/a	14	Unknown	None	Unknown	Two frags. of clay pipe bowls, unmeasurable.
8	598	4	n/a	25-45	5-10	15	Unknown	None	Unknown	Incomplete stem frags., 1 at 5mm diameter, 2 at 7mm diam., 1 at 10mm diam.
9	620	1	n/a	n/a	n/a	7	n/a	None	Unknown	Incomplete bowl fragment
9	620	3	n/a	30-53	7	11	Unknown	None	Unknown	Incomplete stem frag., undecorated
9	620	1	n/a	33	8	3	Unknown	None	Unknown	Incomplete stem frag., with flat spur featuring a stamped H or B.
9	620	1	n/a	35	9	3	Unknown	None	Unknown	Incomplete stem frag. featuring partial oval stamp with possible lion motif in the centre. Stem ringed by a triangle and ball pattern.
9	620	1	n/a	16	10	2	Unknown	None	Unknown	Incomplete stem frag. featuring parallel rounded triangular pattern around the circumference of the stem.
10	708	1	17	n/a	10	13	Rouletted	None	Post-med	Elongated and bulbous bowl which does not narrow towards rim.
10	708	4	n/a	35-56	7-10	16	Unknown	None	Unknown	Incomplete, undecorated stem fragments
10	709	4	n/a	n/a	n/a	46	n/a	None	Unknown	Incomplete bowls
10	709	1	17	n/a	10	13	None	None	18 th C.	Upright bowl, long with narrow bored stem at right angle to the flattened foot, no initials or markings, plain.
10	709	1	17	n/a	10	11	None	None	18 th C.	Upright bowl, long with narrow bored stem at right angle to the flattened foot, no initials or markings, plain.
10	709	1	17	n/a	10	18	Rouletted	None	17 th -18 th C.	Large bulbous bowl, forward facing spur, stem partly preserved

10	709	1	15	n/a	9	17	Rouletted	None	17 th C.	Large bulbous bowl, forward facing spur, stem partly preserved
10	709	1	n/a	n/a	10	15	n/a	None	Unknown	Bowl incomplete
10	709	1	17	n/a	10	13	Rouletted	None	17 th -18 th C.	Large bulbous bowl, forward facing spur, stem partly preserved
10	709	8	n/a	25-77	6-9	45	Unknown	None	Unknown	Incomplete, undecorated stem frags., 6 at 9mm diam., 1 at 8mm diam., 1 at 6mm diam.
10	710	1	11	n/a	9	8	Rouletted	None	17 th C.	Larger bowl, pedestal foot
10	710	1	12	n/a	10	8	Rouletted	None	17 th C.	Larger bowl, pedestal foot
10	710	2	n/a	n/a	n/a	14	Rouletted	None	Post-med	Incomplete bowls
10	710	1	13	n/a	10	10	Rouletted	None	17 th C.	Larger bowl, pedestal foot, stem partly intact
10	710	1	15	n/a	10	11	Rouletted	None	17 th C.	Larger bowl, pedestal foot
10	710	1	14	n/a	9	10	Rouletted	None	17 th C.	Larger bowl, pedestal foot
10	710	1	n/a	n/a	10	9	Rouletted	None	17 th C.	Larger bowl, pedestal foot, bowl incomplete
10	710	1	16	n/a	10	17	None	None	18 th C.	Thick bowl with 'flowing forward curve', thick stem partly intact
10	710	1	17	n/a	10	16	Rouletted	None	17 th C.	Larger bowl
10	710	1	17	n/a	10	11	n/a	None	17 th C.	Small bulbous bowl, bowl incomplete, thick stem partly intact
10	710	1	14	n/a	9	13	Rouletted	None	17 th C.	Small bulbous bowl, thick stem partly intact
10	710	1	14	n/a	9	13	Rouletted	None	17 th C.	Small bulbous bowl, thick stem partly intact
10	710	1	14	n/a	9	9	Rouletted	None	17 th C.	Small bulbous bowl, thick stem partly intact
10	710	8	n/a	35-52	6-10	19	Unknown	None	Unknown	Incomplete stem frag., undecorated, 4 at 8mm diam., 3 at 10mm diam., 1 at 6mm diam.
10	710	7	n/a	30-90	6-10	41	Unknown	None	Unknown	Incomplete, undecorated stem frags, 4 at 10mm diameter, 1 at 9mm diam., 1 at 7mm diam., 1 at 6mm diam.
10	715	1	18	n/a	10	11	None	None	Post-med	Spurred pipe with elongated bowl, stem missing, no decoration
10	715	1	13	n/a	10	9	Rouletted	None	17 th C.	Larger bulbous bowl
10	715	1	14	n/a	10	9	Rouletted	None	17 th C.	Larger bulbous bowl
10	715	1	15	n/a	10	10	Rouletted	None	Post-med	Bulbous bowl, double rouletting to the rim. Incomplete.
10	716	1	12	n/a	10	9	Rouletted	None	17 th C.	Larger bulbous bowl
10	716	1	15	n/a	10	10	Rouletted	None	17 th C.	Larger bowl
10	716	2	n/a	n/a	n/a	16	Rouletted	None	Unknown	Two bowl fragments, undiagnostic
10	716	2	n/a	36-50	5-9	9	Unknown	None	Unknown	Incomplete, undecorated stem fragments
10	717	1	14	n/a	Unknown	11	Rouletted	None	17 th C.	Larger bulbous bowl

18	733	2	n/a	n/a	n/a	5	n/a	None	Unknown	Two bowl fragments, undiagnostic
18	733	1	15	n/a	10	14	Rouletted	None	17 th C.	Larger bowl
18	733	1	18	n/a	10	8	None	None	18 th C.	Upright bowl, long with narrow bored stem at right angle to the foot, no initials or markings, plain.
18	733	2	n/a	47-57	10	23	Unknown	None	Unknown	Incomplete stem fragments, undecorated
19	741	1	17	n/a	10	14	None	None	18 th C.	Upright bowl, long with narrow bored stem at right angle to the flattened foot, no initials or markings, plain.
19	741	1	n/a	35	9	4	Unknown	None	Unknown	Incomplete, undecorated stem fragment
20	754	9	n/a	19-87	6-10	52	Unknown	None	Unknown	Incomplete, undecorated stem frags., 4 at 10mm diameter, 3 at 9mm diam., 2 at 6mm diam.
20	755	1	19	n/a	10	10	None	None	18 th C.	Upright bowl, long with narrow bored stem at right angle to the heightened foot, no initials or markings, plain.
20	755	1	17	n/a	10	12	Rouletted	None	Post-med	Elongated, slightly bulbous bowl, does not narrow towards rim.
20	755	1	15	n/a	10	11	Rouletted	None	17 th C.	Larger bulbous bowl
20	755	1	10	n/a	15	11	Rouletted	None	18 th -19 th C.	Short bowl, slightly bulbous with flared mouth and flattened spur
20	755	1	n/a	25	10	3	Unknown	None	Unknown	Incomplete stem fragment, undecorated
20	756	1	n/a	40	9	4	Unknown	None	Unknown	Incomplete stem fragment, undecorated
20	758	1	20	n/a	9	17	None	None	18 th C.	Upright bowl, long with narrow bored stem at right angle to the flattened foot, no initials or markings, plain.
20	758	1	18	n/a	9	11	None	None	18 th C.	Upright bowl, long with narrow bored stem at right angle to the flattened foot, no initials or markings, plain.
20	758	8	n/a	26-80	4-10	38	Unknown	None	Unknown	Incomplete, undecorated stem frags., 1 at 4mm diam., 1 at 5mm diam., 2 at 9mm diam., 3 at 8mm diam., 1 at 10mm diam.
20	762	1	n/a	25	9	5	Unknown	None	Unknown	Incomplete, undecorated stem fragment
13	801	1	10	n/a	9	9	Rouletted	None	17 th C.	Small bowl, pedestal foot, narrow bored stem
13	801	1	12	n/a	9	14	Rouletted	None	17 th C.	Larger bowl, pedestal foot, stem intact, rouletting imprecise
13	801	3	n/a	23-65	7-10	15	Unknown	None	Unknown	Incomplete, undecorated stem fragments
13	804	1	n/a	40	8	4	Unknown	None	Unknown	Incomplete, undecorated stem fragment
13	804	1	n/a	47	n/a	5	Unknown	None	Unknown	Incomplete, undecorated bowl fragment
21	810	3	n/a	30-55	9	14	Unknown	None	Unknown	Incomplete, undecorated stem fragments
14	905	1	17	n/a	10	20	Rouletted	None	17 th C.	Elongated bowl, stem partially intact, forward facing spur
14	905	1	14	n/a	9	17	Rouletted	None	17 th C.	Larger bulbous bowl, stem partially intact
14	905	3	n/a	40-95	9	22	Unknown	None	Unknown	Incomplete stem fragments, undecorated

14	935	1	n/a	30	9	3	Unknown	None	Unknown	Incomplete, undecorated stem fragment
11	1002	1	14	n/a	10	8	Rouletted	None	17 th C.	Larger bulbous bowl
11	1008	2	n/a	50	9-10	13	Unknown	None	Unknown	Incomplete stem fragment, undecorated
11	1010	1	n/a	35	9	7	Unknown	None	Unknown	Incomplete stem fragment, undecorated
11	1012	1	n/a	41	11	7	Unknown	None	Unknown	Incomplete stem fragment, undecorated
11	1022	1	n/a	37	10	6	Unknown	None	Unknown	Incomplete, undecorated stem fragment
12	u/s	1	17	n/a	10	21	Rouletted	None	Post-med	Stem attached, elongated and slightly bulbous bowl, does not narrow towards rim. Rouletting imprecise.
12	u/s	1	12	n/a	n/a	8	Rouletted	None	17 th C.	Small bulbous bowl, bowl
16	u/s	1	17	n/a	n/a	12	Rouletted	None	Unknown	Bowl incomplete
16	u/s	1	22	n/a	7	9	None	Spur	18 th C.	Tall upright bowl, narrow-bored stem, oval flat spur with illegible stamp to the sides.
16	u/s	1	15	n/a	n/a	12	Rouletted	None	Unknown	Incomplete bowl fragment
5	u/s	1	n/a	45	10	6	Unknown	None	Unknown	Incomplete stem fragments, undecorated
22	u/s	18	n/a	15-65	7-9	75	Unknown	None	Unknown	Incomplete stem frags., 12 at 9mm diameter, 6 at 7mm diam.
22	u/s	1	n/a	47	7	5	Unknown	None	Unknown	Incomplete stem fragments, undecorated
7	u/s	3	n/a	30-50	6-7	16	Unknown	None	Unknown	Incomplete stem fragments, undecorated
8	u/s	2	n/a	45-47	7	7	Unknown	None	Unknown	Incomplete stem fragments, undecorated
12	u/s	4	n/a	35-57	9-10	24	Unknown	None	Unknown	Incomplete, undecorated stem fragments
11	u/s	1	n/a	47	9	5	Unknown	None	Unknown	Incomplete, undecorated stem fragment
11	u/s	2	n/a	45	7	8	Unknown	None	Unknown	Incomplete, undecorated stem fragments
19	u/s	1	n/a	85	9	11	Unknown	None	Unknown	Incomplete, undecorated stem fragment
10	u/s	3	n/a	25-35	4-10	8	Unknown	None	Unknown	Incomplete, undecorated bowl fragments
16	u/s	6	n/a	40-77	6-10	27	Unknown	None	Unknown	Incomplete, undecorated stem frags., 1 at 10mm diam., 2 at 7mm diam., 3 at 6mm diam.
12	u/s	2	n/a	37-65	10	11	Unknown	None	Unknown	Incomplete, undecorated stem fragments
12	u/s	1	n/a	90	9	11	Unknown	None	Unknown	Incomplete, undecorated stem frags
16	u/s	1	n/a	50	6	50	Unknown	None	c. 19 th C.	Incomplete stem frag. featuring a foliate moulded decoration.

Most clay pipe was not retained.

15 WORKED FLINT *by David Gilbert*

Four pieces of struck flint were recovered during the 2005-2007 Christ Church investigations.

Table 13: Recorded flint

Context	Artefact	L (mm)	W (mm)	B (mm)	Notes
U/S spur 12	Thermal-fractured piece	38	22	18	
Tr 18 (734)	Primary flake	37	36	6	Trimming to dorsal surface
Tr22B U/S	Blade	41	16	5	Micro-denticulation
475/B	Primary flake	30	27	8	Hard-hammer percussion

The unstratified blade from Trench 22B was pale grey in colour and snapped at the proximal end. It displayed traces of damage and micro-denticulation along one edge, which would suggest that it was used as a cutting tool. It is probable that the proximal end snap was deliberate, and that it was mounted, possibly with similar blades, on a wooden handle.

The trimmed flake from Trench 18 context (734) also appears to have been deliberately snapped and worked in order to provide an ergonomic cutting tool.

All pieces are free from cortex, indicating that their deposition results from loss during use rather than manufacture in the area. With such a small assemblage it is obviously difficult to accurately date the lithics, but they would appear to have resulted from sparse activity during the Early Neolithic to Bronze Age.

16 INDUSTRIAL RESIDUES *by Hayley McParland and Gwilym Williams*

Copper-alloy slag

16.1. Copper-alloy and lead object.

Copper-alloy and lead object, possibly slag or manufacturing residue from the production of pot metal. The object is slightly curved, as if to suggest that it has taken the form of the inner surface of a crucible or other manufacturing device.

Context: Trench 5, makeup layer (330), SF No. 007. Date: 13th-14th century. Length: 15mm, width: 15mm, weight: 5g.

16.2. Copper-alloy slag.

Single piece of copper-alloy slag.

Context: Trench 2, deposit (07). Length: 40mm, width: 17mm, thickness: 10mm, weight: 10g.

16.3. Copper-alloy slag.

Thirteen fragments of copper-alloy slag. The largest of the fragments is slightly concave and is adhered to a limestone fragment, covering the upper surface of the limestone and extending down one of the sides. Measurements given are for the largest of the fragments, weights are for the total assemblage.

Context: Trench 4, layer (220). Date: *circa*. 13th-14th century. Length: 85mm, width: 45mm, thickness: 35mm (including limestone), copper-alloy: 5mm, weight: 268g.

16.4. Copper-alloy slag.

Five fragments of copper-alloy slag. Measurements given are for the largest of the fragments, weights are for the total assemblage.

Context: Trench 4, ditch fill (222). Date: late 11th to 12th century. Length: 30mm, width: 25mm, thickness: 3mm, weight: 40g.

16.5. Copper-alloy slag.

Single large lump of copper-alloy slag, uneven in shape.

Context: Trench 7, garderobe fill (496). Date: mid-14th century? Length: 50mm, width: 45mm, thickness: 2-25mm, weight: 70g.

16.6. Copper-alloy slag.

A single lump of copper-alloy slag.

Context: Trench 8, layer (520). Length: 25mm, width: 25mm, thickness: 15mm, weight: 37g.

16.7. Copper-alloy slag.

A single lump of copper-alloy slag.

Context: Trench 8, service trench fill (620). Length: 40mm, width: 30mm, thickness: 15mm, weight: 51g.

16.8. Copper-alloy slag.

At least 20 fragments of copper-alloy slag, all fairly flat and even, with only one large fragment present. One fragment of slag is rounded in shape and much heavier than the other fragments, suggesting perhaps the presence of lead. Measurements given are for the largest of the fragments, weight is given for the combined assemblage.

Context: Trench 11, layer (902). Length: 70mm, width: 50mm, thickness: 10mm, weight: 348g.

16.9. Copper-alloy slag.

Lump of heavily corroded copper-alloy slag.

Context: Trench 11, cobbled surface (1022). Date: mid-16th to 17th century. Length: 50mm, width: 10-45mm, thickness: 12mm.

16.10. Copper-alloy slag.

Six fragments of copper-alloy slag.

Context: Trench 4, U/S. Length: 30mm, width: 20mm, thickness: 10mm, weight: 47g.

16.11. Copper-alloy slag.

A single lump of copper-alloy slag.

Context: Spur 13, U/S. Length: 20mm, width: 10mm, thickness: 3mm, weight: 4g.

Iron slag

16.12. Iron and copper-alloy slag.

Single piece of slag, the majority of which appears to be iron slag, with copper-alloy fragments running through it.

Context: Trench 4, layer (220). Date: c. 13th-14th century. Length: 45mm, width: 35mm, thickness: 20mm, weight: 72g.

16.13. Iron slag.

Single piece of iron slag.

Context: Trench 5, layer (251). Date: late 15th to mid-16th century. Length: 45mm, width: 35mm, thickness: 20mm, weight: 26g.

16.14. Iron and copper-alloy slag.

Single piece of slag, the majority of which appears to be iron slag, with copper-alloy fragments running through it.

Context: Trench 5, layer/cemetery soil (258). Date: 13th to mid-16th century. Length: 45mm, width: 28mm, thickness: 20mm, weight: 31g.

16.15. Iron slag.

A single lump of iron slag.

Context: Trench 12, layer (656). Date: mid-16th to 17th century. Length: 80mm, width: 60mm, weight: 137g.

Unidentified Material

16.16. Unidentified mineral material or slag.

Unidentified mineral material or slag, solid, with a silvery grey finish, an uneven surface and occasional pitted vesicles.

Context: Trench 20, mixed service trench fill (758). Length: 40mm, width: 40mm, thickness: 30mm, weight: 70g.

16.17. Unidentified mineral material or slag.

Unidentified mineralised material or slag, solid but light, black in colour with silvery flecks, an uneven surface and occasional pitted vesicles. Appears to be some sort of bitumous or tarry substance.

Context; Trench 7, garderobe fill (496). Length: 52mm, width: 44mm, thickness: 0.18mm, weight: 22g.

17 HUMAN BONE *by Linzi Harvey*

17.1 Nature of the sample

Two partial adult skeletons and a partial infant were recovered during the watching brief observations at Christ Church, Oxford in January 2007. None of the inhumations (735, 737 and 739) were associated with discernable grave cuts. All were aligned east-west with their heads to the west, and were extended inhumations in supine positions. A number of skull fragments indicated the presence of a young infant or neonate just south of the skull of individual 739.

The nature of excavation (trenching along a predetermined course) means that partial remains were recovered where whole remains may have been present. The skeletons were discovered unexpectedly, just 0.40-0.45m below present ground level.

The skeletal remains were examined macroscopically and data recorded onto paper record forms following both IfA and English Heritage standards and guidelines (Brickley and McKinley 2004; Mays and Brickley *et al.* 2004 respectively).

17.2 Methodology

17.2.1 Preservation and completeness

An assessment was made of the state of preservation of the inhumed remains from 'good' (1) to 'poor' (3).

1) 'Good'. Bone surface is in good condition with no erosion, fine surface detail such as coarse woven bone deposition, if present, would clearly be visible to the naked eye.

2) 'Moderate'. Bone surface is in moderate condition, with some post-mortem erosion on long bone shafts, but the margins of the articular surfaces and some prominences eroded.

3) 'Poor'. Bone surface is in poor condition with extensive post-mortem erosion, resulting in pitted cortical surfaces and long bones with articular surfaces absent or severely eroded.

A skeletal inventory and full fragment count of each inhumation was undertaken.

17.2.2 Age at death

Age at death estimation was based on a number of commonly used aging techniques. The adult sample was aged using epiphyseal fusion data (Schwartz 1995), cranial suture closure (Meindl and Lovejoy 1985), maxillary suture closure (Mann *et al.* 1987) and dental attrition (Brothwell 1981) where appropriate. The age of the sub-adult and neonatal sample was determined using epiphyseal fusion data, dental development (Moorees *et al.* 1963a, 1963b) and length of long bones (Scheuer *et al.* 1980) where appropriate.

Ageing techniques associated with the pelvis could not be used in this sample as no lower body remains were recovered.

For descriptive purposes, the skeletons were assessed and then assigned to the following broad age categories:

Table 14: Age codes

Description	Age range
Neonate	< 1 year and in utero
Infant	< 3 years
Juvenile	< 18 years
Young adult	18-25 years
Middle adult A	25-35 years
Middle adult B	36-45 years
Older adult	>46 years

17.2.3 Sex estimation

Estimation of sex was only considered appropriate for the adult sample and was based on macroscopic observation of key skeletal landmarks in the cranium and mandible. Where possible, up to 20 sexually diagnostic features were marked on a five point scale as follows; 1 = male, 2 = probable male, 3 = intermediate, 4 = probable female and 5 = female.

Sex estimation techniques associated with the pelvis could not be used in this sample as no lower body remains were recovered.

17.2.4 Stature

The lengths of the long bones, when available for measurement, were used to provide an estimate of stature for the adult skeletons. This was calculated using formulae created by Trotter (1970).

17.2.5 Metrical data

Where preservation and completeness allowed, measurements were taken of a number of cranial, dental and post-cranial features, using landmarks identified in Brothwell (1981) and Bass (2005).

17.2.6 Non-metric traits

Non-metric traits were not recorded in this sample from Christ Church due to the incompleteness of the individuals and the fragmentary state of the skulls.

17.2.7 Palaeopathology

Pathological changes were recorded using guidelines set out by the British Association of Biological Anthropologists and Osteologists (Roberts and Connell 2004). Basic pathological information was obtained from Roberts and Manchester (1995) and Roberts and Cox (2003) with additional references as required.

17.2.8 Dental pathology

The recording of dental pathology, where dental remains are present, covered five pathological changes; calculus deposits and periodontal disease, carious lesions, hypoplastic defects and periapical lesions. Each observation was recorded by tooth or tooth position as appropriate and scored for severity according to established schemes such as Brothwell 1981.

17.3 Results

17.3.1 Preservation and Completeness

All individuals recovered were less than 25% complete, but the bone preservation of skeletal elements present was generally very good with very little cortical erosion of the bones and fine surface detail still visible. The skulls recovered were all highly fragmentary, however. This is probably due to the unexpected discovery of the skeletons during machining.

17.3.2 Minimum number of individuals

Individuals 735 and 737 represent single inhumations with no intermingling. An infant accompanied skeleton 739, and the presence of an additional right scapula fragment with this skeleton indicates the presence of one other individual. This additional fragment is likely charnel in nature, and may reflect a degree of recutting and disturbance of earlier remains within the cemetery soils.

A fragment of butchered sheep/goat vertebrae was recovered along with skeleton 735, but this is unlikely to be significant.

17.3.3 Age at death

The age of death for both adults could only be broadly estimated due to the incomplete nature of the sample.

On the basis of bone fusion data and dental wear, both skeletons 735 and 739 were adult; 735 a 'Middle Adult A' and 739 a 'Middle Adult B'. Skeleton 737, on the basis of fusion data and long bone length was likely to have been between one and two years of age at death, probably in the middle of that estimate. It is impossible to securely estimate the age of the infant associated with 739, but it was likely to have been under one year old at time of death.

17.3.4 Sex estimation

The biological sex of the middle adult 735 was assessed as male (of the five sexually diagnostic features visible, 80% were considered 'definite male') and the older adult 739 as probable female (three 'probably female' diagnostic features, out of four assessed). This uncertainty was mainly due to the lack of observable pelvic characteristics in both of these skeletons.

17.3.5 Stature

Stature was estimated to be 1.83m (6ft 0in) for the male 735. The stature of probable female 739 was estimated to be 1.65m (5ft 5in). These heights are considered above average for late medieval Britain, where the average height for males in this period was 5ft 7in and for females, 5ft 2in (Roberts and Cox 2003: 248).

17.3.6 Metrical data

No teeth could be usefully measured for any individuals in this sample. A few post-cranial elements were measured, and the following table outlines all of the metric data obtained, in mm.

Table 15: Post-cranial metrical data

Measurement	Skeleton 735	Skeleton 737	Skeleton 739
Humerus length (L)	365mm	120mm (estimated)	-
Humerus head diameter (L)	57mm		
Radius length (R)	-	-	-
Clavicle length (L)	172mm	-	-
Clavicle length (R)	170mm	-	231mm

17.3.7 Palaeopathology

No pathology was observed on the younger skeletal material recovered. The adults in this sample, however, both exhibited a number of pathological and trauma related conditions.

The male 735 exhibited moderate osteophytosis on several vertebral joint surfaces and Schmorl's nodes on three thoracic vertebrae. He also exhibited some pathological changes to the lateral part of the right clavicle and associated articulation with the acromion of the scapula. These changes included porosity of the joint surface, new bone formation and eburnation of the articulation. This is also present, to a lesser extent, in the left side. A rib fragment from 735 exhibited striated new bone formation (periostitis) on the anterior surface, indicating either a non-specific infection or some sort of trauma. One of his middle left ribs exhibited two healed fractures, positioned close together towards the middle of the rib shaft. Additionally, a small (diameter 3mm) growth was found on the frontal bone of 735, which is probably a benign neoplasm often referred to as an ivory osteoma.

The probable female 739 exhibited moderate to severe osteophytosis on the majority of joint surfaces in all three vertebrae recovered (cervical vertebrae 1-3) and porosity of the third cervical vertebral body. Of note in this individual was the right shoulder joint. She exhibited severe osteophytosis of the humeral head margin and glenoid cavity of the scapula, as well as severe eburnation of the articulation between these two joint surfaces. This is almost certainly severe osteoarthritis. The head of the humerus is also notable for the exostosis (growth of bony spurs) of some muscle attachment points, notably the rotator cuff muscles, muscles which rotate the arm and aid the movement of the arm back to the body when the arm is extended.

17.3.8 Dental pathology

In the youngest individual 737, only a small fragment of mandibular ascending ramus and no teeth were recovered. Similarly, no teeth were recovered from the adult 735. Four fragments of posterior mandible recovered, however, show that his lower right second and third molars had been lost ante-mortem. It is likely that this indicates dental problems during his life.

The anterior part of the maxilla and most of the mandible of individual 737 was recovered, but only two teeth remained. The majority of her teeth had been lost prior to death, with only the upper left canine and lower third molar remaining in the dental arcade. Both of these teeth were worn, with the canine considerably so. Four single rooted teeth, also severely worn, were recovered with this skeleton. They do not appear to fit well in any of the partially resorbed tooth sockets present in the mandible or maxilla, but it is possible they are from this individual. No dental pathologies aside from severe attrition and a small amount of possible periodontal disease were observed in this individual.

17.3.9 Summary table

Table 16: Summary table

Skeleton no.	Preservation	Completeness	Age	Sex	Stature	Pathology and trauma
735	Good	Most cervical and six thoracic vertebrae, left and right ribs and scapulae, left humerus, fragmentary skull.	Adult	Male	1.83m (6ft 0in)	Moderate osteophytic lipping, porosity and Schmorl's nodes in a number of thoracic vertebrae. Periostitis of rib fragment, anterior surface. Two healed fractures of typical upper rib (possibly 5 th). Ivory osteoma (3mm diameter) on frontal bone of skull.
737	Good	Fragmentary skull, partial left scapula and arm, several rib fragments (mostly left) and few vertebral fragments.	Infant, 1-2 years	Unknown	Unknown	No pathology observed.
739	Good	Fragmentary skull, upper cervical vertebrae and rib fragments, partial right scapula and humerus, partial left and right clavicles. Right radius.	Adult	?Female	1.65m (5ft 5in)	Osteophytic lipping, porosity and fusion of upper cervical vertebrae. Severe osteophytosis, eburnation and porosity of right glenohumeral joint
739 neonate	Moderate	Few skull fragments, scapula fragment.	Neonate /infant	Unknown	Unknown	No pathology observed

17.4 Discussion

The skeletal material was largely incomplete, due primarily to the limited excavation area of the machine-dug trench. The partial nature of this assemblage makes it impossible to fully

understand the demography of the sample, the dental health and diet, or comment on musculo-skeletal markers that might have shed light on occupation. Additionally, it was impossible to measure many metric and any non-metric traits in this sample due to the fragmentation of several skeletal elements.

The individuals recovered were not associated with identifiable grave cuts, but do appear to have been separate and contained *in situ* inhumations with the possible exception of probable female 739, who might have been buried with a very young infant or neonate. The lack of grave goods or coffin furniture is not unusual in a late-medieval or early post-medieval Christian cemetery and it is likely that the bodies were simply shroud wrapped prior to burial. The adults 735 and 739, as well as the young child 737, were all aligned east-west with their heads to the west and extended in a supine position. Whilst there may have been some disturbance to the skeletons just prior to archaeological excavation, they appear to have been in good overall condition.

Individual 735, a male, appears to have been fairly robust and above average height for the late medieval and post-medieval periods at 1.83m or 6 feet tall. It is likely that he falls into the 'Middle adult A' category of 26-35 years of age at death. The disease and trauma exhibited by this individual was varied – he displayed evidence of moderate osteoarthritis of the spine and acromio-clavicular joint, ante-mortem tooth loss of the posterior molars (indicating possible poor dental health in life), two healed fractures to one of his left middle ribs and an area of possibly related non-specific infection to another. Rib fractures such as the ones exhibited by 735 are usually the product of either a fall or direct blow to the rib cage (Roberts and Manchester 1995, 77). A small benign growth called an ivory osteoma was recorded on a fragment of frontal bone, but would not have presented the individual with any symptoms in life, and these are common occurrences in the modern period and in antiquity.

Individual 737 was an infant aged between one and two years of age at death. No pathology was observed, which is not unusual for such a young individual. Infant mortality in both the late medieval and post-medieval periods was very high, with deaths usually attributed to infection or associated with poor diet.

Individual 739, a probable female appeared to be similarly robust and above average height at 1.65m or 5ft 5in tall. She is likely to fit into the 'Middle Adult B' category of between 36-45 years of age at death. She displayed evidence of moderate to severe osteoarthritis of the upper vertebrae and severe osteoarthritis of the shoulder joint, with the head of the humerus and corresponding part of the scapula both exhibiting extensive osteophytic growth and eburnation. Whilst osteoarthritis is commonly associated with older age in antiquity, the extent of the damage, along with exostosis (increased robusticity) of many muscle attachment sites in her upper right arm, may suggest an occupation related aetiology. Her dental health was fairly poor, with most of her teeth lost before death, probably due to severe wear and poor dental hygiene. A few fragments of neonate or young infant skull were found to the south of the skull of 739, near her shoulder. Whilst these remains may have been residual and re-deposited, it may be that they were deliberately interred with 739. It implies no familial connection – it is common practise even today to bury young children with 'a conveniently recently deceased female' (Roberts and Cox 2003: 253), with the child often placed near the head or hands of the adult.

This sample presents a small group of probably unrelated individuals who were buried in accordance with Christian funerary rites, probably in a late medieval or early post-medieval setting. Although this assemblage was small and incomplete, the large number of pathologies observed on both of the adults may be unusual. This suggests that analysing a larger sample from the same location could potentially yield more detailed information about the daily lives of those people buried within this area of Christ Church.

18 SHELL by Hayley McParland

A total of 177 oyster shells were recovered from the investigations at Christ Church, with 76.8% or 136 oyster shells coming from a range of contexts in Trench 5 broadly dated to the 13th-16th centuries. The *total* quantity of mollusca shell from Trench 5 was 138 individual valves or diagnostic markers, making up 76.6% of the entire Christ Church assemblage. In addition to oyster shell, two columellae from probable whelks or periwinkles were recovered from Trench 5, as well as a single cockle shell from Trench 7. Although the concentration of shell in Trench 5 may have been related to street frontage shops and businesses pre-dating the foundation of Christ Church, this was an area where features were excavated by hand and thus more intensively sampled. Shell would have been retained as finds. Elsewhere during the watching brief, shell was not routinely collected. There were no significant assemblages of shell to warrant further assessment or analysis, and no shell was retained.

Table 17: Marine mollusc shell from Christ Church

Trench	Context	Type	Qty	Length (mm)	Width (mm)	Valve	Weight (g)	Phase
2	7	Oyster	2	75	50	R	39	Unknown
3	122	Oyster	9	45-55	45-50	4L, 3R	74	Unknown
3	179	Oyster	4	45-57	40-55	2L, 2R	28	14 th C.
3	184	Oyster	1	45	43	R	7	14 th C.
4	200	Oyster	1	45	45	R	10	13 th -14 th C.
3	205	Oyster	2	60-100	50-85	1L, 1R	86	13 th -14 th C.
4	219	Oyster	1	60	60	L	29	13 th -14 th C.
5	234	Oyster	2	65	55	R	22	Unknown
5	235	Oyster	6	n/a	n/a	Unknown	19	Unknown
5	241	Oyster	1	60	50	L	21	17 th C.
5	242	Oyster	2	45	40	1L, 1R	11	15 th -16 th C.
5	242	Oyster	4	40-55	35-50	R	13	15 th -16 th C.
5	243	Oyster	13	60	55	1L, 4R	84	Unknown
5	244	Oyster	3	n/a	n/a	1L, 2R	21	Unknown
5	246	Oyster	5	n/a	n/a	Unknown	29	15 th -16 th C.
5	249	Oyster	5	55	45	R	42	Unknown
5	250	Oyster	3	45-55	35-50	1L, 1R	20	13 th -16 th C.
5	252	Oyster	2	40-55	40	1R, 1L	14	Unknown
5	252	Oyster	1	45	40	R	6	Unknown
5	254	Oyster	11	55-70	50-55	6 L, 5R	100	13 th -16 th C.
5	254	Whelk/winkle	1	n/a	n/a	Unknown	3	13 th -16 th C.
5	257	Oyster	10	n/a	n/a	Unknown	57	Unknown
5	258	Oyster	9	50	40-60	1L, 4R	56	13 th -16 th C.
5	258	Oyster	5	45-65	40-65	2R, 3L	57	13 th -16 th C.
5	258	Oyster	8	70	65	1R, 7L	129	13 th -16 th C.
5	265	Oyster	2	40	40-45	R	13	15 th -16 th C.
5	271	Oyster	2	40-55	40-52	R	20	13 th -16 th C.
5	271	Whelk/winkle	1	n/a	n/a	n/a	<1	13 th -16 th C.
5	273	Oyster	2	50	40	1L, 1R	21	Unknown
5	286	Oyster	1	50	40	L	9	13 th -14 th C.
5	299	Oyster	2	n/a	n/a	Unknown	18	Unknown
5	306	Oyster	2	n/a	n/a	Unknown	12	13 th -16 th C.
5	312	Oyster	1	50	35	L	6	15 th C.

5	315	Oyster	16	40-60	30-50	1L, 15R	102	17 th C.
5	316	Oyster	2	n/a	n/a	Unknown	13	13 th -14 th C.
5	327	Oyster	8	40-55	35-40	2L, 6R	55	15 th C.
5	333	Oyster	1	55	45	R	9	15 th C.
5	334	Oyster	3	60	35	R	14	15 th C.
5	335	Oyster	1	50	40	R	6	13 th -14 th C.
5	336	Oyster	2	70-80	70-80	L	89	Unknown
5	353	Oyster	1	50	37	R	6	Unknown
6	401	Oyster	1	50	45	R	11	16 th C.
7	475	Cockle	1	27	30	Unknown	5	15 th -16 th C.
7	496	Oyster	8	42-80	30-75	5L, 3R	152	14 th C.
7	515	Oyster	1	70	55	L	10	Unknown
8	522	Oyster	3	n/a	n/a	Unknown	10	15 th -16 th C.
8	576	Oyster	1	60	55	L	21	Unknown
12	656	Oyster	2	65-85	55-70	1L, 1R	32	16 th -17 th C.
12	656	Oyster	2	40-55	40-50	2R	18	16 th -17 th C.
Unknown	2012	Oyster	1	n/a	n/a	L	6	Unknown
11	u/s	Oyster	1	50	50	L	13	Unknown
2	u/s	Oyster	1	45	45	R	6	Unknown

19 DISCUSSION

19.1 St Frideswide's Priory and the Priory precinct wall

St Frideswide's Priory was officially re-founded in 1122 and was in use until 1525 when it was converted into Cardinal College on the orders of Wolsey. Some of the documentary evidence outlined in this report below records major episodes of rebuilding in what became Christ Church during the 15th, 16th and 17th centuries (Sturdy 1961-62: 215-218). To the north of the cathedral, 1962 investigations found evidence of several extensions to the north-east chapels dating from the 12th century onwards (Beckley and Radford 2011a: 51). Although this work allowed a partial reconstruction of the layout of the medieval tiled floor, much of the archaeological stratigraphy had clearly been destroyed by the insertion of numerous Victorian tombs through the chapel floor (Sturdy 1988: 75). No remains associated with the early medieval priory were encountered during the construction work in 2005-2007, probably mainly because much of the ground-work was too shallow to impact upon any remains of this likely date, although it is also possible that post-medieval and early modern buildings and disturbance had destroyed some of the earlier stratigraphy. The only remains identified during the archaeological investigations that might have been associated with the later Augustinian Priory included walls and a possible building, a garderobe, and burials in the graveyard to the west and north-east of the later Cathedral. The history of the Anglo-Saxon minster and the later Augustinian priory has been thoroughly discussed elsewhere (Blair 1988a, 1994, 52-54, 61-63; Dodd 2003, 17-18).

Remnants of walls that probably belonged to the priory were recorded in Trenches 1 and 5. Wall 03 in Trench 1 in the southern part of Tom Quadrangle was 0.90m wide and orientated north-east to south-west (Fig. 5, Plan 1). It was 0.90m wide and constructed on an arch formed from pitched stones (Fig. 5, Sections 1 and 4), similar to the culvert arch excavated at Greyfriars Site B at Littlegate (Hassall, Halpin and Mellor 1989, 154-155, plates 36-37). Approximately 5.15m to the east was wall 83, and between it and wall 03 was a series of thin floor layers that were unfortunately undated. This may indicate that there had been a building constructed up against the eastern face of wall 03.

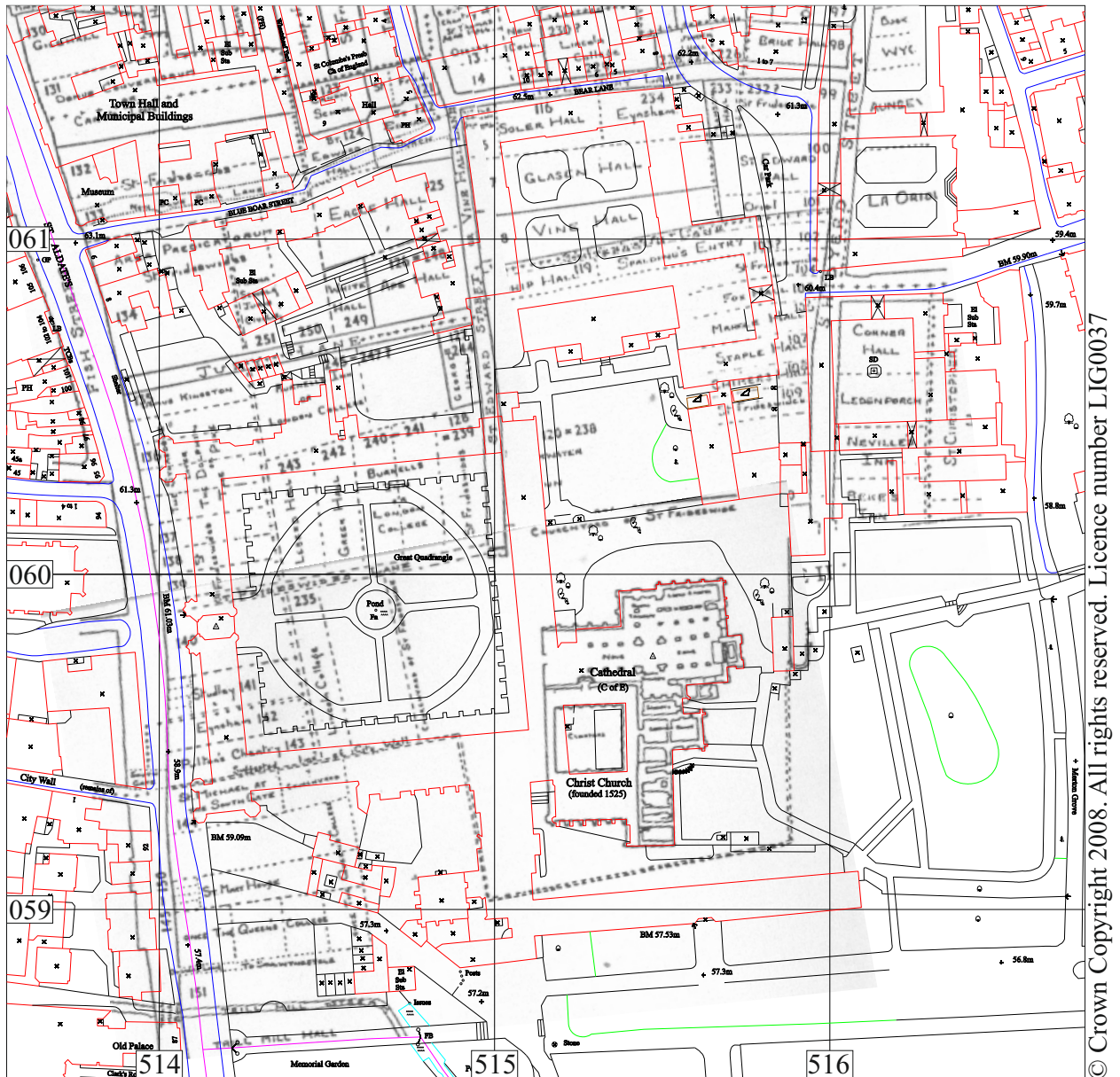
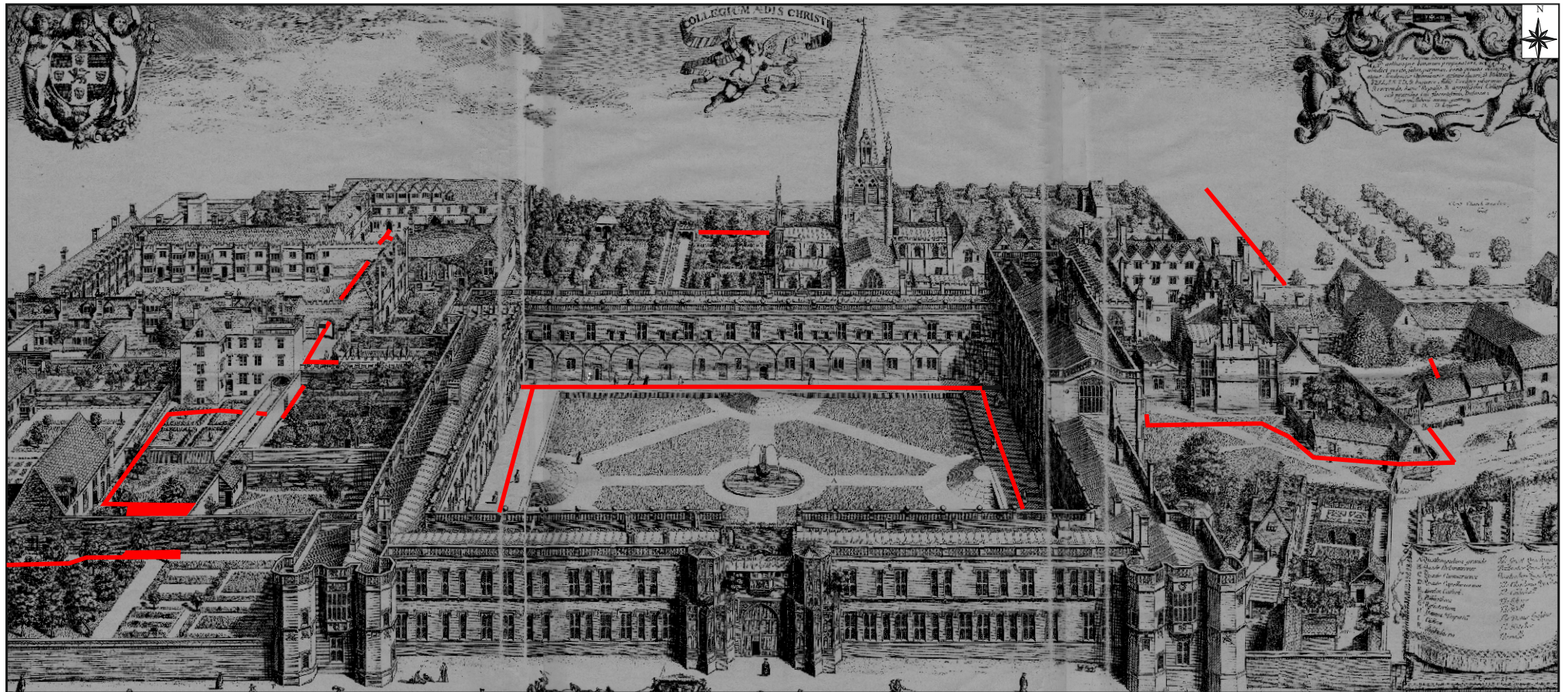


Figure 67. Modern street plan of Oxford with Salter's 1960 map of medieval Oxford superimposed on it



Key:
— Approximate line of trenches

Not to Scale

Figure 68. Logan's panoramic view of Christ Church from 1674, with the lines of the trenches superimposed on it

Wall 03 was interpreted by the excavator as the western wall of the priory precinct, but it seems to be situated too far to the west compared to the boundary shown on Salter's admittedly conjectural map of medieval Oxford (Fig. 67). It is possible that walls 03 and 83 were associated with Lincoln College (Salter 1960, SE235, map SE VI). There are documentary records for this property from 1249 (*ibid.*, 259), and it was seized on the orders of Cardinal Wolsey prior to the construction of Christ Church. Alternatively, and perhaps more likely, this may mean that Salter simply had the priory precinct wall too far to the east. Human remains were found to the west of wall 03, which would also make the Lincoln College interpretation less likely. If the St Frideswide's Priory precinct did indeed originally extend this far west, then this building may well have provided lodgings for visitors or had some form of ancillary function. There is a narrow, linear dashed gap marked on the Salter map (Fig. 67) between the rear of the Studley, Eynsham and Pulton's Chantry properties, and that of Lincoln College. If this line convention was intended by Salter to mark a narrow alleyway or 'ginnel', then it is also possible that the surfaces between walls 03 and 83 were external rather than internal floors, and that the walls were property boundaries with an alleyway in between them. The series of thin clay surfaces would seem to be more indicative of internal floors, however.

In Tom Quadrangle, the roughly east-west orientated masonry wall 322 recorded towards the northern end of Trench 5, approximately 25m to the north of the garderobe 339, apparently defined the limit of the cemetery soil (313) (Fig. 13, Plan 41, Section 25). This probably represents the northern Priory precinct wall, separating the precinct from St Frideswide's Lane, the surfaces of which had probably originally abutted this wall on its northern face. It is likely that this same wall was previously recorded further east in the Cathedral Garden (Sturdy 1961-62, 30-31) where the lower foundations were 0.90m wide and the upper part at 0.79m wide was slightly broader than that in Trench 5 (0.68-0.75m).

The Priory precinct wall was probably built in the 12th century, connected with the re-foundation of St Frideswide's church as a priory of Augustinian Canons in 1122. At the same time the churchyard was extended over sites of earlier houses (Sturdy 1961-62, 31). No evidence for the precinct wall or the city wall was found further to the east or south (see below), however, so no further insights can be provided to discussions of the likely extent of the original and later precinct (Blair 1988b, 236-237). It has been proposed that the St Frideswide's Priory Precinct wall could be a separate wall in Meadow Quad (Robinson *et al.* 2003, fig. 3.13). It is possible that some of the walls recorded in Trenches 13, 15 and 22A might have related to the priory, with walls 725 and 964 being potential candidates for this boundary. The north-east to south-west orientation of wall 725 in particular could suggest that it was either once part of the priory precinct wall, or was following an earlier line of it. Wall 964 was a fragment of east-west masonry, but it was located between two north-south walls and unless the precinct wall had some major changes of alignment at this point it seems unlikely to have formed the precinct boundary. Again though, great caution has to be exercised in comparing the archaeological evidence to the incomplete and often contradictory cartographic and documentary sources. Wall 322 in Trench 5 must have survived, even as footings, for quite a significant period of time, as the pit that truncated it contained 17th century pottery. Much of it would have lain beneath Tom Quadrangle following Wolsey's construction, but it may only have been the reduction in the level of most of the central quadrangle in Tom Quad during the 18th century that destroyed most of it.

It is not clear what structure garderobe 339, just to the north-west of the original end of the church (Fig. 3) was associated with, but it was located within the cemetery and on the same orientation as the main priory buildings. This feature appears to have been infilled during the 15th century and includes architectural fragments of 12th and 13th century date, suggesting that the infilling probably occurred at a time of demolition and/or rebuilding and refurbishment. The architectural fragments might even have been derived from a dismantled building once directly associated with the garderobe.

The presumed building associated with the garderobe seems to indicate that this area was no longer being used as part of the cemetery, and the burials recorded during the investigations may well belong to the earlier part of the medieval period. Indeed, the only dateable material from an excavated grave fill was a single sherd of mid-13th to 14th century date. The pit and ditches that contained late 15th to mid-16th century pottery also suggest that this part of the cemetery was used for other purposes during the later medieval and early post-medieval period.

The two ditches recorded at St Frideswide's were on different orientations from each other, with ditch cut 268/293 on an east-west alignment (not the same as the extant priory buildings), and ditch cut 275 aligned north-east to south-west. Although the fills of ditch 268, its recut 293 and ditch 275 produced pottery of broadly similar 15th to mid-16th century date, this difference in orientation suggests that they were of different phases. The east-west ditch cut 268/293 may have been replaced by a path, indicating that the ditch had a boundary function. The function of shallow vertical-sided pit 275 is unclear, though it could have been a garden feature.

An inhumation burial in a stone-lined coffin was apparently found around 1890 in St Aldate's Street opposite Tom Tower and the western gateway of Christ Church (*Proceedings of the Society of Antiquaries of London* 1901-3, 221), possibly associated with an earlier church on the site of St Aldate's (Dodd, Munby and Wilkinson 2003, 18-19). There is a 19th century antiquarian record for a human burial found in Tom Quad (*Proceedings of the Oxford Architectural and Historical Society* 1 1860-4, 220), and two inhumation burials were found in the south-east corner of Tom Quad during ground-work in 1972, with the bases of both graves covered in charcoal (Hassall 1973, 270-271). It was thought that these were located immediately outside the western end of the 12th century Priory Church. One of the skeletons was radiocarbon dated to the 9th century AD. This was recalibrated to a wider date range of AD 680-1160 (Boyle 2001, 366), but remodelling of this date using Bayesian statistical analyses suggests a narrower range of AD 810-970 (Dodd, Bertram and Munby 2003, 240). Similar 'charcoal burials' of late Anglo-Saxon and earlier medieval date are known from elsewhere in Britain and Europe, with two further examples having been excavated in Christ Church cloister and at least eight more during work at St Aldate's Church (*ibid.*).

Interpretations of such burials have suggested functional explanations such as the use of charcoal to absorb bodily fluids from decomposing bodies and reduce odours from rotting flesh, but charcoal may have been used in a more symbolic way to purify the grave cut, or to represent penance and/or the state of the soul (Gilchrist and Sloane 2005; Thompson 2004). They might also have reflected higher status individuals. The area to the south and east of the cathedral has had many small-scale archaeological interventions since the 1960s which have found inhumation burials mostly ranging in date from the 8th to the 11th centuries, some in stone-lined graves (e.g. Boyle 2001; Scull 1988; Sturdy 1988). Significantly, one relatively recently excavated burial of an adult woman produced a relatively secure 7th century date for one female skeleton (Boyle 2001, 367). This raises the possibility that there was a centre of ecclesiastical and/or political power in this part of Oxford from an early date.

The burials found during the JMHS investigations in the present cemetery garden just north of the Latin Chapel are undated and were at a very shallow depth compared with others found in the vicinity. Here the skeletons were only 0.26-0.42 metres below ground level, compared with the highest just outside the Choir at c. 1.5m (Sturdy 1988), and at 0.80 to 0.90m below the existing ground level, where they were sealed by a layer of demolition material containing 13th century pottery (Boyle 2001). The find of a partial burial and other disarticulated remains west of the precinct wall suggests that this was once part of the cemetery associated with the church of St Michael at the South Gate. There were no signs of pits anywhere along this stretch of Trench 1 and the soil seen was very homogeneous and similar in appearance to a graveyard soil.

In the 19th century a substantial stone wall was revealed on a north-south alignment extending from Tom Tower to 8 St Aldates, and it has been suggested that this was part of the priory precinct wall (Beckley and Radford 2011a: 51), though it does seem very far north. Blair (1988, 233-235) suggested that the St Frideswide's minster cemetery could have extended west beyond St Aldates. The only pottery retrieved during the excavation of this stretch of Trench 1 was dated to the late 11th to 12th century and was found adjacent to the precinct wall. Unfortunately, much of this part of Trench 1 was excavated by ground workers before the appointment of an archaeological contractor, although the base and sides of the trench were subsequently examined. Although it is possible that early minster burials were disturbed by later use of this area as gardens, the partial skeleton disturbed by the building of the precinct wall was situated *c.* 1.17-1.27m above the level of the two burials recorded by Hassall (1973), suggesting that this area was used as a graveyard until a much later date. If this was the graveyard of the Michael at the South Gate, then presumably it extended northwards to St Frideswide's Lane. Further disarticulated human remains were also found in the backfill of service trenches in School Yard, south of the Great Hall and east of two walls that Sturdy (1961-62, 27) thought were associated with the church of St Michael at the South Gate. These human remains could have belonged to the priory, however, if the priory precinct wall ran directly SSW to the town wall (Fig. 67), if it had a 'dogleg' around St Michael at the South Gate, or if the priory precinct had diminished in size at some point. The position of the church here would also correlate with the position of the graveyard seemingly identified during these investigations.

At the southern end of Trench 19, stone wall 742 was a broadly east-west orientated structure up to 1.00m wide. This location was also within the medieval precinct of St Frideswide's Priory and is only just to the east of Christ Church cathedral, but the wall could be later in date. On the Ralph Agas panorama of 1578 (Fig. 69) and the Václav or Wenceslaus Hollar panorama of 1643 (Fig. 70), there is an east-west aligned wall depicted abutting the eastern end of the cathedral, and also linked to the medieval city wall. It might have formed part of a gateway and/or gatehouse through the city wall at the southern end of a north-south orientated lane that was connected to Shidyerd Street. Unfortunately, this structure is hidden 'behind' the main cathedral building on the David Loggan panorama of 1673 (Fig. 68).

To the rear of the kitchen in Chaplain's Quad, several small sections of stone wall were exposed in Trench 21. Wall 811 was orientated NEE-SWW, whilst two further walls 812 and 813 were recorded to the south, these only *c.* 0.60m apart and possibly aligned east-west. There was no dating evidence for any of the walls, which were at a relatively shallow depth below the modern ground surface. The east-west walls could represent one or more phases of an east-west building pre-dating the range of buildings shown on the Loggan panorama of 1673, though this area is largely hidden behind the southern range of Tom Quad and the Great Hall and the cathedral on the 1643 Hollar panoramic map. It is possible that walls 812 or 813 could represent part of an east-west section of the St Frideswide's Priory precinct wall (Salter 1960, map SE VI), but they might equally have been part of buildings or internal boundaries belonging to the complex.

Trench 13 and its eastern continuation Trench 15 were located to the south of the cathedral, to the north of the more recent Meadow Building but still largely within the area of St Frideswide's Priory precinct. Walls 802 and 803 were both substantial limestone masonry structures *c.* 11m apart from one another, 802 on a broadly north-south axis but 803 aligned more NNW-SSE. They were bonded with different materials, and this together with their width suggests that they were not part of the same building or structure. These walls do correspond fairly closely in their spacing to the southern extension of the cathedral. Both walls were overlain by a deposit (801) containing mid-16th and 17th century pottery, along with oyster shells, and limestone and brick or tile fragments. This suggests that the walls were extant until the post-medieval period.

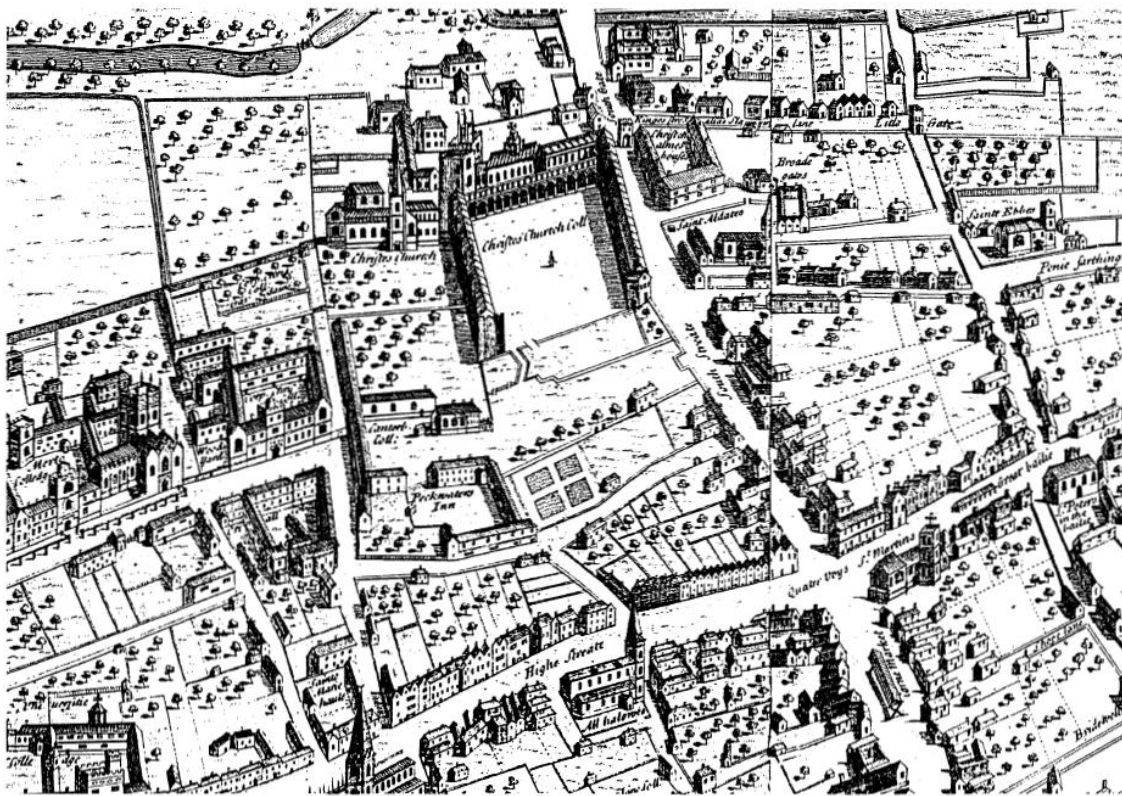


Figure 69. Detail of the Agas panorama of Oxford, 1578

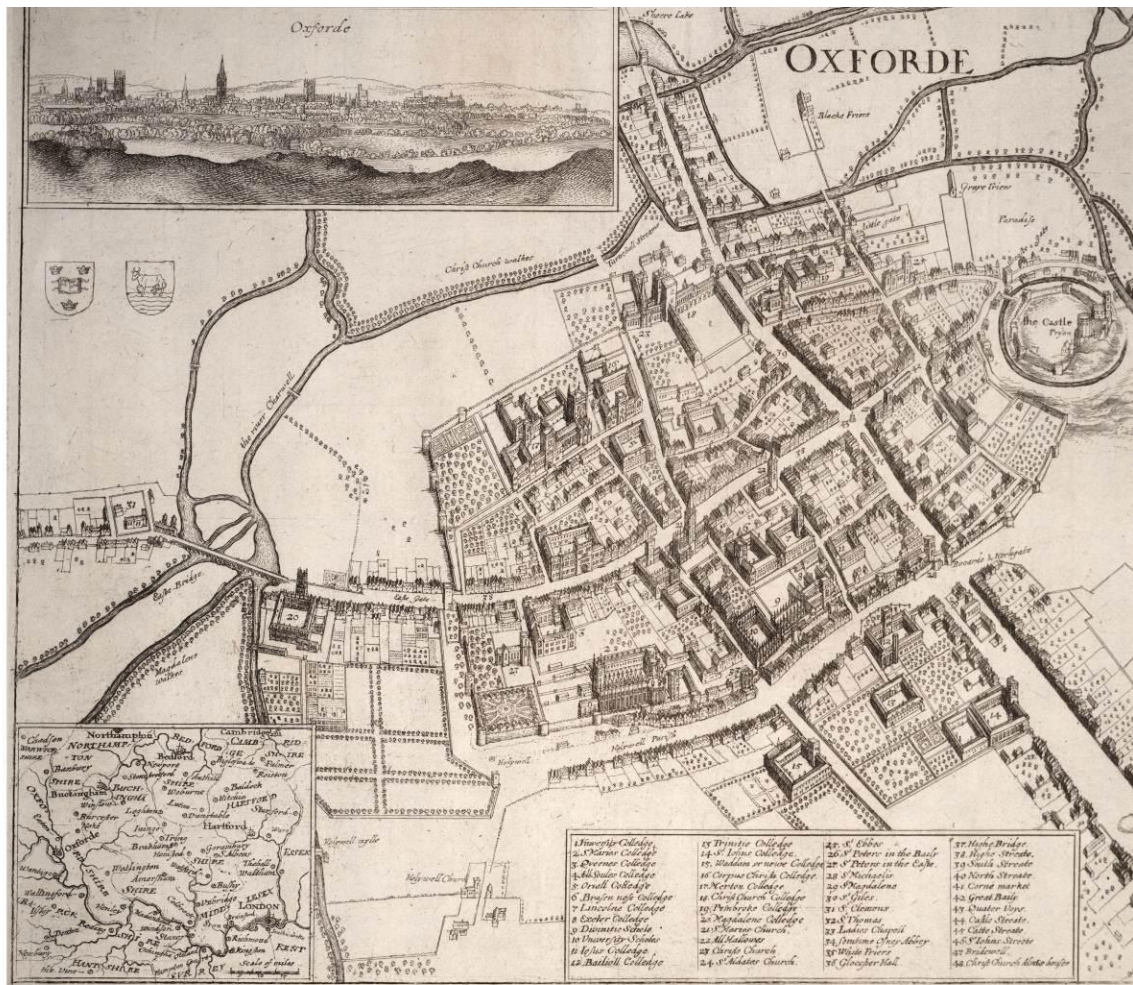


Figure 70. Detail of the Hollar panorama of Oxford, 1643

It was suggested by the excavator that these walls correspond to a 'corridor' on the Guiliemus (William) Williams plan of 1732-33 (Fig. 72; Williams 1732-33), and hinted at on the Loggan panoramic map of 1675 (Fig. 71), and perhaps on the Agas panorama of 1578. This might have been a rectilinear ambulatory, pathway or lane extending southwards from the chapter house of the cathedral and the south-eastern corner of the cloister, and also south from the structure marked as the 'former dort' on the Williams plan of the cathedral complex published in the Victoria County History (Salter and Lobel 1954), presumably a dormitory. It is not clear on this plan, however, if the north-west to south-east orientated double lines linking the cathedral to the Meadow Building depicted a path or a walled lane, or indeed if this is even the same structure.

The full extent of the east-west orientated limestone wall 964 between walls 802 and 803 was not identified. This fragment of masonry could have been part of the large east-west aligned barn shown on the c. 1673 Loggan panorama of Christ Church, but 964 seems too far to the north and west for this. A building in this general location is shown on the 1578 Agas panorama, but alternatively, the wall might represent part of an east-west range of buildings pre-dating the Meadow Building from the earlier priory precinct. Towards the eastern part of Trench 15, two unbonded limestone walls 958 and 959 were identified, both on broadly north-south alignments and approximately 5m apart. A single sherd of 14th century pottery was recovered from within wall 959, although of course this could have been residual. This area is not depicted on Salter's reconstructed map of medieval Oxford (Fig. 67; Salter 1960, SE VI), and was probably outside the St Frideswide's Priory precinct. Only boundary walls are depicted in this general area on the Agas panorama of 1578, none in the location of walls 958 and 959. On the 1675 Loggan panoramic map of Oxford, however, there is an L-shaped yard or field depicted to the west and south of garden areas, and the southern part of this yard or field is bounded by two north-south walls. This may have been part of the cemetery. These walls extend southwards to an east-west boundary wall shown with a possible gate or door in it. Between the L-shaped yard or field and the cathedral, a slightly smaller rectangular walled area is depicted. It is likely that walls 958 and 959 represent the north-south walls of one of these two yard areas. On the 1673 Loggan panorama of Christ Church, this area is unfortunately 'hidden' behind the cathedral, Chapter House and former dormitory.

Near the far eastern end of Trench 15, part of a possible mortar surface was identified (954), at least 3.50m wide and cut by a north-south orientated ditch 952. It seems likely that these were features associated with the Master's Garden, probably representing a boundary pre-dating the existing wall and some form of hard standing or footings for a small structure of some sort.

Immediately south of the Great Hall of Tom Quad in School Quad, the 2005-2007 investigations recorded the north-south orientated brick barrel-vaulted drain 816 near the eastern end of Trench 22A (Fig. 33). This was probably a post-medieval or early modern drainage culvert associated with the Great Hall, and/or the kitchens to the east. Also to the south of the Great Hall in Trench 22A was wall 817, built of stone, at least 1.40m wide and orientated north-south. Approximately 3.5m further west was another north-south masonry wall 820, this being 2.20m wide. Whilst on the eastern side of this wall there was an undated deposit of limestone rubble and gravel, on its western side a deposit (821) containing 13th to 14th century pottery had built up against it. Above this was a layer of mortar and limestone chippings (819) interpreted by the excavators as masons' debris from the construction of the south range of Tom Quad (Fig. 33).

These walls extended underneath the Great Hall and thus pre-dated it, whilst the mason's debris in the layers above also support this notion. This area is largely blank on both the Salter and Pantin conjectural maps of medieval Oxford (Pantin 1964, 28; Salter 1960, SE VI) (Fig. 67), but these walls were probably part of one or more buildings within the medieval priory precinct. It is possible that one wall could be part of the western precinct wall of St Frideswide's (see above), perhaps wall 820, if the precinct as a whole was further to the south than previously thought

(Blair 1988, 232, fig. 93). Alternatively, one or both of these walls might have been associated with the tenements noted by Salter as once having belonged to the Queen's College, or with the rear boundary wall of the churchyard belonging to St Michael at the South Gate (Salter 1960, SE145-150, SE144), though they appear too far east for this.

19.2 The medieval city wall

Trenches 16 and 22A passed across the conjectured line of the Oxford city defensive wall, built in the early to mid-13th century and thought to extend broadly east-west from St Michael at the South Gate, and under the external southern wall of Tom Quad and the southern edge of the cloister of Christ Church cathedral, with a possible corner bastion that has now been converted into the present Corpus Christi Music Room (Beckley and Radford 2011a, app. 3, fig. 3). The bastion at Corpus Christi College was an unusual shape, perhaps relating to the presence of a now demolished gate structure or alterations to the boundary of Christ Church. This bastion, now a Grade I Listed Building, was recorded during a building survey and limited excavation during its conversion into a Music Room (Bashford 2007; IoE 245239). The projected line of the medieval wall is based on excavated remains further to the west and east (e.g. Sturdy 1961-62, 23; UAD 336), and is different to an earlier projected alignment proposed by Salter (1960, SE VI), one that enclosed the entire cathedral complex on a line just to the north of the 19th century Meadows Building.

By 1578 and the time of the Agas panorama, the southern part of the city defences had largely been demolished leaving only the South Gate upstanding, and the remains of the gate fell down or were finally demolished in 1617 (Sturdy 1961-62, 23). Excavations immediately south-west of Tom Quad in 1954-55 in the garden of the south-west Lodging, in trenches IA, II and IIIB found evidence of large stone foundations at least 1.5m wide that possibly belonged to the town wall (Sturdy 1961-62, 23). There was no masonry revealed in Trenches 21 and 13 that might have represented the remains of the city defences according to the older line proposed by Salter, as wall 964 seems far too insubstantial. Trench 16 contained wall 725, but this was not a substantial masonry structure and it was not on the alignment of either the Salter scheme or the newer alignment proposed by Beckley and Radford. In Trench 22C beneath the southern range of Tom Quad, wall 825 was a substantial structure up to 2.20m wide and on a broadly east-west alignment, but it was recorded as abutting and thus post-dating wall 824, the south-eastern end of a substantial building. If the site records are accurate, this makes it most unlikely that wall 825 could have been part of a 13th century defensive wall. There was no sign of the 13th century wall in Trench 15 either. This negative evidence may reflect that the service trenches were not deep enough to expose any remains of the city wall, or else that the wall had been completely robbed in this area. Alternatively, the remains of the city wall might have been on a different alignment in this area, and have yet to be discovered.

The northern wall of the 'Wood Shed' in Trench 17 was built on a much more substantial masonry structure, with a steeply sloping southern face visible at the base of its internal face. It seems highly likely that these footings were originally part of the city walls, and they could have once formed part of a bastion situated to the south of the Corpus Christi Music Room bastion. Several conjectural plans of the medieval defences have inferred that there was a change in angle or corner in the wall at this same location, together with a projecting bastion that may have defended a postern gate (Beckley and Radford 2011a, app. 3, fig. 3; Blair 1988, 230, fig. 92; Durham 1982). Shidyerd Street apparently led to this bastion (and presumably the postern gate) until at least 1299 (Blair 1988, 224).

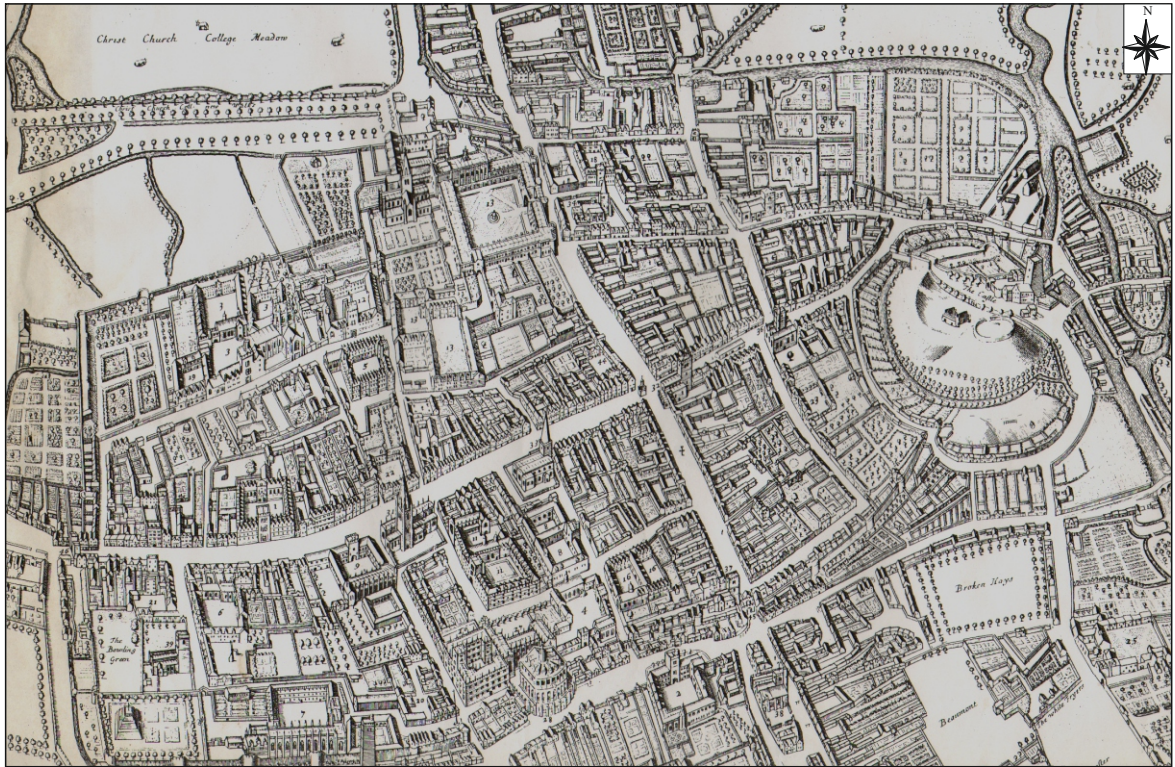


Figure 71. Detail of the Loggan panorama of Oxford, 1675

Not to scale

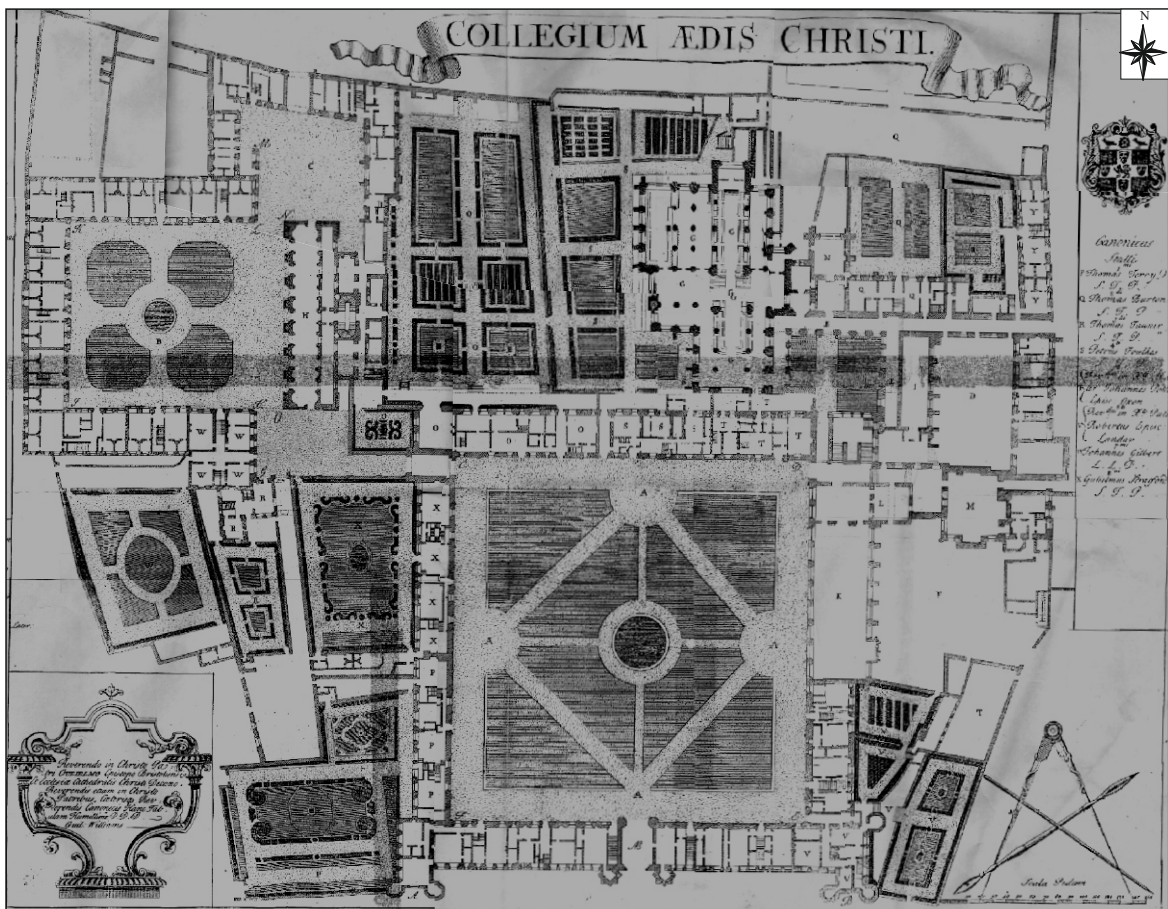


Figure 72. The Williams plan of Christ Church, 1732-33

Not to scale

19.3 The area south of Tom Quad and outside the city walls

In Trench 12, masonry walls 661 and 662 probably originally abutted one another to form a right angle, although this junction had been destroyed by services. They differed in width and bonding so were probably not exactly contemporary in origin, though for a time they probably formed the corner of a boundary extending to the north-west and NNE. No dating evidence was associated with these two walls. They could have formed the corner of the property marked as 'Once the Queen's College' on Salter's map of medieval Oxford, immediately to the north of the road that might have been called Overee's Lane, but whose eastern extent was named Shelvyngstole Street (Salter 1960, 233-235, SE VI). The properties here (*ibid.*, SE145-150) were a series of small shops and houses, some facing Fish Street and others Shelvyngstole Street. Several of these tenements had once belonged to St Frideswide's to whom their occupants had paid rent, but in 1546 they were all apparently granted to the king. The Agas panorama of 1578 does not provide many details of this area, but on the Loggan panorama of Christ Church from *c.* 1673 and the Loggan panoramic map of Oxford of 1675 more detail is shown. It seems likely that these two walls either formed part of a building depicted on the northern side of Shelvyngstole Street, but extending southwards out into this lane just where it 'kinked' noticeably to the south-east, or they were external ancillary walls appended to this building.

Further west by the modern sub-station, limestone walls 650-652 were all orientated broadly east-west but were only *c.* 2m apart from another, so are unlikely to have all been contemporary. A limestone-built culvert 660 was also located between walls 650 and 651. It is likely that these formed part of structures located between Shelvyngstole Street and Trill Mill Stream, and some at least might reflect the earlier use of this area as stables. This property was recorded as belonging to the City of Oxford in 1544, and was let to a man called John Hore (Salter 1960, 234-235, SE151, map SE VI). It may have had a garden and four cottages, and Henry VIII received a complaint from the City that Cardinal Wolsey had 'disseised' them of this property. The Agas panorama of 1578 does not illustrate much detail for this area (Fig. 69), though an east-west structure is visible along the south of Shelvyngstole Street, possibly immediately to the south-west of the 18th century Anatomy School. The 1673 Loggan panorama of Christ Church is uninformative, largely because the key to the picture is actually located over this part of the view, although part of a walled garden is just visible.

Further to the east in Trench 12 were limestone masonry walls 663 and 665, the latter with a stone drain or culvert 644 abutting it on its western side. Both of these walls were orientated approximately NNE to SSW. They were only *c.* 1m apart from another, and so probably not contemporary. These could represent different phases of the same structure, or different structures, possibly one of the buildings or a boundary wall depicted at the north-eastern side of the yard depicted on the *c.* 1673 Loggan panorama of Christ Church. In addition to the possible remains of the town wall noted in Section 19.2 above, excavations south-west of Tom Quad in 1954-55 in the garden of the south-west Lodging found evidence for 16th century stone foundations (Sturdy 1961-62, 24-25). Trench IB contained a 16th wall, and Trench IC evidence for a gravel yard surface, and the floors of 16th houses. Until the 16th century this land may have lain open as a garden and/or rubbish tip, but later two small houses were built in this area, although these were demolished in 1674 (Salter 1960, 233; Sturdy 1961-62, 25).

Sturdy also found deposits associated with Trill Mill Stream, which may have silted up by the late 12th century, whilst traces of the Thames riverbank were found during construction of the Meadows Building in 1863 (Blair 1988, 229, fig. 91). Evidence from 89 St Aldates just outside the Southgate indicated that the Trill Mill Stream channel may have run parallel to the Saxon burh's defences (Durham 1986, 104). The earliest stratified deposits recorded below the sub-station floor (657 and 656) might be at least in part alluvial in origin, and associated with these older channels; or were makeup deposits associated with reclamation of these areas.

19.4 Tom Quad and St Frideswide's Lane

The digging of drains in gardens of the Regius Professor of Divinity and of the Archdeacon to the north of Tom Quadrangle at Christ Church during the early 1890s exposed 'massive foundations' orientated east to west, possibly forming the north wall of Wolsey's proposed Great Chapel for his Cardinal College (*Archaeologia Oxoniensis* 1892-5, 171), which was never completed following Wolsey's downfall in 1529. These large remains extended from the remains of a stone cellar associated with a building 'within the existing boundary wall in St Aldate's to a point near the archway leading to Peckwater quadrangle' (*ibid.*). Substantial rubble wall foundations were again recorded during limited excavations in 1964 just outside the walls of Christ Church in St Aldates between Staircase 7, Tom Quad and the modern roadway (Sturdy and Sutermeister 1964-65, 192). This masonry was '8 feet thick and 5 feet tall', or 2.44m wide and 1.5m high respectively, and was interpreted as the western end wall of Wolsey's chapel. In 1958 and later in 1985, excavations in the Christ Church Cathedral cloister revealed square, corner-buttressed stone foundations, possibly for a separate timber belfry of 16th century date (Scull 1988).

The chapel of Cardinal College was intended to be opposite the hall, and probably originally proposed as extending along the whole northern range of Tom Quad, which if built would have rivalled King's College Chapel in length. Documentary evidence records that by 1526, construction had progressed to the stage that the foundations of the chapel were 'level with the ground' (Milne and Harvey 1943-44, 10, 13). The Agas panorama of 1578 (Fig. 69) shows the general outline or the footings of this uncompleted building, and the antiquary John Aubrey noted that the surviving foundations of Wolsey's chapel were pulled down by Dean Fell around 1671 (*Archaeologia Oxoniensis* 1892-5, 172) during the construction of the northern side of Tom Quad. It is likely that wall 402B and the semi-circular curving footings 406 in Trench 6 represented part of Wolsey's uncompleted building (see below).

In the 2005-2007 investigations, Trench 22C passed through the passageway between Tom Quad and School Quad. Masonry wall footings for the south range of Tom Quad were recorded in the northern end of the trench (Fig. 34). The masonry wall 827 was 1.8m wide, and cut on its southern side by an early modern brick-built cellar. Also in Trench 22C within the southern range of Tom Quad there was a north-south orientated masonry wall 824 with an integral hearth, with c. 7m of the north-south length of the wall exposed in the trench. Its southern end turned westwards though 90 degrees, and it therefore seemed to comprise the south-eastern end of a large building. This was apparently abutted by east-west wall 825, an even more substantial structure, but unfortunately both walls were undated. On the Salter map of medieval Oxford (Salter 1960 SE VI) there is no boundary that matches this wall either (Fig. 67), apart from the NEE-SWW city wall, and as discussed above, the fact that 825 abutted 824 make the former most unlikely to be the city wall. Indeed, Salter does not provide any details for this area at all. Nevertheless, these walls had to have pre-dated the construction of Tom Quad. Wall 824 is most unlikely to have been the western precinct wall of St Frideswide's either (see above), as it was clearly part of a building that extended further to the west, and according to the excavators 825 was a separate, later phase of construction. It may be that these walls were associated with Lincoln College, were an unknown property between Lincoln College and the priory precinct church, or were buildings within the medieval St Frideswide's Priory precinct.

On the St Aldates/Fish Street frontage south of St Frideswide's Lane, a possible 13th to 14th century mortar floor (36) was identified during the 2005-2007 investigations but there were no structural remains directly associated with it. This surface had been cut by the two walls 44 and 45, which were approximately 4m apart and extending back (eastwards) from Fish Street, forming Building 2A (Figs. 8 and 38). This may be the Domus Proud property recorded in Salters' *Survey of Oxford* as SE143 (Salter 1960, 232). A single sherd of 13th to 14th century

pottery was recovered from mortar floor (36) and two sherds of 13th to 14th century pottery were recovered from the deposit (41) through which the construction cut of wall 44 had been dug. When Simon, son of Clement Proud went to the Holy Land in *c.* 1250 he gave this property to his mother Cristina le Prute, and in 1279 it was given to Lucia le Seler (*ibid.*). In *c.* 1470 a man called Pulton is recorded as giving to his chantry a tenement in St Michael South within the south gate between the land of Eynsham to the north and the church to the south, which Salter thought referred to this property. Building 2A was partly robbed and there were remnants of later occupation indicated by remains of a further floor and demolition material. This last may have represented clearance for Wolsey's building. Salter notes that during the reign of Henry VIII 'the cardinal took this house but agreed to pay 20*s.* rent of assize'. To the south of Building 2A was a well-built wall 54 orientated north to south and with a possible internal wall 9, potentially within the same plot.

The discovery of St Frideswide's Lane in the Cathedral Garden by Sturdy (1961-62) was confirmed by the road surfaces recorded in Trenches 4 and 5, although Sturdy's proposed date of the early to mid-12th century for its construction was not verified. While the road surface excavated in Trench 4 overlay ditch 221 containing late 11th to 12th century pottery, similar in date to features found by Sturdy, a deposit (219) excavated below the road foundation layer contained Brill/Boarstall ware dating from the 13th century. Ditch 221 was perhaps a boundary between two plots that were reorganised when much of Oxford was re-planned during the 12th century. The ditch also contained fragments of copper-alloy working debris and indicates craft or industrial activity of this date on the early plot to the north, where similar debris was found in deposit (231) through which the ditch was cut.

In Trench 5, the earliest surface of St Frideswide's Lane that was recorded (361) was below a silty sand layer containing 13th to 14th century pottery, and which was in turn overlain by an additional cobbled surface (338) and a makeup deposit (330) that also contained 13th to 14th century pottery. Even the final road surface identified (317) was beneath a layer of silt that produced mid-13th to 14th century ceramics. Given this evidence, it is possible that Sturdy's early to mid-12th century date proposed for the establishment of St Frideswide's Lane might be incorrect, and may have been based on earlier but residual pot sherds (but see below).

The early road surface of roughly shaped limestone cobbles (200) recorded in Trench 4 sloped down slightly in the centre to a narrow central channel or 'kennel' indicated by cobbles laid lengthways that was approximately 0.30m wide (Fig. 12, Plan 16, Section 15). This appears not to have been maintained for long as it was subsequently filled by further stones, but was not excavated as it was at the limit of the excavation. Two sherds of Brill/Boarstall ware were recovered from between the cobbles and thus date its use to the 13th to 14th century. The later road surface (199) was of cobbles set on a bed of mortar which extended further south of the original width of the lane. Remains of buildings or boundary walls were each side of the later road surface. A possible robber trench (201) was identified on the southern side of the road, although a later feature had removed direct evidence for this. Wall 214 to the north had another cobbled surface (215) which was different in character to the other two road surfaces set against its southern face, and may have been for a yard. This wall and associated surface were of 13th to 14th century or later date as the underlying pottery contained Brill/Boarstall ware. Later disturbance meant that it could not be determined whether or not there had been a boundary between the road and the yard.

The central drainage channel or 'kennel' was a feature of many medieval streets, and other examples of such features have been observed on medieval street surfaces recorded elsewhere in Oxford including High Street and Castle Street, with extant examples still visible in Brasenose Lane and at Radcliffe Square (Dodd, Bertram and Munby 2003, 260-262, 264). The subject of numerous complaints about the filth flowing along them, including human and animal urine and

faeces, and food and butchery waste, this style of street surface was discontinued after the Mileways Act of 1771 when side drains were built into all new roads. In Oxford, most such surfaces disappeared under macadamized street surfaces after 1868.

The property to the south of St Frideswide's Lane is thought to have been that recorded in Salter's *Survey of Oxford* as SE140 (Salter 1960, 231), which in c. 1215-1225 was granted to John de Weston and his heirs, and by 1279 seems to have been in the possession of Guido le Armerer who may have been a guardian for the heirs of John de Weston, for it then descended to the regular heirs. The property immediately to the north is recorded by Salter as SE139, presumed to be a property of the secular canons of St Frideswide's (ibid.). In the latter, remnants of a cobbled yard surface were found. Within Trench 5 the earliest surface identified that was considered to be probably Frideswide's Lane was of different composition to that recorded in Trench 4, but was more similar to that recorded in the Cathedral Garden (Sturdy 1961-62, 31) which consisted of gravel and small limestone fragments set in a coarse yellow-orange gravel matrix. In Trench 4 the surface was of pitched limestone cobbles set in orange gravel while to the east it was a thin layer of compacted gravel. The later surface in Trench 5 was similar in composition to that in Trench 4 and in the Cathedral Garden where originally it was interpreted as the floor of stables (ibid.) but it is now accepted by Sturdy (pers. comm.) that this was probably the later road surface. Between the two road surfaces was a deposit containing 13th to 14th century pottery up to 0.26m thick, indicating that the road was not regularly maintained during this period, and this too accords with the earlier excavation evidence.

The differing dates of the early to mid-12th century for St Frideswide's Lane in the Cathedral Garden proposed by Sturdy (1961-62) and the later date of the 13th to 14th century suggested by the 2005-2007 JMHS investigations near to Fish Street and in the Cathedral Garden are not as apparently contradictory as might first appear. The earlier pottery could have been residual of course (see above), but there is another possibility too. A series of royal documents implies that the pre-1122 minster was bounded on the south or east side, or both, by an intra-mural wall which the canons were allowed to encompass within the precinct and to cut off all access to it (Blair 1988, 236). This would have necessitated the building of a road between St Edward Street and Shidyerd Street to the east. Therefore the main access to the Augustinian Priory was along St Edward Street with some traffic from Shidyerd Street and the new St Frideswide's Lane. This could have extended westwards to form access to Burnells Inn or London College, Greek Hall and Leberd Hall (Salter's *Survey of Oxford* SE240-243). Given the 13th to 14th century material from the deposit under the extreme western part of the lane in Trench 4, this suggests that St Frideswide's Lane might have been extended through to Fish Street at a later date. Whilst there was no accumulation of material between the two road surfaces in Trench 4 compared with further east, the whole of St Frideswide's Lane was apparently re-surfaced.

Immediately to the north of St Frideswide's Lane and west of St Edward's Street, Building 5A was probably located within the property listed by Salter's *Survey* as SE128/239 or Cokewald Hall (Fig. 67; Salter 1960, 224). With a doorway to the east it would have fronted onto Vine Lane/St Edward's Street. The first reference to a building here dates to c. 1250 when Joan Peske, the widow of Alured the Spicer, granted it to John de Godinton, a tailor (ibid.). In 1279 John the tailor had three holdings in the parish of St Frideswides, probably all here. After his death in 1296 the property seems to have stayed in the hands of the Codinton family, many of them tailors, and by 1327-30 Galf. le Taylor, son of John de Codinton tailor had acquired the whole of his father's holding (Salter 1960, SE128). In 1327-1330 it was granted to trustees who gave it to the Priory of St Frideswide. A toft called Cokewald's Hall is referred to in c. 1349 and the tenement is referred to as Cokeswald by c. 1390. The building recorded in this location (Fig. 14, Plan 42, Section 27) was formed by walls 325 and 326. It was probably 14th century in date and had a stone slab floor (327) with an internal drain along the north wall, and an external stone-capped and lined drain alongside the same wall. The final use of this building was dated

by pottery within the floor surface to the 15th century, and pit 344 that cut through part of the building also contained 15th century pottery. A path alongside the drain was probably contemporary with it, and was constructed during the 14th century.

Further north within the same tenement was a further building (Building 3A) formed by NNW-SSE orientated walls 110 and 121 that were 3.5m apart (Fig. 9, Plan 6, Section 8), with a doorway to the east leading to a presumed additional room as there were remnants of a mortar floor with an overlying gravel surface. The floors between the walls were a sequence of clayey silts with an underlying base of small limestone fragments and gravel. The more well-preserved surface to the east of wall 110 suggests a higher status room in the earlier period, although the latest floor in the room to the west was of mortar and small limestone fragments in its latest period. The building appears to have been in use in the 13th to 14th centuries with later pits of possible 15th to early 16th date cut through the east part of the building. To the west of the building was a sequence of yard surfaces of 13th to 14th century date overlying a deposit dated to the late 11th to 12th centuries.

Further to the west, Building 3B was within the tenement called Burnell's Inn (Fig. 67; Salter's *Survey of Oxford* SE240-241). Originally belonging to the Hospital of St John the Baptist, in 1291 it was sold to William Burnell, the nephew of Edward I's chancellor, and after his death it was bequeathed to Balliol College. In 1416-1426 it was rented from Balliol College by Richard Clifford, a leading churchman and member of Richard II's government, and this led to the property having the alternate names of Bishop of London's College or simply London College (Pantin 1964, 44).

The plot between Burnell's messuage and Greek Hall was originally rented to St Frideswide's, and in 1306 houses held by St Frideswide's on that property were rented to William Saunzdelay and Dionisia Burwold (Salter 1960, 261), but the low rent suggests that these were probably very humble dwellings and not the structure recorded as Building 3B. Only the south-east corner of this later building was identified, with a well and yard surface to the south-west (Fig. 10, Plan 9, Section 11). The building was probably late 14th or 15th century in date, with the well either cutting a 15th century to early 16th century cobbled surface or possibly being abutted by it. An earlier cobbled surface at a lower level was definitely truncated by the construction cut of the well. The position of this building within this tenement seems to have been due to the fact that St Edward Street was actually slightly further to the east than depicted on Salter's map. Further west within the same tenement were two subdivisions of the plot defined by ditches c. 6.5m apart. The eastern example ditch cut 151 (Fig. 9, Section 12) was dated to the late 15th to mid-16th century, whilst the second ditch cut 156 further west (Fig. 9, Section 13) was dug through a deposit that contained pottery of a similar date. These two features were thus probably extant and still open when the land was acquired by Wolsey. In the 13th century the eastern part of this holding contained Burnell's Inn and ditch 151 may have been a later boundary of this property, while the western part contained three tenements including one owned by Vincent the tailor in about 1240 (Salter 1960, 261).

Building 3C some 8m further to the west may have been within the extreme western part of the same tenement SE240/241 (Fig. 10, Plan 10), but the NNW-SSE orientation of wall 165 was different to the other wall and ditch alignments. The architectural fragment found within wall 165 was dated to the mid-14th to mid-16th century, suggesting that this wall could also have been standing before Wolsey's clearance, and a later date might help explain the difference in orientation from the predominant tenement layouts. It could also have been a wall within the property of Burnell's Inn, or might have formed the eastern boundary of the Greek Hall property (Pantin 1964, 28). Drain 166 further to the west was on a north-east to south-west alignment (Fig. 10, Plan 10), similar to wall 178. The drain was within the tenement of Greek or Grek Hall (*Survey of Oxford* SE242), a name in use from at least 1306 (Salter 1960, 261-262), but there

was no firm date established for the construction of this drain, although a single sherd of 13th to 14th century pot was recovered from a deposit abutting the structure. Greek Hall was probably amalgamated with Burnell's Inn sometime after 1512, when they were both held by Jones Mores but listed as separate halls.

Further west again, wall 173 was orientated east-west (Fig. 10, Plan 12), though very little of it survived. Deposits (176) and (177) that were recorded on either side of the wall were possibly poor quality surfaces, the former sealed by a layer containing 11th to 12th century pottery and the latter containing a single sherd of 13th to 14th century pottery. This wall might have been an internal structure, but if so it is unclear what building it was part of. These surfaces and wall 173 were sealed by a layer containing late 15th to mid-16th century sherds. This area may lie within the plots owned by Leberd or Greek Hall, as depicted on the Pantin and Salter maps of medieval Christ Church (Pantin 1964, 28; Salter 1960, 261-262, map SE I).

Just 2-3m to the west of wall 173, wall 178 was on the same general north-east to south-west alignment as drain 166 approximately 9m further to the west (Figs. 10-11, Plans 10, 13). Only a single sherd of late 11th to 12th century pottery was recovered from the wall, however, and this may have been residual, so these two structures might not have even been of the same broad date. It is likely that the alignment of wall 178 and drain 166 reflects the similar north-east to south-west orientation of the northern property boundaries of Leberd Hall and Greek Hall (Pantin 1964, 28; Salter 1960, map SE I), though it is unclear whether these could represent the actual boundaries *per se*.

Building 3E was probably on or within the boundaries of the property called Leberd Hall (Fig. 67; Pantin 1964, 28; Salter's *Survey of Oxford* SE243). In c. 1210 Laurence Kepeharm granted the property to the Priory of St Frideswide's with the proviso that he and his wife Cristina were to hold it for life, but by 1220 when there is a reference to Cristina quitclaiming the holding she had probably been widowed and remarried for she was now described as the wife of Jordan Rufus (Salter 1960, 262). In c. 1390 the property was listed as the home of a bishop, and the priory still seems to have had the freehold in 1517 when Leberd Hall 'next to Greek Hall' was at least in part a garden rented by John Pye. The structural sequence and date of the building recorded in this location was unclear. Walls 185, 207 and 209 were almost certainly of different phases as they were only c. 0.60m apart, with wall 207 only 1.10m west of 209. A single sherd of 14th century pottery was found in the core of wall 185, and one sherd of late 11th to mid-14th century date from wall 209. Walls 185 and 209 were both cut into pit 204, an upper fill of which contained 13th to 14th century pottery. The paved surface (180) which abutted wall 209 contained 14th century pottery, as did the layer underneath. This demonstrates at least one phase of building dated to the 14th century. It is possible that mortar floor (206) may have been laid in a narrow 2m wide corridor between walls 207 and 185 which were certainly similar in width, or that walls 207 and 209 replaced the western wall 185 with a corridor 2.5m wide. To the east, it is also unclear if surface (179) was associated with these walls, but if it was indeed the same as surface (180) this would have produced a room at least 4-4.5m in width. To the west, possible hearth (188) may have been external to Building 3E, or might have pre-dated it.

Towards the north-western corner of Tom Quad, the remains of Building 3F that were recorded might have been to the rear of the property listed by Salter in the *Survey of Oxford* (SE136) as once belonging to The Pike (1472) or The Dolphin (1556) Inns (Fig. 67). This area has a very complex history, and was the former site of Oxford's synagogue and possibly also a Jewish school during the 13th century (Salter 1960, 230). The Jewish community in Oxford was concentrated in the vicinity of St Aldates and High Street (Salter and Lobel 1954, 27). A deed held by Balliol College notes a School of the Jews paying rent to John son of Walter and also to St Frideswide's Priory. Oxford's synagogue was founded in c. 1228 by Copin of Worcester, a wealthy benefactor who was granted the property by St Frideswide's Priory in exchange for a

property just to the south (on Salter's *Survey of Oxford* SE137) to the priory in exchange (Roberts 2005; Roth 1951; Salter 1960). The synagogue may not have been a purpose-built structure, but rather a converted town-house, with the synagogue itself situated either within an upper room to the rear of the building, or in a cellar in a similar rear plot or back street location, probably with a discrete entrance or passageway leading to it. The building's street frontage may have included shops or a tavern. Jewish houses were often built of stone, partly for additional security, but also because many of England's Jews originally came from Normandy where this was a more common vernacular tradition (ibid.). Wealthier members of the wider medieval Christian community such as merchants also built such houses, however.

Jews in England lived under the special protection of the king, hence many Jewish areas including that in Oxford were named 'The King's Jewry', but in law they were technically serfs and the crown could also tallage them at will. Tallage was a feudal land use or land tenure tax imposed by the crown, but which was frequently levied on England's Jews during the 12th and 13th centuries (Poole 1955, 422). Jews were also subject to many other additional taxes and demands imposed on them for wardship, marriage, fines, law-proceedings, debts and licenses. Though relatively small in numbers, probably never exceeding c. 100-200 people at its height, Oxford's Jewish community was still a significant proportion of a total 13th century town population of 5000-5500 people (Roth 1951). Most Jews in Oxford lived south of Carfax in St Aldate's parish, and this street became known as Great Jewry Street. Some Jewish people also inhabited adjoining areas, however, including the area south of Blue Boar Lane along Jury Lane, described in one document as a *parvus Judaismus* (a poor Jewry) (Roberts 2005, 5). Traditional occupations of Oxford's Jews included trading, medicine, pawn-broking and money lending, but as the university developed and grew they also became involved with providing finance for poorer clerics and students, and letting accommodation to them. Many had connections with other towns and cities, and in addition to Copin of Worcester, men named Vives of Gloucester and Moses of Bristol both owned properties on the site of Christ Church at different times (Pantin 1964, 34-35; Salter 1960, 230). There were sporadic instances of violence directed against Jewish people in Oxford along with more general persecutions during the 13th century, including an occasion in 1268 when the entire community was briefly imprisoned because it was alleged a Jew had broken the crucifix carried in Oxford's Ascension Day parade.

Following the death of Copin of Worcester, the king gave the property listed as SE136 in Salter's *Survey* to the Hospital of St John in 1252, but in 1253 it was granted in a perpetual lease to Mildegoda the widow of Copin (Salter 1960, 230). In 1290 all Jews were expelled from England, and apart from a small number of Jewish Hebrew scholars at the university during the 16th and 17th centuries, most of them converts to Christianity, it was not really until the later 18th or early 19th century that a Jewish community re-established itself in Oxford (Lewis 1992; Roth 1951). In 1292 the Hospital of St John granted the property at SE136 to William Burnell, but the records state that it had been previously held by Jacob Mildegode, who may have taken over the lease, presumably from his mother. He would then have been forced to leave Oxford with the expulsion of all Jewish people.

William Burnell held the property until his own death in 1304, when it was bequeathed to Balliol College. In a document of 1367, Balliol College claimed ownership of a certain wall next to the 'Broadegates...formerly called the synagogue of the Jews, in the parish of St Aldate's (Lewis 2005, 5). This wall was situated between the former synagogue to the south, and the property of Edmund de Ludlow to the north, and Salter (1960, 290) records that in 1367 Edmonde de Lodewal was the owner of the tenement on the southern corner of Jury Lane and Fish Street (Salter's SE135). The wall was described as 79½ feet in length and 1½ feet in width and extending 'even to the higher gable of the said synagogue' and that one end of the wall originated from another tenement held by Balliol, in the parish of St Edward just to the east (Roberts 2005). The synagogue thus became an inn with shops in front, many of these being let

separately, and was originally known as Bredeshat (Broadgate?) (Salter 1960, 230); it later became The Pike, and then The Dolphin. Documentary sources record that in 1416 John Shaw held the inn along with eight shops (Salter 1960, 130).

Roberts (2005) suggests that the synagogue became part of the main academic hall of Burnell's Inn, in the area shown as SE245 on Salter's map (Salter 1960 map SE I), or as W on Pantin's map (Pantin 1964, 28), but this location seems too far to the north and west. It is likely that Roberts is confusing the westernmost holding that once belonged to William Burnell with the larger eastern holding which was the academic hall that came to be known as Burnell's Inn. Confusingly, Salter (1960, 230) also lists property SE136 as Burnell's Inn, but of course it was only held by Burnell from 1292 to 1304. Balliol College still held the inn and property called The Dolphin in 1526 when it was sold to Cardinal Wolsey (see below).

Building 3F was formed by stone walls 192 and 195, both on NNW-SSE alignments. These were separated by a possible surface of crushed mortar with limestone and ceramic brick or tile fragments, creating a room approximately 3m wide. Wall 195 contained two sherds of 13th to 14th century pottery, and pits of similar date were also present in this tenement. Allowing for the vagaries involved in superimposing the maps of properties drawn up by Salter (1960, SE1) and Pantin (1964, 28), due to discrepancies between them, this may be the larger rectangular building or yard with some form of subdivision depicted by Pantin behind a row of what were probably small shops or houses. Interestingly, on Pantin's map the property immediately to the north also appears to have had a narrow alleyway or passage providing access to St Aldates/Fish Street (Pantin 1964, 28). It is thus not clear if walls 192 and 195 that were recorded during the investigations formed part of the inn, the outbuildings or the boundaries of the property.

Most of the properties owned by Balliol College and others were appropriated by Cardinal Wolsey in order to make space for his planned college. In the case of Burnell's Inn, the agents of Wolsey persuaded Balliol College to release the property, but at the time of his fall from grace in 1529 Balliol had still not received any of the promised money or benefices for it and were understandably aggrieved (Pantin 1964, 46). The college therefore threatened to reoccupy the property, but as Wolsey's assets had been claimed by Henry VIII this protest was to no avail. It is possible that some buildings including the inn might have survived for a while longer, although the Agas panoramic map of Oxford of c. 1578 (Fig. 69) does not seem to show any structures surviving at this locale by the time that it was drawn.

19.5 Fell Tower

At the northern end of Trench 6, the large probable robber trench cut 412 was nearly 3m wide and its fill contained 15th century pottery, though these sherds might have been redeposited as was cut through material on its north side that contained a lot of 15th century and earlier pottery. This wall might have been close to the southern side of Jury Lane and was on the same NEE-SWW alignment, although no signs of the road surface were seen immediately to the north of it. This apparent absence may have been due to the relatively shallow depth of excavation of the service trench, however, and the material containing the pottery could have been levelling material above the road laid down during the laying out for Wolsey's Cardinal College chapel. Unfortunately, there was no pottery recovered from the material to the south which might have indicated when the tenement of George Hall was last occupied, prior to Wolsey acquiring the land. The large size of the robber cut indicates correspondingly large original footings, and such a large building seems unlikely to have been associated with the five cottages and shops recorded on the George Hall property during the 13th and 14th centuries (see below). It is therefore possible that this represented part of the northern side of Wolsey's uncompleted chapel, which was supposedly finally robbed in c. 1615 (*Archaeologia Oxoniensis* 1892-5, 172).

If this was the case, then at least some of the masonry remains at the southern end of Trench 6 might also have been associated with Wolsey's Great Chapel. Most notable amongst these and nearly 7m to the south of cut 412 was the semi-circular stone base 406, at least 4.65m wide and containing sherds of 15th to 16th century pottery in its matrix. It is unclear what structure these solid foundations would have supported. It could have been a central pier supporting a very large fan-vaulted roof (S. Thurley pers. comm.), the base of a central pillar for a chevet or radiating chapel outside of the main aisle of the chapel (Sir H. Colvin 2006), a turret or large staircase base, perhaps intended to connect the eastern end of the chapel with the rest of Cardinal College. Alternatively, the semi-circular footings may have been intended to support the shrine of St Frideswide (Sir H. Colvin 2006) or an altar, though they seem too large for the latter. On the Agas panorama of 1578, there is a gap shown between the main outline of the footings for Wolsey's incomplete Great Chapel, and the eastern end. A narrow gap or path appears to have existed between these two slight separate entities, and this is depicted as distinctly 'kinked'. The Agas panorama is hardly the most reliable source – the footings shown may be highly stylised, and are largely indistinguishable from other walls depicted elsewhere on the map. Nevertheless, it is possible that the reason for this 'kink' was the presence of large curving footings. The fact that the Agas panorama depicted the incomplete footings in two apparently separate sections might also be further tentative support for the notion that there was a chevet or radiating chapel at the eastern end of the main aisle, or perhaps a vestry. Any surviving remnants of the eastern end of such a chapel would thus lie to the east of Kilcannon Passage.

Of the masonry remains (Building 6A) at the southern end of Trench 6, the large NEE-SWW wall 402B was apparently part of a building of some status, with rendering on its internal face. It was probably part of the footings of Wolsey's Great Chapel, and if the semi-circular footing/base 406 was symmetrically placed along the midline of the axis of the chapel, this would indicate a building approximately 30m wide at this point, which broadly concurs with a width of 90 feet (27.4m) depicted on a Royal Commission for Historical Monuments plan of 1939 (Sir H. Colvin 2006). Layer (403) overlay wall 402B, and this contained 15th century pottery. This might at first seem to preclude 402B being constructed during 1525-1529, but it is likely that this material was residual, and the result of the construction trench for the large wall footings cutting through earlier deposits. Less credibly, wall 402B might have pre-dated Wolsey's chapel and represented the north-west corner of a stone building within the same plot as Cokeswald or Cokewald Hall (Fig. 67; Salter 1960, 224, SE128/239), with the southern wall destroyed, possibly by the construction work associated with Wolsey's chapel. In either interpretation, however, wall 404 probably marked the northern boundary of the Cokewald Hall tenement.

Building 6A was certainly truncated by the 16th and 17th century foundations of Fell Tower (wall 402A). Dean John Fell (1660-1686), the son of Dean Samuel Fell (1638-1648), was the person who commissioned the Canon's House and Kill-Cannon Passage (now Kilcannon) between Tom and Peckwater Quadrangles, along with the building of Fell Tower above the latter (Salter and Lobel 1954, 232).

19.6 St Edward Street and Shitebarne Lane, and Peckwater Quad

Along the southern edge of Peckwater Quad, at the southern end of Trench 7 and in the western part of Trench 8, various stone, cobble and gravel layers relating to different phases of road surfaces and repairs probably represented the medieval thoroughfares known as St Edward Street or Vine Hall Lane, and Shitebarne Lane (Fig. 67). It is possible that the junction with Jury Lane, that Salter (1960) shows extending to the west, might have been exposed within Trench 7, but this was probably further to the west. The limited width of Trenches 7 and 8 prevented identification of the actual intersections of these three roads. The various layers of surface

suggested that the roads had varied in width over the centuries, but the full width of St Edward Street could not be established. The excavators thought that some of the surfaces at the western end of Trench 8 were part of St Edward Street, along with those at the intersection of Trenches 7 and 8, where the earliest surface exposed (508) dated to the 13th to 14th century. This is a less likely match for the cartographic evidence, however, and would also indicate a street at least *c.* 17m wide, clearly far too large for a medieval urban street. Furthermore, there are indications of a ditch on the eastern side of road surfaces (550-553), with road deposit (553) sloping into and deposits (554-7) and (560) the fills building up within a drainage ditch. Alternatively, these surfaces might represent the eastern end of Jury Lane, and (561) and (568) part of St Edward Street. If so, then further slumped deposits to the east might have been sloping into a western ditch, with 574 part of Shitebarne Lane. Another possibility is that one or more of the cobbled surfaces at the western end of Trench 8 represent a yard for Ape Hall.

In Trench 8, cobbled surface (532) to the east of (508) might have included part of a yard associated with building 7B, or more likely, it was part of the surface of Shitebarne Lane, as exposed further to the east in the central part of Trench 8 as layers (540) and (537). The western side of St Edward Street may have been marked by the edge of surfaces (508) and (574) which both ended at the same point to the west, nearly in line with wall 599 (Fig. 20, Sections 35 and 37). It is possible that stakeholes and postholes 513, 514, 517, 518 and 519 recorded in the surface of (508) might have resulted from a temporary shop frontage. The complexity of the stratigraphy, the small depth and width of the service trenches and the variable quality of the on-site records mean that it is now extremely difficult to establish the identity of these cobbled surfaces with any precision. A relatively recent entry in the Victoria County History for Oxford notes that the western end of *Shitbarn Lane* was closed by 1306 and the whole lane before 1397 (Chance *et al.* 1979, 175-177), but this date seems far too early and does not accord with the archaeological evidence and other historical accounts. An earlier historical study asserts that Shitebarne Lane was first referred to in the 14th century for example (Salter 1955: 197, 215). Wall 511 exposed at the junction of Trenches 7 and 8, and which rested directly on cobbled surface (508), might have represented part of the later western blocking off of the lane.

Wall 599 may have been the remains of the eastern wall of a building relating to George Hall on the south-west corner of St Edward Street and Jury Lane, with the deposits to the north and east of this wall relating to Jury Lane and St Edwards Lane respectively. George Hall (Fig. 67; Salter 1960, 262, SE243) in St Edward's parish was not an academic hall, and the property paid a feudal rent to St Frideswide's. In *c.* 1298 William le Spicer and his wife Isolda granted this corner tenement with five cottages to Cris (Chris) Beneyt, whose own son Chris in 1345 released them on to Nicholas de Pubbesbury, the property now having five shops. In 1349 it was mentioned as the Hall of St George for the first time, but in 1351 this had become George Hall (*ibid.*), though it still had five shops. In 1390 the property had apparently become a garden, and Salter suggests that it eventually reverted to St Frideswide's for non-payment of rent.

Evidence of 12th century settlement had been previously noted at Peckwater Quad, along with a 13th century pit (Sturdy 1961-62: 27-29, 1964-5, 192). During refurbishment of some of the basements of Peckwater Quad in 1974-6, ground work revealed features that were probably backfilled pits and cellars relating to the pre-existing Peckwater Inn. The soft fills of these features contained late 15th to early 16th century pottery, including jugs, 'unusual pitchers' and a lobed dish (Durham and Mellor 1977, 266). Two of these vessels had personal or merchant's marks incised on them. The predominance of vessels used to serve and consume food and drink accord with Peckwater Inn having higher social status and catering for academics and students.

In Trench 7, the 2005-2007 investigations revealed the remains of the substantial masonry buildings 7A and 7B. These both had the same general NEE-SWW alignment, and would have originally been located north of Shitebarne Lane and fronting onto St Edward Street. These were

probably halls extending at right angles to the street frontage, and both may have originally been two rooms in width. Sherds of 13th to 14th century pottery from the matrix of wall 454 in Building 7A, and a possible clay and mortar floor surface within the building was sealed by a layer containing late 15th to mid-16th century pottery. The possible surface was also cut by two pits, the fills of which produced pottery of similar date. It thus seems probable that Building 7A was occupied at least during the 14th century and probably later, with late 15th to mid-16th century pottery recovered from the matrix of the blocking of a doorway or window (probably the former) between Rooms 1 and 2. A demolition or later makeup deposit within Room 2 of Building 7A contained a clay pipe fragment and three sherds of late 17th to mid-18th century pottery. Alternatively, one of these sherds and the clay pipe could be intrusive, as the other two sherds could be late 15th to mid-16th century in date. The actual use of Building 7A was almost certainly contemporaneous with Building 7B, though there was much less direct dating evidence for the latter, with no dateable floor surfaces identified. Mid-16th to 17th century pottery was recovered from the post-demolition infilling layers within Building 7B.

Within Building 7A, Room 1 had traces of the clay and mortar floor surface, and a cobbled hearth area immediately in front of a fireplace. In Room 2 to the south, however, no floor surface was identified to the north wall 516, although excavation here ceased at 60.90m OD, just one centimetre higher than the 60.89m OD within the north part of Room 1. It is thus possible that a surviving floor or makeup surface south of Room 1 was not reached by the excavation, and/or that the space designated as Rooms 2 and 3 was originally an external yard. It is even possible that Room 3 was not a later subdivision of an internal room, but a narrow building reached across a yard surface. The possible wooden floor in Room 3 was at 61.00m OD. If the feature in wall 462 was originally a doorway, its threshold would have been at 61.29m OD with two steps leading up to it on its northern side. Any stairs on the southern side down into Room 2 or a yard surface may have been of wood. Alternatively, rather than being a doorway, this feature could have been a south-facing window with window seat, looking out from Room 1 across an enclosed courtyard, perhaps with a later ancillary building (Room 3) in the southern part which had a wooden floor.

There was a gap of approximately 12-13m between Building 7A to the north and Building 7B to the south. This area might have formed external garden or courtyard space, and wall 479, faced on both sides, may have been an external northern property boundary to Building 7B. The wall was abutted to the north by a later deposit containing late 15th to mid-16th century pottery sherds, so this is a distinct possibility. The series of gravel deposits recorded south of wall 479 could thus have marked a path or 'ginnel' between the external property wall and Building 7B.

Building 7B was abutted by the cobbled surface of St Edward Street, and like Building 7A it too appears to have been subdivided. No internal surfaces were identified in either Room 1 or Room 2, and any such surfaces might have been robbed, or may originally have consisted of beaten earth floors. The stone-lined garderobe was formed by the three sides of walls 489, 490 and 491. The gap in between walls 489 and 491 was only *c.* 0.80m wide before the construction of the garderobe. This could have been a narrow external 'ginnel' between two partly separate buildings, or perhaps more likely, an internal corridor. The upper deposit (496) within the garderobe contained pre-AD 1350 glass vessels and 14th century pottery, but the upper part of this deposit also produced mid-16th to 17th century pottery, broadly in line with a postulated abandonment of both buildings 7A and 7B during the later 16th century at the earliest, but more likely at some point in the 17th century. The stratigraphic evidence thus suggested that the garderobe was finally in-filled when the building became disused and/or was demolished, though this does not necessarily mean that the ceramic and glass assemblages recovered from it were not derived from medieval activities (see discussion of the finds below). The demolition of buildings 7A and 7B might have slightly pre-dated, or been directly associated with, the large-scale reconstruction of Peckwater Inn during the 17th century (see below).

On Salter's reconstructed map of medieval Oxford, buildings 7A and 7B are depicted as plot 117 Glasen Hall and plot 118 Vine Hall respectively (Fig. 67; Salter 1960, map SE II). Documentary sources suggest that both these plots were once a single property or 'great house' belonging to the Kepeharm family (*ibid.*, 220). They were one of Oxford's wealthiest merchant families (Sturdy 2006). John Kepeharm was alderman in the 1190s, and his son Laurence was the first mayor of Oxford in 1200-1208. A later owner of the house was Philip the Miller, another mayor of Oxford (1210-1214). The northern part of the property called Glasen Hall was given to Oseney Abbey in 1239, in rentals of 1317 it is described as an academic hall, and it was subsequently let to various Principals. Confusingly though, some documentary records indicate that Glasen Hall was or became an open plot of ground, with Sir John Peshall Anthony à Wood noting that in the reign of Richard II (1377-1399), Vine Hall was situated between 'a void spot of ground sometimes called Glassen Hall to the N and Ship Hall on the S' (Anthony à Wood 1773, 127), and Salter suggesting that the low rentals indicates it was only a garden between Vine Hall to the south and Solar Hall to the north, though no other evidence is offered by him to support this. The gap between buildings 7A and 7B could well have been gardens or a derelict plot, however. In 1534 Oseney Abbey granted the property to New College (Salter 1960, 220).

Building 7B was apparently the southern half of the property, called Vine Hall, which may have been named after H. Juvine or Juvensis, supposedly the owner of this property during the reign of Richard I in 1189-1199 (Anthony à Wood 1773, 126). During AD 1310-1314 it was held by Isolda de Weston. In 1357 John de Whitechurch left Vine Hall to Roger Compton, and there are mentions of it in 1360 and 1389, with the latter year seeing it sold to the magistrate Nicholas Wykeham who then gave it to New College (Salter 1960, 220). It became a celebrated grammar school where John Leland senior, father of the celebrated antiquary, taught until his death in 1428 (Chalmers 1810, 330). In 1547 it was amalgamated with Peckwater Inn (see below).

Pits of 11th and 12th century date were recorded in the cellars of Peckwater Quadrangle Staircase 9 in 1964 (Sturdy and Sutermeister 1964-65, 192), approximately 30m from the internal north-western corner of Peckwater Quad towards the centre of the northern range of buildings. This would have roughly corresponded to the location of Solar Hall on the southern side of Little Jury Lane, according to Salter's reconstructed map of medieval Oxford (Salter 1960, 220, SE116, map SEII). In the 13th and 14th centuries this belonged to a variety of owners including Robert de Notingham and Thomam Gibbs. A 1335 will of John de Dokelinton who had a position at Lincoln College left Solar Hall and an adjoining tenement to his wife Sibyl, whilst his son John in a will of 1349 left the property to his widow Alice and then to his two daughters Maud and Joan. In 1527 Solar Hall was sold to New College, but it was taken by Henry VIII in 1546.

During 1974-1976, Christ Church re-furbished the basements along the northern range of Peckwater Quadrangle, involving the removal of *c.* 300mm of material from the earth floor, and the digging of several service trenches. Archaeological remains identified included pits under Staircase 2, disturbance from presumed pits under Staircases 3 and 4, and the remains of three wells or soakaways sealed by extensive areas of soft organic fill over 1m deep under Staircase 7, the latter assumed to be backfill of cellars of the earlier 17th century quadrangle that was demolished and rebuilt around *c.* 1705-1706 (see below). Stratified pottery was recovered from the last context and from Staircase 4, including some unusual pitchers and a lobed dish of late 15th to early 16th century date (Durham and Mellor 1977). In 2005 and 2006, John Moore Heritage Services undertook small-scale excavations in advance of the construction of new floors being laid in the basement of Staircase 4 and part of Staircase 3 at Peckwater Quad (JMHS 2006; Moore and Parsons 2007). Two pits containing late Saxon pottery were recorded, along with further pits of later 11th to 12th century date, and traces of an early 13th century cellared building. Various drains at ground floor level also suggest the subsequent use of this property as a shop.

During the medieval period, Peckwater Inn had actually been located to the south of Shitebarne Lane and Ship Hall and to the north of the churchyard of St Frideswide (Fig. 67; Salter 1960, map SE II, plot nos. 120, 236-238), though Salter notes that there are practically no surviving deeds covering the northern part of this area (plot 120). Plot 237 was once called White Hall and was within an enclosed area within Canterbury College. It was held by Richard son of William le Spicer in 1289, and John Spicer in 1427 (Salter 1960, 260). Salter records few details for plot 238. The origins of the name Peckwater are unclear. Peckwater's Inn or Peckwether's Inn was supposedly once the house of R. Peckwether and Radulph Peckwether his son, provost or chief magistrate of Oxford during the reign of Henry III (1216-1272) (Anthony à Wood 1773, 125). In *c.* 1260 Peckwater Inn was apparently conveyed to J. Giffard, Baron of Brimsfield, who 'constituted it and converted it into a house for students in the civil law, which continued until the utter decay thereof in the reign of Henry VIII' (Anthony à Wood 1773, 125). Another historian notes that it was on the site of a medieval inn run by the Peckwater family, and was given to St Frideswide's Priory in 1246 (Wade 1818, 236). The veracity of these two accounts is unclear however.

The principals of Peckwater Inn were often men of considerable status and influence – Walter Sandwyche, principal from *c.* 1436-1438 was commissary to the bishop of Lincoln, and William Horsey, principal from *c.* 1499-1502, was an official of Bishop FitzJames in the sees of Rochester, Chichester and London (Pantin 1964, 48-49). A progress report from 1526 on the construction work then underway at Christ Church that had been instigated by Cardinal Wolsey notes that the 'old lodgings of Peckwater Inn' were converted into houses for masons to work in, although it is unclear exactly where these were located (Salter and Lobel 1954, 228-238). Anthony à Wood also mentions that 'at its decay' Vine Hall was apparently united with Peckwater Inn in 1547 (Anthony à Wood 1773, 126), and this might have been when the name Peckwater Inn moved to the north of Shitebarne Lane. The original site of Peckwater Inn is marked as part of Canterbury College on the Agas panorama of 1578. Salter and Lobel (1954) note that Vine Hall, together with Peckwater's Inn and the smaller and older Brid Hall and Maiden Hall, were given to Christ Church by Henry VIII in 1547 (Ingram 1847, 57). The name Vine Hall Lane was in use by 1576, and eventually replaced that of St Edward's Lane (Salter and Lobel 1954, 228-238).

It is unclear what happened to Peckwater's Inn in the years following 1546, but by the time of the Agas panoramic map of Oxford of 1578, the buildings of Peckwater's Inn are shown to the north-east of Tom Quad and north of Canterbury College, and are depicted as three different but conjoined ranges of buildings with structures to the north, west and south (Fig. 69), bordered to the north by what must be Little Jury Lane. The northern range is incomplete, and there is a garden or orchard at the north-east corner of the complex. Interestingly, between the southern range of buildings of Peckwater Inn and two conjoined ranges of buildings apparently belonging to Canterbury College there was a gap illustrated that might correspond to the former position of Shitebarne Lane, by this date seemingly blocked at its eastern end by a north-south range of buildings. Documentary sources note that rooms for 'gentlemen commoners' were added to the north range of Peckwater Inn and in the former Canterbury College in 1600 (Salter and Lobel 1954, 228-238). Some of these may be the additional buildings depicted on the Hollar panorama of 1643.

Under Dean Brian Duppa (1629-1638) the buildings in Peckwater and Canterbury were extended, but it was Dr Fell, Dean of Christ Church, who commissioned the building of the eastern part and half the northern part of Peckwater Inn, which was 'sometimes an orchard belonging to one of the canons' (Anthony à Wood 1773, 126). This is referring to John Fell, Dean from 1660-1686, rather than his father Samuel Fell who was Dean between 1638-1648, as it seems unlikely that major building projects would have been initiated during the tumultuous social and political period immediately before and during the English Civil War. This same

account notes that Fell then built the western part of Peckwater Hall, and ‘made the fourth part, which was Vine Hall, uniform with the other’, then he finished the southern side of Peckwater by ‘taking out of his own Garden Room next to his Back Gate’ (ibid.). This account suggests that the orchard or garden depicted on the Agas panorama was the area that was partly built on to create or extend the northern side of Peckwater Inn, which is supported by the buildings shown on the Hollar panoramic map of 1643 (Fig. 70), and also indicates that Vine Hall was incorporated into the complex on the fourth (southern) side. If the latter is the case, then the building shown just above the caption of ‘Peckwater Inn’ on the Agas map was probably Vine Hall, and Shitebarne Lane was indeed to the south of it.

On the Hollar map of 1643 and the Loggan panorama of *c.* 1673, Peckwater’s Inn appears more complete with the garden or orchard to the north-east already partly built on, and on the Hollar map there are four ranges of buildings forming a quadrangle, with additional yards and buildings to the east (Figs. 68, 70). The walls depicted on the Loggan view immediately east of Peckwater Quad do not appear to have roofs, and although these might be small walled gardens, it is possible that this depicts on-going building work, with buildings being constructed to fill in the gap still visible on the Hollar map. The northern, eastern and western ranges of buildings appear complete on the Loggan view, however, and there is an entrance through an arch to the south-east that might reflect the original line of Shitebarne Lane. A large, three storied building is also shown forming the south-eastern corner and southern range of Peckwater Inn, but it is unclear what this might have represented – Vine Hall, or more likely given its position, Ship Hall to the south, later incorporated into Canterbury College, and the taller building shown south of the Peckwater Inn complex on the Agas and Hollar maps.

The great rebuilding of Peckwater Inn into the existing Peckwater Quadrangle was begun by Dean Henry Aldrich (1689–1711), who designed the Quad himself and instigated building work following a large bequest from Dr Anthony Radcliffe, one of the Canons, along with donations from other benefactors (Lindsay 1949, 30, 48; Salter and Lobel 1954, 228-238). Building work began on Peckwater Quadrangle in 1706, though on the southern end of the west range it may have incorporated 17th century masonry. It replaced the previous three sides of the old Peckwater Inn, and it was completed in 1711 (Lindsay 1949, 30, 48). Sometime during the late 16th or 17th century, the building to the east of Peckwater Quadrangle was also constructed. Prior to this, the area east of Peckwater Quad may have consisted largely of gardens, as shown on the Agas panorama of Oxford (Fig. 69). The Library on the southern side of Peckwater Quad was begun in 1717 after the buildings there were cleared, but it was only completed in 1772 (Salter and Lobel 1954, 228-238).

This sequence of building and rebuilding appears to tie in with the fact that the later excavated surfaces of Shitebarne Lane contained late 17th to mid-18th century pottery, and a large part of this street was of course subsumed beneath Peckwater Quad. Some of the earlier cobbled surfaces recorded in the northern part of Trench 10 and in Trench 9 were thus probably part of Shitebarne Lane. On the Agas map of 1578 (Fig. 69), it appears that the eastern end of Shitebarne Lane had been blocked off by a long, narrow range of buildings fronting onto Shidyerd Street. Similarly, the mid-16th to 17th century pottery recovered from the upper fill of the garderobe in Building 7B and also from the disuse or demolition deposits in buildings 7A and 7B would fit the broader historical chronology, though it is unclear whether this was the result of the mid-17th century works or the early 18th century rebuilding. Given that the garderobe deposit also contained medieval ceramics and glassware, and might have reflected material ‘cleared out’ from somewhere else, it is perhaps most likely that this particular deposit was the result of the mid-17th century rebuilding of Peckwater Inn, when Vine Hall, possibly Building 7B, was incorporated into Peckwater’s Inn. The rubble deposit within Building 7A with a clay pipe fragment and late 17th to mid-18th century pottery, however, might indicate that this structure, possibly Glasen Hall, was actually only demolished prior to the construction of Peckwater Quad.

Interestingly, the NEE-SWW division in Peckwater Quad follows the earlier gap between Buildings 7A and 7B. This is not the line of wall 479, but could nevertheless be following a pre-existing boundary of some sort, perhaps the right-angled wall visible on the Agas panorama of Oxford from 1578.

At the western end of Trench 10C, there were two quite substantial stone walls 718 and 719, 1.25m and 0.85m wide respectively, both orientated approximately north-south but only about 0.5m apart from one another, though both were faced on both sides with limestone blocks. Given the narrow distance between them it seems unlikely that they could have been contemporary with one another. These walls may correspond with the rear of plots 105-107 to the south of Shitebarne Lane and fronting onto Shidyerd Street, and shown on Salter's map of medieval Oxford as belonging to Fox Hall, Mariole Hall or Staple or Stapell Hall, perhaps separating them from the larger property of Peckwater Inn to the south-west (Fig. 67; Salter 1960, SE II). Fox Hall was originally owned by St Frideswide's but was given to Canterbury College in 1364, which was the same year this college also acquired Mariole Hall and Stapell Hall, the latter two probably from Abingdon Priory (*ibid.*, 216). On the 1578 Agas panoramic map of Oxford, these plots correspond to an area marked as Canterbury College, but depicted as gardens or orchards with buildings only further to the north and east, and the only boundary wall visible is orientated east-west rather than north-south. The same is true of the 1643 Hollar map.

The *c.* 1673 Loggan panorama also depicts part of this area as walled gardens belonging to the dean and canon, but again there are no north-south walls depicted. On the Loggan map of Oxford from 1675, there is a north-south wall depicted between these gardens and the western side of Tom Quad, this being hidden on the panoramic view of Christ Church, but this structure is too far west to be either of the two excavated walls 718 and 719. The most likely possibility is that one or both of these walls were associated with a north-south orientated building depicted on both the Loggan map of Oxford and the panorama of Christ Church, located to the south of Peckwater Inn, but roughly in line with its easternmost extent (Figs. 68, 71). This structure is shown as having high windows with pointed arches and trefoil window tracery, and may have been either the hall or chapel associated with Canterbury College, probably the chapel which was on the southern side of the complex whilst the hall was on the western side (Page 1907, 68; Pantin 1964, 56). Loggan's panoramic view of Christ Church also depicts the hall of Canterbury College with Early Perpendicular windows (Davis 1946-47, 76), the chapel, and the two ranges of buildings that were commissioned by Prior Chillenden of Canterbury (1379-1397). If one or both of these walls were associated with the western wall of the chapel, then it seems likely that the 1.5m wide stone buttresses 706 and 714 in Trench 10 were also part of this structure. They probably represent footings for an east-facing porch into the chapel building on its western side.

This does still not resolve the issue of why walls 706 and 714 were built so close together, however, although as noted above they might have represented different phases of construction and/or use. It is possible that one wall represented a rear wall of Fox or Mariole Hall, and the other the eastern chapel wall. In Trench 9, the north-south wall 621 could have been an internal boundary wall within the medieval tenement of Spalding's Entry, immediately south of Shitebarne Lane (Salter 1960, 215, SE II) was probably the boundary wall extending northwards from the eastern side of the chapel, and featuring an arched stone gateway across the old line of Shitebarne Lane (Fig. 68), as depicted on Loggan's panorama of Christ Church. The east-west orientated stone-lined and capped drain 622 that cut these footings thus probably followed the same pre-existing line of Shitebarne Lane.

Canterbury College was a corporate institution with a seal and endowments of its own founded in 1363, but dependent on the cathedral priory of Christ Church, Canterbury. Shortly after the dissolution of the monasteries in 1540 the buildings of Canterbury College were acquired by Christ Church. The north-south orientated chapel building was either demolished during *c.*

1715-1717 to make way for the new Peckwater Quad library, or during the rebuilding of Canterbury Quad itself by James Wyatt during 1773-1778 (Pantin 1964, 56). This third quadrangle of Christ Church was funded largely from the bequests of Richard Robinson, Archbishop of Armagh.

19.7 North of Tom Quadrangle, Canon's Gardens, and Jury Lane to Blue Boar Street

The eastern end of Trench 11 to the west of St Edward Street/Vine Hall Lane was located approximately where Salter's reconstructed map of medieval Oxford placed George Hall (Fig. 67; Salter 1960, SE I). It is likely that the trench was slightly too far north to reveal any of the structures associated with this property, however.

Above the earliest identifiable deposit (1007) which contained late 15th to mid-16th century pottery there was layer (1006), a 0.30m thick deposit of crushed mortar and limestone. This probably represented masons' debris, and might have been associated with the foundation of Wolsey's chapel during 1525-1529. Two silty layers sealing (1006) contained early 17th century pottery, so it is likely that the construction debris was indeed from the commissioned works on Cardinal College. A second very similar layer of construction debris up to 0.10m thick (1003) was above these two silt deposits, and this was in turn beneath further silt containing 19th century or later pottery. It is possible that this second deposit of working debris resulted from the completion of the northern side of Tom Quad begun in the 1660s, and/or with the removal of Wolsey's foundations associated with that later work.

In Trench 11 on the northern side of the wall dividing the Canon's Garden into two separate areas there was a sequence of cobbled and sandy surfaces (1011A-D), with the earliest cobbled layer identified being up to 0.20m thick. These were recorded in plan as a rectilinear spread on a north-east to south-west orientation, but the original extent of layers (1011A-D) were not established so this alignment may not be truly representative of this. These were probably road surfaces forming part of Jury Lane, probably originally on a NEE-SWW alignment, and they were sealed by a garden loam deposit containing mid-16th to 17th century pottery. This is significant, as Jury Lane was probably in use until the early 16th century when it was closed off prior to the construction of Cardinal's College. The entrance to Jury Lane is still visible on the 1578 Agas panorama, however, where there is also a roughly NEE-SWW aligned rectilinear open space leading to Canterbury College (Fig. 69), and this implies that the roughly north-east to south-west aligned wall dividing the two halves of the Canons' Gardens may follow the original southern edge of Jury Lane. This wall is visible on the 1673 Loggan panorama of Christ Church and his 1675 panoramic map of Oxford, and what was probably the original line of Jury Lane is also still visible in both of these views (Figs. 68, 71). A series of later gravel and sand surfaces such as (1001) and (1016) were probably paths within the post-medieval and early modern northern part of the Canon's Gardens.

Further to the west, the broadly north-east to south-west orientated cut 1017 was probably the robber trench for a wall, and this cut through cobbled surface (1018). This surface was sealed by a deposit of loam (1015) containing late 15th to mid-16th century pottery, and overlying this layer and the rubble backfill of cut 1017 was a deposit with lenses of ash and charcoal (1014) and also mid-16th to 17th century pottery. It is likely that these remains were associated with the medieval properties of either Ape Hall or Eagle Hall, as depicted on Salter's reconstructed map of medieval Oxford (Fig. 67; Salter 1960, map SEI). The line of the robber cut may even have marked the boundary between these two properties. Eagle Hall, Ape Hall and White Hall further to the west had become conjoined properties by 1498 (*ibid.*, 223), all owned by Oseney Abbey. Following the Dissolution in 1546, these properties probably passed to Cardinal College and thence to Christ Church. Further west again, a further layer of cobbles (1019) contained two

sherds of 13th to 14th century pottery, and this was overlain by another possible laid surface. These surfaces were again probably associated with Eagle Hall. Two small excavations to the west of Peckwater Quad in 1956 recorded three pits containing 12th-14th century pottery, and a brick barrel-vaulted drainage culvert of probable 18th century date (Sturdy 1961-62: 28). This area was apparently the college timber yard in the 16th century before becoming part of the Canon's Gardens in the 18th century.

Limestone walls 1020 and 1023 were both on broadly north-west to south-east alignments, and were separated by the 16m wide cobbled surface (1022). Wall 1023 produced a sherd of mid-16th to 17th century pottery from its matrix, whilst surface (1022) also contained mid-16th to 17th century pottery. The latter was in turn sealed by a gravel surface (1026) which had a deposit of silt and crushed brick (1025) above it. This suggests a post-medieval date for the walls and the cobbled surface. Wall 1020 is probably the structure shown to the east of the Laundry and Old Brewhouse building, as shown on the Loggan panoramas of Oxford and Christ Church from 1673 and 1675, dividing this area from the northern part of the Canon's Gardens (Figs. 68, 71). The brewhouse is believed to be late 16th to early 17th century in date (Lindsay 1949). Surface (1022) could thus be part of the yard surface immediately in front of the brewhouse. Wall 1023 does not match up with any walls depicted on these views, however. It is possible that there was once a subdivision of this area, but the line of wall 1023 would also roughly correspond to the boundary depicted on Salter's map of medieval Oxford between the eastern side of the Magna Schola Juris Civilis or civil law school belonging to St Frideswide's, and an adjacent tenement of St Frideswide's acquired from the Black Friars in *c.* 1280 (Fig. 67; Salter 1960, 264, nos. SE250 and SE251, map SEI). Perhaps an earlier wall was rebuilt and retained for a while, but was subsequently demolished prior to Loggan's depictions. The Agas view of *c.* 1578 is unfortunately uninformative, with only one main north-east to south-west boundary wall being shown in this area (Fig. 69). There were also two north-south walls depicted creating three parcels of land on the northern side of the east-west wall.

Where Trench 14 was excavated for the construction of a new electricity sub-station on the site of former garages, at the base of the trench a quite extensive surface of mortar, gravel and limestone fragments was exposed (932), nearly 6m long and 3m wide. This was sealed by a deposit (904) containing mid-16th to 17th century pottery, and the layer above this (903) contained mid to late 17th century pottery. On Salter's reconstructed map of medieval Oxford, this area is shown as Magna Schola Juris Civilis (Fig. 67; Salter 1960, 264, SE251, map SE I). It is possible that this surface was an internal floor or makeup deposit for the solitary building shown on the Agas panorama of 1578, perhaps a forerunner of the Laundry and the Old Brewhouse, though not actually the same structure. Due to the difficulties of interpreting the panoramic maps it is not clear if by the time of Loggan's 1673 and 1675 views this solitary building had been demolished and replaced by the Scullery and Old Brewhouse (Figs. 68, 71), or if it was actually the same building, probably part of the Blue Boar Inn (see below). If an earlier structure had stood on or near this site, this would broadly fit with a proposed building that was abandoned and/or demolished sometime before the mid-16th to 17th century. Alternatively, deposit (932) was merely a bedding layer for part of Jury Lane or a yard surface associated with the Brewhouse. It is odd that no traces of more substantial cobbled surface were identified, although it is possible that these had been completely robbed for use elsewhere.

The loamy soil layers sealing surface (932) were cut by a series of pits or shallow trenches that were probably features associated with activities in the gardens. Also truncating these layers and extending in two sections across Trench 14 was the construction cut 901 for the north-east to south-west orientated limestone masonry wall 1029. The western extent of this wall was not identified, and it was not clear if it had originally extended beyond the later brick wall footings and cellar, or had abutted them. This is likely to be one of two walls on this alignment shown on the 1673 and 1675 panoramic views by Loggan, either forming the southern boundary of the

northernmost half of the Canon's Garden, or the northern boundary wall of the southern garden. The northernmost wall is depicted as shorter than the southern one, however, as this area was an L-shaped yard immediately to the west of the northern formal garden. On balance, the position of wall 1029 relative to Tom Quad, Kilcanon and the modern boundaries of the Canon's Gardens suggests that it was actually the southernmost wall, forming the northern boundary of the southern garden. Whether layer (932) was an internal floor surface, an external yard or part of Jury Lane, the fact that wall 1029 extended across the middle of this underlying deposit indicates that the lines of the main boundaries in this area certainly shifted slightly over time. Cut 915 was only recorded in section in Trench 14, but its profile suggests that this could have been a ditch following the same broad alignment as wall 1029, albeit some 1.5m to the south of it.

There is an alternative interpretation for wall 1029. A small ancillary building is shown on the 1st Edition Ordnance Survey map of 1876 on the same site as Trench 14, and this is probably the structure which the brick footings were part of (Fig. 73). To the north-east of this building there was a yard between the smaller building and the Laundry and Old Brewhouse, and to the south-east a right-angled narrow lane leading off to the northern range of Tom Quad. The NNW-SSE aligned western wall of the Canon's Garden was to the east (wall 1023, see above), and between this and the ancillary building there was another smaller wall with a gateway in it, orientated north-east to south-west. Wall 1029 was actually recorded in two sections separated by a gap of c. 2.70m. Though on the trench plan the line between these two sections of wall is dashed, implying robbing, it is possible that this gap was an original gateway feature, and also that wall 1029 abutted the brick wall rather than being truncated by it.



Figure 73. Detail of the 1st Edition 1: 2500 25" Ordnance Survey map of Oxford, 1876

Between 2007 to 2009, John Moore Heritage Services also undertook evaluation and watching brief work in Blue Boar Quad prior to and during redevelopment work there (Fitzsimons, Heale and Sausins 2009; Moore 2007). Part of this work involved stripping off deposits and reducing ground levels. Modern services had caused much disturbance, but an area immediately to the north of the Old Brewhouse building was better preserved. The earliest deposits of the stratigraphic sequence were dated to the 13th century or slightly later (Fitzsimons, Heale and Sausins 2009, 10-15). Unexcavated pits cut into these deposits were presumed to be of broadly similar date. Above these was a series of undated deposits including a layer of mortar and possible dumps, some containing tiles. Cut into these deposits was a small gully and several small pits, mostly undated. The remains of one building represented by a partly robbed section of right-angled limestone walling on north-south and east-west alignments, the last floor of which probably dated to after *c.* 1550. This was apparently succeeded by another structure, with one or perhaps two limestone walls on NNW-SSE orientations, one associated with a possible beamslot, the stone and clay footings of an internal wall and a mortar floor surface. This later building may have been of 17th century or more recent date.

These structures were again within the area of Magna Schola Juris Civilis on Salter's map of medieval Oxford (Fig. 67; Salter 1960, 264, SE251, map SE I), and the westernmost wall recorded in Blue Boar Quad might not only have formed the western wall of a building but also a boundary between this property and the Area Predicatorum St Frideswide's. Alternatively, the wall of this building followed an earlier tenement alignment. At least one of the walls recorded at Blue Boar Quad may have been depicted on Loggan's panoramic map of 1675, part of a northern and western extension to the brewhouse. This extension or additional building does not appear on the 1st Edition Ordnance Survey map of 1876, suggesting that it was demolished prior to this date. A small trench excavated within the eastern end of the Old Brewhouse recorded a limestone and brick wall, either from an earlier building or an earlier phase of the existing building. To the east of the Old Brewhouse, another small trench also revealed part of a NNW-SSE orientated wall that might have been part of the same structure as wall 120 in Trench 11.

From the new electricity sub-station northwards towards Blue Boar Street, Trench 20 passed through the area recorded as Area Predicatorum St Frideswide's on Salter's map of medieval Oxford (Salter 1960, 228-229, SE134, map SE I). Blue Boar Street was not a medieval thoroughfare, and the earliest documentary reference to a street along this route is from 1532 (Beckley and Radford 2011b, 16; Gelling 1954, 38). It was created by William Tresham, sub-dean of Christ Church, in order to compensate for the closure of St Frideswide's Lane, and it was consequently initially known as Tresham's or New Lane until at least 1614. It then changed name several times, with documentary references to it being called Blue Boar Lane in the mid-17th century, Bear Lane in 1751, and Blue Boar Street by 1772 (Chance *et al.* 1979, 475).

Excavations in advance of the construction of Blue Boar Quad at Christ Church in 1965 recorded a metalled surface with evidence for domestic occupation from the 12th century onwards (Wilson and Hurst 1966, 199), and this putative road surface apparently overlay 11th century rubbish pits, suggesting an early 12th century date. The results of these investigations have never been published, however, and so it is not possible to identify exactly where this cobbled surface would have been. Given that no road existed here until the mid-16th century, however, this surface was most unlikely to be early 12th century in date. It is possible that the pits recorded in 1965 had been truncated prior to the construction of the metalling, or alternatively, this was not actually a road but part of a yard surface.

Prior to the creation of the new lane, part of the area had been a tenement that had belonged to a man called Moses son of Simon, one of Oxford's Jewish community, but in 1256 the king granted it to William de Walers, and by *c.* 1271 it had passed to St Frideswide's, though later tenants paid rental to both St Frideswide's and Abingdon Abbey (Salter 1960, 227-228, SE133,

map SE I). The area was apparently acquired by Wolsey for his Cardinal College, and this may have been the period when William Tresham initiated the construction of the lane, although it is unclear if any structures actually had to be demolished in order to do so – the street may have followed an existing access route or alleyway into the property.

Following Wolsey's fall from power the remainder of the property now called the Bluebore was sold off by the crown and by 1553 had been acquired by Edward Cowper and Valentine Faireweather, and in this deed it is described as a brewhouse. In 1567 it was left to New College (*ibid.*, 228). A building called the New Stable was later built on the property during the reign of James I (1603-1621). Salter details a lease document that describes the New Stable as being bounded by what was still called Tresham Lane to the south, and by the Blue Bore to the north and west (1960, 228). This seems incorrect however, for on the 1: 2500 1st Edition Ordnance Survey map of 1876, a building labelled Stables is shown facing onto the southern side of Blue Boar Street, with a coach house to the south-east and the laundry and Brewhouse to the south. The Loggan panoramic map of 1675 also shows a large building at this point which was probably the same stables, and the Loggan view of Christ Church from 1673 shows more details of this building on the extreme left-hand (northern) edge of the panorama (Figs. 68, 71). The building is a two-storey structure, and has a series of projections from the upper storey of its south-facing wall of unknown function, though they might have been purely decorative.

By 1818 there was no longer an inn at the property, but there is a reference to rooms 'over' the new lane (Salter 1960, 228). This supports the evidence from the Agas panorama of 1578 and the Loggan panoramic map of 1675 that shows the western end of Blue Boar Lane by Fish Street (St Aldate's) apparently blocked off by a north-south orientated building, presumably the inn – access to the street would thus originally have been via an entrance passage or gateway through and underneath this structure (Figs. 69, 71).

The stratigraphy in Trench 20 had been considerably disturbed by modern service trenches, and finds of 19th-20th century pottery indicated that most of the deposits, features and structures revealed in section were probably early modern or modern in date. At the southern end of the trench wall 753 was recorded, a limestone masonry structure abutted by brick wall 751, which then returned at a right angle and became brick wall 752. These walls formed a small structure with a brick floor, which had been backfilled with cinder and ash. It may well have been a coal bunker, small external storage shed or a lean-to structure. Given the early modern date of these structures, one might suppose that they could be identifiable on the 1: 500 1st Edition Ordnance Survey map. At first glance, there are no structures south of the Old Brewhouse on the same north-south alignments – most of the boundaries are actually orientated NNW-SSE or NEE-SWW. Wall 751 extends towards the south-western corner of the Old Brewhouse, however, and it is likely that it abutted this building. On the 1st Edition map, a wall does extend from this corner on a NNW-SSE alignment, forming the western boundary of a yard, and there are three small ancillary buildings marked too, abutting this boundary wall at right angles (Fig. 73). The wall no doubt pre-dated these smaller structures, as it is visible on the Loggan panoramic views of 1673 and 1675 (Figs. 68, 71). It therefore seems highly likely that wall 753 was this boundary wall, and walls 750 and 752 were part of a small building appended to it, probably the smallest of the three ancillary buildings shown on the 1st edition Ordnance Survey map. This implies that the original site drawings were not accurately measured or 'tied into' standing structures. Unfortunately, this also means that the orientations of some of the other structures recorded in Trench 20 might be incorrect too, but it is not possible to remedy this at the post-excavation stage. The central and northern boundaries in Trench 20 appear to have been less affected by this phenomenon though, so it is perhaps only the southern part of the trench where this error was most pronounced.

Assuming that the orientations of the walls in Trench 20 are slightly incorrect, then masonry wall 760 was probably the east-west garden wall marking the northern boundary of the Canon's Garden, actually on a NEE-SWW orientation. It would originally have been appended close to the northern end of the western wall of the Old Brewhouse and Laundry, and featured a gate for a path or alleyway extending to the yard and stables to the north. The limestone walls 761 and 763 probably mark separate phases of buildings shown to the north-west of the Old Brewhouse and north of the gateway into the Canon's Garden. Wall 761 in particular may be one of the NEE-SWW walls forming part of structures *c.* 5m to the north of the garden gateway. It is likely that most of these walls and buildings were demolished in the 1960s as part of the redevelopment of this area and the construction of Blue Boar Quad. Masonry wall 779 may have been either the northern wall of one of the small structures on the western side of the passage or alleyway, or perhaps the wall bounding the south-western extent of the stable yard.

At the northern extent of Trench 20, the earliest identifiable deposit was a sequence of mortar floors (797), (798) and (799). These were sealed by a dump of ceramic roof tiles (793), probably the result of demolition. These surfaces were unfortunately undated, but are likely to represent internal floors of a building fronting onto Blue Boar Street. The mortar floors suggest a medieval or post-medieval building, as does the position of these surfaces, now underneath the access on the western side of the stables into the yard behind. Small buildings are indeed shown here on the Loggan panoramic map of 1675 (Fig. 71), although unfortunately this area is just beyond the left-hand edge of the more detailed 1673 panorama of Christ Church. The earlier Agas panorama of 1578 also depicts a building in this area. Investigations within Blue Boar Quad in 2007 and 2009 recorded some limited evidence of settlement activity during the 11th-13th centuries, including rubbish pits and pottery (Fitzsimons, Heale and Sausins 2009: 40-42; Moore 2007). These were likely to have been associated with the Area Predicatorum St Frideswide's and Eagle Hall.

The dump of roof tiles (793) was truncated by the construction cut for the limestone masonry wall 795. This seems to have been aligned at right angles to Blue Boar Street, and may thus represent the end wall of a later building immediately east of the entrance off the street. This might have been the western end wall of the stables, but given its stratigraphic position above the demolition rubble and its likely later post-medieval or early modern date, this may be part of the urinal depicted on the 1st Edition Ordnance Survey map (Fig. 73).

19.8 Artefacts

19.8.1 Introduction

The finds assemblage recovered during the 2005-2007 investigations was relatively large, but due to the considerable amount of disturbance of earlier deposits over the years, relatively few of the objects were from securely stratified contexts. Some of the most interesting individual artefacts were actually found in backfilled deposits within early modern and modern service trenches, and are thus essentially unstratified. Nevertheless, the assemblage still ranks as one of the most important groups of medieval and post-medieval objects excavated in Oxford during the past decade, and several categories of artefact are worth discussing in more detail.

19.8.2 Patterns of pottery consumption and residuality

Only small quantities of late Saxon pottery were excavated during the 2005-2007 investigations, but as Paul Blinkhorn suggests (section 4.2.4 above), the lack of residual material in later contexts suggests that there was actually little activity across most of the area affected by the service trenches before the medieval period. If many Anglo-Saxon stratified deposits had been

destroyed, then more ceramics of this period would have been present in deposits of later date. This supports the idea that late Saxon activities were concentrated in and around the immediate vicinity of St Frideswide's Precinct.

Blinkhorn (see sections 4.2.3 and 4.2.4 above) noted other interesting patterns in the proportions of residual material in the phased assemblages over time. Approximately 18% of the 15th century ceramic assemblage consisted of residual material, but this increased dramatically to just over 60% during the 17th or mid-17th century. This would correspond broadly to the building works commissioned by Dean John Fell (1660-1686), including the north side of Tom Quadrangle and the lowering of the level of the Quad, Canon's House and Kill-Cannon Passage between Tom and Peckwater Quadrangles, Fell Tower and the massive rebuilding of Peckwater Inn. Another major phase of residuality occurred during the mid-18th to 19th centuries, when nearly 90% of the material was residual. This would reflect construction projects such as the library on the southern side of Peckwater Quad, the Anatomy School and the Meadows Building, but also the work associated with the installation of early services. Similarly, Blinkhorn has also identified interesting peaks in ceramic consumption (section 4.2.5 above), some of these perhaps coinciding with significant social changes such as the founding of Cardinal College.

19.8.3 The preparation and consumption of food and drink

The 13th to 14th century ceramic assemblage was fairly typical of Oxford, and has similarities with other groups of pottery from sites such as 4A Merton Street, Merton College (Blinkhorn 2006). Evidence of the high status of some of the properties preceding Christ Church, however, is provided by the glass tablewares. At the 4A Merton Street site, fragments of a green high-lead glass decorated beaker of 13th to 14th century date were recovered, the first known from Oxford (Beckley and Radford 2011b, 80; Tyson 2006, 292). At Christ Church by contrast, pieces of three medieval glass vessels were found – part of a footed goblet, a beaker and a bowl, again of 13th or early 14th century date. At least two of these vessels were imports, and all three are very rare types in England (see Tyson above). The vessel fragments were found in the garderobe fill (496), associated with Building 7B that may have been part of Vine Hall. In the later 14th century this property was owned by the magistrate Nicholas Wykeham who then gave it to New College (Salter 1960, 220).

The 15th to mid-16th century assemblage recovered from Christ Church consisted mostly of jars and jugs, but also contained relatively large quantities of mugs and cups, and three dripping dish rims (see Blinkhorn above, section 4.2.5). Although not numerous, the sherds from dripping dishes are noteworthy because of their use for collecting fat from spit-roasted meat, implying affluent consumption (Blinkhorn 2006: 267).

Rhenish Stoneware mugs, jugs and bottles formed high proportions of the overall ceramic assemblage from the mid-16th to late 17th centuries, particularly mugs. Some other late medieval and post-medieval finds assemblages of this date range from Oxford have also produced significant quantities of vessels associated with the serving and consumption of drink, most notably from Merton College and Merton South Lodge (Blinkhorn 2009, in press b), hardly surprising given the predilections of academics and students alike. Nevertheless, as Blinkhorn notes above (section 4.2.5), the proportions of Stonewares recovered from Christ Church are unusually large, and no doubt reflect the exceptional status of the college from its inception onwards. At the same time, pottery associated with the cooking, serving and consumption of food was virtually absent from the assemblages that produced so much drinking pottery, suggesting that such activities took place in a much more restricted spatial and social context. This may reflect the preparation of food in college kitchens and the fact that scholars and students would have eaten mainly in halls, but would have been able to drink in their rooms.



Figure 74 (left). Foot and lower bowl of a medieval green glass goblet (see Tyson, Fig. 47.1 above). Figure 75 (right). Fragments of a bowl in colourless glass with concentric opaque red glass trailing (see Tyson, Fig. 47.4 above).

More recent evidence of high-status dining is represented by the hallmarked silver spoon found in Trench 14 in the Canon's Garden. This was probably the result of accidental loss, although it is possible that it was stolen and hidden, but never recovered. The date of this spoon is unclear – it was found in a deposit containing 17th century pottery, but is more likely to be 18th or perhaps even early 19th century in date. Not all details of the hallmark were clear enough to narrow the date range down sufficiently, and its location means that the layer could have been frequently disturbed. A fragment of post-medieval Spanish olive jar is also worthy of note, which can be added to a small but growing group of similar finds from Oxford.

A recent review of the medieval archaeology of Oxford presented the evidence from the various animal bone assemblages excavated across the city (Beckley and Radford 2011a, 80-81). Excavations at Queen's College kitchen, for example, produced interesting animal and fish bone assemblages that suggest veal, mutton, venison, swan and heron was eaten by scholars and students, along with large numbers of marine and freshwater fish (Nicholson 2010: 210-14; Nicholson and Strid 2010: 183-185; Strid 2010: 206-10). Other significant fish bone assemblages were recovered from Merton College, Lincoln College and Hinksey Hall (Nicholson and Strid 2010: 184). Relatively little animal bone was recovered from the 2005-2007 investigations at Christ Church, and after consultation with an animal bone specialist at an early stage in the project it was decided that the assemblage would be too small and a significant proportion would have been derived from residual or disturbed contexts. It is worth noting, however, the relative prevalence of oyster shell and other edible marine mollusc species from medieval and post-medieval contexts in Trench 5, and to a lesser extent in Trench 12 (see McParland above), although in the case of Trench 5 this might be at least partly explained by the greater degree of hand excavation which took place in that area.

19.8.4 Evidence of scholarship

Ceramic oil lamps

Fragments of two 13th to 14th century ceramic oil lamps were recovered from the 2005-2007 investigations at Christ Church, and two 15th to late 15th lamp stems (see Blinkhorn section 4.2.6). Ceramic oil lamps are distinctive artefacts that appear to be associated with academic learning and have been recovered from a number of college and hall sites (Beckley and Radford 2011b, 80). Larger assemblages of medieval and late medieval ceramic oil lamps from Oxford have been recovered from the 65-67 St Giles site, the Corpus Christi Music Room and the

Postmaster's Hall, Merton College (Blinkhorn 2006, 2008, 180-185; Cotter 2009; Norton and Cockin 2008, 161-194).

Styli

Several other excavations in Oxford have produced metal and bone writing styli, including sites at 4A Merton Street, Queen's College Kitchen and at the St Ebbe's/Westgate Centre (Allen 2006a, 280, 2010, 200; Hassall, Halpin and Mellor 1989, 100). Five bone styli were recovered during the 2005-2007 investigations at Christ Church, along with one possible lead stylus (see McParland, and Rose above). One bone stylus was essentially unstratified from the fill of a service trench, as was the lead stylus (SF No. 33), whilst another bone stylus (SF No. 157) was from a layer of silty material that had built up above the surface of Shitebarne Lane, possibly of 17th to 18th century date. Three of the bone styli (SF Nos. 9, 10 and 11) were recovered from a deposit of cemetery soil relating to St Frideswide's, however, with the pottery evidence suggesting that due to continued disturbance from grave digging these could have ranged in date from the 13th to mid-16th centuries. None were directly associated with any human remains, but it is feasible that styli were sometimes re-used as shroud pins. Alternatively, it is possible that ecclesiastical scribes were sometimes inhumed with the 'tools of their trade' as part of a burial rite (Gilchrist and Sloane 2005, 179). A lead stylus was found in a 15th or early 16th century grave at St Saviour's Hospital, Bury St Edmunds (Caruth and Anderson 1997, 3.3.7), whilst a 'parchment pricker' (of bone?) was reported from a grave at Abingdon Abbey (Allen 1990, 76).

Book clasps and binders

Several objects associated with books have been previously recorded from archaeological investigations in Oxford, mostly as isolated finds. These include copper-alloy book fastenings from the St Ebbe's/Westgate Centre excavations (Goodall 1989: 223, 226, fig 62 no. 96), and a 14th to 15th century book clasp and a 13th-14th century page holder or clip from 4A Merton Street (Allen 2006a: 280). Further examples were found at 4 Queen Street, Oxford and the Hospital of St John the Baptist, Oxford (Goodall 2003, 314; Rogers 1991, 55). One of the largest assemblages to date was a group of six or seven book-clasps, book-clasp eyes and possible book plates recovered during excavations in the cloister of St Frideswide's Priory in 1985 (Goodall 1988, 39). The six book clasps and mounts recovered during the 2005-2007 investigations at Christ Church therefore represent a significant contribution to this corpus, and an unusually large group from one archaeological project, ranging in date from the 14th to the 17th century.

19.8.5 Scientific, chemical or alchemical practices

One of the most notable aspects of the 2005-2007 Christ Church investigations was the recovery of the finds assemblage from layer (496) in the stone garderobe associated with Building 7B in Trench 7. Unfortunately, no section drawing exists for this feature, and coupled with the minimal amount of stratigraphic information that was recorded on site, it is not clear how these finds were distributed within the layer. There are no photographs of the finds *in situ* under excavation, although one of the excavators has commented that the vessels were not 'stacked' in any way, and the sherds of pottery and glass appeared to be the product of relatively unstructured dumping (E. Fitzsimons pers. comm.). There are only a few 'working shots' (Plate 12), none showing ceramic or glass vessel fragments *in situ*, and just a few photographs of the garderobe after excavation had ceased. In addition, it is unfortunate that no samples were taken of deposit (496) that might have been suitable not only for palaeo-environmental analysis but also potentially for the examination of any industrial or chemical residues. Equally, it is most regrettable that no analysis was undertaken of the possible residues from the inner surfaces of the ceramic and glass vessels recovered, due to the expense of analysis.

It is nevertheless worth exploring the context of the assemblage in more detail. Although deposit (496) within the garderobe contained 14th century pottery, and glass vessels that were probably

no later in date than the mid-14th century, the upper part of this deposit also produced five sherds of mid-16th to 17th century pottery and two post-medieval iron keys (see Blinkhorn, McParland and Tyson above). The top of deposit (496) produced five sherds of mid-16th to 17th century pottery, and was very similar to deposit (480) that filled Rooms 1 and 2 in Building 7B. This might mean that the whole of context (496) was a dump of material in a secondary post-medieval context, associated with the abandonment and/or demolition of Building 7B during the 17th century, perhaps during the major rebuilding of Peckwater Inn initiated by Dean Fell. Nonetheless, the later material recovered from (496) was apparently only from the uppermost part of the deposit, so it is possible that this deposit only had intrusive later material mixed with it during the disuse or demolition of Building 7B. The three iron keys, the axe head and the nails from this same deposit may also indicate this. Unfortunately, the lack of stratigraphic information and the poor site records do not allow this question to be resolved.

The rather unusual nature of both the ceramic and the glass vessel assemblages has been commented on above by Paul Blinkhorn and Rachel Tyson, and together they form a unique group of mid-14th century objects of this kind from medieval England. Other assemblages of glass distilling vessels excavated in England date from the 15th century and are from monastic sites including St John's Priory, Pontefract, St Leonard's Priory in Stamford and Selborne Priory in Hampshire (Tyson 2000, 168-178). A much more recent 17th to early 18th assemblage of industrial vessels excavated to the rear of the Museum of the History of Science in Oxford included crucibles and ceramic retorts, flasks and bottles (Blinkhorn 2003b).



Figure 76. Part of the ceramic assemblage from garderobe deposit (496) in Trench 7

One of the original excavators (M. Parsons) suggested in an early interim document that the 'domestic' ceramic vessels and even the glass distillation apparatus could have been associated with ecclesiastical and/or higher status cooking activities, and distilling for the production of medicines or even some form of alcoholic 'aqua vitae'. The fact that the ceramic bottles and 'cruets' had vitrified fabrics and outer surfaces, and had clearly been subjected to intense heat, however, indicates something other than normal domestic use. It was also initially considered by

the excavators that the ceramic and glass assemblage might have been dumped after an accidental laboratory fire, but many other ceramic vessels did not display signs of such extreme heating, including most of the bowls and skillets. Any accidental fire capable of vitrifying the fabric as well as the outer surface of some of the ceramic vessels would also surely have melted or deformed the glass vessels. Some of the bowls and skillets did have degraded glaze on their inner surfaces, but little sign of heating on the outer, indicating that they had once held strongly acidic or caustic substances. Off-white and light yellow residues were also present on some of the inner surfaces of these ceramic vessels. Along with the fragments of fired clay from a portable hearth or furnace recovered from deposit (496) in the garderobe, this evidence suggests that the assemblage was used for processes involving heating, and in part at least, distillation.



Figure 77. Some ceramic vessels from garderobe deposit (496) exhibiting vitrification of their outer surfaces

Some idea and visual impressions of the use and settings of these artefacts are provided by later 16th and 17th century illustrations such as Jan van der Straet's *An Alchemist's Laboratory and Distillato* of 1570 and c. 1580 (see Figs. 45 and 51), but also an illustration by Hans Weiditz entitled *An Alchemist* of c. 1520 (Fig. 78), one by Pieter Breughel the Elder from c. 1550 entitled *An Alchemist at Work* (Fig. 79), and woodcut illustrations of metallurgical assaying from Lazarus Ercker's *Metallurgy* of 1574 and his *Treatise of Ores and Assaying* of 1580 (Fig. 80). Further details of some of the artefacts, including different types of portable hearth or furnace, can also be seen in the woodcut illustrations from other books such as *Coelum Philosophorum sen de Secretis naturae Liber* produced by Philipp Ulsted in 1528, *Das Vade mecum* by Caspar Harttung vom Hoff from 1557, and in *De Alchemia* by 'Geber' in 1541, the latter work actually a later Europeanised reprint of an original treatise by the Arab scholar Jabir ibn Haiyan al-tarasusi.



Figure 78. *An Alchemist* by Hans Weiditz, c. 1520



Figure 79. *An Alchemist at Work* by Pieter Breughel the Elder, c. 1550

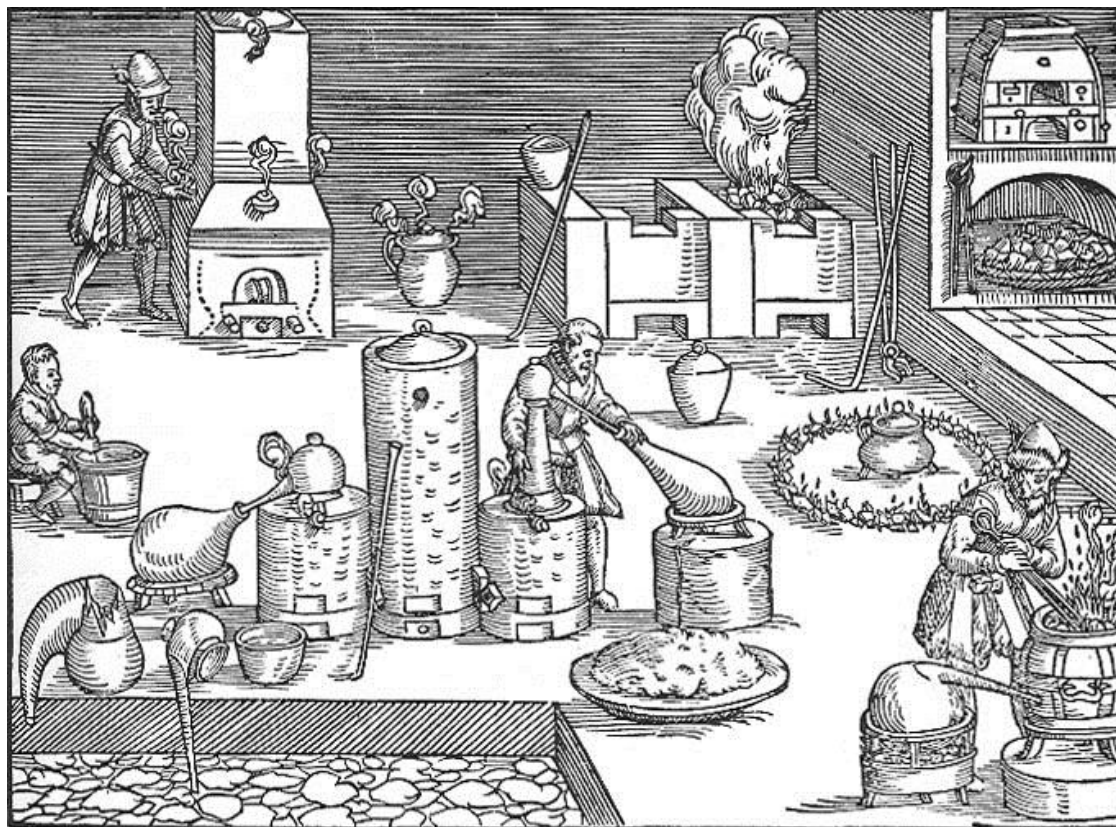


Figure 80. Illustration from Lazarus Ercker's *Treatise of Ores and Assaying*, 1580

In his analysis of the ceramic assemblage, Blinkhorn noted that although a large number of glass vessels associated with distillation were found in garderobe deposit (496), equivalent ceramic alembics, curcubits and bifid-rim vessels or 'distilling-bases' were absent. This might indicate that although distilling was taking place as part of other chemical procedures, distillation itself was not the primary function of the ceramic and glass assemblage as a whole. Fire assay to determine the metal content of samples is one potentially relevant process, but this was generally associated with more specialist metallurgical vessels such as triangular crucibles, bone-ash cupels and scorifiers (Martín-Torres, Rehren and von Osten 2005; Rehren 1996). Vessels such as these were excavated from a 16th century dump deposit beneath the sacristy of a manor house chapel at Oberstockstall, Kirchberg am Wagram, Lower Austria (Martín-Torres, Rehren and von Osten 2005; Soukup and Mayer 1997), in association with alembics, aludels, cucurbits, adopters, receivers and other ceramic and glass vessels, furnace bricks and metal and slag remains. The 17th or 18th century crucibles excavated at the Museum of the History of Science in Oxford were also associated with metallurgical experiments and analyses (Blinkhorn 2003b). None of the more specialist artefacts were present in the Christ Church garderobe assemblage, however, and only one piece of copper-alloy slag was found in deposit (496), in addition to a lump of possible bitumen or a related tarry material. It is therefore more likely that what was being carried out in or near Building 7B was one or more chemical or alchemical processes, perhaps involving calcining, melting and fluxing; but also distillation for the preparation of mineral acids and the purification of volatile substances.

Any attempt to draw a distinction between 'functional' or 'scientific' chemistry and 'non-functional' alchemy is fruitless, however, and merely imposes a modernist post-Enlightenment dichotomy on the evidence. In the medieval and earlier post-medieval periods, alchemy and chemistry were not distinct domains, and were also impossible to separate from metallurgy (Martín-Torres and Rehren 2005, 15). Those undertaking such practices were doing so within an ontological and cosmological world-view rather different to our own.

It is impossible to ascertain the original location of these practices. Although the objects were not necessarily from Building 7B, the large size of the assemblage and the relative completeness of many of the objects suggest that they cannot have been transported very far. At the time of their excavation from the Building 7B garderobe, the vessels and the building were provisionally linked to Ship Hall, to the south of Shitebarne Lane. Salter (Salter 1960, 221, SE119) stated that in 1373 Godstow Abbey granted this property to the monks of Canterbury College, but he thought it was returned to Godstow on completion of the monks' own premises by *c.* 1400, but Pantin (1985, 135-136) says that Ship Hall was back in the hands of the abbess only in 1503, and Canterbury College went on paying rent to the end in *c.* 1540. This putative ecclesiastical context was the reason why the glass and ceramic vessels were initially thought to be associated with alcohol or medicine production, and higher-status cooking. As has been demonstrated, however, Building 7B was north of Shitebarne Lane, and thus cannot have been part of Ship Hall. Instead, it probably formed part of Vine Hall. The known history of Vine Hall has been outlined above, along with the names of those known to be holding it during the 14th century – Isolda de Weston, John de Whitechurch, Roger Compton and the magistrate Nicholas Wykeham who then gave it to New College (Salter 1960, 220). After this it became a grammar school. Although it is tempting to try and link the excavated assemblage to a documented historical individual known for practicing chemistry, alchemy or metallurgy, this is clearly not possible.

The garderobe and deposit (496) were not fully excavated, so some more remains of ceramic and glass vessels have hopefully been preserved *in situ*. Any future archaeological work might permit the sort of detailed scientific analyses this material deserves.

19.8.6 Ceramic tiles

In addition to the medieval ceramic floor tiles recovered during the 2005-2007 investigations at Christ Church, there are two brief mentions of tiles in documents detailing the expenditure and progress of building works on the hall of Wolsey's Cardinal College in 1528-29. A John Norton was paid £6 1s 4d for 2600 paving tiles of yellow and green at 3s 8d the hundred (Salter and Lobel 1954: 228-238), although unfortunately the location of his tilery is unknown. It is not clear what form these tiles took, as these would be somewhat late in date for Penn tiles, but they might have been plain glazed tiles. Earlier accounts for the period 16th January 1525 to 19th December 1527 noted that £244 had been spent on 'sundry purchases' including plumbing materials, tin, glass and paving tiles, the latter presumably ceramic floor tiles.

19.8.7 Metalwork and metalworking

The metalwork assemblage recovered from Christ Church included a post-medieval dagger or rapier chape (SF No. 162), incorporated within the fabric of an early modern brick wall, and the remains of three iron spurs (SF Nos. 41, 42 and 43), two of which at least were rowel types, and one of which (SF No. 41) was from garderobe deposit (496). Rowel spurs were introduced to Europe during the 13th century and were generally in use until the 17th or 18th centuries (Ellis 1991, 58; Jope 1956, 41-42; Ottaway and Rogers 2002, 2956). The chape was not of the highest quality, with rather crudely incised decoration, and the spurs were unfortunately too badly corroded to date closely – several have subsequently disintegrated altogether. A notable assemblage of spurs and horse furniture was excavated from Oxford Castle (Norton 2005, 29), with other examples from All Saints Church (Ellis 2003, 319). The Christ Church examples were certainly not comparable in terms of numbers or quality. Nevertheless, these objects might reflect the presence of potentially higher status individuals within the general area both before the founding of Cardinal College and Christ Church, and after its establishment, although the wearing of spurs was not necessarily restricted to male members of the elite (Ellis 1991, 54).

The only evidence for actual metal working was found in Trench 14, with a small quantity of copper-alloy slag found in layer (902), which was probably late 17th century or later in date.

19.9 Conclusions

The archaeological investigations at Christ Church undertaken by John Moore Heritage Services in 2005-2007 were carried out in less than ideal conditions, and essentially comprised one watching brief over an extremely long but narrow area. Many of the contexts had already been considerably disturbed by earlier services, and many of the structural remains in particular were truncated and fragmented. Nevertheless, there was artefactual evidence recovered for late Saxon occupation in the area, and burials and other traces of the precinct of St Frideswide's Priory. Possible traces of the St Frideswide's civil law school were also detected, along with a hitherto unknown section of footings for a bastion associated with the medieval city wall.

Important evidence was also recovered regarding the structure and layout of medieval buildings and streets pre-dating the foundation of Wolsey's college. Remains of metalled surfaces belonging to St Frideswide's Lane, Shitebarne Lane, Jury Lane and Vine Street/St Edward's Street were recorded, along with traces of the structures fronting or backing onto these thoroughfares. In particular, remnants of large well-built stone structures were identified that may have formed part of Cokewald Hall, Burnell's Inn, Leberd Hall and the inn known as The Pike or The Dolphin. The two large buildings fronting onto Vine Street may have represented Vine Hall and Glasen Hall, whilst a garderobe associated with Vine Hall contained a unique assemblage of 14th century artefacts associated with metallurgical, chemical and/or alchemical experimentation. This is one of the earliest and most important groups of such objects ever excavated in Britain. This garderobe feature also contained fragments of some extremely rare, imported high-status glass tableware vessels. Additional artefacts recovered from a variety of contexts including writing styli, book clasps and perhaps even candle holders all reflected academic activities in the wider area.

In addition to the medieval remains, previously unknown evidence was also recorded for the construction of Tom Quadrangle, the reconstruction of Peckwater Inn and the building of Peckwater Quad. The most significant of these remains were probably the massive semi-circular footings identified near Fell Tower that may have been an important component of Wolsey's planned Great Chapel.

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PLATES



Plate 1. Skeletons SK 287 and SK 291, Trench 5



Plate 2. Unknown skeleton, exposed but not excavated, Trench 5



Plate 3. Stone-lined garderobe 339, Trench 5



Plate 4. Pitched stone arched footings 03, Trench 1, looking west

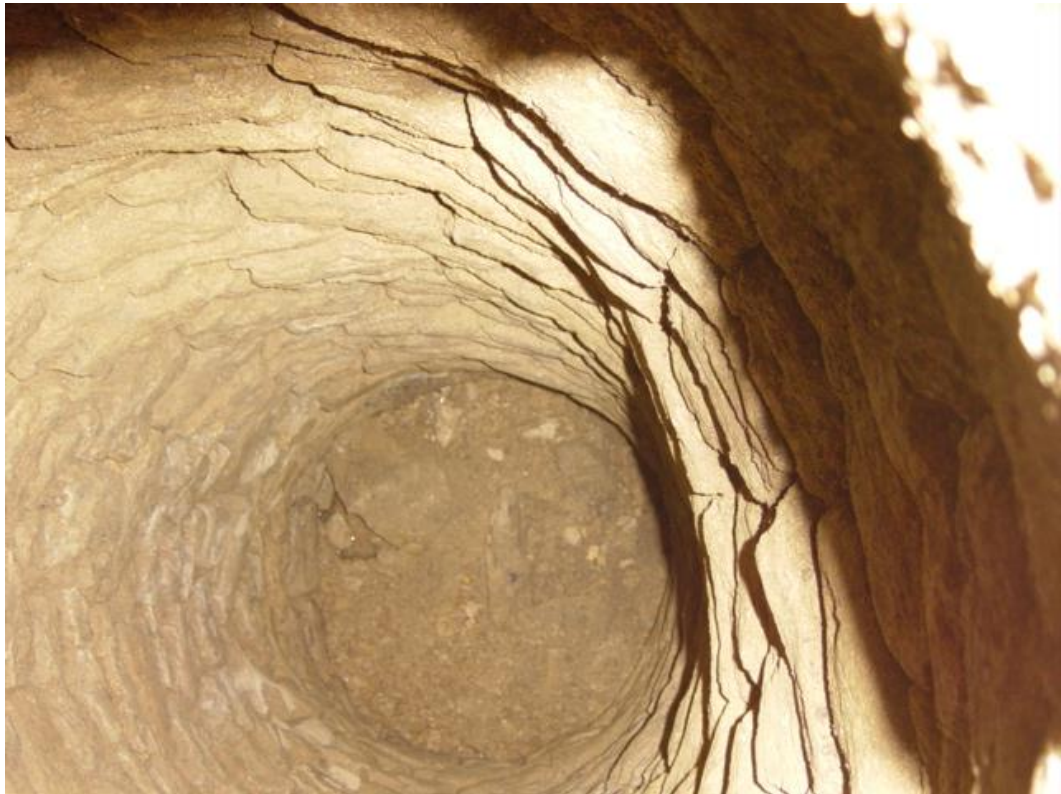


Plate 5. The interior of well 136, Trench 3



Plate 6. Cobbled surface 200, Trench 4, probably remains of St Frideswide's Lane, looking west



Plate 7. Building 5A with wall 326 and surface (327), Trench 5, looking south

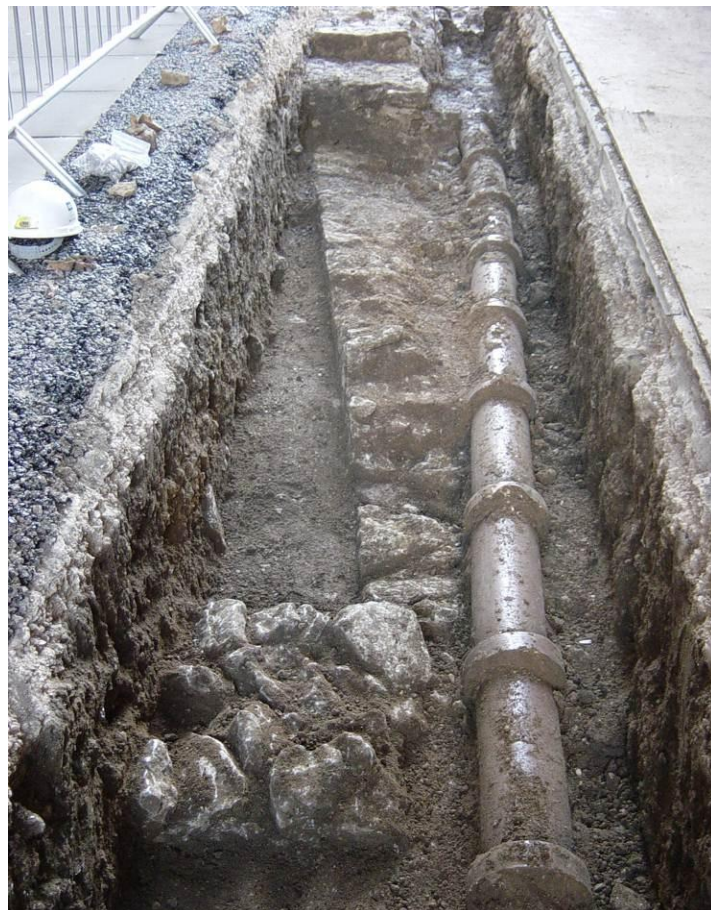


Plate 8. Building 6A with wall 400 and 402B, Trench 6, looking south



Plate 9. Cobbled surface (508) and wall 511 at the junction of Trenches 7 and 8, probably part of Shitebarne Lane and/or Vine Hall Street, looking north



Plate 10. Well 597 with brick culvert and limestone slab capping, Trench 8



Plate 11. Surviving plaster on inner face of wall 481/490/492, Building 7B, Trench 7



Plate 12. The junction of walls 489, 490 and 491 forming a stone-lined garderobe, with deposit (496) under excavation, Building 7B, Trench 7



Plate 13. Wall 462 in Building 7A, Trench 7, with blocked doorway or window showing two steps on the northern side, looking south



Plate 14. Buttress 714, Trench 10, probably part of the porch entrance into the chapel of Canterbury College



Plate 15. Limestone wall 753 (centre), brick wall 751 (left) and cinder and ash dump (750) (upper left), Trench 20

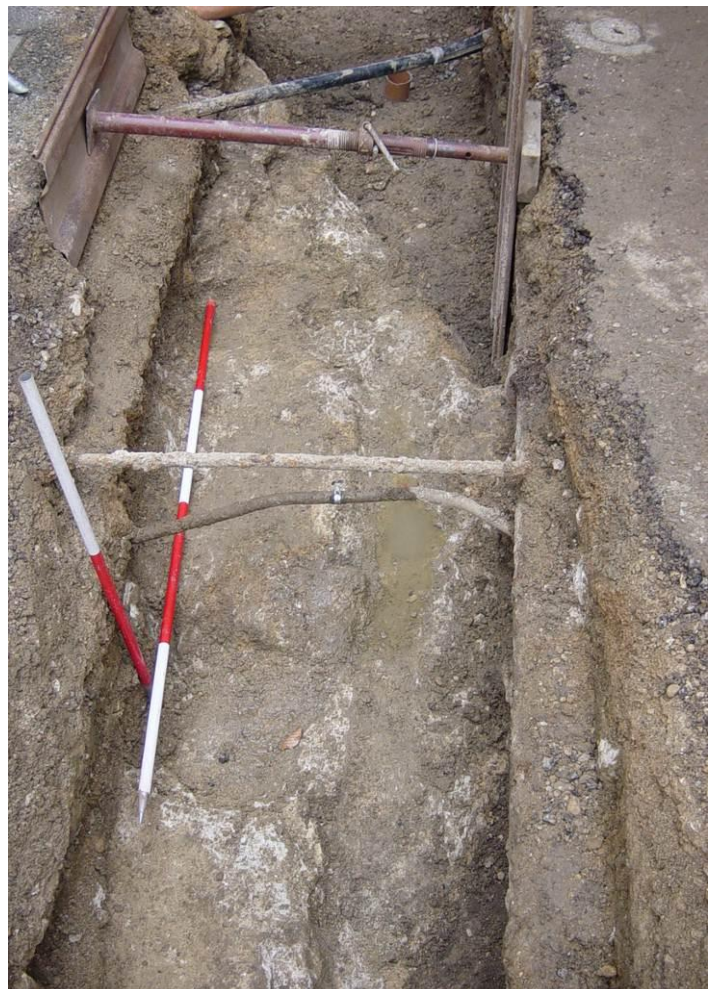
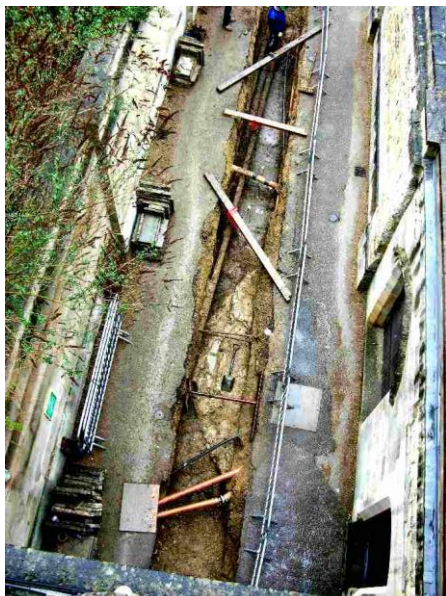


Plate 16. Semi-circular footings 406, Trench 6, looking south (main) or north (inset)



Plate 17. Brick barrel-vaulted drain 816, Trench 22A



Plate 18. The sloping earlier footings of the northern wall of the 'Wood Shed', Trench 17, possibly part of a bastion on the medieval city wall



Plate 19. Machining and recording underway at Trench 7, Peckwater Quad



Plate 20. Work in progress at Fell Tower