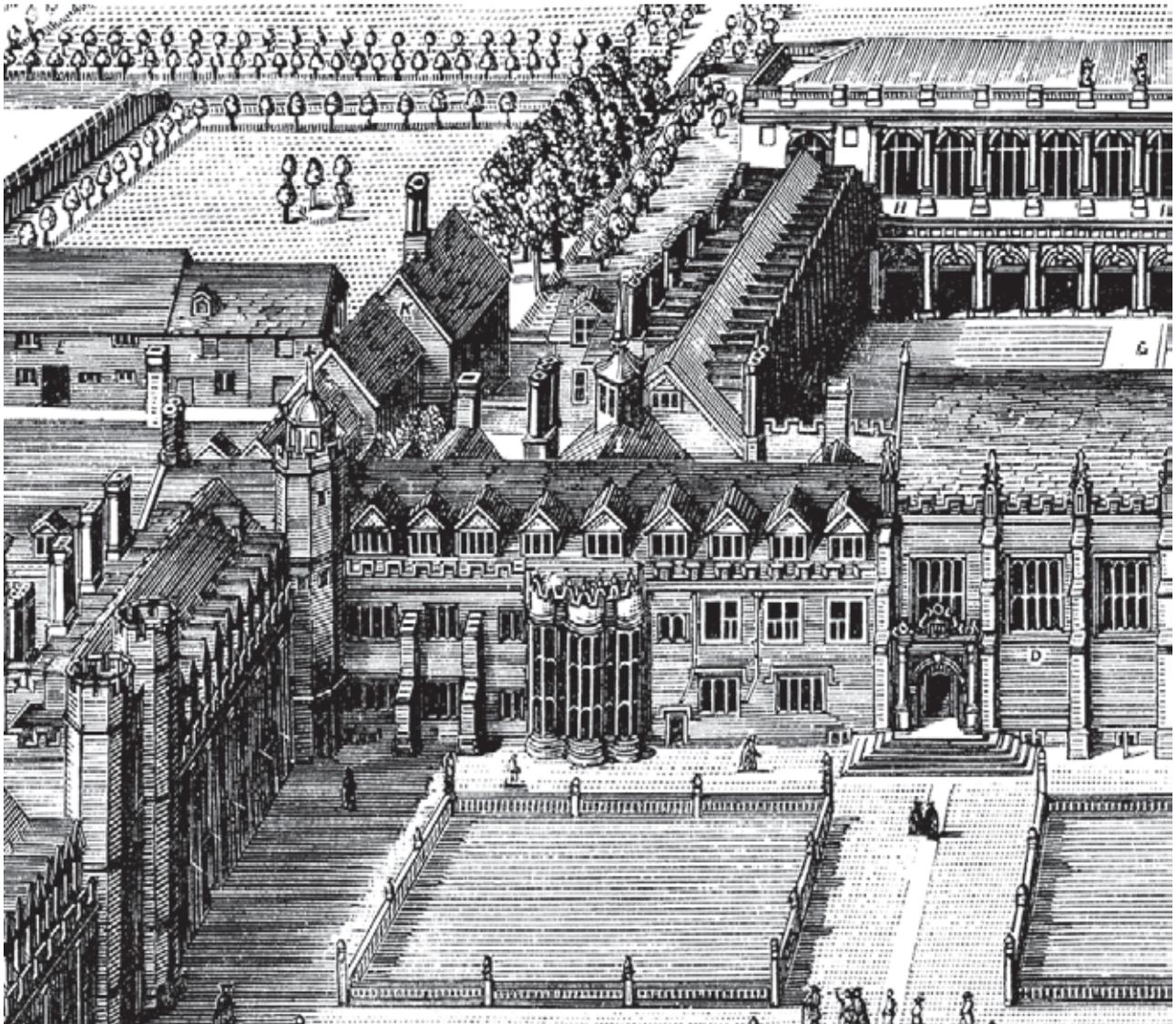


Trinity College Kitchens, Cambridge

An Archaeological Excavation and Watching Brief



Richard Newman

CAMBRIDGE ARCHAEOLOGICAL UNIT
UNIVERSITY OF CAMBRIDGE



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Summary

Archaeological investigations were recently undertaken in two discrete areas located within the grounds of Trinity College, Cambridge, in advance of the redevelopment of the College's kitchen facilities. Following an initial test pit and borehole evaluation, a total of four trenches were excavated at the site; in addition, two further phases of watching brief were also undertaken. The first, and most intensively excavated, of the two areas was situated within the present kitchen cellar, beneath the southern end of the Great Hall. Here, four phases of activity were identified in three distinct trenches. The first of these phases consisted of a series of pits of 12th to 16th century date. Subsequently, the majority of these features were truncated by the erection of two substantial structures, both of which contained undercrofts. These buildings were associated with the newly established Trinity College, which had been founded at the site by Henry VIII in 1546. In the first instance, in c. 1546-47, the hall of the preceding College of Michaelhouse (founded 1324) was demolished and rebuilt on an enlarged scale. The new hall extended somewhat further to the north than its predecessor, into the present area of investigation, and also incorporated a substantial quantity of moulded stone derived from an imposing masonry structure within its foundations. This latter building, which had probably contained a fine vaulted undercroft, decorative arcading and an elaborate pinnacle, may potentially have been associated with the preceding institution. To the north of the replacement hall an additional range containing a kitchen and buttery was constructed in 1554-55. This also contained an undercroft, which – in contrast to that of the new hall, which was relatively sterile and had incised decoration on its walls – had been extensively used for a range of culinary-related activities and contained a well-built stone sump. The third phase of activity, which occurred in 1603-04, consisted of the demolition of the two preceding structures. These were then replaced during phase four by the College's extant Great Hall, which was completed in 1605.

The second area of investigation was situated around 70m to the southwest of the first, inside the southeastern corner of the southern range of New Court. Here, a single trench was excavated in advance of the construction of an electrical switchroom. The earliest activity to be identified in this location consisted of a sub-soil deposit, containing Roman pottery, which was then overlain by a series of alluvial layers. Anthropogenic activity subsequently appears to have resumed at some time during the 11th/12th centuries, when a fenceline was erected and a number of pits were inserted. Then, in the early 13th century, three closely adjacent timber buildings were constructed. These structures, which may well have been associated with commercial activity conducted at nearby Flaxhythe, each went through at least two phases of development. In the early 14th century, however, all three buildings were demolished and the area was transformed into a long-lived garden. This event was most probably associated with the establishment of two hostels – Garret Hostel and Ovyng's Inn – at the site in c. 1317-29. The area remained in use as a garden until a stable block was constructed in the late 17th century. Then, in 1823, the stables were demolished in order to make way for the construction of New Court.

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Introduction

This report details the results of a series of investigations that were undertaken by the Cambridge Archaeological Unit (CAU) at Trinity College, Cambridge, between the summers of 2009 and 2010. The site, which is centred on TL 4469 5861, is situated in the historic core of the town, close by the river Cam (see Figure 1). In the first instance, an evaluation consisting of five hand-dug test pits was undertaken in the southeastern corner of the lawn of the College's Great Court on the 27th of May 2009. Shortly afterwards, on the 29th of May, three boreholes were also inserted in the area of Great Court in order to test potential 'soft spots' on the proposed route of a mobile crane. The location of these works has been defined as Area 1 (see Figure 2). Subsequently, archaeological excavations were conducted at three further discrete locations at the site between the 3rd of November and the 11th of December 2009. Two of these (Areas 2 and 3) were situated within the present kitchen basement, immediately beneath the southern end of the Great Hall. They were irregular in form, measuring a maximum of 8.87m by 3.20m and 7.73m by 2.40m in extent – and covering 24.1m² and 16.5m² in area – respectively. The other area (Area 4), in contrast, was located around 70m to the southwest. Situated in the southeastern corner of the southern range of New Court, immediately adjacent to Garrett Hostel Lane, Area 4 measured 8.96m by 4.24m in extent and covered 38m² in area. A further area (Area 5) was later excavated in close proximity to Area 2 within the kitchen cellars on the 17th of February 2010. This measured 3.28m by 1.88m in extent, and covered 5.6m² in area. Finally, two additional phases of watching brief were also undertaken. The first of these (Area 6) was conducted on the 12th of November 2009, and the second (Area 7) between the 15th of April and the 6th of May 2010.

The project followed the specifications issued by the CAU (Dickens 2009a; Dickens 2009b) and was monitored by Dan McConnell, Development Control Archaeologist at Cambridgeshire Historic Environment Team (formerly CAPCA). The work was commissioned by Trinity College, Cambridge, in advance of redevelopment of their kitchen facilities.

Landscape and Geology

The buildings of Trinity College are primarily arranged in a series of three adjoining quadrangles – comprising, in date order, Great Court, Nevile's Court and New Court – all of which are situated upon the former northwest floodplain of the river Cam (British Geological Survey, sheet 188). Although the topography of this area was originally quite uneven – the underlying second terrace river gravels slope markedly to the west, for example, dropping from 7.65m OD at the College Gateway to 4.45m OD close to the river – the present external ground level at the site is relatively consistent, lying on average at *c.* 8.3m OD. This indicates that potentially quite substantial made-ground deposits have been introduced in certain areas, particularly close by the river, and that the original topography of this latter zone – including the very course of the river itself – may well have been modified. It is also significant to note that anaerobic conditions, leading to a high degree of organic preservation, have previously been encountered during a number of excavations undertaken in this vicinity, particularly those situated in close proximity to the Cam (*e.g.* Alexander 1997; Cessford *in prep.* a).

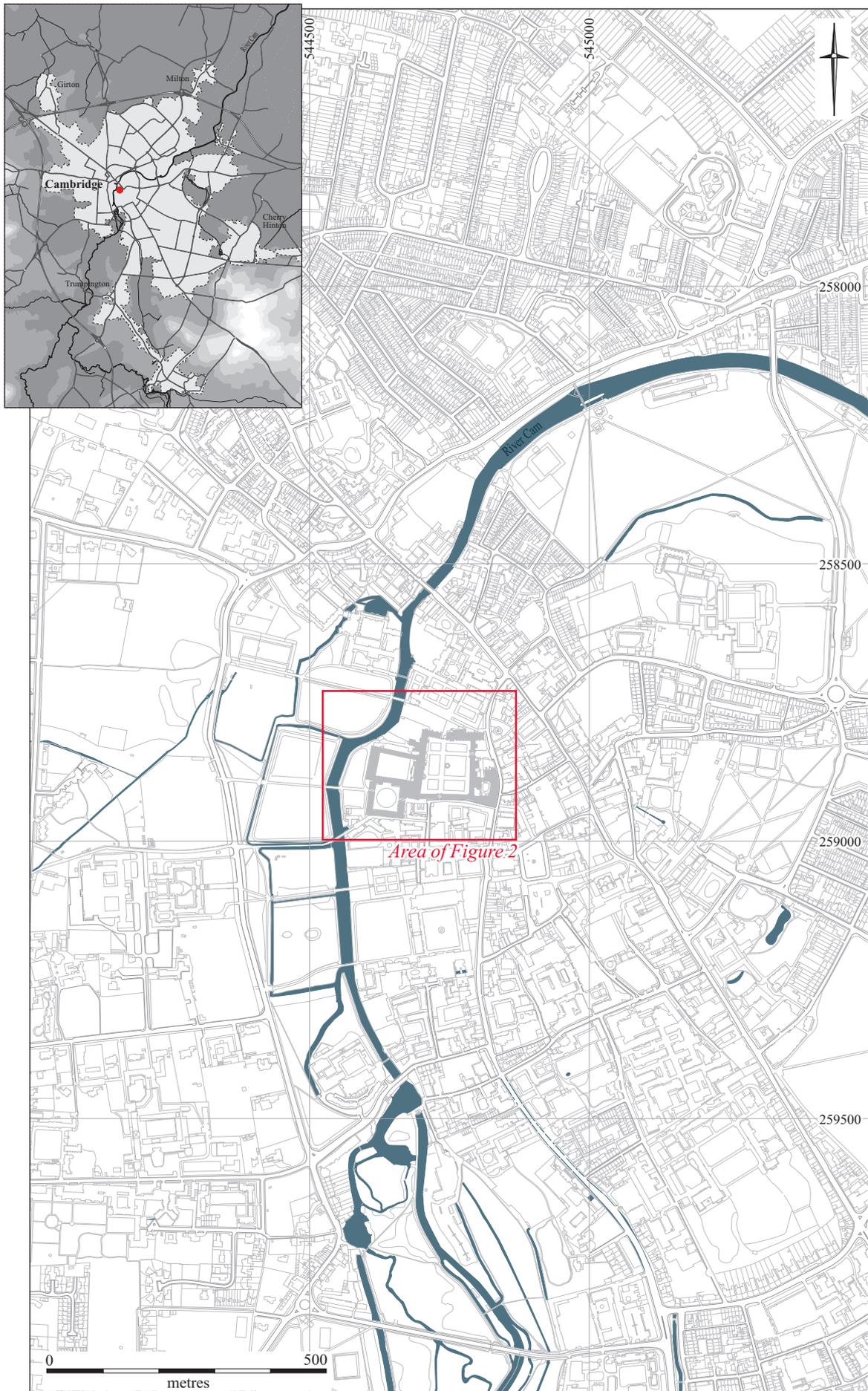


Figure 1. Site location.

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Methodology

During the course of the excavations, modern deposits and overburden – including layers of concrete and concrete-covered service ducts – were broken out and removed by the principal contractor. All archaeological features were then excavated by hand and recorded using the CAU-modified version of the MoLAS single context recording system (Spence 1994). Base plans were drawn at a scale of 1:20, whilst sections were drawn at a scale of 1:10. The photographic archive for this site consists of a series of digital images. Within the text, context numbers are indicated by square brackets (*e.g.* [001]) and feature numbers are denoted by the prefix F. (*e.g.* F.100); all stratified contexts have been assigned feature numbers, with the exception of those seen only during phases of watching brief.

Report Structure

The main body of this report details the results recovered from the four excavated areas (Areas 2 to 5). This discussion has been sub-divided into two parts – the first focusing upon Areas 2, 3 and 5, the second upon Area 4 – their separation having been determined by the wide spatial distribution of the respective areas. Where relevant, assessment reports of the associated material culture, along with those of the economic and environmental data, are presented as discrete sections within each part. The results of the evaluation and watching briefs (undertaken in Areas 1, 6 and 7) are summarised where appropriate in the main text, and presented in detail in Appendix 1. A table of concordance, providing more detailed information on each excavated feature, is presented in Appendix 2.

Historical and Archaeological Background

Prior to the commencement of medieval reclamation works in this vicinity, the present area of investigation comprised part of the alluvial floodplain of the river Cam. Environmental evidence recovered during riverside excavations conducted at the nearby Trinity Hall and St John's College Chapel Court and Master's Garden sites (Alexander 1997; Dickens 1996) – plus, a little further to the north, at 24 Thompson's Lane (Newman 2008a) – has allowed a provisional model of the environmental history of the area to be constructed (Newman & Cessford *in prep.*). From this it seems probable that during the Neolithic period, and continuing throughout later prehistory, the Cam was a broad, slow flowing river that occupied a wide marshy floodplain. Subsequently, however, during the 2nd to 4th centuries AD, the evidence suggests that the area became markedly drier (whether due to anthropogenic intervention, or simply via natural environmental change, is not clear). At this time, a limited degree of activity is known to have taken place in the surrounding area. Perhaps most pertinently, an antiquarian note exists of 'Roman pits' being encountered "beneath Trinity College, close to Garret Hostel Lane" (Evans in Alexander & Pullinger 1999, 259). This discovery was most probably made during the construction of the College's New Court in the early 19th century. In addition, a little way to the north, a number of late Roman quarry pits – along with an associated metallised surface – were excavated at the Chapel Court and Master's Garden of St. John's College in 1992 (Dickens 1996, 4-8) whilst, a short distance to the south, two possible Roman quarry pits were identified during excavations conducted at the Bateman Building, Gonville & Caius College, in 1995 (Alexander 1995). This evidence indicates that a low level of 'background' activity of this date may well have taken place at the site.

During the succeeding Early-Middle Saxon period, the area reverted back to being an active floodplain with evidence of regular seasonal inundation. At this time the principal focus of settlement was centred further to the north, in the Castle Hill area (see Cessford with Dickens 2005a; Cessford *et al.* 2007), and very little activity appears to have taken place to the south of the river. Indeed, right up until the mid 10th century, the town remained only a small “economically viable backwater” (Hines 1999, 136). Following this date, however, it emerged as a significant urban centre. By the late 10th century a mint had been established (Lobel 1975, 3) and Cambridge was being linked to a group of important trading centres including Norwich, Thetford and Ipswich (Fairweather 2005), thereby emphasising the central role played by river trade in its rapid economic growth. This prosperity led to a period of rapid expansion, beginning in the 11th century, during which a series of churches were established along the length of what was to become the medieval High Street – now Trinity Street/King’s Parade (Cam 1959, 123-32; Addyman & Biddle 1965, 94-6). Work also began on draining the adjoining marshland beside the river, where a series of hythes, barge-pulls and quays were created. Thus, by the beginning of the 13th century, Cambridge had emerged as the leading *entrepôt* in the county, through which goods and services were disseminated to many of the surrounding regional towns (Cam 1934, 43; Leader 1988, 11). Within the present area of investigation at this time a clear pattern of bustling mercantile activity had been established, and a number of hythes and wealthy merchant’s houses were present (see further below).

This pattern was to alter dramatically during the early 14th century. For, in 1324, the College of Michaelhouse was founded at the site by Hervey de Stanton, the Chancellor of the Exchequer and Chief Justice of the King’s Bench to Edward II (Willis & Clark 1886 II, 389-402; RCHM(E) 1959 I, 209; see also Stamp 1924; Brand 2004; Loewe 2010). Michaelhouse comprised only the second College to be founded in Cambridge, following the establishment of Peterhouse in 1280, and was notably the first to be located in what was soon to emerge as the principal ‘University Quarter’ of the town (see further Leader 1988; Leedham-Green 1996). It was situated in close proximity to King’s Hall, a training school for royal clerks and bureaucrats that had been founded by Edward II in 1317 and which was later itself raised to the status of a College by Edward III in 1337 (RCHM(E) 1959 I, 209; Cobban 1969). Indeed, throughout the 14th century, the area passed increasing from the possession of ‘town’ into ‘gown’, as both Michaelhouse and King’s Hall gradually expanded to occupy many of the surrounding properties, and a number of satellite hostels for fee-paying students were also established. The process of expansion culminated in 1546 with the establishment of Trinity College by King Henry VIII. Intended to be significantly larger than its predecessors, Trinity was designed to accommodate a Master and around one hundred Fellows and Scholars (RCHM(E) 1959 I, 209). The new College took possession of its present site in April or May 1546, at which time it was occupied by three halls – those of Michaelhouse, King’s Hall, and Physick Hostel – plus a chapel – belonging to King’s Hall – and the premises of six subordinate hostels – comprising Garret Hostel, Ovyng’s Inn, St Gregory’s Hostel, St Margaret’s Hostel, St Katharine’s Hostel and Tyled or Tyler’s Hostel – as well as a number of private properties (Willis & Clark 1886 II, 389; RCHM(E) 1959 I, 209-10). The majority of these pre-existing buildings were demolished and a piecemeal construction process began; Great Court and Nevile’s Court were completed during the 17th century, New Court and Whewell’s Court during the 19th century and Angel Court, the Wolfson Building and Blue Boar Court in the 20th century (see further Trevelyan 1943).

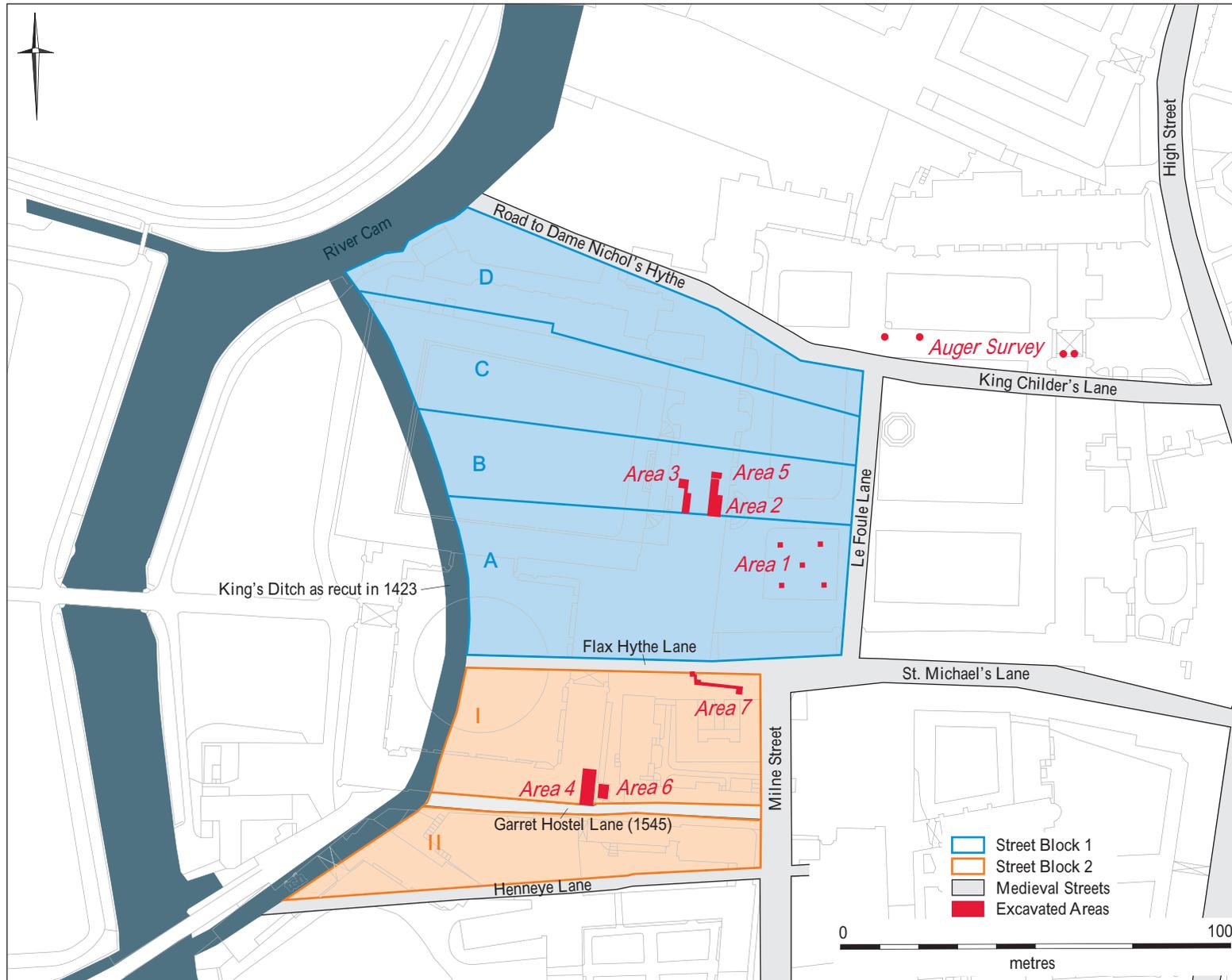
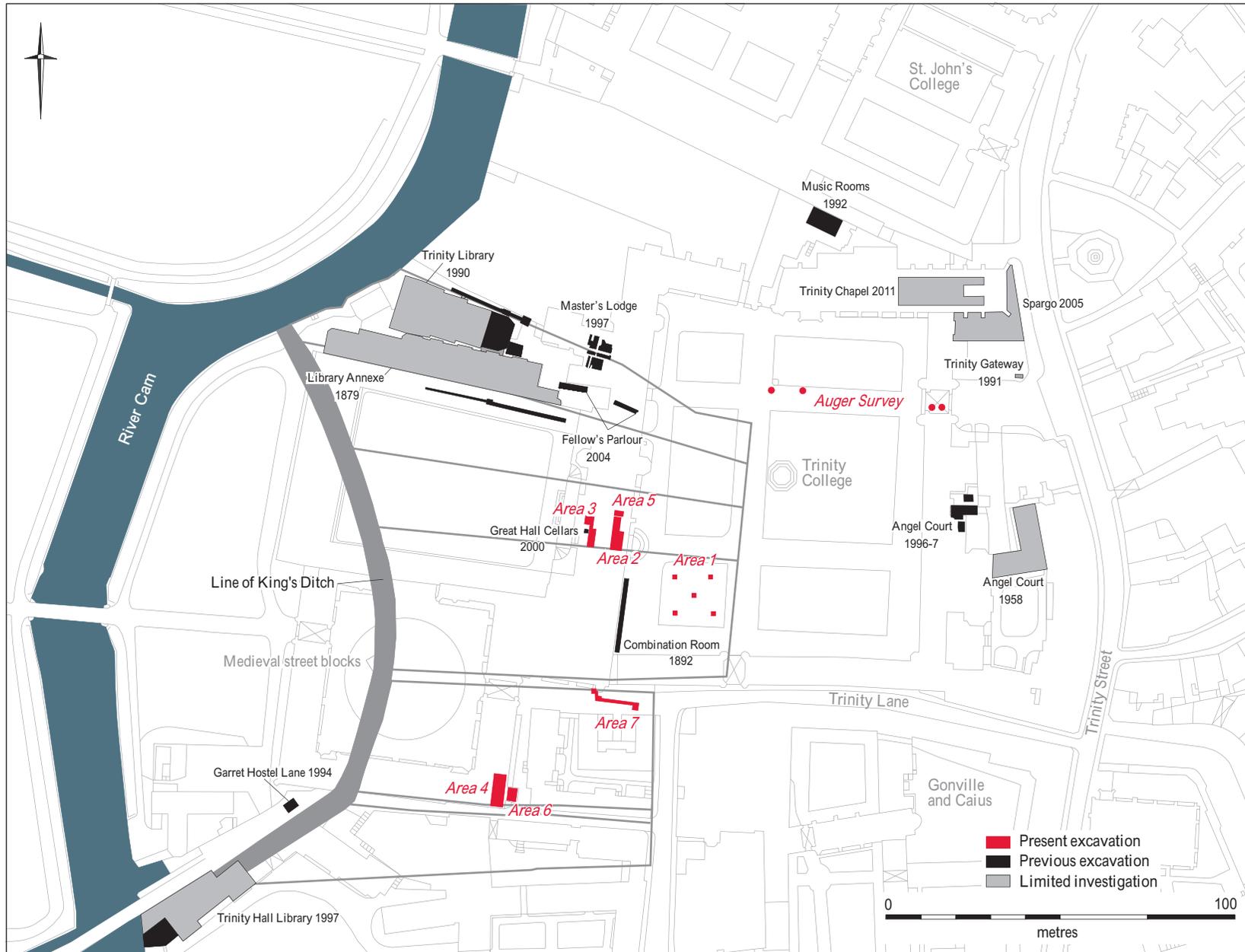


Figure 2. Investigated medieval street blocks, with areas of excavation.

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Figure 3. Location of present excavations and previous archaeological investigations at Trinity College.

Documentary and Archaeological Sources

Due to the wide spatial distribution of the recent investigations, varying degrees of work were conducted within two separate and discrete medieval ‘street blocks’ – or groups of plots bounded by street lines (Conzen 1960, 5) – during the course of this project (see Figure 2). The largest, and most thoroughly explored, of the two – which was originally defined by King’s Childer’s Lane to the north, Foule Lane to the east, Flax Hythe Lane to the south and a branch of the river Cam running to the east of Garret Hostel Green to the west – was divided into four main rectangular properties during the medieval period, each of which fronted onto Foul Lane. All four were acquired piecemeal by Michaelhouse during the 14th century, with the result that almost the entire block had been transferred from domestic to collegiate use by 1353. For ease of reference, the properties will be referred to as **A** to **D**. In summary, they comprised:

- A.** The message of Roger Buttetourte, which became the original core of Michaelhouse in 1324 (Willis & Clark 1886 II, 394-5). This property, situated at the southern end of the block, was the largest of the four; indeed, as it was roughly twice the width of the others, it almost certainly represents the amalgamation of two earlier properties. Its owners since 1294, the brothers Roger and Richard Buttetourte, had obtained a licence to enclose the adjacent lane leading to Flaxhithe in 1306 in order to further enlarge their property. Roger – the son of Guido Buttetourte, a *nobilis vir* (man of noble birth) – sold the message to Hervey de Stanton on the 16th of March 1324, and he in turn conveyed it to his College on the 26th of September that year. At the time of its purchase Roger described it as ‘*mesagium meum cum edificis, gardinis, kaya, et redditibus*’ (literally: my message with its [grand] building, its garden, its quay and its rental income).
- B.** The message of Adam de Trumpington, former rector of St. Michael’s Church, which was sold to Michaelhouse on the 11th of November 1326 (Willis & Clark 1886 II, 395).
- C.** The message of Adam de Armyne, archdeacon of Norfolk, which was sold to Michaelhouse on the 28th of January 1353. This house had previously belonged to Simon Goodman, a burgess of Cambridge, and was inherited by his daughters Matilda and Johanna, along with his son in law John Naysng (also a burgess of Cambridge), who sold it to Adam de Armyne in 1331 (Willis & Clark 1886 II, 396).
- D.** The principal message at the northern end of the block comprised Crouched Halle or Corner Hostel, which was sold to Michaelhouse by John de Illegh on the 28th of September 1337. John had purchased it from Cristina, daughter of Walter de Fulbourne, in 1336 (Willis & Clark 1886 II, 395). Crouched Halle was eventually demolished and Saint Gregory’s Hostel (also known as Mawmarkynd Hostel or Newmarket Hostel) constructed on the site. This remained standing until the Master’s Lodge and Gallery of Trinity College were constructed during the mid 16th century. At the south end of Crouched Halle was the ‘King’s Ditch’ (1341). Beyond this was Le Millestones, a patch of waste land measuring 99 feet west to east (30m) and 82 feet 6 inches north to south (25m), which was leased by Michaelhouse from the Corporation of Cambridge in 1434 for 100 years and finally purchased by them in 1542 (Willis & Clark 1886 II, 397-98).

In terms of the locations of archaeological investigations conducted within this street block, the test pits excavated in Area 1 were situated at the eastern end of **Property A**, whilst Areas 2, 3 and 5 were situated in **Property B**. The latter three areas, which were the most intensively studied, form the focus of Section I of the excavation results chapter, below. In addition to the present work, a number of excavations have

previously been conducted in **Property D** (see further below), although no work has yet been undertaken in **Property C**. Of all the earlier work that has taken place in the area, perhaps of greatest relevance to the present report is a small trench, measuring 1.8m by 1.5m in extent, which was excavated within the *Great Hall Cellars* during July and August 2000. This was situated within **Property B**, immediately adjacent to the present location of Area 3 (see Figure 3). Within this trench, natural gravels overlying Gault clay were encountered at 6.0m OD. Above these deposits lay the truncated remnant of a 13th century pit, which appeared to have been sealed by a series of layers of ‘garden soil’ and ‘dumped material’ (Hall 2000, 3-5). In retrospect, however, these latter deposits seem most likely to have comprised the fills of a series of additional pits – probably at least three in number – each of which contained 15th century pottery. The pits were in turn sealed by a demolition deposit composed of rubble and hardcore, which was then itself truncated by the foundation of the College’s extant Great Hall (*ibid.*). As this building is known to have been constructed in 1604-05 (Willis & Clark 1886 II, 490), it provides a secure *terminus ante quem* for the preceding sequence.

Further to the north, the most significant excavation to be undertaken within **Property D** took place at the *Trinity Library Bookstore* site in October and November 1990 (see Figure 3). Activity first began in this location during the 13th century, when a channel or barge-pull was created; this measured 2.5m wide by 0.7m deep and connected the site to the nearby river (Cessford *in prep.* a). A number of timber structures may also have been present beside the channel, although these had been heavily truncated by later activity. Subsequently, during the early 14th century, the channel went out of use and was deliberately backfilled; a number of clay-lined tanks were inserted into its former course. In 1327, these tanks were themselves overlain by a lead conduit pipe resting on a wooden base, which was introduced in order to supply water to the nearby Franciscan Friary on Sidney Street. The pipe was sealed in turn during the mid to late 14th century beneath a substantial masonry structure, which most probably comprised a warehouse in the possession of Michaelhouse. Then, during the 15th century, this building was demolished and a major stone-built boundary wall constructed. Finally, during the mid 16th century – when Trinity College took possession of the area – this wall was itself demolished and the area transformed into a long-lived garden containing a number of cisterns or soakaways. The site was rendered particularly important because of the high degree of environmental preservation that was encountered during its excavation. Significant discoveries included a large leather assemblage, a number of preserved wooden artefacts and a group of worked bone tuning pegs (*ibid.*).

A further excavation was undertaken nearby at the *Trinity Master’s Lodge* site during the summer of 1997 (see Figure 3). Here, within four small adjoining basement rooms, a series of shallow linear features were uncovered, each aligned west-northwest to east-southeast. These linears apparently comprised wheel-ruts that had formed in the surface of a gravel laneway. The lane was some 9m wide and had a shallow 2m wide ditch to the north of it; a second, smaller, 1.1m wide ditch was also situated on its southern side (Alexander 1998, 5-6). This feature therefore appears to have comprised the “road to Dame Nichol’s Hythe” that is known from contemporary documentary sources to have formed the northern boundary of **Property D**, and which was most probably established at some time during the 12th century. During the 13th century the ‘road’ continued to be well maintained; the roadside ditches were cleared out and the gravel surface was patched (*ibid.*, 8). Unfortunately, however,

later cellaring had almost entirely removed any post-13th century deposits, with the exception of the 14th century lead conduit pipe and a series of substantial clunch-and-mortar foundations of 16th century date. The latter most probably correspond to the initial construction of the overlying Master's Lodge, which was built in 1550-54 (Willis & Clark 1886 II, 468-69). In addition, a watching brief was also conducted at the *Fellow's Parlour* site – located only a short distance to the south of the Masters Lodge, again within **Property D** – during March and April 2004 (see Figure 3). At this time two trenches, measuring 6.5m by 1.2m and 8.0m by 1.2m in extent respectively, were excavated by machine (Webb 2004). Although these proved to be too unsafe to enter, they did demonstrate that a sequence of deposits at least 1.9m deep survived in this area.

Finally, it is notable that in 1892 the antiquarian William White – who was then the sub-librarian of Trinity College – made a series of observations during the construction of a library annexe attached to the north cloister walk of Nevile's Court (White 1894). This structure is also situated within **Property D**. Amongst the various discoveries that White recorded were the remnants of a “wooden platform laid upon piles”, which he interpreted as “an old landing stage belonging to one of the hythes” (*ibid.*, 294-95). A few yards from this he also observed “a flight of stone steps”, as well as “a room paved with red bricks” the floor of which lay at a depth of 12 feet, or *c.* 3.65m, below the ground surface (*ibid.*, 296-97). White interpreted the latter structure as “the site of some early mansion purchased to increase the size of Michaelhouse” (*ibid.*, 297) but, given his description, it appears much more likely to represent the remains of a post-medieval cellar.

The second medieval street block within which investigations were conducted as part of this project lay immediately to the south of that previously described above. It was originally defined by Flax Hythe Lane to the north, Milne Street (now Trinity Hall Lane) to the east, a branch of the river Cam running to the east of Garret Hostel Green to the west and Henneye Lane to the south. During the medieval period, this street block contained two principal properties (these are referred to as **I** and **II**, below). In 1545, the area was also subdivided by the introduction of Garret Hostel Lane (Willis & Clark 1886 I, 209). At the beginning of the 14th century, **Property I** was occupied by a large messuage, a landing stage and four or five riverside buildings. By 1329, however, this area had been cleared and two *hospicia*, or hostels (comprising St. Gerard's or Garret Hostel and Ovyng's Inn) had been founded at the site; in the same year, these were transferred into the ownership of Michaelhouse. **Property II**, in contrast, consisted of a long-lived garden called Hennably. This was also conveyed to Michaelhouse, in 1448, and was subsequently purchased by Trinity Hall in 1545.

- I. The earliest recorded owner of the principal property in this block was one Robert de Orford, parson of the church of Cottenham (Willis & Clark 1886 II, 402). In 1310, his messuage was purchased by William de Estdene, parson of the church at Leverington, and his nephew John de Ovyng. The remainder of the property was occupied by a landing stage known as Flaxhythe, which was situated in its southwest corner, and four or five riverside buildings with gardens, some of which were occupied by fishermen (*ibid.*, 402-3). By 1317, however, John de Ovyng had purchased all of the above and was in full possession of the entire property. Following de Ovyng's death, in 1329 his heirs sold the property to John de Illegh, who in turn sold it to Michaelhouse on the 20th of October that year. At this time it was recorded as being occupied by two student hostels, Garret Hostel and Ovyng's Inn (*ibid.*). These appear to have lain side-by-side, with the latter – an inn for law students – directly adjoining

the buildings of Michaelhouse. The former appears to have been the larger and more prestigious of the pair, however, and the land behind it stretching down to the King's Ditch seems to have comprised its garden. No land was apparently attached to Ovyng's Inn (*ibid.*, 403-4). By 1662 Garret Hostel was ruinous, and was pulled down. Money was donated for a new hostel by Dr John Hackett, Bishop of Lichfield and Coventry, in 1669, and the building was completed in 1670 (RCHM(E) 1959, 241-42). This structure, which is known as 'Bishop's Hostel', is still standing at the site. Much of the remainder of the property is now sealed beneath Trinity College's New Court, which was constructed in 1823-25 (Willis & Clark 1886 II, 651-60).

- II. The earliest recorded owners of the garden called Hennably were the Prior and Convent of Anglesey (founded *c.* 1212; *ibid.*, 404). Between 1316 and 1338, they leased the property to John de Cambridge and his family and in 1447 they sold it to King Henry VI. On the 26th of July 1488, the latter conveyed the property – “which parcel abuts at one head towards the east on *mylnestrete* and at the other head towards the west on the King's Ditch” to Michaelhouse (*ibid.*). On the 16th of April 1545, the garden was purchased in turn by Trinity Hall. At this time, Henneye Lane was decommissioned and a new road, Garret Hostel Lane, was established along the property's northern edge. The remainder of the garden was then converted into Trinity Hall's Fellow's Garden, in which use it remains to this day (*ibid.* I, 213).

Archaeologically, Areas 4, 6 and 7 were all located within **Property I**; the work conducted in Area 4 forms the focus of Section II of the excavation results chapter, below. Although no previous excavations have been undertaken within this street block, two nearby investigations – those conducted in *Garret Hostel Lane* (Evans 1994) and at *Trinity Hall Library* (Alexander 1997) – are discussed further in the relevant chapter. In addition, four sites situated towards the eastern boundary of Trinity College – and thus within a third, otherwise uninvestigated street block – have also been the subject of archaeological investigation (see Figure 3). The sites in question comprise *Trinity Gateway* (Evans 1991), *Angel Court* (Addyman & Biddle 1965; Regan 1996; Regan 1997), the *College Music Rooms* (Miller 1992) and *Trinity College Chapel* (Newman *in prep.*). Unfortunately, however, all of these sites were excavated on a very limited scale and none yielded results that are pertinent to the present discussion. Finally, elsewhere within the College a number of soil cores have been analysed from the area of Isaac Newton's former garden (Spargo 2005); this work is again of limited relevance to the present investigations.

Excavation Results

The following chapter has been subdivided into two sections, each detailing the results recovered from excavations conducted within one of the two medieval street blocks outlined above.

Section I: Areas 2, 3 and 5

The most extensive, and also perhaps the most significant, of the recent investigations were conducted within the northernmost street block (see Figure 4). Due to extensive modern truncation, however, the three principal areas of excavation in this location – Areas 2, 3 and 5 – essentially represented 'islands' of stratified archaeology, between which few deposits appear to have survived. Nevertheless, within each individual island the degree of preservation encountered was relatively high, and a sequence consisting of four phases of activity – which were dominated in Phase 2 by the remains of two substantial 16th century structures – was revealed.

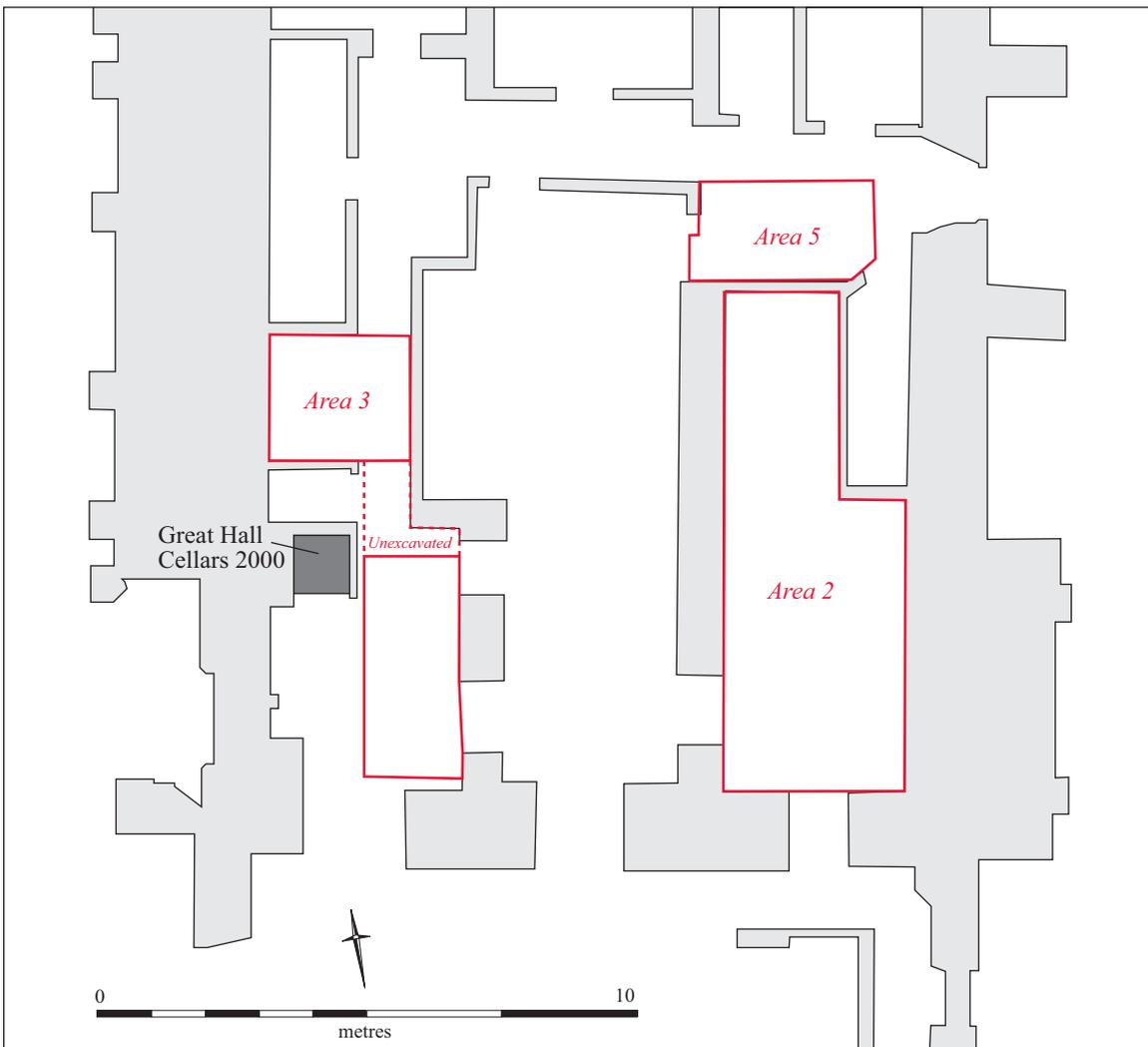
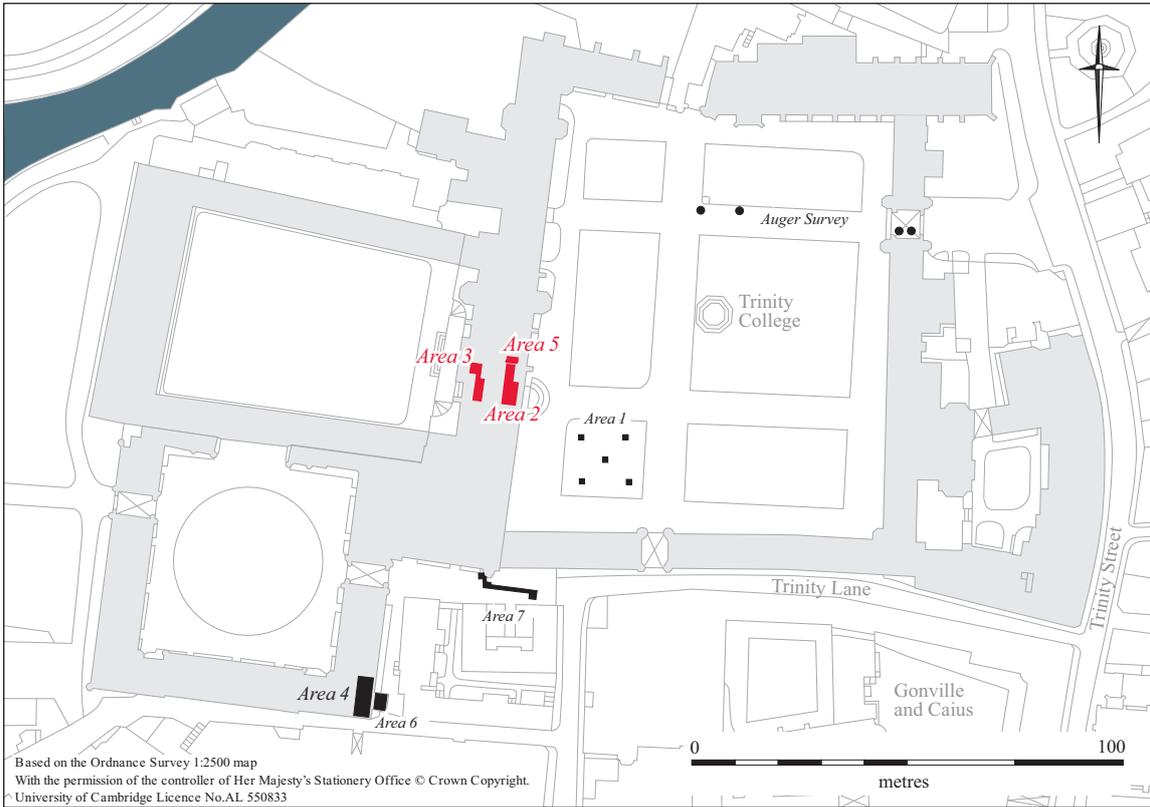


Figure 4. Location of Areas 2, 3 and 5, showing modern divisions of cellar.

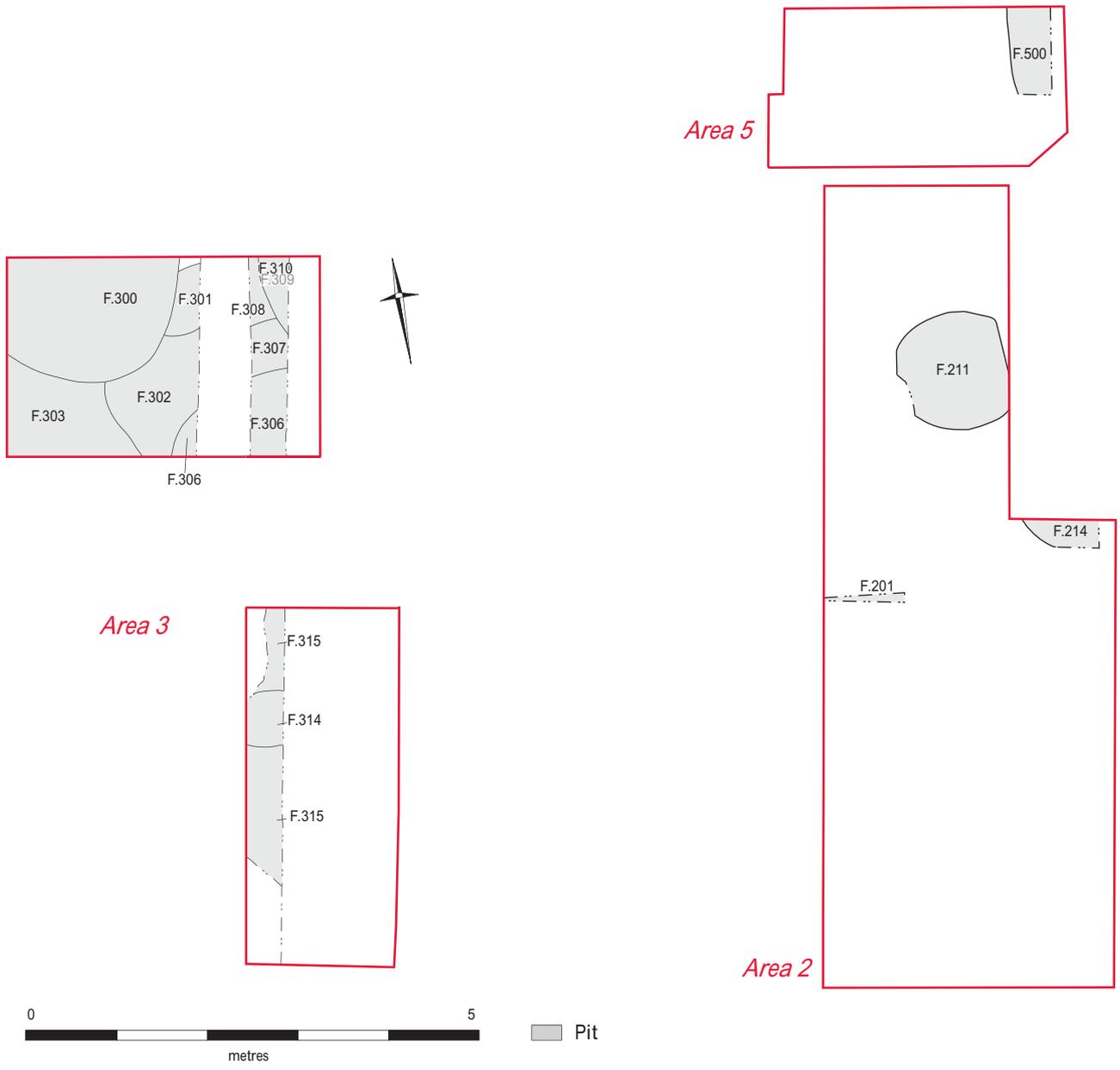


Figure 5. Phase 1 features in Areas 2, 3 and 5.

Phase 1

Following the creation of an initial sub-soil deposit, the earliest anthropogenic activity to have been identified consisted of a sequence of intercutting pits. In the majority of cases, these features later came to be sealed beneath – or else were heavily truncated by – a series of substantial structures (the erection of which comprises Phase 2, below). In certain instances, however, the features did not become sealed and Phase 1 activity continued contemporaneously with the buildings' usage (with the 'open' areas representing external as opposed to internal space). During its latter stages, therefore, this phase represents a broadly *spatial* as opposed to *temporal* distinction in the nature of the activities that were being undertaken at the site.

The sole remnant of a heavily truncated mid yellowish brown silty sand sub-soil deposit, **F.505**, was identified in Area 5. This layer – which was undated, and appears to have been 'scalped' in the two remaining areas by extensive modern disturbance – overlay natural gravels at 6.46m OD. As no other evidence of surviving horizontal stratigraphy was identified, it seems likely that the site had generally been reduced to a level consistent with, or perhaps slightly below, the original ground surface during construction works conducted in the 1970s. In Area 5, the surviving sub-soil was found to have been truncated by undated sub-rectangular pit remnant **F.500**, which was then itself truncated during Phase 2 by the undercroft of a large building. A very similar pattern was also identified a little way to the south in Area 2, where three additional pits were present. Here, the northernmost feature – **F.211** – was oval in form and measured 1.35m by 1.20m in extent by 0.48m+ deep. Although the fill of this pit, which consisted of alternating episodes of weathering and collapse, was generally quite sterile, it did contain a sherd of plain red coarseware. This indicates that the feature is 16th century in date, and provides a secure *terminus post quem* for the overlying Phase 2 structure. The two remaining pits in this area – **F.201** and **F.214**, which were both situated further to the south – had been heavily truncated by the undercroft of a second, potentially much larger Phase 2 structure; unfortunately, neither feature contained any datable material. To the west, however, in the southern portion of Area 3, two additional pits were identified that had also been truncated by this same building. Of these features – **F.315** and **F.314**, which varied between 3.02m+ and 0.59m+ in length and 0.38m and 0.76m+ in depth – the former also contained plain red coarseware, indicating that it was again 16th century in date.

In the northern half of Area 3, no structural remains were encountered. Instead, this space appears to have remained open until the construction of the standing Great Hall in *c.* 1604 (see further Phase 4). Furthermore, in contrast to those areas discussed above – which were heavily truncated during Phase 2 – in this 'external' zone a much higher density of features was identified. Indeed, a total of nine intercutting pits were present (see Figure 5). The majority of these features – including **F.301**, **F.302**, **F.306**, **F.307**, **F.308**, **F.309**, **F.310** and **F.317** – were relatively uniform in shape, and varied between 1.3m+ and 0.4m+ in length, 1.04m+ and 0.26m+ in width and 0.64m+ and 0.28m+ in depth. Although all of the pits contained pottery dating to the 14th-15th centuries, a number of them also contained residual earlier material. This indicates that a preceding horizon of features, most probably dating from the 12th/13th centuries, had been disturbed by the high degree of later medieval activity. The latest feature in the stratigraphic sequence, pit/well **F.300**, measured 1.88m+ by 1.42m+ in extent and 0.90m+ deep; unfortunately, it could not be bottomed due to the structural issues raised by encountering standing water within it in close proximity to the extant

building's foundations. Although the excavated portion of the feature contained exclusively 15th century material, it seems probable that the well remained in use into the early 17th century as no further pits were inserted prior to the area becoming sealed in c. 1603-04. Finally, it is notable that the sequence identified in this area is almost identical to that previously encountered a short distance to the south during the *Great Hall Cellars* excavation (Hall 2000). This implies that a very similar pattern of contemporary external activity was also being undertaken in the wider vicinity.

Phase 2

This phase is represented by the construction of two substantial buildings, which sealed – and in a number of instances, heavily truncated – much of the preceding Phase 1 sequence. Significantly, both buildings were found to have contained undercrofts, and it is these features that form the primary focus of the following discussion. A number of key differences between the two structures were identified, thus allowing their original functions to be determined; this has revealed that both buildings played an important role in the long history of collegiate occupation at the site. The largest, and archaeologically the most important, of the two structures – which will hereafter be referred to as *Building A* – was encountered in both the southern half of Area 2 and the eastern portion of Area 3. Although its northern, western and eastern walls were all identified, its southern extent could not be determined as it continued beyond the limits of the excavation (see Figure 6). Overall, including its construction cut, the identified portion of *Building A* measured 9.5m+ by 4.3m+ in extent, although only around a third of this area was subject to excavation. Based upon the dating evidence recovered from Phase 1 pit **F.315**, the building appears to have been constructed at some time during the 16th century; as will be discussed further below, however, this date most probably represents a major phase of rebuilding as opposed to a *de novo* foundation.

In its rebuilt 16th century form, the undercroft of *Building A* was constructed within a large, pre-excavated trench. This construction cut – **F.218 = F.311** – was somewhat larger than the footprint of the building itself, however (see Figure 6), thereby allowing work to proceed on both the internal and external faces of the walls contemporaneously. In Area 3, where a dense sequence of intercutting pits had preceded the introduction of the building, the trench was also found to have been substantially deeper than in the less disturbed Area 2. Indeed, **F.311** – which extended to 5.54m OD – had clearly been excavated to the depth of the surviving natural gravels prior to the introduction of a series of well-compacted foundation deposits. Furthermore, timber impressions identified along the western edge of the cut in this area demonstrate that the trench was originally revetted in order to ensure its stability. In Area 2, in contrast, the base of the construction cut lay at 5.94m OD and no revetment had been required. Once the trench had been secured, a series of walls – **F.218 = F.312** – were constructed within it. These walls were primarily composed of two irregular courses of massive reused limestone blocks, which measured between 1.0m by 0.43m by 0.32m and 0.62 by 0.60m by 0.36m in size. A large number of blocks were present and, significantly, many of them were also substantially complete, thus allowing their original date and function to be determined. Analysis has revealed that they were derived from a single large and impressive early 14th century structure, and their massive size and unabraded state indicates that this building may well have been situated in close proximity to the present site (see further below).

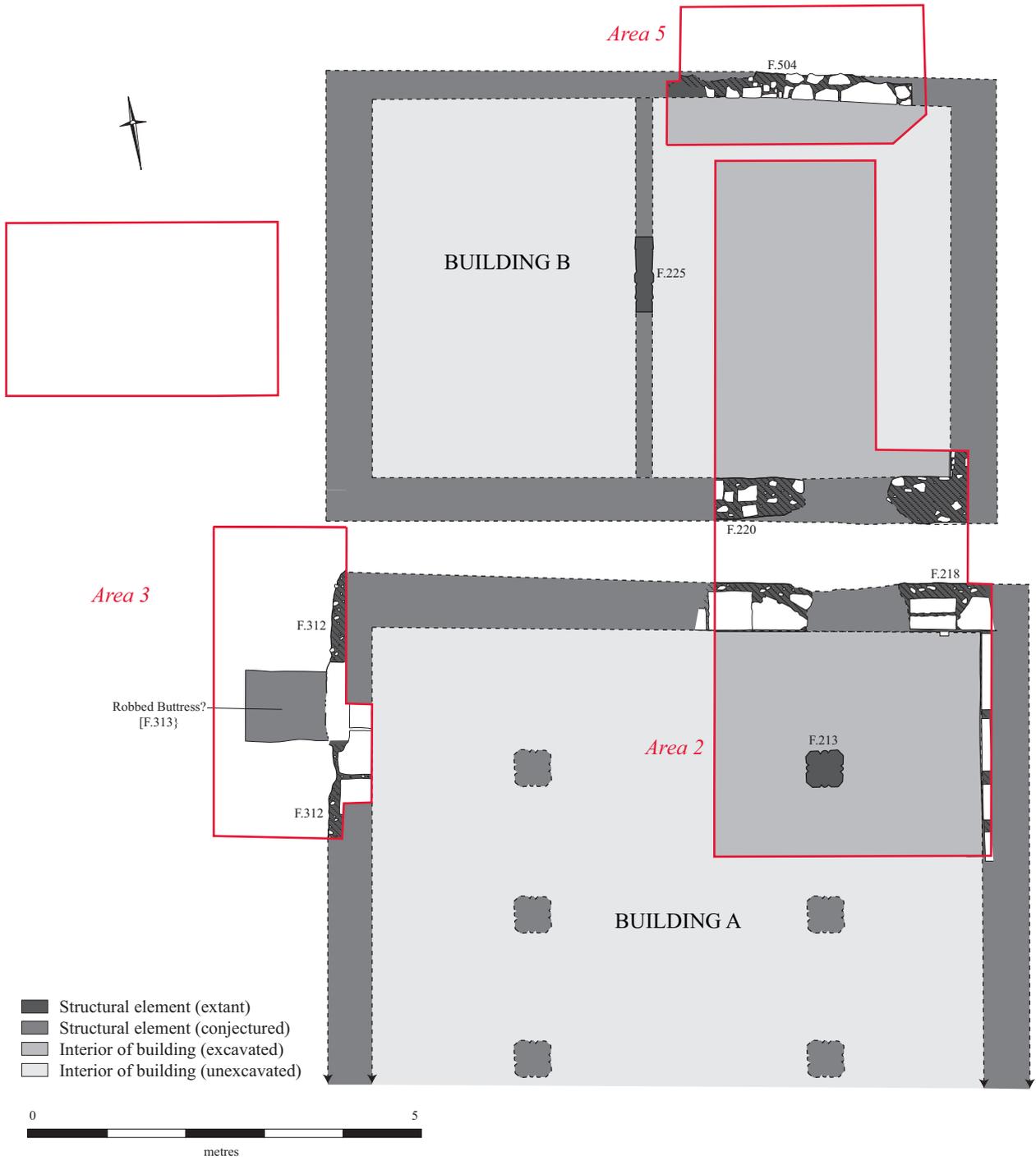


Figure 6. Phase 2 buildings, showing projected extents.

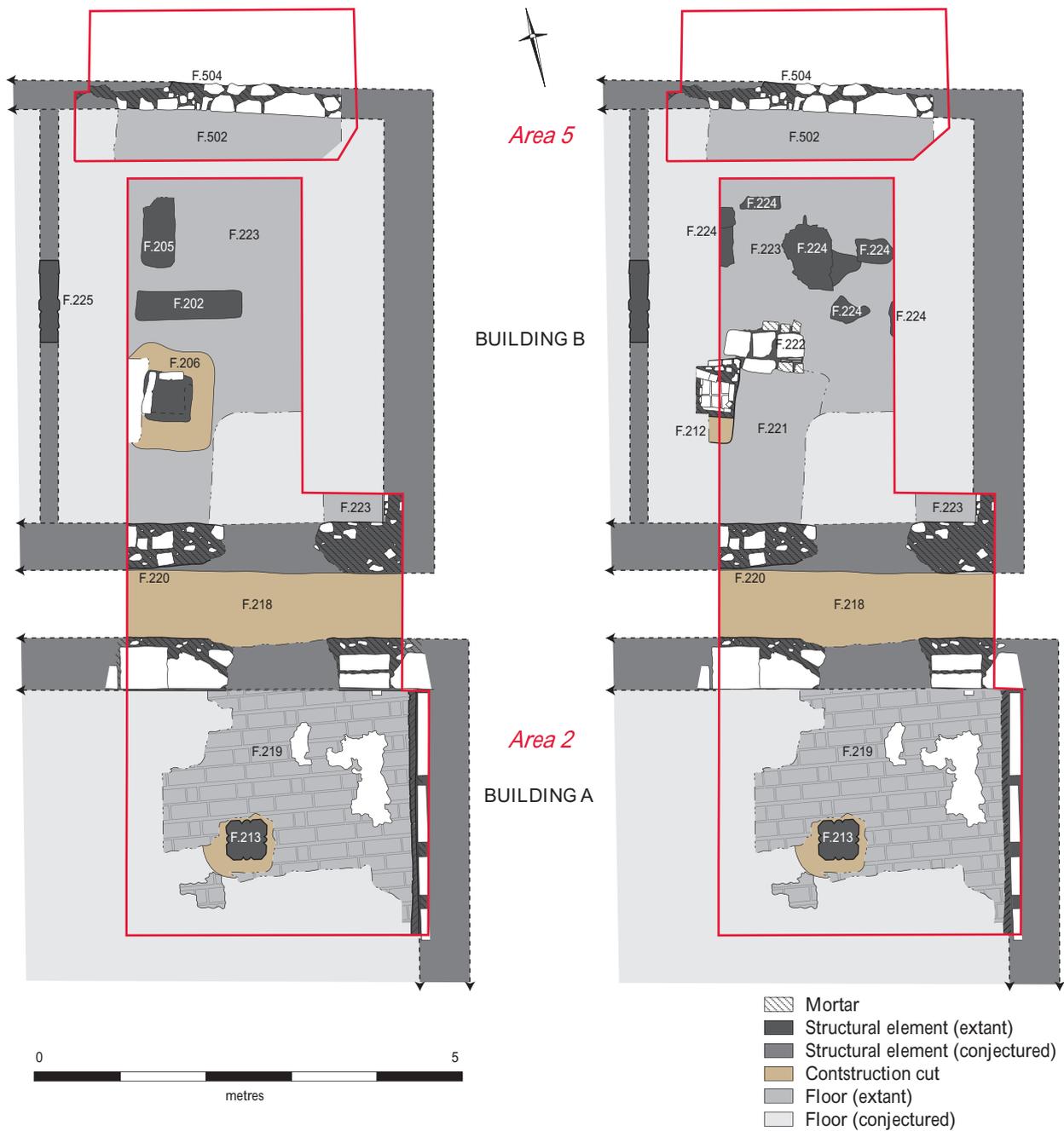


Figure 7. Areas 2 and 5, Phase 2 early (left) and Phase 2 late (right).



A



B



C



D

Figure 8. Excavating Phase 2 deposits in Area 2 (A and C) and Area 3 (B and D).



Figure 9. Interior of *Building A*, facing east (Phase 2).



A



B

Figure 10. Interior of *Building A*, facing north, showing details of decorated render on F.218 (A) and scars of robbed brick floor F.219 (B).

Infilling the gaps between and around the reused blocks were a series of partially-dressed and rough-hewn clunch fragments, as well as a number of half bricks, all of which were bonded with tenacious pale brown lime mortar. Overall, the walls of *Building A* measured *c.* 0.62m in width and survived to a maximum depth of 0.59m. Within the interior of the undercroft, a reused column segment – **F.213** – was also set within its own individual construction cut at this time (see Figures 6, 9 and 10). This column, which was of the same date and architectural order as the numerous blocks that were concurrently being incorporated into *Building A*'s walls, appears to have been utilised as the base for a pier which supported the undercroft's vault. Its location, some distance to the east of the centre of the building, implies that two rows of piers were originally present (see Figure 6). Both the walls and the column base were then abutted by floor layer **F.219**. This feature consisted of an initial mortared rubble foundation deposit, which was overlain by a layer of pale yellowish brown lime mortar that bore the scars of a robbed floor surface (see Figures 7 and 10). As these scars measured an average of 0.22m by 0.1m in extent, it is likely that the floor was composed of flat-laid bricks, which may potentially have been glazed (this would certainly account for the thoroughness of their later removal). The floor surface originally lay at *c.* 6.08m OD. Additional clues pertaining to the finished appearance of the undercroft were also identified. Once completed, a thin skim of mid to pale grey render had been applied to its walls, and – although this material only survived in patches – a sufficient quantity remained to determine that it had originally been decorated with a series of incised lines (see Figure 10). These lines clearly depict a pattern of bricks or small ashlar blocks (although, as each individual element measured an average of only 0.24m by 0.08m in extent, the former interpretation appears the most likely).

It is thus clear that *Building A* – with its large, well-built undercroft – represents the remains of a very prestigious structure. Indeed, both its grand scale and its high degree of decoration indicate that it is unlikely to have been either domestic or functional in origin. Given its location in the heart of the collegiate area, therefore, it appears most probable that *Building A* represents the remnants of the hall which preceded Trinity College's present standing Great Hall; the earlier structure is known from documentary records to have stood in this location (Willis & Clark 1886 II, 464-68). Furthermore, these same documents also reveal that when Trinity College first acquired the site in 1546, the hall of Michaelhouse – the first College to have been established here, in 1324 – was already standing on this spot. At around this time, therefore, the earlier building is likely to have been extensively altered or remodelled in order to accommodate the marked increase in student population that accompanied the foundation of the new institution (Willis & Clark 1886 II, 465; Atkinson 1894, 234). Such evidence provides an important context for the extent of the building's 16th century reconstruction, and perhaps also for the substantial quantity of reused medieval masonry that was encountered within its footings (see further the discussion section, below). Overall, therefore, *Building A* represents a significant archaeological discovery.



A



B



C

Figure 11. Interior of *Building B*, facing north, with details of sumps F.206 (B) and F.212 (C) facing west.

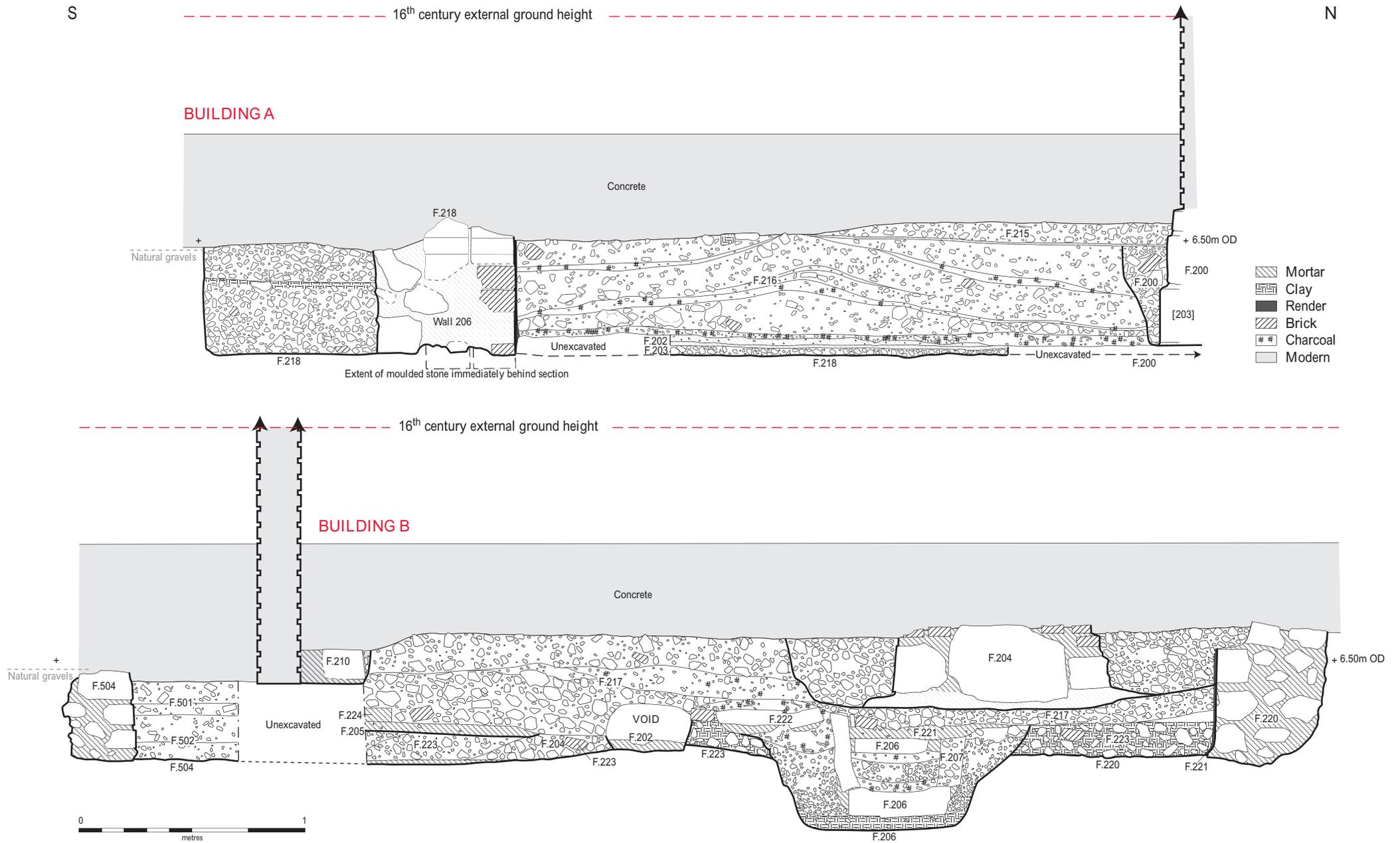


Figure 12. Sections of *Buildings A and B*.



A



B



C

Figure 13. Area 2, facing north, showing Phase 2 (A) and Phase 3 (B) deposits; the central portion of the area has been heavily truncated by a modern service trench. Below (C) is a section through the Phase 3 demolition deposits, facing west.

The second structure to have been identified at the site – *Building B* – was located immediately to the north of *Building A*. Although somewhat smaller in size than its southern counterpart, *Building B* was also relatively substantial. It was encountered archaeologically in both the northern portion of Area 2 and in Area 5, and its northern, eastern and southern walls were all identified. While its western wall was not encountered during the present excavations, its location can be estimated with some certainty as it is highly likely to have run parallel to the western wall of *Building A*. Based upon this assumption, *Building B* originally measured approximately 8.6m by 5.7m in extent, with around a third of this area having been subject to excavation (see Figure 6). Dating evidence previously recovered from Phase 1 pit **F.211**, which was heavily truncated by the construction of this building, indicates that it was also most probably built at some time during the 16th century.

Building B, very much like *Building A*, was initially constructed within a large, pre-excavated trench. Unlike *Building A*, however, the walls of this second structure – **F.220 = F.504** – directly abutted the earthen sides of its construction cut, and were consequently much more irregular and uneven along their external face. Furthermore, a much higher proportion of brick and clunch fragments were utilised in their construction, although a number of reused limestone blocks – which were noticeably much smaller and more ‘trimmed’ than those that had been employed within the walls of *Building A* – were also identified. The majority of these blocks (which averaged around 0.35m by 0.33m by 0.14m in size) had been carefully placed so as to form a smooth internal face to the wall. The interior of this undercroft also appeared to have been at least partially rendered, although no trace of decoration was discernable. In general, the walls of *Building B* measured 0.47m in width – although they were noticeably narrower to the north – and survived to a maximum height of 0.63m. Across the base of the construction cut, and abutting the base of these walls, an initial foundation layer consisting of off-brown concreted mortar was then deposited. This was subsequently overlain by a series of five further layers – **F.223 = F.502** – all of which contained significant quantities of mortar, as well as a number of sherds of 16th century pottery. These deposits appear to represent a series of patchy, relatively short-lived floor surfaces, each of which was associated with a thin layer of trample. In total, they measured 0.13m thick and their uppermost surface lay at 6.15m OD. Finally, lying on top of the highest floor surface, north-south aligned clunch-built wall foundation **F.225** was encountered during the excavation of an underpinning trench extending west beneath the extant building’s foundations. Although its location precluded a thorough examination, its location in the approximate centre of the undercroft suggests that it may have comprised part of a structural support for the roof (such as the foundation for a central vault). Alternatively, however – and, given its stratigraphic position within the building sequence, perhaps rather more probably – **F.225** may have comprised a less substantial internal structural feature.

In contrast to *Building A*, where little or no evidence relating to the usage of the undercroft was identified, within *Building B* it is clear that a wide array of activities were being undertaken. Leaving aside **F.225**, the earliest evidence pertaining to the usage of the structure was encountered towards the northern end of Area 2. Here, in the first instance, east-west aligned beamslot **F.202** – which measured 1.23m by 0.31m in extent and 0.17m deep – had been established. This feature survived largely as a void, within which the decayed remnants of the original wooden beam were identified. At its western end was situated a second, north-south aligned beamslot,

which lay at a right-angle to the first. This second feature – **F.205**, which measured 0.65m by 0.45m in extent and 0.06m+ deep – also contained the *in situ* remnants of a decayed timber. Taken together, therefore, these beamslots appear to have comprised the foundations of a relatively substantial structural setting, although – due to the extent of later robbing activity – the precise nature of the overlying structure itself remains unclear. One possible clue to its function is present, however, in the form of nearby stone-built-sump **F.206**. This feature, which was both large – it measured 1.18m by 0.98m+ in extent and 0.46m deep – and very well constructed, had clearly been designed to channel a large volume of liquid. In its original form the sump consisted of a single, sub-trapezoidal base stone (which comprised part of a reused sarcophagus), the centre of which had been partially ‘dished’ by repeated intensive cleaning, onto which had been mortared four irregular vertical slabs. These latter stones – only the northern and western of which survived, the other two having later been robbed by **F.207** – had been carefully notched at the top in order to aid the flow of liquid into the sump (see Figure 11). Subsequently, the feature was partially backfilled – with a deposit containing a number of sherds of 16th century pottery – and a second, much shallower base stone introduced. This latter slab (which comprised part of a reused gravestone, bearing fragmentary decoration) reduced the active depth of the sump to only 0.12m (see Figure 11).

Eventually, **F.206** was abandoned completely and a replacement brick-built sump, **F.212**, was constructed immediately to its west. This latter feature, which measured 0.96m by 0.46m+ in extent and 0.30m+ deep, was constructed from handmade unfrosted red bricks, measuring 225mm by 110mm by 45mm on average, that were bonded with coarse yellow sandy mortar. After this sump too had gone out of use, it was backfilled with a series of deposits that contained relatively large quantities of animal bone and ceramic fragments. It appears that by this time the original structural setting at the northern end of the undercroft had also been abandoned, as a series of new mortar foundations were established in this area. The first of these, **F.209**, measured 0.58m by 0.48m in extent and 0.05m+ thick. This remnant was then succeeded by a series of seven discrete mortar ‘patches’, **F.224**, which were composed of three distinct fabrics. Although several of these patches contained impressions derived from the bricks (or, in certain instances, perhaps irregular masonry blocks) that had originally been bedded onto them, no clear pattern was discernable in their layout. Indeed, in at least one instance one type of mortar was found to have been directly overlain by another, thereby indicating that several phases of activity – as opposed to a single uniform set of contemporary features – may be represented. Finally, towards the southern end of *Building B*, the partially surviving remnant of a raised floor surface – **F.222** – was also present. This consisted of four stone flags (measuring *c.* 0.30m square on average), along with a series of flat-laid brick fragments, which had been set down upon a layer of mortar bedding; it measured 1.48m+ by 0.66m+ in extent, and its upper surface lay at 6.26m OD. Overlying the flagstones was a black layer of ashy trample that contained a substantial number of small animal bone fragments, whilst beneath the floor patchy levelling layer **F.221** was identified. This latter deposit overlay the backfilled remnants of stone-built sump **F.206**, and appears likely to have originally extended across much of the southern half of the structure.

Overall, therefore, it is clear that the undercroft of *Building B* – in stark contrast to that of *Building A* – was utilised as a functional space within which a range of practical activities were conducted. On the one hand, it is possible that the numerous phases of internal foundations discussed above were associated with a series of ovens, although it should be noted that no traces of heat affectation were identified in any of the surrounding deposits. Perhaps rather more likely, therefore – especially given the presence of a number of well-built, and frequently repaired, sumps within the room – is that a series of vats, or other liquid-associated structures, were constructed in this space. Whatever the precise nature of these features, however, the area certainly appears to have had a strong culinary association, as revealed by the numerous deposits of butchered animal waste that were recovered. When taken together, this evidence strongly suggests that *Building B* corresponds to the undercroft of the kitchen block that is known from documentary sources to have been constructed in this vicinity in 1554-55 (Willis & Clark 1886 II, 471). As was the case with the reconstruction of *Building A*, this new kitchen and buttery formed part of the widespread reorganisation of this area that was initiated by the acquisition of the site by Trinity College in 1546 (see further the discussion section, below).

Phase 3

In *c.* 1603-04 *Buildings A* and *B* were both demolished in order to allow the construction of a new, substantially enlarged Great Hall above their remains (see further below, Phase 4). Significantly, a number of archaeological features relating to this process have been identified.

In the first instance, within *Building A*, demolition work appears to have begun with the insertion of robber cut **F.313** in Area 3. This feature – which was rectangular in form and measured 1.05m by 0.82m in extent and 0.65m+ deep – represents the robbing of a buttress from the western side of the structure (see Figures 14 and 15). The reason behind this act remains somewhat obscure, however. It is known from archaeological observations made in 1892 that at least four closely comparable buttresses were left *in situ* along the eastern side of the building, for example (Atkinson 1894), and the main wall foundation itself also appears to have remained largely untouched at this time. It thus appears likely that **F.313** represented a single localised robbing event, as opposed to an element within a more widespread program of structural reclamation. Elsewhere within *Building A*, as part of the ongoing process of demolition, a series of layers accrued. These deposits, **F.216**, primarily consisted of demolition debris (which included fragments of ceramic building materials, moulded stone, glazed floor tiles and mortar/plaster). Interspersed with this material, however, were discrete dumps of kitchen waste – consisting of numerous animal bones, many with butchery marks, plus fragments of pottery derived from a large number of German stoneware vessels – which appear most likely to have been derived from *Building B*. Within the latter structure itself, near identical contemporary deposits **F.217** and **F.501** were also present. Overall, therefore, a relatively substantial assemblage of material was recovered from these layers (see further the specialist assessment reports). In addition, enigmatic robber cut **F.203** was also present in *Building B*. The precise target of this feature, however, which was rectangular in form and measured 0.98m by 0.78m in extent and 0.17m deep, remains unclear.

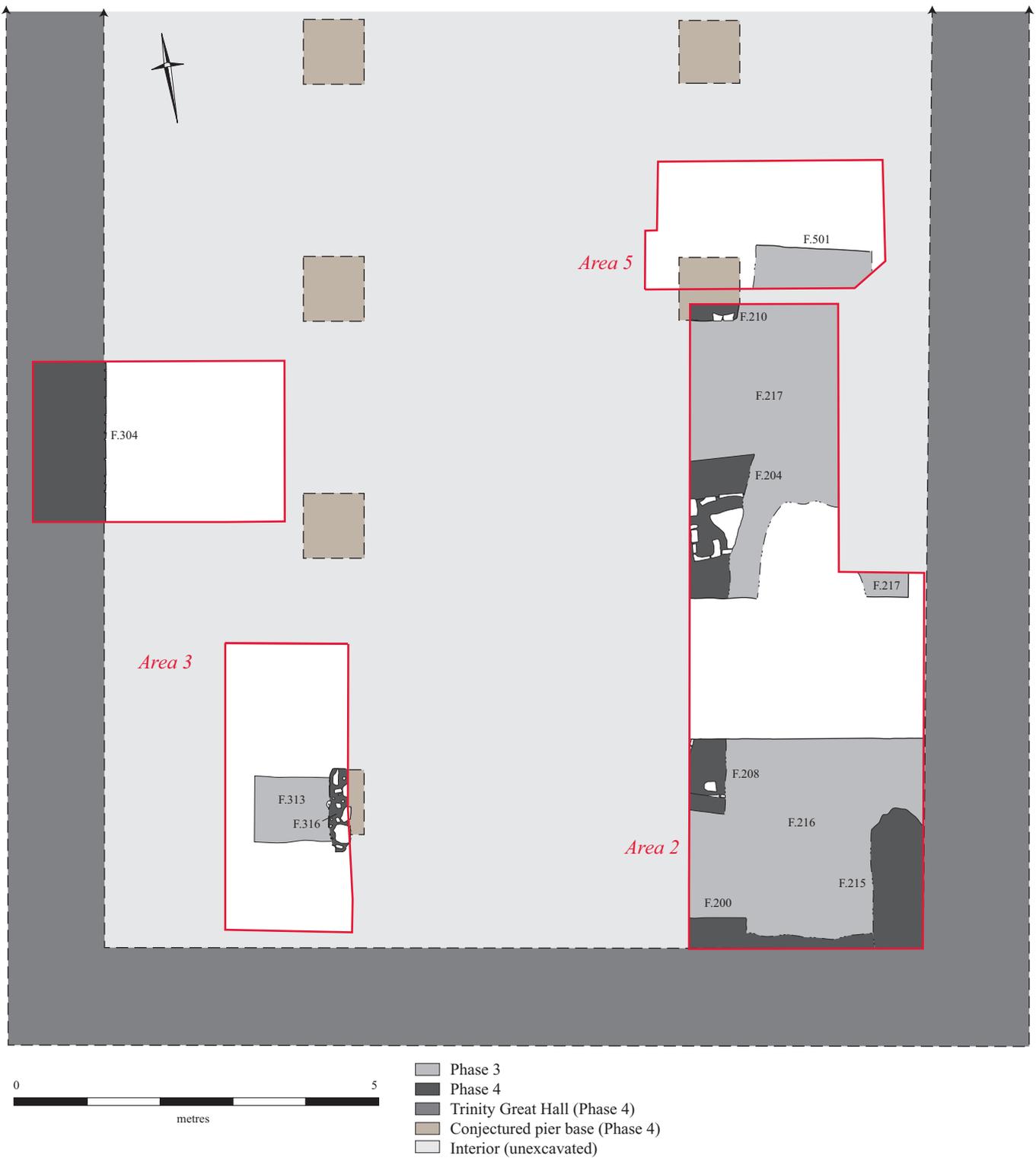


Figure 14. Phase 3 and 4 features in Areas 2, 3 and 5.



A



B

Figure 15. Phase 3 robber cut F.313, facing east (A) and Phase 4 plinth F.204, facing west (B).

Phase 4

Following the completion of the Phase 3 demolition process, the present Great Hall of Trinity College – within the cellars of which the current excavations took place – was constructed in 1604-05 (Willis & Clark 1886 II, 490). Archaeologically, a number of features that shed light on the original form of this structure were identified.

To begin with, two foundations were encountered, each of which comprised part of the Great Hall's initial construction. The first of these, east-west aligned wall **F.200** in Area 2, acted as the foundation for the southern gable end of the building. It was constructed from well-dressed clunch blocks, which varied between 0.59m by 0.24m and 0.24m by 0.16m in size, and was bonded with coarse yellow sandy mortar. Notably, within its construction cut the basal course of **F.200** had been laid upon the remnant floor of *Building A*, and the blocks abutted – but were not bonded into – the fabric of this earlier structure. The wall survived to a height of 0.46m, above which it had been rebuilt. In Area 3, part of the foundation of the western wall of the Great Hall was also identified. In contrast to **F.200**, however, **F.304** was constructed from unfrogged red bricks (measuring 195mm by 105mm by 55mm on average) and was markedly less substantial. Indeed, only four courses of brickwork were present and these appear to have acted as a 'raft', spreading the building's weight. Also dating to the period of the Great Hall's construction was mortar floor layer **F.215** in Area 2. This deposit, which was of relatively poor quality, does not appear to have comprised a permanent surface but was more probably a by-product of the construction process itself. The most significant discovery made in regard to the original form of the Great Hall's undercroft, however, was the identification of a series of sub-square masonry pier bases. These features – **F.204**, **F.208**, **F.210** and **F.316** – ranged between 1.95m and 0.85m+ in length, 0.90m+ and 0.20m+ in width and 0.64m+ and 0.36m+ in depth, and were positioned across Areas 2 and 3 in such a fashion as to replicate the three-aisled arrangement of the earlier, Phase 2 hall (see Figures 14 and 15). Although they varied quite widely in both the scale and quality of their construction – utilising, in each instance, reused brick and masonry fragments in a 'best-fit' manner, and taking advantage of the presence of pre-existing structural features – it is clear that they represented the foundations for a series of piers that originally provided support for a vaulted undercroft. These pillars themselves were later replaced by the extant brick-built barrel vaults in 1750-51 (see further the discussion section, below).

Material Culture

The deposits in Areas 2, 3 and 5 produced the majority of the material culture that was recovered from the Trinity College Kitchens site. The assemblage – which includes metalwork, worked stone, pottery, glass, clay tobacco pipe, moulded stone and building materials (including floor tiles, bricks and mortar/plaster) – has been subdivided by material type and is discussed in detail below. Of the various assemblages recovered, the moulded stone and pottery are of particular significance.

Metalwork (Richard Newman)

A total of 48 metalwork fragments, weighing 232g, were recovered from the deposits excavated in Areas 2, 3 and 5. This material has been sub-divided by material type.

Copper Alloy

In total, 26 copper alloy fragments – weighing 5g – were recovered. These fragments relate to a minimum of 18 artefacts, which comprise ten pins and eight aiglets. With the exception of a pin fragment recovered from sump **F.212**, all of the items were derived from a single deposit; Phase 3 demolition layer **F.216**. One aiglet (<**373**>) was recovered by hand, whilst the remainder were identified via the sieving of the densest concentration of material. All of the items are of simple design, and are undecorated. Given their context, the deposition of this group can be dated to *c.* 1603-04.

F.212, [209], <373>: a single pin fragment, which measures 12mm long by 1mm in diameter. It has a spherical head measuring 2mm in diameter, and weighs less than 1g.

F.216, [209], <373>: a near complete aiglet, which measures 27mm long by 4mm in diameter at its widest, tapering to 1mm at the opposite end. It weighs less than 1g.

F.216, [209], <388>: seven pin fragments representing a minimum of five pins, two of which are complete. These measure 24mm in length by 1mm in diameter and 22mm in length by 1mm in diameter respectively, and both have spherical heads measuring 2mm in diameter. Each weighs less than 1g.

F.216, [209], <398>: six aiglet fragments representing a minimum of four aiglets, two of which are near complete. These latter measure 25mm in length by a maximum of 2mm in diameter and 20mm in length by a maximum of 4mm in diameter respectively, and both taper to 1mm in diameter at their narrowest. Each weighs less than 1g.

F.216, [209], <399>: six pin fragments representing a minimum of four pins, two of which are complete. These measure 33mm in length by 1mm in diameter and 25mm in length by 1mm in diameter respectively, and both have spherical heads measuring 2mm in diameter. Each weighs less than 1g.

F.216, [209], <401>: three complete aiglets. These measure 34mm in length by a maximum of 3mm in diameter, 27mm in length by a maximum of 4mm in diameter and 24mm in length by a maximum of 3mm in diameter respectively, and all three taper to 1mm in diameter at their narrowest. Each weighs less than 1g.

Ironwork

In total, 22 iron fragments – weighing 226g – were recovered. Whilst the majority of these items consist of corroded nails or undiagnostic lumps, additional artefacts are also represented, including a barrel-pin hinge or hasp and a knife.

F.216, [208], <358>: a barrel-pin hinge or hasp, which measures 81mm long by 28mm wide by 10mm thick and weighs 85g. It may well have been derived from a door or window. It was recovered from a Phase 3 demolition deposit, which dates to *c.* 1603-04.

F.206, [248], <365>: two rejoining fragments, which form the haft and part of the blade of a knife. Altogether, the haft measures 75mm long by 8mm wide by 5mm thick, and the blade 59mm+ long by 12mm wide by 2mm thick. It weighs 20g. The knife was recovered from the backfill of a late 16th century sump (Phase 2).

Lead

A single lead item, representing a piece of window came weighing 1g, was recovered.

F.216, [209], <389>: a squashed and twisted fragment of window came, which measures 30mm long by 5mm wide by 2mm thick and weighs 1g. It was recovered from a Phase 3 demolition horizon dating to *c.* 1603-04.

Worked Stone (Richard Newman)

A single mortar fragment, weighing 215g, was recovered. Composed of shelly oolitic limestone (possibly Middle Jurassic Cornbrash Limestone), this fragment clearly belonged to a well-finished mortar. It was recovered from a Phase 1 pit that dates to the 14th/15th century.

F.302, [309], <228>: a small rim fragment, which measures 72mm long by 56mm wide by 34mm thick and weighs 215g. Based upon the surviving sample, the mortar originally measured *c.* 300mm in diameter.

Pottery (Richard Newman with David Hall)

A total of 621 sherds of pottery, weighing 7131g, were recovered from the deposits excavated in Areas 2, 3 and 5. This represents 79.7% of the total site assemblage by count, and 78.2% by weight. The material is discussed on a phase-by-phase basis.

Phase 1

In the first instance, only a small quantity of 10th to 12th century material – comprising St Neots-type ware (2 sherds, weighing 10g) and Thetford-type ware (1 sherd, weighing 6g) – was recovered from the Phase 1 deposits. In addition, a single sherd of 12th/13th century Developed Stamford-type ware (weighing 5g) was also present. All of these early fabrics occurred residually within later features, however, indicating that the earliest phase of activity at the site had subsequently been truncated by later, more intensive pitting. This latter phase, which appears to date from the 14th century onwards, was associated with the newly established College of Michaelhouse. The assemblage recovered from these features was dominated by 13th to 15th century coarsewares, including those with both grey and buff fabrics (comprising 89 sherds, weighing 699g, and 2 sherds, weighing 58g, respectively). A further prevalent element was intermediate Medieval Ely ware (27 sherds, weighing 438g), which is of a similar date. A number of medieval finewares were also present, including Grimston ware (2 sherds, weighing 13g); this is 13th to 15th century in date, with a 14th century *floruit*. Also identified were a single sherd of 13th to 15th century Hertfordshire Fine ware (weighing 10g) and a single sherd of Essex Red ware (weighing 12g), which is late 13th to 15th century in date with a 15th century *floruit*. Activity in this phase also appears to have continued on into the 16th century, as represented by the presence of diagnostically 16th century fabrics such as plain red coarseware (9 sherds, weighing 325g) and glazed red earthenware (2 sherds, weighing 76g).

Phases 2 and 3

By far the largest ceramic assemblages in Areas 2, 3 and 5 were recovered from deposits dating to Phases 2 and 3. These groups will be discussed together for two reasons; firstly, the material consists of an identical range of wares that are largely indistinguishable in terms of both their types and forms, and secondly – with only one exception – the groups were all deposited within a span of less than half a century. Indeed, although it must be remembered that the material in Phase 3 stratigraphically succeeded that in Phase 2, it is highly likely that many of the vessels which became incorporated into the demolition deposits had been utilised during the preceding phase within the very structures that were now being levelled. The outlying exception to the tight chronological grouping outlined above consists of a single sherd of grey coarseware, weighing 9g, which was recovered from Phase 2 construction deposit

F.218 in *Building A*. This sherd is 13th to 15th century in date, but could potentially be residual. The remainder of the Phase 2 material was recovered from *Building B*. Here, the largest assemblages were recovered from floor **F.222** (92 sherds, weighing 1059g), brick-built sump **F.212** (118 sherds, weighing 1651g), stone-built sump **F.206** (31 sherds, weighing 317g) and beamslot **F.202** (21 sherds, weighing 191g). Smaller quantities were also recovered from **F.205**, **F.207**, **F.221** and **F.223**. The constituent elements of this group are broken down by ware in Table 1.

Ware	Count	Weight (g)	MSW (g)
Coarsewares	9	111	12.3
Babylon ware	4	6	1.5
Lead glazed	29	115	4
Ely fineware	2	3	1.5
Glazed red earthenware	70	520	7.4
Frechen stoneware	198	2737	13.8
Total	312	3492	11.2

Table 1: Wares recovered from the mid to late 16th century Trinity kitchen undercroft (Phase 2).

Within this group, it is notable that refitting sherds derived from a stoneware *bartmänner* with the scrolling legend ‘...ST: DRINK: VID: EST: ...’ and a medallion depicting the bust of a warrior, were recovered from **F.202** and **F.207**. Very similar, although not rejoining, material was also present within the extensive Phase 3 demolition deposits, which were identified in both buildings and excavated in all three areas. Individual assemblages were recovered from layers **F.203** (17 sherds, weighing 216g), **F.216** (127 sherds, weighing 663g), **F.217** (56 sherds, 841g) and **F.313** (8 sherds, weighing 193g). The constituent elements of this group are broken down by ware in Table 2.

Ware	Count	Weight (g)	MSW (g)
Coarsewares	13	231	17.8
Medieval Ely ware	5	112	22.4
Babylon ware	8	98	12.2
Lead glazed	1	17	17
Ely fineware	4	10	2.5
Glazed red earthenware	16	62	3.9
Frechen stoneware	161	1383	8.6
Total	208	1913	9.2

Table 2: Wares recovered from the c. 1603-04 demolition deposits (Phase 3).

Overall, the most striking element of the combined Phase 2 and 3 assemblage is its nature. The group is dominated by storage/service vessels, with comparatively little utilitarian material such as coarseware or GRE; this contrasts markedly with the material recovered from the broadly contemporary external pits (see Phase 1, above), and is atypical of 16th century assemblages generally in the Cambridge region (*cf.* Edwards & Hall 1997). The service nature of the group is further underlined by the types of vessels that were present, which primarily consisted of jugs, bottles, cups and tygs. Even more striking, however, is the fact that the wares were dominated by imported stoneware from Germany; this material accounts for 69% of the assemblage by count and 76% by weight, and represents the largest group of stoneware yet identified from a single site in Cambridge (see Table 3). This is made all the more

significant when it is considered that only a small portion of the contexts within which the material occurred were available for excavation. The original size of the group could therefore have been considerable, and in this regard it is notable that one of the workmen reported encountering large amounts of very similar material – including at least one complete vessel – during earlier, unmonitored works undertaken at the site.

Site	Siegburg	Langerwehe	Raeren	Frechen	Westerwald	Total
<i>Trinity College Kitchens</i>	0	0	0	360	0	360
Bradwell's Court	0	24	23	129	1	328
Grand Arcade (all phases)	5	7	110	198	9	315
Hostel Yard (all phases)	0	5	12	100	0	117
Bene't Court (all phases)	1	1	28	74	0	104
St. John's Triangle (all phases)	2	3	17	60	7	89
Forehill, Ely	**	**	**	-	-	63
Jewson's, Ely	1	11	19	4	0	34
Castle Hill (combined sites)	0	2	3	11	1	17
Pembroke College	0	0	0	6	0	6
Bene't Street (all phases)	-	-	**	-	-	?
King's School, Ely	-	*	*	*	-	?

Table 3: Post-medieval German stonewares from Trinity Kitchen by count, as compared to those from other local sites; assemblages presented in size order (key: ** = common, * = present, - = absent or unknown).

Although some German stoneware, produced in Siegburg, is known to have arrived in Cambridge by the end of the 14th century (Newman 2009, 11), importation to England on a larger scale was a largely 16th century phenomenon (Gaimster 1998). In the early 16th century products from Langerwehe and Raeren first appeared, whilst later in the 16th century Frechen overtook these sources in significance. During the 17th century, material was also imported from Westerwald. The notable absence of any other products besides those from Frechen within the present assemblage is almost certainly the result of the tight chronological span of the deposits from which it was recovered, which date exclusively to the late 16th and very early 17th centuries. Frechen stoneware generally has a dark grey clay body with an iron-rich brown surface and salt-glaze treatment, which produces a characteristically mottled 'tiger' glaze. The vessel forms represented at the present site comprise jugs and bottles, a number of which bore applied decoration in the form of shields or coats of arms. Unfortunately, however, the majority of these decorations are very fragmentary, but further research may be able to establish a provenance for some of the vessels. Large groups of stoneware such as this are rare. Contemporary features containing a maximum of four or five similar vessels have previously been encountered in Cambridge, most notably at the St John's Triangle site, where they may well have been associated with a nearby tavern or inn (Newman 2008b, 56-57). A much more comparable group has recently been excavated at the Guildhall site in London, however. Here, over 119 Frechen *bartmänner*, along with at least 30 associated tygs, were recovered from a 17th century brick chamber or storage vault. It appears that these vessels, which had probably been used for the serving of alcohol at large-scale entertainments at the site, had been abandoned following the Great Fire of 1666 (Bowsher *et al.* 2007, 234-6).

Phase 4

A small quantity of material was recovered from early 17th century contexts associated with Trinity College's Great Hall. The assemblage included residual 15th century grey coarseware (1 sherd, weighing 11g) plus 16th/17th century glazed red earthenware (1 sherd, weighing 25g) and Frechen stoneware from Germany (1 sherd, weighing 29g).

Glass (Vicki Herring)

The majority of the glass assemblage from Areas 2, 3 and 5 – which consisted of 55 shards, weighing 53g – comprised window glass that was recovered from Phase 3 demolition deposits **F.216** and **F.217**. In addition, however, three vessel fragments were also recovered. The most notable of these was medieval in date, and comprised the decorated base ring of a green bowl. A late 16th/early 17th century stem-goblet fragment was also recovered, along with a rim shard derived from a square, post-medieval blue green vessel.

F.206, [247], <169>: The tooled base ring of a 13th to 15th century bowl, with applied decoration, which is composed of green potash glass. This was bonded into the mortar of a Phase 2, mid- 16th century stone-built sump. The base ring originally measured *c.* 100mm in diameter. This vessel is difficult to date precisely without the associated bowl form, but probably belongs to the later part of the above date range. The fragment weighs 21g.

F.217, [217], <125>: A body shard derived from a late 16th/early 17th century stem-goblet (which was recovered from a Phase 3 demolition context, dating to *c.* 1603-04). This most probably had a deep, 'U-shaped' bowl, and is composed colourless soda or mixed alkali glass. It is most probably English in origin, and is likely to have been manufactured in London. Such vessels were common during this period; a number of very similar examples were recovered from Nonsuch Palace (Biddle 2005, 215-17 and 250-51), for example. The fragment weighs 1g.

[300], <210>: A rim shard derived from a post-medieval square vessel, which was recovered from a 20th century service trench. This was blue green in colour, and composed of soda glass. The vessel is difficult to date precisely, but could have been manufactured as late as the 19th century. The fragment weighs 1g.

Clay Tobacco Pipe (Craig Cessford)

A single bowl fragment, **<386>** weighing 1g, was recovered from Phase 3 demolition layer **[209], F.216** in Area 2. Although fragmentary, sufficient of the form survived for this bowl to be dated to *c.* 1580-1660 (via Oswald's 1975 general typology). Given the context from which it was recovered, however, its deposition can be dated more accurately to *c.* 1603-04. This is relatively early for the presence of a clay tobacco pipe in Cambridge, as the majority of the known material post-dates 1620.

Moulded Stone (Mark Samuel)

This assessment is based upon an examination of fragments stored at both the Cambridge Archaeological Unit's offices and at Trinity College's storage facility at Moor Barn's Farm. The assessment was carried out on the 11.12.09 and the 15.6.11. The assessment represents not only items retained from the excavation but two fragments that were not removed: these were recorded during the first visit. Three of the most important fragments were recorded on both visits. All items were inspected but only items of interest are mentioned here. It is implicit that other items can be disposed of (or perhaps alternatively be utilised by the College's Works Department).

Catalogue no.	Context no.	Building stone	Patterns	Component element	Major element	Complete %	Early date	Late date	Comments
'B'	206	Barnack	¾ hollow and fillets	?	?	?	1290	1330	Purpose unknown, not removed but recorded in 2009
'D'	206	Barnack	Lateral roll mouldings	Ribstone	Sexpartite vaulting?	75?	1290	1330	Tas-de-charge destroyed after recording in 2009
001	312	Barnack	Crocket and trefoil	Base	Pinnacle or cross	90	1290	1330	Greatly weathered in situ
002	206	Barnack	¾ hollow and fillets	Voussoir	Arcade?	75	1290	1340	Asymmetric major-order arch moulding, purpose unclear
003	282	Barnack	Polygonal shafts and wave	Shaft	Arcade pier	50	1290	1340	Minor-order arcade pier from ?hall
004	206	Barnack	Polygonal shafts and wave	Shaft	Arcade pier	75	1290	1340	Major-order pier from ?undercroft
357	206	Burwell Stone (clunch)	[F.Ashlar]	n/a	n/a	100	?	?	Marked with 'T'
107	206	Barnack	Polygonal shafts and wave	Shaft	Arcade pier	50	1290	1340	Three fragments of <003>-type pier; suitable for petrological analysis
351 '2 of 2'	236	Barnack rag?	[F.Pavior]	n/a	n/a	?	?	?	Deeply dished and highly irregular; may have been used as a whetstone
351 '1 of 2'	236	Barnack	[F.Pavior]	n/a	n/a	?	?	?	One foot square
352	242	Barnack rag?	[F.Recumbent gravestone]	n/a	n/a	10	1150	1300	Relief sculpture of crescent moon
353	247	Barnack rag?	[F.Sarcophagus]	n/a	n/a	10	1150	1300	Sides broken away
353 '2 of 3'	247	Barnack	[F.Pavior]	n/a	n/a	?	?	?	Cutaway for drain? Very worn in situ
353	274	Barnack	[F.Stair tread]	n/a	n/a	50	?	?	Apparently reversed and worn on both sides
356 '3 of 4'	287	Barnack	Quirk	Label	?	?	1250	1350	Fragmentary and barely recognisable
356 '4 of 4'	287	Barnack	Semicircular hollow	Label	Window arch	50	1180	1260	Poor condition and obscured by re-use mortar
356 '1 of 4'	287	Barnack	Quirk	Weathering drip	Clasping buttress	75	1200	1400	Moulding mostly destroyed by severe weathering

Table 4: Catalogue of moulded stone recovered from Areas 2, 3 and 5.

Most fragments are cut from an oolitic limestone; sub-microscopic inspection reveals a matrix of rolled sand and white ooids with fossil fragments. Weathering shows the stone to be ‘spar-prominent’; being consistently an orange/straw hue. It has been identified as ‘Barnack stone’ by Adrian Biggs (Deputy Clerk of Works at Trinity College). This stone derives from the Inferior Oolite Group within the Upper Lincolnshire Limestone (Alexander 1995, 115-6). The lamination observed on the most weathered areas of these elements is a characteristic of Barnack ‘Rag’ (Parsons 1990, 23); the stone has, however, been used for complex and fine carving in this context. Throughout this report ‘catalogue numbering’ is used, applied either individually or collectively where a stone had been broken into several pieces. Where original labelling data survives or has been reconstructed, this is shown in italics. The stones exposed in 2009 that could not be recovered were referred to by an alphabetic prefix at the time of the author’s visit. Table 4 summarises basic information, but items of particular interest are separately described afterwards. ‘Particular interest’ in this context refers to items deemed to have a direct bearing on the history of the college or its predecessors.

Items of Particular Interest (complete dimensions are underlined)

‘D’: Tas-de-Charge *element* (see Figure 16)
 Dimensions (mm): X = >285, Y=>780, Z=450

This fragment was trapped below a massive 20th century concrete floor and was recorded in this position, which only permitted a partial record. Unfortunately the rib moulding did not fully survive. A satisfactory 3-D record of this very complex element was not possible in the time, and with the equipment, available. Despite these drawbacks, a tas-de-charge or springer block 45 cm high was recognised. The basic vault form was apparently of barrel type with a centre of *c.* 4.55 m (+/-16%). The complete element represents the coalescence of ?seven ribs above a (lost) respond capital. The upper (springing) surface was subcircular in plan (indicating a fan vault) and incorporated skewbacks for separate ribs above that level. A common arch centre of *c.* 3.18 m (+/-18%) was apparently used but only two rib arc segments were measured. The lower bed probably did not directly rest on the respond capital and an intervening dressing served to unite the ribs more compactly. The finish was high on all observed surfaces, being achieved with a tool sharing the principal of the modern comb. Enough evidence survives to permit the rib moulding to be restored and only the axial termination is missing. It formed a *lateral roll moulding (type IV)* rib (Morris 1979, 13). This type derives from major north-east centres such as York and Lincoln; centres in close contact with Picardy and the Low Countries over two centuries. The moulding is paralleled well, though not perfectly, in the Lincoln cloister (1290s; *ibid.*, fig.14;d), the chief difference being the use of small straight pieces between the wave and axial termination at Cambridge rather than a continuous wave. Similar lateral rolls with straight pieces are however seen at King’s College Chapel (the extant vaulting ribs in side chapel E, for example, date to 1446-1515; RCHM 1959, 108) and *c.* 1290 is best regarded as a *terminus post quem*. The axial termination was probably a *roll-and-fillet* as at Lincoln. The attenuation of the moulding is a feature of this variety.

[F.206] <001>: *the base of a pinnacle*
 Dimensions (mm): X = 596, Y=440, Z=445

This very large element was not readily analysed due to severe *in situ* weathering, demolition damage, abrasion and thick adhering mortar. However, relative completeness allows a general understanding of its purpose. The weathering is an immediate clue to this element’s purpose. The block can be compared to widespread surviving parallels such as a cross base at Walsoken, Norfolk (Fletcher 1943, 459; b). Allowing for damage, it probably had a 3:4 plan ratio (2 feet long, 18 inches high and wide). It supported a ?foot-square pinnacle let into a deep socket; the only means of attachment. The gablets (which reinforced the socket housing) were coped with triple rolls incorporating drips, again a normal feature. The archlets were adorned with trefoils, of which one example survives. It is uncertain if the base rested on and sharply overhung a plain

shaft of rectangular section (18 X 12 inches) or if the shaft shared the dimensions of its cap. In the latter case, the trefoils would have capped sunk panels with moulded edges. Elaborate *crockets* (nearly obliterated) grew up from the margins of the archlets and the angles; these imply similar adornment on the vanished crocket. The trefoil broadly dates to around 1300. The degree of weathering suggests that the pinnacle was hundreds of years old at the time of its demolition.

[F.206] <002>: a major-order?arcade arch voussoir with three-quarter-hollow-and-fillets
Dimensions (mm): X = 276, Y=590, Z=490

This curved voussoir survives to its full length but the outer limits of the moulding are broken off. The moulding is in a fresh condition. The moulding is highly finished with ?abrasives, but joints were left with a rough *boasted* finish. It is possible to guess at the original wall-depth of this damaged moulding, which was set in a wall over 0.8m thick. The 'step' in the outer margin hints at a framing label moulding; a lost minor order can also be identified but a mortar scar on the soffit and a scribe line on the joint shows the soffit was left partly visible. The arch centre (measured from the surviving soffit) is about *c.* 2.78m (+/-18%). This, the asymmetry, and the fresh condition of both parts of the moulding indicate a portal arch in a sheltered location. The three-quarter-hollow flanked by fillets dates after 1250 (Morris 1992, 13) and the presence of ogees places this moulding firmly in the Later Gothic tradition. The enduring popularity of this moulding pattern in Cambridge gateways (*e.g.* the west arch of the main gate of King's College Old Court, which dates to 1441; RCHM 1959, 394) would make more precise dating misleading.

[F.213] <003>: a minor pier plinth element (see Figure 16)
Dimensions (mm): X = 460, Y=460, Z=365

The complete moulding of this fragment <3> can be restored easily. The moulding is highly finished with fresh comb-type marks but the rough adze cutting of either end shows it has been cut down from a longer element. At the same time, a rough socket may also have been cut in one face (although it should be noted that the block was extensively damaged during the insertion of a service trench during the 1970s, rendering precise attribution impossible). Nevertheless, it is clear that the fragment was reused as a postpad or pierbase (F.213) during the first phase of Trinity's Great hall in the mid 16th century. As a result, the buried end is much better preserved. This element derives from a rather slight pier, which was probably set diagonally. The plinth below a shaft base moulding seems the most likely source, given that polygonal elements are more normally parts of plinths. A pier consisting of four engaged round shafts can be postulated. The dimension between the angle facets was 22 inches, but no other round measurements can be detected. In the design, the four notional octagons do not quite meet; *wave* mouldings however bridge the gaps. This undulating form is symptomatic of Continental connections in the decades around 1300 (Morris 1978, 27-9). The major pier shaft <4> was quite incompatible with this pier around their stylistic connection is obvious. It may be hazarded that this light arcade pier was employed at ground floor level, while the heavier pier supported an undercroft vault below.

[F.218] <004>: a major arcade shaft
Dimensions (mm): X = 615, Y=604, Z=391

This badly-damaged element had sheared in two along a natural bedding plane (parallel to the horizontal joints). The element was assembled for recording. The surfaces of the moulding were well preserved where not abraded with clear comb-type tooling. The joints were deteriorated, but one preserves two 'X' marks adjacent to the hollows. Enough survives to allow a confident reconstruction of a shaft moulding which consisted of alternating polygonal and wave-derived components. The semicircular shafts were very probably adorned with fillets. The essential units of the design were a two-foot square with another larger square at 45 degrees to it (30.2 inches, *i.e.* no proportional relationship). This was a substantial piece of architecture intended to take great weight. A similar pier (of *c.* 1320) survives at the parish church of St Mary and St Nicholas, Trumpington (RCHM 1959, 395). The moulding of this nave arcade pier employs similar principles to those employed here: wave and fillet shafts mark four-way symmetry and the pier is of comparable width (0.746m). As such, it gives some idea of the excavated pier's role. The excavated pier would however also suit a quadripartite vault and its common find spot with the *tas-de-charge* element strongly indicates a connection. The wave moulding is typical of the Decorated style, not appearing until the 1280s. Paired waves with an intervening fillet were not widespread until about 1310 (Morris 1978, 21-3), and its use on a pier seems to be fairly unusual.



A



B

Figure 16. Details of *in situ*, but reused, moulded stones, including column fragment F.213, facing east (A) and a *tas-de-charge* springer block embedded within wall F.218, facing east (B) .

Conclusions

The remainder of the recognisable fragments derived from this excavation (see Table 4) present little noticeable pattern. A group of greatly-damaged 13th century elements that were recovered from the walls of *Building B* – <356>, F.220 – were clearly very old at the time of their re-use (1554-5), and they are unconnected with the high-status early 14th century campaign that is the chief feature of interest. Amongst them, the motif on a single very weathered fragment of a Barnack gravestone may represent the moon (part of a pairing of the sun and moon); alternatively, however, the remnant may comprise part of a *double omega* motif. Overall, it is likely that many of the very large slabs of Barnack that were reused in this building originated as part of stone coffins, although only one fragment was definitely recognisable as such. The most probable source for this material is Cambridge's former Franciscan Friary, the site of which is now occupied by Sidney Sussex College, as historical accounts indicate that a large quantity of masonry was quarried from that site for reuse at Trinity College during the mid 16th century (Willis & Clark 1886 II, 726).

The fragments re-used in *Building A*, in contrast – within contexts [206] and [282] – appear to have been derived from a single, very high-status early 14th century structure. The materials used, along with the nature of the tooling marks, all point to a common building campaign where the masons used *cock's combs* and *drags* (Adrian Biggs, *pers. comm.*). This was a relatively novel means of finishing at that time, as this suite of finishing tools did not come into favour until *c.* 1300 and took some time to supplant other methods (Samuel in Hicks & Hicks 2001, 153-4). A consistent range of patterns that came into favour in the early 14th century are displayed, and there is also a corresponding absence of later Perpendicular motifs such as the double ogee. The blocks themselves were comprised of Barnack stone. This material was first used in Cambridge during the early to mid 12th century (at Holy Sepulchre Church and Stourbridge leper chapel), and was in frequent use in the town from the late 13th century onwards (Purcell 1967, 29-34). Blocks of Barnack stone recovered archaeologically from Whittlesea Mere having been used to indicate the presence of a sunken medieval barge (Hutchinson 1994, 121; Jenkins 1993a; Jenkins 1993b). This appears to have been a flat-bottomed, double-ended vessel measuring 9.0m long with a beam of 3.0m and a draught of less than 1.0m (*ibid.*). Such vessels, with their valuable cargo, would have been able to reach Cambridge via the network of Fenland rivers.

The historical implications of the moulded stone assemblage are discussed within the main discussion section of the report, below.

Building Materials (Richard Newman)

A relatively large assemblage of building materials was encountered in Areas 2, 3 and 5, the majority of which was associated with the widespread demolition horizon of *c.* 1603-04. The material included frequent ceramic peg tile and split Collyweston stone tile fragments, although no complete examples were identified and the fragments were not retained. Significantly, however, a number of floor tiles – both decorated and undecorated – were recovered, and these are discussed in more detail below. In addition, a number of brick and mortar/plaster samples were also retained.

Floor tiles

A representative sample of 17 floor tile fragments, comprising the most complete and/or diagnostic examples, was retained from the excavation. These represent a wide range of types and sizes, both decorated and undecorated, and may well have been derived from a variety of structures of differing dates. The most notable pieces include a complete medieval encaustic tile, with impressed *fleur-de-lis* decoration, which was recovered from Phase 3 robber cut **F.203**. This feature also contained four further fragments derived from later, probably early post-medieval tiles with bipartite plain brown and streaked brown and yellow decoration. In addition, a complete green glazed edging tile was also recovered from Phase 3 demolition layer **F.501**, while near complete unglazed tiles were recovered from contemporary deposit **F.216** and earlier, Phase 2 floor layer **F.502**.

F.203, [226], <143>: a complete encaustic tile, plus four further fragments. The complete example measures 110mm by 110mm by 15mm and weighs 370g. Although heavily worn, the original design – with an impressed central cross dividing the tile into four quadrants, each of which contained a *fleur-de-lis* oriented at 45 degrees – can still be discerned. It is composed of a mixed reddish fabric, with white slip inserted into the impressed decoration, and was coated with a yellowish glaze (producing a final green and yellow result). It is most probably 14th century in date, and may well have been derived from the original hall of Michaelhouse. The remaining fragments, however, are notably different. Comprising a minimum of two tiles, they are much thicker (at 30mm) and have streaked brown and yellow glazes. On two fragments, an incised line is evident (stretching diagonally from corner to corner), which has sub-divided the decoration into two fields; one side is streaked, the other is a single shade of brown. The original tiles measured a minimum of 115mm across, and the fragments weigh between 120g and 406g.

F.216, [209], <119>: Three large fragments derived from three separate unglazed tiles. Two are substantially complete. The first of these is comprised of a dense mid red fabric and measures 116mm by 116mm by 20mm thick. The second, which is comprised of a similar though darker red fabric, measures 120mm across and is 21mm thick. The third, however, is comprised of a much coarser fabric and is partially convex in profile, having risen in the kiln. It measures 118mm across and is 25mm thick.

F.217, [220], <131>: A single fragment derived from a decorated tile. This decoration on this piece is identical to that of the fragments discussed above from **F.203**, in that it has an incised line which subdivides the decoration into two fields; one side is again streaked, the other is a single shade of brown. The fragment measures 25mm thick, and weighs 252g.

F.223, [243], <162>: Four glazed fragments, each composed of a different fabric; none is complete. The most substantial, measuring 33mm thick, consists of a pale reddish fabric with a heavily eroded yellow glaze (weighing 441g). A second fragment, with an orangey red fabric and a fragmentary mottled yellow and brown glaze, measured 21mm thick and weighed 22g. A third, with a similar fabric and glaze, measured 27mm thick and weighed 99g. Finally, a thinner fragment (20mm thick) with a dense coarse red fabric and a mottled greenish brown glaze was also present; this weighed 154g.

F.501, [502], <423>: a near complete tile, with only one corner missing. This is composed of a coarse yellow fabric and is substantially smaller than the other retained samples, measuring 68mm by 68mm by 21mm in extent. Although heavily worn, traces of green glaze survive on its sides. It weighs 147g. Given its size, it may potentially have been derived from a decorative edging or border.

F.502, [503], <424>: Firstly, a complete unglazed example, composed of mixed red and black fabrics, with tapering sides. This measures 114mm by 112mm by 17mm thick, and weighs 319g. Also a glazed fragment, with streaked yellow and brown decoration. This is much thicker (at 34mm) and is composed of a coarse red fabric; it weighs 130g.

Bricks

A total of 19 bricks, weighing 20.4kg, were retained from Areas 2, 3 and 5. This included nine complete, or near complete, samples recovered from wall foundations **F.218**, **F.220** and **F.304**, plus masonry pier base **F.204**. Unfortunately, however, the majority of these examples appear to have been reused, and are therefore unreliable as dating evidence. Ten further samples, displaying a variety of sizes and finishes, were also retained from early 17th century demolition layers **F.216** and **F.217**.

Mortar/Plaster

A large quantity of mortar and plaster fragments were encountered in Area 2, primarily within early 17th century demolition layers **F.216** and **F.217**. Although very little of this material was retained during the excavation (with the principal exception of mortar samples recovered from walls **F.218** and **F.220**), 457 fragments, weighing 1789g, were present within the heavy residues of environmental samples taken from these deposits. This underlines the ubiquity of this material amongst the demolition debris.

Economic Data and Environmental Remains

The following section presents details of the animal bone and environmental assemblages that were recovered from Areas 2, 3 and 5.

Animal Bone (Vida Rajkovača)

The animal bone assemblage from the Trinity College Kitchens site comprised 2430 fragments, weighing 9214g. This represents 84.1% of the total site assemblage by count and 61.1% by weight. Faunal material was hand-collected from a number of layers and features ranging in date from 14th-15th century to early 17th century. A significant quantity of faunal material also came from the heavy residues from bulk soil samples. This sub-set has been further sub-divided based upon the chronology of the material (Table 5). As this shows, the majority of material came from the Phase 3 demolition layers in Area 2, which date to *c.* 1603-04. This is potentially significant, as these deposits are associated with demolition activity that took place prior to the construction of Trinity Great Hall.

Hand-recovered material	<i>Phase</i>				Total
	Phase 1	Phase 2	Phase 3	Phase 4	
<i>Contexts</i>	14	11	12	2	39
<i>Fragments</i>	69	154	840	10	1073
Heavy residues	Phase 1	Phase 2	Phase 3	Phase 4	Total
<i>Contexts</i>	-	4	1	-	5
<i>Fragments</i>	-	427	930	-	1357

Table 5: Context and fragment count for Areas 2, 3 and 5.

Methodology and Preservation

The zooarchaeological investigation followed the system implemented by Bournemouth University with all identifiable elements recorded (NISP: Number of Identifiable SPecimens) and diagnostic zoning (amended from Dobney & Reilly 1988) used to calculate MNE (Minimum Number of Elements) from which MNI (Minimum Number of Individuals) was derived. Identification of the assemblage was undertaken with the aid of Schmid (1972), Hillson (1999) and reference material from the Cambridge Archaeological Unit, Cambridge. Most, but not all, caprine bones are difficult to identify to species; however, it was possible to identify a selective set of elements as sheep or goat from the assemblage, using the criteria of Boessneck (1969) and Halstead (Halstead *et al.* 2002). Unidentifiable fragments were assigned to general size categories where possible. This information is presented in order to provide a complete fragment count. Ageing of the assemblage employed both mandibular tooth wear (Grant 1982; Payne 1973) and fusion of proximal and distal epiphyses (Silver 1969). Taphonomic criteria including indications of butchery, pathology, gnawing activity and surface modifications as a result of weathering were also recorded when evident. Measurements have been taken following Von den Driesch (1976).

Overall the assemblage was moderately to quite well preserved, with high quantities of fish bone recovered by hand being testament to good state of preservation. Canid gnawing was observed on *c.* 0.8% of the material, a statistic which is indicative of rapid deposition of the material. Similarly, evidence of surface bone erosion and weathering were also minimal.

Occurrence of species

The hand-recovered material from Areas 2, 3 and 5 totalled 1073 assessable fragments, of which 840 (*c.* 78.3%) were retrieved from demolition layers dated to *c.* 1603-04. The list of identified species varies from phase to phase and it shows a relatively broad range of species in Phase 3. This sub-set is potentially one of the most important finds from the site. Assemblage as a whole is dominated by the remains of sheep/goat, followed by rabbit and chicken (Table 6). Remains of cow and pig are surprisingly scarce. The range of bird species is relatively varied and further identification of bird species present within the assemblage is much needed. For the purpose of this assessment, the majority of fish remains remained unidentified to species. It was possible, however, to confirm the presence of pike and small cyprinid species.

Phase 1 (12th-15th century)

This small sub-set was recovered from a series of pits – and one pit/well, **F.300** – all of which were 15th century or earlier in date. The sample size is insufficient to sustain propositions about animal use; however, it appears to reflect the pattern of economy where cattle, sheep/goat and pigs were of equal economic importance. Other domestic species such as horse, dog, chicken and goose are also present.

Taxon	Phase 1			Phase 2			Phase 3			Phase 4			Total NISP
	NISP	NISP %	MNI	NISP	NISP %	MNI	NISP	NISP %	MNI	NISP	NISP %	MNI	
Cow	4	18.3	1	.	.	.	5	1.8	1	.	.	.	9
Ovicaprid	7	31.9	1	20	40.8	2	109	39.9	11	.	.	.	136
Sheep	.	.	.	7	14.4	1	15	5.5	3	.	.	.	22
Goat	.	.	.	.	.	.	6	2.2	2	.	.	.	6
Pig	5	22.7	1	1	2	1	.	.	.	.	.	.	6
Horse	2	9.1	1	.	.	.	.	.	.	.	.	.	2
Dog	1	4.5	1	.	.	.	1	0.4	1	.	.	.	2
Cat	.	.	.	.	.	.	4	1.5	1	.	.	.	4
Rabbit	.	.	.	17	34.7	1	91	33.3	8	.	.	.	108
Rat	.	.	.	.	.	.	7	2.6	1	.	.	.	7
Chicken	1	4.5	1	2	4.1	1	27	9.9	4	.	.	.	30
Duck	.	.	.	.	.	.	5	1.8	1	.	.	.	5
Goose	1	4.5	1	.	.	.	1	0.4	1	.	.	.	2
Pheasant	.	.	.	.	.	.	2	0.7	1	.	.	.	2
Mallard	.	.	.	1	2	1	.	.	.	.	.	.	1
Teal	1	4.5	1	.	.	.	.	.	.	.	.	.	1
Wading birds	2	.	.	.	.	.	.	.	.	.	.	.	2
Cyprinid	.	.	.	.	.	.	1	.	.	.	.	.	1
Pike	.	.	.	1	2	1	.	.	.	.	.	.	1
Cattle-sized	20	.	.	10	.	.	37	.	.	1	.	.	68
Sheep-sized	19	.	.	64	.	.	325	.	.	9	.	.	417
Rodent-sized	.	.	.	.	.	.	6	.	.	.	.	.	6
Mammal n.f.i.*	.	.	.	1	.	.	5	.	.	.	.	.	6
Fish n.f.i.	.	.	.	29	.	.	162	.	.	.	.	.	191
Bird n.f.i.	6	.	.	1	.	.	31	.	.	.	.	.	38
Total	69	100	.	154	100	.	840	100	.	10	.	.	1073

Table 6: Number of Identified SPecimens and Minimum Number of Individuals for identified species from hand recovered contexts by phase. *the abbreviation n.f.i. denotes the specimen has not been further identified.

Phase 2 (late 16th century)

Animal bone material assigned to this phase came from stone-built sump **F.206**, brick-built sump **F.212**, beam-slot **F.202** and floor layer **F.223**, all of which date to the mid to late 16th century. The total amount of bone recovered from this phase was 581 bone specimens, a combined figure of the hand-recovered (154 fragments) and sieved material (427 fragments). There is a shift from small quantities of faunal material dominated by all three main 'food species' from the previous phase towards a more restricted range of species with an emphasis on ovicapra, rabbit and fish.

Butchery marks were observed on *c.* 17.5% of the material, and mainly consist of chops through the middle of the bone shaft and fine knife filleting marks implying meat removal. In addition, the most interesting butchery action observed was noted on sheep/goat vertebrae, of which the great majority showed dorso-ventral chops down the sagittal plane. This butchery mark is indicative of hanging carcasses and splitting them into left and right portions. The sub-set therefore hints at dietary patterns that become more evident during the succeeding phase.

Phase 3 (demolition layers; c. 1603-1604)

Faunal material assigned to this phase amounted to 1770 bone specimens, of which 840 (47.5%) were hand-recovered and 930 (52.5%) were retrieved from heavy residues. The most abundant category of species appears to be fish, with 624 (*c.* 35%) fragments in total. This was followed by ovicapra (NISP=144; *c.* 8%) with sheep and goat positively identified, rabbit (NISP=113; *c.* 6%) and chicken. The range of species is more varied than in the previous phase. Preservation within this sub-set was extremely good, with 99% of fragments showing minimal or no surface exfoliation and weathering. Butchery was observed on 194 bone specimens, a figure which corresponds to *c.* 11% of the sub-set. Of 194 butchered specimens, 171 (*c.* 88%) were identified as sheep/goat or sheep-sized elements. One butchery action was exceptionally common in this assemblage and that is splitting animal carcass in half by chopping the vertebrae along the dorso-ventral axis. Although present in some prehistoric assemblages, this butchery technique was extremely rare until the 16th century when it becomes increasingly important (Maltby 1979). The Trinity College Kitchens faunal record appears to support this notion, where bone material from earlier phases does not seem to display this type of butchery.

Phase 4 (c. 1604)

Ten assessable fragments were recovered from the backfills of masonry pier base **F.204** and wall foundation **F.304**, both of which date to 1604-05. Of these specimens, nine were assigned to sheep-sized mammal and one to cattle-sized mammal category.

Faunal remains from heavy residues

Five samples (*c.* 20 litres each) in total were processed from Area 2; four of these were assigned to Phase 2 (Sample 203, Sample 204, Sample 205 and Sample 300) and one (Sample 201) to Phase 3 (Tables 7 and 8). The latter, taken from demolition layer **F.216**, produced 930 assessable fragments. This figure corresponds to *c.* 70% of the remains recovered from the heavy residues. Fish remains were particularly significant and their recovery puts an emphasis on the overall importance of environmental sampling. Apart from fish, ovicapra and rabbit are once again the prevalent species and seem to have formed an important part of the College's dietary regimes.

Taxon	Sample 201			Sample 203			Total NISP
	Demolition layer F.216, [209]; Phase 3			Floor F.222, [221]; Phase 2			
	NISP	NISP%	MNI	NISP	NISP%	MNI	
Cow	.	.	.	.	.	.	.
Ovicaprid	14	29.2	3	4	57.1	1	18
Sheep	.	.	.	.	.	.	.
Horse	.	.	.	1	14.3	1	1
Pig	.	.	.	.	.	.	.
Cat	1	2.1	1	.	.	.	1
Rabbit	22	45.8	2	2	28.6	1	24
House mouse	8	16.7	1	.	.	.	8
Shrew	1	2.1	1	.	.	.	1
Frog/toad	2	4.1	1	.	.	.	2
Cattle-sized	8	.	.	.	.	.	8
Sheep-sized	165	.	.	49	.	.	214
Rodent-sized	57	.	.	23	.	.	80
Mammal n.f.i.*	190	.	.	.	.	.	190
Fish n.f.i.	461	.	.	40	.	.	501
Bird n.f.i.	1	.	.	4	.	.	5
Total	930	100	.	123	100	.	1053

Table 7: NISP and MNI for identified species from heavy residues by feature; *the abbreviation n.f.i. denotes the specimen has not been further identified.

Taxon	Sample 204			Sample 205			Sample 300			Total NISP
	Stone-built sump F.206, [237]; Phase 2			Brick-built sump F.212, [277]; Phase 2			Pit/well F.300, [317]; Phase 1			
	NISP	NISP%	MNI	NISP	NISP%	MNI	NISP	NISP%	MNI	
Cow	1	3.2	1	.	.	.	.	.	.	1
Ovicaprid	19	61.3	2	.	.	.	1	50	1	20
Sheep	1	3.2	1	.	.	.	.	.	.	1
Pig	1	3.2	1	.	.	.	.	.	.	1
Deer <i>sp.</i>	.	.	.	.	.	.	1	50	1	1
Rabbit	6	19.4	1	4	100	1	.	.	.	10
Frog/toad	3	9.7	1	.	.	.	.	.	.	3
Cattle-sized	1	.	.	1	.	.	.	.	.	2
Sheep-sized	37	.	.	7	.	.	3	.	.	47
Rodent-sized	36	.	.	3	.	.	2	.	.	41
Mammal n.f.i.*	13	.	.	.	.	.	5	.	.	18
Fish n.f.i.	131	.	.	21	.	.	4	.	.	156
Bird n.f.i.	3	.	.	.	.	.	.	.	.	3
Total	252	100	.	36	100	.	16	100	.	304

Table 8: NISP and MNI for identified species from heavy residues by feature; *the abbreviation n.f.i. denotes the specimen has not been further identified.

Conclusion

The Trinity College Kitchens faunal record represents one of the most important assemblages yet recovered from post-medieval Cambridge. The quantity of animal bone retrieved from a relatively small area is both quantitatively substantial and quite varied in terms of species present. Given that the majority of this assemblage appears to have been associated with the former College kitchen – although, in this respect, it should be noted that the material recovered from the Phase 3 demolition deposits cannot be considered as secure as the groups recovered from the *in situ* Phase 2 usage deposits – this represents an important opportunity to gain an insight into the range of animal species exploited and the nature of food consumed in the College. Some differences are visible between the material encountered here and in Area 4, for example (see Section II), in the same way that variations are evident between different the phases of occupation (see Tables 6, 7 and 8). In general, mutton appears to have been regularly eaten, followed by rabbit. Both of these species were also valued for their wool (sheep) and fur (rabbit). Preliminary identification of bird bones from the assemblage already shows that a varied range of species is present: chicken, geese, ducks (mallard), pheasant, dove/ pigeon, teal and small waders. The fish assemblage also appears to be varied with probably cod, pike and smaller cyprinids present.

A number of other contemporaneous sites from the vicinity are available for comparison, such as Grand Arcade (selected sample NISP=6605; Higbee in Cessford 2007), Corpus Christi (sample size NISP=769; Swaysland & Higbee in Cessford 2005), St. John's Triangle (sample size NISP=7307; Higbee in Newman 2008b). In addition, another valuable comparative is the King's School, Ely (sample size NISP=2012; Higbee in Dickens & Whittaker *in prep.*). Of these four assemblages, the most similar list of species was recorded from a large refuse pit at the St. John's Triangle site, which was most probably associated with a nearby tavern, although in broad terms all four assemblages reflect a similar pattern of animal use to that observed in the Trinity College Kitchens assemblage. The overwhelming prevalence of ovicapra, coupled with an under-representation of cattle and pig, was not noted in other assemblages to such extent, however. In other words, cattle and pigs are considerably better represented in these four comparable assemblages compared to the Trinity College Kitchens assemblage, thus reflecting a pattern of mixed economy where all three livestock species are of equal economic importance. The fact that Grand Arcade, St. John's Triangle and Corpus Christi assemblages displayed a much more extensive array of bird and fish species is due to the fact that the majority of bird and fish species identification at the present site remains provisional pending further specialist analysis.

Recommendations for further work

First and foremost, as outlined above, the Trinity College Kitchens assemblage will benefit from further identifications of bird and fish species. In addition to identifications to species for these two faunas, it would also be important to record potential butchery marks with a view to gaining valuable information about food preparation and consumption. Secondly, body-part representation and distribution can also provide valuable information regarding food procurement and use. In other words, analysis of different body parts can tell us whether for instance sheep were being reared on site, brought to the site as complete carcasses or as portions of dressed meat. Thirdly, building of kill-off profiles for the main species would be crucial for

our understanding of the site's dietary practices. Furthermore, biometrical data should be used for shoulder height calculations, which should then be compared with similarly dated assemblages from both the urban and rural sites. That way, one can potentially see whether College obtained their animals from local farmers or whether improved larger animals/ breeds were being brought from elsewhere. Finally, it seems that the potential of this assemblage is both quantitative and qualitative in nature. Incorporating the data from comparable assemblages from Cambridge should considerably increase the size of the dataset with a view to offering more distinct answers relating to questions about site's procurement strategies, as well as socio-economic and dietary practices.

Environmental Remains (Rachel Ballantyne)

Five bulk samples were assessed from Areas 2, 3 and 5. Three of these were processed by wet-sieving, and as a result do not have associated plant assemblages other than charcoal >4mm. The two remaining samples were flotation sieved by Frankie Cox at the CAU, using a modified version of the Sīrāf tank (Williams 1973). Flots (> 300µm) and heavy residues (>1mm) have been dried and then sorted using a Leica MS5 (x6.3–x50) binocular microscope for flots, and by eye for residue fractions greater than 4mm. The 1–4 mm residues are retained for now. Full raw data is summarised in Tables 9 and 10. Nomenclature follows Stace (1997) for plants.

Preservation

Charred plant remains are rare and often puffed and fragmented, however charcoal in the bone-rich layers is well preserved. Occasional untransformed seeds also occur. This phenomenon is common in medieval to post-medieval contexts from central Cambridge (de Vareilles & Ballantyne *in prep.*), and appears to represent part-waterlogged seeds that have survived due to unknown qualities of the urban burial environment, rather than intrusive modern items. The very low density of organic seeds/fruits per litre of sediment suggests they are likely to be heavily skewed towards more durable types. Occasionally, mollusc shell is also well preserved, as is consistent with the calcareous groundwater of the Cambridge region.

Phase 1 pit/well fill [304] F.300

Six charred cereal grains and a low amount of wood charcoal provide limited evidence of human activity. Three grains are of free-threshing wheat (*Triticum* sp.) and the other three are unidentifiable. A few untransformed seeds are of plants that are natural colonisers of disturbed, nutrient-enriched soils, as is consistent with an urban setting; elder (*Sambucus nigra*), common fumitory (*Fumaria officinalis*) and dead-nettle/horehound (*Lamium/Ballota* sp.). Elder seeds could also represent human or animal faeces following consumption of the berries, but this is not demonstrable from these remains (i.e. no other untransformed food seeds are present). There is good biological evidence for a proportion of this context resulting from flood deposits, which may be *in situ* or relocated from elsewhere as backfill. There are abundant freshwater snails and occasional oogonia ('seeds') of green algae Charophytes. The latter thrive only in clear, pure freshwater environments and could not be expected to colonise small, wet features in an urban setting. Of the molluscs, both *Bithynia tentaculata* and *Bithynia leachi* are found in larger freshwater bodies such as rivers and lakes, so again would not be expected in small, wet urban features. A number of

the other molluscs are tolerant of small, seasonally-wet ‘slum’ environments (*cf.* Evans 1972), notably *Valvata cristata*, *Lymnaea truncatula*, *Gyraulus albus* and *Anisus leucostoma*. These other shells, in conjunction with the very low number of terrestrial types, could thus be evidence for a damp local environment.

Phase 2 kitchen sump basal fill [277] F.212

Although rich in wood charcoal, this feature includes no other charred plant remains. A single, small charred fragment of wool/yarn is present.

Phase 2 and 3 bone-rich layers F.206, F.216, F.222

All four samples have been processed by wet sieving, which means that any plant macrofossils less than 4mm have not been retrieved (Table 9). Of the sampled features, F.222 is by far the richest with 15ml charcoal per litre sediment, whilst the others have values of 0.3–0.5ml charcoal per litre. As with F.212 above, all samples contain a wide range of uncharred artefacts in addition to wood charcoal, demonstrating an admixture of refuse sources.

Conclusions

All the sampled contexts contain, in addition to wood charcoal, numerous uncharred bones and seashells that represent an admixture of refuse. As a result, caution is required when interpreting the different material culture groups as they are likely to contain items from a wide range of sources. The very limited charred plant macrofossils reiterate patterns known from larger medieval and post-medieval assemblages in Cambridge (*e.g.* de Vareilles & Ballantyne *in prep.*). Namely:

- The widespread presence of probable oven ash that includes free-threshing wheat and barley grains with occasional evidence for sedge fuel
- Intermittent, low quantities of untransformed seeds that are likely survivals from the ‘natural’ vegetation of the urban environment

The freshwater molluscs in pit/well F.300 include good evidence for local flooding from the River Cam or redeposited freshwater sediment. No further work is required on this assemblage, which is of local significance and has been adequately characterised during assessment. The results provide a limited contribution to the urban landscape of Cambridge, where the bulk sampling of waterlogged or refuse-rich features continues to be a high priority for all periods.

Feature number	F. 206	F. 222	F. 216	F. 216
Area	2	2	2	2
Phase	2	2	3	3
Context number	248/237	[221]	[209]	[209]
Sample number	<204>	<203>	<201>	<202>
Description	Bone-rich	Bone-rich	Bone-rich	Bone-rich
Feature type	Under floor layer	Over floor layer	Rubble layer	Rubble layer
Volume/ litres	15	20	20	20
Estimated charcoal volume/ millilitres	6	300	6	10
ml charcoal per litre of sediment	0.4	15	0.3	0.5

Table 9: Wet-sieved samples (>4mm) from Areas 2, 3 and 5.

Feature number		F. 300	F. 212
Phase		1	2
Area		3	2
Context number		[304]	[277]
Sample number		<300>	<205>
Description		Fill	Basal fill
Feature type		Pit/well	Kitchen sump
Volume/ litres		8	4
Charred cereal grain			
<i>Hordeum vulgare sensu lato</i> caryopsis	Barley grain		
free-threshing <i>Triticum</i> sp. caryopsis	Free-threshing wheat grain	3	
Cereal indet. caryopsis	Indeterminate grain	3	
Untransformed wild fruits/seeds			
<i>Fumaria officinalis</i> L. achene	Common Fumitory	* u/w	
<i>Sambucus nigra</i> L. seed	Elder	+ u/w	* u/w
<i>Lamium/Ballota</i> sp. nutlet	Dead-nettle/Horehound	* u/w	
Charophyte oogonium	Green algae 'seed'	+ u/w	
Estimated charcoal volume/ millilitres		3	5
Charcoal >3mm		+	+
Charcoal <3mm		++	++
Vitrified charcoal			+
Coke/fly ash			++
Mollusc shell			
<i>Bithynia tentaculata</i> L.	Quiet rivers and still but large waters	*	
<i>Bithynia leachi</i> Sheppard	Quiet rivers and still but large waters	+	
<i>Valvata cristata</i> (Müller)	Slow, muddy water with vegetation	*	
<i>Lymnaea truncatula</i> (Müller)	Marshy, very shallow water	*	
<i>Planorbis planorbis</i> (L.)	Ponds and ditches	+	
<i>Gyraulus albus</i> Müller	Freshwater, esp. oxygen-poor with weed	*	
<i>Anisus leucostoma</i> Millet	Seasonal ponds and ditches	+	
<i>Succinea</i> sp.	Damp waterside vegetation	*	
<i>Columella edentula</i> (Draparnaud)	Damp places and woodlands	*	
<i>Pupilla muscorum</i> (L.)	Turf, walls and dry places	*	
<i>Vallonia pulchella</i> (Müller)/ <i>exentrica</i> Sterki	Open land, dry to damp	*	
<i>Ceciloides acicula</i> (Müller)	Burrowing, probably intrusive	*	
<i>Aegopinella/Oxychilus</i> sp.	Shady damp places	*	
Sphaeridae indet.	Small freshwater bivalve	*	
Other items in flot			
Fish scale		*	
Fish bone			*
Small mammal bone			*
Wool/yarn fragment			* ch
Other items in residue > 4mm			
Potsherd		+	++
Burnt clay		+	
Bone fragments		++ (+ ch)	+++
Small bone		+	+++
Seashell		++	++

Table 10: Flotation sieved samples from Areas 2, 3 and 5. (Key: * 1 or 2 items, + <10 items, ++ 10-50 items, +++ >50 items, u untransformed, w waterlogged, ch charred).

Section I: Discussion (incorporating information from Mark Samuel)

Little can now be discerned of the pre-collegiate sequence in this area due to the impact of subsequent phases of activity. In particular, the extensive structural remains that comprise Phase 2 truncated – and, in several instances, probably entirely removed – the majority of features that predated the 16th century. Included amongst this largely ‘lost’ portion of the sequence, therefore, is the earliest phase of collegiate activity at the site. This is because for 220 years (between 1326 and 1546) this area comprised part of the grounds of Michaelhouse, the second oldest College in the University. Despite the extent of later truncation, however, potential evidence pertaining to this period in the site’s history was recovered in the form of several moulded stone blocks that had been reused in the foundations of *Building A*. These architectural fragments were most probably derived from a single, high-status structure of early 14th century date. This building contained two orders of pier (sharing chamfered polygonal angles) as well as an elaborate – probably quadripartite – vault that was supported by *tas-de-charge* springer blocks. The outer order of a possible arcade arch was also identified, along with the heavily weathered base of an elaborate pinnacle derived from the building’s superstructure. Because of the sheer size of the blocks in question, allied with their unabraded state, it appears unlikely that they had been transported far from their initial location prior to their reuse (although this possibility cannot, of course, be entirely discounted). The nature of the original building itself, however, is somewhat less clear. It was certainly of a high architectural order, and employed adventurous mouldings that made much use of the *wave* – which predominated during the English Decorated Style, c. 1290-1360 – the *ogee* and the *three-quarter hollow* flanked by *fillets*. Thus, if secular in nature, it was potentially more comparable in the scale of its ornamentation to a *hôtel de ville* in a city of the Low Countries than a typical 14th century English townhouse (see further Grenville 1997; Quiney 2003). A second possibility, therefore, is that it was ecclesiastical in origin, and in this context it is notable that many of the architectural elements that have been identified would not have appeared out of place in a well-appointed contemporary church.

Given the coincidence of both the date and the potential proximity of this building to the present site, one intriguing possibility is that it may originally have been associated with the preceding College of Michaelhouse (which was founded in 1324). Upon the dissolution of this institution in 1546, its buildings passed into the ownership of the newly established Trinity College. Although the majority of the structures were demolished at this time, some information regarding their nature and disposition can be reconstructed from the surviving documentary sources. Perhaps most pertinently, it is known that “the largest and most important part of [Michaelhouse] ... was a house which stood at the corner of Foul Lane and St. Michael’s Lane” (Willis & Clark 1886 II, 394). Prior to its conveyance to the College, on the 26th of September 1324, this building had been in the possession of Roger and Robert Buttetourte. These brothers are known from documentary sources to have purchased the property on the 2nd of June 1294, and subsequently, on the 16th of March 1306, they obtained a royal license to enclose and keep the lane leading to Flaxhythe – which abutted their dwelling to the south – in order to enlarge their property (*ibid.*, 394-5). Although no earlier documents relating to this plot are discussed by Willis and Clark, additional research was undertaken within Trinity College’s archives by A. E. Stamp for his volume celebrating Michaelhouse’s sixcentenary. Here, he discovered that the Buttetourtes had purchased their property from two brothers named Bouden, whose father had apparently combined two earlier

houses – originally belonging to two adjacent properties – in order to create one large mansion (Stamp 1924, 15-16). From the surviving records, Stamp concluded that this “was an L-shaped building, the wings running north and west; one wing corresponded with the present College buildings facing Bishop’s Hostel, the other with a short length of the building on the west side of Great Court” (*ibid.*, 16).

Although, in its initial form, this mansion appears to have been constructed in the mid 13th century – at least fifty years before the date of the recovered architectural fragments – it is possible that the structure was rebuilt by the Buttetourtes during their aforementioned early 14th century campaign of reorganisation and enlargement at the property. Certainly, in 1324 Hervey de Stanton, the founder of Michaelhouse, “granted to the Master and Scholars, and their successors, a place of habitation in his messuages with the appurtenances situated in the Parish of St Michael, in the street called Milnestreet which he had purchased of Master Roger, the son of Lord Guy Botetourte, for ever” (Loewe 2010, 596). It has therefore been proposed “that for many years [this] mansion ... served for the members of the College and took the name of the manse thereof” (Willis & Clark 1886 II, 398-99). Although the specific design of the building itself is perforce unclear, it is notable that the 14th century generally comprised a period of increasing standardisation of domestic layout. Indeed, architecture at this time was dominated by the emergence of the tripartite open hall. This arrangement placed the service rooms (which typically consisted of a buttery and a pantry) at one end of the main hall, where they were separated off by a screened passage, and the more private chambers at the other (Quiney 1994, 231; Grenville 1997, 93-4). In grander houses – a category to which the Buttetourtes’ mansion may well have belonged – the hall was often situated on the first floor, with a vaulted undercroft beneath. This tripartite layout, which became almost ubiquitous in larger houses of the 14th to 16th centuries, emerged from the more heterogeneous vernacular architectural forms of the preceding two centuries (*cf.* Gardiner 2000; Gardiner 2008; Johnson 2010). Significantly, it also came to be adopted as the standard template of the halls in Oxbridge Colleges (RCHM(E) 1959 I, lxxx-lxxxii).

In fact, the conversion of a former domestic property for collegiate use in this manner was by no means unprecedented. Two further Cambridge examples can be cited, each of which consisted of a wealthy merchant’s house that was situated in relatively close proximity to the present site. The first, and oldest, of this pair comprises the late 12th/early 13th century School of Pythagoras, which was purchased for use by Merton College, Oxford, in 1271 (Gray 1932; RCHM(E) 1959 II, 377-9; Graham-Campbell 1968; Leader 1988, 60; Grenville 1997, 74; Quiney 2003, 163). The second comprises the early 14th century mansion of Robert de Croyland, which became the permanent home of King’s Hall in 1336 (Willis & Clark 1886 II, 431; Cobban 1969; Trevelyan 1972, 3). But if the moulded stone blocks recovered from the foundations of *Building A* were indeed derived from a domestic mansion that had subsequently been adopted for collegiate use, then this had clearly formed a building of unusual architectural pretension. For whilst the presence of a vaulted undercroft was by no means uncommon during this period, the addition of decorative arcading and an elaborate pinnacle would have been more in keeping with a civic as opposed to domestic milieu (*c.f.* Quiney 2003). Nevertheless, the Buttetourtes’ mansion was potentially of the right age, and was certainly situated in the right location, to comprise an important potential source for the reused masonry that was recovered. Furthermore, amongst the remainder of the known buildings of Michaelhouse there are few alternative structures

that could have provided similar material. This is in large part because the society itself was neither large nor particularly wealthy. Of its members, “all admitted to the Fellowship were to be priests, or at least in Holy Orders, and were to enter the Faculty of Theology” (Leader 1988, 81).

Unlike nearby King’s Hall, for example, which was subject to royal control and thus kept extensive records, Michaelhouse was a private institution largely independent of outside authority (Stamp 1924; Leader 1988, 82). Consequently, fewer records were maintained and much of what is known of the history of the College comes instead from the ‘Otryngham Book’, a precedent book that was initially compiled by a 15th century Master of Michaelhouse, John Otryngham. Within this work are transcribed numerous title deeds, statutes, notes of benefactions and miscellaneous documents relating to the early years of the society (Stamp 1924, 12). Also recorded in its pages are the accounts of three major phases of building work, which took place during the late 14th, mid 15th and late 15th centuries. The first of these events, which occurred in *c.* 1380, comprised the construction of “twelve chambers and a kitchen” (Willis & Clark 1886 II, 399). Eight of these chambers “were built on the north part, and four on the south part’ of the Botetourte house” (Loewe 2010, 598). Subsequently, in *c.* 1444 William Aysclough, Bishop of Sarum, donated £100 “towards the building of [the College]” and in 1497 John Fisher, Bishop of Rochester, donated £110 for “a new building”, the nature of which is not recorded (Willis & Clark 1886 II, 399). Cumulatively, this work resulted in a small complex of buildings that most probably took the form of three ranges – situated to the north, south and west – that were arranged about a central courtyard and accompanied by a small gatehouse (*ibid.*, 401-2). The only additional building in the College was the chapel. Somewhat unusually, this structure – St Michael’s, which was situated a short distance away from the main College precinct – also served a dual parochial function as the local parish church (RCHM(E) 1959 II, 284-86; Loewe 2010, 595). It was built by Hervey de Stanton in 1325-28 in order to serve his new foundation (RCHM(E) 1959 II, 285), and was not demolished when Michaelhouse was dissolved but remains standing to this day.

In the past, historians have generally assumed that the hall of Michaelhouse was similarly retained in 1546 for use by the newly founded Trinity College – albeit perhaps in a somewhat modified or enlarged form (*e.g.* Willis & Clark 1886 II, 465; Atkinson 1894, 234; RCHM(E) 1959, 210; Stamp 1924, 19; Pevsner 1970, 164-65). The results of the recent archaeological investigations, however, have clearly demonstrated that this was not the case. Instead, the earlier building appears to have been comprehensively demolished in order to make way for a new and expanded structure (*Building A*); its remains may, or may not, have been incorporated within the foundations of the replacement structure. This latter building extended at least *c.* 3.5m (or 11.5ft) further to the north than its predecessor, into what had originally comprised an adjoining property, and is also likely to have been widened at this time. The context for such extensive reconstruction can be found in the scale of the new institution relative to the size of its predecessors. Michaelhouse itself, for example, originally had provision for a Master and only six Fellows, with this number later being increased to include two additional Fellows, three Chaplains and four Bible Clerks (Rouse Ball 1906, 41). In 1546, when the College was dissolved, 21 individuals were recorded as resident at the institution (Lee 2005, 144). King’s Hall was rather larger, and had originally provided accommodation for a Master and thirty-two Fellows (Rouse Ball 1906, 41); in all, fifty resident members were recorded in

1546 (Lee 2005, 144). In contrast, however, Trinity College was endowed to support fifty undergraduate Fellows, ten undergraduate Scholars and forty Grammarians. In 1548, a total of 143 individuals were recorded as resident in the College (Leader 1988, 346). This is more than double the combined population of the two earlier foundations and represents an almost sevenfold increase in the number of potential diners using the hall, thus clearly underlining the necessity of rapid enlargement/reconstruction of the pre-existing facilities.

A great deal of information was recovered regarding the nature of the replacement hall, which was most probably constructed in 1546-47 (Willis & Clark 1886 II, 460). The locations of this building's north, east and west walls were all identified, for example, along with the base of a pier that supported its undercroft. Furthermore, traces of its incised decorative scheme also survived. Although it is likely that many contemporary undercrofts were also decorated, most probably with brightly coloured painted designs, the presence of incised decoration such as this is rare; perhaps the closest parallel to the present example is to be found in "the undercroft of the chapel at Lambeth Palace [which] still has areas of plaster lined to look like ashlar on its walls" (Schofield 1995, 74). In addition, within the test pits excavated in Area 1 – which were situated inside the former courtyard of Michaelhouse – the original mid 16th century external ground height was identified at 7.78m OD (see further Appendix 1). As the brick floor of the undercroft lay at 6.08m OD, this portion of the building extended 1.70m below the contemporary ground surface. It is therefore likely that the floor of the hall above was partially raised, and the undercroft illuminated by windows situated high up in its walls. Significantly, because the building was constructed during the period in which the first detailed maps of Cambridge were compiled – and because part of the hall, principally consisting of its eastern façade, remained standing until 1771 – five additional sources can be adduced for the appearance of the structure. These can be summarised as follows:

- I. The earliest useful depiction to survive is that of John Hammond, which was made in 1592 (Figure 17A). Although an earlier map, drawn by Lynne in 1574, remains extant, no detail is discernable in this image due its limited scale, orientation and perspective. Hammond's plan reveals that the hall possessed an oriel window partway along its eastern wall, and shows differing arrangements of windows to both the north and south of this feature. A *louvre* also appears to be present on the slated roof, implying the presence of a central open hearth.
- II. A mid to late 16th century plan of the Great Court area, which most probably formed part of a proposal for its reconstruction, remains present in the College Library (Figure 17B). This drawing, which is undated, appears to have been compiled either when Trinity College was first established (in 1546-7), or in 1594-5 when plans for the present layout of Great Court were first being formulated (Willis & Clark 1886 II, 468). In general, the latter date seems much the most probable, although it should be noted that the plan's depiction of the extent of the chapel – the walls of which were completed in 1564 – is inaccurate; this may perhaps have been an oversight, or a conjectured alteration that was never undertaken, but could indicate that the drawing predates the chapel's construction. This uncertainty highlights one of the plan's prevailing limitations, in that distinguishing between proposed changes and contemporary reality remains problematic. Nevertheless, its contribution is potentially significant because both the hall ('*Aula comuinius*') and the kitchen ('*Culina*') are clearly labelled, and correspond closely with the buildings depicted in these same locations by Hammond. The oriel window is again present, in this instance clearly individuated into three lobes, along with a series of buttresses that are not shown on the 1592 plan. An open hearth is depicted in the centre of the hall, and two large fireplaces are indicated against the western wall of the kitchen.

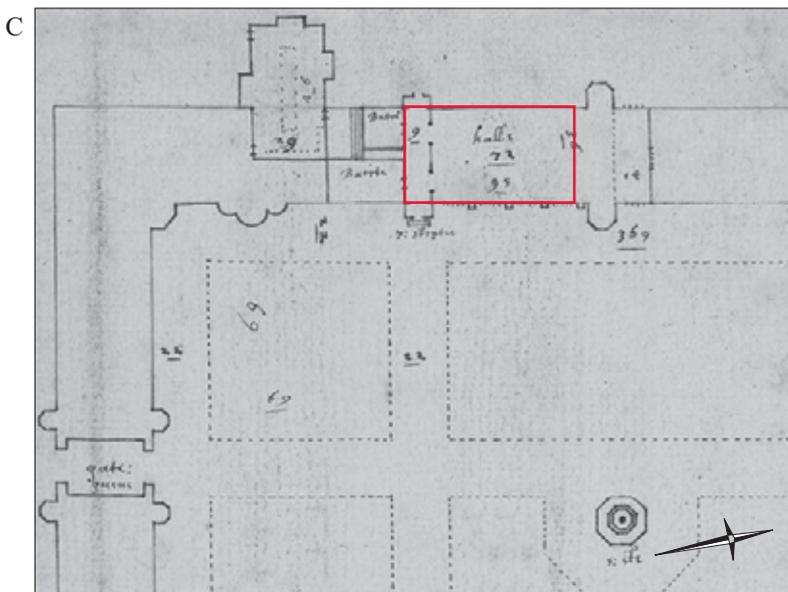
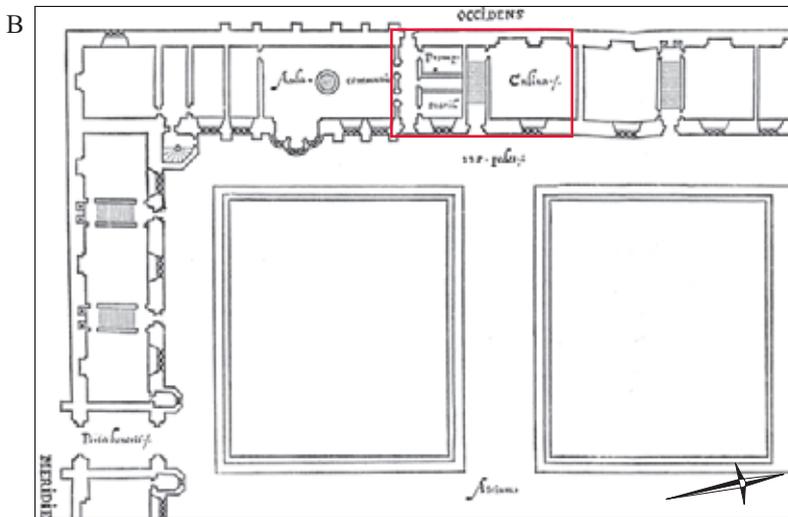
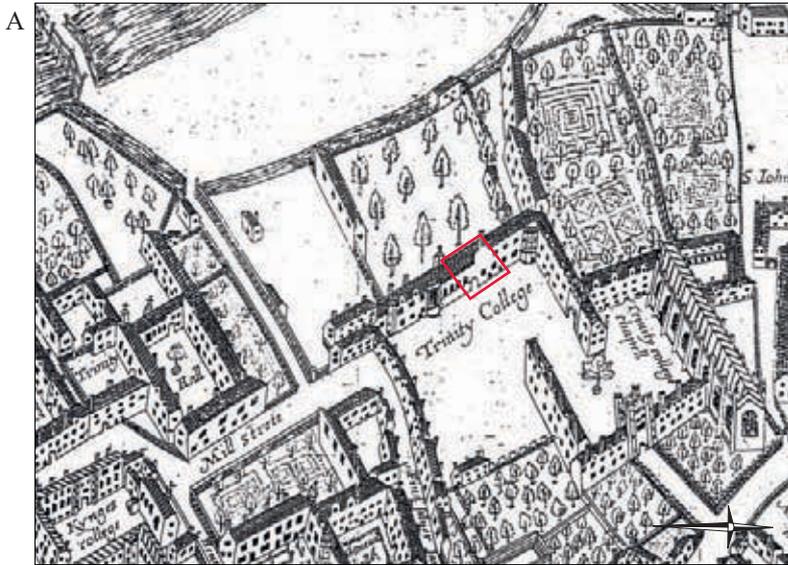


Figure 17. Historic map sequence, with area of excavation shown in red.

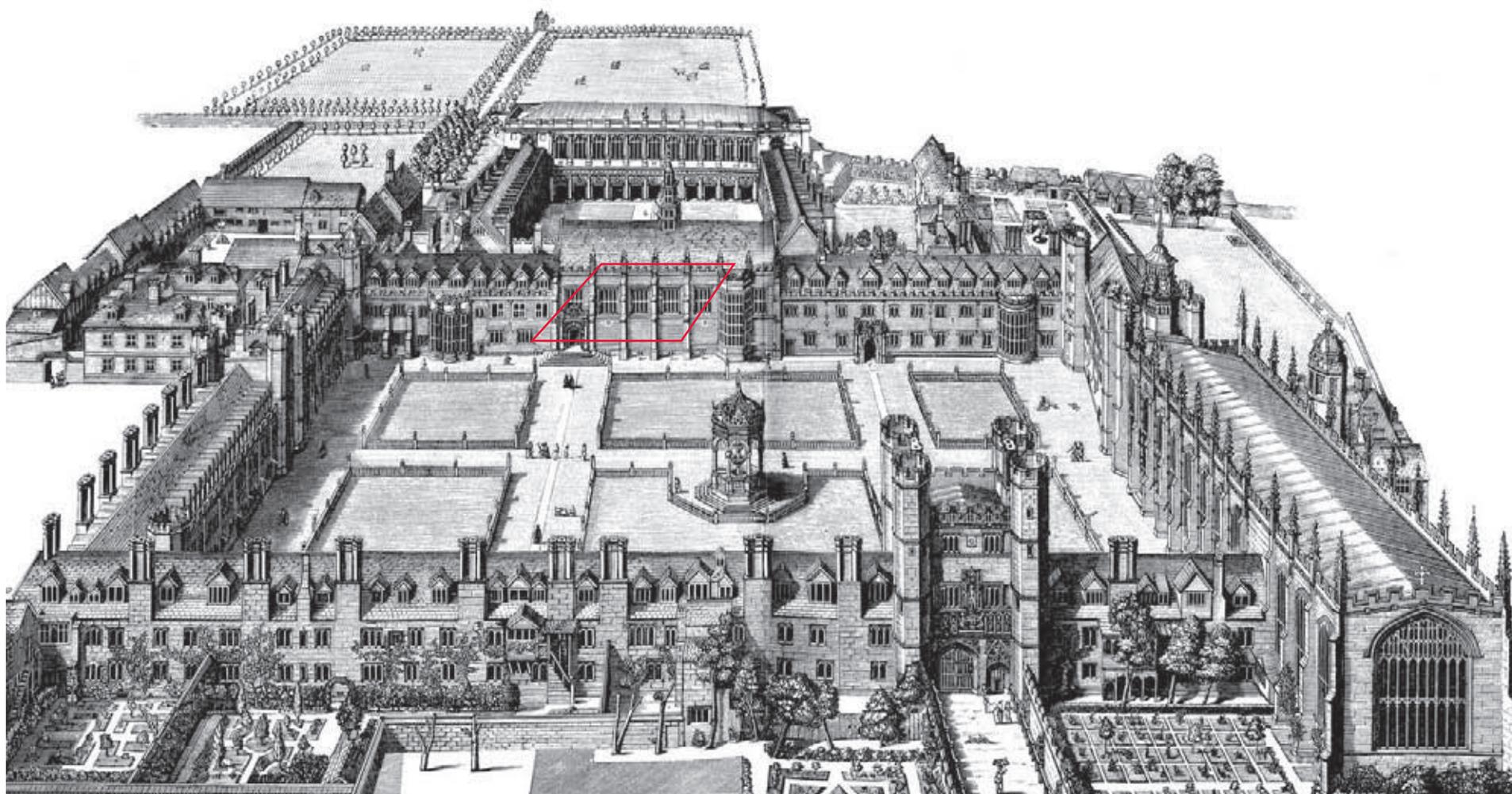


Figure 18. David Loggan's print of 1688, with area of investigation in red.

- III. In *c.* 1609, the architect Robert Smythson drew a plan of the newly established Great Court (RIBA 29121; Figure 17C). Although it has previously been suggested that this drawing was made partway through the process of the hall's demolition (RCHM(E) 1959, 212), it appears more likely to show the new Great Hall – and the outline of the adjacent new kitchen block – shortly after their completion.
- IV. The most detailed depiction of the old hall is that shown in the print made by David Loggan in *c.* 1688 (Figure 18). Although the former kitchen building and the northern end of the old hall had been demolished by this time, much of the eastern façade of the latter structure remained largely extant. The lobed oriel window is still present, for example, and buttresses are depicted to its south; these have clearly been removed to the north, however, where a series of new windows have also been inserted. Many of these latter alterations are likely to have been associated with the construction of the new kitchen block, which intruded into the old hall, along with the subdivision of the earlier building into three stories (which also necessitated the introduction of a series of dormer windows).
- V. The final strand of evidence relates to a series of archaeological observations that were made by T. D. Atkinson during building alterations undertaken at the site in 1892. At this time, a series of foundations were revealed that correspond to four of the buttresses on the eastern side of the old hall, as well as the footings of the oriel window (see Figure 3 for location). In addition, three fragments of tracery derived from this latter feature were also recovered (Atkinson 1894).

Location	Date	Length (ft)	Breadth (ft)	Area (ft ²)
School of Pythagoras	<i>c.</i> 1200	65	26	1690
Peterhouse	<i>c.</i> 1286-1300	50	26	1300
Trinity Hall	Pre-1374	40	27	1080
Corpus Christi College	<i>c.</i> 1350-1400	48	28	1344
Gonville & Caius	1441	48	24	1152
Queen's College	<i>c.</i> 1448-54	50	23	1150
Jesus College	1495-1500	55	24	1320
Christ's College	1505-15	53	26	1378
St. John's College	1510-16	70	30	2100
Magdalene College	<i>c.</i> 1519	45	24	1080
<i>Trinity College (Phase 1)</i>	<i>c.</i> 1547	50	26	1300
Emmanuel College	1584-86	70	32	2240
Sidney Sussex College	1595-1600	56	27	1512
<i>Trinity College (Phase 2)</i>	1604-05	100	40	4000
St Catharine's Hall	1674-75	38	28	1064
Clare Hall	1693	50	28	1400

Table 11: Comparative measurements of medieval and post-medieval halls in Cambridge (excluding screen passages, butteries and pantries). Dimensions are taken from Willis & Clark 1886 except those of the School of Pythagoras, which are from RCHM(E) 1959. The length of the first phase of Trinity College Hall is taken from the plan shown in Figure 17B.

Based upon the archaeological evidence recovered, supplemented by information derived from the plan shown in Figure 17B, the size of the first hall of Trinity College can be determined with some certainty. It measured internally around 50 feet long by 26 feet broad (or *c.* 15m by 8m), which is relatively typical of Cambridge halls of the period (see Table 11). Although somewhat smaller than the hall that had recently been constructed at nearby St John's (1510-16), it was closely comparable to those at both Christ's (1505-15) and Magdalene (*c.* 1519). Given the evidence for this building's recent expansion, therefore, the preceding hall of Michaelhouse appears likely to have been smaller than any known example of medieval or post-medieval date now extant in the University. In addition, akin to the moulded stone blocks that were incorporated

within its foundations, the replacement building appears to have been architecturally quite elaborate. The triple-lobed oriel window, for example – which was originally believed by Atkinson to be 15th century in date (Atkinson 1894, 235) – was almost certainly constructed in the mid 16th century when the hall was rebuilt (Pevsner 1970, 165). Although no part of this building is now standing at the site, it is possible that a small portion of it was incorporated into the succeeding Great Hall. This is because the two doorways into the screens passage, though differing in shape and details, both clearly predate the standing hall (Willis & Clark 1886 II, 603). Judging by their form, it is certainly possible that these elements were retained from the earlier building (Pevsner 1970, 170).

The construction of Trinity College's new kitchen (*Building B*) can be dated with confidence to 1554-5, when this structure – which formed the southern end of a range that also contained the Buttery, the Combination Room and the Master's study, bed-chamber, corner-chamber, lowest corner-chamber, middle corner-chamber and outer chamber – was frequently mentioned in the building accounts (Willis & Clark 1886 II, 471). The identification of *Building B* as the undercroft of the kitchen is confirmed by the late 16th century plan of Great Court (shown in Figure 17B), in which the overlying room is clearly labelled. Unlike the preceding hall, however, whose foundations potentially made much use of a recently demolished on-site building, this latter range was predominately constructed from material imported from Cambridge's Franciscan Friary. This had been conveyed to Trinity College by Henry VIII on the 19th of December 1546, following its dissolution (RCHM(E) 1959, 210). Amongst the monastic buildings that are known to have been demolished at this time are the church (in 1546-1547) the belfry, the cloister, the graveyard and the schoolhouse (in 1553-4). The robbing activity culminated in 1556-7 with the removal of 2950 cart loads of stone for reuse in the Trinity's new chapel (Willis & Clark 1886 II, 726; see also Darby & Miller 1948). An account given in 1547 indicates that “the materials were either reduced to lime, or hewn into shapes convenient for use in new buildings, previous to removal” (*ibid.*). This is entirely consistent with the nature of the masonry fragments that were recovered from the kitchen undercroft, several of which appear to have been derived from fragmentary monastic gravestones/sarcophagi. (In addition, although the description is clearly not consistent with the size and condition of the fragments that were encountered within the foundations of the adjoining hall, the importation of material from the demolished church nevertheless represents the most probable alternative source for these blocks if the possibility of an on-site domestic origin is discounted).

Within the undercroft of the kitchen block it is apparent that a wide range of contemporary activities were being undertaken. Whilst historically it is known that the usage of such a space was not always directly associated with the function of the structure above (Quiney 2003, 149), a strong connection does appear likely in this particular case. This interpretation is based upon the presence of a large, well-built sump, which had been reconstructed on at least two occasions. Furthermore, a series of foundation scars were also identified that most probably correspond to the bases of a number of vats or ovens. Such evidence suggests that the undercroft was potentially associated with activities relating to the College's Buttery. The kitchen itself was situated on the ground floor, which was rather more extensive than the undercroft beneath, and is likely to have been overlain in turn by the Combination Room (Willis & Clark 1886 II, 474).

The demolition of the north end of the first phase hall, along with its accompanying kitchen, can also be dated with some confidence (RCHM(E) 1959, 210). This is because entries in the College's building accounts of 1604-5 contain references to "diging the foundation of y^e Kitchen wall that goeth thorough y^e Old Hall" and "diging at y^e old Hall walles" (Willis & Clark 1886 II, 466-7). Amongst the material culture that was recovered from the demolition deposits was a significant quantity of pottery associated with the storage/serving of beverages, along with a relatively sizable assemblage of animal bones. In terms of both content and composition, these groups were largely indistinguishable from assemblages that had previously been deposited within the kitchen undercroft during the period of its active use, thus implying that they may have had a similar origin. The buildings themselves were demolished as part of a wider scheme to establish a new, regular and expanded 'Great Court'. This plan, which was financed by Sir Thomas Nevile (Master 1593-1615), was undertaken on a very ambitious scale. The new Great Hall, for example, was to be a little over three times the size of its predecessor (see Table 11), and it remains to this day the largest hall in any Cambridge College. Its construction was begun on the 9th of April 1604, following a design by Ralph Symons (Willis & Clark 1886 II, 490). This was based upon the template of Middle Temple Hall, London – completed 1572 – the dimensions of which it follows precisely; its roof design, however, was updated to reflect more recent tastes (RCHM(E) 1959, 210). It was built by John Symes, and was completed by the 3rd of October 1605 (*ibid.*). Amongst the materials employed in its construction was ragstone reclaimed from Cambridge Castle as, by this date, the site of the former Franciscan Friary had been occupied by Sidney Sussex College.

The new kitchen, which intruded laterally into the old hall, and its accompanying buttery were begun on the 7th of July 1605, and their roofs were slated by the 24th of November that year (Willis & Clark 1886 II, 467). The replacement kitchen was itself almost twice the size of its predecessor, measuring 52ft by 50 ft in extent compared to *c.* 30ft by 26ft. During its construction, the western wall of the old hall was demolished but the eastern wall – with its oriel window – was retained, and made to serve for the new Combination Room (*ibid.*). The next major structural alteration occurred in 1750-51, when the original pillars in the undercroft of the Great Hall were removed and the extant brick-built barrel vaults inserted (*ibid.*, 603). Then, in 1771, the last surviving remnants of the first phase hall were finally demolished. At this time, "the whole range from the Great Hall southwards, with the exception of the kitchen, was taken down and rebuilt in white brick, faced with stone on the side near the court" (*ibid.*, 606). The new three-storey building, which was designed by the architect James Essex, was completed in 1774 and first occupied in 1775. Due to the construction of cellars beneath the new building "it was necessary to remove the foundations of the old walls" (Atkinson 1894, 237). Areas 2, 3 and 5 were unaffected by this work, as they are situated beneath the south end of the Great Hall. Within the remainder of the kitchen area, however, the reduced floor height indicates that only the basal remnants of cut features are likely to have survived. Subsequently, during the 20th century, numerous services were inserted throughout the kitchens as a whole, further truncating the remaining deposits and leaving only isolated 'islands' of stratigraphy upstanding in the investigated area.

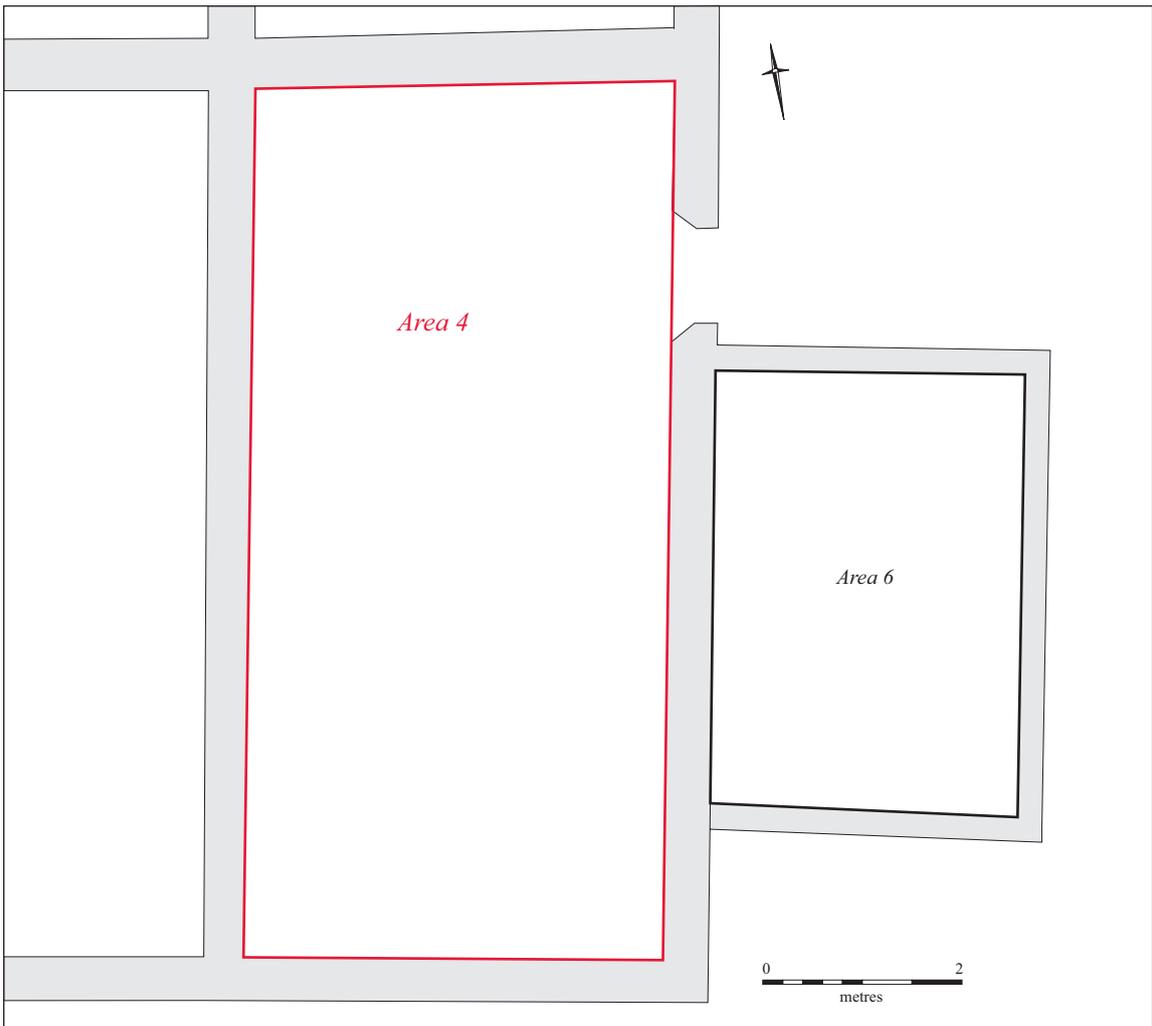
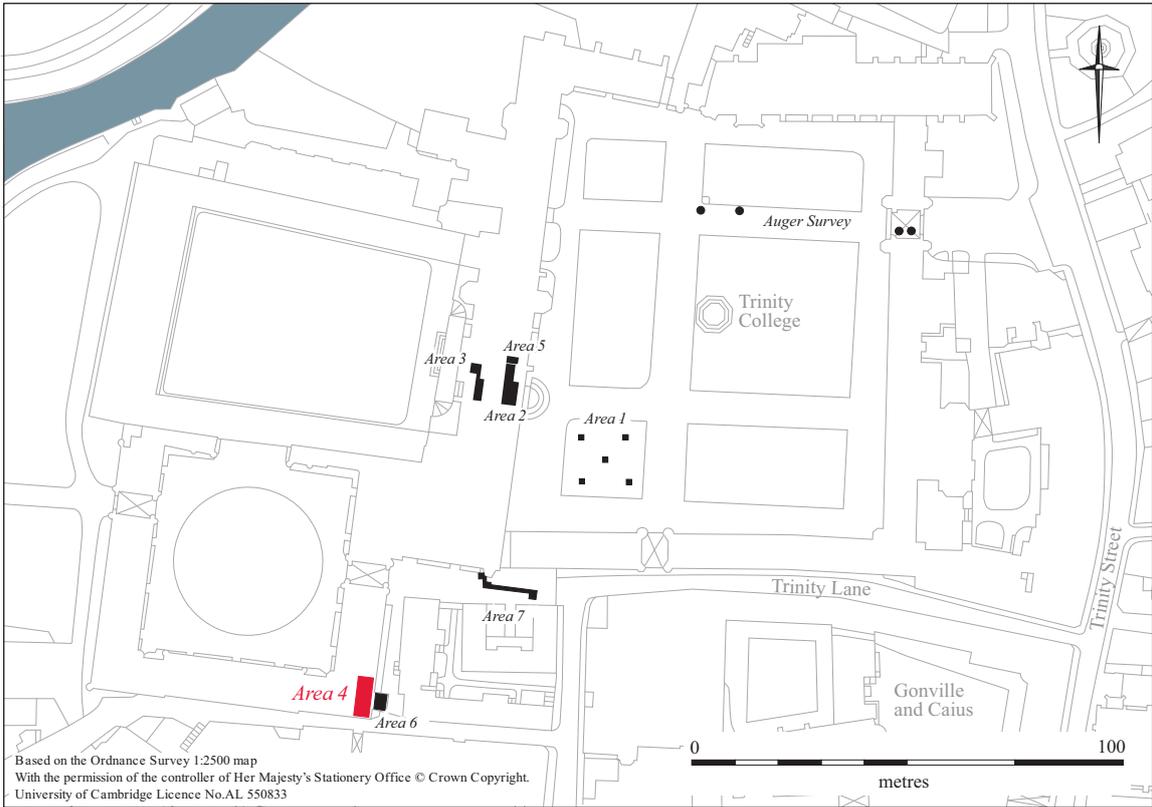


Figure 19. Location of Area 4.

Section II: Area 4

The second area of excavation was situated some distance to the south of that previously described above, within the southernmost of the two medieval street blocks (see Figure 19). Work commenced in Area 4 on the 6th of October 2010 with the excavation of two evaluative test pits, Test Pits 11 and 12, which were located inside the southeastern room of the southern range of Trinity College's New Court. Both of these test pits – which measured 0.5m by 0.5m in extent, and were situated in the northwestern and southeastern corners of the room respectively – encountered *in situ* archaeological deposits lying *c.* 0.7m below the present floor surface. Because it was the contractor's intention to reduce the area by 1.3m (to a height of 6.45m OD) in order to facilitate the construction of an electrical switch room, the lower 0.6m of archaeological deposits were then subject to archaeological excavation in advance of this work. Finally, an additional test pit – measuring 1.0m by 1.0m in extent – was also inserted in the centre of the room in order to ascertain the depth of the underlying natural. Thus, although the sequence in Area 4 could not be fully investigated due to the pre-determined depth of intervention required by the contractor, a number of archaeological deposits were investigated, representing four distinct phases of activity. Perhaps the most significant remains were those of three timber-framed buildings of 12th to 13th century date. In contrast, investigations conducted within the former Bin Store (Area 6) – which was situated immediately to the east of Area 4 – encountered only a sequence of modern building alterations (see further Appendix 1); the following discussion is therefore restricted to the remains encountered in Area 4.

Phase I

Within the central test pit, the earliest deposit to be identified consisted of mid yellowish brown sandy silt sub-soil layer **F.431**. This measured up to 0.18m deep and contained two sherds of highly abraded indeterminate Roman coarseware. A fragment of *tegula* was also recovered as residual material from a later feature. As no cut features of Roman date were identified, however, this material appears most likely to have been imported to the site during manuring activity associated with arable cultivation (see further the discussion section, below). The sub-soil overlay natural second terrace river gravels at 6.15m OD.

Phase II

Activity most probably resumed at the site at some time during the 11th or, more likely, 12th centuries. Unfortunately, however, the investigation of the earliest deposits in the sequence was restricted to the parameters of the central test pit, from which no dating evidence was recovered. Nevertheless, a series of features relating to the earliest portion of this phase were identified.

Within the test pit, the primary Phase II deposit comprised mid to dark brown silty clay layer **F.430**. This material, which measured 0.2m+ thick, appears to have been alluvial in origin, but the date of its deposition remains unclear. The earliest definite evidence of anthropogenic activity was represented by north-south oriented posthole alignment **F.405**, which truncated the preceding layer. This feature consisted of at least three postholes, which averaged *c.* 0.14m in diameter and 0.3m in depth (see Figure 20). The posts themselves were thus relatively insubstantial, and – whilst it is not inconceivable that they were structural in origin – they appear rather more likely to have comprised part of a fence-line or similar boundary-related division.

Immediately to the west of **F.405**, small sub-rectangular pit/linear **F.404** was also identified. Elsewhere within the area, additional undated and heavily truncated features that may have comprised part of this initial horizon include layer **F.421** and pit remnants **F.409** and **F.425**. The nature of these features, allied with the paucity of material culture that was encountered within them, indicates that the area may have been subject to only occasional or sporadic usage at this time. Subsequently, however, a more intensive pattern of activity appears to have developed. This latter phase – the majority of which it was possible to investigate across the whole of the area – may well have commenced at some time during the 12th century, but principally appears to have been 13th century in date. Significantly, this portion of the sequence was dominated by the presence of three timber-framed buildings. The simplest of these three structures, *Building 1*, was situated at the northern end of the area (see Figure 20). Although the majority of this building lay outside the area of investigation, east-west aligned beamslot **F.410**, which comprised the southern boundary of the structure, was available for excavation. This feature was relatively substantial, measuring 3.4m+ by 0.35m in extent and 0.3m deep, and its backfill contained 13th/14th century material. Beneath the beamslot, the remnants of two earlier features – pit/foundation **F.411** and pit/linear **F.412** – were also encountered. It is possible that these features comprised part of an earlier phase of structural activity in this location, but – due to the high degree of later truncation – this could not be determined with certainty.

The second structure, *Building 2*, was situated immediately to the south of *Building 1*. Yet although the two structures appear to have been broadly contemporary, they were of substantially different construction. For, in contrast to the beamslot which comprised the principal structural element of *Building 1*, the initial phase of *Building 2* was centred around at least six large upright posts (see Figure 20). Whilst no trace of the timbers themselves survived, the remnants of their post-pads were identified. Two of these features – **F.407** and **F.413**, which comprised the northeast and southeast corners of the structure respectively – were excavated. They varied between 1.35m and 1.4m by 0.8m and 1.04m in extent and 0.21m and 0.31m in depth, and had been backfilled with compacted deposits of mid brownish grey clay. Four additional post-pads, each of which was somewhat smaller than those provided for the more structurally significant corner timbers, were also present along the northern and southern sides of the building. However, these features – **F.426**, **F.427**, **F.428** and **F.429**, which varied between 0.42m+ and 0.92m by 0.37m+ and 0.42m+ in extent – were not excavated. Subsequently, at some time during the 13th century, the first phase of *Building 2* went out of use and its remains were overlain by patchy layers **F.419** and **F.420** (see Figure 20). The latter deposits, which consisted of mixed clay spreads, may have accrued as trample during the demolition process, but could equally well represent the remnants of a succeeding floor surface (lying at 6.54m OD). This second interpretation is potentially supported by the presence of large rectangular pit **F.408**, which measured 2.08m by 2.04m+ in extent and 0.71m deep. The feature was situated in the centre of the former structure, and its location – allied with its vertically-sided and flat-bottomed form – indicates that it may potentially have comprised the cut for a timber-lined cellar. No other structural evidence relating to a second phase of building was encountered, however, and it remains possible that **F.408**'s positioning was simply fortuitous. The backfill of this feature once again contained 13th/14th century material.

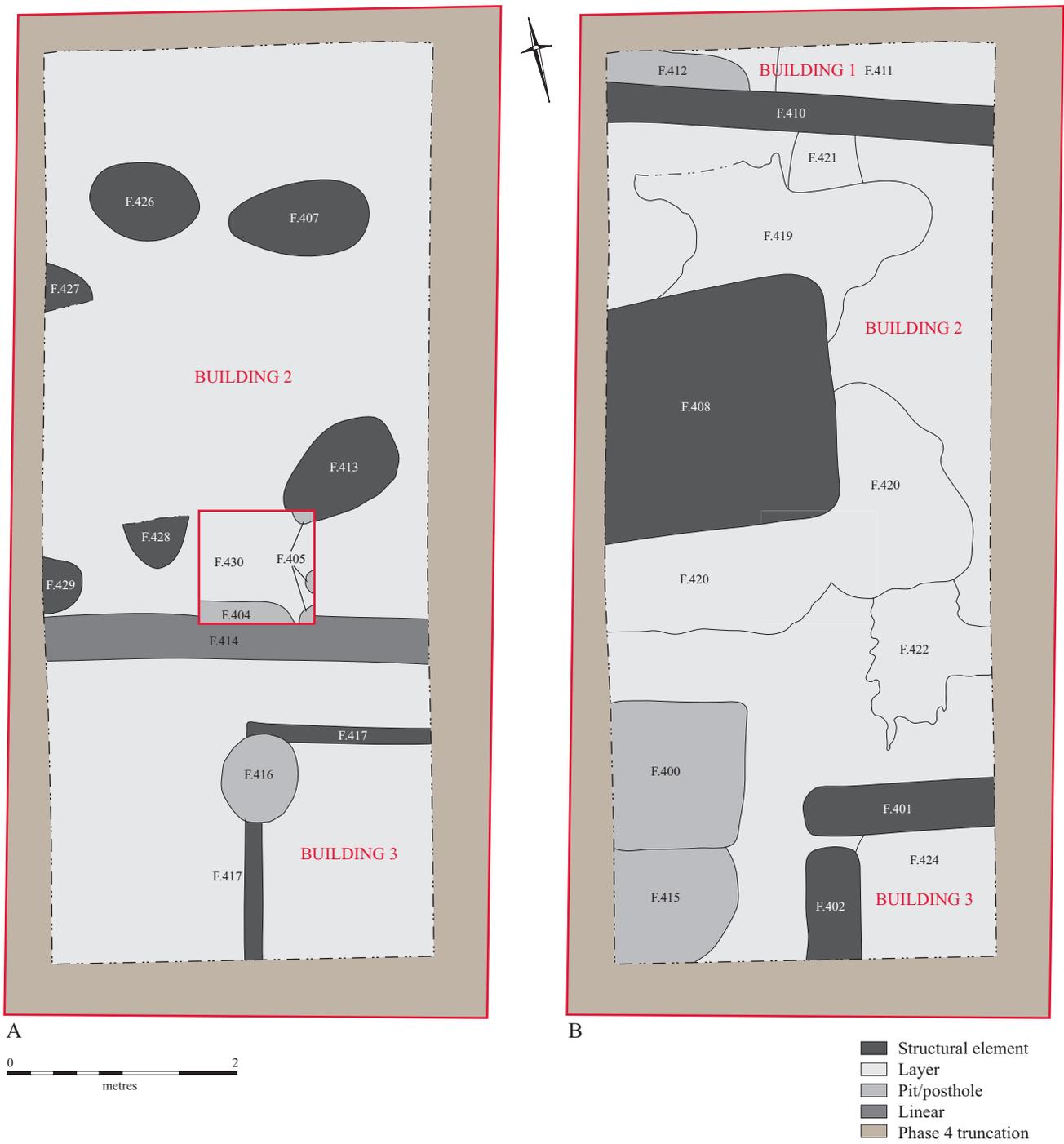


Figure 20. Phase II early (A) and Phase II late (B) features in Area 4.



A



B

Figure 21. Area 4, Phase II, facing north, showing the late (A) and early (B) horizons of activity.

Immediately to the south of *Building 2*, east-west aligned gully **F.414** was present. This feature, which measured 3.33m+ long by 0.46m wide and 0.18m+ deep, appears to have delineated a boundary that sub-divided *Buildings 1* and *2* from the various activities being undertaken contemporaneously further to the south. Although **F.414** itself contained no datable material, it was subsequently overlain by 13th/14th century layer **F.422**, which contained Medieval Ely ware. This latter deposit consisted of dense pale grey clay that showed signs of having been heat-affected; it did not appear sufficiently scorched to have formed the base of a hearth or oven, however, and most probably comprised an external surface upon which occasional heat-based activities were conducted. Its upper surface lay at 6.58m OD. Beyond this layer, in the southeastern corner of Area 4, *Building 3* was identified. In its initial form this structure consisted of a single right-angled beamslot, **F.417**, which extended both north-south and east-west; it measured 0.18m wide and 0.13m deep (see Figure 20). The first phase of *Building 3*, which had truncated 12th century pit **F.425**, went out of use during the early 13th century; at this time, its beamslot was backfilled and a robber pit – **F.416**, which contained 13th century Lyveden ware – partially truncated its remains. Subsequently, the surviving remnants of the structure were also overlain by upcast layer **F.423**. Later in the 13th century, however, the building was re-established, although its position was shifted a short distance to the south at this time. Two beamslots, east-west aligned **F.401** (which measured 1.66m + by 0.42m in extent and 0.31m deep) and north-south aligned **F.402** (which measured 0.99m + by 0.46m in extent and 0.32m deep), were introduced, whilst, inside the structure, banded gravel foundation layers **F.424** – whose upper surface lay at 6.52m OD – were deposited (see Figure 20). Finally, a little way to the west of *Building 3*, pits **F.400** and **F.415** were also present. Each of these features, which varied between 1.25m and 1.38m by 1.07m and 1.2m+ in extent and 0.2m and 0.26m in depth, contained a small quantity of 12th/13th century material; it is therefore unclear whether they were contemporary with the first or second phase of the structure.

Whilst it is unfortunate that the earliest portion of the Phase II sequence could not be fully examined, thereby precluding any potential understanding of the initial process of reclamation in this area, the identification of *Buildings 1*, *2* and *3* is nevertheless significant. These structures, all three of which appear to have been relatively small in scale, are most likely to have been ancillary in nature. This interpretation also accords with their relatively marginal position within the medieval street block, as they were situated at some distance from the original frontage. Structurally, the absence of any apparent internal surfaces within them – with the possible exception of the putative second phase of *Building 2* – implies that they probably had raised wooden floors, and this may provide some indication as to the nature of the local environmental conditions at this time. Furthermore, the structures' close proximity, allied with the low quantities of domestic refuse that were recovered from both within and around them, indicates that they may well have been commercial as opposed to domestic in function. Notably, during the 13th century activity at the nearby dockside area of Flaxhythe was at its height (Willis & Clark 1886 II, 402-03); *Buildings 1*, *2* and *3* might thus have functioned as associated storerooms or warehouses (see further the discussion section, below).

Phase III

During the late 13th or early 14th century the area underwent a dramatic transformation; the preceding pattern of intensive structural activity was abandoned, and *Buildings 1, 2 and 3* appear to have been demolished.

Following this event, the area became sealed beneath garden-soil layer **F.403**. This deposit, which measured 0.34m+ deep, contained a well-stratified ceramic assemblage dating from the 14th to 16th centuries (see further the pottery assessment report). During this period, therefore, the area appears to have remained an open garden within which very few activities were being undertaken. Indeed, only a single pit – **F.406**, which is 16th century in date – was identified. This latter feature, which measured 1.60m by 0.96m in extent and 0.24m deep, contained a moderate quantity of refuse material, including a large number of oyster shells and the remnants of two iron knives. The marked change in the usage of the area during this phase was most probably associated with either the unification of the street block into a single property by John de Ovyng in 1317, or his subsequent establishment of two hostels at the site by 1329 (Willis & Clark 1886 II, 403-04; see further the discussion section, below).

Phase IV

Between 1823 and 1825, Trinity College's New Court was constructed in this location (Willis & Clark 1886 II, 651-60). This structure, which was represented archeologically by foundation trenches **F.418**, appears to have effectively 'scalped' the majority of post-16th century deposits in the area.

Notably, the foundation trenches themselves were oriented at a consistently obtuse angle to the extant building's walls (see Figure 20). Furthermore, a quantity of 17th century pottery, along with a number of clay pipe bowls dating to *c.* 1660-80 and several large, well-dressed clunch blocks, were recovered from their fills. This implies that an earlier, 17th century structure may potentially have been demolished – and its foundations robbed – prior to New Court's construction; no other trace of this building survived, however. In addition to the residual material, **F.418** also contained a small quantity of 19th century pottery, including several fragments derived from a Trinity College plate bearing the name of 'Hudson'. This can be linked to one Henry Hudson, who was cook at the College between 1823 and 1838.

Material Culture

The deposits in Area 4 produced a moderately sized quantity of material culture. The assemblage – which includes metalwork, worked stone, pottery, clay tobacco pipe and building materials – has been subdivided by material type, and is discussed in detail below. None of the groups are of particular significance.

Metalwork (Richard Newman)

A total of 22 metalwork fragments, weighing 209g, were recovered from the deposits excavated in Area 4. This material primarily consisted of iron items, although seven copper alloy fragments, weighing 6g, were also present. The vast majority of the artefacts were recovered from 16th century pit **F.406**, which contained:

[436], <371>: four iron fragments – at least two of which rejoin – which form the haft and part of the blade of a knife. Altogether, the haft measured 75mm long by 18mm wide. It consisted of two composite wooden side panels, which were held in place by three pins (still *in situ*); each pin projected 5mm, giving a total width of 12mm. The blade, which is incomplete, measured 135mm+ long by 24mm wide+ and 2mm thick. The fragments weigh 57g.

[437], <460>: seven copper alloy items, including a spring, a small plate or fitting and five undecorated aiglets. The spring is composed of fine extruded copper wire, and measures 4mm in diameter by 4mm in depth; given its size, it appears to have been derived from a relatively delicate mechanism. The plate or fitting is similarly small in scale, measuring 14mm long by 3mm wide (although it is broken at both ends). It is convex in profile, with two pins – which measure 1mm in diameter and 3mm long – extending from its reverse. Finally, the five aiglets measure between 10mm and 18mm in length and average 2mm in diameter, and all taper to 1mm in diameter at their narrowest point. Each aiglet weighs less than 1g.

[437], <461>: four iron fragments – at least three of which rejoin – which form the tapering blade of a knife. Altogether the blade, which is incomplete, measured 167mm+ long; at its widest, it measured 0.28mm, and tapered to 18mm. No trace of the haft was present. The blade measured 2mm thick, and the combined fragments weigh 59g. In addition, two heavily corroded iron nails were also present in this context.

Worked Stone (Richard Newman)

A single quernstone fragment, weighing 120g, was recovered. This was composed of fine-grained bluish grey vesicular stone that is identifiable as Niedermendig Mülstein lava (also known as Rhenish or Mayen lava) from the Eifel region in Germany (Kars 1983). Although such querns were frequently used during the Roman period, and are common finds on Middle and Late Saxon sites, they are much rarer in the medieval period as their use was controlled and many people were instead compelled to use centrally regulated mills (Watts 2002, 38-42). Indeed, during recent excavations conducted at Cherry Hinton lava querns commonly occurred archaeologically up until the 11th century, but were then virtually non-existent from the 12th century onwards (Cessford with Dickens 2005b). This pattern compliments the information recorded in Domesday Book that five mills were present in Cambridge by 1086, three created by Sheriff Picot “by which the pasture is taken up and many houses destroyed” (indicating that they were of recent origin), plus a mill owned by the Abbot of Ely and another owned by Count Alan (Cessford 2007, 290). This indicates that, although the quern fragment was recovered from a 12th/13th context, it is most likely to have been of 10th or early 11th century origin.

F.430, [426], <307>: a Niedermendig Mülstein lava quern fragment. It varies between 25mm and 33mm in thickness, and weighs 120g.

Pottery (Richard Newman with David Hall)

A total of 158 sherds of pottery, weighing 1984g, were recovered from the deposits excavated in Area 4. This represents 20.3% of the total site assemblage by count, and 21.8% by weight. The material will be discussed on a phase-by-phase basis.

Phase I

Two highly abraded sherds of indeterminate Roman coarseware, weighing 18g, were recovered from sub-soil deposit **F.431** (K. Anderson, *pers. comm.*). These may well have been deposited via manuring associated with agricultural activity.

Phase II

The second largest assemblage of material in Area 4 was recovered from deposits belonging to Phase II; this group dates principally to the 12th to 13th centuries. In the first instance, the standard triumvirate of Saxo-Norman material – including St Neots-type ware (24 sherds, weighing 342g), Thetford-type ware (27 sherds, weighing 359g) and Stamford-type ware (1 sherd, weighing 3g) – was present. Most notably, a St Neots-type ware lamp base was recovered from **F.400**, [405], <376>, which weighed 79g. In addition, a small quantity of Lyveden ware from Northamptonshire – which dates to the 13th to 14th century, with a 13th century *floruit* – was also recovered (2 sherds, weighing 10g). This was accompanied by equally small quantities of Medieval Ely ware (4 sherds, weighing 265g) and brown, buff and grey coarsewares (7 sherds, weighing 59g); both of the latter date to the 13th to 15th centuries, but are likely to have been deposited here in the 13th century.

Phase III

The largest assemblage was recovered from Phase III deposits, and the majority of this material was derived from layer **F.403** (see Table 12). Here, the most common material comprised 13th-15th century Medieval Ely ware (24 sherds, weighing 297g). A small quantity of 14th/15th century Essex red ware, with polychromatic decoration, was also present (10 sherds, weighing 126g), along with a single sherd of 16th century Ely fineware (weighing 7g) and four sherds of coarseware (three of which consisted of 16th century plain red material). A small quantity of residual material – including St Neots-type and Thetford-type wares – was also present. Overall, therefore, this deposit appears to represent a gradual accumulation that most probably began in the 13th/14th century and continued until the 16th century.

Ware	Count	Weight (g)	MSW (g)
Coarsewares	4	55	13.7
Essex Red ware	10	126	12.6
Ely Fine ware	1	6	6
Medieval Ely ware	24	297	12.4
St Neots-type ware	3	35	11.7
Thetford-type ware	3	50	16.7
Total	45	569	12.6

Table 12: Wares recovered from levelling/garden soil deposit **F.403**.

The remainder of the material from this phase was recovered from 16th century pit **F.406**, which truncated layer **F.403**. This feature contained 16th century red coarseware (14 sherds, weighing 47g), Ely fineware (1 sherd, weighing 1g) and Frechen stoneware (3 sherds, weighing 1g), as well as residual 13th to 15th century grey coarseware (5 sherds, weighing 33g) and Medieval Ely ware (4 sherds, weighing 80g).

Phase IV

The material from Phase IV was entirely recovered from wall foundations **F.418**, which date to 1823-25. These deposits contained single sherds of residual St Neots-type and Thetford-type wares (weighing 31g, and 20g respectively). The majority of the assemblage is 16th/17th century in date, however, and included glazed red

earthenware (5 sherds, weighing 84g), Frechen stoneware (2 sherds, weighing 20g) and a single sherd of lead glaze (weighing 2g). Finally, seven sherds derived from a single large 19th century blue & white transfer-printed plate were also recovered (weighing 21g). The print depicts Trinity College fountain, and the plate bears the name ‘Hudson’ on its reverse; it can therefore be linked to one Henry Hudson, who was cook at Trinity College between 1823 and 1838.

Clay Tobacco Pipe (Craig Cessford)

A total of eight clay tobacco pipe bowls, with a combined weight of 168g, were recovered from two separate contexts in Area 4. The first of these – <271>, [401], F.418 – contained three bowls belonging to type 6 of Oswald’s general typology (Oswald 1975); they date to *c.* 1660-80, and were unmarked. The second – <339>, [466], F.418 – contained five bowls. Three of these again correspond to Oswald’s general type 6, whilst the remaining two belong to the later type 14 (dating to *c.* 1820-40). One of the latter was marked with an eight-spoked wheel on the base of its heel, although this stamp is generic and cannot be linked to a specific maker.

Building Materials (Richard Newman)

Only a small quantity of building materials was recovered from Area 4. The most interesting artefact comprises a fragment of probable *tegula*, which was recovered from 13th century layer F.423.

F.423, [410], <287>: A fragment derived from a substantial, though heavily abraded, tile, measuring 79mm by 79mm by 35mm. This appears most likely to comprise part of a Roman *tegula*.

Economic and Environmental Data

The following section presents details of the animal bone and environmental assemblages that were recovered from Area 4.

Animal Bone (Vida Rajkovača)

Area 4 yielded a considerably smaller quantity of animal bone, and a more restricted range of species, than the deposits in Areas 2, 3 and 5. The assemblage comprised 449 fragments, weighing 5870g. This represents 15.9% of the total site assemblage by count and 38.9% by weight. Of the assessable fragments recovered from this area, 344 specimens (*c.* 77%) were assigned to Phase III and broadly dated to the 14th-16th centuries. This assemblage does not appear to reflect the same patterns of animal use as that observed in Areas 2, 3 and 5 (see above, Section I). Ovicapra remain the most commonly eaten species, followed by cattle and pig. Fish remains also appear to have been a significant part of their diet.

Hand-recovered material	Phase			Total
	Phase II	Phase III	Phase IV	
<i>Contexts</i>	19	3	1	23
<i>Fragments</i>	98	344	7	449

Table 13: Context and fragment count for Area 4.

Taxon	Phase II			Phase III			Phase IV			Total NISP
	NISP	NISP %	MINI	NISP	NISP %	MINI	NISP	NISP %	MINI	
Cow	11	19.6	1	6	6.1	2	5	83.3	1	22
Ovicaprid	11	19.6	2	69	70.4	4	1	16.7	1	81
Sheep	.	.	.	2	2.1	1	.	.	.	2
Goat	1	1.8	1	.	.	.	.	.	.	1
Pig	13	23.2	2	4	4	1	.	.	.	17
Dog	.	.	.	1	1	1	.	.	.	1
Cat	18	32.2	2	2	2.1	1	.	.	.	20
Rabbit	.	.	.	2	2.1	1	.	.	.	2
Chicken	1	1.8	1	10	10.2	2	.	.	.	11
Goose	.	.	.	1	1	1	.	.	.	1
Pigeon	1	1.8	1	.	.	.	.	.	.	1
Small wader (snipe?)	.	.	.	1	.	.	.	.	.	1
Cod	.	.	.	1	1	1	.	.	.	1
Cattle-sized	19	.	.	64	.	.	.	.	.	83
Sheep-sized	22	.	.	69	.	.	1	.	.	92
Rodent-sized	.	.	.	1	.	.	.	.	.	1
Fish n.f.i.*	.	.	.	90	.	.	.	.	.	90
Bird n.f.i.	1	.	.	21	.	.	.	.	.	22
Total	98	100	.	344	100	.	7	100	.	449

Table 14: Number of Identified SPecimens and Minimum Number of Individuals for identified species in Area 4 by phase; *the abbreviation n.f.i. denotes the specimen has not been further identified.

Phase II (12-13th century)

This sub-set was recovered from a number of beam-slots, pits and layers dated to the 12th and 13th centuries. The ratio of the three main ‘food species’ showed that cattle, ovicapra and pigs appear to have been of similar importance. Butchery within this small sub-set was rare, being observed on four specimens only.

Phase III (14th-16th century)

16th century pit **F.406** and 14th-16th century layer **F.403** yielded a considerable quantity of faunal remains, amounting to 344 assessable specimens. This sub-set seems to put even greater emphasis on the most common species from the previous phase, such as ovicapra. Fish appear to have become more important during this phase, a pattern also reflected in contemporaneous sub-sets from Areas 2, 3 and 5. A number of birds remained unidentified to species at this stage; however, it was possible to identify chicken, goose and a small wader bird (snipe?). Fish remains were also only quantified, pending further specialist analysis. The range of fish species appears to include some of the larger species such as pike and cod, yet some smaller vertebrae were also recorded, potentially indicating the presence of eel or small cyprinids such as perch (?). Furthermore, a series of fish vertebrae had the appearance

of being chewed. Of 344 specimens, 50 were recorded with butchery marks (*c.* 15%), the majority of them being sheep/goat or sheep-sized elements. In addition, one fish vertebra had a fine cut mark. It would be important to determine if this mark corresponds to the type of marks commonly found on prepared fish.

Phase IV (Early 19th century)

The total of seven bone specimens from this phase were recovered from a construction cut relating to the construction of Trinity College’s New Court in 1823-25. Cattle, sheep/goat and sheep-sized elements were recorded.

Faunal remains from heavy residues

Two samples were processed from Area 4, one of which was assigned to Phase II (Sample 402) and one to Phase III (Sample 401). Only two specimens were possible to identify to species level and these were sheep/goat loose teeth (Table 15). The remainder was assigned to size-categories. Similar to the findings from Areas 2, 3 and 5 (Section I, above), fish elements are again present in significant numbers and should be identified to species.

Taxon	Sample 402			Sample 401			Total NISP
	Pit/cellar F.408, [445]: 13th century; Phase II			Pit F.406, [437]: 16th century; Phase III			
	NISP	NISP %	MNI	NISP	NISP %	MNI	
Ovicaprid	2	100	1	.	.	.	2
Cattle-sized	.	.	.	1	.	.	1
Sheep-sized	5	.	.	12	.	.	17
Rodent-sized	.	.	.	1	.	.	1
Mammal n.f.i.	12	.	.	4	.	.	16
Fish n.f.i.*	3	.	.	49	.	.	52
Bird n.f.i.*	.	.	.	1	.	.	1
Total	22	100	.	68	.	.	90

Table 15: NISP and MNI for identified species from heavy residues for Area 4;* the abbreviation n.f.i. denotes the specimen has not been further identified.

Environmental Remains (Rachel Ballantyne)

Two bulk samples were assessed from Area 4. These were flotation sieved by Frankie Cox at the CAU, using a modified version of the Sirāf tank (Williams 1973). Flots (> 300µm) and heavy residues (>1mm) have been dried and then sorted using a Leica MS5 (x6.3 – x50) binocular microscope for flots, and by eye for residue fractions greater than 4mm. The 1–4 mm residues are retained for now. Full raw data is summarised in Table 15. Nomenclature follows Stace (1997) for plants.

Preservation

Charred plant remains are rare and often puffed and fragmented. Occasionally, mollusc shell is also well preserved, as is consistent with the calcareous groundwater of the Cambridge region.

Feature number		F. 408	F. 406
Phase		II	III
Context number		[445]	[437]
Sample number		<402>	<401>
Description		Basal fill	Fill
Feature type		Cellar	Rubbish pit
Volume/ litres		8	12
Charred cereal grain			
<i>Hordeum vulgare sensu lato</i> caryopsis	Barley grain	2	
free-threshing <i>Triticum</i> sp. caryopsis	Free-threshing wheat grain	3	
Cereal indet. caryopsis	Indeterminate grain	2	1
Charred wild fruits/seeds			
cf. <i>Prunus</i> sp. kernel fragment	Plum/Cherry kernel		1
<i>Vicia/Pisum/Lathyrus</i> sp. [>4mm] seed	Pea/Vetch/Wild Pea	1	
<i>Trifolium</i> sp. seed	Clover	1	
<i>Cladium mariscus</i> (L.) Pohl. nut	Great Fen-sedge	2	
Poaceae indet. caryopsis [2-4mm]	Medium-sized grass seed	1	
Indeterminate small seed		1	
Charcoal			
Estimated charcoal volume/ millilitres		1	620
Charcoal >3mm			+++
Charcoal <3mm		+	+++
Mollusc shell			
<i>Bithynia tentaculata</i> L. operculum	Quiet rivers and still but large waters	*	
<i>Planorbis planorbis</i> (L.)	Ponds and ditches	*	
<i>Pupilla muscorum</i> (L.)	Turf, walls and dry places	*	
<i>Ceciloides acicula</i> (Müller)	Burrowing, probably intrusive	*	
Other items in flot			
Amphibian bone		*	
Fish scale		++	+
Fish bone		*	*
Other items in residue > 4mm			
Potsherd		+	+
Bone fragments		++ (+ ch)	+++
Small bone		++	+++
Seashell		++	++

Table 16: Flotation sieved samples from Area 4. (Key: * 1 or 2 items, + <10 items, ++ 10-50 items, +++ >50 items, u untransformed, w waterlogged, ch charred).

Phase II pit/cellar fill [445], F.408

Several charred cereal grains with wild seeds provide limited evidence of human activity. There are two barley grains (*Hordeum vulgare sensu lato*), three of free-threshing wheat and two that are indeterminate. Single charred seeds of vetch/pea/wild pea (*Vicia/Pisum/Lathyrus* sp.) and clover (*Trifolium* sp.) could be contaminants of grain, of another plant resource, or from the local environment. Two charred seeds of great fen-sedge (*Cladium mariscus*) are likely to represent oven ash,

as historic records describe this fenland plant as a favoured kindling fuel in medieval and early post-medieval Cambridge (Rowell 1986). The very low number of mollusc shells cannot support ecological interpretation, but a single operculum of the river/lake snail *Bithynia tentaculata* suggests that a proportion of the fill derives from flood deposits.

Phase III rubbish pit fill [437] F.406

A single unidentifiable charred grain and possible fruitstone fragment (*Prunus* sp.) are accompanied by abundant wood charcoal.

Conclusion

No further work is required on this assemblage, which is of local significance and has been adequately characterised during assessment. The results provide a limited contribution to the urban landscape of Cambridge, where the bulk sampling of waterlogged or refuse-rich features continues to be a high priority for all periods.

Section II: Discussion

The pattern of possible Roman agricultural activity that has been identified at this site corresponds very closely with evidence that has previously been recovered from a number of other nearby excavations. Firstly, a near identical subsoil deposit – which was interpreted as a Roman ploughsoil horizon – was encountered during work conducted within the Bateman Building, Gonville & Caius College, situated only a short distance to the southeast (Alexander 1995, 3-4). Residual Roman pottery was also recovered during investigations conducted further to the south, upon King's College lawn (Evans in Alexander & Pullinger 2000, 259; Cessford *in prep.* a) and beneath the Old Schools (Newman 2009, 4-5). In addition, a little way to the north Late Roman gravel quarries and a possible hard-standing were discovered during excavations undertaken at St John's College (Dickens 1996, 6-10). This pattern can also be extended to the northeast, where unstratified Roman pottery – again apparently consistent with contemporary manuring activity associated with arable cultivation – was identified during fieldwork conducted within the grounds of Jesus College (Evans *et al.* 1997; Whittaker 1999). This evidence provides a secure context for the antiquarian report of 'Roman pits' being encountered in close proximity to the present site (Evans in Alexander & Pullinger 1999, 259). The extent of contemporary activity in this vicinity is likely to have been relatively minimal, however, as the nature of these discoveries strongly suggests that during the Roman period the present site comprised part of a broader agricultural hinterland. This hinterland itself is most likely to have been associated with the small suburb, of 2nd to 3rd century date, which has recently been identified lying alongside the contemporary Cambridge to Godmanchester road at the St John's Triangle site (see Newman 2008, 61-69). In this context, therefore, it is notable that neither of the two excavations that have previously been conducted in close proximity to Area 4 encountered material of Roman date.

In the first instance, monitoring work was conducted in 1994 during the excavation of an Anglia Water inspection trench situated in Garret Hostel Lane (see Figure 3). This trench measured 2.5m by 2.0m in extent, and was excavated to a depth of 2.5m (Evans 1994, 4). Below this, natural gravels were determined to lie a further 2.0m

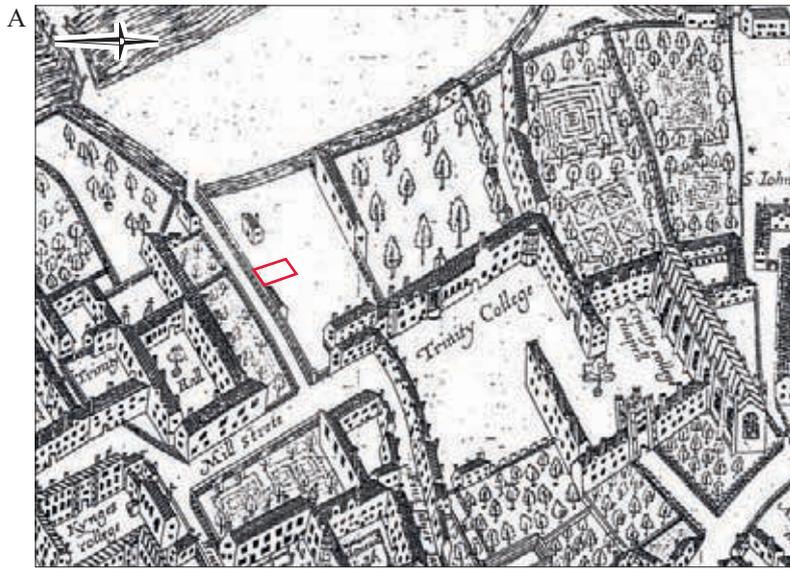
lower – at 2.95m OD – via augering. The upper portion of the sequence in this location had been very heavily disturbed by modern services. Beneath this disturbance, a series of dark grey to black silty clay deposits were encountered, which contained frequent brick/tile and animal bone inclusions. In addition, four sherds of 15th/16th century pottery were also recovered. Due to the limited depth of the excavation, however, it remains unclear whether these deposits were related to the establishment of made-ground deposits or to the backfilling of the King's Ditch, which is known to have lain in very close proximity to the trench (*ibid.*). Nearby, excavations were also undertaken at Trinity Hall in 1997 in advance of a proposed extension to the College library (see Figure 3). Here, the lowest deposits were excavated within a trench measuring 3m by 2.5m in extent, which was located immediately adjacent to the Cam, and natural river terrace gravels were encountered at 3.03m OD (Alexander 1997, 5). Above this were discovered 1.91m of alluvial deposits, consisting of mottled and banded deposits of dark greyish brown clayey silt and dark greyish brown silty clay. Although no dating material was recovered from these layers, the two basal horizons did contain waterlogged organic remains. Analysis of this material indicated that the area initially comprised a heavily wooded environment, with occasional open clearings, which was located adjacent to sluggish (and perhaps in places stagnant) water (*ibid.*, 16). Higher up in the alluvial sequence, however – and thus probably at around the beginning of the medieval period – sampling indicated the river became increasingly fast-flowing. This change might be attributable to localised channelling of the river's course (*ibid.*). The waterlain deposits were finally sealed during the 16th century, when a revetment wall was constructed and the land began to be reclaimed.

A more comparable sequence to that identified at the present site was encountered a little way to the north during excavations undertaken in 1990 at the Trinity Library Bookstore site (see Figure 3). Although no evidence of Roman activity was encountered in this location, the remnants of possible timber buildings of 13th century date were uncovered. But, as these structures had been very heavily truncated by later activity, few details of their form or construction could be recovered (Cessford *in prep.* a). Of greater relevance, therefore, are a series of excavations that were undertaken during the same period in the Master's Lodge and Chapel Court of St John's College. Although several phases of work were conducted in this location between 1990 and 1993, most pertinent to the present project are two trenches that were both excavated during the summer of 1992 (Dickens 1996). These measured around 13.5m by 6.5m in extent, and were located approximately 70m and 50m back from the edge of the river respectively. Significantly, they were also located immediately adjacent to St John's Lane, a medieval street that provided access to a contemporary waterfront or hythe. Here, following on from a sequence of relatively intensive Roman quarrying activity, a series of waterlain deposits formed during the 11th to 12th centuries. These layers were subsequently truncated by a line of stakeholes, set around 1.15m apart, which ran in a northwest to southeast alignment perpendicular to the main Bridge Street frontage (Dickens 1996, 14). The presence of this fenceline indicates that the floodplain was subject to at least seasonal usage at this time, and had probably been incorporated into the rear portion of properties extending back from the Bridge Street thoroughfare. Indeed, a relatively large assemblage of Saxo-Norman pottery was recovered from the site, which may have been associated with contemporary attempts at ground consolidation or reclamation. The mollusc assemblage recovered from the silty clay alluvial deposits that accrued during this

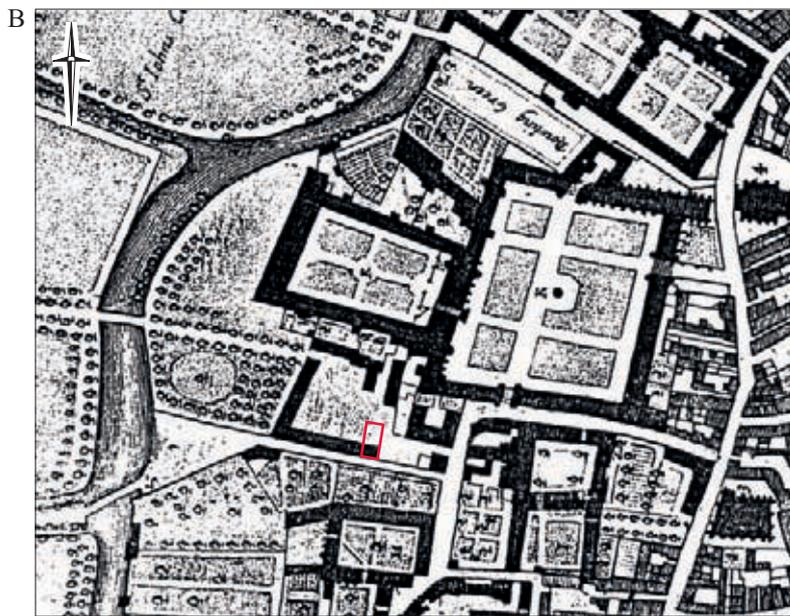
period suggests a mixed environment, with periods of inundation alternating with episodes of damp tussocky grassland (*ibid.*, 15).

Following on from this phase, three drainage ditches were inserted at the site during the 12th to 13th centuries. The most significant of these measured around 4.5m wide by 0.5m deep and was orientated east-southeast to west-northwest; it had steeply sloping sides leading to a flat base and an associated bank to the northwest that was 2.0m wide and at least 0.6m high (*ibid.*, 18). This feature was thus large enough to have accommodated shallow-draughted vessels and may well have acted a minor channel or barge pull. The two remaining ditches were much smaller, being only between 1.2m to 1.5m in width, and appear to have silted up by the end of the 13th century, whilst the larger channel was recut and maintained in use until the 15th or 16th centuries (*ibid.*, 23). At some time during the 13th century, the reclamation work evidently having been completed, a series of timber buildings were established to the north of the channel. At least five timber structures were constructed in this location, and – as they were situated at the rear of their respective property plots, in close proximity to the probable barge channel – they are most likely to have been commercial as opposed to domestic in nature. The buildings themselves were very poorly preserved, however, with few identifiable structural elements surviving; their existence was predominately identified via the presence of discrete clay floor surfaces. Nevertheless, a number of similarities are discernable between these buildings and those identified at the present site. In both locations, the structures were tightly clustered together, with a notable dearth of domestic features – such as pits – lying around or between them. In addition, at the St John’s College site a series of paths and yard surfaces were also identified. Finally, it is notable that although the majority of the structures went through numerous phases of use and rebuilding, they also appear to have been demolished by the end of the 14th century (*ibid.*, 28).

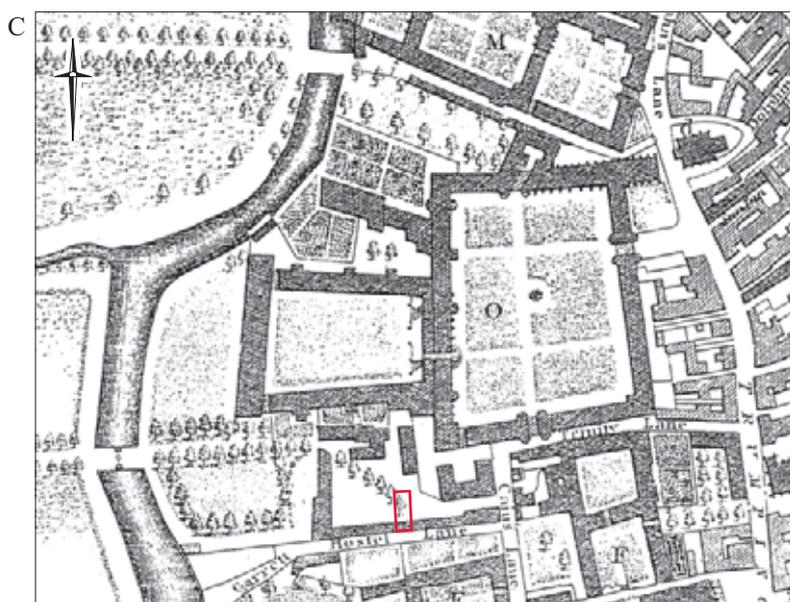
In contrast to the sequence identified in Area 4, however, a number of activities continued to be undertaken at the St John’s College site following the buildings’ demolition. The pre-existing barge channel remained open, for example, and a number of new clay lined pits or tanks were created (*ibid.*, 31-3). These were not backfilled until the 16th century, when the channel was finally abandoned and the area given over to horticultural use. But the abandonment of the buildings at the present site seems instead to have been associated with a more fundamental change in the usage of the area. It appears that, during the early 14th century, all commercial activity at Flaxhythe ceased, with the result that the channel itself began to silt up. This process can be demonstrated via the surviving historical sources. The earliest known documents describe the eastern boundary of the street block as the *aquam currentem* (running water), *filum aquae* (stream of water) or *aquam Domini Regis* (King’s stream), demonstrating that, up until the early 14th century, the ditch contained flowing water. Subsequently, however, following the increasing collegiate presence in the area, the canal appears to have fallen into disuse and it was referred to thereafter as the *fossatum Regis* (King’s ditch) or *communis fossatum* (common ditch), terms employed elsewhere within the town for common enclosure ditches (Willis & Clark 1886, 405-06). It appears to have been for this reason, therefore, that on the 30th of September 1423 Michaelhouse was granted permission to create a new ditch, measuring 12ft across (*c.* 3.65m), in order to allow ‘fuel and other goods’ to be transported to the College (Willis & Clark 1886 II, 409). This latter ditch formed the new eastern boundary of the two investigated street blocks (see Figure 2).



Hammond 1592



Logan 1688



Custance 1798

Figure 22. Historic map sequence (Area 4 shown in red).

Once the area had been cleared of pre-existing commercial buildings, in *c.* 1317-29, two student hostels were established at the site. These structures, Garret Hostel and Ovyng's Inn, stood in very close proximity to one another at the head of the property. In the earliest known map of Cambridge, which was compiled by Richard Lyne in 1574, the two hostels were shown as standing side-by-side, with Ovyng's Inn – an inn for law students – closely abutting the buildings of Michaelhouse. Subsequently, however, in 1592 a more accurate plan was published by John Hammond (see Clark & Gray 1921; Baggs & Bryan 2002). In this map (Figure 22A) the buildings were shown as standing one-behind-the-other. Regardless of their precise disposition, however, it is clear that Garret Hostel comprised the larger and more prestigious of the pair. It is therefore likely that the majority of the northern portion of the street block was employed as its garden (Willis & Clark 1886 II, 403-4); in contrast, no land appears to have been attached to Ovyng's Inn. Hostels such as these were occupied by fee paying students, who were not as privileged as those who entered into the society of a College. Michaelhouse alone possessed a number of similar properties in the area, as they acted as additional sources of revenue. Along with the remainder of Michaelhouse's possessions, they were transferred into the ownership of Trinity College in 1546. Subsequently, in 1552, Garret Hostel became the residence of a lecturer in Hebrew. It was transformed into a hostel once again, with eight sets of rooms, in 1576, but by 1662 it was ruinous and was pulled down (*ibid.*, 404-6). Money was donated for a new hostel by Dr John Hackett, Bishop of Lichfield and Coventry, in 1669, and the building was completed in 1670; this structure, 'Bishop's Hostel', is still standing at the site.

During this same period, *c.* 1660-80, it appears that a series of additional buildings were erected in the area of the hostel's former garden. These structures are clearly shown in David Loggan's map of 1688 (Figure 22B). Amongst them, the foundations that were encountered in Area 4 were most probably associated with the College stables. These can be dated to *c.* 1660-80 via the presence of several closely datable clay pipe bowls, which were found in association with numerous large clunch blocks. By the time of William Custance's plan of 1798 (Figure 22C) the stables had been extended along much of the length of Garret Hostel Lane, and further ancillary structures had also been established at the site. Indeed, when the construction of New Court began in 1823, the area was occupied by "the old Brewhouse, a Stable and Coach-house assigned to the Master, part of the College Stables, part of the offices of the kitchen and a Lecture Room" (Willis & Clark 1886 II, 659). The construction of the new quadrangle 'scalped' much of the preceding archaeological sequence, however, thereby removing any further evidence relating to the post-medieval usage of the area.

Conclusion

Although clearly having very different developmental trajectories, one key similarity can be discerned within the histories of the two investigated street blocks. This is because, in both areas, a major change occurred during the early to mid 14th century when the constituent properties were transferred from private into collegiate ownership. In the southernmost of the two street blocks, for example, this change led to the relatively dramatic transition from a bustling mercantile zone to a static open garden. Whilst the remains of the former phase of activity were only investigated on a somewhat limited scale, this work nevertheless produced a number of significant

results. A series of three relatively long-lived timber buildings were identified, which potentially correspond to a wider pattern of increasing urban structural specialisation during the 12th and 13th centuries (see further Pearson 2005; Rees Jones 2008). These buildings appear most likely to have been associated with the nearby commercial waterfront at Flaxhythe, and thus constitute part of a location-type that is increasingly recognised as being of high archaeological potential (see Gardiner 2007). The succeeding collegiate phase of activity in this area, however, was characterised by the absence – as opposed to the abundance – of cut features. This is in direct contrast to the archaeological sequence that was encountered in the northern street block. Here, the earliest horizon of 12th to 16th century features had been almost entirely truncated by later collegiate activity. The impressive scale of the structural remains that were encountered in Areas 2, 3 and 5 – which comprised portions of the undercrofts of two substantial buildings – has allowed a great deal of information to be recovered.

Indeed, the scale of these results is almost unique in Cambridge, where previous investigations of early university buildings have either been principally restricted to standing building recording (*e.g.* Evans *et al.* 1997; Evans & Pollard 1999), or else conducted on a very limited scale (*e.g.* Dickens 2001; Newman 2009; Newman & Webb 2011). Elsewhere, however, comparable excavations have previously been undertaken at three Oxford Colleges. These comprise:

- *Lincoln College*: Excavations were conducted within the standing Great Hall, Kitchen and Buttery of this College – which were constructed in *c.* 1427-37 – between 1997 and 2000. Elements of their foundations, along with a large stone-built well, were encountered, but very little associated material culture was recovered (Kamash *et al.* 2002).
- *Merton College*: Between 2000 and 2002, excavations were conducted in a yard area situated to the rear of a standing medieval mansion that had been owned by Merton College since *c.* 1270. Although the earliest phases of activity at this site were associated with high-status domestic occupation, from the late 14th to the mid 16th centuries the yard was utilised for the disposal of a large quantity of College waste. Significantly, some of this material, including substantial animal bone and ceramic assemblages, appears to have been derived from Merton's kitchens (Poore *et al.* 2006).
- *St. John's College*: Here, a small-scale excavation conducted in 2003 revealed part of the heavily robbed foundations of a 17th century kitchen building. Although very little associated material culture was recovered, a stone-built drain was present, as well as a stone-lined pit that may well have functioned as a sump (Lawrence 2005).

Of these three sites, the Merton College excavation in particular has provided a useful comparative assemblage of ceramic and faunal material derived from a non-Cambridge collegiate context. Within Cambridge itself, however, setting aside the Trinity College Kitchens assemblage only a small quantity of comparable material has so far been recovered from secure collegiate contexts. Currently, this includes assemblages that were derived from 16th and 17th century deposits at Jesus College (Evans 1995; Newman & Webb 2011) and from 16th century pits at Gonville & Caius College (Alexander 1995); the material recovered from a late 16th century pit group at Pembroke College is most probably pre-collegiate in origin (Hall 2002). In addition, an historical examination of the food and fuel supplies utilised by Colleges in Cambridge between 1450 and 1560 has also been undertaken (Lee 2003). In contrast to the paucity of collegiate material, however, very much larger assemblages have been recovered from contemporary domestic contexts in the town. In the first

instance, a group consisting of over 140 early 17th century vessels was recovered from a pit situated beneath Barclay's Bank, Bene't Street, in 1968 (McCarthy 1974). Further significant faunal and ceramic assemblages of comparable date have also been recovered during recent excavations conducted at Hostel Yard, Corpus Christi College (Cessford 2005), Grand Arcade (Cessford 2007), St John's Triangle (Newman 2008b) and the Old Divinity School (Cessford *in prep.* b). This thereby raises the intriguing possibility of conducting a comparison of the material culture of 'town' versus 'gown' in post-medieval Cambridge.

But above all, it is the architectural sequence in Areas 2, 3 and 5 – which potentially spans two Colleges and at least three phases of building – that comprises the most significant result of the recent investigations. Although the provenance of the large architectural fragments that were reused as foundation material in *Building A* during the mid 16th century cannot be established with certainty, they are nevertheless of archaeological significance. This is because relatively few comparable masonry structures are known from medieval Cambridge, and the two most likely sources for this material – the hall of Michaelhouse or the church of the Franciscan Friary – were both important buildings in the 14th century town, about which relatively little is known. In addition, the results recovered from the initial phase of Trinity College's buildings are also of significance. Valuable information regarding the size, location and design of both the first phase hall and its related kitchen was identified. This adds significantly to the known historical record, and provides a wealth of additional detail regarding the early growth and development of what is now Cambridge's largest and wealthiest College (see Neild 2008). Notably, amongst the alumni of this initial, transitional period in the College's history were John Dee, mathematician and alchemist (c. 1546-48), Sir Francis Bacon, philosopher and statesman (1573-76), Robert Devereux, 2nd Earl of Essex and courtier to Elizabeth I (1578-81) and Henry Spelman, antiquary (1580-83). The presence of such illustrious individuals underlines the important role that Trinity College was to play in the subsequent history of post-medieval and early modern Britain.

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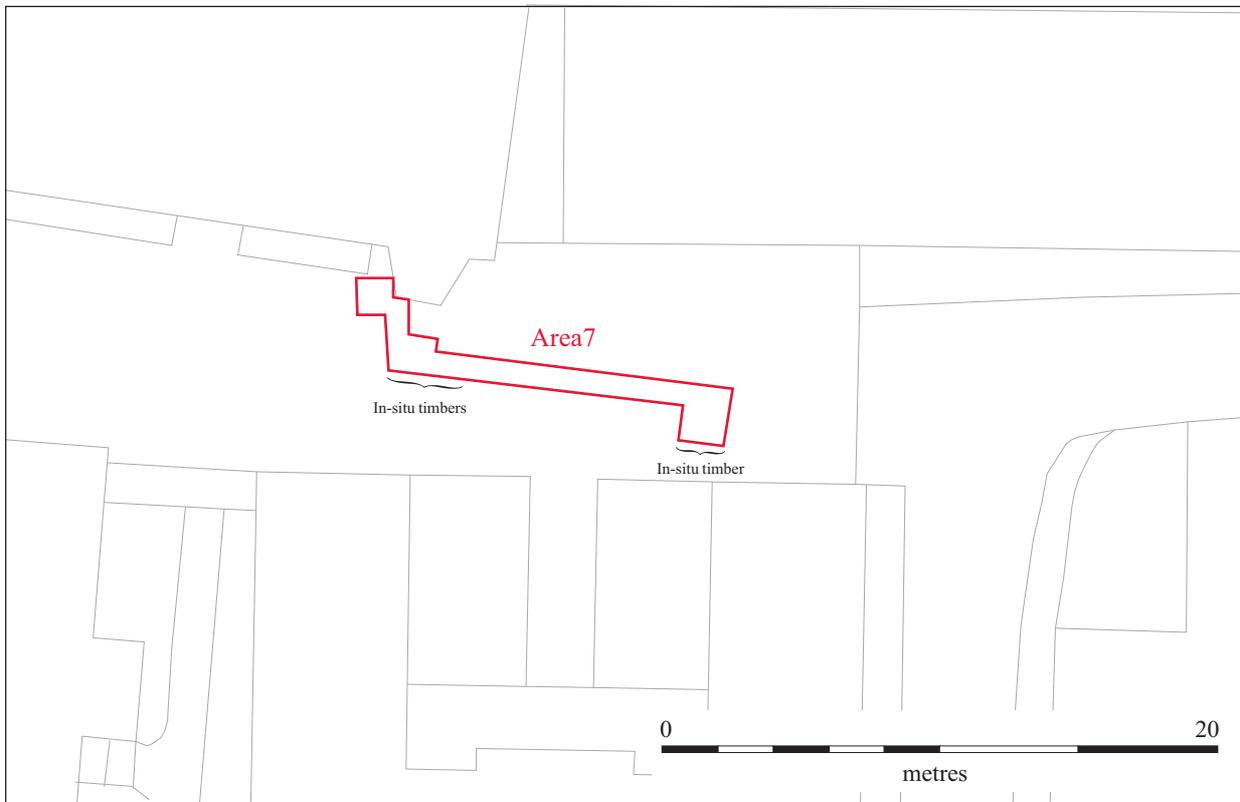
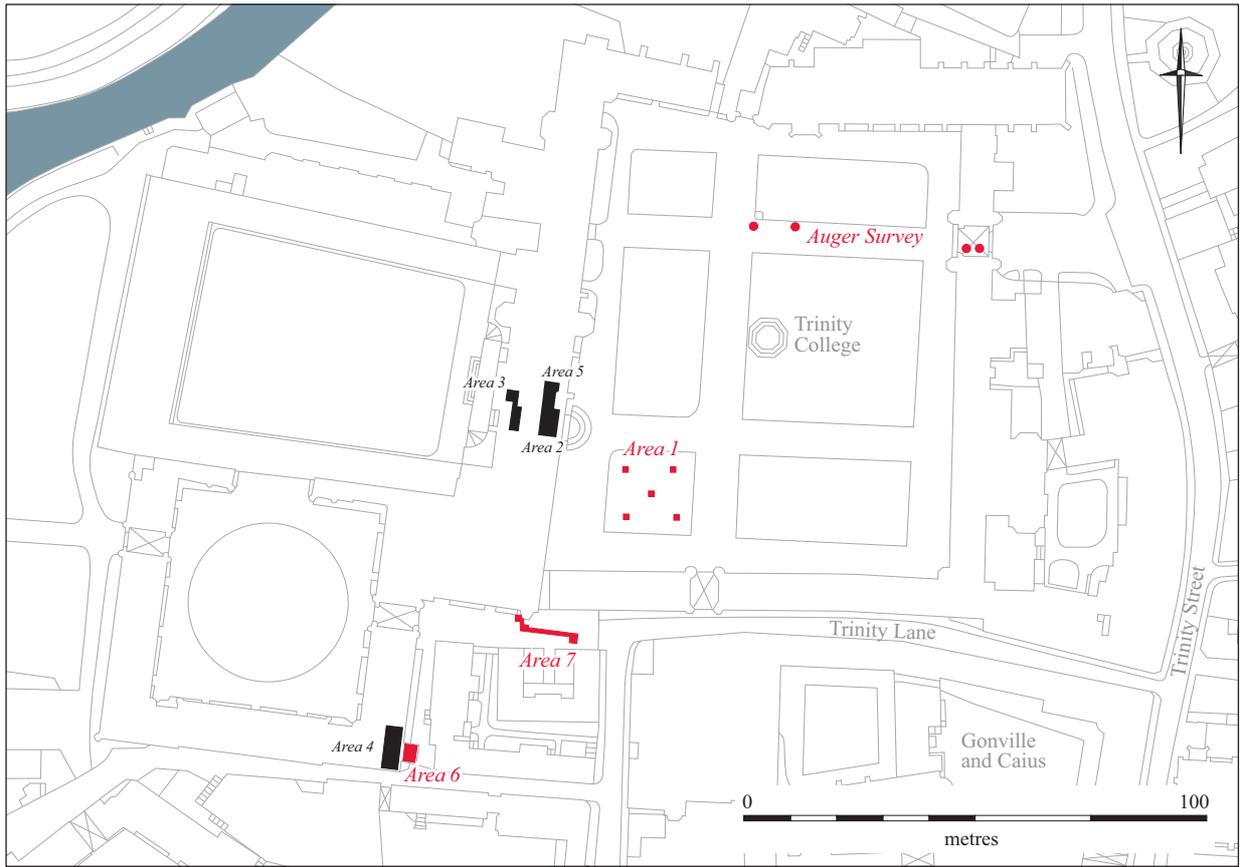


Figure 23. Location of watching briefs and evaluation, showing below positions of waterlogged wood in Area 7.

Appendices

1) Watching Briefs and Evaluation

The following appendix presents the results recovered during the various phases of watching brief and evaluation that were undertaken in Areas 6, 7 and 1.

Area 6

Two evaluative test pits – Test Pits 9 and 10 – were excavated at the former ‘Bin Store’, a brick-built structure appended to the external face of the east wall of the southern range of Trinity College’s New Court, on the 6th of October 2010 (see Figure 19 for location). In both instances, these test pits encountered modern deposits to a depth of 0.50m. Subsequently, a watching brief was conducted in this location on the 12th of November 2009. At this time, the surface height of the structure was reduced 1.24m by a mechanical excavator (to 6.95m OD), and modern deposits were found to extend fully to this depth. The nature of these deposits is detailed below. Beneath the modern truncation, the upper surface of a series of archaeological deposits was visible; these were not excavated, however, but preserved *in situ*.

Internally, the ‘Bin Store’ measured 4.42m by 3.10m in extent. Three phases of usage of this structure were identified. The first consisted of a brick-built cellar, constructed using unfrogged red bricks (measuring 220mm by 110mm by 60mm) that were bonded with creamy yellow sandy mortar. It had a brick floor, lying at 7.03m OD, which was overlain by deposits of trampled coal dust, suggesting that it may originally have been utilised as a coal store. This cellar was 19th century in date, and it is conceivable that it may have been broadly contemporary with the construction of New Court itself in 1823-25. The original extent of the structure is unclear, due to the degree of later truncation, but it measured at least 4.4m+ long by 1.8m+ wide. Its southern wall represented a later addition or modification, abutting the two earlier walls, which may well have been inserted when the pillared gateway to the east – giving access onto Garrett Hostel Lane – was constructed; the base of one of these pillars overlay the wall. Subsequently, the eastern wall of the cellar was removed and a series of ceramic service pipes introduced, each set in concrete. The floor height was also raised, from 7.03m OD to 7.75m OD, and the room converted into a white-tiled bathroom containing at least five toilet cubicles (the scars of which were still visible). The entrance at this time was situated in the northwest corner of the room. Following the disuse of the bathroom, the floor height was again raised (to 8.19m OD) and a new doorway cut into the eastern wall; the former entrance was bricked up. This space was then put to use as a bin store.

Area 7

Between the 15th of April and the 6th of May 2010, a watching brief was conducted during the excavation of a service trench located in the narrow laneway that separates Bishop’s Hostel from the southern boundary of Great Court (see Figure 23). This laneway, which is accessed via Nevile’s Gateway from Trinity Lane, closely follows the probable route of medieval Flax Hythe Lane (see Willis & Clark 1886 II, 402). The trench – which was somewhat irregular in form due to the presence of numerous earlier services along its length – extended 13.7m east to west, and was an average of 0.85m wide. Due to its depth, which averaged around 2.70m (and thus extended to *c.* 5.4m OD), its excavation was undertaken segmentally, with each segment being

temporarily shored prior to being recorded and then backfilled. Natural gravels were encountered at 6.29m OD, overlying Gault clay at 6.04m OD. Although the majority of archaeological deposits in this area had been heavily truncated by modern disturbance, occasional 'pinnacles' of stratigraphy were identified; in addition, a number of waterlogged timbers were also present at the very base of the trench.

The largest surviving pinnacle of material was situated towards the western end of the trench. Although the upper portion of the sequence in this location had been truncated, a series of six layers survived (extending from 7.15m OD to 6.03m OD). The uppermost of these layers consisted of a friable deposit of dark greyish brown sandy silt, with occasional gravel and CBM inclusions, which measured 0.11m+ thick. Beneath this lay a mixed and mottled mid greyish brown sandy silt deposit with diffuse reddish brown sandy gravel patches, which measured 0.15m+ thick. This overlay a very friable deposit of pale brownish yellow sandy gravels measuring 0.10m thick, which in turn overlay a mid to pale brown sandy silt layer with occasional gravel inclusions measuring 0.15m. Beneath this lay a very firm deposit of dark brownish grey sandy silt, with occasional to rare gravel inclusions, which measured 0.12m+ thick. Finally, a friable deposit of mid brownish grey silty sand was also present; this contained diffusely banded lenses of orange gravel, and measured 0.34m thick. Whilst none of these layers demonstrated the dense compaction and tight banding normally associated with a trackway – such as was identified at the nearby Trinity Master's Lodge site, for example (see Alexander 1997) – it is possible that one or more of the deposits was associated with medieval Flax Hythe Lane. Elsewhere within the trench, the partial remnants of two quarry pits with reddish orange gravel fills were also identified within heavily truncated 'pinnacles', but few other details of these features could be discerned.

Perhaps most significantly, however, waterlogged timbers were encountered at both the extreme west and extreme east ends of the trench (see Figure 22). In both instances these timbers, which appear to have formed part of the revetments of large east-west aligned cut features, had been preserved by being embedded within the Gault clay. The best-preserved wood was situated at the western end of the trench, where it was revealed at the base of the north-facing section (with the uppermost surviving element lying at 5.44m OD). Here, five timbers were present, although this clearly represents only a small portion of the original extent of the feature. A single upright, which was square in section and measured 0.12m wide by 0.48m+ long, was accompanied by four associated planks. The latter – which were arranged, two deep, to either side of it – had all been morticed into the upright. The most fully exposed plank measured 1.70m+ long, 0.19m wide and 0.08m thick. At the eastern end of the trench, a second very similar feature was again identified within the north-facing section. Here, however, only a single fragment of plank survived, although this clearly comprised part of a very similarly constructed revetment. The fragment measured 0.23m by 0.16m by 0.03m thick. Due to the instability of the trench, none of these timbers could be recovered and they were left *in situ*.

Area 1

Included below is a copy of the interim statement that was originally issued in relation to the test pit and borehole evaluation that was conducted in Great Court between the 27th and the 29th of May 2009.

Interim note on work at Trinity College: Main Court Lawn Test Pits and Boreholes

Alison Dickens BA MIFA

24th July 2009

Introduction

Two blocks of work have been commissioned by Bidwells on behalf of Trinity College in advance of locating a temporary kitchen in the southwest corner of Main Court. This note is a brief statement for archaeological investigation prior to the digging of shallow pits for the supporting pads of the temporary structure and borehole investigation of locations identified as possible voids by ground penetrating radar.

Background

Main Court consists of six areas of lawn divided by cobble paths. The location of the temporary kitchen is in the southwest corner of Main Court, mostly on an area of lawn with a slight overlap on the path outside the Great Hall.

Trinity College was founded in 1546, uniting the existing colleges of Michael House and King's Hall, and expanded onto land in part already occupied and in part reclaimed from the riverside. The area of the investigation is close to the line of Milne Street, an ancient route through the town closer to the river than the present Trinity Street line that was gradually obliterated by the expansion of colleges towards the river. It is not clear if Milne Street continued right through Main Court, but the area of the temporary kitchen is close to its projected line.

Previous Work

Several phases of archaeological investigation have been carried in Trinity College in the last 18 years. This includes: work in the gateway area (Evans 1991), Music Rooms (Miller 1992), Angel Court (Regan 1997), Master's Lodge basement (Alexander 1998), Great Hall kitchen cellar (Hall 2000) and the Fellows Parlour (Webb 2004). Work on the library site in 1990 is due to be published shortly (Cessford & Dickens in prep).

What all these investigations have in common is that they revealed evidence, in the case of the library and Master's Lodge basement being quite deep sequences of activity, relating to both the College and the periods proceeding it.

Methodology

The work consisted of two components:

- ∞ Five 1x1m hand-dug test pits were excavated in the lawn where the temporary kitchen is to be located. Given that the support pads pits for the kitchen are to be dug to a depth of 200mm, the test-pits were dug to about 300mm.
- ∞ To install the kitchen a mobile crane is required to be brought in to Main Court. In anticipation of this a ground penetrating radar survey was conducted to determine any potential weak points on the route. These were

then tested by boreholes drilled by hand on the sites of three possible voids to determine what was present.

Results

Test-Pits

The five test-pits (TP) were dug on 27th May 2009. Turf was removed by hand and excavation conducted with appropriate hand tools. All pottery, glass and metal work was retained for specialist analysis along with chronologically diagnostic clay pipe fragments. A sample of brick, tile and animal bone was selected from the excavation of TP3. Contexts were assigned sequentially from [100], no feature numbers were assigned.

Plans were drawn at 1:20, sections at 1:10. A photographic record of each TP was made.

Excavation revealed evidence of floors, surfaces and make-up layers, with a single posthole in TP1 and a possible pit in TP5. Initial assessment of the pottery suggests that the earliest archaeology encountered dates to the 14th or 15th century with a later phase of activity of probably late 16th or 17th century date.

All Test-Pits

[100] Layer of turf and top soil.

Moderately well compacted, semi-friable, mid greyish brown sand clay silt with occasional small sub-rounded and sub-angular gravel inclusions and rare small brick and tile fragments, moderate to frequent root disturbance, measures from 0.1m to 0.14m thick. Layer [100] overlies make-up deposits [101])in TP3, [103] in TP1, [107] in TP2, [110] in TP4 and [115] in TP5.

TP1

[103] Make-up layer

Moderately well compacted, semi-friable, mid brownish grey gravelly silt with moderate small sub-rounded and sub-angular gravel inclusions, moderately frequent brick and tile fragments, moderately frequent inclusions of pot and bone and occasional glass and clay pipe, occasional root disturbance, measures from 0.12m to 0.18m thick. Layer [103] seals posthole [105], fill [104], and is sealed by turf and topsoil [100].

[104] Fill of posthole

Loose to moderately well compacted, semi-friable, mid greyish brown sand silt with very occasional small sub-rounded and sub-angular gravel inclusions and very occasional brick and tile fragments, maximum depth of 0.14m. Fill [104] sits within cut [105] and is sealed by make-up deposit [103].

[105] Cut of posthole

Cut of sub-rectangular posthole continuing beyond the limit of TP1 to the west with steeply sloping sides breaking sharply to a flat sub-rectangular base. Measuring 0.36m by 0.24m in diameter and with a maximum depth of 0.14m. Posthole [105] cuts layer [106] and is filled by deposit [104].

[106] Make-up layer / surface

Moderately well compacted, semi-friable, pale brownish grey sand silt with moderate to frequent small sub-rounded and sub-angular gravels and moderate brick and tile fragments

and crushed mortar inclusions, measures 0.11m+, layer continues beyond limit of excavated depth. Layer [106] is cut by posthole [105].

TP2

[107] Make-up layer

Moderately well compacted, semi-friable, mid brownish grey gravelly silt with moderate small sub-rounded and sub-angular gravel inclusions, moderately frequent brick and tile fragments, moderately frequent inclusions of pot and bone and occasional glass and clay pipe, occasional root disturbance, measures from 0.16m to 0.24m thick. Layer [107] overlies layer [108] and is sealed by turf and topsoil [100].

[108] Trample layer

Moderately well compacted, mid to pale greyish brown silt with frequent inclusions of degraded clunch fragments and occasional brick and tile fragments, measures 30mm to 80mm thick. Layer [108] overlies floor [109] and is sealed by make-up deposit [107].

[109] Clunch floor

Well compacted, firm, pale greyish white clunch blocks and fragments, measures greater than 0.1m+, layer continues beyond the limit of excavated depth and may show evidence of multiple floor surfaces divided by trample horizons and 'pressed-in' tile fragments. Floor [109] is overlain by trample layer [108].

TP3

[101] Make-up layer

Moderately well compacted, semi-friable, mid brownish grey gravelly silt with moderate small sub-rounded and sub-angular gravel inclusions, moderately frequent brick and tile fragments, moderately frequent inclusions of pot and bone and occasional glass, clay pipe and metal (Fe), occasional root disturbance, measures from 0.17m to 0.19m thick. Layer [101] overlies possible surface [102] and is sealed by turf and topsoil [100].

[102] Make-up layer / surface

Moderately well compacted to firm, semi-plastic, mid to pale yellowish cream silt clay with very occasional pot and occasional small sub-rounded and sub-angular gravel inclusions, layer not excavated and therefore thickness unknown. Layer [102] is sealed by make-up deposit [101].

TP4

[110] Make-up layer

Moderately well compacted, semi-friable, mid brownish grey gravelly silt with moderate small sub-rounded and sub-angular gravel inclusions, moderately frequent brick and tile fragments, moderately frequent inclusions of pot and bone and occasional glass, clay pipe and metal (Fe), occasional root disturbance, measures from 0.12m to 0.15m thick. Layer [110] overlies possible surface [111] and is sealed by turf and topsoil [100].

[111] Make-up layer / surface

Moderately well compacted, friable, pale brownish grey sand silt with occasional brick and tile fragments and small sub-rounded and sub-angular gravel inclusions, measures 90mm to 120mm thick. Layer [111] overlies layer [112] and is sealed by make-up deposit [110].

[112] Trample layer

Moderately well compacted, relatively firm pale grey sand silt with moderately frequent 'off-white' clay mottles throughout, occasional small sub-rounded grit inclusions, measures a maximum of 20mm thick. Trample layer [112] overlies surface [113] and is sealed by layer [111].

[113] Surface

Moderately well compacted, relatively firm pale grey sand silt with occasional small sub-rounded grit inclusions, measures a maximum of 80mm thick. Layer [113] is overlain by trample layer [112].

[114] Layer / Fill

Relatively loose to moderately well compacted, semi friable, mid reddish brown sand silt, layer not excavated and therefore thickness unknown. Deposit [114] is sealed by layer [113].

TP5

[115] Make-up layer

Moderately well compacted, semi-friable, mid brownish grey gravelly silt with moderate small sub-rounded and sub-angular gravel inclusions, moderately frequent brick and tile fragments, moderately frequent inclusions of pot and bone and occasional glass and clay pipe, occasional root disturbance, measures from 0.16m to 0.19m thick. Layer [115] overlies possible pit or depression [118], fill [116], and is sealed by turf and topsoil [100].

[116] Fill of pit or depression

Relatively loose to moderately well compacted, friable, mid brownish orange silt sand with moderately frequent small sub-angular grit and gravel inclusions, measures 0.13m+, deposit not bottomed. Fill [116] sits within cut [118] and is sealed by make-up deposit [115].

[117] Make-up layer / surface

Moderately well compact, firm, semi-plastic, cream silt clay with moderate pale brownish cream mottles throughout, measures 80mm+, layer not bottomed. Layer [117] is cut by possible pit or depression [118].

[118] Cut of depression or pit

Depression or pit of unknown form continuing beyond the limits of excavation in test pit 5 to the west and south. Appears to have relatively gently sloping sides, base was not reached, the feature measured 0.62m by 0.34m and 0.13m+ deep. Feature [118] cuts layer [117] and is filled by deposit [116].

Boreholes

Five boreholes were drilled into the area of the possible voids identified by the ground penetrating radar (GPR). The work was conducted on 21st May 2009 by Dr. Steve Boreham of the Dept. of Geography, Cambridge University.

In summary the results were as follows.

Boreholes A1 and A2

Below 310mm of cobbles, concrete and a soft silty sand red tile was encountered indicating the top of a small drain or culvert. The tile top was 20mm thick, with a void below 270mm deep. The base, at 600mm below ground level, was yellow brick.

The culvert/drain was less than 500mm wide, significantly narrower than the readings from the GPR had suggested. This is probably due to the brick side walls reflecting back a signal to the sides.

Borehole A1

Depth relative to ground surface (cm)

0 to 15cm Cobbles and concrete

15 to 31cm Soft brown silty sand with chalk and flint fragments becoming darker and more gravelly towards the base

31 to 33cm	Red tile
33 to 60cm	Void
60cm	Borehole stopped on yellow brick

Borehole A2 (2m from A1)

Depth relative to ground surface (cm)	
0 to 15cm	Cobbles and concrete
15 to 25cm	Soft brown silty sand with chalk and flint fragments
25cm	Borehole stopped on red tile

Borehole B

The results from borehole B indicated that no void was present in the area. The sequence encountered below the cobbles suggest the presence of a large infilled pit of unknown date. The reflection in the GPR survey was probably caused by the presence of waterlogged deposits around 1.27m below ground level.

Borehole B

Depth relative to ground surface (cm)	
0 to 15cm	Cobbles and concrete
15 to 25cm	Orange brown coarse sand with peas grit
25 to 27cm	Black-grey silty marly sand
27 to 30cm	Chalk blocks in sand matrix
30 to 42cm	Clayey chalk with grey laminations
42 to 60cm	Yellow chalky buff sand
60 to 65cm	Yellow sand with pebbles
65 to 70cm	Black organic sandy silt
70 to 72cm	White silty chalk
72 to 79cm	Yellow-buff marly silty sand with pebbles
79 to 82cm	White chalky silt
82 to 127cm	Black very soft organic sandy silt with chalk and flint pebbles
127 to 134cm	Grey wet gravel and sand
134 to 173cm	Brown sand and pea grit
173 to 176cm	Orange medium sand and gravel
176cm	Borehole stopped on gravel

Boreholes C1 and C2

Both these boreholes were targeted at the southern of two large targets immediately under the main gateway. In C1, beneath the flagstones, the sequence started with a relatively soft sand with brick fragments. Succeeding deposits, however, became increasingly compact, with brick fragments present in most of the layers encountered. At the base (1.37m) the borer was stopped by a larger piece of brick.

In C2 the sequence was broadly similar with brick fragments down to at least 1.50m. In this case the borer was stopped at 1.86m by a cobble.

Given the position of the two targets, their shape as suggested by the GPR and the nature of the backfilled deposits, it seems most likely that these are pits cut as part of the construction of the main gateway and then backfilled afterwards. The compaction of the layers, particularly the deeper ones, indicates not only deliberate backfilling, but deliberate compaction presumably to create as stable a backfilling as possible.

Borehole C1

Depth relative to ground surface (cm)	
0 to 10cm	Flagstones and sand

10 to 20cm	Brown sand with brick and occ. bone fragments
20 to 55cm	Dark brown silty sand with brick fragments
55 to 63cm	Brown-black sand with brick fragments
63 to 67cm	White soft chalk
67 to 106cm	Soft grey marly silty sand with brick fragments becoming more gravelly with depth
106 to 122cm	Grey sand with brick and limestone fragments
122 to 128cm	Dense orange-brown sand and gravel
128 to 132cm	Brown sand with flint and brick fragments
132 to 137cm	White-buff chalky sand with brick fragments
137cm	Borehole stopped on brick

Borehole C2 (4m from C1)

Depth relative to ground surface (cm)

0 to 10cm	Flagstones and sand
10 to 25cm	Brown sand with pea grit and brick fragments
25 to 38cm	Brown sand with pea grit, chalk and brick fragments
38 to 42cm	Grey sandy silt with brick
42 to 56cm	Chalk blocks in grey coarse sand with brick fragments
56 to 70cm	Brown sand with pea grit, chalk and brick fragments
70 to 89cm	Stiff grey sandy silt with brick and chalk fragments
89 to 109cm	Stiff grey clay with pebbles and chalk
109 to 125cm	Orange coarse sand with gravel
125 to 135cm	Grey-black sandy silt with charcoal and pea grit
135 to 151cm	Green-grey sandy silt with brick and tile fragments
151 to 186cm	Green-grey silty clay with charcoal, sand and shells
186cm	Borehole stopped on a cobble

Discussion

These two minor pieces of work none-the-less contribute to a characterisation of archaeological remains that might be expected in Trinity Main Court. The test-pits indicate that the top of a sequence dating from the late 16th or 17th century is only about 300mm below the modern ground level, about 7.78m above OD. Work elsewhere in the College has demonstrated that the full sequence could be expected to extend down as deep as 5.76m above OD based on previous work in the kitchen basement in 2000 (Hall 2000). This indicates a depth of archaeological deposits of more than 2m.

The boreholes, whilst more limited in terms of providing a date, also indicate a significant depth of remains below Main Court, in particular the possible pit at B with its base at around 6.34m above OD.

2) Feature Concordance Table

Feature Number	Context Numbers	Type	Form	Length (m)	Width (m)	Depth (m)	Date	Phase	Area
200	202-04	Wall Foundation	Linear, E-W	3.20+	0.22+	0.45m+	1604-05	4	2
201	210-14	Pit	Sub-circular	0.80+	0.10+	0.46+	11 th -14 th century	1	
202	215-16, 224-25	Beamslot	Linear, E-W	1.23	0.31	0.17	Later 16 th century	2	
203	226-27	Robber Cut	Sub-rectangular	0.98	0.78	0.17	1603-04	3	
204	229-31	Masonry Pier Base	Sub-square	1.95	0.90+	0.36+	1604-05	4	
205	238-39	Beamslot	Linear, N-S	0.65+	0.45	0.06+	Later 16 th century	2	
206	237, 242, 244, 247-52	Stone-Built Sump	Square	1.18	0.98+	0.46	Later 16 th century	2	
207	245-46	Robber Cut	'L' Shaped	0.67	0.15	0.31	Later 16 th century	2	
208	232, 263-64	Masonry Pier Base	Sub-square	0.94	0.90+	0.64+	1604-05	4	
209	258, 265	Foundation Remnant	Irregular	0.58	0.48	0.05+	Later 16 th century	2	
210	267-69	Masonry Pier Base	Sub-square	0.85+	0.20+	0.17+	1604-05	4	
211	271-74	Pit	Oval	1.35	1.20	0.48+	Pre-15 th century?	1	
212	275-80	Brick-Built Sump	Square	0.96	0.46+	0.30+	Later 16 th century	2	
213	281-3	Column Base	Sub-rectangular	1.02	0.86	0.23+	c. 1546-7	2	
214	Unexcavated	Pit	Heavily Truncated	0.84+	0.33+	-	Pre-15 th century?	1	
215	200, 201	Floor Layer/Foundation	Heavily Truncated	2.35+	0.90+	0.15+	1604-05	4	
216	208, 209, 234, 235	Demolition Layers	Sub-rectangular	2.98+	2.82+	0.46	1603-04	3	
217	217-20, 228	Demolition Layers	Sub-rectangular	4.10+	2.04+	0.45	1603-04	3	
218	205-07	Wall and Construction Cut	Linear, E-W + N-S	3.46+	3.38+	0.62+	c. 1546-7	2	
219	284-86	Floor Foundation	Sub-rectangular	2.90+	2.72+	0.08	c. 1546-7	2	
220	287-88	Wall and Construction Cut	Linear, E-W + N-S	4.10+	3.20+	0.63+	c. 1554-5	2	
221	240-41	Levelling Layers	Heavily Truncated	1.02+	0.94+	0.27	Later 16 th century	2	
222	221, 236	Floor	Heavily Truncated	1.48+	0.66+	0.31	Later 16 th century	2	
223	222, 243, 257, 259-261, 270	Floor Layers	Irregular	1.88+	1.68+	0.13	Later 16 th century	2	
224	253-56	Foundation Scars	Irregular	0.88+	0.58+	0.07	Later 16 th century	2	
225	223	Wall Foundation	Linear, N-S	1.00+	-	0.30+	Later 16 th century	2	

Feature Number	Context Numbers	Type	Form	Length (m)	Width (m)	Depth (m)	Date	Phase	Area
300	304-05, 317	Pit/Well	Sub-oval	1.88+	1.42+	0.90+	15 th century	1	3
301	306-08	Pit	Sub-oval	0.72+	0.38+	0.54+	15 th century?	1	
302	309-12	Pit	Sub-oval	1.30+	1.04+	0.50+	14 th /15 th century	1	
303	313-14	Pit	Sub-oval	0.45+	0.35+	0.15+	14 th /15 th century	1	
304	301-303	Wall Foundation	Linear, N-S	2.0+	1.0+	0.23+	1604-05	4	
305	315-16	Borehole	Circular	0.30	0.30	0.85	Modern	/	
306	318-21, 326-29	Pit	Sub-oval	1.23+	0.93+	0.63+	15 th century	1	
307	322-25	Pit	Heavily Truncated	0.58+	0.42+	0.44+	15 th century	1	
308	336-37	Pit	Heavily Truncated	0.77+	0.29+	0.54+	14 th /15 th century?	1	
309	332-34	Pit	Heavily Truncated	0.82+	0.35+	0.28+	14 th /15 th century?	1	
310	330, 331, 335	Pit	Sub-oval	1.01+	0.35+	0.64+	15 th century	1	
311	341-46, 363	Construction Cut	Rectangular	4.12+	1.58+	1.09+	c. 1546-7	2	
312	347	Wall Foundation	Linear, N-S	3.50+	0.45	0.89+	c. 1546-7	2	
313	348-51	Robber Cut	Rectangular	1.05	0.82	0.65+	1603-04	3	
314	352-55	Pit	Sub-oval	0.59	0.38+	0.38	15 th century?	1	
315	356-62	Pit	Heavily Truncated	3.02+	0.38+	0.76+	16 th century?	1	
316	364-65	Masonry Pier Base	Sub-square	1.11+	0.62+	0.58+	1604-05	4	
317	338-39	Pit	Heavily Truncated	0.40+	0.26+	0.37+	14 th /15 th century?	1	
400	405-06	Pit	Sub-rectangular	1.25	1.07	0.20	13 th century	II	4
401	408-09	Beamslot	Linear, E-W	1.66+	0.42	0.31	13 th century	II	
402	421-22	Beamslot	Linear, N-S	0.99+	0.46	0.32	13 th century	II	
403	404	Layer	Heavily Truncated	8.96+	4.24+	0.34+	14 th -16 th century	III	
404	427-28	Pit	Sub-rectangular	0.85+	0.20+	0.22+	12 th /13 th century?	II	
405	429-34	Posthole Alignment	Linear, N-S	0.20	0.14	0.30	12 th /13 th century?	II	
406	436-39	Pit	Sub-rectangular	1.60	0.96	0.24	16 th century	III	
407	440-42	Pit/Postpad?	Sub-oval	1.35	1.04	0.31	12 th /13 th century?	II	
408	423-25, 444-46	Pit/Cellar	Rectangular	2.04+	2.08	0.71	13 th century	II	
409	447-49	Pit	Sub-oval?	0.81+	0.43+	0.45+	13 th century	II	

Feature Number	Context Numbers	Type	Form	Length (m)	Width (m)	Depth (m)	Date	Phase	Area
410	450-51	Beamslot	Linear, E-W	3.40+	0.35	0.30	12 th /13 th century	II	4
411	452-53	Pit/Foundation	Sub-rectangular?	1.92+	0.48+	0.24+	12 th /13 th century	II	
412	454-55	Pit/Linear	Linear, E-W?	1.22+	0.33+	0.12+	12 th /13 th century?	II	
413	456-58	Pit/Postpad?	Sub-oval	1.40	0.80	0.21	12 th /13 th century?	II	
414	461-62	Gully	Linear, E-W	3.33+	0.46	0.18+	12 th /13 th century?	II	
415	463-64	Pit	Sub-oval	1.38	1.20+	0.26	12 th /13 th century	II	
416	472-74	Pit	Sub-oval	0.93	0.45+	0.25	13 th century	II	
417	475-77	Beamslot	Linear, E-W + N-S	2.09+	0.18	0.13	12 th century	II	
418	401-03, 419-20, 466-71	Walls and Construction Cut	Linear	8.96+	0.58+	1.84+	1823-25	IV	
419	442	Layer	Irregular	2.62	1.70+	0.09	12 th /13 th century?	II	
420	414-15	Layers	Irregular	3.22+	2.11+	0.08	12 th /13 th century	II	
421	479	Layer	Sub-rectangular	0.64+	0.55	0.05	12 th /13 th century?	II	
422	407, 480	Layer/Hearth Base	Irregular	1.43+	1.07+	0.06	13 th century	II	
423	410, 418	Layer	Heavily Truncated	8.04+	3.33+	0.27	13 th century	II	
424	412-13	Layers	Sub-rectangular	1.18+	1.12+	0.10	13 th century	II	
425	411, 416-17	Pit	Sub-rectangular?	1.02+	0.48+	0.37+	12 th century	II	
426	Unexcavated	Pit/Postpad?	Sub-oval	0.92	0.68	-	12 th /13 th century?	II	
427	Unexcavated	Pit/Postpad?	Sub-oval	0.46+	0.40+	-	12 th /13 th century?	II	
428	Unexcavated	Pit/Postpad?	Sub-oval	0.46+	0.43	-	12 th /13 th century?	II	
429	Unexcavated	Pit/Postpad?	Sub-oval	0.42	0.37+	-	12 th /13 th century?	II	
430	426, 460, 478	Layer	Heavily Truncated	8.96+	4.24+	0.20	12 th /13 th century	II	
431	435, 459	Sub-Soil	Heavily Truncated	8.96+	4.24+	0.18	Roman?	I	
500	507-08	Pit	Sub-rectangular	0.96+	0.46+	0.62+	Pre-16 th century?	1	5
501	501-02	Demolition Layers	Sub-rectangular	3.00+	0.84+	0.15+	1603-04	3	
502	503-04	Floor Layers	Sub-rectangular	3.00+	0.84+	0.19	Later 16 th century	2	
503	505	Garden Soil	Heavily Truncated	2.94+	0.84+	0.28	Pre-16 th century?	1	
504	500, 509-10	Wall and Construction Cut	Linear, E-W + N-S	3.28+	1.20	0.37+	c. 1554-5	2	
505	506	Sub-Soil?	Heavily Truncated	2.94+	0.86+	0.24	Pre-medieval?	1	

Oasis Form

OASIS ID: cambridg3-102045	
Project Details	
Project name	Trinity College Kitchens, Cambridge
Short description of the project	Archaeological investigations were recently undertaken in two discrete areas located within the grounds of Trinity College, Cambridge, in advance of the redevelopment of the College's kitchen facilities. The first, and most intensively excavated, of the two areas was situated within the present kitchen cellar, beneath the southern end of the Great Hall. Here, four phases of activity were identified in three distinct trenches. The first of these phases consisted of a series of pits of 12th to 16th century date. Subsequently, the majority of these features were truncated by the erection of two substantial structures, both of which contained undercrofts. These buildings were associated with the newly established Trinity College, which had been founded at the site by Henry VIII in 1546. The third phase of activity, which occurred in 1603-04, consisted of the demolition of the two preceding structures. These were then replaced during phase four by the College's extant Great Hall, which was completed in 1605. The second area of investigation was situated around 70m to the southwest of the first, inside the southeastern corner of the southern range of New Court. Here, a single trench was excavated in advance of the construction of an electrical switchroom. The earliest activity to be identified in this location consisted of a sub-soil deposit, containing Roman pottery, which was then overlain by a series of alluvial layers. These were then truncated by a series of features during the 11th/12th centuries. Then, in the early 13th century, three closely adjacent timber buildings were constructed. In the early 14th century, however, all three buildings were demolished and the area was transformed into a long-lived garden. The site remained in use as a garden until a stable block was constructed in the late 17th century. Then, in 1823, the stables were demolished in order to make way for the construction of New Court.
Project dates	Start: 27-05-2009 End: 06-05-2010
Previous/future work	Yes / Not known
Any associated project reference codes	ECB 3582 - HER event no.
Any associated project reference codes	TKL 09 - Sitecode
Type of project	Field evaluation
Site status	Listed Building
Current Land use	Other 2 - In use as a building
Monument type	PITS Medieval
Monument type	BUILDING FOUNDATIONS Post Medieval
Significant Finds	MOULDED STONE Medieval
Significant Finds	POTTERY Medieval
Significant Finds	POTTERY Post Medieval
Significant Finds	ANIMAL BONE Post Medieval
Methods & techniques	'Documentary Search','Targeted Trenches','Test Pits'

Development type	Building refurbishment/repairs/restoration
Prompt	Direction from Local Planning Authority - PPG16
Position in the planning process	After full determination (eg. As a condition)
Project Location	
Country	England
Site location	CAMBRIDGESHIRE CAMBRIDGE CAMBRIDGE Trinity College Kitchens, Cambridge
Postcode	CB2 1TQ
Study area	95.00 Square metres
Site coordinates	TL 4469 5861 52.2062681744 0.117701464930 52 12 22 N 000 07 03 E Point
Height OD / Depth	Min: 6.15m Max: 6.46m
Project Creators	
Name of Organisation	Cambridge Archaeological Unit
Project brief originator	Local Planning Authority (with/without advice from County/District Archaeologist)
Project design originator	Alison Dickens
Project director/manager	Alison Dickens
Project supervisor	Richard Newman
Type of sponsor/funding body	Developer
Name of sponsor/funding body	Trinity College, Cambridge
Project Archives	
Physical Archive recipient	Cambridge Archaeological Unit
Physical Archive ID	TKL 09
Physical Contents	'Animal Bones','Ceramics','Environmental','Glass','Metal','Worked stone/lithics'
Digital Archive recipient	Cambridge Archaeological Unit
Digital Archive ID	TKL 09
Digital Contents	'Animal Bones','Ceramics','Environmental','Glass','Metal','Worked stone/lithics'
Digital Media available	'Images raster / digital photography','Spreadsheets','Text'
Paper Archive recipient	Cambridge Archaeological Unit
Paper Archive ID	TKL 09
Paper Contents	'Stratigraphic'

Paper Media available	'Context sheet','Matrices','Photograph','Plan','Report','Section'
Project Bibliography	
Publication type	Grey literature (unpublished document/manuscript)
Title	Trinity College Kitchens, Cambridge: an Archaeological Excavation and Watching Brief
Author(s)/Editor(s)	Newman, R.
Other bibliographic details	Cambridge Archaeological Unit Report Number 1000
Date	2011
Issuer or publisher	Cambridge Archaeological Unit
Place of issue or publication	Cambridge
Description	A wire-bound A4 document with plastic laminate covers. It is 100 pages long, and has 23 illustrations.
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