

Old Hall, Queens' College, Cambridge

Archaeological Monitoring of Floor Replacement



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Summary

Archaeological monitoring in advance of the replacement of the floor in Old Hall, Queens' College, Cambridge, was undertaken by Cambridge Archaeological Unit in late January and early February 2003. This provided the opportunity to record the vaulted cellars below the floor and revealed a sequence of deposits relating to their construction and subsequent alterations.

Introduction

The Cambridge Archaeological Unit undertook recording of archaeological deposits between 30th January and 4th February 2003 during the replacement of the floor, which dates from 1862, in the Old Hall, Queens' College, Cambridge (Figure 1). Archaeological deposits over a metre in depth were recorded in section on the northern side of two barrel-vaulted brick cellars within the internal area of the Old Hall. Even though the archaeological investigation was limited, this has enabled a sequence to be established for the construction of, and later alteration to, the building. The site code is QCH 03.

Background

Queens' College was founded on the present site in 1448, and the contracts of work date the construction of the Old Hall to 1449 (Willis and Clark 1886: Volume II, 7-11). The northern part of the site had been previously occupied by the Carmelite Friary and the rest consisted of a messuage and garden – a corner house, *angulare mesuagium*, four tenements and their gardens and a piece of ground, not built on, belonging to Corpus Christi College (Willis and Clark 1886: Volume II, 2-3). The documented history of the Old Hall is summarised in Willis and Clark's *History of the University of Cambridge* (1886: Volume II: 44-50) and also in Atkinson and Clark's *Cambridge Described and Illustrated* (1897: 382).

Methodology

The archaeological work consisted of archaeological monitoring of deposits below the 1862 floor, in an area measuring *c.* 6.5 m north – south x 8 m east – west on the north side of vaulted cellars (Figure 2). However, most of these deposits had already been removed prior to investigation and they were recorded in section only (Figures 3 and 4).

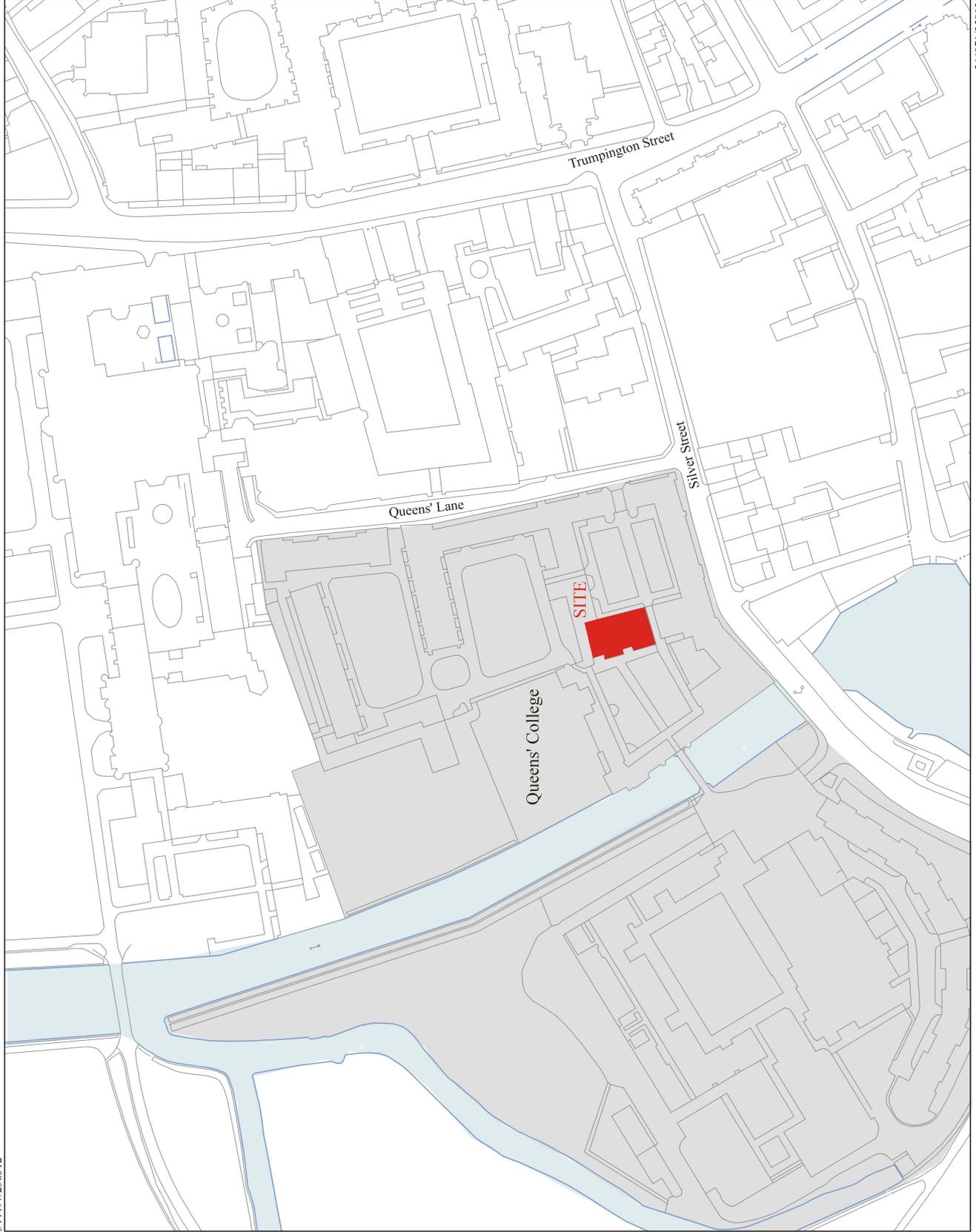
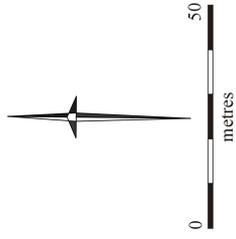
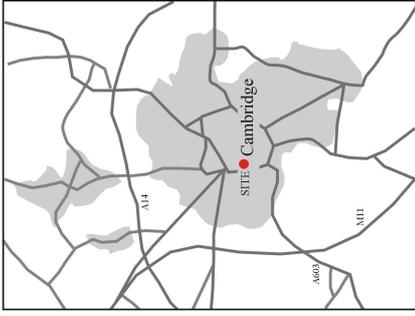
Archaeological features were hand cleaned and planned at a scale of 1:50 and 1:20. Recording was conducted using the CAU-modified Museum of London system (Spence 1990), and sections were recorded at 1:10; a profile across the site was recorded at 1:50. A digital photographic record of the archaeological features was completed. All work was carried out in strict accordance with the recommendations of SCAUM (Allen and Holt 1997).

Results

A sequence of construction and alterations/refurbishments can be suggested as a result of this archaeological work (Figures 2, 3 and 4). A total of 50 archaeological contexts was recorded across the area (Appendix 1). A small assemblage of sampled finds from the work was recovered, including five sherds of pottery (73 g), 11 fragments of bone (36 g), four fragments of tile (1,462 g), ten fragments of brick (2,116 g) and 25 sherds of glass (120 g); however, only a small proportion of this material was from stratified archaeological deposits (Appendix 2).

The archaeological features are described in this report, in order of chronological sequence relating to the construction and alteration of the Old Hall.

A barrel-vaulted red-brick cellar, aligned east to west, was constructed across the centre of the Old Hall (Figure 2). However, it was unclear from these archaeological investigations whether or not this central cellar was integral to the original construction of the Old Hall. The backfilled earth around the cellar apparently contained a sherd of sixteenth century pottery and, if it is not residual, this would suggest that the cellar was inserted into the pre-existing building, constructed in the mid fifteenth century.



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Figure 1. Site location

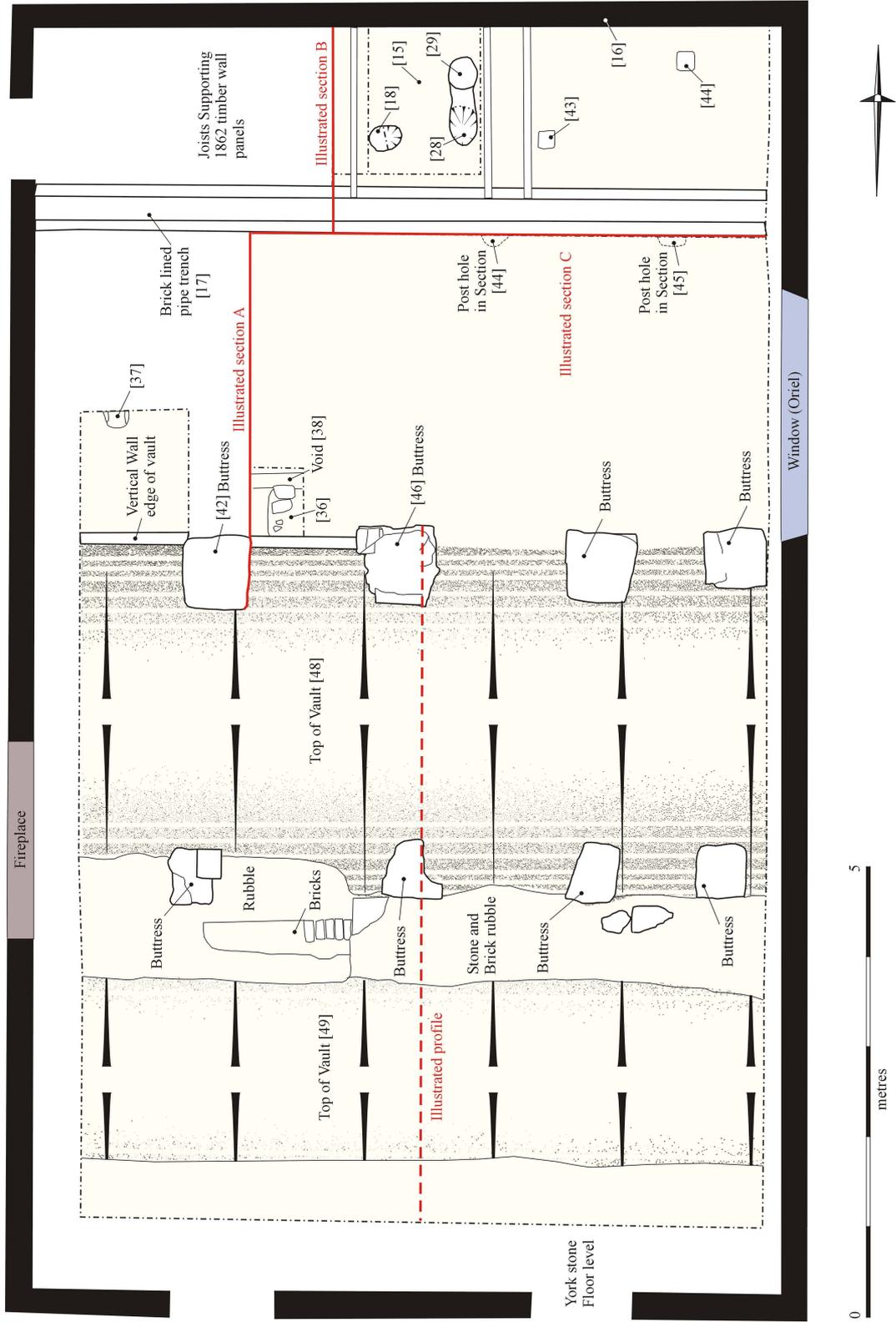


Figure 2. Plan of investigations in Old Hall, Queens' College

A substantial quantity of material was excavated from the internal area of the Old Hall for the construction of this cellar, the base of which was over 2 m in depth below the level of the Old Hall floor and exterior ground surface. The internal width of the cellar measures 3.7 m (N – S) x *c.* 8 m in length (E – W), and is 2.05 m in height. It is clear from the results of these archaeological investigations that an area far larger than the actual size of the cellar was removed in order that it could be built, which was subsequently backfilled after the cellar had been finished. This has removed any earlier archaeological deposits from within the internal area of the Old Hall, either of earlier buildings or of earlier floor levels within the Old Hall (if the cellar was a later addition to a pre-existing building).

The cellar was constructed with red bricks, measuring 0.22 m in length x 0.05-0.06 m in thickness and these are typical of the sixteenth and early seventeenth centuries; this size of brick was used up to the mid seventeenth century when bricks became slightly thicker. The shallow barrel vault was constructed with two layers of bricks laid on edge.

A series of crude buttresses was erected on and along the sides of the vault, presumably to stop the vault springing. A total of eight buttresses was spaced *c.* 2 m apart (centre-to-centre) and *c.* 3.5 m apart north-south on either side of the vault (Figure 2). The individual buttresses were sub-rectangular in shape, measuring *c.* 0.8 x 0.7 m in area x *c.* 0.5 m in height (max.); they begin at the top of the vertical side walls, extending up to a height level with the top of the vault. The buttresses were constructed using stone rubble <0.35 m in length as well as reused masonry; several of the mouldings were fragments of window mullion, one of which was 0.55 m in length. The buttresses were bonded with pale greyish-cream coloured mortar.

In a small sondage (0.75 x 0.55 m in size x 0.5 m in depth) against the northern (outer) side of the vault, the top of a further probable buttress was partially exposed, abutting and *c.* 0.2 m below the vertical side-wall of the cellar (Figure 3, Section A). This, presumably, also functioned to counteract the outward thrust of the vault. The buttress [36] was very similar in character to those fully exposed along the sides of the vault, measuring 0.6 m in length (N – S) and made up of rubble blocks *c.* 0.2 m in size and bonded together with mortar. It seems likely that there are further buttresses along the northern side of the cellar wall. On the northern side of this buttress a possible timber void [38] was encountered, measuring 0.2 m in width x 0.17 m in depth, which was traced for two metres on the north side of, and parallel to, the central red-brick cellar. This feature could possibly indicate the position of timber scaffolding that was simply left in position during the backfilling or alternatively might simply represent a timber that was discarded in the backfilled rubble deposit.

The cellar was buried after it had been constructed and the area dug out around it was backfilled level with the top of the vault, above which the floor was laid (Figure 3, Section A). This backfilling was defined by a series of layers and lenses of material, and more substantial deposits with tip-lines of material, that abutted the north wall [16] of the Old Hall and sloped down towards, and also abutted, the cellar wall [48]. This indicates that these deposits, which are associated with the construction of the cellar, post-date the construction of the north wall of the Old Hall, although the two might have been close in time. The deposits varied from loose dark brown soil layers, for example [39], to compact layers of crushed chalk and mortar, for example, [15]. Much of this was probably redeposited material that had been initially dug out for the cellar and simply backfilled after it had been built. Small discontinuous layers represent material from different sources, probably including waste from construction of the Old Hall, if they were constructed close in time. The more compact mortar deposits may have been the remains of temporary working surfaces used during the construction of the cellar, if material was deposited as the cellar was constructed. There were few finds within these deposits, although most of the material had been removed without archaeological supervision and, in general, recording was limited to sections only. Layer [39] contained a rim-sherd of a sixteenth century greyware jar, although there is some uncertainty about the exact location of this sherd. A copper-alloy token, dating to the fifteenth century, was also recovered before archaeological monitoring commenced.

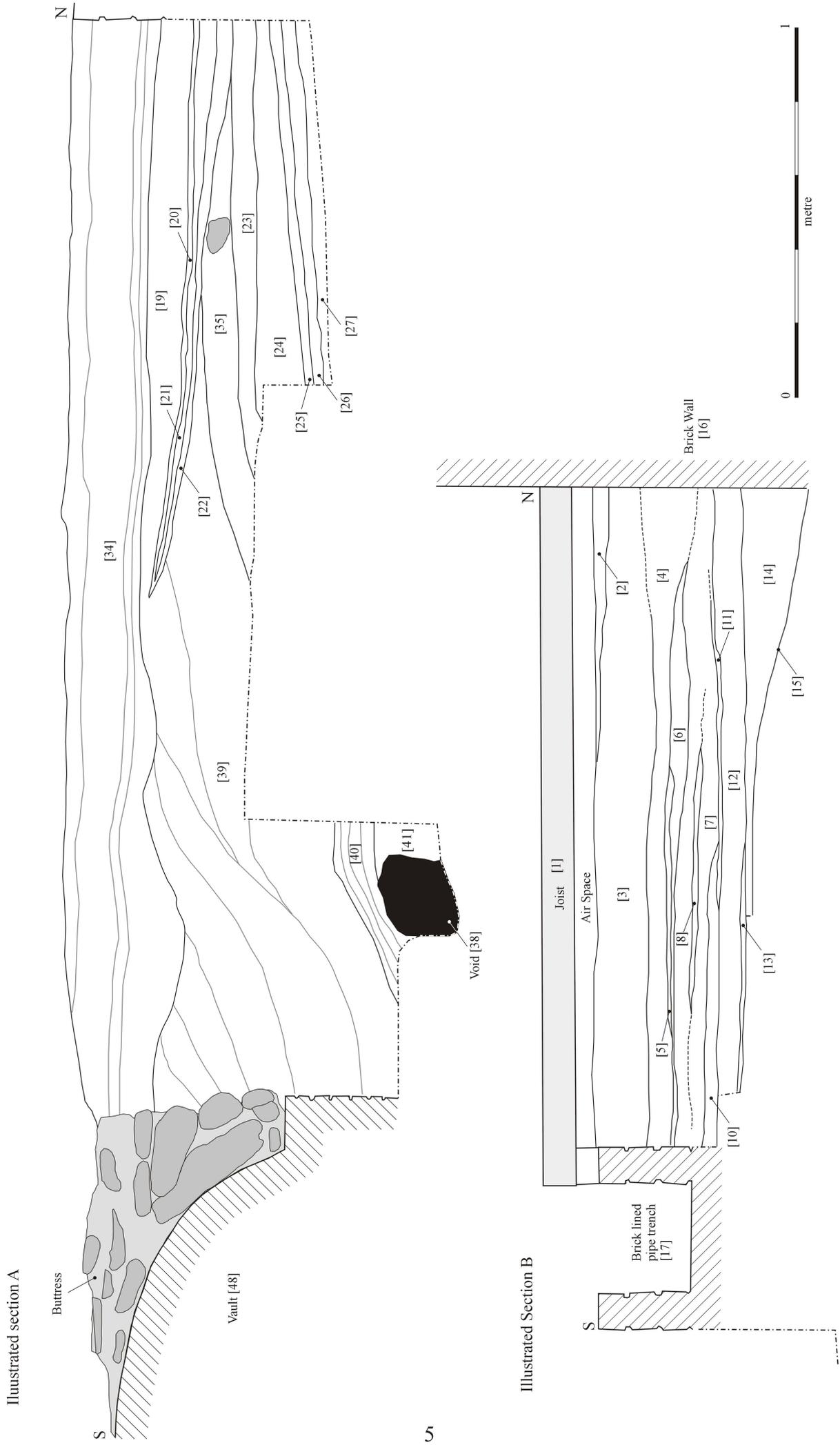


Figure 3. North - South Sections A and B (see Figure 2 for locations)

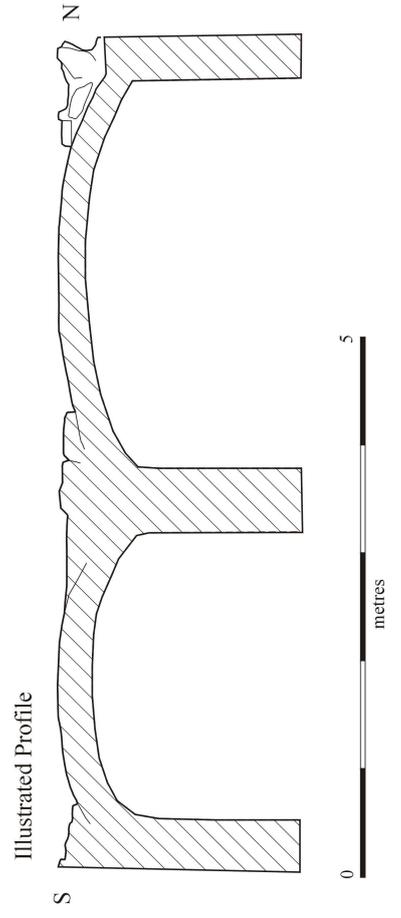
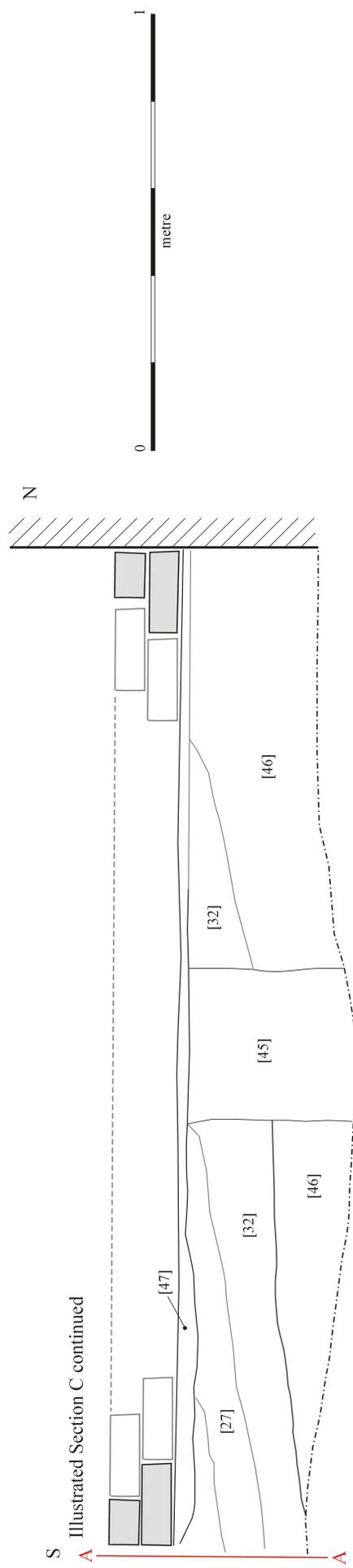
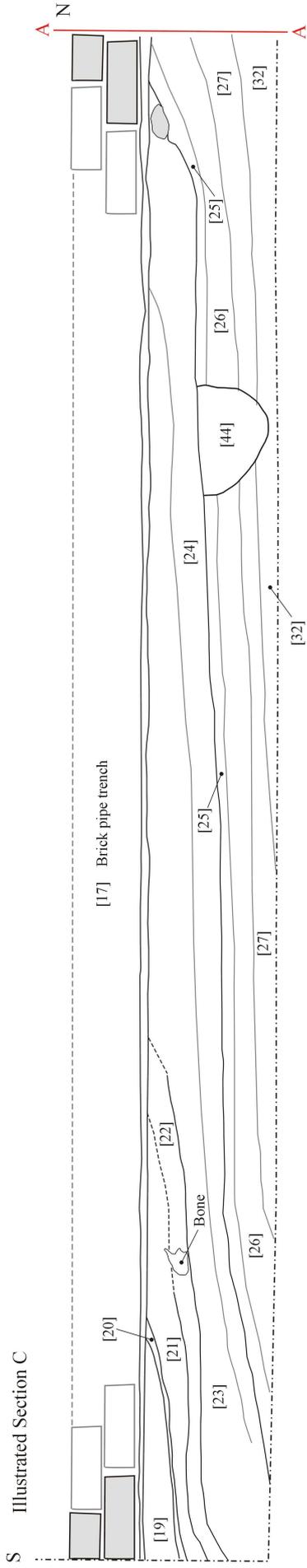


Figure 4. East - West Section C and profile across brick vaults
(see Figure 2 for locations)

On the south side of the central cellar, a second barrel-vaulted brick cellar was constructed [50], using yellow bricks 0.22 m in length x 0.07 - 0.08 m in thickness (Figure 2). The barrel of this cellar was also constructed using two rows of bricks on edge. However, the vault was narrower than the earlier one and the internal width of the cellar measured 2.65 m but it was slightly deeper at 2.17 m. There were also no buttresses associated with this vault. A further yellow brick barrel-vaulted cellar, which was apparently contemporary with this one, was constructed immediately to the south, but it lies outside the area of the Old Hall and underneath the Screens. The brick-type indicates that these two cellars were inserted during the late eighteenth or first half of the nineteenth century. Their construction has removed all earlier archaeological deposits on the south side of the red-brick cellar.

A number of postholes was defined cutting through the backfill deposits on the northern side of the red-brick cellar, although the level at which these postholes was cut down from could not be ascertained because the overlying deposits had already been removed (Figure 2). It seems likely there were probably further postholes that had been removed before archaeological monitoring. The fill of posthole [33] contained a decorated sherd of a glass vessel (weighing 2 g) and a fragment of late fifteenth/sixteenth century brick (370 g), posthole [45] contained a fragment of brick (264 g), posthole [18] contained a fragment of brick (10 g) and a fragment of Collyweston tile (456 g) and posthole [28] also contained a fragment of fired clay tile (54 g) and a fragment of Collyweston tile (122 g). Posthole [29] was filled with mortar post-packing [30] that had been dumped in and around the post, preserving the shape of a square timber 0.12 m wide. The mortar deposit contained two large fragments of late fifteenth/sixteenth century brick (1,290 g). Posthole [37] contained tile that had been reused as post-packing around the timber.

It is suggested that these postholes were probably used to secure timber scaffolding, either during the construction of the Old Hall, if the red-brick cellar was integral with the original building, or possibly during the refurbishment of the building (Atkinson and Clark 1897: 382; Willis and Clark 1886: 44-8). In 1531 the Hall was decorated with wooden panelling, which was subsequently removed to the Lodge, and between 1732 and 1734 the Old Hall was, according to Dr Plumtre (President 1760-88), 'fitted up in its present neat and elegant manner', and in 1846 the ceiling was removed and the roof restored (Willis and Clark 1886: 44-7). The postholes could be associated with any of these works and they are not necessarily all contemporary with each other. A deposit of window glass (78 g), which was unstratified but came from the general area in front of the oriel window on the eastern side of the Old Hall, might relate to the refurbishment in 1854, when it was restored and filled with stained glass; the older glass was removed to the Audit Room and the Lodge (Willis and Clark 1886: 47). The Old Hall was decorated between 1861 and 1875 by G.F. Bodley and William Morris, and in 1862 the floor was laid with tiles made by W Godwin of Lugwardine; it is the replacement of this floor that has provided the opportunity to investigate the deposits preserved below it.

During the twentieth century a brick-lined pipe duct [17] was constructed, aligned east to west across the Old Hall from the south side of the western door across the building, which is 8 m in width (Figure 2). The cut for this duct [50] was 0.5 m in width and 0.32 m in depth below the base of the floor joists [1] of the dais at the northern end of the building. The pipe duct cut down through the dumped and made-up deposits on the north side of the central vault (Figure 3., Section B). The dais was constructed at the northern end of the building, 4 m in length (north-south), while the remainder of the floor (*c.* 10 m in length) was tiled. Presumably the joists for the dais were cut or replaced when the pipe duct was inserted. There was an airspace *c.* 0.05 m in depth below the wooden joists, which were inserted into toothing in the northern wall of the Old Hall, and the ground surface, which was formed by the uppermost of the backfilled deposits [3] = ?[34]. Overlying [3] there was a thin layer of fine dark brown material, *c.* 0.04 m in depth (max.), which had clearly filtered between the floorboards of the dais; a large number of animal bone fragments, in particular ribs, was scattered within this deposit which, likewise, had also fallen through gaps between the floorboards and presumably represent bones dropped or discarded from high table.

Discussion

Archaeological monitoring was undertaken in advance of the replacement of the floor in Old Hall, Queens' College, Cambridge. This provided the valuable opportunity to record the vaulted cellars below the floor and revealed a sequence of deposits relating to their construction and subsequent alterations. The work indicated that the internal area of the Old Hall had been completely excavated down to the level of the base of the cellars, removing any earlier archaeological deposits. It was unclear, however, whether or not the cellar was contemporary with the original Hall, which dates from the mid fifteenth century, but the balance of evidence indicated that it was possibly a later insertion. The area to the north of the central red-brick cellar had then been backfilled level with the top of the vault, on which the floor surface was constructed. A number of postholes were defined, cutting through these deposits, which probably related to timber scaffolding for later refurbishments and alterations to the building. The area on the south side of this cellar had been completely removed by the insertion of a later yellow brick vaulted cellar, probably during the late eighteenth or early nineteenth century.

Acknowledgements

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Appendix 1: context list

C cut; F fill; L layer; O other

Context No.	Type	Description	Same as
1	O	Joists (7 cm wide x 9 cm thick) of planked floor for dias 4 m in width at the northern end of the dining hall	
2	L	Fine dark brown material c. 4 cm in depth (max.), containing frequent animal bone	
3	L	Greyish-cream rubble mortar deposit 15 cm in depth. Loose gravel, occ. coarse limps 5-10cm in size	?=34
4	L	Greyish-cream rubble mortar deposit 5 cm in depth. Similar to [3] but lower gravel content	
5	L	Thin and discontinuous brown soil layer c. 2 cm in depth	
6	L	Packed and compact white chalk layer c. 5 cm in depth. Chalk fragments <5 cm in size	
7	L	Loose dark brown soil layer 4 cm in depth	?=19
8	L	Thin and discontinuous light brown/cream mortar layer 3 cm in depth	
9	L	Dark brown soil layer 6-7 cm in depth	?=23=24=39
10	L	Chalk rubble <5 cm in size in light grey-brown soil 4 cm in depth	
11	L	Thin band of compact white chalk c. 1-2 cm in depth	
12	L	Very compact mortar deposit 7 cm in depth	
13	L	Dark brown soil layer 1-2 cm in depth	
14	L	Compact mortar rubble layer 17 cm in depth (max.)	
15	L	Compact mortar rubble layer, with chalk fragments 5-7 cm in size, sloping down towards northern wall of dining hall	?=32
16	O	Northern wall of dining hall. Red brick (22 cm in length x 5-6 cm in depth), several foundation blocks of stone <30 cm in size	
17	O	Brick-lined pipe duct with slate base, 50 cm wide x 25 cm in depth below floor joists [1], aligned E-W across entire width of dining hall	
18	F/C	Subcircular-shaped posthole 40 x 33 cm in size with a U-shaped profile 12 cm in depth (min.), containing loose dark brown soil. Seen to cut layer [13] but original level unknown	
19	L	Dark brownish-grey loose stony soil 10 cm in depth	?=7
20	L	Thin compacted layer of yellowish-white chalky mortar with gravel inclusions 1-2 cm in depth	
21	L	Yellowish-grey loose chalky gravel c. 5 cm in depth	
22	L	Thin firmly compacted yellowish-white mortar with gravel inclusions c. 4 cm in depth	
23	L	Light brownish-grey loose stony soil 5 cm in depth	?=39
24	L	Light brownish-grey loose stony soil c. 5-6 cm in depth	?=39
25	L	Thin band of moderately compact light greyish-white chalky mortar 2-3 cm in depth	?=41
26	L	Band of moderately compact greyish-white chalky mortar 5-6 cm in depth	?=41
27	L	Band of moderately compact yellowish-white chalky mortar 5 cm in depth	?=41
28	F/C	Subovate-shaped posthole 35 x 32 cm in size with a U-shaped profile 22 cm in depth (min.), containing loose grey-brown rubble fill	
29	C	Subcircular-shaped posthole 37 x 30 cm in size with vertical sides 26 cm in depth (min.). Seen to cut layer [13] but original level unknown	
30	F	Mortar post-packing, deposited around (and preserving the shape of) a square timber 12 cm in width	
31	F	Postpipe of a timber 12 cm in width within posthole cut [30]	
32	L	Pinkish-white layer of moderately compact chalky mortar 13 cm in depth (max.)	

33	F/C	Subrectangular-shaped posthole 23 x 17 cm in size with vertical sides 80 cm in depth (min.), containing a dark brown rubble fill. Original level unknown (defined below [34] but could possibly cut [34])	
34	L	Loose white chalky mortar layer 21 cm in depth	
35	L	Loose light grey stony soil c. 9 cm in depth (max.)	?=39
36	O	Probable buttress against outside of the northern wall of central red-brick cellar, 60 cm in length (N-S) and made up of rubble blocks c. 20 cm in size in cream mortar bonding	
37	F/C	Square-shaped posthole 32 cm in width x 30 cm in depth and lined with red tile which preserved the shaped of a square timber c. 22 cm in size	
38	O	Subrectangular-shaped ?timber void 20 cm in width x 17 cm in depth traced for 200 cm E-W on the north side of, and parallel to, the central red-brick cellar	
39	L	Dark brown loose stony soil c. 55 cm in depth (max.)	?=35, 23, 24
40	L	Compact white chalky mortar layer c. 10 cm in depth	?=25=26=27=32
41	L	Moderately compact light yellowish-brown soil 17 cm in depth	?=46
42	O	Subsquare-shaped buttress over the northern side of barrel vault the central red-brick cellar, 80 x 70 cm in size x 50 cm in height (max.) sloping down the side of the vault, made up of reused masonry, stone rubble <35 cm in length in white mortar	?=46
43	F/C	Subsquare-shaped posthole c. 20-25 cm in size x c. 15 cm in depth. Original level unknown	
44	F/C	Subsquare-shaped posthole 25 cm in width with a U-shaped profile 16 cm in depth, containing loose dark brown-greyish stony soil	
45	F/C	Subsquare-shaped posthole 35 cm in width with vertical sides c. 38 cm in depth (min.), containing loose dark brown-greyish stony soil	
46	L	Moderately compact light yellowish-brown soil 28 cm in depth	?=41
47	L	Thin dark brown soil layer 1 cm in depth immediately below brick-lined duct [17]	
48	O	Central red-brick cellar, aligned E-W across the width of the hall, of which the upper part of the barrel vault was exposed. The individual bricks measure 22 cm in length x 5-6 cm in depth	
49	O	Southern yellow-brick cellar, aligned E-W across the ditch of the hall, adjacent to [48]. The individual bricks measure 22 cm in length x 7-8 cm in depth	
50	C	Cut for pipe duct [17], 50 cm in width x 32 cm in depth below base of floor joists [1] x 800 cm in length across width of dining hall	

Appendix 2: finds list

BN bone; BR brick; BS burnt stone; GL glass; LT leather; MT metal; OT other; TL tile

Cat. No.	Context	Material	Location	No.	Wt (g)	Notes
001	002	BN		11	36	10 rib fragments and one splinter
003	018	BR		1	10	
006	025	BR		2	77	
007	027	BR		2	105	
010	030	BR		2	1290	bricks measure 110 mm in width x 50 mm in thickness
012	033	BR	posthole	2	370	bricks measure 50 mm in thickness
014	045	BR		1	264	
004	018	BS		1	456	Collyweston TL
009	028	BS		1	122	Collyweston TL
015	033	GL	posthole	1	2	decorated opaque glass vessel fragment, with a rectilinear incised pattern
019	unstrat	GL	N of vault	24	118	14 opaque window glass fragments (78g), 10 glass vessel fragments (38g), nine of which are opaque and includes two rim-sherds from different vessels and two decorated base sherds from different vessels, one of which has the same decoration as that from <015> and the other has a cut rosette/petal pattern, and also one blue glass sherd
018	unstrat	LT	N of vault	1	8	?Shoe sole
020	unstrat 039?	MT	dark brown soil	1	5	Cu alloy - token; 15th century, French
011	030	OT		2	109	mortar post-packing sample
016	039?	PT		1	26	rim 16th greyware jar
017	unstrat	PT	N of vault	4	47	1 Hedingham 14th/15thc., 1 base 14th/15thc. 2 white modern
002	015	TL		1	33	
005	024 or 025	TL		1	719	yellow tile 119 mm in width x 35 mm in thickness
008	028	TL		1	54	
013	037	TL		1	656	floor tile 37 mm in thickness, used as post-packing