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## ***Some Splendid Rooms: Further Archaeological and Architectural Investigations in Jesus College, Cambridge, 1998–2011***

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*Representing both the best preserved monastic site and the most thoroughly investigated collegiate site in Cambridge, the archaeology of Jesus College is of national importance. Recent architectural and archaeological investigations have revealed new information pertaining to both the pre- and post-conversion design of two of the college's most important buildings; the eastern range of Cloister Court and the chapel. Discoveries include the identification of a probable vaulted undercroft within the nuns' dayroom, the exposure of a portion of the former nave-aisle arcade and a reconstruction of the steeply-pitched nave roof of 1510.*

Between 1998 and 2011 the Cambridge Archaeological Unit (CAU) undertook ten campaigns of archaeological and architectural investigation within the grounds of Jesus College, Cambridge (Fig. 1):

- (1) An archaeological evaluation conducted for the New Accommodation Block site (Whittaker 1998)
- (2) Architectural recording within the first-floor Fellows' Common Room (Baggs *et al.* 1999)
- (3) Architectural recording within the east wing of the Master's Lodge (Begg 2001)
- (4) An archaeological watching brief within the Master's and Fellows' Gardens (Hall 2001)
- (5) An archaeological watching brief within Chapel Court (Brudenell 2004)
- (6) An archaeological watching brief within Cloister Court (Ten Harkel 2005)
- (7) An archaeological watching brief within Cloister Court and the east wing of the Master's Lodge (Hall 2005)
- (8) Survey and recording of the timbers constituting the chapel nave roof (Dickens *et al.* 2007)
- (9) Architectural and archaeological recording within the east range of Cloister Court and the western portion of Chapel Court (Newman & Webb 2011)
- (10) An archaeological watching brief primarily within Chapel Court (Evans *et al.* 2012).<sup>1</sup>

Largely small in scale, each of these investigations took place in advance of development-led service-installation and/or refurbishment works. As a result, their locations were not targeted according to a pre-existing research agenda, but were instead determined by the nature of the works undertaken. Consequently, the results that were recovered were often of limited scope. Indeed, only three of these projects – Numbers 3, 8 and 9 in the above list (highlighted in red in Fig. 1) – could be considered to have made any substantive contribution to the wider understanding of the site's development and history. It is these investigations that form the focus of the following account.

Historically, the sequence at Jesus College can be broadly sub-divided into two phases. The first commenced in *c.* 1138 when the Benedictine Nunnery of St. Mary and St. Rhadegund was founded on an area of former agricultural land situated on the outskirts of Medieval Cambridge. By *c.* 1250, the monastic complex was already well-established (Fig. 2). From the mid 14th century onwards, however, the nunnery was in decline; it was eventually suppressed by John Alcock, Bishop of Ely, in 1496. Alcock demolished the majority of the pre-existing monastic structures and converted the remainder for collegiate use. The newly founded institution – officially named the College of the Blessed Virgin Mary, St. John the Evangelist and the glorious Virgin St. Radekund (Glazebrook 2007, 15) – was initially one of the smallest, and poorest, colleges within the University, but has subsequently developed into one of the wealthiest (for further detailed information on the history of the site see; Willis & Clark 1886 II, 115–86; Gray 1898; RCHM(E) 1959, 81–98; Gray & Brittain 1960; Haigh 1988; Van Houts 1992; Glazebrook 2007).

Following on from a small number of 19th century antiquarian excavations (see Gray 1894; Willis & Clark 1886 II, 121–41; Evans *et al.* 1997, 106–7), a series of development-led archaeological and architectural investigations were conducted at Jesus College between 1988 and 1997. Collated and published in 1997, these formed the basis for a wide-ranging examination of the site's historical and archaeological development (Evans *et al.* 1997). It is this framework upon which the present paper builds.

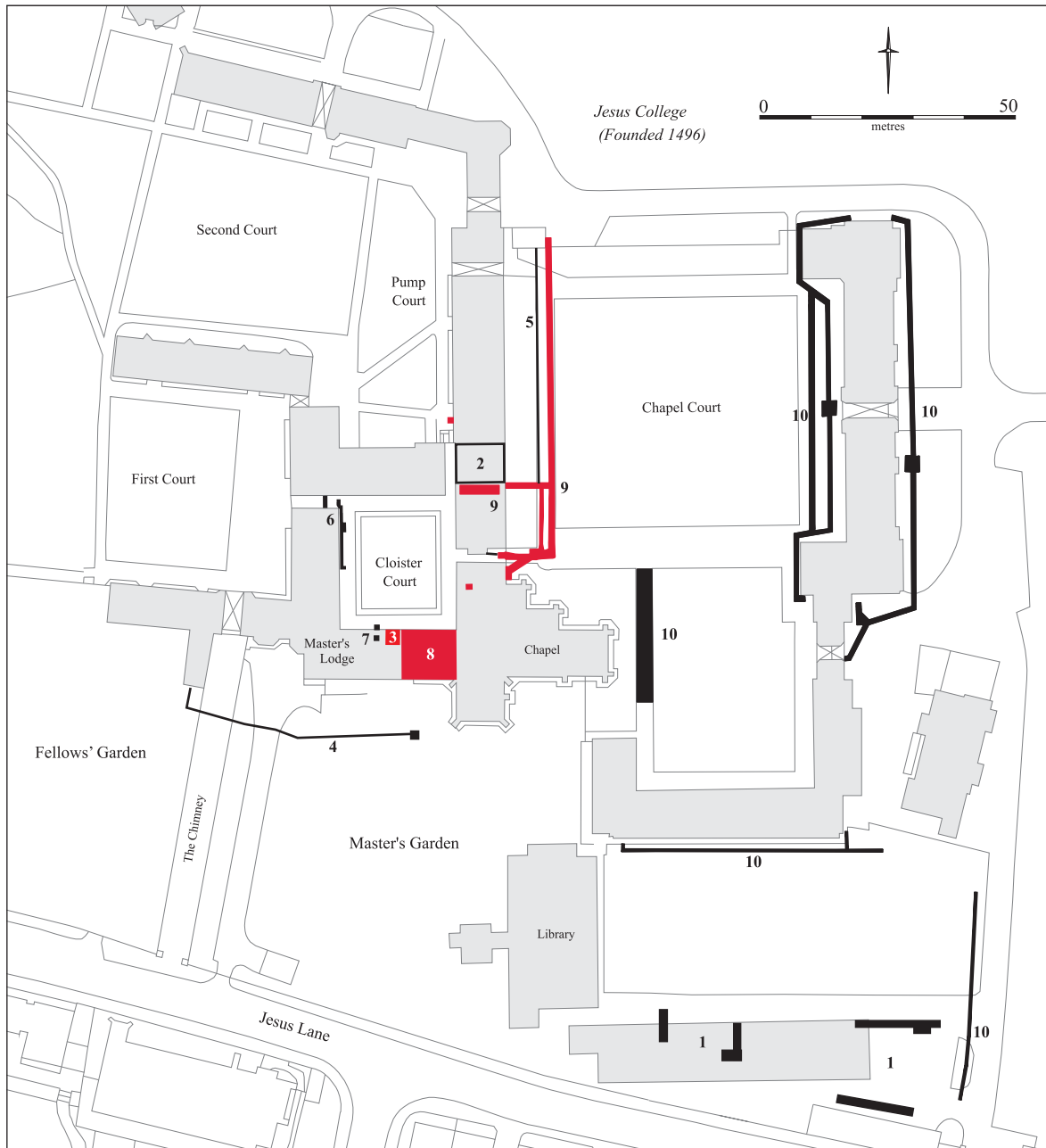


Figure 1. Location of investigations.

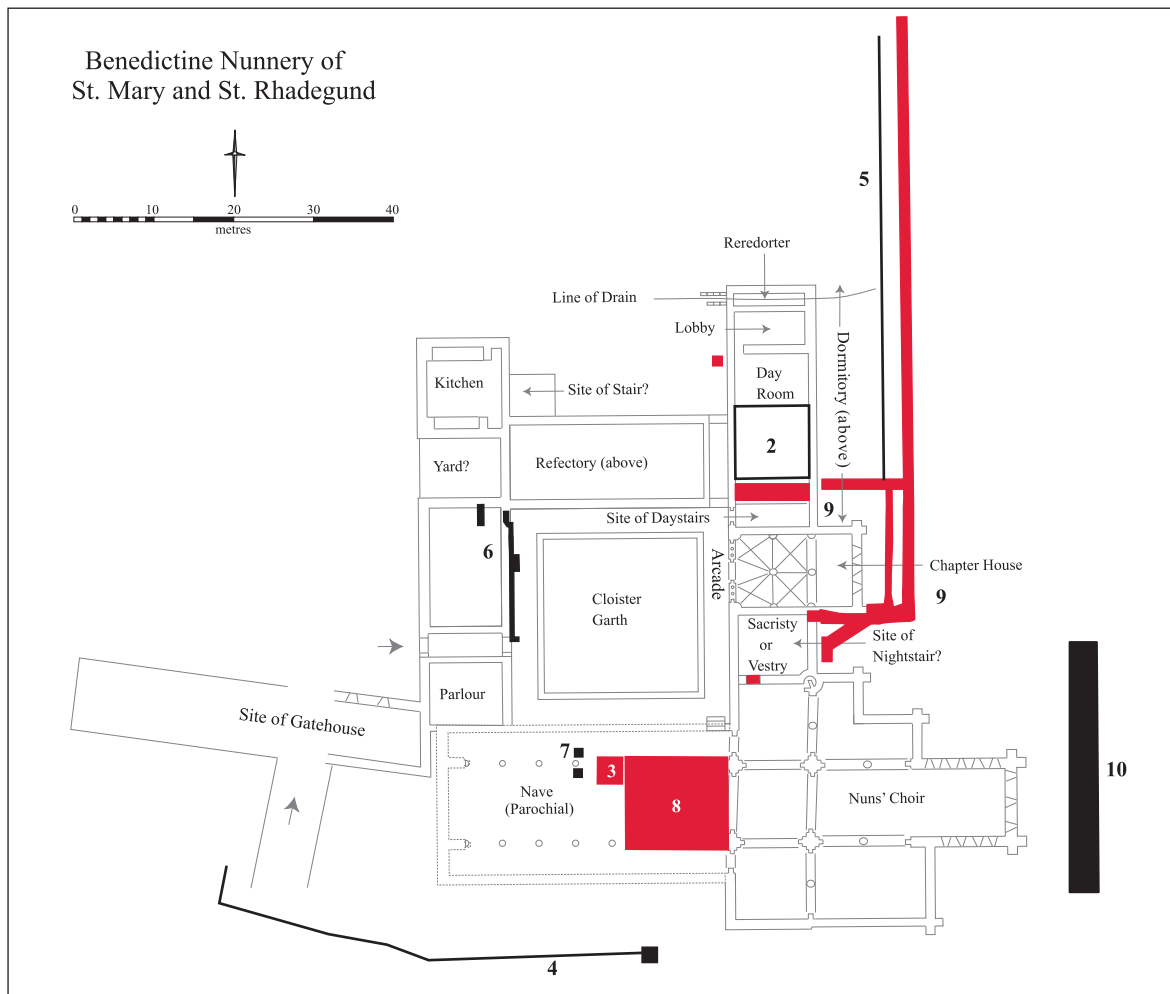
### Eastern Claustal Range and Environs

The first investigation took place within and around the eastern range of Cloister Court (Fig. 1, 9). During monastic times this structure housed the sacristy or vestry, chapterhouse, nuns' dayroom and reredorter, along with a first-floor dormitory (Fig. 2). Of these areas, the chapterhouse, in particular, has previously comprised the focus of significant investigation (e.g. Gray 1894; Evans *et al.* 1997, 105–20). Between May and October 2010, a new phase of refurbishment works was undertaken within the eastern range itself while associated service-trenching occurred across the western portion of Chapel Court (Fig. 3). A total

of seven separate areas were monitored, although in each instance the investigations were relatively small (Newman & Webb 2011). Nevertheless, three locations in particular – Areas 4, 5 and 6 – yielded significant results pertaining to both the monastic and collegiate phases of the site's history.

### Monastic Phase (c. 1138–1496)

During external service works conducted in Area 4, several features of monastic date were identified. The most significant comprised two remnants of the southern wall of the former chapterhouse that had become isolated from the main body of the structure. The easternmost – F.20 (0.80 x 0.65m)



**Figure 2.** Reconstructed plan of monastic complex, c. 1250. Note that the first floor dormitory extended above the entirety of the east range, including the chapterhouse.

– comprised part of the southeastern buttress of the building. Although heavily truncated by 20th century services, two important details could be discerned. Firstly, only a single course of ashlar – representing the vestiges of a plain chamfered plinth composed of dressed Barnack blocks – was present. This can be compared with the three courses of ‘wrought masonry’ that were previously identified in this location during Gray and Atkinson’s 1894 investigations (Gray 1894, 121; see also Evans *et al.* 1997, 106–07). Secondly, the buttress was supported by an extensive mortared rubble foundation, over 0.36m deep, which was broadly pyramidal in form. This contrasts with the previous exposure of this building further to the west, where it had little or no foundation (Evans *et al.* 1997, 109–111).

The second remnant of the chapterhouse wall (F.21) was identified within the adjacent archway of the F-stair passage-way. This consisted of a ‘T-shaped’ segment – composed of well-mortared, roughly-squared clunch blocks – with truncated arms extending east-west and north-south. Although less well-preserved than the buttress to the east, this fragment unambiguously demonstrates that the chapterhouse comprised part of the same contemporary build as the adjacent sacristy/vestry, and thus also the remainder of the eastern claustral range. Moreover, its presence serves to fix

precisely both the location and alignment of the chapterhouse’s southern wall.

Also present at the southern end of Area 1, and lying only a short distance to the east of the chapterhouse, were three undated postholes (F.08, F.09 and F.12). These were aligned on an west-northwest by east-southeast axis. Their function is uncertain, for while they were of a sufficient size to have been structural in origin, they might equally well have comprised part of a fenceline or other external subdivision. Subsequently, the westernmost posthole (F.12) was overlain by an ancillary timber-framed structure. This was represented by floor remnant F.13, which consisted of irregular split Collyweston stone fragments bedding upon a layer of coarse yellow sandy mortar (Fig. 3A). The impression of a north-south aligned timber sill beam had also been preserved in the mortar’s surface. Measuring a minimum of 3 x 1.3m in extent, this building almost directly abutted the chapterhouse’s east wall. Due to the degree of later truncation, its original form and function remain unclear.

Internally, excavations conducted within Area 6 – presently the Fellows’ Cloakroom and, in monastic times, the southern end of the nuns’ dayroom – uncovered part of the original east wall of the nunnery’s eastern claustral range (Fig. 4). The lowest portion of this wall consisted of roughly

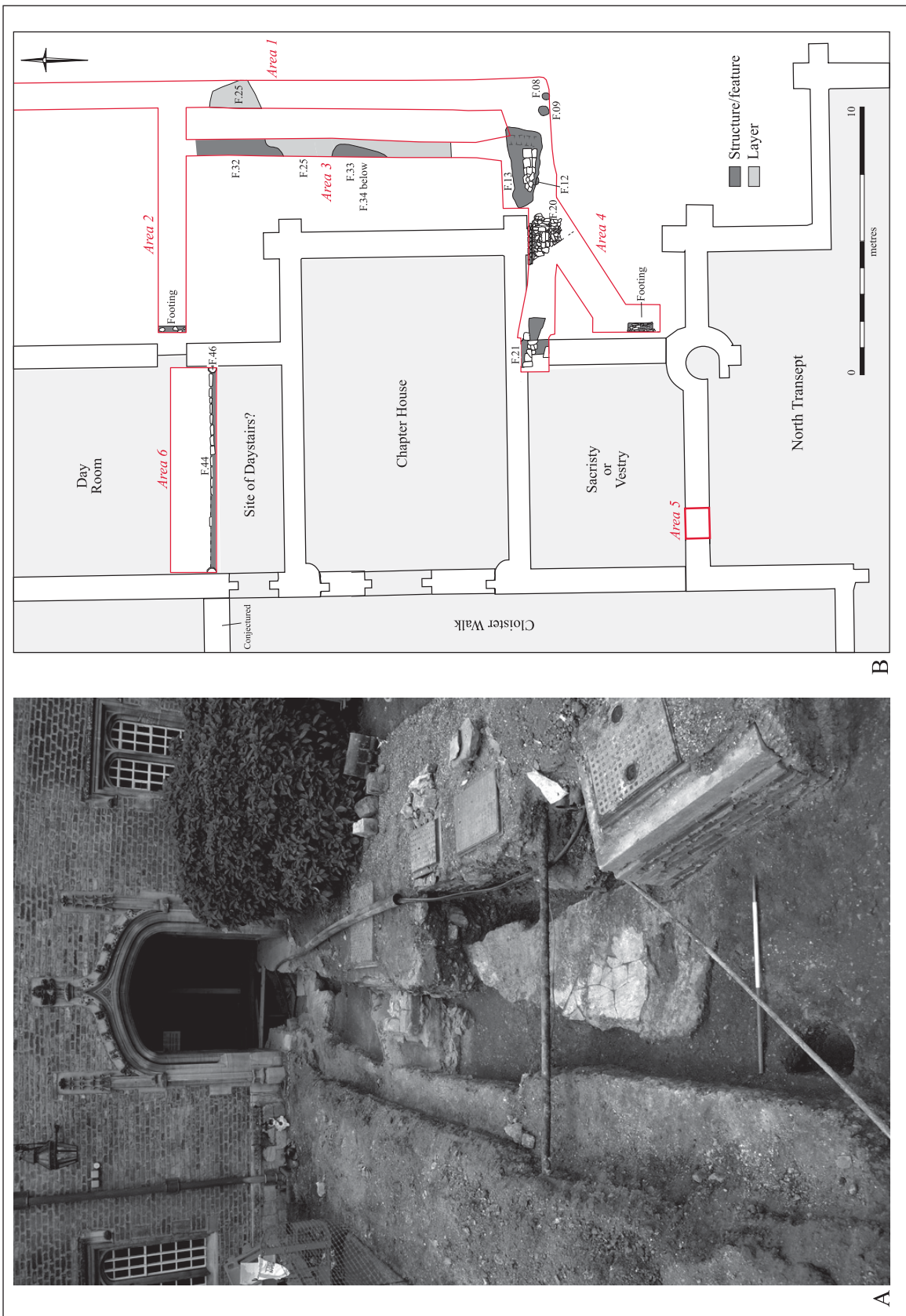


Figure 3. View of excavation in Area 4, facing west (A), and plan of archaeological features (B).

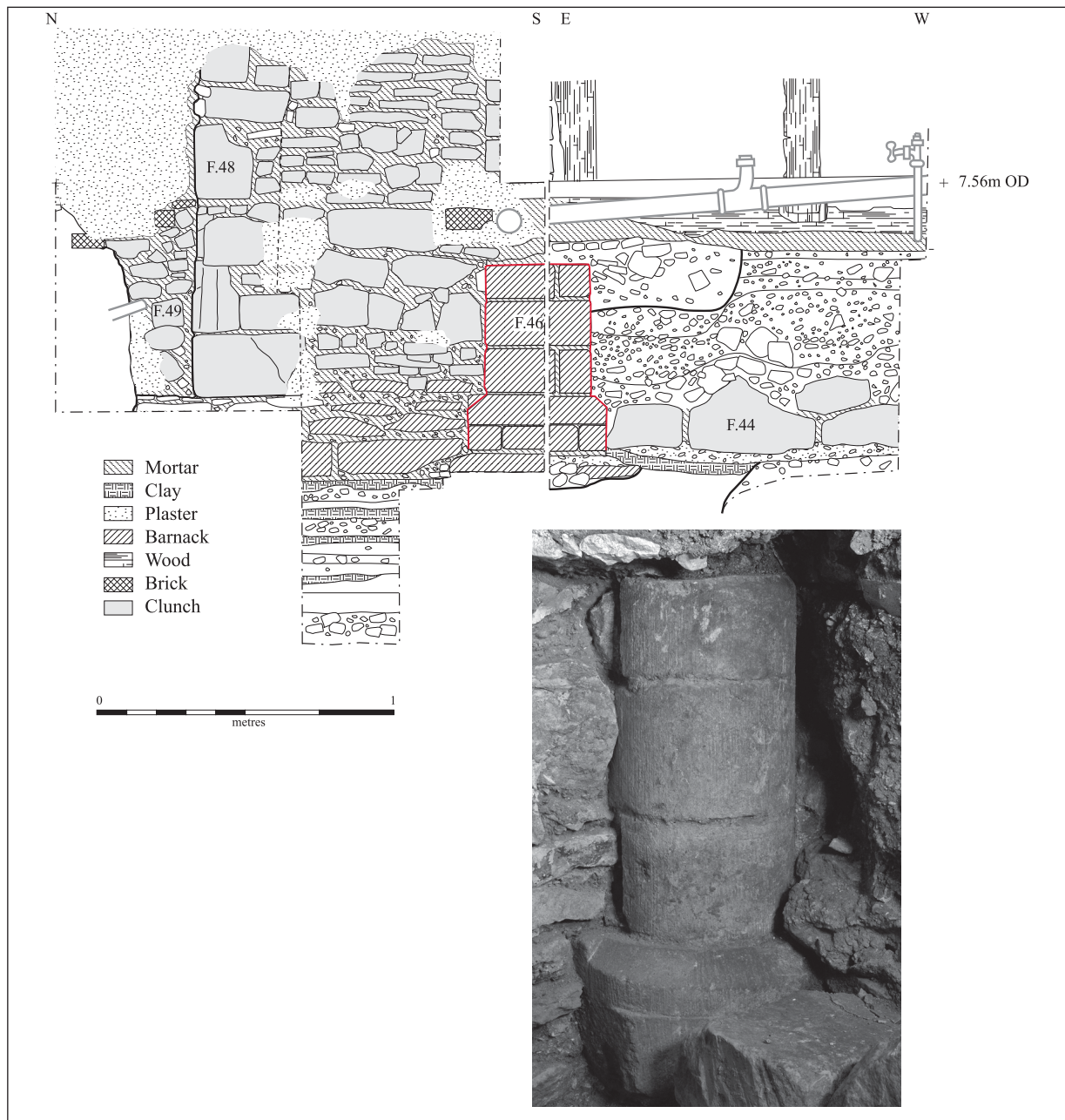


Figure 4. West and north facing sections of Area 6, with inset photograph of in situ wall-shaft F.46.

coursed Barnack slabs, above which were set three courses of roughly squared clunch blocks that were, in turn, surmounted by roughly coursed clunch fragments; the masonry was bonded throughout with a relatively consistent coarse yellowish grey sandy mortar. This exposure is thus commensurate with the fabric of the east range as previously recorded in 1995 (Evans *et al.* 1997, 114–15). Of particular interest was the survival of the lower part of a semi-circular respond of Barnack stone (F.46).

The three *in situ* sections of the responds measured 0.30m in diameter. They were bonded to the wall in the standard way, with alternate courses butted and keyed. The lowest section stood on a plain chamfered base, which was stopped against the wall, and below it was a plain semi-octagonal sub-base (0.36m wide; Fig. 4). In addition, the lower parts

of a second, identical respond were also noted in the same relative position on the opposing western wall of the room. This latter example had been discovered and preserved by the college during an earlier phase of works, but its presence has not previously been recorded.

Both of the responds identified within the nuns' dayroom correspond closely in form with columns previously identified elsewhere within the eastern claustral range. In the area of the former chapterhouse, for example, near-identical octagonal sub-bases carrying columns c. 0.35m in diameter were recorded in 1995 (Evans *et al.* 1997, 112). In contrast to the responds discussed above, the columns associated with the chapterhouse vault also bore integral ribs. There can, nevertheless, be little doubt that the two builds are contemporary. Together, they appear to have formed part of a

single, cohesive 13th century phase of construction/rebuilding that encompassed the entirety of the cloister's eastern range.

Abutting the base of respond F.46 was a compacted layer of chalky clay. A remnant of the original 13th century day-room floor, this lay at 6.62m OD – almost precisely the same level as the floor of the chapterhouse. Subsequently, this surface was sealed beneath, and partially truncated by, a later dividing wall, F.44. This latter feature – which measured 0.38m in width, and survived to a height of two courses – extended east-west and had partially subsumed the two earlier responds. It was composed of squared clunch blocks, bonded with coarse yellow sandy mortar, many of which bore traces of render/plaster on their northern faces. Where the wall abutted the earlier responds, the clunch blocks had been carefully trimmed in order to incorporate their profile. Although clearly not an original feature, the materials employed in this wall's construction – allied with the evidence of rendering some 0.8m below the level of the later college floor – all indicate that it was monastic, as opposed to collegiate, in date.

Finally, one further feature in Area 6, doorway F.48, may also represent a later monastic-period insertion. Only the lower portion of its southern doorjamb was present within the area of investigation; this was constructed from dressed clunch blocks decorated with a partial plain chamfer, which was stopped 0.36m from the base (Fig. 4). As the doorway was inserted 1.0m to the north of column F.46 it would have continued to provide external access into the dayroom following the erection of dividing wall F.44, and may even have been inserted contemporaneously with its construction. Its threshold lay 0.20m above the original floor height. This disparity may reflect an increase in the external ground level prior to the door's insertion, but could also indicate that the dayroom floor was partially cellared.

Very little material culture of Medieval date was recovered during the investigations. A small quantity of 13th–15th century pottery was found redeposited within later made-ground layers in Area 4. Accompanying these sherds were a late 15th-early 16th century 'boy bishop' token (Rigold 1977; Fig. 5.1) and a 13th–15th century lead stylus, which is similar to examples from Coppergate, York (Ottaway & Rogers 2002, 2934). A ring-and-dot decorated bone strip or fitting, of probable Medieval manufacture, was also recovered from Area 1 (Fig. 5.3).

### *Collegiate Phase (c. 1496–present)*

In addition to monastic-period features, evidence of activity pertaining to the succeeding collegiate phase was also identified. In the first instance, a number of features associated with the conversion of the former claustral range – beginning c. 1496 – were encountered. In Area 6, for example, an extensive layer of demolition debris overlay the partially demolished remnants of a Medieval dividing wall, F.44. This deposit contained a large quantity of dressed and moulded stone – including at least one fragmentary vault rib – which was clearly derived from an episode of extensive alteration/demolition. Furthermore, the debris also appears to have been utilised as make-up material, thereby substantially raising the level of the floor (by a minimum of 0.6m). An almost identical deposit, corresponding to a similar increase in surface level, was previously identified within the area of the former chapterhouse in 1995 (Evans *et al.* 1997, 115).

Additional alterations undertaken to the layout of the

former dayroom at this time included the partial blocking of doorway F.48. The lower portion of this feature was infilled with mortared rubble – primarily consisting of clunch fragments, but also including a small quantity of brick and tile (F.49) – whilst the upper portion was converted into a window *via* the addition of a moulded frame. Due to the marked increase in the contemporary floor level, it is likely that the original head of the doorframe was broken out as part of the process of the window's insertion; a process that also occurred elsewhere within the range during this period (RCHM(E) 1959, 91).

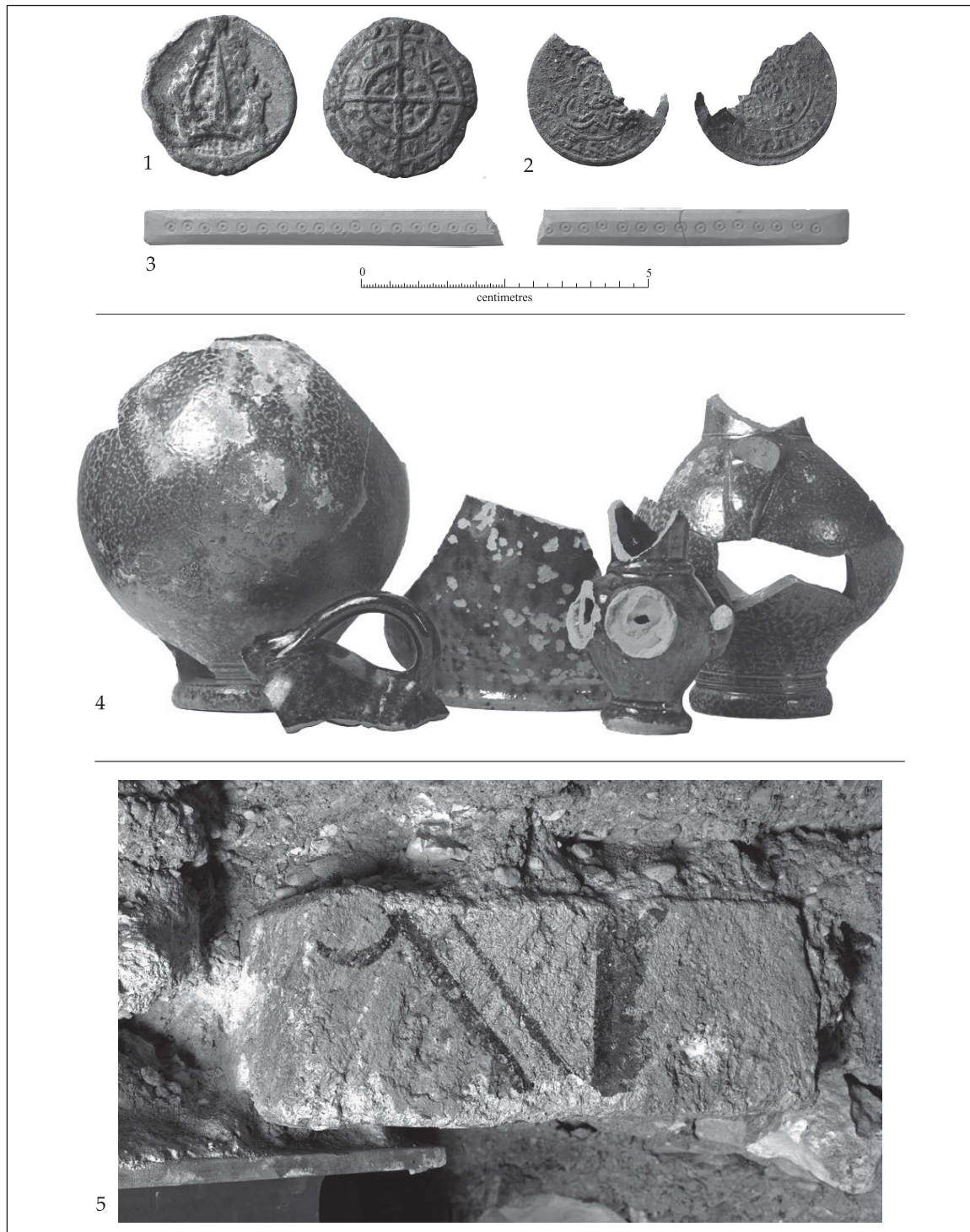
Further to the south, in Area 5, additional evidence of the process of conversion was encountered. Here, a round-arched 12th century doorway – first identified in 1995 – had originally provided access between the north transept and the 13th century sacristy/vestry situated at the southern end of the east range. This was now infilled. In contrast to the dayroom doorway, no brick or tile was employed in its blocking and, instead, a large quantity of dressed and moulded stone – including a number of apparently unused rough-outs – was inserted. Whilst it is possible that the infilling occurred prior to the college's acquisition of the site, the importance of this access route to the former monastic inhabitants (and its corresponding lack of importance following the convent's suppression), implies that it is most likely to have comprised part of Bishop Alcock's wider programme of alterations.

Similarly, the nature of the materials employed in the infilling – which included fragments of a capital with stiff leaf decoration, a doorjamb, a window sill and a vaulting rib, as well as a block with elaborate painted decoration (Fig. 5.5) – also suggest that it formed part of a much larger episode of demolition/reconstruction, potentially involving a number of different monastic-period structures. The removal of this blocking as part of the recent refurbishment has allowed the former pre-collegiate routeway to be re-established.

Externally, in Areas 1 and 3 further evidence of the widespread programme of late 15th century demolition/conversion was encountered. An extensive, though irregular, mortar surface was present (F.25), lying immediately to the east of the former chapterhouse. No evidence of any associated structure was identified, however, implying that the surface – which, given its constituent materials, would have been highly susceptible to the elements – was only temporary. This interpretation is also supported by its form as, although well-made, it was somewhat uneven and sloped markedly southward.

The mortar surface was subsequently overlain by a very dense layer of mortar fragments and building debris, a high proportion of which was almost certainly derived from the demolition of the adjacent chapterhouse. Whilst such debris also extended south of F.25 – where it overlay the earlier ancillary timber-framed building – it was noticeably denser in the area of the mortar spread. This implies that F.25 comprised a temporary working surface that was only briefly utilised during the process of demolition, probably to facilitate the reclamation of the most suitable material (see Howard 2003). That such a large quantity of demolition debris still remained more or less *in situ* (the layer being up to 0.38m thick) is perhaps somewhat surprising. It would appear, however, that – concomitant with the contemporary increase in internal surface level discussed above – the external ground height was also raised during this period.

In addition to evidence pertaining to the late 15th century conversion of the east range, features associated with its subsequent usage and occupation were also identified. In Area



**Figure 5.** Late 15th century lead 'Boy Bishop' token (1); 17th century copper-alloy Nuremberg jetton (2); Medieval worked bone strip (3); selection of 17th century ceramics recovered from F.33 (4) and Medieval painted ashlar used as infill in Area 5 (5). The design upon the latter is unclear. It may represent part of a decorative frieze, perhaps imitating a pediment, but could alternatively have comprised part of a larger, more elaborate scheme. Colour-wise, it has a reddish-brown band to the right, white pigment in the centre and pinkish colouring to the left.

3, for example, three large pits were encountered. The earliest of these, F.34, was probably late 16th-early 17th century in date. It was succeeded by F.33 later in the 17th century, before the sequence was finally capped by F.32 during the

late 17th-early 18th century. Each of these pits was relatively large, measuring over 3.0m in diameter, but quite shallow. They thus appear most likely to have comprised planting beds or similar, horticulturally-related features.

The basal fill of F.33 contained a relatively substantial ceramic assemblage. Totalling 115 sherds (3114g), this material was dominated by glazed red earthenware and Frechen stoneware (Fig. 5.4); a common regional pattern during this period (Edwards & Hall 1997; Cessford & Dickens in prep.). Also present was a small quantity of green-glazed fineware. This included a largely complete two-handled jug of unusual design (Fig. 5.4), along with a rim fragment of pierced fretwork form; both of these vessels appear most likely to have been manufactured in Essex. Finally, a sherd of Babylon-type lead-glazed earthenware from Ely was identified that bore embossed anthropogenic decoration (cf. Cessford *et al.* 2006, 65–7). In addition, the feature's faunal assemblage (43 fragments) was overwhelmingly dominated by sheep/goat. Overall, therefore, although small, this group is relatively significant as to date only a limited number of comparable assemblages have been recovered from secure collegiate contexts in Cambridge.

Contemporary with the pits, and continuing to accrue long after they had been backfilled, were a series of made-ground/horticultural deposits. Within these was a moderately-sized, though heavily intermixed, pottery assemblage (359 sherds; 7256g), spanning the 14th–19th centuries. A number of metal artefacts were also present, including two 17th century jettons (Fig. 5.2) and a copper alloy furniture mount, as well as an iron spur and a pair of metalworking pliers. In addition, a relatively large assemblage of 17th–18th century clay tobacco pipes was recovered, several of which bore identifiable maker's marks. Finally, the fragmentary remains of two 18th century wine glasses were also present, along with an 18th–19th century worked bone needle case. It is possible that much of this latter material did not originate from the college itself, however, as evidence of contemporary night-soiling activity was previously identified in the area of the Master's Garden in 1992 (Evans *et al.* 1997, 136–37).

Whilst not resulting in a radical reappraisal of the eastern range's layout or history, the results of this investigation closely complement the preceding phase of chapterhouse recording (Evans *et al.* 1997, 105–20). Externally, the fragmentary buttress and wall remnants encountered in Area 1 provide crucial information concerning the precise location of the demolished exterior portion of this structure. The new evidence indicates that the chapterhouse originally extended at least a metre further to the east than has previously been recorded (RCHM(E) 1959, facing page 84), but agrees with the alignment of the walls visible in the one surviving photograph of Gray and Atkinson's 1894 excavation (Evans *et al.* 1997, plate i).

In addition, the presence of a timber-built ancillary structure, whilst somewhat unexpected, is by no means extraordinary. Numerous outbuildings – such as a kitchen, brew-house, servants' quarters and stables – are likely to have been present in and around the majority of contemporary monastic precincts (Greene 1992, 4–11), although it should be noted that it is unlikely that buildings as substantial as these were situated in close proximity to the chapterhouse. Moreover, many ancillary structures underwent several phases of development. Just such a sequence is indicated at the present site by the existence of an earlier post alignment, sealed beneath structure F.13,

which is paralleled by a further posthole that was encountered beneath the chapterhouse during the 1995 investigations (Evans *et al.* 1997, 108).

This latter posthole clearly predated the erection of the extant 13th century chapterhouse, and potentially comprised an element within a preceding timber building. Historical accounts indicate that the earliest structures in the majority of monastic foundations are likely to have been constructed from timber in this way (Burton 1994, 135). Indeed, at Norton Priory in Cheshire two successive phases of timber cloister were found to have predated the final masonry version of the structure (Greene 1989, 94). The discovery of a second mortar surface, situated – at some depth – within a small sondage excavated in First Court in 1995 (Evans *et al.* 1997, 139–40), indicates that additional early/temporary structures may also have been present elsewhere within the nunnery.

Internally, perhaps the most significant result comprised the identification of two *in situ* responds located within the former dayroom. Their form indicates that they could potentially have comprised part of a scheme of decorative arcading situated around the interior of the dayroom. But a much more plausible interpretation of their presence is that this space – which directly underlay the nuns' dormitory – was originally vaulted, in a similar manner to the lower storey of the chapterhouse (see Fig. 2). Despite thorough investigation, however, no evidence of a central column was identified, though the area had been subject to extensive later modification and it is possible that any such evidence had been removed.

The existence of vaulting is supported by the presence of vault rib fragments within the late 15th century demolition horizon, and also by the identification of additional semi-circular respond fragments that had been reused locally within the conversion-period wall cladding. Moreover, the partially-celled floor height in this area – almost precisely matching that previously encountered within the chapterhouse itself – strongly indicates that a similar roofing strategy was employed. Indeed, vaulted dayrooms of this type comprised a relatively common feature within many contemporary moderately-sized monasteries. Similar arrangements were present at Cleeve Abbey, Somerset (Gilyard-Beer 1990) and Forde Abbey, Dorset (RCHM(E) 1952, 240–46; Robinson 1998, 109–10), for example, both of which had chapterhouses near identical in form to that at St. Rhadegund's nunnery.

The archaeological evidence of early collegiate activity that was recovered during the recent investigation closely accords with what was previously known of the conversion of the east range in c. 1496–1500. It appears that, at this time, the building's interior was entirely gutted – with the exception of the lower portion of the reredorter and adjacent dividing wall, both of which are situated at the extreme north end of the structure – and the projecting eastern portion of the chapterhouse demolished (RCHM(E) 1959, 91). The remainder of the range was then sub-divided into three equal bays *via* the construction of two free-standing chimney stacks. A new timber-built interior structure



was introduced, raising the range from two storeys to three, and the earlier masonry walls were largely re-faced in brick (Evans *et al.* 1997, 97). The identification of a temporary yard surface situated immediately to the east of the former chapterhouse, which appears to have been utilised during the course of the latter structure's demolition, underlines the degree of planning and organisation required in order to implement this ambitious programme of conversion.

Finally, the recovery of later, 17th century collegiate material is also of interest. Such finds offer the tantalising prospect of examining the vexed, but previously little-studied, relationship between contemporary 'town and gown' communities (see further Parker 1983). The possibility of identifying such subtle distinctions archaeologically remains problematic, however. Firstly, for example, it seems that although in both physical and social terms the boundaries of the college were rigidly maintained – and strongly demarcated – during this period, on a purely materialistic plane it represented a rather more 'permeable' space. Individual items were probably introduced and removed from the site on an episodic basis according to the various dictates of need, fashion and/or personal taste. Moreover, there is no valid reason to assume that hierarchical distinctions which were pertinent during the active use-life of an object – such as a division between the possessions of scholars and staff – will have been maintained post-discard. A wide array of refuse may have become intermixed, or been middened within communal dumps, prior to its deposition.

### East Wing of the Master's Lodge

The focus of attention now shifts to the southern portion of Cloister Court. Here, within what is today the east wing of the Master's Lodge, an architectural investigation was conducted in November 2000 (Begg 2001; Fig. 1, 3). Historically, the east wing occupies four-and-a-half out of the original seven bays of the monastic-period church's nave (Fig. 2). This portion of the building, constructed *c.* 1200, represents the second oldest element of the surviving structure (RCHM(E) 1959, 88). Its size is attributable to the parochial role it served during monastic times; a function that was no longer required following the nunnery's conversion. In addition to reducing the nave's length by two-thirds, the reconstruction works that commenced in *c.* 1496 included the demolition of the north and south nave-aisles and the construction of new lateral walls, which infilled the pre-existing arcades. Finally, having separated this portion of the structure from the remainder of the chapel, the east wing was converted into a three-storied chamber-block with garret (Willis & Clark 1886 II, 170).

Architectural recording was undertaken in the northeast corner of the east wing in advance of the insertion of a new staircase. During the course of this work, elements pertaining to both the monastic and collegiate phases of the struc-

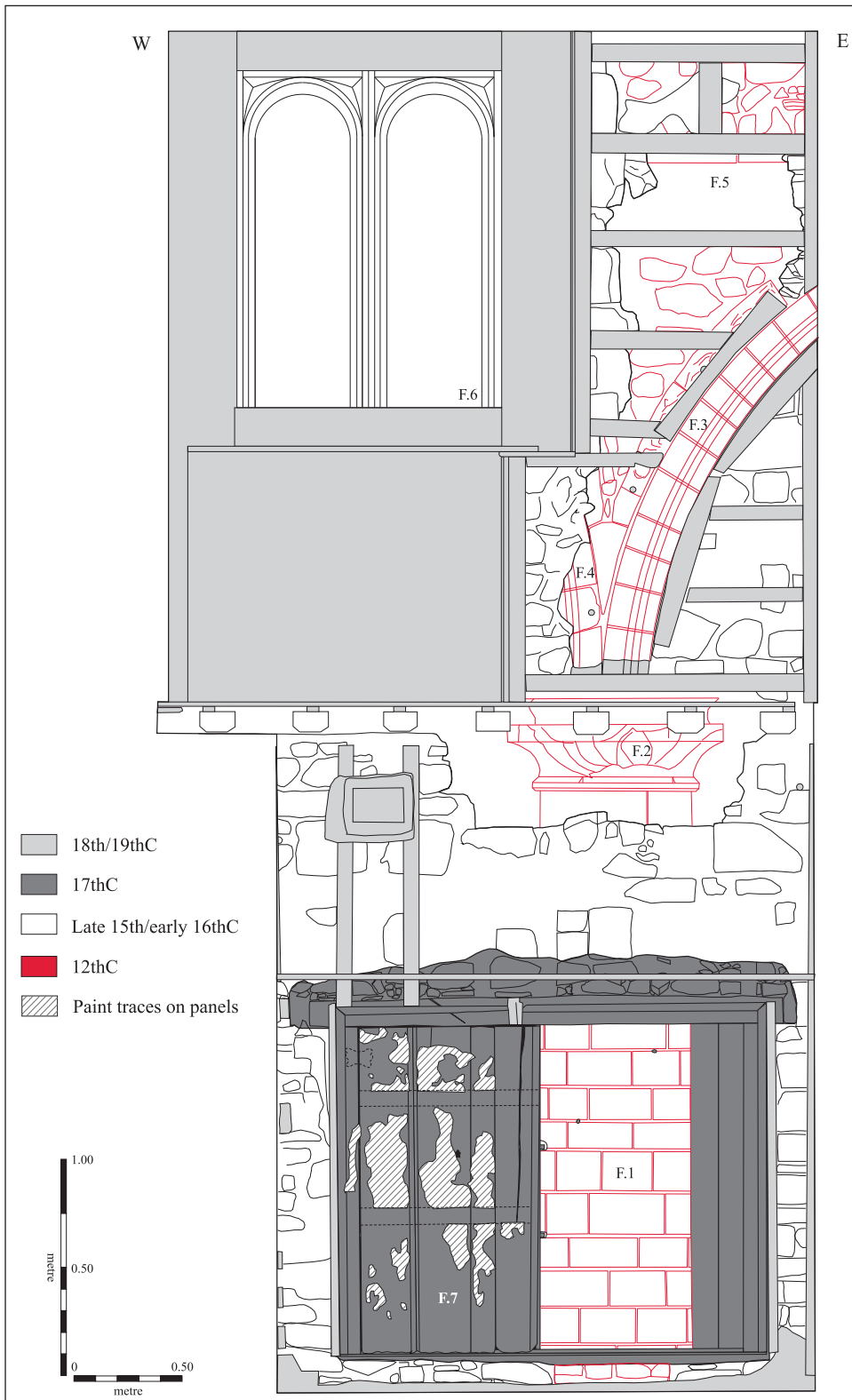
ture's history were uncovered (Fig. 6). In the first instance, part of the shaft of a large circular clunch-built pier – F.1 (0.70m diam.) – was revealed. This had first been exposed during the 17th century when a timber-fronted cupboard was inserted into the base of the lodge's north wall. The pier, upon the surface of which traces of rough lime mortar still adhered, comprised part of the original early 13th century nave-aisle arcade. Prior to its re-exposure, it had lain subsumed within the conversion-period lateral wall. Following the shaft's identification, the remaining plaster was removed from the affected portions of the north and east walls on both the ground and first floors in order to allow the full extent of the surviving early fabric to be traced.

As a result of this exposure, the pier's capital was revealed (F.2). Although partially truncated by the insertion of later floor joists, its simple design – consisting of a plain concave moulding with necking below – remained clearly discernible. Traces of a very faded painted motif were also present, possibly representing a simplified, non-moulded imitation of stiff-leaf style decoration. Above the capital – springing from an abacus that remained primarily concealed, but appears to have been carved from a separate block – were two arches. That to the east was relatively well-preserved (F.3); it had plain mouldings, which were only partially exposed, and appeared most likely to be two-centred in form. That to the west, however – F.4 – had been heavily truncated by the insertion of a later window. Directly overlying the arches, the surviving early 13th century arcade wall fabric consisted of small, irregularly coursed clunch and Barnack fragments bonded with pale brown lime mortar (F.5).

In addition to these remnants of the original monastic church, elements of the succeeding early 16th century conversion-period build were also identified. Infilling the earlier arches, for example, and surrounding the first-floor window, was fabric of a very different character. Here, irregular – and, occasionally, reused dressed and/or moulded – clunch blocks, along with dark reddish brown brick fragments, had been employed. These were bonded with fine, pinkish-white lime mortar. This same build was also apparent within the room's east wall, which comprises the partition between the east wing and the adjacent chapel nave. Finally, the first-floor window itself – F.6, of two lights with recessed spandrels – is also of early 16th century date. It is almost identical in form to first-floor windows situated within the contemporary east and west ranges of Cloister Court (RCHM(E) 1959, 96).

Although the majority of the post-conversion wall surfaces had been rendered, and then subsequently whitewashed, on the first floor a small, isolated remnant of a painted surface was identified. Situated towards the base of the east wall, a design consisting of a pale green panel bordered by a narrow dark green vertical band was present. A similar pattern, of probable late 16th-early 17th century date, has previously been recorded within the west range of the Master's Lodge. This consisted of white panels bordered by green bands edged in black (Evans *et al.* 1997, 127).

Perhaps the most remarkable collegiate-period feature comprised a 17th century ground-floor cupboard F.7. This took the form of an alcove (1.92 × 1.50m and 0.48m deep) that had been cut into the pre-existing wall. An oak frame, bearing simple ogee-moulded decoration, was then erected across the alcove's entrance. Onto this, two panelled oak doors were attached. Internally, however, only the western half of the cupboard provided usable storage space. Its eastern half was almost entirely occupied by the 13th century nave-aisle pier (F.1), which appears to have been preserved



**Figure 6.** North wall elevation of the east wing of the Master's Lodge (note that for illustrative purposes, the right-hand cupboard door has been omitted).

*in situ* due to the recognition of its continued structural importance. Why the position of the cupboard was not altered following the pier's identification remains unclear.

Subsequently, during the 18th-early 19th century, the cupboard went out of use. Its doors were first nailed shut, then wallpapered over and, finally, whitewashed. All of its fixtures and fittings were also removed. At around the same

time a series of battens were introduced to the walls on both the ground and first floors, onto which new lath-and-plaster surfaces were attached.

It was not until 1846, during an episode of extensive renovation, that evidence of the once impressive layout and extent of the former Medieval church first

came to light. As a result of chance discoveries made at this time “it was resolved to push the enquiry to the utmost; all the plaster was stripped off the inner face of the walls; piers and arches were brought to light again in all directions” (Willis & Clark 1886 II, 124). A thorough record of these remains was made by Professor Robert Willis, a noted mechanical engineer and architectural historian. Significantly, within the extant college nave Willis identified remnants of the former arcades that had been encased within the conversion-period walls. The arches themselves, which were two-centred, had plain mouldings whilst the piers that supported them alternated between cylindrical and octagonal in design (a pattern that is perpetuated by the latest discovery). The relationship between the recent exposure and Willis’s 19th century chapel elevation is shown in Figure 7.

Previously, it was believed that the extent to which the original nunnery-period fabric survived *in situ* was greater within the chapel than the lodge’s east wing due to the latter area’s sub-division into multiple storeys; a situation that was further compounded by the addition of extensive new fenestration (Willis & Clark 1886 II, 128). This area was not investigated during the 19th century renovations, however, and it is now clear that within the lodge’s north wall, at least, the former nave arcade remains equally well-preserved.

Although the rooms situated at the extreme west end of the former medieval church nave appear to have comprised part of the Master’s Lodge from the early 16th century onwards (Willis & Clark 1886 II, 170), the remaining two-thirds of the newly constructed chamber block – which was originally ap-

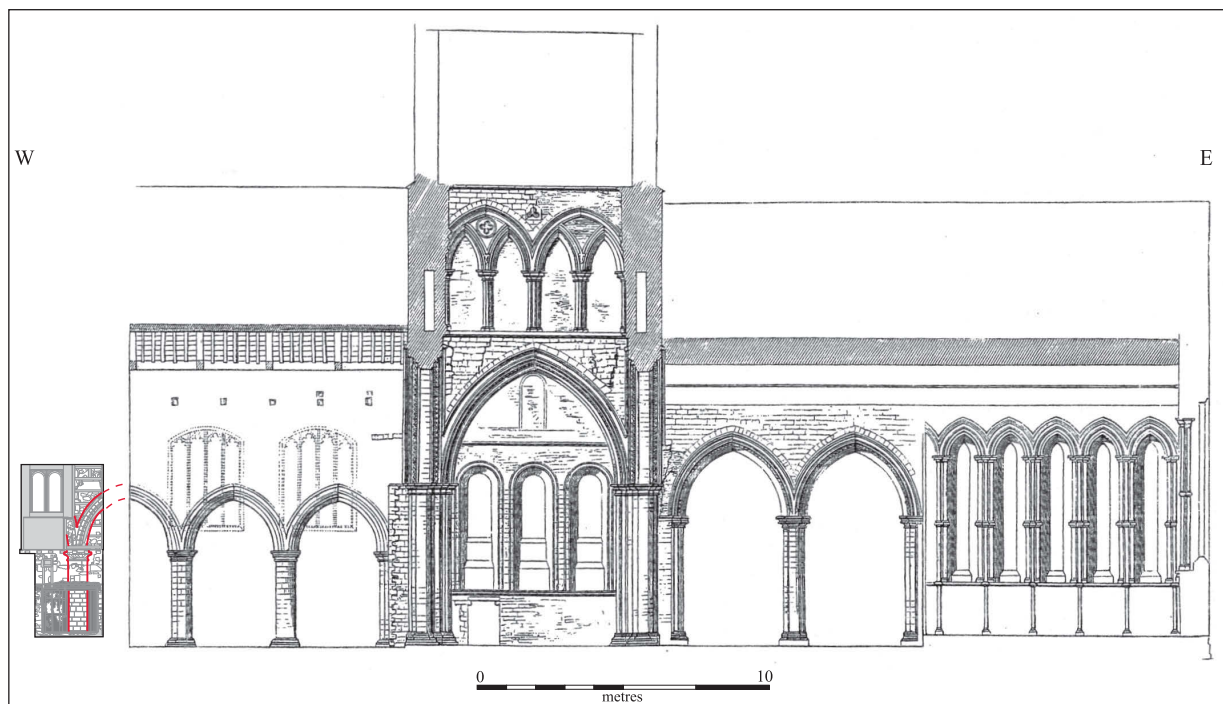
proached *via* a separate staircase arising from the south walk of the cloister – initially fulfilled a different role. A possible clue as to the initial function of this space was revealed in 1997, when a hagioscope, or squint – providing a view into the interior of the nave – was identified within the east wall of a first floor room (Evans *et al.* 1997, 128). Its presence suggests a possible ecclesiastical use. By the end of the 16th century, however, these rooms had been converted into Fellows’ apartments (Willis & Clark 1886 II, 171). Subsequently, in 1663, the ground floor chambers beneath were annexed by the Master for use as a kitchen (RCHM(E) 1959, 96), and this event provides a possible context for the introduction of the somewhat bizarre 17th century cupboard. The remaining rooms, situated on the first and second floors, were not incorporated into the lodge until 1866 (Willis & Clark 1886 II, 171).

### The Chapel Nave Roof

Further information pertaining to both the form and appearance of the college-era chapel, as well as the associated chamber block to the west, was obtained in 2006. Between August and September of that year – during scheduled works conducted upon the extant chapel nave roof (Fig. 2, 8), which were designed to alter its pitch and increase the fall of its box guttering – a detailed physical survey of the structure’s constituent timbers was undertaken (Dickens *et al.* 2007). This was complemented by a programme of dendrochronological (tree-ring) analysis.

Methodologically, in order to allow every piece of

Figure 7. The recent pier-in-cupboard exposure in relation to Willis’ 1846 elevation of the north wall of the chapel.



wood to be allotted its place in the recording scheme each was allocated a unique number based upon its position in the roof. Full details of the resultant numbering system are presented within the original archive report, but have been omitted from the following account. Similarly, except where pertinent, detailed exposition of joint types, timber dimensions, etc. have also been excluded. All terms used follow the standard glossary for recording timber-framed structures (Alcock *et al.* 1996).

#### *Extant Roof Structure*

The structure that was revealed once the pine boards supporting the roof leading were removed comprised a typical king post truss roof (Fig. 8). Trusses are rigid transverse frameworks that span a roof at regular intervals, forming a series of bays. In this particular instance, four trusses were recorded. Each was composed of a tiebeam (the main transverse timber), two principal rafters (forming angled supports), a king post (providing a central vertical support) and two additional braces (Fig. 8B). This represents one of the simplest, and most common, forms of roof truss. Connecting the trusses together were a series of purlins, longitudinal timbers that are set into the plane of a roof's slope. These were tenoned into the principal rafters and arranged in a staggered pattern, with single purlins to each side. Finally, a series of regularly-spaced, identically-sized inclined timbers – known as common rafters – were joined to the purlins. Arranged in pairs, there were five sets of common rafters within the three easternmost bays of the roof, increasing to nine sets within the fourth, westernmost bay.

The entire roof was constructed from oak, save the central ridge board and its support brackets that were pine. Excluding the latter, the roof contained 129 recorded timbers: four kingposts, eight purlins, eight principal rafters, eight braces, four tiebeams, a wall plate and 96 common rafters.

At the time of recording, the roof of the adjacent wing of the Master's Lodge had a different pitch to that of the chapel. The westernmost recorded purlins, however, clearly extended beyond the area of investigation into this space. Here it was observed that they joined a fifth truss, beyond which further trusses were also visible. These appeared identical to the recorded examples discussed above, and clearly formed part of a single original structure. It is, therefore, apparent that at a later date (c. 1980) the western two-thirds of the roof was modified, raising its pitch by c. 0.4m.

Directly related to the assembly of the roof in its initial, unaltered form were three separate but contemporary numbering systems. Each of these was represented by chisel-cut Roman numerals. Firstly, the trusses themselves were numbered in a sequence that commenced at the east end of the nave and progressed westward. Secondly, the joints between the purlins and the principal rafters were numbered independently, as, finally, were also the individual common rafters.

#### *Reused Timbers*

A minimum of 65, and probably 101, reused timbers were identified within the extant roof. Recycled material thus constituted between 50% and 79% of the total recorded structure. Indeed, new timbers only appear to have been employed in its construction when no suitable earlier material was available (fresh wood being principally reserved for substantial members such as king posts and tiebeams).

Reused timbers were distinguished *via* the presence of redundant joints, re-hewn and planed surfaces and redundant carpenter's numbers. Three distinct groups were identified, which comprised:

- Group 1:* Ten timbers, each with two scribed ogee housings backed by up to four mortise holes, which were derived from an earlier roof
- Group 2:* Five timbers, each with two long mortise holes on one face and a single long mortise hole on the other, which were derived from an earlier roof
- Group 3:* More than 50, and probably 96, unidentified timbers that had been recut for use as common rafters

*Group 1:* Eight of these timbers had been reused as principal rafters, one as a wall plate and one as a purlin. All of their joints were identical, each having two housings scribed and carved to fit around moulded timbers (Fig. 11). These housings had flat bottoms that were cut by the mortises housing the secondary tenons on the ends of the timbers. The primary tenons had all been pegged in pairs, and where the sawn-off timbers survived *in situ* their faces were moulded and set at a partial angle. These joints occurred on two sides of six timbers and on a single side of four timbers. For the former, the pairing of joints across opposite sides, together with shared mortise slots and the angled face, suggests that these timbers had formerly comprised principal rafters. The sawn-off fragments represent the surviving ends of moulded purlins where, unusually, the moulded section had been let into the face of the rafter. This interpretation is further supported by the lack of evidence for joints on the back of these timbers. Overall, the double- and single-sided timbers constitute six double rafter sets and four single rafter sets; the numbers required for a four bay roof.

The faces of the moulded timbers were tilted forward, suggesting that they were set at an angle so that the moulding would be visible from below. This indicates that the roof was designed to be open (i.e. without a ceiling). Between each set of moulded mortises was a long plain mortise. Where the tenon survived *in situ* the grain of this long tenon was angled towards the upper purlin at 45°. This suggests the presence of a brace extending from the side of the sloping timber, the principal rafter, to the underside of the upper moulded purlin. On each of these timbers, one of the faces at 90° to those with the moulded mortises bore a second set of plain mortises. These appear to have been designed to house bracing, forming each pair of principal rafters into a truss. Based upon the angle at the top of the wide tenon housing the collar brace, this roof originally had a pitch angle of 55–60°. A reconstruction of the original roof, based upon these reused elements, is shown in Figure 9(A).

*Group 2:* These five timbers were distinguished from the first group by a consistent pattern of mortises, with one long socket present on the lower face and two smaller sockets above. In each case, the lower mortise was positioned centrally in relation to the other two. Initially, the possibility that these timbers might represent additional elements employed within the Group 1 roof was explored. However, the positioning of the mortises indicates an arrangement of angled windbraces. It is not possible to incorporate this arrangement into the reconstructed Group 1 roof, either within or between the trusses. Therefore, it appears likely that the

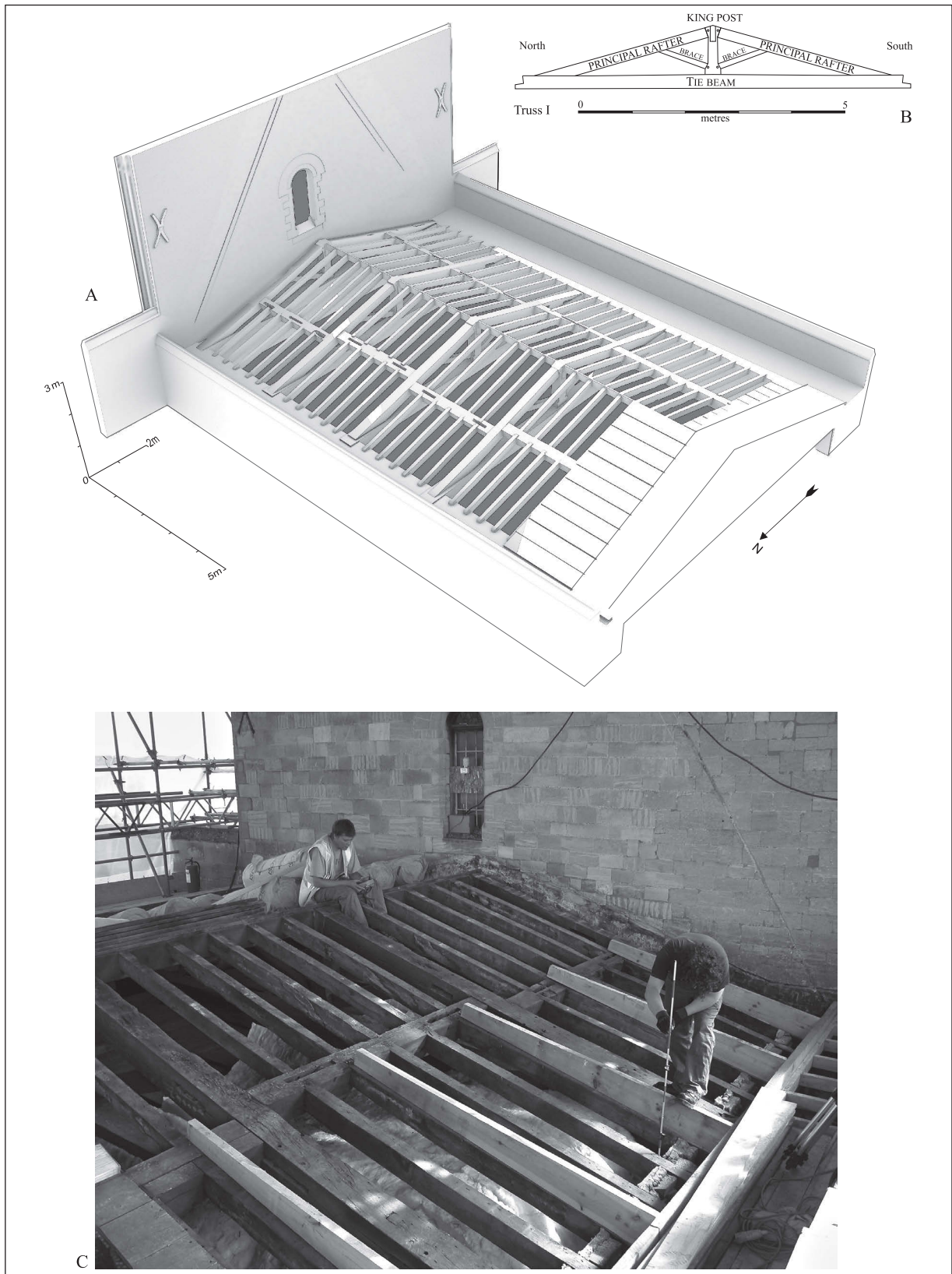
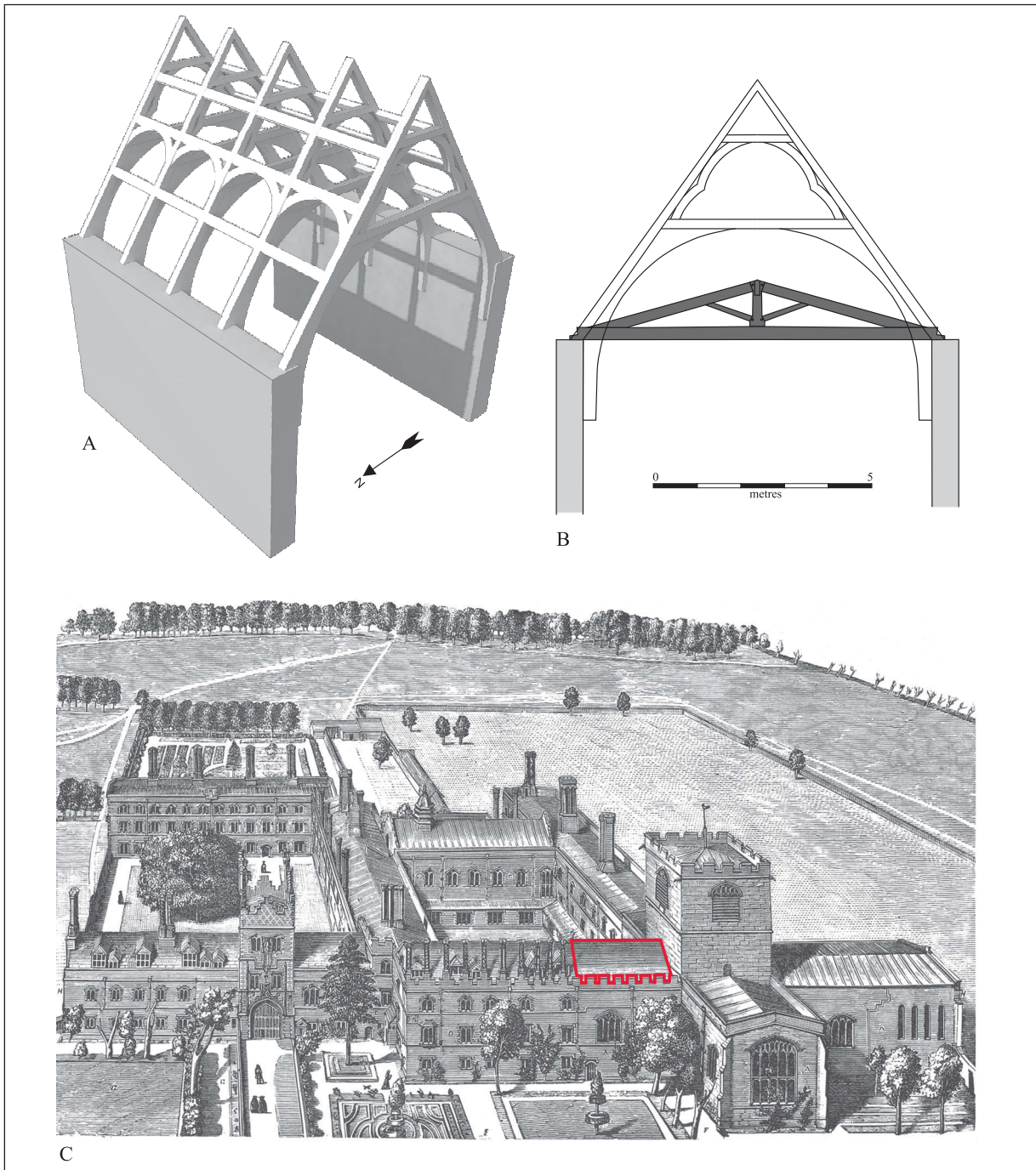


Figure 8. 3-D model of the extant nave roof (A) with labelled cross-section of a constituent king post truss (B). (C) 2006 surveying in progress.



**Figure 9.** 3-D reconstruction of Group 1 roof (A), with comparative elevation showing both the reconstructed and extant structures (B) and Loggan's 1690 engraving of Jesus College (C).

Group 2 timbers represent purlins that were derived from a different, although broadly contemporary, source. This was most probably a steeply-pitched roof situated elsewhere within the college.

*Group 3:* In contrast to the preceding groups, aside from the truncated remnants of a pre-existing numbering sequence, no distinguishing joints or other pertinent details were visible on any of the Group 3 timbers. Although it is therefore likely that all 96 common rafters were composed of recycled material derived from a single common source, this could

not be determined with certainty. Similarly, the original purpose of the timbers is also unclear. Had they comprised reused common rafters that were previously employed within either the Group 1 or Group 2 roofs, they would be expected to have been tapered in form (Rackham 1980, 146). Their lack of tapering implies that they were instead derived from another source. Perhaps the most likely scenario – given their size, regularity and quantity – is that they were initially used as studs (vertical members) within a framed wall. Such a feature, or features, might well have been demolished as part of the same episode of widespread demolition/conversion that

led to the dismantling of the aforementioned roofs.

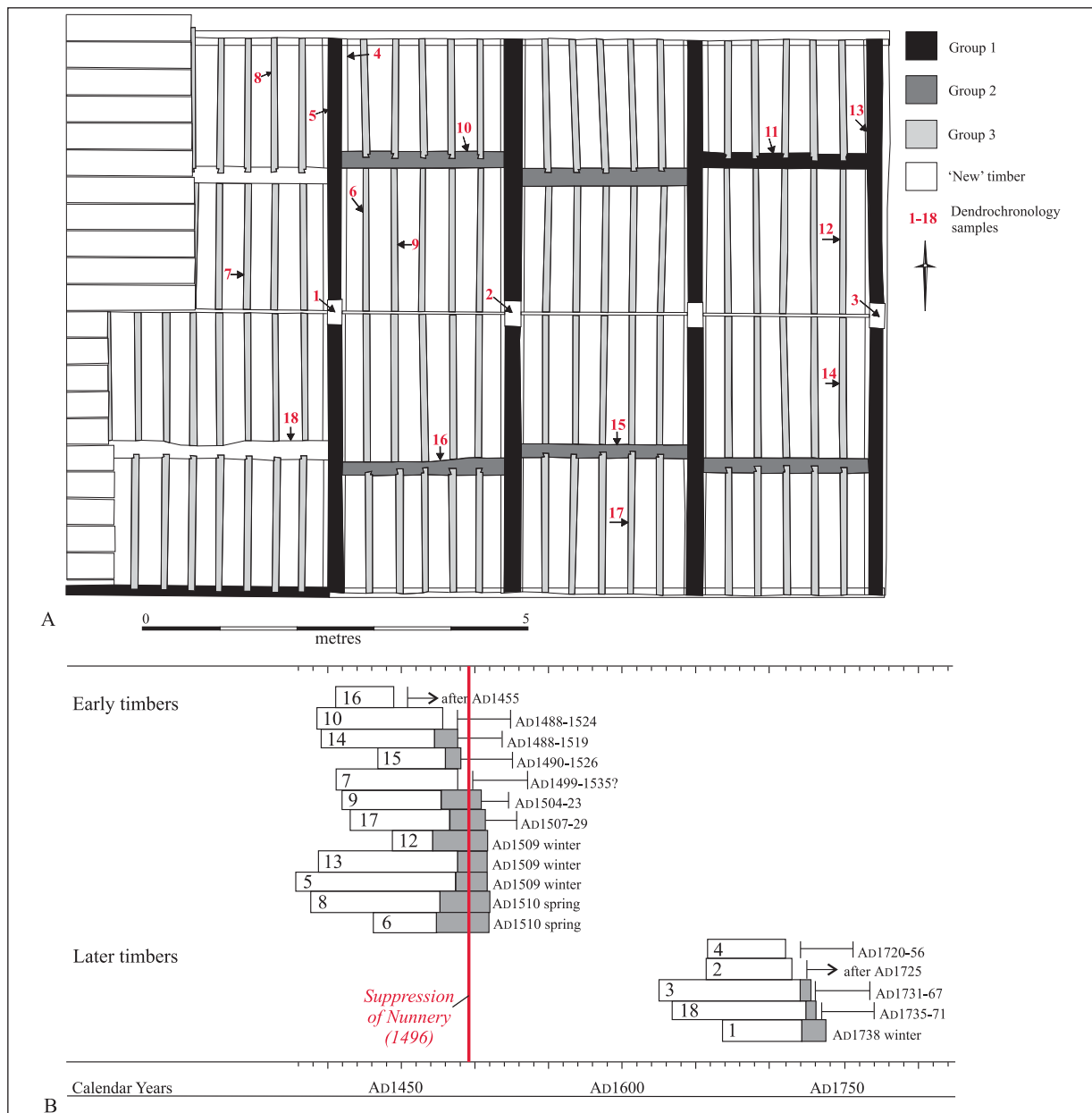
*Dendrochronological Analysis*

Eighteen timbers from the roof were selected for dendrochronological analysis, conducted by Ian Tyers (whose full report is in Dickens *et al.* 2007). The samples included timbers derived from all three reused groups, as well as fresh elements created specifically for the extant king post truss structure (Fig. 10A). They comprised three king posts, one tiebeam, two principal rafters, five purlins and seven common rafters. Although one sample contained an unmeasurable sequence, the remainder included six that were complete to the bark-edge and a further six that retained significant quantities of sapwood. Following their measurement, all of these series were found to cross-match and two separate groups were

apparent. A composite series was constructed from each group of correlated samples. One group of twelve timbers formed a sequence of 131 years, whilst a second group of five timbers formed a group of 114 years. Each sequence was cross-matched with a large number of reference chronologies at a single consistent position. These correlations indicate that the rings in the first composite series date from AD 1379–1509 inclusive, and in the second to AD 1625–1738 inclusive. The dates of the individual samples derived by this process are shown in Figure 10(B).

The first sequence, dated 1379–1509, comprised samples derived from two principal rafters, three purlins and seven common rafters. Five of these had surviving bark-edge, and each was felled in the winter of 1509 or spring of 1510. Less precise felling date ranges could also be calculated for the

**Figure 10.** Location of dendrochronology samples (A), with diagrammatic representation showing the relative and absolute positions of the dated samples (B); white bars represent heartwood, shaded bars represent sapwood (the felling date, felling date range or terminus post quem date is also shown for each sample as appropriate).

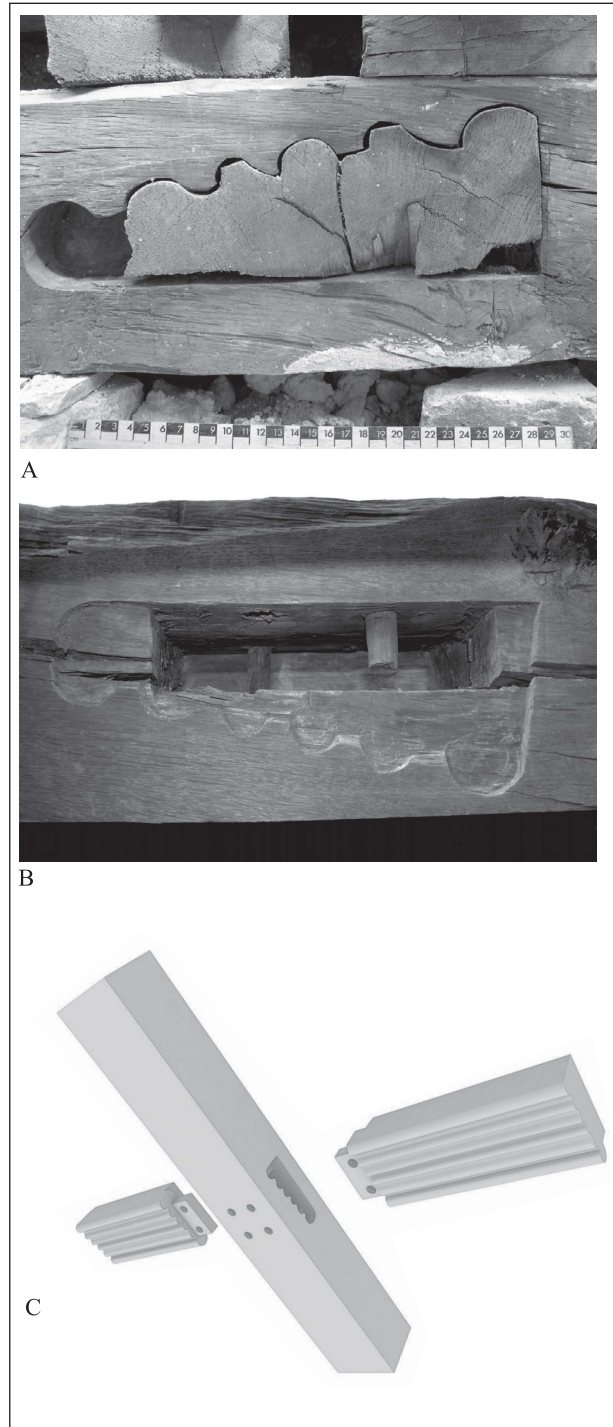


other seven dated samples, which show that they are broadly consistent with the aforementioned timbers. It should be noted that the distinction between winter and spring felling in this group may, in fact, be misleading in terms of the actual day of felling. A group of oak trees in the same location at around Easter always includes some trees that have begun the season's new growth whilst others are still dormant. Thus, timbers felled at this time of the year would be expected to include material with slightly different apparent felling dates.

The second sequence, dated 1625–1738, comprised samples from three king posts, a tiebeam and a purlin and includes a king post with surviving bark-edge. This timber was felled in the winter of 1738, and a second king post was derived from the same tree. The less precise felling date ranges calculated for the other three dated samples in this group are also consistent with this date. There were clear examples of seasoning distortions on the king posts and some of the purlins that can only have occurred after they were squared. This observation suggests that these elements of the framing were each prepared whilst their timbers were still green, effectively within a few weeks or months of their felling. It is thus reasonable to assume that initial construction of this structure occurred during or shortly after the winter of 1738.

The dendrochronological evidence provides a clear context for the reconstructed Group 1 roof. Erected during or shortly after the spring of 1510, this structure comprised part of the extensive programme of works associated with the conversion of the former nunnery for collegiate use. Moreover, given the dimensions of the roof – allied with the location in which many of its constituent timbers were subsequently reused – there can be little doubt that it too was originally situated above the converted chapel nave (formerly the eastern four-and-a-half bays of the monastic nave); a space into which it fits precisely. This, therefore, almost certainly represents the steeply-pitched nave roof depicted in Loggan's 1690 engraving of the college (Fig. 9C). The print also reveals that the roof of the adjoining chamber block, now the east wing of the Master's Lodge, was of an identical pitch. Here, however, a series of dormer windows indicate that the attic space was put to residential use. This conjoining structure, which was very probably built concurrently with the chapel roof, provides much the most likely source for the additional, Group 2 reused timbers.

Internally, the newly discovered evidence demonstrates that the nave roof was open to the rafters, with decorated purlins facing down into the main body of the chapel. The structure may also have been painted, although no trace of colouring survived upon any of the reused timbers. One very unusual feature of the roof was the way in which the moulded parts of the purlins had been set into the bodies of the principal rafters (Fig. 11). This appears to have comprised an attempt to impart greater rigidity to the structure, a function that might more practically have been achieved by use of a diminished haunch (a particular design of tenon that helps to preserve the alignment of the members without unduly weakening the end of the mortise). Widely employed *c.* 1510–1700 (Hewett



*Figure 11. Joints of moulded purlins, showing; sawn-off remnant of purlin in situ (A); scribed and carved housing (B) and 3-D reconstruction of original arrangement (C).*

1980, 215), the earliest use of this joint has been credited to the broadly contemporaneous roof of King's College chapel, Cambridge (see Woodman 1986, 221–2). More recently, however, its inception has been pushed back to *c.* 1500 or earlier at St. Aylotts, Essex (R. Darrah pers. comm.), thus rendering its absence



from the present structure all the more intriguing.

Upon completion, the steeply-pitched nave roof comprised only one element within a much broader, chapel-wide schema. Today, the only surviving *in situ* remnants of this design are the open timber roofs of the north and south transepts. These are both much lower in pitch than the former structure, and are sub-divided into three bays as opposed to four (Royal Commission on the Historical Monuments of England (RCHM(E)) 1959, 88–9). Moreover, in addition to moulded purlins that appear almost identical to those identified among the reused timbers, each of these roofs also contains moulded tie-beams, ridge boards and wall plates. Although relatively well-preserved, the roof of the south transept was restored and augmented in 1867 and both structures were also painted – or possibly repainted – during the 19th century. Nevertheless, it is clear that the transept roofs comprised part of the same overarching conversion-period design as the newly reconstructed nave roof.

The increased level of decorative moulding that appears to have been employed within the transept roofs may have been stimulated by their diminished height, which would have enhanced its visibility, but more probably formed part of a broader trend of increasing elaboration towards the chapel's east end; a common pattern during this period. Unfortunately, this interpretation cannot be confirmed with certainty because a number of requisite components of the nave roof – such as the collar beams, for example – were not represented amongst the reused timbers. Furthermore, the chancel roof, which should on this basis have represented the design's most elaborate constituent, is a later replacement, constructed between 1847 and 1849 to a design by A. W. Pugin. It is, however, reputed to have incorporated a significant proportion of the preceding low-pitched structure within its build (RCHM(E) 1959, 89).

The date obtained from the reused timbers also raises an additional issue. Previously, the process of converting the church from monastic to collegiate use is widely assumed to have been completed by *c.* 1500, when the first Fellows were admitted to the fledgling institution (e.g. Atkinson 1897, 396; RCHM(E) 1959, 86–8). Dendrochronological evidence, however, conclusively demonstrates that work upon the chapel remained ongoing until at least 1510. It thus appears that – in addition to the construction of the adjacent Grammar School and Gatehouse, which occurred in 1503–07 (Evans *et al.* 1997, 124–8) – work upon the new chapel also continued for at least a decade after the college's initial establishment. Moreover, this delay is also evinced by documentary sources that indicate that the conversion of the 'chapel and cloister' may not have been fully concluded until *c.* 1513 (Glazebrook 2007, 17). The disruption caused by these ongoing works thus appears likely to have had a significant impact upon the effective functioning of the new community in its earliest years.

Whilst the historical context of the initial conversion-period roof is clear, that of its successor – the extant nave roof, installed in winter 1738 or spring

1739 – is harder to establish. Although a thorough account of the numerous episodes of building work undertaken by the college has been published (Willis & Clark 1886 II, 115–86), much of which is based upon the surviving audit books, no mention is made therein of alterations conducted during the relevant period. Nevertheless, archaeological evidence reveals that extensive works were most probably conducted within the east wing of the Master's Lodge *c.* 1736–38.

Alterations undertaken to the upper storey of the chamber block at this time appear to have led to the dismantling of the pre-existing roof, with its dormer windows, and the concomitant replacement of the conjoining structure above the chapel nave. Furthermore, these works are also likely to have included the removal of several conversion-period stud-built partition walls. Given their precise contemporaneity to the dismantled roofs, it is likely that these, too, were situated within the western portion of the former chapel nave. Additional evidence of this episode of widespread alteration is provided by the presence of several extant 18th century features. Firstly, two of the principal staircases within the east wing, which are located upon the ground and first floors respectively, date to this period. Each has close strings and turned balusters, though the position of that situated on the ground floor was altered during the late 19th century (RCHM(E) 1959, 96–97). In addition, a number of second floor bedrooms also have 18th century fielded panel doors along with contemporary flat-moulded masonry fireside surrounds. It thus appears likely that all of these elements were installed *c.* 1736–38 and as part of a broader programme of alteration/modernisation.

What might have prompted such an extensive, and otherwise undocumented, episode of rebuilding? Historically, during the period 1701–52 the Master of Jesus College was Dr Charles Ashton, a noted scholar and divine (Taylor 2007). In addition to his collegiate position, Ashton was also collated to a prebendal stall in Ely Cathedral in 1701 and elected vice-chancellor of the University in 1702. Under his aegis, extensive alterations had already been made to the west wing of the Master's Lodge in 1718–20. This included the addition of a third storey to the structure and associated reroofing, as well as probable refenestration (RCHM(E) 1959, 96–7). Although the cost of this reconstruction was partially defrayed by a legacy, Ashton noted that "the remaining sum of £166 16s. 9d. I paid out of my own money" (Willis & Clark 1886 II, 167; emphasis added). If this pattern of private sponsorship were to have continued, or even expanded, during the succeeding three decades of Ashton's mastership, few if any of the resultant expenses would necessarily have been entered within the official college audit books.

Regardless of the precise provenance of the funding for these alterations, it is clear from their surviving remains that they were conducted to a very high standard. The new roof, for example – which followed a design of king post truss that had first been introduced into Britain during the 17th century

(Yeomans 1992, 30; see also Price 1733, plate G) – was of excellent quality. Fresh English oak, sourced from southeast England, was employed in its construction at a time when imported oak or pine was much more commonly in use. Moreover, many of the reused timbers were carefully reshaped and tapered to fit in their new positions, despite the fact that – being re-employed within a closed roof – they would no longer have been visible from below. Indeed, such was the quality of its execution, when a new panelled ceiling – decorated by William Morris & Co. – was installed in the nave in 1867, few if any alterations were required to the pre-existing structure (cf. RCHM(E) 1959, 89).

### Discussion – *Splendid Rooms*

Although limited in scale, the investigations reported upon above have produced a number of significant results. In the first instance, additional information pertaining to both the form and position of the Medieval east range, as well as evidence of a contemporary ancillary timber-built structure, has been recovered. Further details of the former nave-aisle arcade within the monastic church were also revealed. Moreover, relating to the succeeding collegiate period, the initial

design of the chapel nave roof has been reconstructed and an extensive, though previously unrecognised, mid-18th century episode of reconstruction/modernisation within the east wing of the Master's Lodge has also been identified.

Yet, the outcome of these projects look forward as well as back. Within the chapterhouse, for example the College can feel rightly proud of the end result of the recent conversion programme. The Unit's 1995 discoveries there were, to all intents and purposes, boarded up and put on hold for 15 years. Now, through a private benefaction, and the skills and sensitivity of Donald Insall's architect, Matthew Seaborn, today the finished rooms are both a beautiful and extraordinary space (Fig. 12). Through panes set within the floor, crucial chapterhouse architectural features can be appreciated. By this, and the opening up of the wall behind Cloister Court's nunnery arcade, the works have managed to do justice to both the chapterhouse and Alcock's early college room-conversion. Certainly, it is no mean feat to simultaneously convey a sense of the main phases of successive historical buildings when their floor levels lie upwards of 0.75m apart. To this should equally be added that the Romanesque doorway, also found in '95, has been restored and again gives direct access to the chapel.

Set against the due celebration of these new rooms,

*Figure 12. Top, the completed chapterhouse (now meeting room) restoration, facing west (left) and, right, east (note key chapterhouse-component viewing holes in floor; photographs © Tim Soar); below, during renovation works (see Evans et al. 1997 for relevant elevations).*



the College's greater archaeological potential should not be lost sight of. Not only does this relate to its immediate institutional place-history, but, more generally, that it saw the succession of what were essentially gender-exclusive communities. Indeed, having a nunnery (female) replaced by a late Medieval college (male) is an extraordinary legacy. It is one without obvious parallel and, as such, is certainly worthy of further serious research investment.

#### Note

1. Two additional investigations have not been included within this listing. Situated some distance to the northwest, on the perimeter of the college grounds, these excavations occurred at the Maintenance Workshop and Gardener's Compound site (Hattersley & Evans 2003; Evans & Williams 2004). Here, numerous features of Iron Age and Roman date were uncovered. As they bear no relation to the Medieval and subsequent phases of occupation that comprise the focus of the present paper, these will instead be considered within a separate publication (Evans in prep.).

Mention should also be made that the full 'grey literature' reportage of all of these investigations is available through the Archaeological Data Service's digital archive (<http://archaeologydataservice.ac.uk/>).

#### Acknowledgments

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The investigations within the east range of Cloister Court were directed for the CAU by Dave Webb and specialists who considered material from the site included Grahame Appleby, Craig Cessford, Andrew Hall, Richard Newman, Vida Rajkovača and Hugh Richmond. The architectural recording within the east wing of the Master's Lodge was undertaken by Crane Begg, whilst the recording of the chapel nave roof was done by Richard Darrah, assisted by Nigel Randall and Alison Dickens. The timbers were surveyed by Marcus Abbot and Donald Horne, and their dendrochronological analysis was undertaken by Ian Tyers. In addition to the above, this study has benefited from informative discussions with Craig Cessford, Hugh Richmond and the late Tony Baggs, as well as the perceptive comments of two anonymous referees. Initially produced by Marcus Abbott, Crane Begg, Alison Dickens and Vicki Herring, the paper's figures were prepared for final publication by Andrew Hall. Aside from Tim Soar's images of the restored chapterhouse/now meeting room, the photography herein is by Dave Webb.

#### Bibliography

- Alcock, NW, Barley, MW, Dixon, PW and Meeson, RA 1996 *Recording Timber-framed Buildings: an Illustrated Glossary*. (Practical Handbook in Archaeology 5.) York: Council for British Archaeology.
- Atkinson, TD 1897 *Cambridge Described and Illustrated: Being a Short History of the Town and University*. Cambridge: Macmillan and Bowes.
- Baggs, A, Evans C and Hall, A 1999 *Architectural Recording of a First Floor Room at Jesus College, Cambridge*. Cambridge Archaeological Unit (CAU) report 340.
- Begg, C 2001 *Architectural Recordings within the East Wing Master's Lodge, Jesus College, Cambridge*. CAU report 412.
- Brudenell, M 2004 *Chapel Court, Jesus College, Cambridge: An Archaeological Watching Brief*. CAU report 630.
- Burton, J 1994 *Monastic and Religious Orders in Britain, 1000–1300*. Cambridge: Cambridge University Press.
- Cessford, C, Alexander, M and Dickens, A 2006 *Between Broad Street and the Great Ouse: Waterfront Archaeology in Ely*. (East Anglian Archaeology Report 114.) Cambridge: Cambridge Archaeology Unit.
- Cessford, C and Dickens, A in prep *From King's Ditch to Department Store: investigations of an 11th–20th-century suburb and the town ditch of Cambridge*. (East Anglian Archaeology Report.) Cambridge: Cambridge Archaeology Unit.
- Dickens, A, Darrah, R and Tyers, I 2007 *Jesus College Cambridge: Survey and Recording of the Chapel Nave Roof*. Cambridge. CAU report 784.
- Edwards, D and Hall, D 1997 Medieval Pottery from Cambridge. *Proceedings of the Cambridge Antiquarian Society (PCAS)* 86: 153–168.
- Evans, C, Dickens, A and Richmond, DAH 1997 Cloistered Communities: Archaeological and Architectural Investigations in Jesus College, Cambridge, 1988–97. *PCAS* 86: 91–144.
- Evans, C and Williams, S 2004 *Jesus College, Cambridge: the Maintenance Workshop and Gardener's Compound site excavations*. CAU report 618.
- Evans, C, Tabor, J and Newman, R 2012. *Jesus College, Chapel Court: An Archaeological Watching Brief*. CAU report 1121.
- Evans, C in prep *Investigations in Cambridge's lower Roman town*. Cambridge: Cambridge Archaeological Unit.
- Gilyard-Bear, R 1990 *Cleeve Abbey* (2nd Edition). London: English Heritage.
- Glazebrook, P 2007 The College Founders, in P Glazebrook (ed) *Jesus: The Life of a Cambridge College*: 14–20. Cambridge: Granta Editions.
- Gray, A 1894 *Reliquiae Sanctae Radegundis. The Chanticleer* 28: 120–123.
- Gray, A 1898 *The Priory of St Radegund, Cambridge. Cambridge Antiquarian Society*, Octavo 31.
- Gray, A and Brittain, F 1960 *A History of Jesus College, Cambridge*. London: Heinemann.
- Greene, JP 1989 *Norton Priory: the Archaeology of a Medieval Religious House*. Cambridge: Cambridge University Press.
- Greene, JP 1992 *Medieval Monasteries*. Leicester: Leicester University Press
- Haigh, D 1988 *The Religious Houses of Cambridge*. Cambridge: Cambridgeshire County Council.
- Hall, A 2001 *An Archaeological Watching Brief in the Master's Garden and Architectural Recording in the Chimney, Jesus College, Cambridge*. CAU report 424.
- Hall, A 2005 *An Archaeological Watching Brief within the Master's Lodge and Cloister Court, Jesus College,*

- Cambridge. CAU report 690.
- Hattersley, C and Evans, C 2003 *Jesus College Cambridge: The Maintenance Workshop and Gardener's Compound Site: An Archaeological Evaluation*. CAU report 569.
- Hewett, C 1980 *English Historic Carpentry*. London: Phillimore and Co. Ltd.
- Howard, M 2003 Recycling the Monastic Fabric: Beyond the Act of Dissolution, in D Gaimster and R Gilchrist (ed) *The Archaeology of Reformation, 1480–1580*. (Society of Post-Medieval Archaeology Monograph No. 1.): 221–234. Leeds: Society of Post-Medieval Archaeology.
- Newman, R and Webb D 2011 *Jesus College, Cambridge: Archaeological and Architectural Recording*. CAU report 991.
- Ottaway, P and Rogers, N 2002 *Craft, Industry and Everyday Life: Finds from Medieval York. The Archaeology of York Vol. 17/15: The Small Finds*. York: The Council for British Archaeology.
- Parker, R 1983 *Town and Gown: the 700 years' war in Cambridge*. Cambridge: Patrick Stephens.
- Price, F 1733 *The British carpenter: or, a treatise on carpentry. Containing the most concise and authentick rules of that art*. Dublin: J. Williams
- Rackham, O 1980 *Ancient Woodland: Its History, Vegetation and Uses in England*. London: Arnold.
- RCHM(E) 1952. *An Inventory of the Historical Monuments in Dorset, Volume 1: West*. London: HMSO.
- RCHM(E) 1959. *An Inventory of the Historical Monuments in the City of Cambridge* (Two Volumes). London: HMSO.
- Rigold, S 1977 The St Nicholas or "boy bishop" tokens. *Proceedings of the Suffolk Institute of Archaeology and History* 34: 87–101.
- Robinson, D (ed) 1998 *The Cistercian Abbeys of Britain: Far from the Concourse of Men*. London: B.T. Batsford.
- Taylor, S 2007 Masters and Bishops: Dr Chubbes to Dr Corrie, in P Glazebrook (ed) *Jesus: The Life of a Cambridge College*, 94–99. Cambridge: Granta Editions.
- Ten Harkel, L 2005 *Cloister Court, Jesus College, Cambridge: An Archaeological Watching Brief*. CAU report 660.
- Van Houts, E 1992 Nuns and Goldsmiths: the Foundation and Early Benefactors of St. Radegund's Priory at Cambridge, in D Abulafia, MJ Franklin and M Rubin (eds) *Church and City 1000–1500: Essays in Honour of Christopher Brooke*: 59–79. Cambridge: Cambridge University Press.
- Whittaker, P 1998 *An Archaeological Evaluation at the New Accommodation Block Site, Jesus College, Cambridge*. CAU report 278.
- Willis, R and Clark, JW 1886 *The Architectural History of the University of Cambridge and of the Colleges of Cambridge and Eton* (Three Volumes). Cambridge: Cambridge University Press.
- Woodman, F 1986 *The Architectural History of King's College Chapel and its Place in the Development of Late Gothic Architecture in England and France*. London: Routledge and Keegan Paul.
- Yeomans, DT 1992 *The Truss Roof: Its History and Development*. Cambridge: Scholar Press.