KEYNSHAM ABBEY EXCAVATIONS 1961–1991: FINAL REPORT
PART I: THE ARCHITECTURE OF KEYNSHAM ABBEY

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INTRODUCTION Barbara J. Lowe

Rescue excavations during bypass construction and subsequent re-excavation of Victorian trenches on the site of Keynsham Abbey were carried out by volunteers from Bristol Folk House Archaeological Society during 1961 to 1991. The results up to 1985 were reported in Volume 131 of this journal (Lowe *et al.* 1987, 81–156). This paper is the first of two representing the final Keynsham Abbey report by the Society and deals with the huge quantity of architectural fragments in greater depth than was possible in the 1987 paper by the author and Basil Cottle (Lowe *et al.* 1987, 103–26). There details of the carved stonework excavated up to 1985 were published but an overall assessment was not, at that time, possible. These papers have been made possible by full access to the extensive archives compiled by members of the Society and by examination of material unearthed since 1865. The illustrations in that paper are referred to in the following papers. The task has been approached in detail in Stuart Harrison's paper followed by a wider overview of the significance of the Keynsham Abbey architecture by Malcolm Thurlby.

In the second paper, to appear in the next *Proceedings*, the on-site work undertaken from 1985 to 1991 will be reported. The opportunity has also been taken to review the whole 1961 to 1991 archaeological programme bringing together the different strands of evidence from the salvage excavations and the later re-excavations of the Victorian trenches. Summaries of the different types of finds work will also be presented.

AN ANALYSIS OF THE LOOSE STONEWORK AND REASSESSMENT OF THE BUILDINGS

STUART A. HARRISON AND BARBARA J. LOWE

INTRODUCTION

The excavations carried out at Keynsham Abbey were reported in 1987 (Lowe *et al.* 1987). Though some of the carved stonework recovered from the site was published in that paper it did not deal in depth with the larger collection of material that has survived. Since that time further research on the whole collection has revealed considerably more about the abbey and led to a greater understanding of the detail of the architecture. This paper looks in more depth at the abbey from the perspective of what the collection of loose stone can tell us about the appearance of the buildings, how they were extended and altered, and their relationship to other buildings in the region. The detailed context and wider

significance of the architecture of the abbey church and chapter house are dealt with in the companion paper by Malcolm Thurlby.

The visible remains of Keynsham Abbey form a meagre percentage of a once flourishing house of canons of the Order of St Victor. A few low walls of the church and part of the eastern range are all that remain. The buildings were demolished piecemeal following the dissolution of the abbey. The accounts kept by the churchwardens of Keynsham parish church show payments for the carriage of substantial amounts of stone, taken from the abbey, to construct a new church tower following the collapse of the existing tower in 1632. In total this amounted to 198 loads of ashlar, 10 loads of freestone and 13 loads of rough stone. Intriguingly reference is also made to turrets in the abbey being taken down. In 1775 Abbey House, which occupied part of the site, was sold and demolished. The materials, including some corbel heads, being used to build a warehouse in Quay St, Bristol. The core of Abbey House may have been 'the dwelling in the court of the monastery near the great door of the conventual church' that was reserved for the use of abbot Walter Bekynsfild who retired in 1456. The service buildings of Abbey House such as the coach house and stables were exempted from the sale and the coach house survived until 1835 when it burned down. The arched entrance to the Abbey House coach house still survives in Station Road but was moved and rebuilt in 1865 by Richard Cox. By this time it appears that the exact detailed location of the abbey buildings had been lost but when Cox began developing it for housing some were rediscovered.

Some of the discoveries made at that time were published by Loftus Brock but the abbey site was obscured again by the large new houses that were then constructed over the site. Brock published a plan that showed part of the church and this seems to have been based in part on a survey of the remains made by the Bristol architect J.T. Irvine (Brock 1875, pl.13). It appears that the remains were disclosed in stages and that Irvine's unpublished plan shows that the excavations were more extensive and that more was uncovered by the excavators than Brock's published plan would indicate. Brock makes clear that the builders were removing walls as their work progressed and despite receiving an undertaking by Richard Cox that certain walls would be preserved, it seems clear that the destruction continued. When rescue work began in 1961 all that remained visible of the abbey was a single pier in a garden and loose moulded stones incorporated into garden rockeries.

The remains were again rediscovered during the construction of the Keynsham bypass between 1960 and 1966 when some of the Victorian villas were demolished. Unfortunately the route of the new road ran directly across the main claustral complex and because it was in a deep cutting it destroyed a substantial part of the abbey. Fortunately members of the Bristol Folk House Archaeology Society were able to organise a survey of the remains and to recover much of the abbey plan that the road construction revealed. They were also able to recover many architectural fragments that had been discovered during the road construction and also many of those that had been preserved in the gardens of the Victorian houses built over the abbey. Following the completion of the bypass, excavation – often re-excavation of former excavation trenches – continued on the sites of the south-east part of the church and the chapter house and many more architectural fragments were recovered. Despite the almost total destruction of the buildings and a major section of the site, much can still be learned from this extensive collection of lapidary stonework. The abbey was a landmark monument in the development of the early Gothic style in the West Country and the material is of national importance. It forms the key to reconstructing the church and chapter house and enables far more to be learned about the appearance of the abbey than could be gleaned from study of the excavations alone.

The material forms a diverse collection with stones dating from the 12th to the 15th centuries covering the whole life of the abbey but is particularly rich in the remains from the 12th-century building campaigns. At present the material is split between three locations, some is stored on the abbey site, some in the basement of Keynsham Town Hall and some stored in the grounds of Cadbury's Chocolate Factory. In addition there is material built into the Station Road arch and in other buildings within the town. Study of those elements known to have been unearthed during the Victorian building works confirms that their excavations must have been more extensive than indicated in Brock's report. Some of the material can be positively identified as having origins in the nave of the church, chapter house, cloister and refectory undercroft. In the case of the north side of the nave, Brock commented that 'Whatever may have existed before the ground was opened on the north side and west end, has been entirely removed' (Brock 1875, 202). This statement suggests that nothing had been found in this area yet sections of one of the nave screens amongst the

material excavated in the 19th century confirm that considerable stonework must have been found and cleared away. This and other similar evidence strongly indicates that large sections of in situ walling and collapsed debris were simply destroyed or cleared away by the Victorian builders. Material from the later medieval periods show how the original buildings were modified, extended and enriched. For the first time this material has been studied in depth to ascertain what it can tell about the design of the buildings and the development of the site. The fragmentary condition of many of the pieces suggests that they fell victim to systematic stone robbing following the dissolution of the abbey. The evidence suggests that some stone was rendered more suitable for reuse by having the carved detail hacked off the tail blocks. Other fragments may have survived because they broke off larger blocks when the walls were felled and were too small or unsuitable for reuse. More complete pieces seem to have been lost in the inevitable drift of debris that built up during demolition. A comment by Brock also suggests that the Victorian builders were recycling abbey stone for their own use (Brock 1875, 204).

THE ABBEY PLAN

The outline of the central claustral complex was recovered by the Bristol Folk House Archaeology Society and shows that the buildings were arranged in the traditional manner around a square cloister court (Fig. 1). On the north was the church with a chapter house and dormitory on the eastern side and a refectory on the south. There appears to have been some form of western range, though the evidence for this was fragmentary. To the south of the main ranges were a series of other buildings though remains of these only survived in a fragmentary condition. The bypass construction cut across the site diagonally destroying the west, south and southern end of the east range and slicing across the cloister in a line from north-west to south-east.

THE TOPOGRAPHY OF THE SITE

The monastic complex was set out in the traditional manner centred around a cloister court that was slightly rectangular from north to south. It measured around 32m east to west and 35m north to south. The topography of the site has been substantially altered by the later construction works and it is now difficult to appreciate how it must have looked before the bypass was constructed let alone how it must have appeared when the canons first arrived to found the abbey. Fortunately some clues regarding the topography at that time were revealed during the bypass construction work. The deep cutting exposed some of the foundations of the buildings and showed that they were not only of massive construction but that they had been built in order to artificially terrace the site. The monastic builders constructed a massive retaining wall that formed the south boundary of the cloister and this continued eastwards, possibly for another 30m (100') or more. Along the south cloister alley this wall formed the north wall of the refectory that stood over an undercroft just over 3m (10') in height. The eastern continuation of this wall formed the south wall of the east range that was unusually set on an east–west axis to follow the contour of the sloping hillside. The foundations of part the west wall of the east range were also exposed. These were equally massive, particularly at the south-west corner of the chapter house where they were shown to be at least 2m (6'6") in depth. The chapter house seems to have been constructed as an independent building because there was no link between its footings and those of the rest of the east range to the south. This was medieval engineering on a massive scale and may have involved removal of the hilltop to create a level platform for the church whilst at the same time reusing the spoil by backfilling behind the south retaining wall to create a huge terrace for the cloister and east range. A very similar cloister terrace can be seen at Kirkham Priory where the refectory also stands over an undercroft and at Mount Grace Priory where the hillside was scarped to create an artificial platform for the priory buildings. These topographical engineering works show that the layout of the buildings were planned as an integral whole and must have been envisaged from the start of construction. It seems likely that the main footings of the claustral complex must have been laid out and completed at an early stage in the terracing process and if the hilltop was regraded to provide the backfill, it may be that they were completed before the footings of the church.

THE MONASTIC LAYOUT

The work to recover the basic plan during the bypass construction was limited by the working conditions. Walls were exposed by the bulldozers grading the road cutting and these were quickly recorded

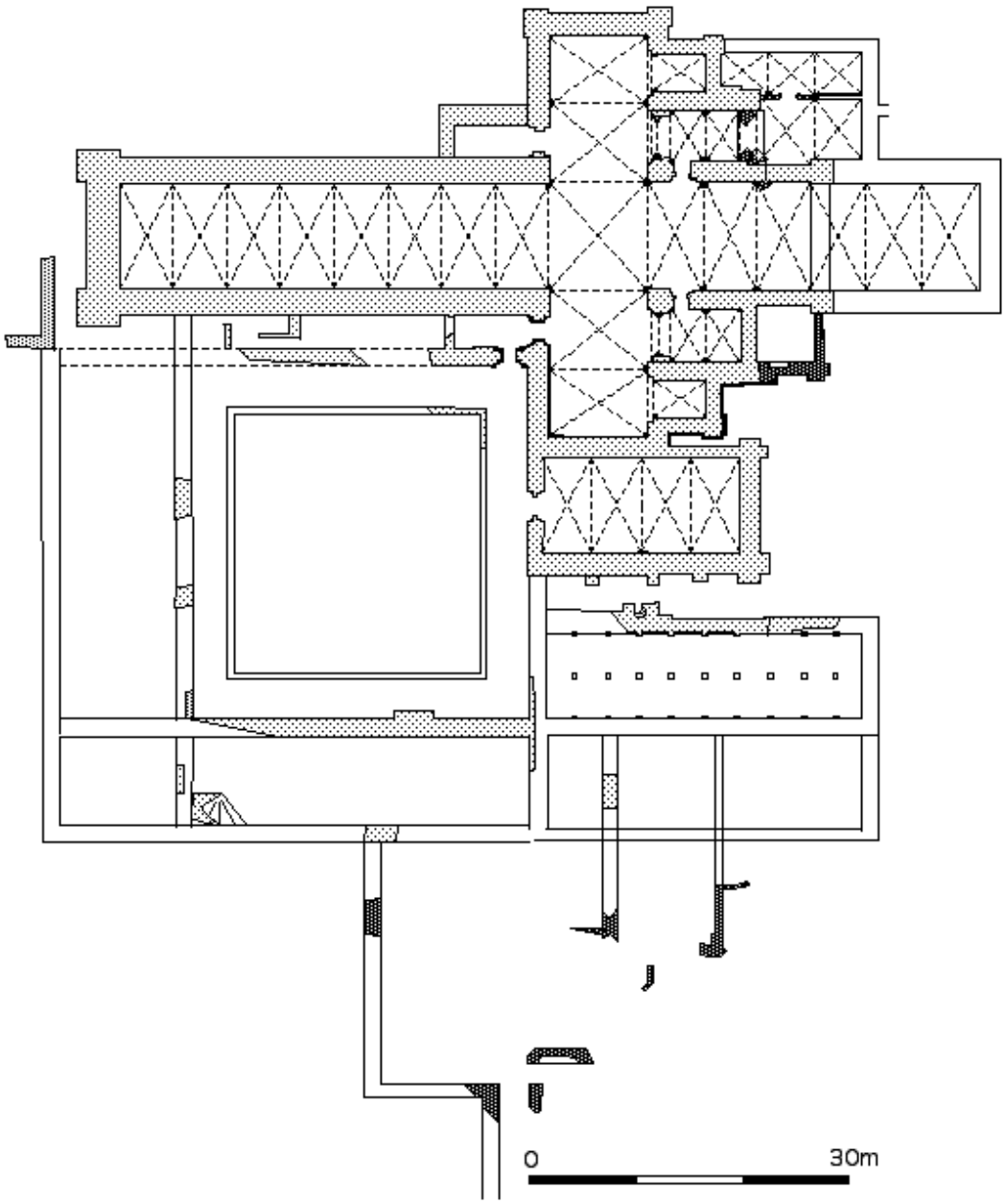

Fig. 1 Overall ground plan

wherever possible before they were completely destroyed. In many areas it was not possible to record features in great detail before they were swept away. Given the circumstances it is remarkable that so much information about the basic outlines of many of the buildings was recovered. The plan that eventually emerged shows several unusual features that deviate from the traditional monastic layout. Some of these are clearly a product of the hillside setting of the abbey but others may relate to specific

modification of the traditional layout to cater for the needs of the Victorine Canons. Whether these peculiarities of plan only appeared at Keynsham of were typical of their houses in England has not been established. Too little is known of their sites in general to be sure. Further research in the future may shed new light on this aspect of their architecture.

The buildings arranged around the cloister included the church on the north side, an eastern range that is somewhat unusual because the chapter house is sited next to the south transept; usually there would be a slype passage between the two. South of the chapter house is a narrow parlour or passage and then the dormitory. This is also of unusual plan because, as mentioned above, it appears to have projected along an east–west axis rather than the usual north–south alignment. Presumably this was because of the fall of the land towards the south and it was therefore easier to build along the contour of the hillside than across it. The refectory was parallel to the south cloister alley and a projection in its north wall, in the south cloister alley, probably housed the laver where the canons washed before meals. At the south-west corner of the south range there was a broad curving flight of steps that gave access down to the vaulted refectory undercroft. These steps may also have served as access from the kitchen if it stood in the traditional position south-west of the refectory. Though some trace of buildings to the south of the main claustral complex were observed, considerable areas on the lower part of the site were bulldozed without archaeological intervention. Some traces of a western range, consisting of a paved area at the north end, were seen but otherwise these were fragmentary. The abbey was laid out on a large scale from the first and indicates that the community must have been of considerable size. The cloister court in particular was much larger than in many contemporary houses of canons regular. We have seen that Keynsham shows several unusual characteristics in plan and this raises other questions about the layout. No trace of a night staircase was found in the south transept and there is no obvious day stair either. It may well be that because of the terracing of the site the dormitory was sited on the ground floor of the east range as at Kirkham Priory, or that a stair towards the south end of the east cloister alley was destroyed without being seen. That this eastern range was clearly of two storeys, however, is shown by a small circular turret stair, found at the east end of the slype. This seems too small to have functioned as the day or night stair. Traces of responds against the north wall suggest that the ground floor of the east range was vaulted.

THE CHURCH

The outline plan of the church can be established from the surviving walls, the Brock and Irvine plans, and the excavations following the construction of the bypass. These were largely limited to areas of the south transept, south choir aisle and part of the nave because the northern sections of the church, if they survive, still lie beneath the gardens of private houses It is immediately apparent that the church must have been extended eastwards several times with a lengthened presbytery and enlarged chapels added on the north and south sides. Enough evidence survives to chart this development and reconstruct the overall plan of the church with some certainty (Fig. 1). This shows progressive and piecemeal enlargement of the original building, a process that can be paralleled at other houses of canons such as Norton Priory.

The 12th-century church

In turn it is possible to extract and reconstruct the original plan of the 12th-century church that formed the core building (Fig. 2). In its original form the presbytery was aisleless and square-ended, marked out in three bays by wall responds for a high vault. The bays were demarcated by triple vault shafts standing on moulded bases, some of which have survived amongst the stone collection (Fig. 3). They have early Gothic base profiles with a polygonal sub-base and supported triple nib-keeled shafts. Several fragmentary capitals from these shafts have been identified and show a mixture of plain leaf designs, trumpet scallops and volutes. The leaf designs range from simple forms of pointed leaves to those of much more complex design with curled-over ends that form volutes and wide loops between them (Lowe *et al*. 1987, 113, pl. 21). Some of the foliage has an unusual ripple-like form. The scallop designs also show variations in form ranging from simple semicircular upright scallop faces to more abstract forms with double curves on the face. The volutes also vary from very plain rounded forms to more elaborately carved examples, notably they all seem to have projected forwards beyond the upper impost of the capital. Overall the impression these pieces give is one of considerable variety and though some capitals bear a family likeness that could be attributed to the hand

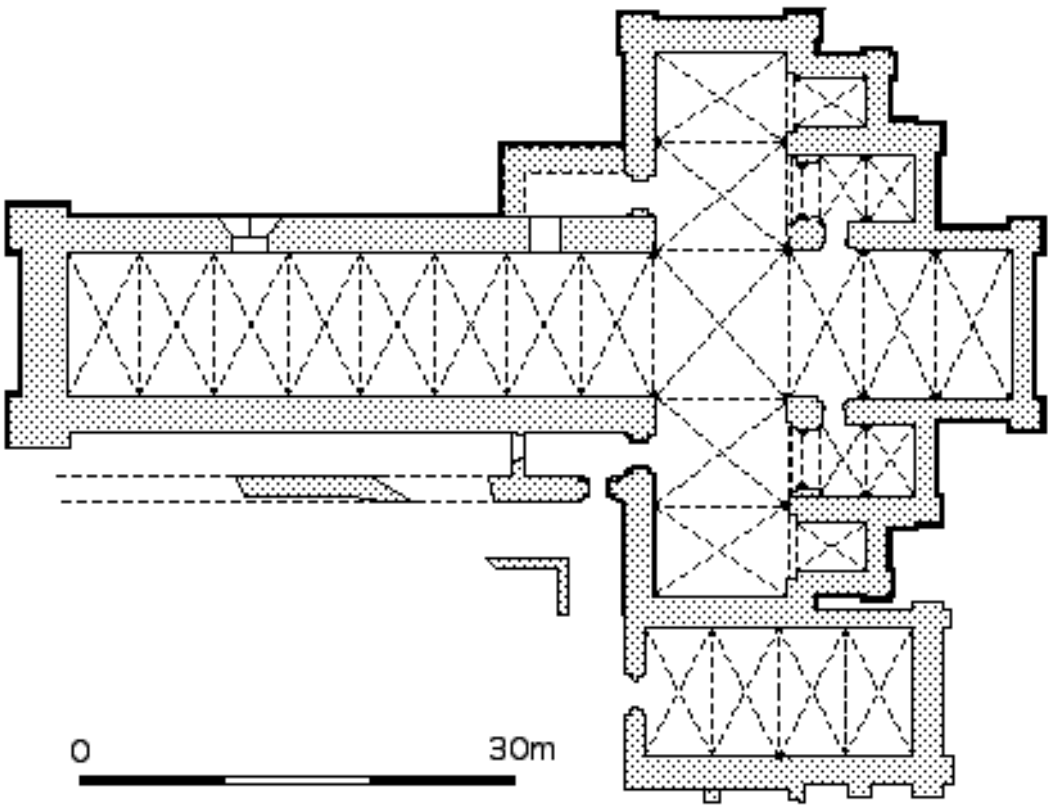

Fig. 2 Plan of 12th-century church

of the same carver, no two are identical. The top of each capital, like the bases, was of polygonally planned form that united the separate elements of the capitals together. The capitals were furnished with separate abaci and several examples of these have survived. They show a squared top edge over a small quirk with a quarter-hollow along the lower edge. Interestingly some have a quarter-roll returning at the side suggesting a step in the wall face or a shallow stringcourse linking each capital.

A second type of wall shaft has also been identified. It has a single nib-keeled shaft with a three-quarter hollow at each side. These hollows sink back beyond the line of the wall face and would give the effect of partially sinking the shaft into the wall (Fig. 4b). This is a typical motif of the West Country School and occurs at several sites within the region. Unfortunately we do not know where this particular type of shaft was employed in the buildings. In the corners of the chapels there were single nib-keeled shafts and some of these have survived loose; they have a squared tail block for tying them into the wall (Fig. 4a).

Numerous vault ribs have survived from the church and two of them were illustrated by Brock with the comment 'vaulting rib stones in great number' (Brock 1875, pl. 14) (Figs 5b and 5d). Presumably the ribs survived in great quantities because the first act of demolition would have been to fell the vaults so that walls could then be stripped of the higher quality ashlar. The ribs themselves were not that suitable for reuse due to their mouldings, though no doubt some were salvaged and re-dressed. The profiles show considerable variety. The first rib shows a pair of central rolls flanked by a hollow and a quarter roll at the side (Fig. 5a). The second has a central hollow flanked by a roll and small offset on each angle. At the side is another small hollow and a half-roll and quadrant hollow (Fig. 5b). This profile is the most complex and probably originated in the presbytery. The third type has a central deep hollow flanked by rolls with a side hollow and quarter roll

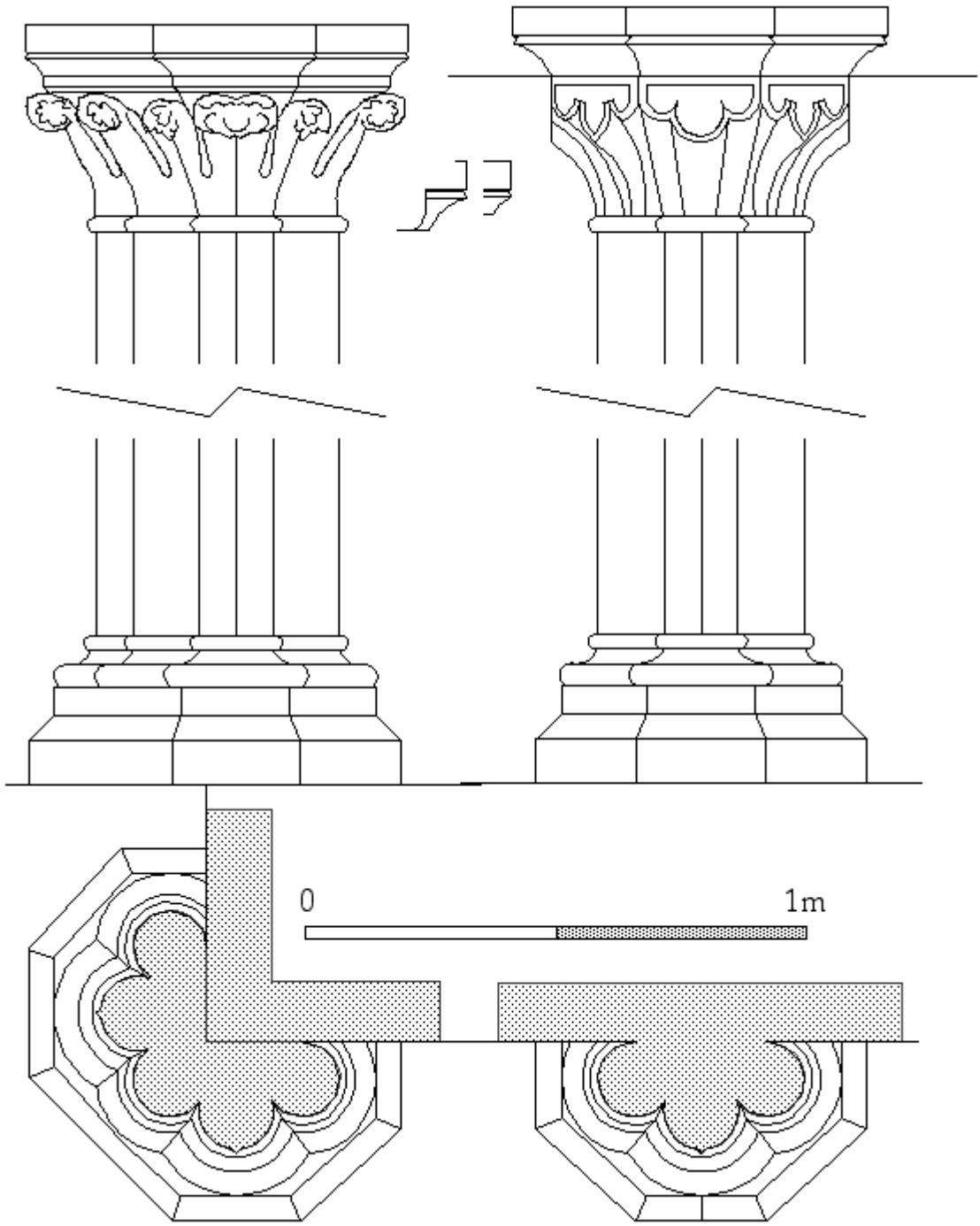

Fig. 3 Church bases, vault shafts and capitals

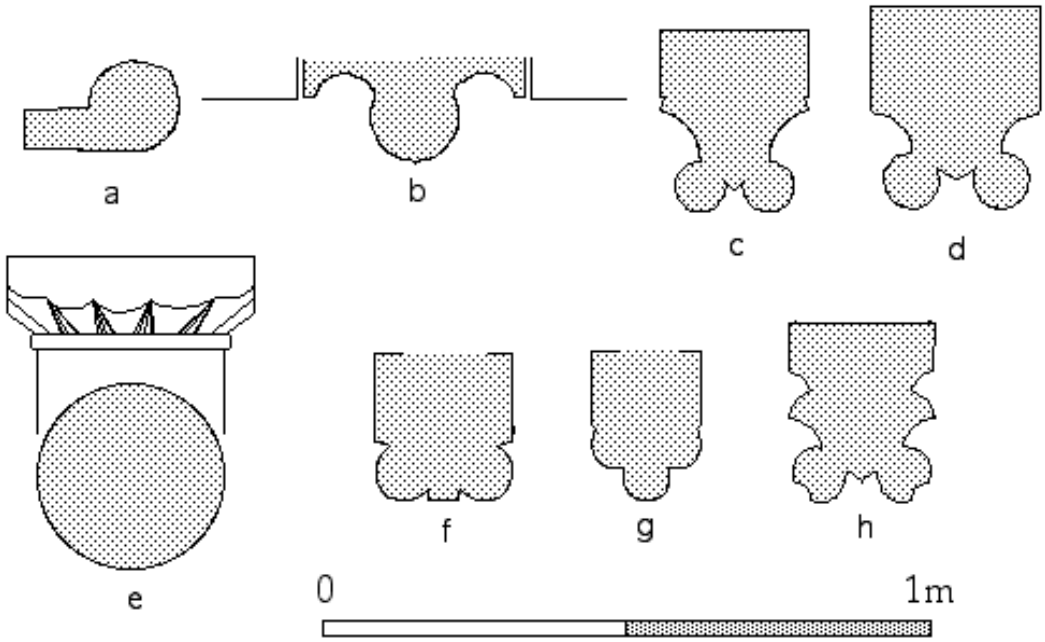

Fig. 4 Mouldings, including sunk wall shafts, keeled shafts, minor vault ribs and scallop capital on round shaft

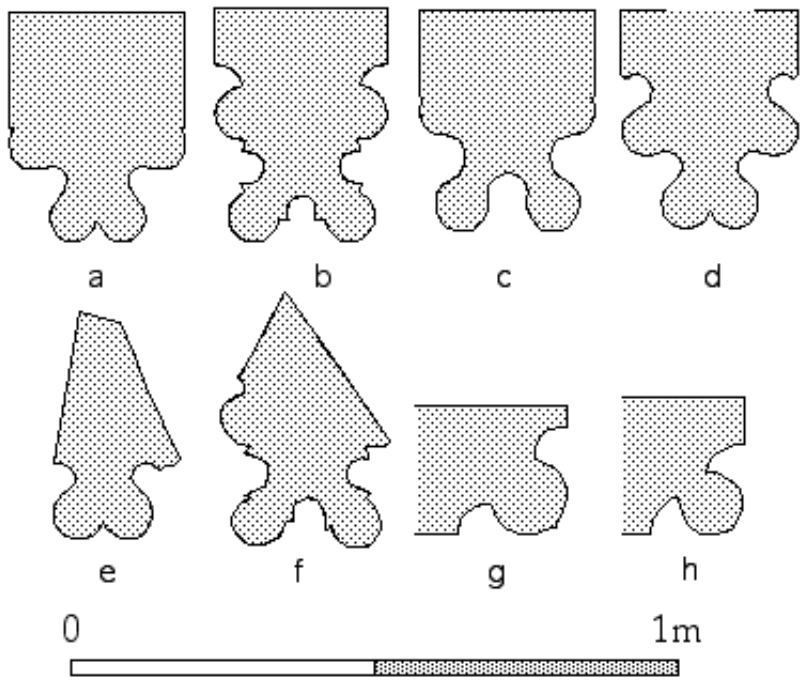

Fig. 5 Vault and wall ribs

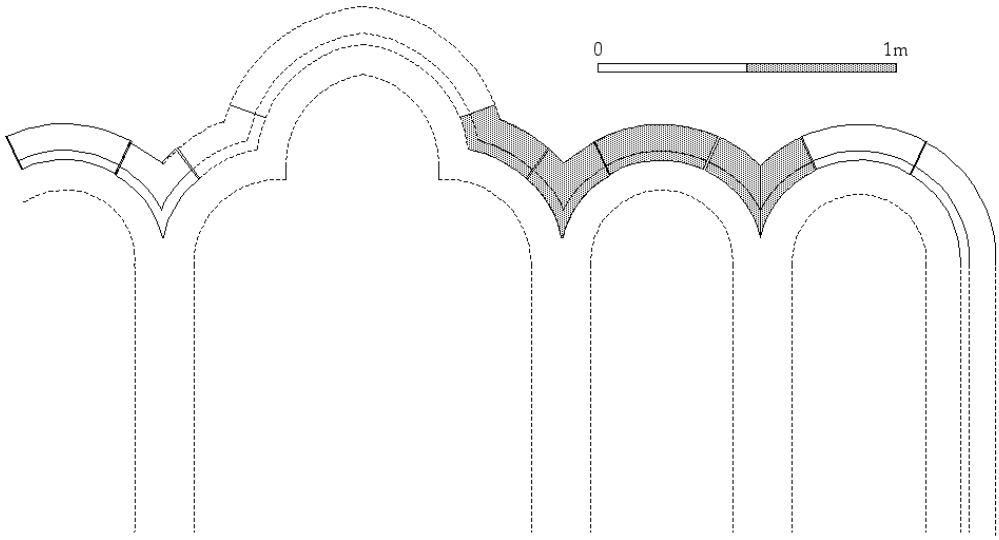

Fig. 6 Trefoiled rib

(Fig. 5c; Lowe *et al.* 1987, pl. 16b). In the recent excavations examples of this type of rib were discovered collapsed on the nave floor. A fourth type, also found in the nave, has paired central rolls with a side roll flanked by hollows (Fig. 5d). It is interesting that some examples show incomplete profiles because the blocks have been cut down diagonally at the side in order to fit them into place close to the vault springing point (Figs 5e and 5f). The similarities between 5a and 5d might suggest that 5a was a block that was set just above the springing point and therefore did not need to show the full profile; this would have developed into the full profile 5d higher up the rib. These details give an interesting insight into how the ribs were set upon the capitals and how the full profile gradually emerged as the cluster of three ribs rose in height and diverged from each other. It also suggests that single large vault springer blocks were not employed, or at least not to any great height. The vaults must have been furnished with wall ribs because numerous sections of a keeled moulding, of wide curvature, flanked by hollows have survived and these include a pointed keystone (Figs 5g and 5h). Notably several examples of the vault ribs and the wall ribs have small rectangular sockets cut along the extrados presumably to accommodate the vault centring for the webs. Some of the vault ribs retain faint traces of red lining along the sides. The keeled rolls may also represent the arch orders of the transept chapel entrance arches. Though no pier bases have survived in situ it seems likely that the transept chapel piers had quarter roll mouldings as an outer order framing inset single shafts, like those in the chapel corners, and carried keeled roll mouldings.

The Presbytery

The presbytery was flanked by two chapels in each transept of *en echelon* plan with each inner chapel being longer than the outer. This type of plan was common in the Romanesque period with arrangements of staggered apses but here was modified by abandoning the apsidal terminations and substituting squared eastern walls to each chapel instead. In the south transept it is still possible to see how the original east wall of the inner chapel has been removed during an extension to the building but its position is marked by the single keeled shaft base that stands in the original south-east corner (Fig. 7). Brock's plan shows a similar base in the inner chapel on the north side of the church (Brock 1875, pl. 14). These bases clearly supported shafts and show that the chapels must have been covered with ribbed vaults. The crossing is highly unusual because it had piers that were clusters of five shafts and it is notable that they are no larger in size than the presbytery vault wall shafts (Figs 2 and 3). Normally one would expect to find far more substantial crossing piers to carry crossing arches demarcating and defining the crossing area. Such crossing arches were normally provided to carry a tower but the

Fig. 7 Base in chapel corner

arrangement at Keynsham suggests that the crossing was not reinforced to carry a central tower and was simply closed with a ribbed vault (Wilson 1978, n.37). Using standard vault ribs in place of crossing arches would have the visually unifying effect of carrying the presbytery vault uninterrupted through the crossing to the nave and giving a similar effect transversely through the transepts and crossing. Several sections of one of the piers have survived and one of the crossing pier capitals has been identified and, though broken into three pieces, shows a leaf design with large forward projecting volutes and wide loops with deep recessing between the leaves. This latter element is one that forms a characteristic of the volute capitals from the church and chapter house (Lowe *et al*. 1987, 113, pl. 21).

The transepts

The transepts were two bays deep and must also have been covered by a high vault. Unusually they projected to north and south beyond the side walls of the outer chapels which were also covered by ribbed vaults. At the north end of the west wall of the south transept there are the remains of the jambs of an archway with the moulded bases of the responds in situ (Figs 2 and 8). The internal and external arrangements of bases and shafts are identical (Lowe *et al*. 1987, fig. 4). Each side has an external quadrant moulding on the outer angles, without a moulded base, with a recess in the jamb filled by nook shafts that have moulded bases. They are flanked by an inner order with another inner quadrant roll moulding, also without a moulded base. A small chamfered plinth runs around the base of the responds. Unusually on the external face the nook shaft bases and the coursed keeled shafts they supported vary in size and design, from one jamb to the other. The inner and outer orders must have been carried around the arch head without capitals in a typical West Country manner. The nook shafts must have supported capitals and an outer arch order. Two plain chalice capitals that would have fitted this arch have survived and, though they cannot be ascribed to it with certainty, help to visualise what the arrangement must have been like. The capitals probably supported an arch with a keeled roll moulding set between hollows and numerous voussoirs of this type have survived in two different sizes (Figs 5g and 5h). Besides their probable use in this doorway, as mentioned above, they may also have been employed in the transept arcades and as vault wall ribs. The whole archway can be reconstructed with some certainty and must have formed the principal entrance to the church from the claustral buildings.

Other important architectural detail recovered in excavation includes several sections of keeled arch moulding. Apart from their curvature they have the same profile as the sections of single keeled vault shafts (Fig. 4a) with the same squared tailblock for socketing them into the wall. There are two arch springers, one with equal arms at each side and another with arms of slightly different length and curvature that is clearly of handed design. There is also a complete voussoir and a section of foiled form where two sections of an arch join together. These arch sections might have been simply socketed into a plain wall face standing proud of the surrounding surface, but more likely were set into a squared recessed order. Such treatment of a roll set into a squared recess can be seen in the arch from the south transept into the nave south aisle at Malmesbury Abbey. The relatively tight curvatures shown on the voussoir and springers suggest a row of small arches of round-headed design. The voussoir can be assembled with the even-handed springer to give the outline of one of these arches. It seems likely that the handed springer assembled with the foiled section forming the lower section of a larger trefoiled arch. This tentative assessment of the fragments suggests some form of arcading with a mix of round-headed and trefoiled openings (Fig. 6) – perhaps either some form of triforium or clerestory arcade. That small trefoil-headed windows formed part of the buildings is clear from the survival of several window heads and it may be the case that they were combined in

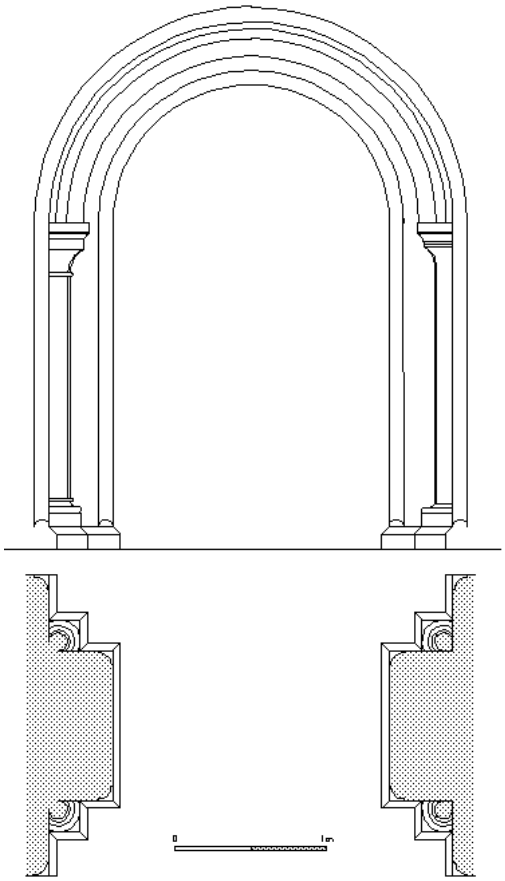

Fig. 8 South transept archway reconstruction

some form with this arcading. Continuous arcading forming the triforium stage of a great church can be seen in the transepts and nave of Wells Cathedral and give an impression of how the Keynsham arches may have appeared.

The nave

The nave appears to have been laid out to an unusual plan and because it has never been completely excavated its details are not fully understood. Like the presbytery it appears to have been aisleless and probably vaulted in eight bays. No trace of vault respond bases have been found but it is possible that the vault shafts may have been supported by corbels. The presence of a high vault is shown by collapsed vault ribs that were recovered in excavation and have been detailed above (Fig. 5). Part of the foundation of the west wall was uncovered during the excavations for the bypass and this shows that it was a thick wall, but with no surviving traces of a western doorway. The unusual thickness of this wall and large buttresses on the western angles might indicate that there was a western axial tower, like at West Malling Abbey or Lilleshall Abbey. The north-west corner angle was recorded in detail (Lowe *et al*. 1987, figs 11a, 11b) and showed broad pilasters on the angles with a sloping plinth returning along the north wall. The north wall footing, founded on bedrock, was a massive construction 1.67m (5'6") high and 3m (10') wide and the wall it supported was1.9m (6'6") wide

Though the nave essentially seems to have formed an aisleless design, without arcades, it was flanked on the south by what appears to have been an aisle-like structure (Fig. 2; Lowe *et al*. 1987, fig. 4). At the eastern end this had an arch into the south transept with a similar arch in its south wall forming the main doorway into the cloister. To the west there were traces of a cross wall, dividing the aisle to form a vestibule to the transept entrance. In its north-west corner there may have been a small laver or a pillar drain, because a plain stone base was discovered here that was provided with a lead pipe running to this point from the south-east (Lowe *et al*. 1987, fig. 4). The south wall was traced for a considerable distance towards the west with evidence for a series of cross walls with connecting doorways. These may possibly have formed vestries or additional chapels entered through doorways from the nave. This is a highly unusual feature and cannot be easily paralleled in terms of general monastic planning. That it was an original feature is clear because the design of the archway into the south transept had no door rebate or door, the provision of the vestibule was therefore intended from the first. The cloister doorway only partly survives with a base for an internal jamb shaft on the eastern side and a series of stepped chamfered plinths and a door rebate on the cloister face; it must have looked very similar to the archway into the transept.

On the north side of the nave, traces of what may be a similar aisle wall or possibly a projecting porch have recently been discovered, though not enough has been uncovered to establish its date of construction or relationship to the original building. With an aisleless nave it was usual to provide a passageway or small lean-to, like a truncated aisle at the east end to allow access from the nave into the north transept. Several examples and variations of this type of feature survive at Kirkham Priory, Norton Priory, Haverfordwest Priory, St Dogmael's Abbey and White Ladies Priory. We should therefore expect

such a feature to have existed at Keynsham. In the apparent absence of a western doorway it seems most likely that the main entrance was in this north wall, probably placed towards the west end as at Kirkham Priory. One voussoir recently recovered in this area shows a pair of filleted rolls separated by hollows and the stubs of deeply undercut dog-tooth that spanned between them (Fig. 14.l). It is clearly a soffit stone from an arch and may have formed part of a porch outer doorway. The deep undercutting of the dog-tooth suggests the arch was extremely ornate. The radius of the stone is also very large indicating that the arch was steeply pointed. There is considerable limewash remaining with a thicker part along the edge of the extrados on one side, where the next voussoir abutted the soffit and faint traces of red paint. The dissolution reference to 'the great door of the abbey church' suggests a main entrance of considerable size and possibly magnificence.

The nave screens

Traces of two stone screens were discovered crossing the nave (Lowe *et al*. 1987, fig. 7). The western screen survived at foundation level and extended northwards from the south nave wall. Only the southern half was excavated but sufficient was seen to indicate the position of a central doorway. The second screen is sited on the present boundary of the abbey site with an adjoining private garden. Like the western screen only the southern half was excavated. Traces of an altar base and platform were discovered against its west face. Unusually there are the jambs of a doorway at the south end, retaining a moulded base for a jamb-shaft at each side. Normally one would expect that two screens in this type of location would form the rood screen on the west and the *pulpitum* screen on the east but the position of the doorway in the eastern screen casts doubt on this identification. *Pulpitum* screens always have a single central doorway to accommodate the return choir stalls against the east face. The doorway at the south end of this screen cannot therefore be reconciled with choir stalls returning against the eastern side, unless it gave access to some form of laterally placed staircase in the thickness of the screen up to a loft. The thickness of the screen was 0.94m (3'1") and the doorway passed straight through it. On balance it may well be the case that the western screen formed some type of parclose screening for nave chapels and the eastern screen is in fact the rood screen. The details of the surviving door jamb bases in this screen indicate a 13th-century date for its construction and this may help to tie in the architectural debris discovered in this area.

The 13th-century syncopated screen

Parts of a 13th-century syncopated arcade that may have formed part of this screen were discovered scattered around the nave floor (Harrison 1997, 68–74). More fragments of this arcade were recovered from the gardens of the demolished Victorian villas, suggesting that the 19th-century excavations had also encroached into the area of the nave. When reconstructed the arcading shows two parallel rows of trefoiled arcading supported on moulded lias bases, shafts and capitals. The two rows of staggered arcading were linked by miniature ribbed vaults and closely resemble the cloister arcade at the Benedictine abbey of Mont St Michel in Normandy. The surviving wall of the screen stands around 0.6m (2') high and originally must have been considerably higher with the syncopated arcading standing on top. It would have formed an impressive feature of the building with its darkly polished bases, shafts and capitals contrasting with the painted arches. Some sections of stringcourse have recently been identified that may have formed part of the top of this arcade. They have the unusual feature of circular sockets on the vertical joints, possibly to provide seatings for an ironwork or timber cresting. Other sections of the arcade, including some of the springers have been cut away, possibly to accommodate the fittings of the rood.

The syncopated design of the arcade is a rare and unusual architectural feature. Until a few years ago the example at Mont St Michel was thought to be the sole survivor of a series of such cloister arcades known from documentary and pictorial sources to have existed at a number of abbeys in Normandy. Recently it has proved possible to identify similar cloister arcades at Monk Bretton Priory in Yorkshire and Tintern Abbey in Wales that has enlarged their known geographical distribution enormously. This third example at Keynsham, employed as a screen, enlarges it further, and, significantly, from the evidence of its mouldings, appears to be the earliest of the British examples and suggests it is a near contemporary of the Mont St Michel cloister arcade. This raises questions of the initial source of the syncopated arcade design, when it was first used and how the design was disseminated in France and Britain. Unfortunately the research into these aspects is still in its infancy, much more needs to be done particularly in trying to trace, reconstruct and date

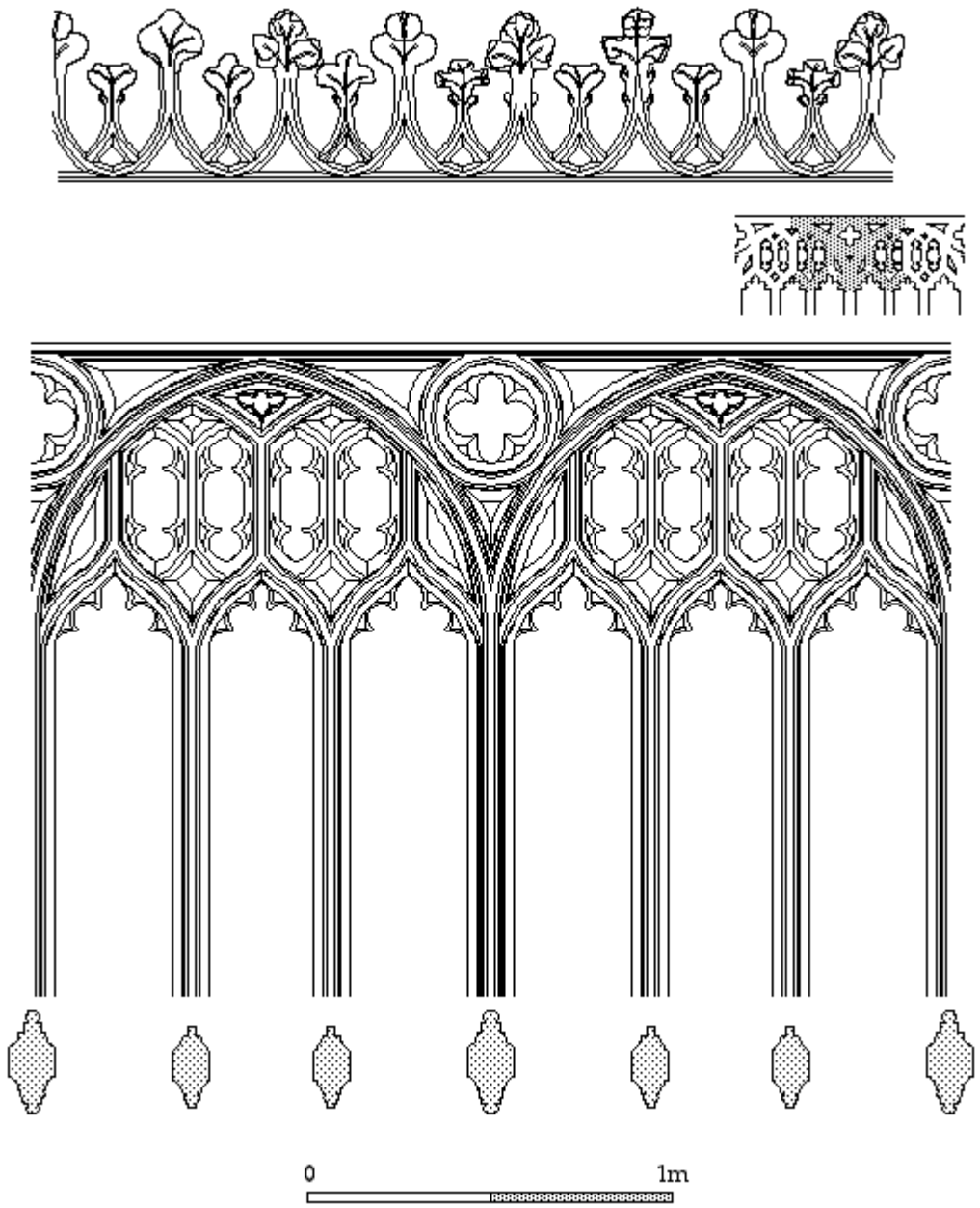

Fig. 9 Nave tracery screen and cresting

the other known French examples; presumably other British examples also await discovery.

The 15th-century tracery screen

Considerable pieces from a later tracery screen and many sections of a stone cresting were also discovered, probably of late 14th or early 15th-century date (Fig. 9; Lowe *et al.* 1987, pl. 47–8). This may have formed the superstructure of the western screen. The tracery was arranged in panels of three lights forming individual bays. The mullions

were of two sizes – minor ones for the sub-lights and major ones marking each bay division. The major mullions had a central angled roll flanked by a half-filleted roll and a hollow at the front. At the rear there was another angled central roll flanked by a squared offset and hollow. These were carried up into the main arch that framed the lesser tracery. The minor mullions had a filleted central roll flanked by hollows and to the rear a squared fillet. Each main light had a cinquefoil cusped head that was ogee-shaped to support a mullion above. The head of the tracery was subdivided into four main lights and minor sub-lights against the main arch head at each side. The dividing mullions had upper and lower side cusps with small openings in the spandrels at the top and bottom. The central mullion supported a Y-shaped division with a quatrefoil-cusped piercing at the arch apex. Between each three-light arch the spandrel was set with a circle pierced by a cusped quatrefoil. A horizontal moulding framed the tracery at the top and may have supported a cornice and cresting. No bases have survived and the remains were discovered collapsed on the nave floor. Presumably the surviving tracery was discarded because it was unsuitable for reuse as building stone and had become buried in demolition debris and the base wall, and lost supporting elements were robbed away because they could be more easily reused.

The screen cresting

Numerous sections of a screen cresting were also discovered in the nave (Fig. 9). These have a base of small intersecting inverted arches that supported trilobed foliate finials. The arches are simply chamfered and it appears that the finials alternated with smaller ones set low down and larger ones rising higher and framing them. Many examples of these finials survive and show a variety of foliate detail ranging from some that are quite finely carved to relatively crudely produced pieces. The cresting can be related in form to that on a timber screen in Keynsham parish church. This was the former rood screen of the parish church and is now set at the eastern end of the south aisle. Because it is a timber screen it is more complex in design and detail than the stone example but shows the same type of alternating major and minor finials. The cresting from the abbey is most likely to have been set on top of the tracery screen though it might be expected that there would have been a cornice placed between the two.

THE EVIDENCE OF ARCHITECTURAL FEATURES AND FITTINGS

The 12th-century windows

Evidence for the types of windows used in the building were discovered in the nave and south transept chapel areas (Fig. 10a). These comprise two identical stones that must have formed the central division between paired windows with chamfered splays at each side and glazing rebates. Another identical stone, from the Victorian excavations, retains some fine red masonry lining, confirming Brock's comments that 'traces of red colouring were very apparent on the walls' (Brock 1875, 203). This evidence shows that the church was painted with a false masonry pattern over limewash, that did not follow the real stone jointing. The red painted lines on the surviving stone indicates that the glazing rebates were set towards the exterior of the building. The fact that these stones were discovered in different parts of the building suggests that there was a coherent scheme of window design that was repeated throughout the structure. One would normally expect that each bay would have a single round-headed or lancet window but this evidence suggests that the windows were more complex and most likely comprised paired or triple windows, set into a single arched recess in each bay. These window divisions can be tentatively linked to a half window head that has a trefoiled outline and assembled to give an indication of a possible window arrangement (Fig. 10a).

Only a few fragments remain of external window jambs that show a plain chamfer and rebates for glazing frames and a short section of straight jamb with another chamfer. One voussoir of this type shows that the window from which it originated was quite small the glazed aperture being only 0.71m (2'4") wide (Fig. 10b). A second voussoir with the same basic arrangement came from a larger window, which, if round-headed, had an aperture 1.35m (4'5")wide (Fig. 10c). As these sections of windows seem to have been discovered by the Victorian excavators we cannot now tell where they were found. Such chamfered window designs formed the standard pattern in the 12th and 13th centuries and these examples give an indication of what some of the main windows at Keynsham must have looked like.

Small windows

Evidence for smaller windows such as might be used to light a stair turret was identified (Fig. 11). A near

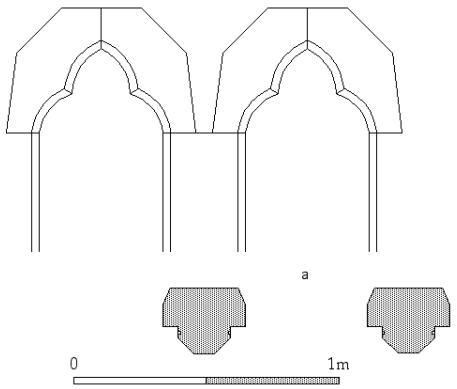

Fig. 10a Twelfth-century window

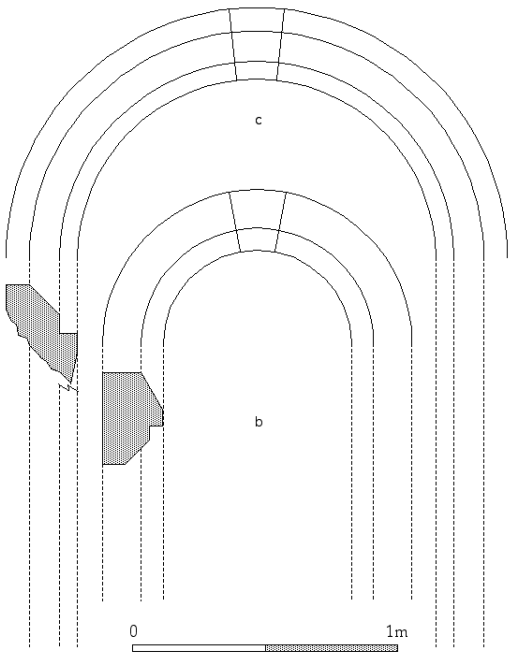

Fig 10b Two further 12th-century windows

complete sill shows internal and external chamfers and a glazing rebate, the chamfer being continued on the sill base (Fig. 11b). The aperture was only 0.21m (8.25") wide and shows that the window must have been of loop design. The arch head from another one of these windows also survives. Cut from a single stone as a monolithic head it has similar internal and external chamfers and a glazing rebate (Fig. 11a). It is smaller than the sill stone having an aperture of 145mm (5.7"). The inner arch head curvature is

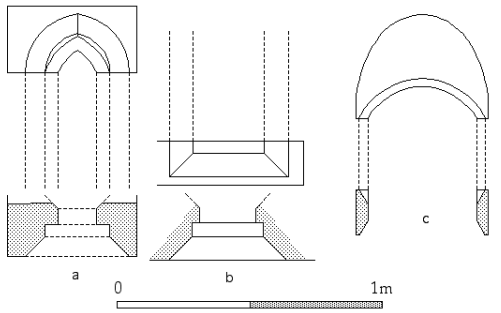

Fig. 11 Loop windows and Saxon window

slightly segmental and of lancet design but this was corrected on the main chamfer. A single segmental-headed loop window has also survived. This is unusual in that the extrados of the stone is curved and there are no glazing rebates only a chamfer on the reveal (Fig. 11c). The window might possibly be of late-Saxon origin and therefore possibly pre-Conquest in date but it is difficult to be sure. Such loop windows were predominately used to light stair turrets in churches and other buildings – at Keynsham turret stairs might have been employed in the east range. No trace of any turret stairs have been found in the church at Keynsham but at least one must have certainly existed to allow access to the main roof spaces.

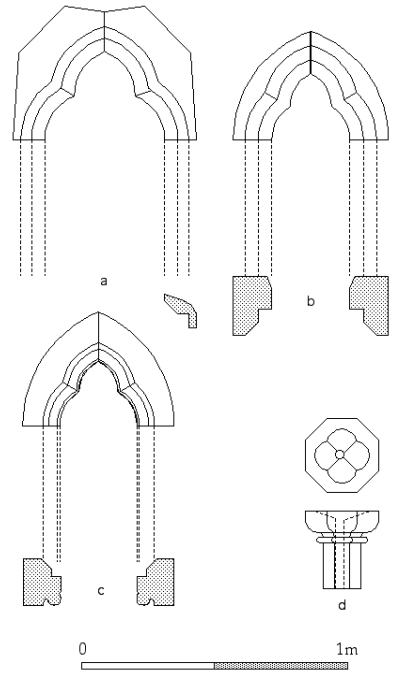

Fig. 12 Trefoil-headed windows, pillar piscina

Trefoil-headed windows

Three examples of small windows with trefoiled heads (Fig. 12; see also the example in Fig. 10a) show a variation on the monolithic type of window head construction technique. Loop windows were small enough for the arch head to be cut from a single stone but in these examples, because the windows were larger, two stones that were butted together at the arch apex were used to form the arch head. The largest example has an aperture 0.45m (1'5.7") wide and only one face has survived showing a rebate and chamfer. The position of the rebate on the face of the stone suggests that it held a shutter rather than glazing. The second example shows a chamfer, a rebate and a smaller, shallower angled chamfer. The third is more complex with a small hollow flanking a filleted roll on one side and a rebate and chamfer on the other. It is not obvious which face formed the outside or inside of the windows because glazing rebates in the 12th and 13th centuries could be placed on either side. If they held shutters it is likely the rebates faced towards the interior of the building. These examples all originated in the Victorian excavations but the example shown in Figure 10 was found in the church. So it is possible these examples had a similar origin, though such small windows, often provided with shutters, were frequently used to light monastic dormitories or latrine blocks.

Pillar piscina

Amongst the collection of stones is a pillar piscina (Fig. 12d) that must have stood beside one of the altars in the church. The most common surviving type of piscina is that enclosed within an arched recess flanking the south side of an altar. Initially these took the form of a shallow bowl-shaped hollow with a small drain at the bottom that was cut into the shelf of the recess. Later versions of the same design were often set into the floor beside the altar when there was no suitable flanking wall in which to place a recess. It is generally thought that they were used for pouring out a small amount of wine from the cruets to ensure the spouts were clear and for cleansing the vessels following the mass. An alternative type was the pillar design that often took the form of a small freestanding column with moulded base, shaft and capital with the same bowl-shaped drain set into the top. In this example the base and lower part of the shaft have been lost but the upper part shows a short length of octagonal shaft with a roll moulding at the top. Above this the bowl widens and flares out with a smooth curvature. The top is flat with a shallow dishing for the drain carved in the shape of a four-lobed foil. The drain hole is set slightly off centre and is cut through the shaft to the bottom of the stone.

Moulded door jamb

A door jamb base that had a single detached shaft on the angle (Fig. 13a), has a circular sinking in order to locate the shaft in position. The shaft was flanked on each side by a small roll moulding and two hollows. The base profile has a large lower roll surmounted by two quarter rolls. There is no hollow sinking between them and this indicates a post-waterholding 13th-century date. The sub-base is cut to follow the curve of the base moulding on the corner. The splayed angle on the corner indicates the base was set on the internal side of a doorway or window. The base is unusual in being cut from Lias and was presumably darkly polished to give a polychrome effect. The use of false marble of fossiliferous limestone became popular in the 12th century and reached a peak in the 13th century. In the West Country much use was made of the local Lias that was lighter grey-blue in colour than the more prolifically used Purbeck from Dorset. At Keynsham it was used for this base and probably the capital and shaft it supported. As mentioned above it was also used for the bases, shafts and capitals of the syncopated nave screen and for some mullions.

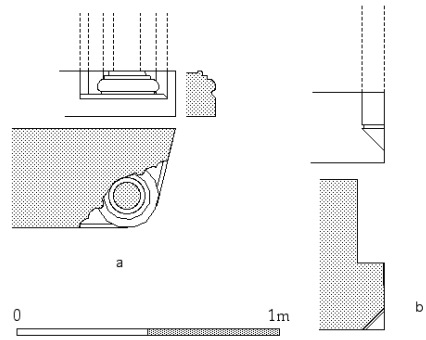

Fig. 13 Moulded door base, chamfered door base

Chamfered door jamb

A simply chamfered door base jamb was found with a stop at the bottom of the chamfer and an internal

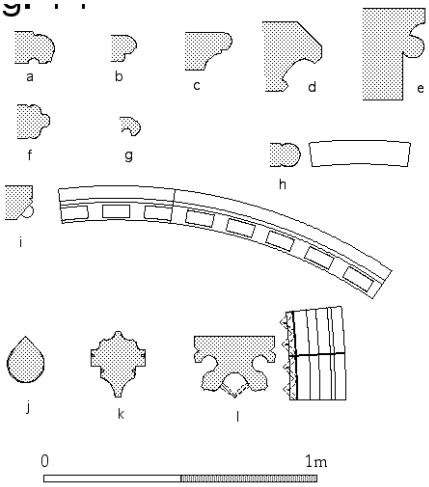

Fig. 14 Stringcourse mouldings, billet hoodmould, tear-drop shaft, added lias mullion and dog-tooth voussoir

rebate and squared reveal (Fig. 13b). The base stop has a small horizontal roll set across the junction of the chamfer and base splay. Considerable sections of the jambs of this relatively plain doorway survive, though it is not known where it was originally located. It may be representative of the simpler designs of doorways within the monastic complex.

Stringcourses and hoodmoulds

A number of sections of stringcourse have survived and these vary in design (Fig. 14). The simplest type features a single roll 90mm (3.5") in diameter and can be linked to two sections of identically moulded curved hoodmould (Fig. 14h). It may be the case that some of the window hoodmoulds were linked by a stringcourse. One of the hoodmoulds is weathered on the upper side, possibly suggesting external usage. The second stringcourse has a filleted roll with a hollow on the underside. The fillet is set towards the bottom of the upper roll which overhangs it (Fig. 14a). The upper side is also weathered suggesting external usage. A third stringcourse is much later in date, probably 14th century. It has a roll at the top with a small vertical step below it and a large quarter hollow beneath (Fig. 14c). Though only slight evidence for the form of the original windows survives there are several sections of hoodmould that may be related to them. These show a hood with a chamfer on the underside that is decorated with billets and a diameter of around 3.3m (11') which suggests that they may have formed the hoodmoulds to some of the transept arches in the church (Fig. 14i). One surviving section, found in the excavation of the south transept, shows considerable areas of limewash.

Tear-drop shaft

Detached shafts of various sizes have survived and the majority are of the usual round section. One small section of a shaft 135mm in diameter, however, has a tear-drop shape with a squared rear section (Fig. 14j). In the 12th century shafts like these were designed to fit into a corner position hence the squared tail section. This example may have come from a doorway or acted as a nook shaft on a window.

The cross base

Brock illustrated a large cross base of 13th-century date but did not say where it had been found (Fig. 15; Brock 1875, pl.14). Fortunately it has survived and though worn from weathering sufficient detail remains to show what it was like when newly made. It is square in plan with a large central socket for the cross shaft that had a small circular shaft on each corner. The base is moulded with a lower roll and a sweeping upper hollow and smaller upper roll. Around the sides are crockets, now badly worn but which originally had bulbous trilobed stiff leaves with prominent stems. They stand up from the lower base roll and three are set around each corner base and one in the middle of each side. The lower part

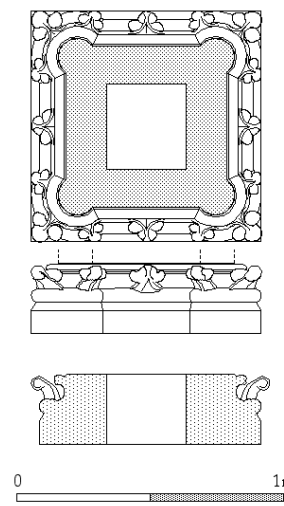

Fig. 15 Cross base

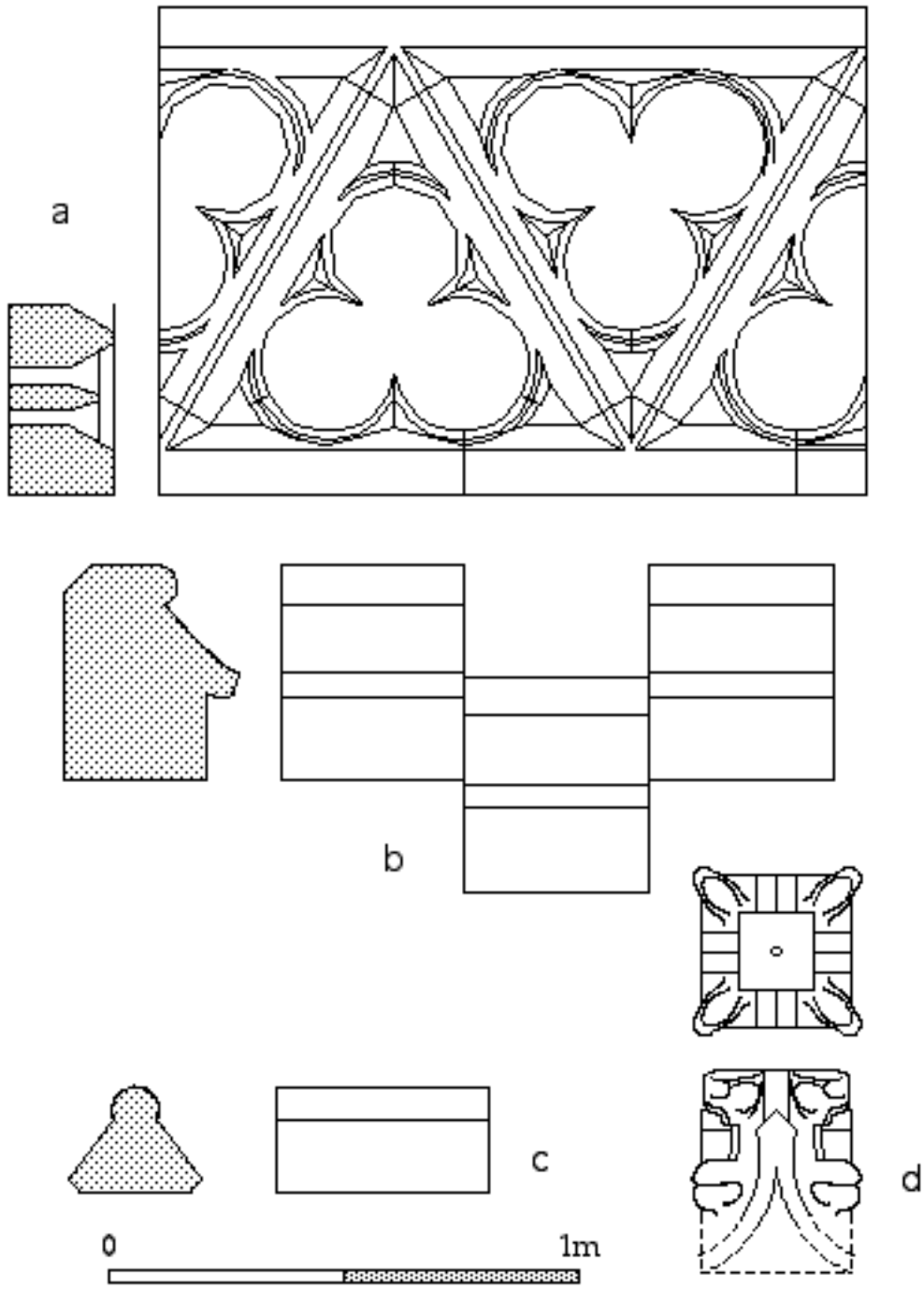

Fig. 16 Parapet copings, tracery parapet and pinnacle

of the base is simply squared and this suggests it was sunk into the ground. This base probably stood on a plinth and supported a very large churchyard cross, possibly set to the north of the nave of the church. The base and part of the shaft of a similar but smaller cross of early 13th-century date remains in such a position at Lanercost Priory in Cumbria (Summerson and Harrison 2000, 141–3).

THE EXTERNAL APPEARANCE OF THE CHURCH

The buildings were constructed of coursed dressed rubble with very fine ashlar dressings on the plinths, buttresses and angles. Traces of external render observed in the excavations shows that the rubble stone was plastered over and probably limewashed. Externally the walls of the building had a steeply sloping ashlar plinth at the base with a small lower chamfered plinth. There were pilaster buttresses on all the main corner angles and a section of this plinth is still visible on the walls of the south transept chapels. We cannot tell if the nave walls were buttressed because the south wall was largely robbed away and the north wall remains inaccessible. On the south side the flanking aisle-like structure with its cross wall subdivisions would have provided some abutment to the nave south wall. The details of the north wall are as yet unknown, though, as suggested above, there may have been a substantial porch and doorway. At Monkton Priory and Wigmore Abbey, where the naves were completed with vaults, there is a noticeable lack of buttresses. Presumably the exterior was articulated by stringcourses, probably linking and outlining the window heads.

Parapet copings

Other details of external features have also been recognised, including later embellishments to the buildings. These include sections of copings, probably from parapets around the church (Fig. 16). They include a section with an overhanging base roll that sweeps up in a hollowed curve to an upper half roll (Fig. 16b). The top is flat but there is a chamfer on the rear. This type of coping was usually employed in a battlemented parapet. Another coping is triangular in section with a 100mm diameter roll set along the top and at each side there is a small 30mm chamfer on the bottom (Fig. 16c). The most complete and architecturally distinguished parapet shows an arrangement of openwork tracery composed of pierced cusped trefoils (Fig. 16a). The tracery bars are angled at 45º and the trefoils alternate in alignment to fill the equilateral triangles they create. The bars are simply chamfered and the trefoils are formed with a sunk cusp along the centre of each tracery bar and top or bottom sill, and delicate chamfered pierced roundels in the corners. The design probably dates to the 14th century and must have looked very elegant. What it looked like in situ can be gauged from the nearest comparable example – the parapet to the 17th-century tower of Keynsham parish church (Fig. 17). It has similar trefoils but the design is not quite identical and raises the question of whether it was directly inspired by the parapet from the abbey. Rebuilt after the collapse of an earlier tower in 1631 the church tower is known to have reused materials from the abbey. It may be that either the design was copied in a slightly simplified manner from a surviving parapet at the abbey, or that it was part of another similar parapet at the abbey that was dismantled and reused. These details help to fill out the external picture of the abbey church in the 14th and 15th centuries when the chapels were extended, eaves were probably remodelled and parapets of varying design introduced. These would have substantially altered the outline of the building and modernised its appearance.

Fig. 17 Keynsham parish church tower parapet

The pinnacle

A very damaged section of a small 14th-century pinnacle shows a square plan with the apex of a blind

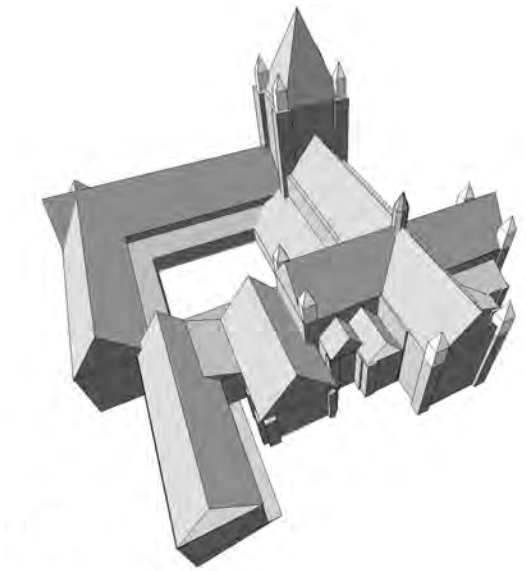

Fig. 18 Perspective reconstruction of the 12th-century church

ogee arch on each side face (Fig. 16d). Diagonally set on the bottom of each corner is a projecting leaf-decorated crocket with a ridge rising to another crocket set at the top. The upper bed has a socket for an iron pin 20mm in diameter, to securely locate the lost upper finial. This design is typical of pinnacles with projecting crockets used from the 14th century. It is probably likely that this piece may have formed only the upper section of a much larger pinnacle. There is also the possibility that the corner pinnacles of Keynsham parish church tower are reused from the abbey.

THE MASSING OF THE 12TH-CENTURY CHURCH

The recovery of the main details of the original plan allow the massing of the church to be reconstructed with some confidence (Fig. 18). Some details such as whether the transept chapels had single sloping roofs or individual gabled roofs to each chapel cannot be determined. Both types have been depicted in the reconstruction drawing. By the standards of Augustinian churches, Keynsham was a large building, around 70m (230') long overall and 42m (138') across the transepts and was much larger than the aisleless Cistercian abbey churches at Tintern and Waverley. With the destruction of so many monastic churches, particularly those of the canons, it is difficult to determine the distribution of churches that were fully vaulted in stone. In the 11th century they seem to have been the exception rather than the rule; even in major abbey or cathedral churches it was often the case that only the presbytery and transept chapels were covered with vaulting. This was also the case in smaller monasteries where the spans to vault were considerably smaller as at Leonard Stanley, Ewenny Priory or Lilleshall Abbey. In the later 12th century high vaulting became more common, particularly in the west country in the new great churches at Glastonbury and Wells for instance and at smaller monastic establishments such as Abbey Dore and Llanthony Priory that were fully vaulted in a mixture of stone and timber. In a Victorine context Wigmore Abbey seems to have been a similar size to Keynsham and notably was also completed with high vaults and an aisleless nave. There is now little more than the south nave wall and part of the south transept to be seen at Wigmore but the surviving loose architectural detail and excavations undertaken by Harold Brakspear add considerably to the picture (Brakspear 1933, 32–5). Much of the interior of the building remains deeply buried in collapsed debris but the remains of the nave south wall, allowing for the depth of debris filling the interior, show that it was a relatively low structure. The outline of the high nave vaults and their robbed-out vault shafts remain and indicate that the high vault was a primary feature. The lowness of the building and the presence of the cloister roof meant there were no windows in the south nave wall. The remaining short section of the north wall suggest that it was also devoid of windows so the effect must have been that of a long low tunnel with windows confined to either end. Brakspear showed that the vault shafts were triple clusters of nib-keeled shafts standing on moulded bases that are similar to those at Keynsham (Brakspear 1933, 34). Fragments of these remain amongst the loose stone and built into the garden summer-house. At Keynsham it seems that there must have been some windows in the nave walls though these may have been restricted to the north wall because of the presence of abutting roofs on the south side. Some of the other ex situ architectural detailing at Wigmore shows similarities with that at Keynsham, particularly the use of strapwork with pellets on some reused stones built into the porch on the south side of the house (Wilson 1978, 86).

SUBSEQUENT ENLARGEMENTS OF THE CHURCH

In the typical fashion of the 14th and 15th centuries when there was a general trend towards adding chapel space the original church was considerably enlarged (Fig. 19). There was a substantial extension of the presbytery, though its full extent has never been established. Both inner transept chapels were also extended eastwards and on the north side there was also an extension of the outer chapel, thought to have later formed the chantry chapel of Jasper Tudor. The surviving details suggest these enlargements were not all undertaken in a single campaign but were piecemeal adaptions to the original fabric. In the transept inner chapels the original eastern walls appear to have been demolished and replaced by wide-arched openings. The original chapels then perhaps formed vestibules to the extensions. The north wall of the north transept inner chapel was extended eastwards to form the new chapel, and this was uncovered by the Victorian

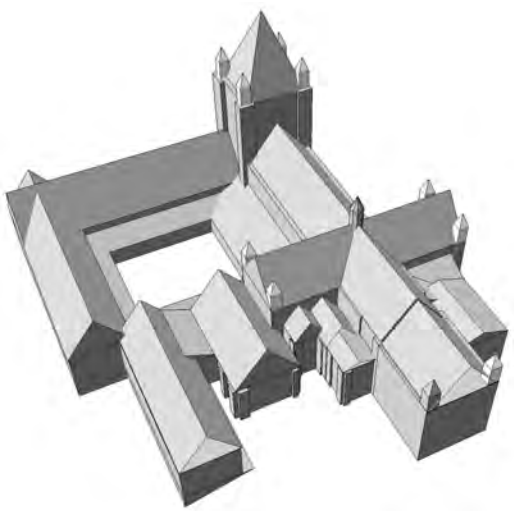

Fig. 19 Perspective reconstruction of enlarged church

builders. Brock's plan shows the jambs of a doorway in this wall and on its north side a respond base for a triple vault shaft, clearly showing that the outer transept chapel had also been extended (Brock 1875, pl. 13–14). Evidently this doorway was provided to allow access between the two chapels and the vault shaft suggests that the extended chapels, or at least the northern example, were also vaulted in stone. A foliate vault boss and vault ribs of 14th-century date have survived in the stone collection (Fig. 21h,i,j). The boss has angled ribs meeting it at each side suggesting that it was a minor boss and that the vault it formed part of had a complex pattern of intersecting ribs. Presumably it originated in one of these chapel extensions. Probably also originating from this area is a voussoir and apex joint stone from a narrow pointed lancet arch. Devoid of glazing provision it has moulded jambs with very wide rolls that feature wide fillets with a smaller roll on the outer angle (Fig. 21k).

It appears that the section of wall dividing the northern chapels was removed by the Victorian builders and its component parts distributed in the gardens of the new houses, because the doorway jamb base and a section of the jamb shaft have survived amongst the material recovered from the gardens. There is also the triple base for the vaulting shaft shown in Brock's drawings. The details of these pieces suggest a 14th-century date for the new chapel extension. The doorway base (Fig. 20a) has a pair of shafts separated by a hollow and small offsets, a second hollow flanks the other side of the inner shaft. They have tiered polygonal sub-bases with a hollowed stepping and a shallow base moulding typical of the earlier 14th century. At one side there is a squared projection around which the lower sub-base is continued and a simple chamfer on the other side. The vault shaft base (Fig. 20b) is similar with three shafts supported on a tiered polygonal sub-base that Brock shows standing on a wall bench (Brock 1875, pl.14). Besides the doorway base and the triple shaft base, a third base from a corner position and a section of the triple shafts it supported, was discovered in the bypass excavations. It shows a very similar tiered profile with a group of three smaller shafts set into the corner. The sub-base is angled to turn through 90º and chamfered back to follow the outline of the three shafts (Fig. 20c; Lowe *et al.*1987, pl. 45).

When the east wall of the inner chapel was removed to extend it eastwards, an arch supported by substantial responds was constructed across the aisle. The lower part of the south respond survives in situ in a private garden and shows a tall plain sub-base surmounted by tall narrow bases. These support a series of small hollows and rolls with offsets that make up the main core of the respond. The whole is visually complex and it seems likely that the two main angled faces of the respond were covered with Perpendicular-style tracery panelling that may have continued into the arch itself (Brock 1875, pl. 14). The details suggest a date later than

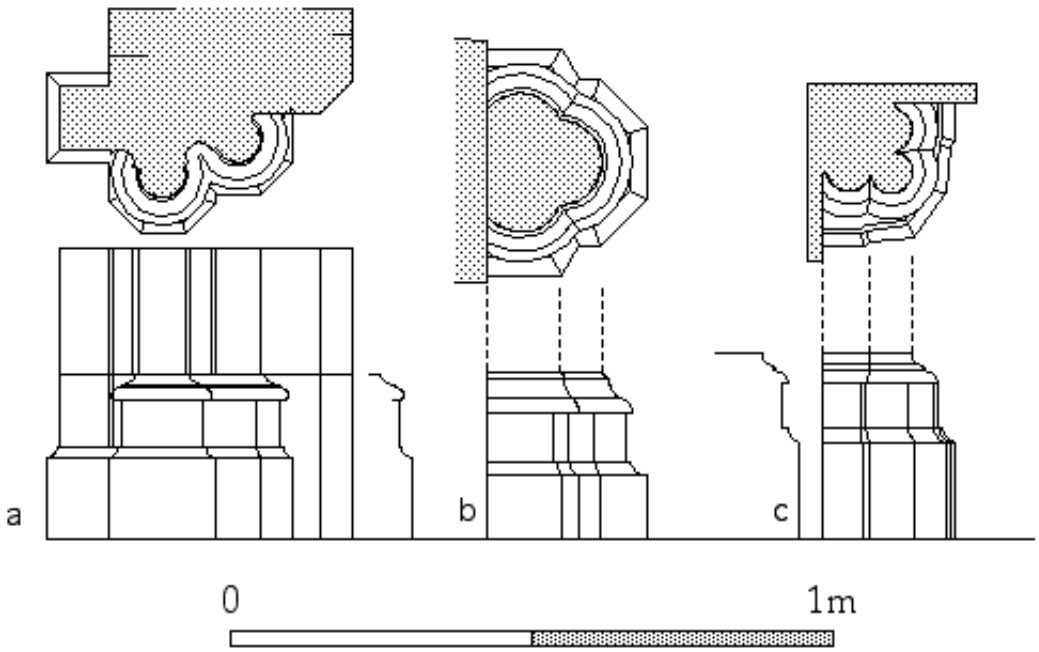

Fig. 20 Fourteenth-century door and vault shaft bases

the 14th century and this may indicate that the arch was inserted to open out the transept inner chapel to the existing 14th-century extension sometime in the 15th century, possibly in connection with the chantry of Jasper Tudor. Brock indicates that immediately to the east of the respond there was a vault within the thickness of the presbytery north wall. Only buried backfilled remains of this now survive, but it seems most likely that the wall had been cut through for the construction of an arched canopy tomb that would have been visible from both the north chapel and the presbytery.

The window tracery

GEOMETRIC

The evidence suggests that the church was extended in several campaigns which may have included the enlargement of some of the existing windows and the introduction of window tracery. Numerous sections of tracery have survived, the majority having been recovered from the gardens of the Victorian villas. The bulk of these have now been sorted and analysed. They show considerable variety in type and date and add greatly to our knowledge of the abbey buildings. One large fragment of tracery shows the central springer for a two-light tracery window. The lower part has the springing for a single pointed arch at each side with trefoil-cusping on the soffit and a small pierced triangle in the spandrel between the springings. The profile of the mullion and arch mouldings shows a central filleted roll flanked by hollows. There are precisely cut, squared glazing grooves at each side and the rear face is deeply chamfered at each side. The cusps have shallow sinkings that are not large or deep enough to pierce the stone. Above the springer sections is part of a roundel with two cusps. It is of large diameter and when projected to full circle shows that there must have been twelve cusps set around the internal rim. Such a large roundel is unusual because it is virtually impossible to combine it with others to make a satisfactory tracery pattern for a large multiple-light window. It is therefore unlikely that the window was any larger than two lights. Generating a reconstruction based on this premise shows that the roundel is as wide as the two lights below it and can be framed satisfactorily within a pointed arch (Fig. 22). A very similar window, where the roundel also completely fills the head of a twin-light window can be seen in Northfleet church in Kent. This geometrical design must date to the second half of the 13th century, and though without provenance is

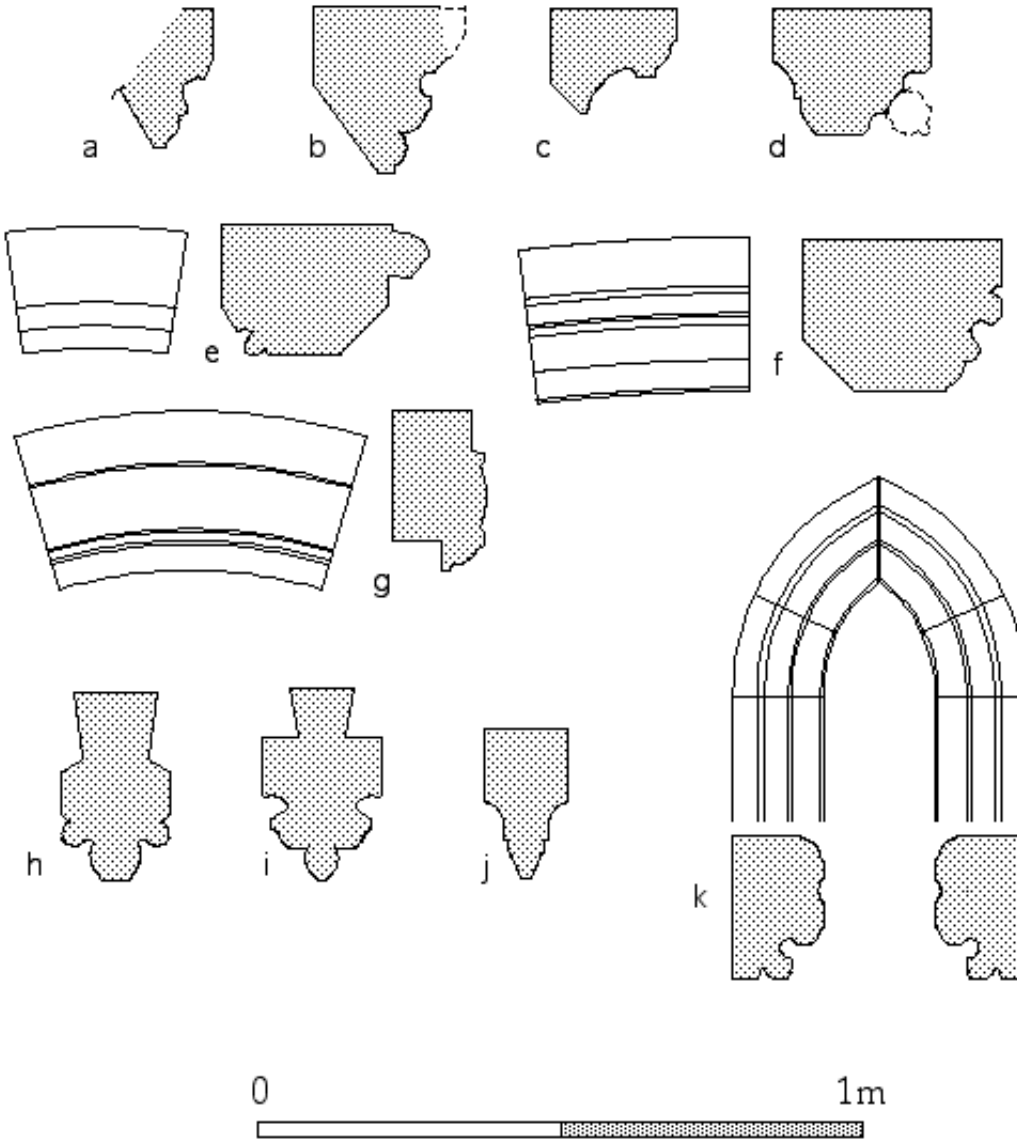

Fig. 21 Rerearches and 14th-century vault ribs

most likely to have originated in the church. It forms the earliest type of surviving bar tracery and only identifiable section of geometric 13th-century window tracery from the abbey.

Segmental-headed Window

A second group of tracery survives in more complete form and can be reassembled to reconstruct a three-light window. Internally and externally the mullion and window mouldings show a broad roll with a central fillet that is flanked by chamfers. At each side there is a well-cut glazing groove. Two types of springer survive. The first is from the edge of the window and shows a shallow, curving, outer rim with a single cusp that has shallow sinkings. The second was supported by a mullion and has a straight vertical section at one side and the springing for a cusped

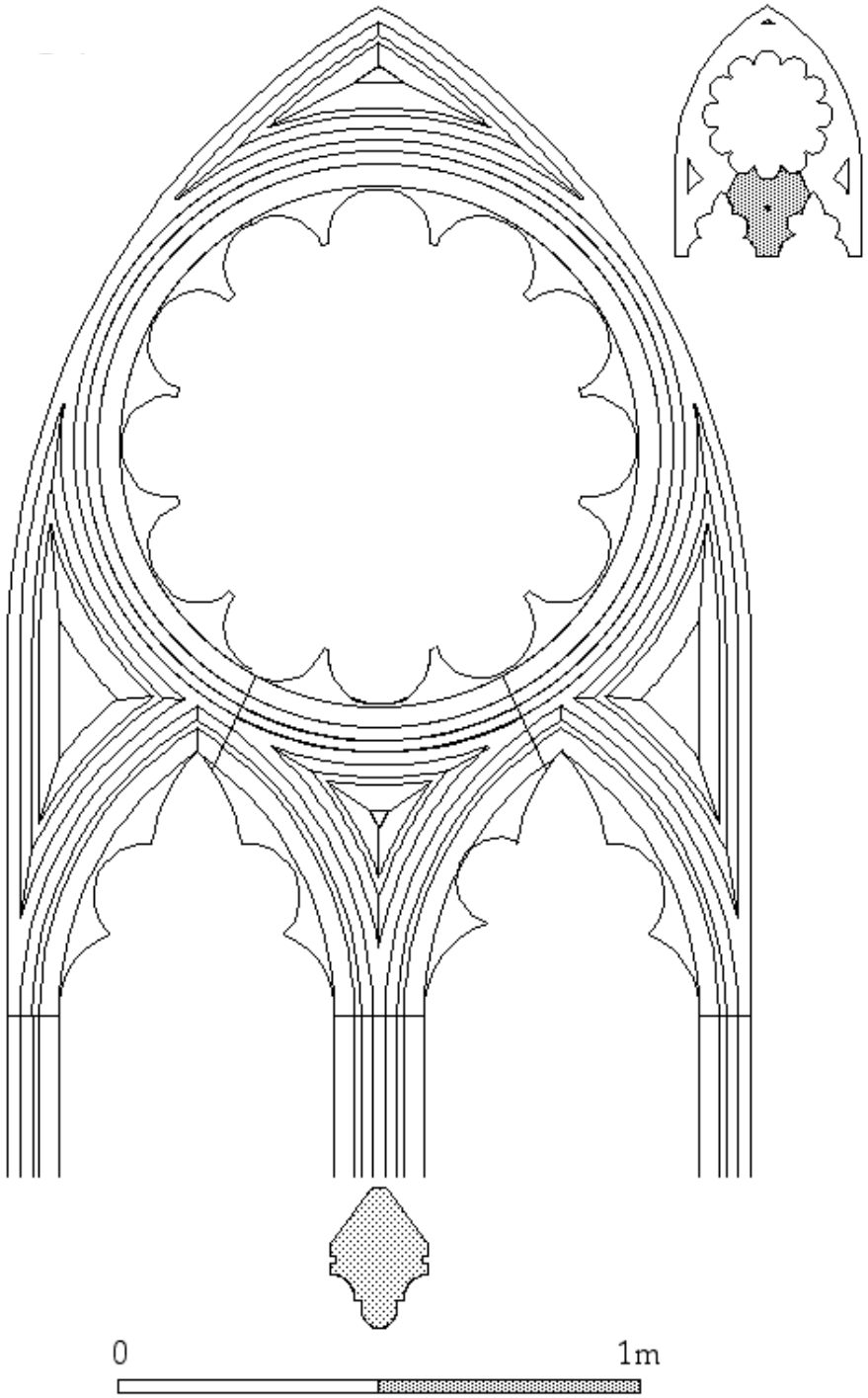

Fig. 22 Geometric tracery window

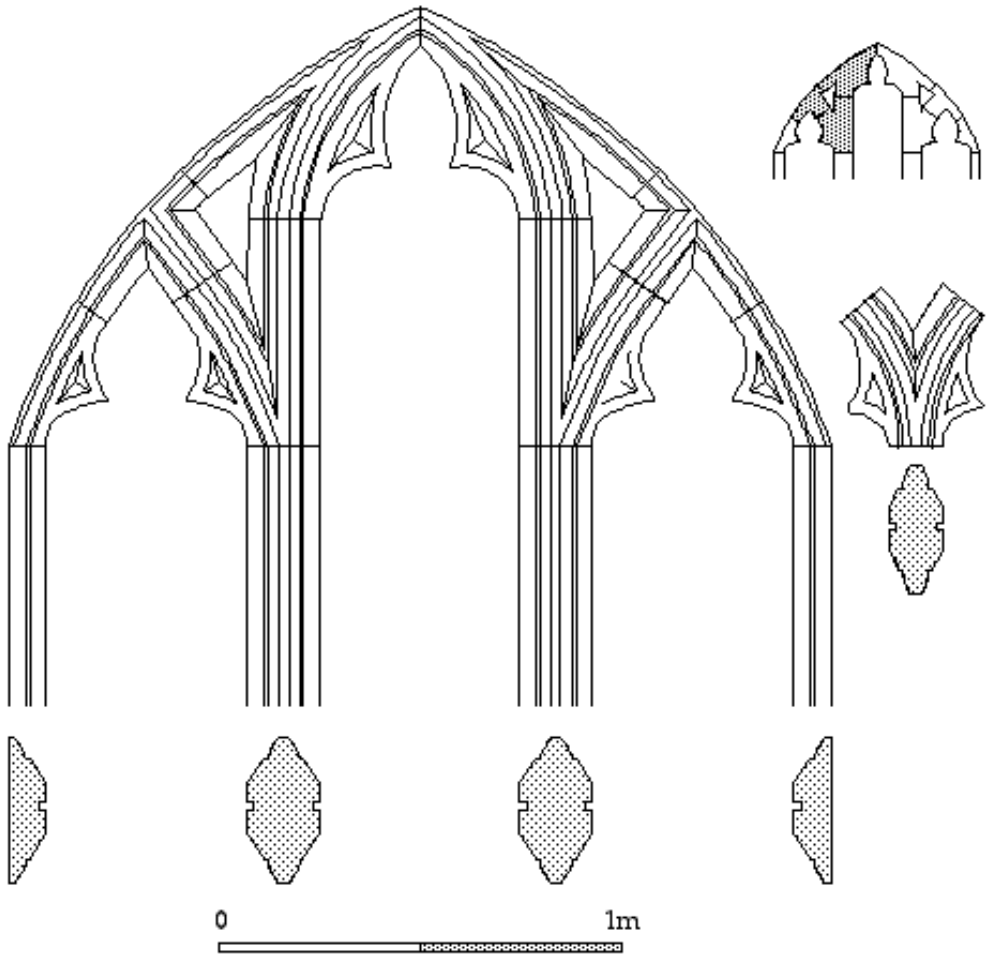

Fig. 23 Segmental-headed window

arch on the other. A section of the window head shows part of the outer rim and a curved cusped section for a central light at the window apex. The assemblage is completed by a fourth piece that formed part of the outer rim with the apex of a window arch joining to it. When correctly arranged these pieces form a three-light window with the tracery graduated to fit within the outer arch (Fig. 23). This window is unusual because the outer arch head and parts of the tracery that fit to it are segmentally curved. This makes an unsightly sharp change of angle at the springing points and is most likely a feature introduced to enable the window to be fitted beneath the curvature of a vault. Where windows are raised as high as possible to snugly fit beneath a vault curvature the internal and external arch heads are set level so both follow the same curvature. Often in such instances the internal framing arch head is moulded with a segmental rere-arch. In this connection several other stones within the collection may have relevance. These are voussoirs that are moulded towards the front face of the arch but plainly chamfered on the back face. Several examples have survived together with some arch apex stones; they almost certainly represent internal window rere-arches and show considerable variety in design (Fig. 21a–g).

Kentish Designs

In addition to these stones there are also a considerable number of large tracery fragments that

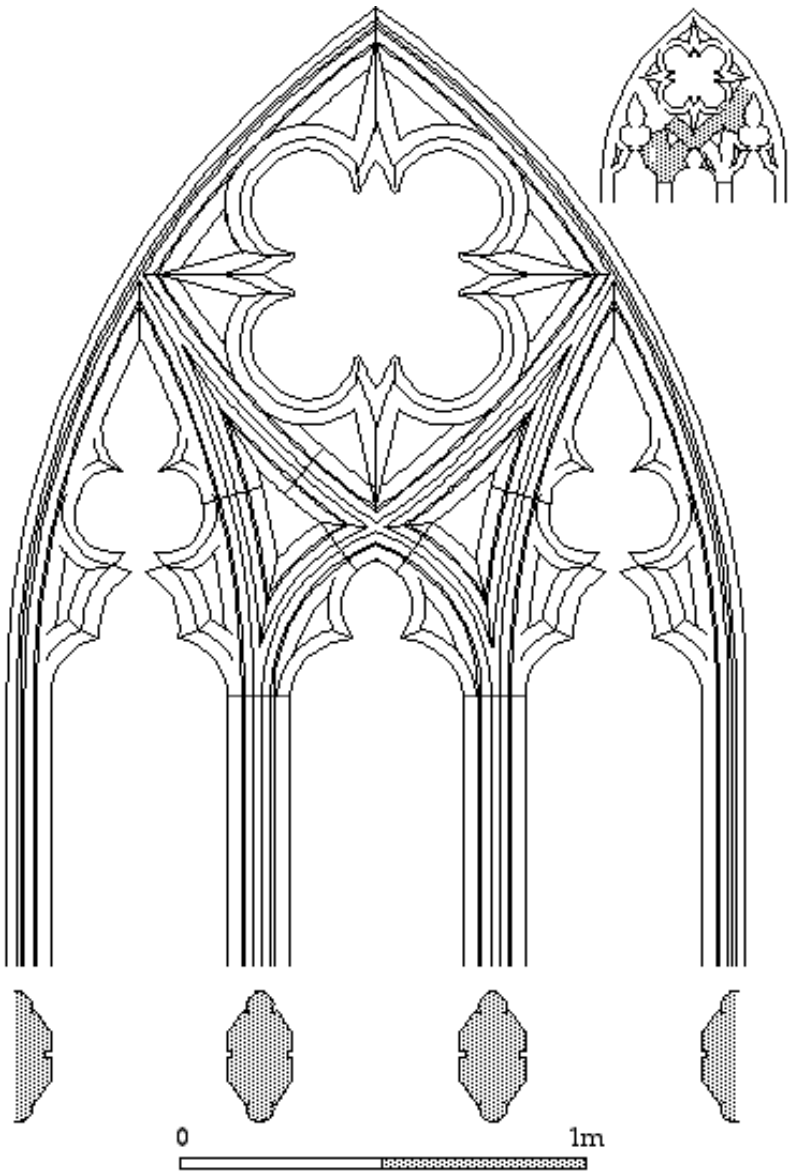

Fig. 24 Kentish tracery: 1 Billingborough type

must have a common origin. The largest piece was illustrated by Brock and was found in the northern chapel area. His drawing was slightly inaccurate but showed the basic arrangement of the tracery section (Brock 1875, pl. 15). It consists of two straight arms that cross and which have large open cusps set in the angles of intersection. These cusps have the unmistakable bifurcated double-pointed tips that are a feature of particular window patterns known as Kentish tracery. The style takes its name from the best known examples such as those at Chartham church in Kent but the name is somewhat of a misnomer because examples of this type of tracery can be found across a much wider region – it occurs much further afield, for instance at Kirkham Priory and Whitby Abbey in North Yorkshire. The particular

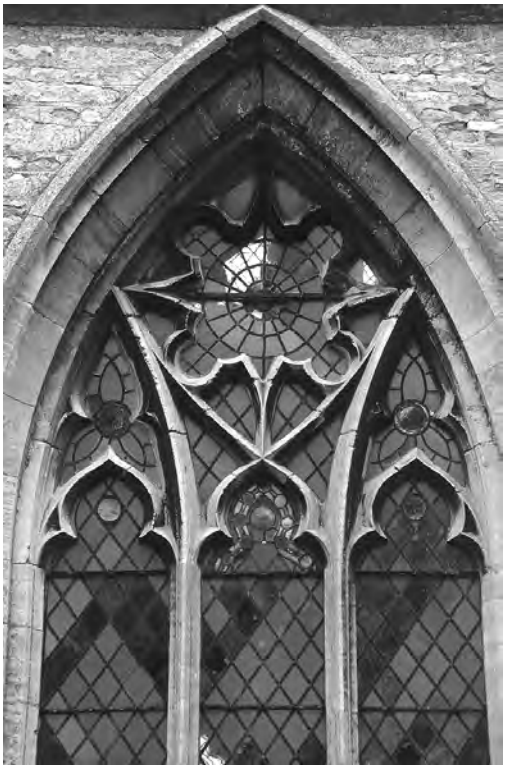

Fig. 25 Billingborough church: window tracery

motif employed in this type of tracery is a bifurcated cusp which has an open spandrel, usually combined with quatrefoils or trefoils to make a star-like assembly. It is no surprise, therefore, to find these examples at Keynsham. The large tracery intersection must have formed the central feature of a large window in which four quatrefoils or trefoils with bifurcated cusps are set around the intersection. The surviving cusps are not symmetrical and suggest that their size was purposely varied to accommodate the geometry of the foils attached to them (Fig. 27a). During the survey of the stones it proved possible to locate a section of this stone that had broken off the main piece and this confirmed the straight aspect of the radiating arms.

Besides this tracery intersection there is a whole array of other pieces in varying states of preservation. A springer design shows a small cusped arm on one side and a larger arm of wider diameter on the other. This has a canted cusp with a hollowed out spandrel of unusual shape. Several of these springers survive and one has three lead pins set into the face where some of the stone has spalled off the block. The quality of the Bath stone from which the tracery is cut is not that good, with many of the typical bubble-like cavities throughout the body. Several pieces have in fact broken in half along the bed lines revealing a core peppered with small cavities. Possibly a fracture had appeared when the springer stone was being cut and the lead plugs were inserted into the stone as a repair. The side with the short-armed springer can be assembled with an X-shaped intersection that forms the keystone for a central pointed light. Another Y-shaped piece of tracery assembles to the X-shaped keystone and the larger arm of the springer. This piece of tracery retains traces of a foil attachment and in the intersection of the arms of the X-shaped piece there is the stub of a vertical star-cusp point. These pieces of evidence show that the window had three lights with a quatrefoil in the head with four outward pointing bifurcated star-like cusps (Fig. 24). Though not a large window the reconstructed design shows an elegant tracery pattern that is typical of these Kentish forms. The tracery pattern can be matched exactly with the nave windows at Billingborough church in south Lincolnshire (Fig. 25) and this suggests that it was a standardised design.

A second window can be reconstructed from several pieces of tracery. One piece shows a tracery arm attached to the rim section of the window. In the angle between the two is a large open cusp that suggests a window head with a foil. A second piece of tracery assembles with the first and has a large canted open cusp on the extrados and a solid cusp on the intrados. The two sections when assembled and mirrored show a window head with a large quatrefoil that is open at the bottom with a dagger-like foiled motif in the spandrel between the two arched subdivisions of the tracery. The lower tracery section has the stump of a subdivision that must have divided the window lower lights and completed the lower lobes of the quatrefoil. A similar tracery arm shows the attachment for the window rim and can be used to indicate the design of the lower lights. The evidence suggests a four-light design of intersecting tracery with three pointed arch heads that were each cusped in a trefoil pattern (Fig. 26). This window pattern can be paralleled locally at Bristol Cathedral where an almost identical window can be seen on the south side of the cathedral.

Another type of window is indicated by a springer with an open canted cusp on one side that shows the start of a trefoiled cusping on the upper part and a single small cusp on the other. The arms can be

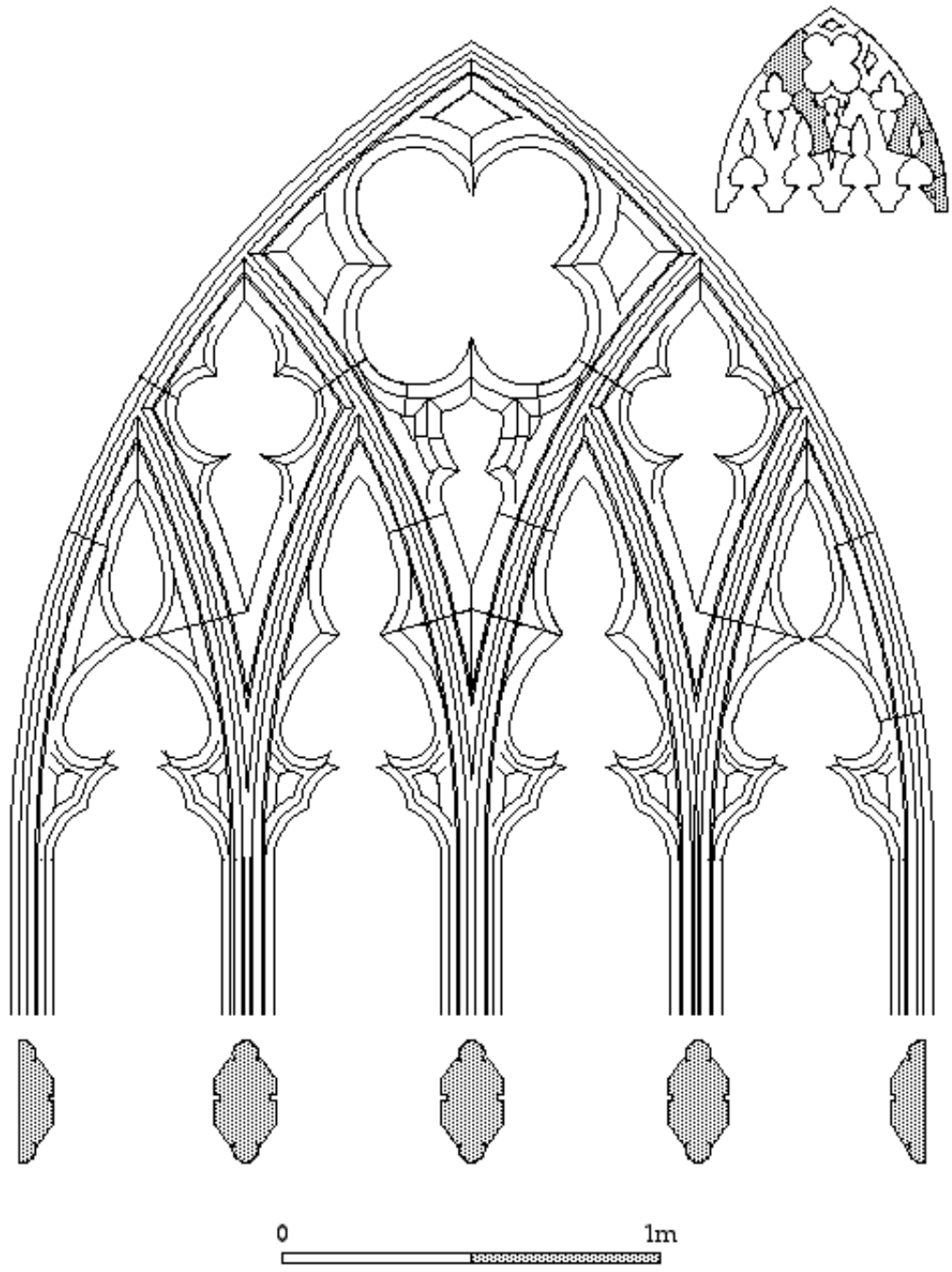

Fig. 26 Kentish tracery: 2 Bristol Cathedral type

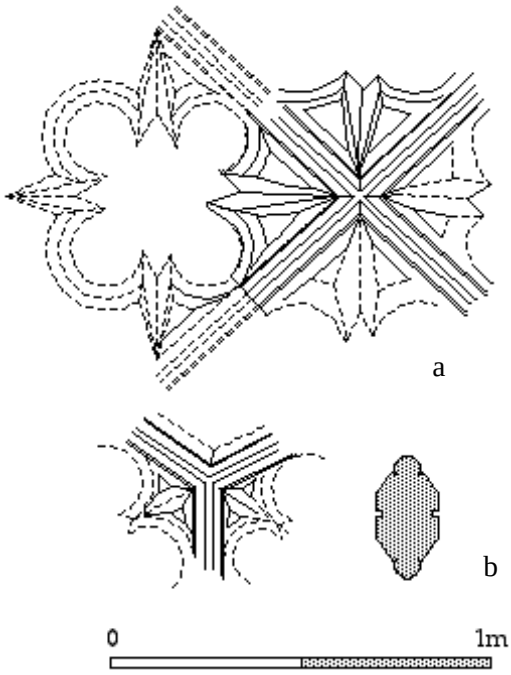

Fig. 27 Kentish tracery: cross and three arm pieces

projected to recreate the likely division of the window. A three-light design is most likely and though none of the upper tracery appears to survive, its most likely form was an arrangement of cusped pointed quatrefoils. Other less well preserved tracery sections include three-way junctions with the stubs of cusped points in two of the angles (Fig. 27b). Though too fragmentary to reconstruct the full tracery patterns, they suggest the presence of trefoils or sexfoils in one of the window designs. The evidence suggests a series of windows with a considerable variety in the tracery patterns employed. They probably originated from the extended presbytery or one of the chapels in the area north of the presbytery, of three and four-light design, possibly the larger windows forming a principal feature of the east walls and the smaller ones in the side elevations.

Lias Mullions

In addition to the tracery there are several sections of mullions that have an unusual profile (Fig. 14k). At the front is a central fillet flanked by shallow hollows, a second fillet and another hollow. The side returns have a stepped rebate with a central rear fillet flanked by a single hollow at each side. The rebates suggest the presence of shutters or conventional glazing frames. Within the rebates are rough cut holes for iron bars. The side returns also show rough cut grooves and sockets that are clearly secondary features, for glazing and cross bars. Unusually these mullions are cut from Lias and may reflect a short term fashion for using marble for mullions in tracery windows during the late 13th century, such as those in the east front aisle windows of the Angel Choir at Lincoln Cathedral. Some sections of these mullions were discovered in the excavation of the south transept of the church and this suggests that some of its original windows had been replaced with tracery designs. Unfortunately no matching tracery has been found to give some clue to the window design.

Perpendicular

Numerous fragments from a Perpendicular-style window have survived. They can be reassembled to show a four-light window with cinquefoil-cusped heads to the lower lights (Fig. 28). Mullions in two sizes rise from the spandrels and arch heads dividing the upper part of the window into eight sub-lights. The heads of these lights are graduated to the outer rim of the window with each outer light forming a triangular panel and the other six having trefoil-cusped heads. In the centre the inner pair of sub-lights are contained under a Y-shaped subdivision that must have supported a quatrefoil central panel at the apex of the window. Probably of 15th-century date the window is typical of the Perpendicular tracery then in vogue, with profiles that are simple chamfers. Some of the sections show evidence for the iron saddle bars set at regular spaces across the upper lights to help hold the tracery in place and support the glazing panels. The reconstructed design can be compared to the windows of a similar date in Keynsham parish church. This window, like most of the window tracery, is not very large being only just over 2.3m (7’6”) wide and therefore unlikely to have occupied one of the main elevations of the building. It is more likely to have been a feature of a smaller structure such as one of the subsidiary chapels. Its presence shows that additional works were carried out to the fabric following the expansions of the 14th century. Variations and duplications within the surviving components suggest that there was more than one window of this pattern present in the building.

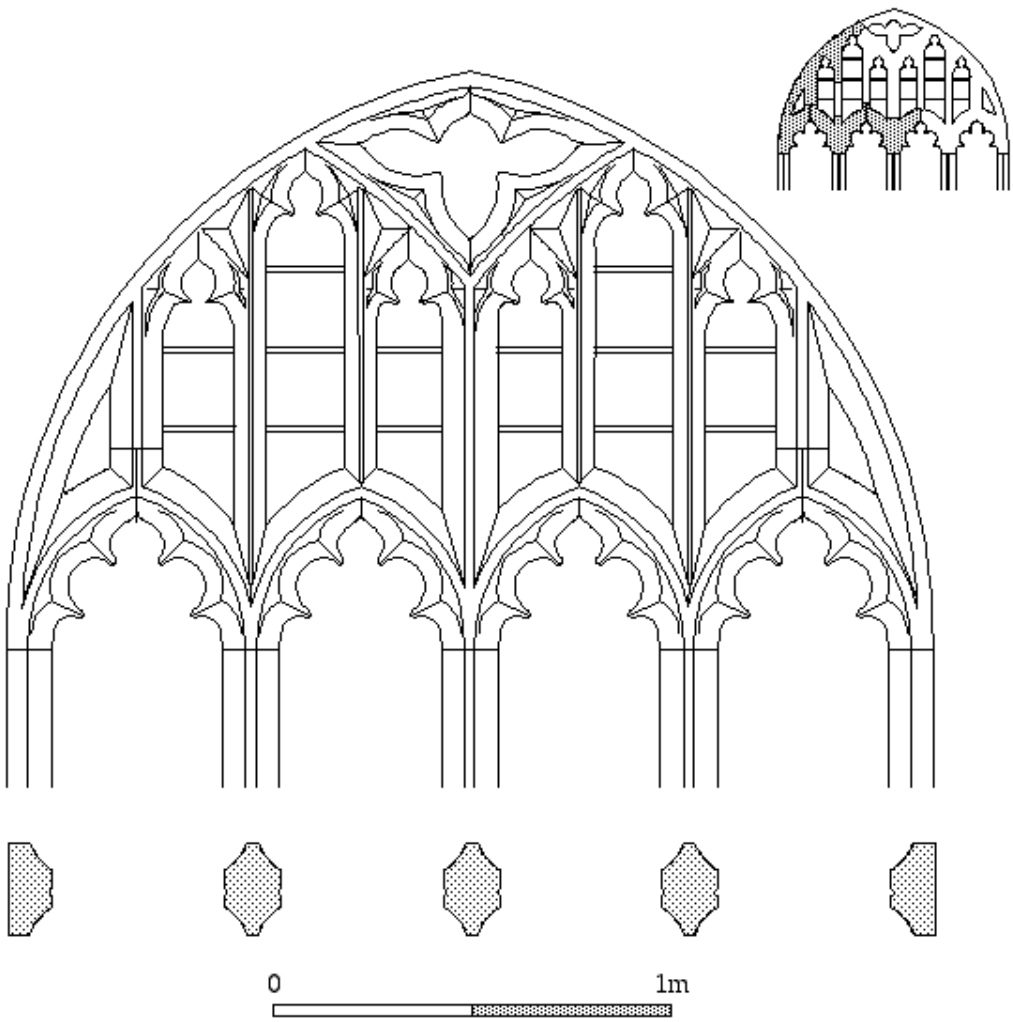

Fig. 28 Perpendicular tracery window

The tabernacle canopies

Brock reported on the discovery of 'delicate tabernacle work' found in the area of the north chapel near the surviving respond pier (Brock 1875, 201). It was then kept in the house of Richard Cox and apparently included 'elegant heads of niches in great variety'. Brock was evidently greatly impressed by the quality of this material though none of it was illustrated at the time. Fortunately a considerable quantity of it has survived though now badly affected by weathering (Lowe *et al*. 1987, pl. 50a). The collection of fragments is of Perpendicular style and probably late 15th-century in date. The largest and best-preserved section forms a large niche head with a net vault on the underside that supports a polygonal projecting canopy (Fig. 29). Below the vault, set between its springers, there are three canted wall faces decorated with miniature tracery. The most complete of which shows a twin-light subdivision that has a cusped quatrefoil in the head and a trefoil in each light set above trefoiled cusping. Above the vault is an external moulded cornice and the stubs of small buttresses that have small tapering pinnacles set on the face with miniature crockets and foliate finials. The whole is richly decorated and it is clearly only a small section of the original composition. This largest survivor forms only one piece of a whole array

Fig. 29 Canopy at Cadbury's

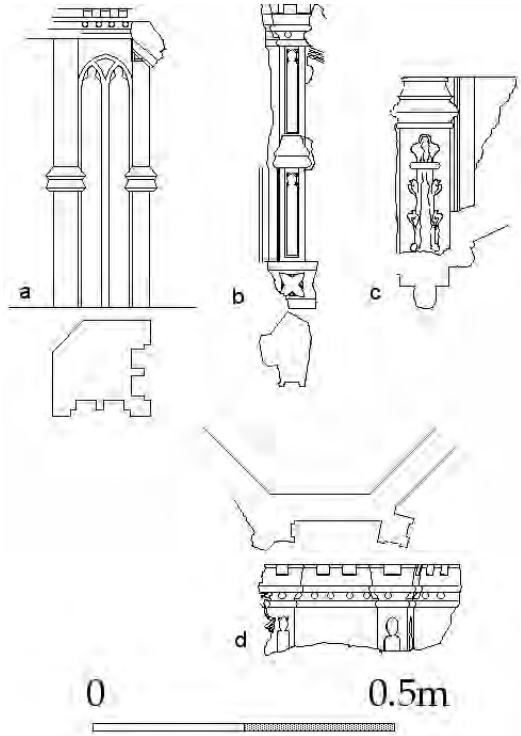

Fig. 30 Fragments of tabernacles and shafts

of fragments many of which obviously formed part of similar tabernacles. They include sections of angled canopies with buttresses on the angles that have blind trefoil-headed tracery decoration on the front. These support an embattled cornice that is studded with small ball ornament (Figs 30c and 30d; Lowe *et al*. 1987, pl. 50b). There are also several buttress piers in a variety of sizes and forms, some of which appear to have occupied a corner position (Figs 30a and 30b). They have blind tracery decoration on the faces and moulded offsets to the main buttress sections that have stubs of miniature flying buttresses or finials on the corner. At the top they have a similar moulded embattled cornice with ball ornament and the stub of another miniature moulded flying buttress. One example has a sunk quatrefoil with pointed lobes at the base that may have been part of a frieze (Fig. 30b).

The most extensive collection of fragments form parts of canopies with net vaulting (Fig. 31; Lowe *et al*. 1987, pl. 50a). The arches outlined by the vault springers have a row of small cusps worked along the edge. The main front edge, above the vault, has been largely lost but enough survives at the right hand edge to indicate the design. There is a small buttress with the moulded springing of the lost front arch and traces of foliate crockets. The buttress appears to have continued upwards to support a small pinnacle. This evidence shows that the canopy was fronted by an ogee-headed arch, moulded along its front edge and with a row of crockets on the extrados. On the top is what appears at first sight to be the stub of a finial decorated with rows of crockets that rise up the stub. At the very back of the canopy are

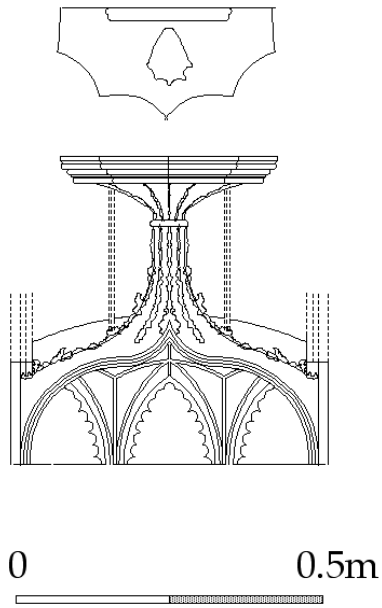

Fig. 31 Tabernacle canopies with pedestals

Fig. 32 Voussoir in Park Farm arch

the broken stubs for a vertical back piece moulded at the edges. The two broken stubs – of the back piece and apparent finial – can be linked to other loose pieces in the collection. These are very damaged but the complete form can be clearly recovered. At the bottom is a broken stub with traces of crockets rising to a moulded neck or rim. Above this is a wide belling-out also decorated with bands of foliage that follow the splaying. At the top is a moulded rim that has a series of convex curves going around it. At the back are stubs for a supporting back piece that match those on the main canopy. These pieces clearly stood on top of the main canopy and formed a series of pedestals, possibly for the support of small statues. Brock mentions that in Richard Cox's garden and those of neighbours were 'several remains of statuary, some monumental' (Brock 1875, 203). Unfortunately none of the monumental pieces appear to have survived but some smaller examples of statues may have been connected with this tabernacle assembly (Lowe *et al*. 1987, pl. 49). Sufficient pieces survive to attempt a reconstruction of a single niche with its pedestal. It would appear that the fragments either formed the tiered sections of a single large monument or parts of a reredos and separate tomb. Unfortunately the pieces are too damaged and incomplete to attempt a reconstruction of the overall structures they once formed part of, but it seems clear that they would have been impressive pieces of micro-architecture. They give an indication of the high quality of architectural furnishings provided in the abbey chapels and indicate the scale of monument loss that the destruction of such intricate structures of the abbey represents.

CHAPTER HOUSE

The south-west corner of the chapter house was destroyed in the bypass construction but the remainder was carefully excavated. The building was overlain by a deep deposit of Victorian debris from the construction of the villas. Below this debris the floor was covered by a large amount of collapsed material much of which derived from the destruction of the vaulting. The type of debris suggests that the vault was purposely felled and the building then systematically demolished. Though most of the material was a jumble of debris, sections of collapsed vault ribs and other features remained in articulated rows. From these it was possible to determine some of the arrangements of the collapsed and robbed out superstructure. The chapter house was a large rectangular room entered from the cloister through a centrally placed doorway in the west wall. This doorway is badly ruined and most of its jambs have been robbed away, though enough survives to show it had three orders. A row of nine plain stones found collapsed inside the chapter house most likely formed part of its inner south jamb, and another five part of its arch head. Some of these showed a simple quarter roll on the angle, similar to those on the archway between the south transept and nave aisle (Fig. 8). This suggests that the interior jambs and arch of the doorway had a continuously moulded roll on the angle. The stones recovered by the Victorian builders and modern excavation of the room show that it was a very elaborately decorated structure. Several pieces deriving from the chapter house were reused in the Victorian arch that forms the entrance to Park Farm. One of these is a highly decorated stone that has a banded quatrefoil decorated with pellets and interleaved with diagonally set foliate swags (Fig. 32; Brock 1875, pl. 15). This stone is a voussoir and careful measurement of the taper on its joint faces has enabled the span of arch to be determined. It was around 2.6m (8'9") wide and this would accord with the projected span of the outer order of the chapter house doorway. A less complete stone with identical decoration survives in the collection and this is also a voussoir. Another loose stone has almost identical decoration and the same steeply angled decorated face, and can be identified as a jamb from the same doorway. This shows that the decorative scheme ran continuously up the jambs and over the arch head, without the use of capitals.

A second stone type has a circular decoration of foliage that has inset foliate and pellet designs with diagonally radiating foliage straps towards the

corners of the block. It has been partly re-dressed for reuse but sufficient remains to show there was an angled face at the rear of the block that indicates it too was angled at 45º. This seems to show that there was a second angled order. A third stone decorated with a trefoil set with foliate sprigs also forms part of the Victorian arch and can be identified as one of the pieces illustrated by Brock (1875, pl.14). It may well have formed a simple panel decoration but its close similarity to the quatrefoil-decorated pieces suggests that it might have also have formed part of the same doorway, possibly the inner order. That it came from the chapter house is shown by a matching stone recovered in excavation that forms half of a similar trefoil-decorated block. The design is square cut in contrast to the other two angle-set examples. Smaller fragments from similarly decorated stones were discovered in the excavation of the building (Lowe *et al*. 1987, pl. 42a). Though the design only partly survives it indicates a possible fourth type of decorative motif, or some variation in the three more complete designs. Combining all these decorative elements allows a tentative reconstruction of the doorway to be drafted (Fig. 33). This arrangement can be matched to the overall outline of the door base found in excavation. The type of panels and their decoration can be paralleled at Malmesbury Abbey on the main doorway into the nave (Wilson 1978, 83). This doorway also has angled orders, some decorated with foliate quatrefoils, that alternate with semicircular coursed shafts that have decorative medallions or trellis ornament. The inner order is not angled but is set square and is also carried up through the arch head. We cannot tell if the doorway from Keynsham also featured small coursed decorated shafts but the similarities with Malmesbury, may suggest they would have been included in the design. The Malmesbury inner and outer porch doorways are magnificent designs, even in their present weather-worn condition. The evidence seems to indicate that the chapter house doorway from Keynsham was equally magnificent and probably directly inspired by the earlier example at Malmesbury.

The most common arrangement of chapter house entrances was a central doorway flanked by unglazed windows. Not enough evidence remains in the surviving fabric to tell if such windows flanked the doorway at Keynsham but during the bypass construction, the south-west corner of the building was seen and photographed before its destruction. This shows what appears to have been the sloping sill of the southern window. Often such windows were subdivided by plate tracery into two sub-arches. This arrangement allowed the spandrel between the arches to be pierced, often with a trefoil or quatrefoil. Broken sections from such a plate tracery quatrefoil were found in the excavations. It was 675mm (26") in diameter, with a simple filleted roll moulding along the internal angle. The four cusp terminals were flat-ended and the spandrels were pierced and it appears to have been designed to fit into a squared rebate. There is no obvious provision for glazing and it appears that the quatrefoil was left open. A section of a voussoir has also survived with a filleted roll moulding on the angle and a squared rebate on the soffit. This is exactly the right size and curvature to accommodate the plate tracery quatrefoil and the two can be assembled together (Fig. 34d). Though it cannot be proved it seems likely that these pieces possibly derive from one of the windows flanking the chapter house doorway or similar plate tracery subdivision.

Other details from the chapter house include a Greek Key or meander stringcourse that uses an elaborate moulding composed of numerous complex small rolls and offsets (Lowe *et al*. 1987, pl. 42b). The Greek Key pattern is also quite complex and forms a double return; the effect is dense and tightly patterned. That this design was employed as a stringcourse is clearly shown by the forward-angled tilt from the vertical on the front face (Fig. 34a). One section built into the Park Farm arch shows the return for an internal square corner, indicating that the stringcourse ran around more than one wall of the room. A very similar stringcourse of Greek Key design that is also angled forward from the vertical can be seen on the exterior of the east wall of the Treasury at Canterbury Cathedral dating to before 1165. Another decorative element was a frieze of small intersecting round arches that have delicate lobed foliate terminals (Fig. 34b; Lowe *et al*. 1987, pl. 41). The small arches are moulded and stand out in relatively deep relief from the surrounding wall. They must have been employed as a continuous band or stringcourse around the walls of the room, perhaps set above or, more likely, below the Greek Key stringcourse. Another much plainer example of Greek Key stringcourse has been recovered from various parts of the site and was probably a common motif employed on the buildings (Fig. 34c; (Lowe *et al*. 1987, pl. 42b).

The chapter house was covered by an elaborate ribbed vault and numerous sections of the vault ribs were discovered lying on the floor where they had fallen from the vault, together with the rubblestone

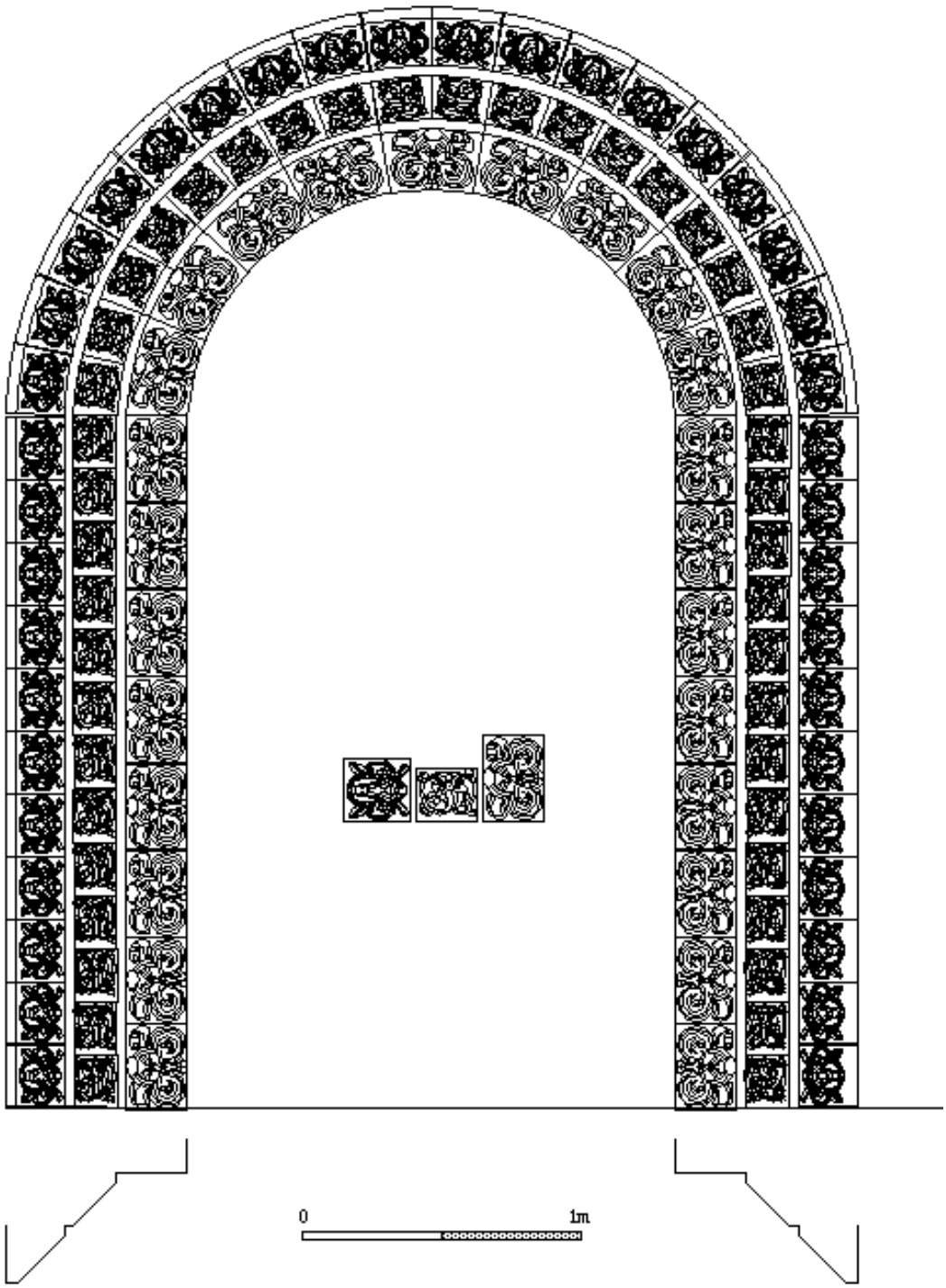

Fig. 33 Chapter house doorway reconstruction

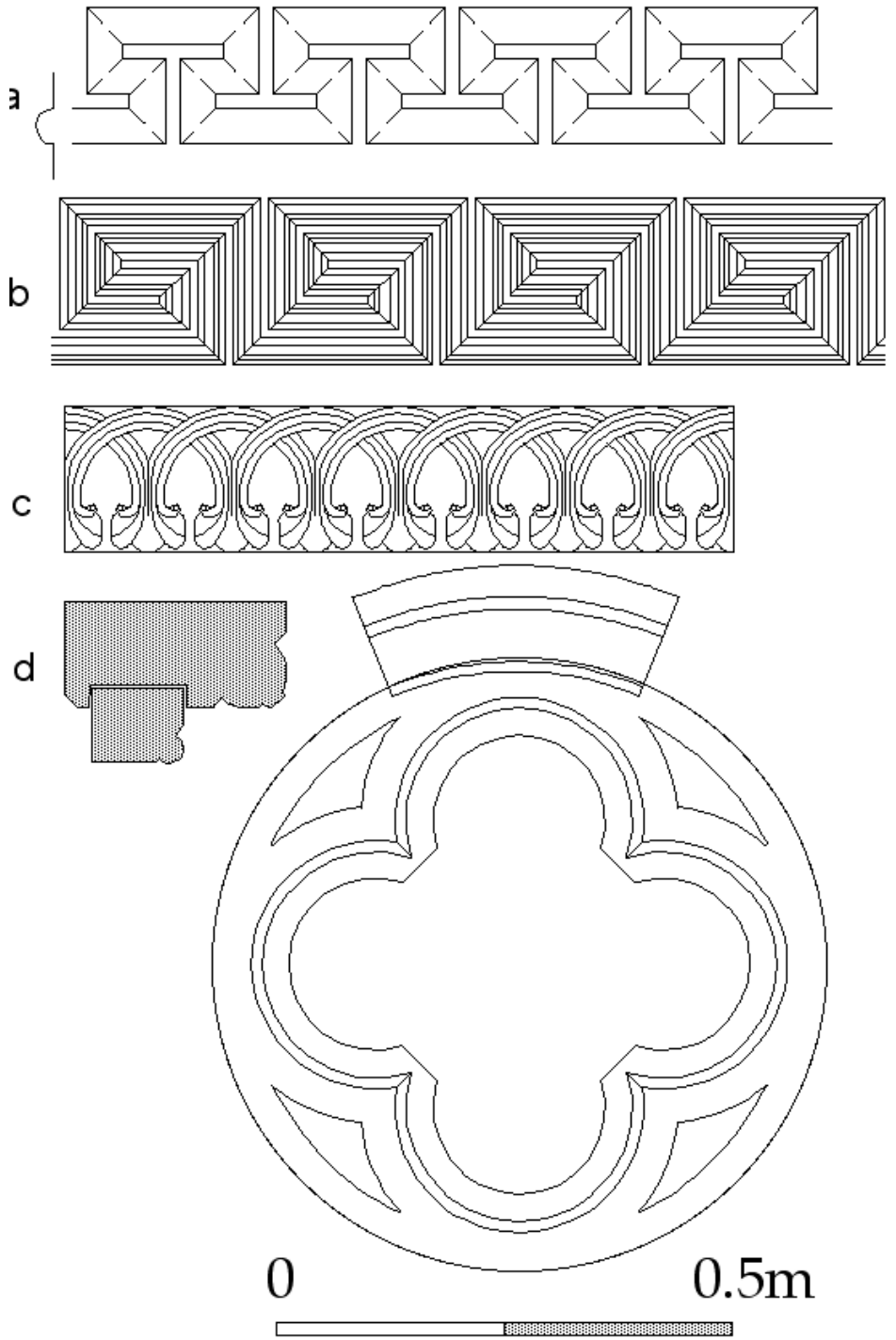

Fig. 34 Greek key string, foliate band string, plate tracery quatrefoil

vault webs. The absence of any obvious trace of vault supports such as conventional respond shafts with moulded bases and capitals, like those in the church, indicates that the vault ribs must have been supported by corbels or shafts at a higher level. A review of the excavated material shows there are no obvious examples of large vault corbels such as would be needed to support the vault springers. The excavation, however, revealed a number of small foliate corbels and more examples of these can be seen built into the Park Farm arch. They were designed to support a single small nib-keeled shaft and have narrow rear tailblocks for socketing into the wall; the decorative elements being wider than the tailstones. On their own these corbels cannot have served to support the heavy springers of the chapter house vault because they are far too small. They would have to be massively enlarged in some form of tiered arrangement or grouping of shafts. It can, however, be demonstrated that they formed the lowest elements in those supports. Several small fragments of delicate sculpture were recovered in the excavation including human figures, heads and miniature buildings that show windows and tiled roofs that are set above arches (Lowe *et al*. 1987, pls 36a, 36b, 39, 40a, 40b). These indicate that there was a major sculptural cycle present somewhere in the chapter house. The largest surviving section (Lowe *et al*. 1987, pl. 37) shows tiers of figures that include angels with scale-feather wings that are enclosed or set above arches. Unfortunately this stone is very badly damaged and far from complete. Enough remains, however, to show that the top was angled indicating that when complete it formed part of a polygonal-shaped projection. At the base there is another projection for a vertical nib-keeled shaft that is the same size as those that were supported by the small foliate corbels. The size of the block and the position of the lower shaft support suggest that when complete there would have been paired lower supports consisting of two shafts and small foliate corbels. Elements of fragmentary triple shafts with foliate decoration attached, also suggest that there was a variety in the type of shaft supports. The presence of the other small fragments of sculpture suggests that there was originally an extensive series of sculpted scenes and that these must have formed the corbels that supported the chapter house vault springers. Taking these elements together it is possible to give an outline indication of what one of these corbel supports may have looked like (Fig. 35). These corbels must have been large blocks of stone and therefore eminently suitable for reuse when the chapter house was demolished. Some at least must have been partly re-dressed once they had been prised from the walls and this accounts for the fragmentary pieces that have survived. Such a design for corbel supports, with lower minor paired corbels and shafts supporting the main corbel, is highly unusual. That the main corbels were also decorated with sculpture, possibly depicting a cycle of scenes, is unprecedented in English chapter house design of this period.

Study of the remains of the vaulting shows that it must have been a very impressive structure. The vault ribs employed were of several different designs. While the diagonal ribs were plainly but intricately moulded, in the latest early Gothic idiom, the transverse vault ribs were highly decorative examples of late Romanesque chevron design (Lowe *et al*. 1987, pls 14, 15a, 15b, 15c, 17a). The diagonal rib profile consists of a central hollow flanked by half-rolls on the angle set against small offsets with a repeat of the hollow at each side flanked by another half-roll and double offset. The number of bays of vaulting can be determined from the angle of intersection of the ribs of a badly damaged keystone (Lowe *et al*. 1987, pl. 14) that clearly shows the chapter house must have been divided into four bays. The transverse ribs take two different forms, the first has alternating voussoirs that share a common core profile which has five half-rolls separated by small square offsets. In one type of voussoir the middle roll at each side forms a diagonally projecting chevron (Fig. 36b). The other type of voussoir has a diagonally set square panel on the soffit and a chevron at each side. A collapsed alignment of these types of ribs was discovered marking the position of the first transverse rib in the chapter house. Together these two types of voussoir form a complex alternating pattern that must have given the vault ribs considerable visual impact (Lowe *et al*. 1987, pl. 15c). The second type of rib design uses only one voussoir (Fig. 36c) but the overall design worked with two identical voussoirs that were alternated. Each voussoir has a half chevron at each side and a full chevron on the soffit. By alternating the voussoirs, a larger chevron was created along the side face and a diamond-shaped one on the soffit (Lowe *et al*. 1987, pl. 17a). The effect was visually complex and also highly decorative. The vault appears to have been furnished with wall ribs that have moulded chevrons with a flat semicircular raised decoration applied to the face. These have small circular pellets worked around the edge (Figs 36a and 36e; Lowe *et al*. 1987, pls17b and 17c).

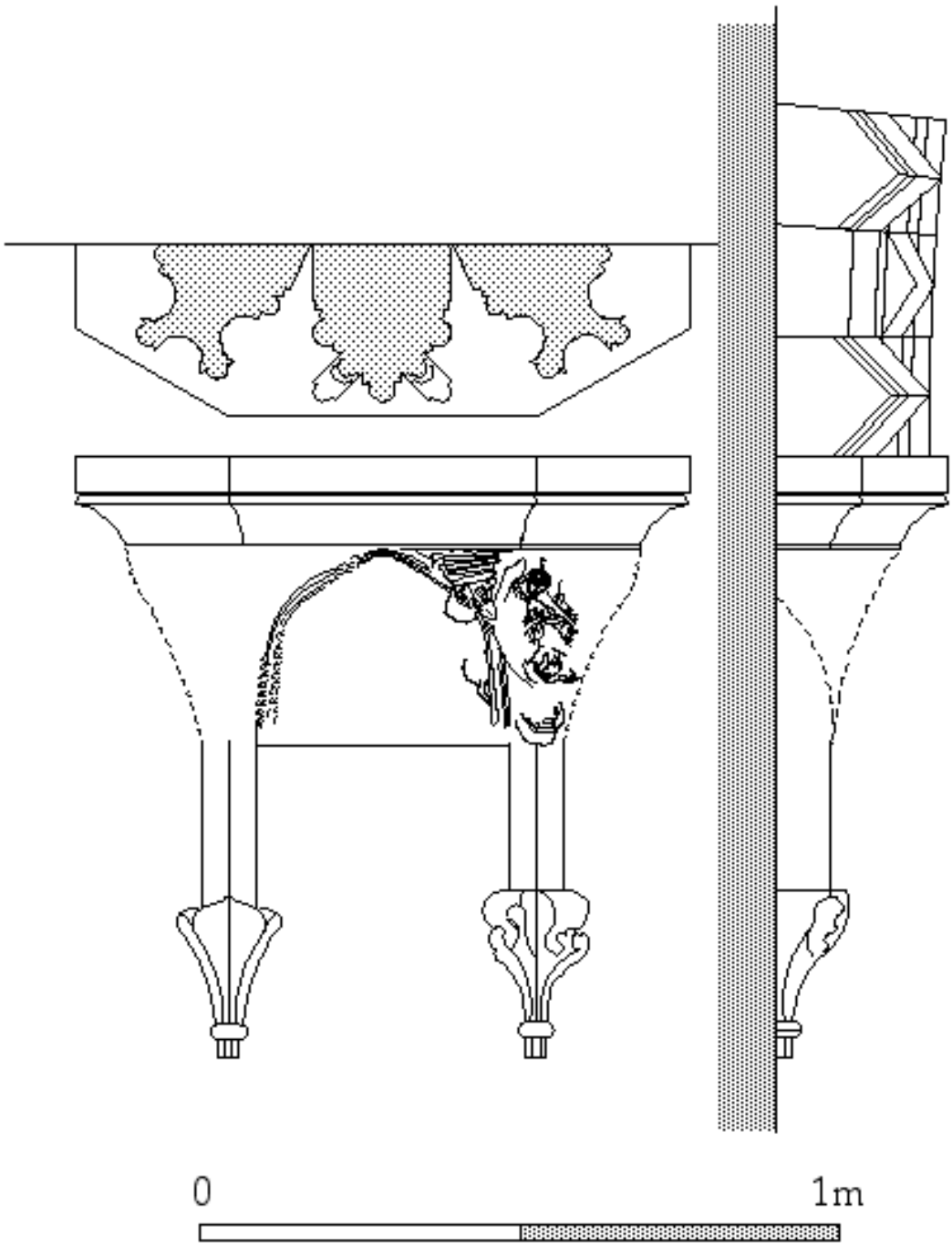

Fig. 35 Chapter house corbel reconstruction

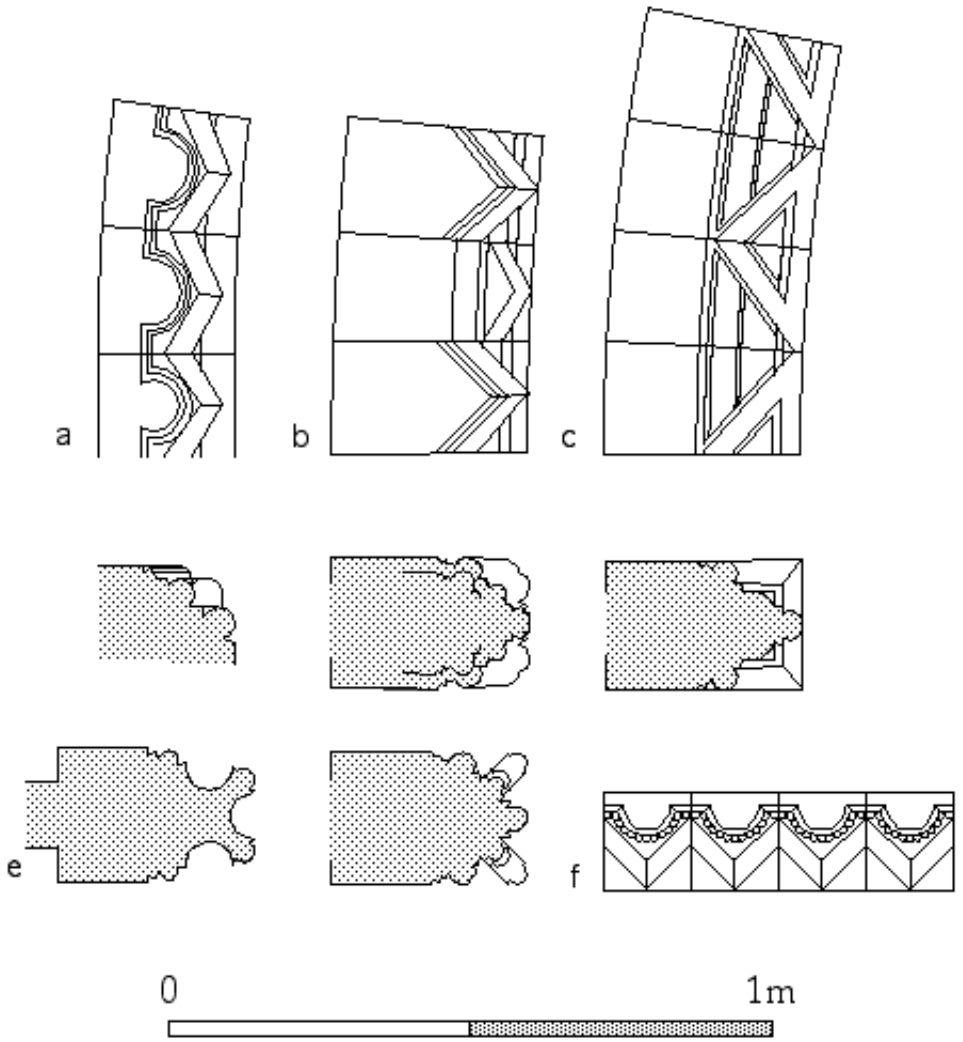

Fig. 36 Chapter house vault ribs and chevron wall ribs

The presence of straight examples as well as voussoirs suggests that the wall ribs were stilted, in a French-style of vault lunette construction, where they sprang off the vault corbels.

The vault webs were constructed of a mixture of tufa and pennant rubblestone, one collapsed section showing a row of four tufa blocks in a line flanked by pennant. Evidence is accumulating for the use of tufa in vaulting. Being a very light porous stone its use could reduce the loading of a vault considerably – curiously at Keynsham its use was mixed with that of ordinary stone.

Numerous fragments of capitals and annulets of foliate design were recovered in the excavation and another example is built into the Park Farm arch. Though most are fragmentary some complete or near complete examples have survived. From the angled splay at the corner they can be identified as the decorative elements applied to the internal jambs of the window surrounds (Lowe *et al*. 1987, pl. 21). Detached shafts supported leaf-decorated capitals of which one extremely well-preserved example was recovered in the excavation. It has deeply cut leaves, similar to those of the recently identified crossing

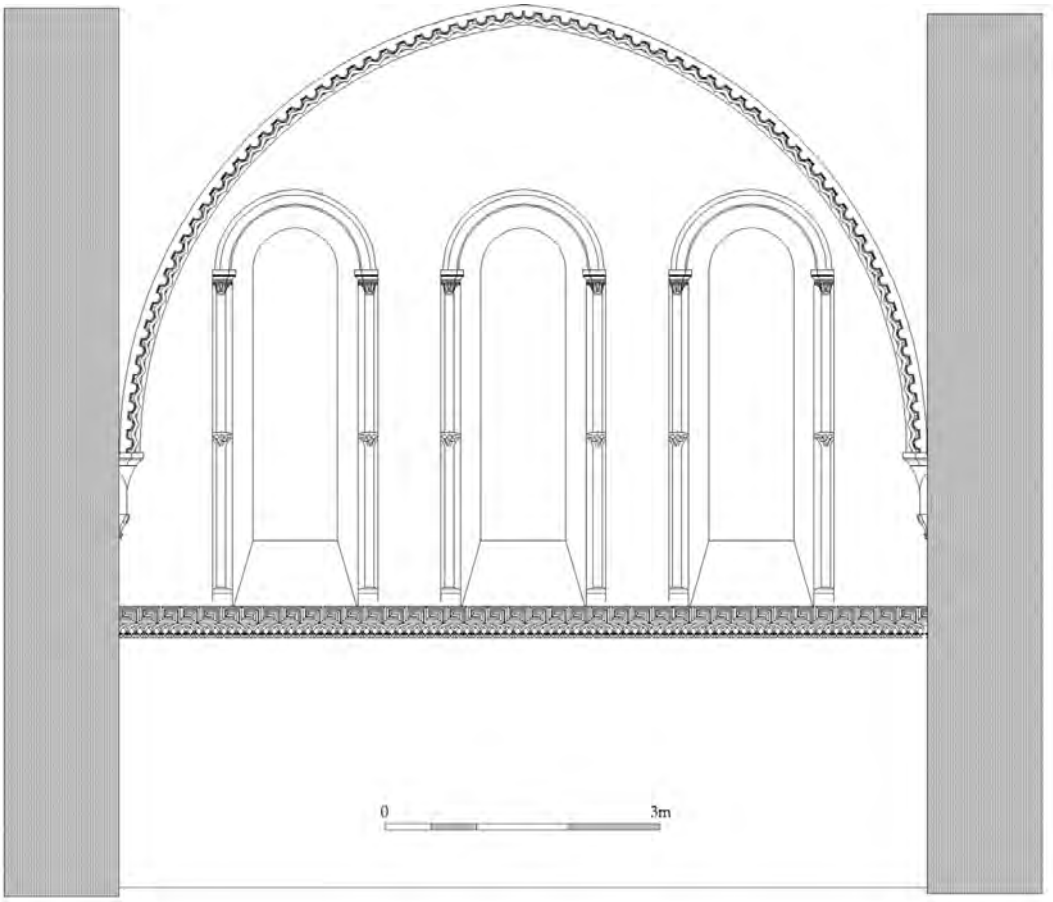

Fig. 37 Chapter house east wall reconstruction

pier capital. It has a shallow plain impost and this may have been surmounted by a moulded abacus. The detached shafts that supported the capitals stood away from the wall behind, to the extent that it would have been possible to easily pass a hand behind them. This is a highly unusual feature because it was normal to set detached shafts hard against the right angled or curved recess that accommodated them. The top of the capitals show they were set on an angled splay that clearly indicates that they were set on the internal window jambs. The shafts were interrupted by annulets or collars of unusual design. They took the form of foliate capitals also decorated with deeply cut leaves and volutes, with a shallow moulded base on the top to support the next section of shaft (Fig. 37; Lowe *et al*. 1987, pls 25a–e, 26a–c, 26d). Another example of this type has recently been unearthed during building works in Keynsham Vicarage garden. Only one base was found in the chapter house, set towards the south-east corner on the east wall. It was loosely in situ and shows the shaft standing away from the wall (Lowe *et al*. 1987, pl. 32). Unfortunately it appears that no sections of the splayed window jambs, their arch heads, or external window detail have survived. Putting these elements together it is possible to tentatively show how they may have been arranged (Fig. 37).

Measuring 18.35m (60') by 8.9m (29') and vaulted in four bays, the chapter house must have been a very elegant and splendid room. Its internal dimensions suggest that it was set out as a double square in plan. The room was vaulted in a single span, like the chapter house at Bristol Cathedral and dispensed with the use of intermediate piers. The chapter house at Bristol is earlier in date and though

it uses chevron ribs they are not as highly developed. The entrance is preceded by a vestibule, vaulted at a lower level, that allowed the canons first floor access from their dormitory to the church for the night service. At Keynsham there is no vestibule and we cannot now tell if the first bay of the chapter house was vaulted at a lower level to allow the canons similar access to the south transept. As no trace of a night stair was found in the south transept it may be that the canons entered the church at night through the cloister using a combined night and day stair sited south of the chapter house. The chapter house at Bristol is highly decorated with diagonally set chevron and other abstract ornament on the side walls in the *opus reticulatum* fashion and, though earlier in date, forms a good local parallel for the appearance of the chapter house at Keynsham. Notably similar chevron ribs to those from Keynsham chapter house appear in the vault of the slightly later Bristol precinct gatehouse.

Keynsham stands on a sloping site that was terraced to create platforms on which the buildings were erected. This meant that some of the buildings entered from the cloister, such as the refectory, were supported on vaulted undercrofts. During the cutting of the bypass three splendid carved vault bosses were recovered and it seems most likely that they formed part of the vaulting of the refectory undercroft or the refectory itself (Lowe *et al*. 1987, pls 10, 11, 12). The vault rib profile of these bosses is narrow and formed by three rolls (Fig. 4g). Several examples of matching ribs were salvaged from the villa gardens. The bosses are described in detail in Malcolm Thurlby's paper. Further work on the angle of the rib intersections and the curvature of the ribs might help to elucidate their possible origin within the buildings. The design of undercroft vaulting usually included a central row of piers that served to reduce the bay sizes and thus the spans of the vaults. One capital has survived of scallop design that was supported on a circular pier around 0.3m (1') in diameter and it seems likely that this may represent the sole survivor from such a row of undercroft piers. The capital is shallow in height with a roll moulding at the neck and a square top. The transition from circular to square plan is made with five segmentally curved scallops between which are set pointed angle fillets (Fig. 4e). The capital top has a simply squared impost and it seems likely that there would have been a chamfered or moulded abacus worked on a separate stone that increased the bearing capacity for a vault springer.

In addition there were two other slightly wider ribs or arch voussoirs. One has a paired roll separated by a squared fillet (Fig. 4f). The other is more complex with a central V-shaped arris flanked by rolls that have gouged hollows worked on them (Fig. 4h). At the side is a hollow, a quarter roll and another quarter hollow. This profile is early Gothic in date and the gouged hollows are typical of that period. This motif had a wide distribution but only seems to have had been fashionable for a relatively short period of time. It appeared, for instance, in south Wales on the west front windows of Margam Abbey, in the North in the choir arcades of York Minster, in the presbytery aisle vaulting at Byland Abbey and on the transept arcades at Furness Abbey. It seems to have been particularly prevalent in the north of England but, as this example from Keynsham shows, had a national distribution. The presence of these various ribs indicate that there may have been several undercrofts or ground floor rooms that featured ribbed vaults or that, as in the chapter house, there was a variation in rib mouldings between transverse and diagonal ribs. Two other ribs recovered from the transept and nave of the church probably represent the vaulting ribs of the chapels (Figs 4c and 4d; Lowe *et al*. 1987, pl. 16a). They show similar profiles with a pair of rolls flanked by hollows at the sides and separated by an angle fillet or arris.

THE CLOISTER ARCADING

The Victorian builders uncovered some capitals from a cloister arcade and more have been recovered from the cloister in the recent excavations (Fig. 38; Lowe *et al*. 1987, pls 18, 19, 20, 24). The standard arrangement in 12th-century monastic cloisters was a square court with covered alleys on each side. The lean-to alley roofs were normally supported by open arcading that stood on a low wall. At Keynsham, the cloister arcading followed the typical design fashionable in the second half of the 12th century, with paired shafts supporting the arches. What is known of earlier cloister arcades, such as that from Henry I's foundation at Reading Abbey, indicates they could be very elaborate with arcades decorated with chevron arches carried on single shafts with scallop and sculpted capitals (Baxter and Harrison 2002). By mid-century the twin shaft design had come into vogue, possibly because it was more substantial, stable and less bulky overall than rows of single shafts. The evidence from Keynsham includes some fragments of the moulded paired bases

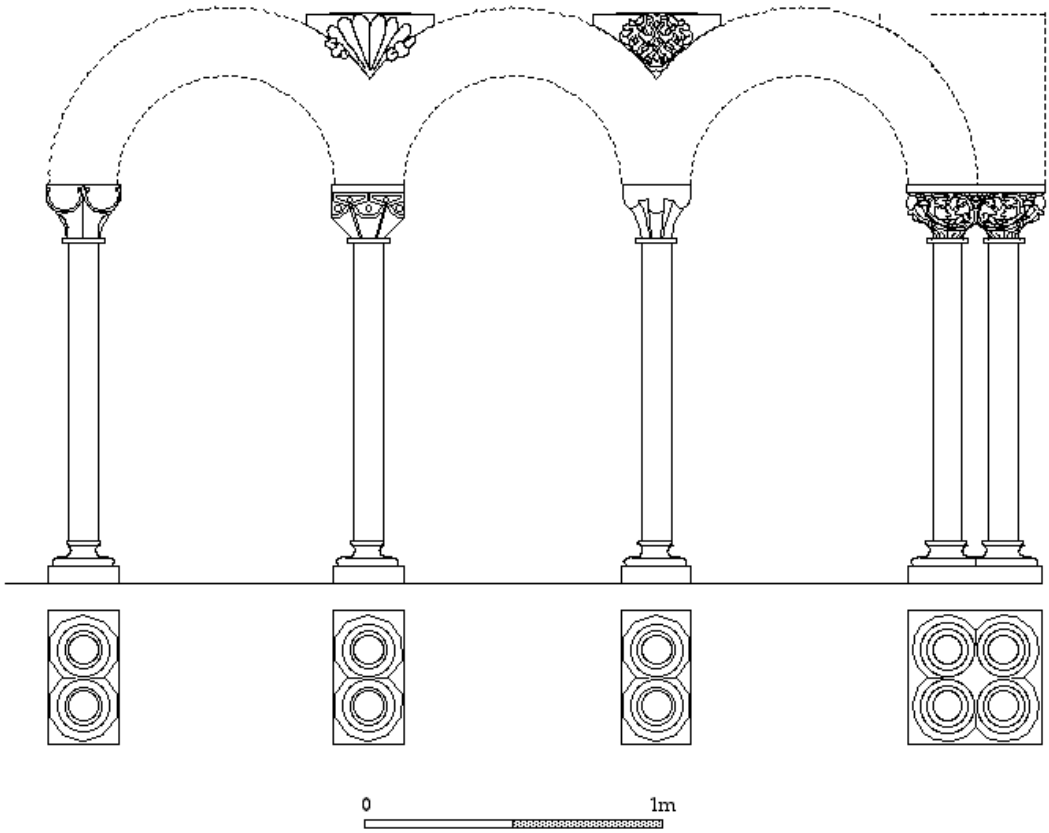

Fig. 38 Cloister arcading

that supported the shafts and several of the capitals. These show a great variety of design based on scallop and trumpet scallop forms and some pellet decoration. The Victorian builders found one of the corner capitals forming a four-shaft cluster (Brock 1875, pl. 15; Lowe *et al*. 1987, pl. 18). This has suffered damage from weathering and is therefore not as crisp as the newly discovered examples. It is a superb leaf design with complex entwined stems. The masoncraft exhibited in these capitals, like much of the material from Keynsham, is of the highest quality in both stone cutting and design. They show a vigorous variety of forms and though some elements are repeated, no two capitals are identical. Unfortunately it seems that none of the voussoirs or springers from the arcades have survived but their overall size can be calculated from two of the decorated spandrel stones which have been recovered. These are shaped to fit into the spandrels and therefore repeat the outer curve of the arch voussoirs. They are carved with decorative bosses that projected forward from the spandrels. One has a shell-like design radiating upwards with small sprigs of foliage at each side (Lowe *et al*. 1987, pl. 27a). The other is more complex with a mass of intertwined stems and leaves (Lowe *et al*. 1987, pl. 27b). This piece retains substantial traces of red paint on a limewash ground showing that the arcading was brightly painted. Study of numerous cloister arcades suggests that Augustinian cloisters were on the whole more elaborate than those of the Cistercians with greater use of sculpture and spandrel decoration. Material recovered from Bridlington Priory (Franklin 1989), Norton Priory (Green 1989, 111–18), Haverfordwest Priory and Haughmond Abbey (Blair *et al.* 1980) all show evidence of figure sculpture and elaborate foliate decoration. Recently a spandrel-set figure has been identified at Lanercost Priory and this may have originated in the cloister arcading (Summerson and Harrison 2000, 122, fig. 54). Though no spandrel figure sculpture has yet been discovered at Keynsham it seems quite likely that

some of the spandrel decoration would have included heads or small figures. The presence of these sculpted spandrel bosses suggests that the arcading did not have an internal hoodmould though it is likely that there would have been an external one.

CONCLUSION

This analysis of the main part of the lapidary stone collection at Keynsham Abbey, linked to the archaeological evidence, has greatly expanded our knowledge of the abbey buildings. The plan of the original church has been largely recovered with a greater understanding of the subsequent development of the site and the progressive enlargement of the church in the 14th century and its liturgical fittings. The 12th-century church was a large building by the standards of Augustinian houses at the time and was built in the latest early Gothic West Country style that was then developing out of the Romanesque. Exceptionally the church had high vaults throughout and an unstressed crossing without provision for a crossing tower. The presence of a western axial tower might be indicated by the size of the western nave foundations and the buttresses. This could be seen as following a trend in Augustinian houses for western towers such as that surviving at Lilleshall Abbey and thought to have existed at Kirkham Priory and Gisborough Priory. The church appears to have been built in the latest early Gothic idiom, without recourse to the current taste for developed chevron and other late Romanesque ornament, exemplified by the post-1184 reconstruction at Glastonbury Abbey. The chapter house, by contrast, shows a lavish employment of such forms in the entrance doorway, deriving from earlier works at Malmesbury Abbey, and in the decoration of the ribbed vault. The use of sculpted corbels of unusual design that seem to have featured a cycle of biblical scenes is unprecedented in known English chapter house design.

ACKNOWLEDGEMENTS

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THE ARCHITECTURAL CONTEXT OF THE LATE TWELFTH-CENTURY FABRIC OF KEYNSHAM ABBEY

MALCOLM THURLBY

INTRODUCTION

In a famous article entitled 'A West Country School of Masons', Sir Harold Brakspear identified a range of motifs that he associated with a regional expression of late 12th-century architecture in the west of England, the West and South-west Midlands, and Wales (Brakspear 1931). Brakspear's concept of this school has received wide acceptance but his ideas have been expanded and refined, most importantly for our purposes by Christopher Wilson (1978, 80–90). Wilson's study of the two western bays of the nave of Worcester cathedral – constructed after the fall of the 'new tower' in 1175 – demonstrated that many of the motifs used there are paralleled at Keynsham Abbey (Wilson 1978, 83–5). The connection is hardly surprising because of family ties between the patrons. Keynsham Abbey was founded by William, Earl of Gloucester, in fulfilment of the wish of his dying son, Robert (d. 1166). Subsequently on 16 March 1167, Pope Alexander III granted to Roger, Bishop of Worcester, the founder's brother, the authority to establish, for the salvation of his relatives and especially of Robert his nephew, a house of regular canons at Keynsham (Cheney 1980, 339, n 46). As Wilson suggests, 'it is therefore highly probable that Roger himself was responsible for the recruitment of masons from Keynsham when his cathedral church suffered damage in 1175' (Wilson 1978, 84). Wilson also established links between details of foliage sculpture at Keynsham and Malmesbury Abbey, and significantly enhanced Brakspear's assessment of the role of Malmesbury Abbey in the West Country school. Moreover, he traced certain features back to St Peter's Abbey (now cathedral), Gloucester, in the late 11th and early 12th century.

Barbara Lowe's publication (Lowe *et al*. 1987) of the excavations of the Keynsham Abbey site between 1961 and 1985 contributed immensely to our understanding of the Abbey, especially the chapter house and east walk of the cloister.

The present author's study of the Lady Chapel of Glastonbury Abbey (1184–86/89) showed that many of the architectural and sculptural elements used there were derived from Keynsham (Thurlby 1995). Further investigation has confirmed these connections and has added considerably to our understanding of the place of Keynsham in late 12th-century architecture and sculpture. On the one hand, Keynsham may be seen as a continuation of a well-established architectural tradition in the West Country. This started at St Peter's Abbey, Gloucester, with the work for Abbot Serlo (1089–1100), and may be traced, in embellished mode, through the patronage of Roger, Bishop of Sarum (1102–39), and Henry of Blois, Abbot of Glastonbury (1126–71) and Bishop of Winchester (1129–71). Allied work is also found at Malmesbury Abbey, Leonard Stanley Priory and in the chapter house and gatehouse at St Augustine's, Bristol. On the other hand, many of the motifs used at Keynsham find no precedent in these English works and derive instead from near-contemporary northern French sources. Later associations are with the post–1175 work at Worcester Cathedral and allied Worcestershire churches, the Lady Chapel at Glastonbury Abbey (1184–86/9), and St Davids Cathedral (post-1182).

THE ENGLISH BACKGROUND AND AFFILIATIONS

Twelfth-century chapter houses in England were often richly articulated, although today the evidence for this has to be pieced together carefully from the ruinous state of the majority of the originals. St Peter's, Gloucester, Durham Cathedral and St Augustine's, Bristol, are good examples that survive largely intact, and Much Wenlock is relatively well preserved. At St Frideswide's, Oxford, the 12th-century façade, with rich chevron ornament in the arches, now fronts the 13th-century chapter house (Halsey 1988, 160–7, figs 51 and 65). Scars on the chapter house interior walls at Castle Acre and Reading betray former blind arcades, while excavation and fragments at St Albans (Thurlby 2001), and fragments from St Mary's, York, preserved in the Yorkshire Museum, allow at least a partial reconstruction of those formerly rich examples. St Augustine's, Bristol, is typologically earlier than Keynsham and provides local precedent

for the profuse decoration and the rib vault. Lavish cloisters would have accompanied these chapter houses but today they are represented only by fragments from Reading Abbey (Baxter and Harrison 2002), Norwich Cathedral (Franklin n.d., 5–27) and Bridlington Priory (Thurlby 1989).

This profusion of decoration and many of the specific motifs in the Keynsham chapter house derive from the work at Sarum Cathedral undertaken by Bishop Roger between 1102 and 1139 (Stalley 1971; *RCHME* 1980, 1–24; King 1990; 1996; Tatton-Brown 1998; Thurlby 2000a). The meander or Greek-key pattern (Lowe *et al.* 1987, pl. 42b) is presaged in a fragment from Sarum Cathedral (English Heritage, Salisbury stone store, 81109783). It subsequently appears on the triforium string course in the nave of Malmesbury Abbey, on the north nave string at Sherborne Abbey, on the label of the south nave doorway at Llandaff Cathedral, and at St Davids Cathedral beneath the presbytery east windows and in the nave clerestorey windows. In the north it is used on the south crypt passage doorway of Archbishop Roger of Pont l'Évêque's York Minster (1154–81). Raised semi-circles (Lowe *et al.* 1987, cat. 17b) are used at Keynsham in connection with chevron. They are not on the chevron at Sarum Cathedral but the same raised semi-circles appear on two other Sarum fragments: a hood mould (81109787) and an abacus (81109765). The motif frames beakhead voussoirs from Reading Abbey and it appears later on the hood of the arch to the south porch at Sherborne Abbey. A beaded version is also found at Keynsham (Lowe *et al*. 1987, cat. 17c) which does not appear at Sarum but beads are used on the Sarum abacus fragment (81109765). The motif as it appears at Keynsham is later used on the turrets of the Glastonbury Lady Chapel (Thurlby 1995, fig. 14).

The beginning of chevron ornament in England has long been associated with the second campaign of construction in the nave of Durham Cathedral *c.* 1110/15–33 (Clapham 1934, 128). This view has been modified and it is now generally agreed that the use of chevron on the triumphal and east crossing arch in the Abbey church at Cerisy-la-Forêt (Calvados) dates from the 1080s (Fernie 2000, 276). An early example (*c.* 1090) appears on the west face of the arch from the south nave aisle to the south transept at Great Malvern Priory. By the early 12th century right-angled chevron is applied profusely in the nave of St Peter's, Gloucester, and various types appear in the chapel of Ludlow Castle chapel, and at Hereford cathedral which was commenced between 1107 and 1115. There are no less than 18 different types of chevron from Sarum Cathedral (each of the following pieces – prefixed 81109 – represents a different type in the English Heritage stone store at Salisbury: 701, 704-6, 709, 711, 714, 717–18, 736, 763–4, 769, 782, 786, 789, 805, 849). This variety is reflected in Cormac's Chapel, Cashel (Tipperary) (1127–34) and the west front of Ardfert Cathedral (Kerry) (Stalley 1981, 62–5; O'Keefe 2003, 123–65, 173–5). The tradition continued in Henry of Blois's hospital church of St Cross, Winchester, probably after 1158 (Kusaba 1984), in the nave of the former collegiate church at Steyning (Sussex) (Thurlby and Kusaba 1991), in Archbishop Roger of Pont l'Évêque's work at York Minster (1154–81) (Thurlby 2000b), and in Henry II's castle chapel at Newcastle (1168–78) (Halsey 1980, 68–9). In an Augustinian context, the chapter house and gatehouse at St Augustine's, Bristol, provide excellent examples of this ornamental variety. Specifically, three types of chevron from Keynsham are paralleled in the Lady Chapel of Glastonbury abbey – single chevrons at 45º to either side of an angle roll (Thurlby 1995, figs 15 and 16), the spaced chevron with intermediate 45º triangles (Lowe *et al*. 1987, pl. 15c; Thurlby 1995, fig. 12), and an openwork, lozenge pattern (Lowe *et al*. 1987, pl.17a; Thurlby 1995, fig. 3). The latter form is also used on the transverse arch of the vault of St Mary's gate at St Peter's (Cathedral), Gloucester (Thurlby 1995, fig. 58), on the central eastern lancet of the presbytery at St Davids Cathedral, and on the east side of the arch from the north choir aisle to the north transept at Lichfield Cathedral.

The abacus or frieze of intersecting semi-circles with foliated ends (Lowe *et al*. 1987, pl. 41) is a variant of the beaded intersecting semi-circles on the hood mould of the north arch of St Augustine's, Bristol, gatehouse.

Foliated door jambs (Lowe *et al*. 1987, cat. 42a) are associated with the most ambitious patrons in 12th-century England. Good examples are in the central west doorway at Lincoln Cathedral inserted into the 11th-century façade front by Bishop Alexander, nephew of Roger Bishop of Salisbury (Zarnecki 1988, 28–32). Henry of Blois, Bishop of Winchester (1129–71) and abbot of Glastonbury (1126–71), used the motif in Wolvesey Palace, Winchester, and this has been related to Abbot Suger's west portals at St-Denis (Zarnecki *et al.* 1984, cat. 147a–c). Further examples, albeit less deeply undercut, are on the abbey south porch and west doorway at Malmesbury Abbey, while the

closest parallels for Keynsham are on the north and south doorways of Glastonbury Abbey Lady Chapel (Thurlby 1995, figs 20 and 21).

The vault boss with masks swallowing ribs is paralleled in the apse at Kilpeck (Herefs) (Thurlby 1999, fig. 13), in the chancel at Elkstone (Glos) (Zarnecki 1953, ill. 110), and in the south porch of Sherborne Abbey (Thurlby 2000a, fig. 20). Allied masks consume shafts on the south doorway at Siddington (Glos), the north doorway at Monkton Farleigh (Somerset), the west tower belfry at Beckington (Somerset), the outer left capital of the tower east arch and a dado arcade capital on the north wall of the central axial tower at Englishcombe (Somerset), and a reset capital from Abbotsbury (Dorset) Abbey (Thurlby 2000a, 13, fig. 25). These English examples probably derive from exemplars in Saintonge where the motif enjoyed considerable popularity. Be that as it may, shaft-swallowing masks also appear on the nave aisle buttresses at St-Etienne, Beauvais (Oise) (Henwood-Reverdot 1982, pl. 1).

An allied head at Keynsham (Lowe *et al*. 1987, pl. 35) may have served as a label mask in the tradition of Sarum Cathedral (Zarnecki 1953, ill. 45), St Peter's, Gloucester (Thurlby 1999, fig. 12), the crossing arches at Sherborne Abbey (Thurlby 2000a, figs 14–17), the nave arcades at Malmesbury Abbey (Zarnecki 1953, ill. 46), and elsewhere. The latter are the closest in style to the Keynsham mask.

Of the two other figurated bosses at Keynsham, the one carved with the Agnus Dei may be paralleled in the early Gothic choir of Canterbury Cathedral (Cave 1935, fig. 2). This motif also appears on a boss in the chancel at Crondall (Hants) (Cave 1948, ill. 70), and one in the south nave aisle at Lincoln Cathedral (Cave 1936, pl. viii, fig. 2). The Samson and the Lion boss is the earliest extant historiated vault boss in England. Samson's head type appears to derive from one found locally in the head of a martyr on a historiated capital from Bath Abbey (Zarnecki *et al*. 1984, cat. 116a). The articulation of Samson's draperies with paired parallel lines seems to derive from the figure of Mary Magdalene wiping the feet of Christ with her hair on the north capital of the chancel at Leonard Stanley (Glos) (Saxl 1954, fig. 14). Further parallels for the figure style are found in certain medallions of the arch to the south porch at Malmesbury Abbey (Saxl 1954, pl. lxxxiii), the relief figure of St Paul from Ivychurch Priory (Wilts) (Zarnecki *et al*. 1984, cat. 157b), and the roundels reset inside the north and south nave portals at Maiden Newton (Dorset) (Thurlby 2000a, figs 38 and 39). Analogous attention to fine detail in the beading and drillwork suggests a connection with the sculpture done for Henry of Blois at Glastonbury Abbey (Zarnecki *et al.* 1984, cat. 149a–g). The theme of Samson and the lion is used in the 13th century at Hailes Abbey (Zarnecki *et al*. 1984, cat. 163c; Gardner 1951, fig. 216).

Two paterae found near the entrance to the Keynsham chapter house (Lowe *et al*. 1987, cat. 27, pls. 27a and b) may come from the spandrels of the cloister arcade as in the cloister at Aix-en-Provence Cathedral (Baxter and Harrison 2002, fig. 15). There is also an allied spandrel fragment from Muchelney Abbey preserved in the English Heritage stone store at Salisbury (78700035). Aside from the spandrel setting, the patera motif should be seen against the background of Sarum Cathedral and derivatives on the north portal at Cormac's Chapel, Cashel, the west portal of St Cronan at Roscrea (Tipperary) and the north portal at Lullington (Somerset) (Stalley 1971, 79–80, pl. xix). Closer in date to the work at Keynsham are the paterae in the triforium of the west bays of the nave at Worcester Cathedral, where the specific form of 'ice-cream whirls' repeats a design on a voussoir from Keynsham (Thurlby 1995, figs 8 and 10). This very design is subsequently used in the Glastonbury Lady Chapel (Thurlby 1995, figs 7–9, 11, 13 and 18).

A fragment of a capital and a number of shafts from Keynsham are executed in Blue Lias, a stone that served as a regional variant of the Purbeck marble popularized in the choir of Canterbury cathedral after the 1174 fire. Once again, close parallels for this very use of Blue Lias are with Glastonbury Abbey Lady Chapel, but the use of dark marble may be traced back much earlier in the 12th century. It is found in the nave of the Temple church, London, which would have been completed for the entry into the church in 1161 (Lees 1935, lxxxvii–lxxxviii), and St Cross hospital church at Winchester for Henry of Blois. Tournai and Purbeck marble were used by Henry of Blois in his palace at Wolvesey, while in his work at Glastonbury Abbey polished Blue Lias served as a substitute for marble (Zarnecki *et al.* 1984, cat. 149). Purbeck marble was used in Faversham Abbey for King Stephen between 1148–54 (Zarnecki *et al*. 1984, cat. 146). Purbeck, Tournai, Sussex and Bethersden marbles were popular for cloisters in the third quarter of the 12th century, as in the infirmary cloister at Canterbury Cathedral, St Nicholas's Priory at Exeter (Brakspear 1915–16), Battle Abbey, Lewes Priory, Rochester Cathedral, Shaftesbury Abbey and Fountains Abbey chapter house. Close to Keynsham, polished dark shafts were

used at Bristol St Augustine's in the windows between the vestibule and the chapter house.

Brakspear (1931, 6–7) identified the alternation of continuous and non-continuous mouldings, as in the responds of the arch from the south transept to the south nave aisle at Keynsham, as one of the characteristics of the West Country school. As it appears at Keynsham with the continuous quadrant roll next to a nibbed (ogee keeled) shaft on a moulded base, we encounter the most popular arrangement in the early Gothic West Country. Parallels occur in the arch to the infirmary passage and in the triforium of the nave west bays at Worcester cathedral, and the south and west doorways at Bredon (Worcs), a church that belonged to the Bishop of Worcester. A possible antecedent is in the east processional doorway at Flaxley Abbey (Gloucestershire), a Cistercian house founded in 1151. The idea of alternating continuous quadrant rolls and plain shafts with bases and capitals may be traced back to the choir aisle responds at St Peter's, Gloucester, commenced in 1089 (Wilson 1978, 82).

Triple-roll vault ribs first appear in England in the 1120s at Sarum cathedral and at Reading abbey but with heavier rolls than at Keynsham (Thurlby and Baxter 2002). Closer to Keynsham are the diagonal ribs in Buildwas Abbey, and those in the nave aisles at Malmesbury Abbey, the chapter house at Forde Abbey (Thurlby 2000a, figs 22 and 23) and the south porch at Sherborne (Thurlby 2000a, fig. 20). The double-roll vault ribs are paralleled in the diagonal ribs of the chapter house at Buildwas Abbey (Lowe *et al.* 1987, cat. 16a)

The closest parallel for the recessed shafts at Keynsham seems to be in the responds of the entrance arch to the Becket Chapel in the north transept at St Davids Cathedral. However, the tradition of recessing shafts into the wall goes back to the entrance arch of the north transept chapel and the chapter house at St Peter's, Gloucester. The motif is subsequently used in the West Country in the crossing piers at Leonard Stanley, the east crossing piers at Malmesbury Abbey (Thurlby 2000a, fig. 5), and the chapter house vault responds at Forde Abbey (Thurlby 2000a, 11–12, fig. 22) and Bindon Abbey (*RCHME* 1970, 404–6, pl. 204).

The Keynsham foliage capitals take on a chalice shape and are carved mainly with late-Romanesque foliage types. Parallels are found at St Mary's Shrewsbury, on the chapter house façade and *lavatorium* at Haughmond Abbey (Lowe *et al*. 1987, cat. 21), in the chancel at Blockley, (Worcs), in the south porch at Sherborne Abbey, and on the lecterns at Crowle and Norton (Worcs), and on fragments of the related lectern from Much Wenlock (Salop) (Lowe *et al*. 1987, cat. 20; Pearson *et al.* 2002). There are also fragments of stiff leaf from the chapter house at Keynsham (Lowe *et al*. 1987, cat. 42a). The earliest datable stiff leaf is at Wells Cathedral which was probably commenced in 1175. This suggests that work on the Keynsham chapter house would have continued until at least 1180.

The bases at Keynsham range typologically from pre-water holding to water holding. The earliest datable water-holding base is in the chapter house at Fountains Abbey by 1170. More relevant for Keynsham is the juxtaposition of pre-water holding and water-holding bases in the east arcade and the east aisle responds of the north transept at Wells Cathedral. I have not found a precedent in the West Country for the capitals carrying bases at Keynsham, but later analogues appear in the western bays of the nave of Llandaff Cathedral, probably after 1193.

The use of calcerious tufa for the vault web of the Keynsham chapter house belongs to a tradition in the West Country established in the late 11th century (Thurlby 2004). The lost Romanesque nave and nave aisle vaults at Chepstow Priory were documented in 1838 as having had tufa webs (Ormerod 1861, 82). There is strong evidence to suggest that the former Romanesque high barrel vaults at Tewkesbury Abbey were constructed in tufa (Thurlby 2003a, 98). Tufa was used for the Romanesque vault in the chapter house at Worcester Cathedral, after 1175 in the vaults of the western bays of the south nave aisle there (Thurlby 2004, 158, fig. 8.4). The vaults of the chapel at Bishop Roger's chapel at Sarum Castle and the chapter house of Much Wenlock Priory also included tufa. After Keynsham chapter house, tufa appears in the vaults of the Great Church at Glastonbury Abbey (Thurlby 2004, fig. 8.3), the nave of Witham Friary church and possibly in the nave high vault of St Davids Cathedral (Thurlby 2003b).

FRENCH CONNECTIONS

Outside the West Country school, the nibbed shaft is used in the main arcade piers of the presbytery at St Andrews Cathedral, commenced between 1160–62 (Thurlby 1994, pl. viB). It also features in the chapter house at Trondheim Cathedral after 1161, probably as a reflection of the work of Archbishop Roger of Pont l'Évêque at York Minster (Fischer 1965, 108–20; Wilson 1986, 97–8). It seems likely

that the motif was adapted from keeled mouldings on piers as in the nave at St-Etienne at Beauvais (Henwood-Reverdot 1982, ills 45 and 52), on the crossing piers at Lucheux (Somme) (Enlart 1895, pl. opp. 132), and the choir of the Premonstratensian Abbey of Dommartin (Pas-de-Calais), after 1153 (Enlart 1895, 104–22, fig. 83).

The shaft-cluster piers from the crossing at Keynsham may also derive from northern France, as in the nave at Berteaucourt-les-Dames (Somme), and from Selincourt reused as a cross base at Méricourt-en-Vimeau (Somme) (Thurlby 2000b, ills 4 and 5). However, we must bear in mind that an eight-shaft cluster pier appears in the south nave arcade at St James's Priory, Bristol, founded in 1144 as a daughter house of Tewkesbury Abbey.

Keeled roll mouldings first appear in England in the vault ribs of Durham Cathedral chapter house (1133–40) and in the north doorway of the west front of Lincoln Cathedral (after 1141). They are used earlier in Picardy, as in the choir ribs at Namps-au-Val (Somme) (Enlart 1895, fig. 110).

Gorged roll mouldings are most readily found in works associated with Archbishop Roger of York, and at St Andrews Cathedral (Thurlby 1994, pl. viC) and Trondheim Cathedral (Wilson 1986, fig. 5; Thurlby 2000b, ill. 70). They are also used in the nave arcades of the Temple church in London. The motif is relatively unusual in the West Country but it appears on the west portal and west windows of Margam Abbey and on the arches of the chapter house entrance at Coombe Abbey. Like the keeled roll, the gorged roll was earlier used in northern France, as in the windows of the radiating chapels at Noyon Cathedral.

Trumpet-scallop capitals also seem to derive from French exemplars, although it should be recognized that a trumpet-like cushion capital is used in the crypt of Worcester Cathedral between 1084 and 1089 (Baylé 1991, ill. 700). Wilson (1978, 84) drew attention to the trumpet-scallop capitals at St Père at Chartres, but perhaps the examples at Airaines (Somme) (Enlart 1895, pl. opp. 52) are a more likely source for the English work. Wilson (1978, 84) also mentions that trumpet-scallop capitals appear at Henry of Blois's hospital church of St Cross, Winchester (Kusaba 1984). It is tempting to speculate that trumpet scallops would also have been used in Henry of Blois's work at Glastonbury Abbey but, unfortunately, no examples survived the fire of 1184. After the start of Keynsham, trumpet scallops became the capital of choice in the west bays of Worcester cathedral, at Llanthony Priory and Wigmore Abbey, and at St Davids Cathedral. Similarly, the Keynsham trumpet scallops enriched with foliage inspire similar work at Worcester and St Davids Cathedrals.

Fig. 1 Keynsham Abbey: figure fragment

FIGURE SCULPTURE AND MICRO-ARCHITECTURE

The 1961–1985 excavations revealed numerous fragments of figure sculpture from the chapter house (Lowe *et al.* 1987). The cloth rippling over the feet of one figure (Lowe *et al.* 1987, pl. 39) is allied to the first magus before Herod on the second order of the north doorway of the Glastonbury Lady Chapel. A genuflecting figure (?angel), from Keynsham is remarkable for the delicate rendering of the softly channeled folds of the garments that subtly articulated the bodily form of the figure (Fig. 1). The parallel with the genuflecting magus on the fourth order of the north doorway of the Glastonbury Lady Chapel is especially close (Fig. 2). Generally classicizing as the draperies of these figures are, it is the detail of the girdle tied high on the waist of the Keynsham fragment that suggests the sculptor had access to high-quality antique models. This could have come about in two ways, either through Roman

Fig. 2 Glastonbury Abbey Lady chapel: north doorway, detail of magus

sculpture at Bath, or through sculpture brought to Winchester by Bishop Henry of Blois (1129–71) (Zarnecki 1986; Riall 1994; Williamson 1995, 102, ill. 153). John of Salisbury relates the story of Henry buying up antique statues in Rome and shipping them to England. Nothing of the collection is known to survive but the classicism of the female figure from the Deanery porch now preserved at the east end of the south aisle of the retrochoir at Winchester Cathedral surely came about through the sculptor's study of antique models (Williamson 1995, 113, ill. 173). Henry of Blois was also abbot of Glastonbury (1126–71) and he was responsible for a lot of building there. Unfortunately, this was destroyed in the great fire of 1184 and only a few excavated fragments survive to attest to the high quality of the work Henry commissioned. One such fragment (Fig. 3) is a base spur carved with a stylized head with undulating eyebrows that seems to foreshadow a mask at Keynsham (Lowe *et al*. 1987, pl. 35). No figure sculpture remains that can be attributed to Henry's patronage at Glastonbury but it is tempting to suggest that he might have been the catalyst for a classicizing figure style, just as he set the trend for the use of dark marble. In other words, it is possible that the work at Keynsham was inspired by Henry of Blois's work at Glastonbury. Be that as it may, the link between Keynsham and the sculpture of the north doorway of the Glastonbury Lady Chapel is confirmed by the form of the fragments of miniature architecture at Keynsham (Lowe *et al*. 1987, cat. 40) in relation to the canopy above the Nativity on the Glastonbury doorway (Thurlby 1995, fig. 34).

The fragmentary historiated capital from Keynsham chapter house, which may represent the Annunciation to the Shepherds (Lowe *et al.* 1987, cat 37, pl. 37), was originally topped with a semi-octagonal abacus and probably stood above two single shafts each supported by a small corbel. The scale of the fragment suggests that it was probably part of an elaborate vault respond. Historiated capitals did not enjoy enormous popularity in England in the 12th century but it is interesting that two capitals from Bath Abbey, carved with scenes of martyrdom, probably come from the crossing of the church (Zarnecki *et al.* 1984, cat. 116a and b). Also in a west of England context the presbytery vault capitals at Leonard Stanley Priory are carved with the Nativity and Mary Magdalene wiping the feet of Christ (Saxl 1954, fig. 14; King 1990, figs 7, 9, 12a and 19). Starting in the early 1180s there are the historiated capitals in the west arcades of the transepts at Wells Cathedral capitals (Gardner 1956) and their interesting, little-known derivatives in the nave south arcade at Hawkchurch (Devon) (Thurlby 1997, 36, pl. viiiD), and in the choir and transepts at Christ Church, Dublin (Stalley 1979).

CONCLUSION

The ambitious late 12th-century work at Keynsham Abbey was intended to vie with the most prestigious

Fig. 3 Glastonbury Abbey: fragment of Blue Lias base

buildings of the time. Many aspects of its rich and varied articulation and ornamentation belong to a well-established tradition in the West Country, especially in the works associated with Roger, bishop of Salisbury (d. 1139), and Henry of Blois, Abbot of Glastonbury and Bishop of Winchester (d. 1171). It is frustrating that so little remains of Henry's buildings at Glastonbury, in that surviving fragments suggest that his work would have been a major influence on Keynsham. Be that as it may, the association of certain features at Keynsham with northern French exemplars indicates a strong desire to integrate the most progressive elements of the day with the well-established, richly ornamented architectural tradition. In this respect, Keynsham stands as a West Country counterpart to Archbishop Roger's new choir at York Minster, and Bishop Puiset's Galilee chapel at Durham Cathedral. In turn, Keynsham influenced the continuation of this tradition in the Glastonbury Lady Chapel and St Davids cathedral.

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