
Proceedings of the Cambridge Antiquarian Society

(incorporating the Cambs and Hunts Archaeological Society)

Volume LXXXI

for 1992



Recent Publications of the Cambridge Antiquarian Society

Proceedings LXXVIII, 1989: Price £6 for members, £7.50 for non-members

MARSHALL JOSEPH BECKER: *Skeletal Remains from a Roman Sarcophagus in the Collections of the Fitzwilliam Museum, Cambridge*

CATHERINE HALL & ROGER LOVATT: *The Site and Foundation of Peterhouse*

ANNE HOLTON-KRAYENBUHL, THOMAS COCKE & TIM MALIM: *Ely Cathedral Precincts: The North Range*

C.C. TAYLOR: *Spaldwick, Cambridgeshire*

DAVID TRUMP: *Anglesey Abbey — A Resistivity Survey Exercise*

Proceedings LXXIX, 1990: Price £6 for members, £7.50 for non-members

C.N.L. BROOKE: *Cambridge and the Antiquaries, 1500–1840: The 150th Anniversary Lecture, Delivered on 12 March 1990*

ROBERT MIDDLETON with illustrations by R.A. PARKIN: *The Walker Collection: A Quantitative Analysis of Lithic Material from the March/Manea Area of the Cambridgeshire Fens*

JOAN P. ALCOCK: *The Bassingbourn Diana: A Comparison with Other Bronze Figurines of Diana Found in Britain*

TIM MALIM: *Barrington Anglo-Saxon Cemetery, 1989*

WENDY HORTON & GERALD WAIT: *St Neots Priory, 1989*

GRAHAM CHAINEY: *The Lost Stained Glass of Cambridge*

NIGEL HOLMAN: *A Different Kind of Cambridge Antiquarian: Marshall Fisher and his Ely Museum*

ALISON TAYLOR: *Excavations in Cambridgeshire, 1989 and 1990*

Book review: *The Drainage of Wilbraham, Fulbourn and Teversham Fens*

Proceedings LXXX, 1991: Price £10 for members, £12 for non-members

TIM MALIM & ALISON TAYLOR: *Cambridge Castle Ditch*

VIRGINIA DARROW OGGINS & ROBIN S. OGGINS: *Hawkers and Falconers Along the Ouse: A Geographic Principle of Location in some Serjeanty and Related Holdings*

DAVID SHERLOCK: *Wisbech Barton's Farm Buildings in 1412/13*

GRAHAM CHAINEY: *Royal Visits to Cambridge: Henry VI to Henry VIII*

GRAHAM CHAINEY: *King's College Chapel Delineated*

A.E. BROWN & C.C. TAYLOR: *A Relict Garden at Linton, Cambridgeshire*

C.P. LEWIS: *John Chapman's Maps of Newmarket*

GERALD A. WAIT: *Archaeological Excavations at Godmanchester (A14/A604 Junction)*

HILARY WAYMENT: *King's College Chapel: Additions to the Side-Chapel Glass 1991*

ALISON TAYLOR: *Field-work in Cambridgeshire: November 1990–June 1991*

Proceedings of the Cambridge Antiquarian Society

(incorporating the Cambs and Hunts Archaeological Society)

Volume LXXXI

for 1992

Published by the Cambridge Antiquarian Society 1993

ISSN 0309-3606

Officers & Council, 1991-92

President

M.W. THOMPSON, M.A., Ph.D., F.S.A.

Vice-Presidents

MISS M.D. CRA'STER, M.A., F.S.A.

C.A. SHELL, M.A., Ph.D.

D.R. WILSON, M.A., F.S.A.

Disney Professor of Archaeology

PROFESSOR LORD RENFREW, M.A., Sc.D., F.S.A., F.B.A.

Curator of the University Museum of Archaeology and Anthropology

D.W. PHILLIPSON, M.A., Ph.D., F.S.A., F.R.G.S.

Ordinary Members of Council

M. COLES

C.J. EVANS, M.A.

G.H. FIELD, A.R.I.B.A., A.I.A.rh.

R.E. GLASSCOCK, M.A., Ph.D., F.S.A.

MRS A. HOLTON-KRAYENBUHL, B.A.

M.D. HOWE, B.A., A.M.A.

PROFESSOR N.J. POUNDS, M.A., Ph.D., F.S.A.

F.M.M. PRYOR, M.A., Ph.D., F.S.A., M.I.F.A.

F.H. STUBBINGS, M.A., Ph.D., F.S.A.

B.D. THRELFALL, M.A., C.Eng., M.I.C.E., F.F.B.

A. WOODGER

Secretary

PROFESSOR M.B. HESSE, M.Sc., Ph.D., F.B.A.

Editor

MISS A.S. BENDALL, M.A., Ph.D., F.S.A., A.L.A.

Hon. Librarian and Assistant Editor

J.D. PICKLES, M.A., Ph.D., F.S.A.

Registrar

MRS R. DESMOND

Treasurer

T.E. HOARE

Editor of Conduit

R.I. BURN-MURDOCH, M.A.

Excursions Officer

MRS L. POTTER

County Archaeological Officer

MISS A.F. TAYLOR, B.A.

Representative of Cambridgeshire Local History Society

MISS A.E. COOPER, B.A.

Hon. Auditor

R.E. SEATON, C.I.P.F.A., I.I.A.

Contents

Survey Excavation on the Long Field at Rookery Farm, Great Wilbraham W.H.C. Frend & A. Cameron	5
Anglo-Saxon Burials at the 'Three Kings', Haddenham 1990 Ben Robinson & Corinne Duhig	15
Three Earthwork Surveys Cambridge Archaeology Field Group	39
A Note about the Transept Cross Aisles of Ely Cathedral J. Philip McAleer	51
The Medieval Wall Paintings of St Mary and All Saints, Willingham Julie Chittock	71
Changes in the Huntingdonshire Landscape, 1550–1750 Stephen Porter	81
Who Were the Fen People? Polly Hill	97
Wyatville's Remodelling and Refurbishment of Sidney Sussex College, 1820–1837 Peter Salt	115
Field-Work in Cambridgeshire: July 1991 – December 1992 Alison Taylor & Christopher Evans	157
<i>Index</i>	169

A Note about the Transept Cross Aisles of Ely Cathedral

J. Philip McAleer

It is generally agreed that the north and south end walls of the two-aisled east transept at Ely Cathedral were intended to have the aisles returned across them. In this way, the aisle vaults were to form the floor of a gallery which constituted the second stage of the elevation, in the manner still preserved at Winchester Cathedral (1079-93) (Plate 1).¹ The debate has not been what was intended but, rather, whether such cross aisles and galleries were ever actually built.²

In his architectural history of the cathedral, published in 1868, D.J. Stewart commented that the evidence of a cross aisle having abutted the east and west side aisles of the transept had formerly been clear, particularly in the south arm.³ Writing in 1953, in his history of the cathedral for the *Victoria County History*, T.D. Atkinson noted Stewart's remark, and further commented

'... it would seem that these evidences were removed within his [Stewart's] own memory. We must accept this clear statement'.⁴ Then, however, Atkinson proceeded to cast doubt on it: 'But it is possible that what Stewart saw was the "toothing" formed in the walls of the side aisles for bonding in the cross aisle at a later but not distant time'. Atkinson proposed that the architectural evidence pointed the other way. The arches of the cross aisle in the south arm, he argued, would have sprung from round piers; he considered this an awkward arrangement. Atkinson therefore thought that the south transept arm was only built after the idea of a south (cross) aisle had been abandoned. Since, in the north arm, the corresponding piers are compound rather than round, he felt that the cross aisle had 'probably' been built there, because the shape of the pier was more suitable for the arches of the cross aisle. Atkinson only considered one feature of the two transept arms and so based his argument on logic rather than on architectural evidence; he also ignored the stylistic evidence which suggests the south arm is actually earlier than the north arm, not the reverse.⁵ His conclusions

¹ For Winchester see R. Willis, 'The architectural history of Winchester Cathedral', *Proceedings of the Archaeological Institute of Great Britain* (1845; reprinted in *Architectural History of Some English Cathedrals: A Collection in 2 Parts of Papers Delivered During the Years 1842-1863* [Chicheley 1972 and 1973] and, separately, by the Friends of Winchester Cathedral [Winchester 1980]) pp.23-8.

² A. Clapham, *English Romanesque Architecture. Vol.2. After the Conquest* (Oxford 1934) p.38, n.1 ('Never actually executed in masonry'); N. Pevsner, *Buildings of England: Cambridgeshire* (Harmondsworth 1954) p.276 (of the south arm: '... so one may presume that the original plan was for a balcony the width of one whole bay, exactly as it still exists at Winchester. Whether this was ever built or not, cannot be said'), p.277 (of the north arm: '... but the narrow balcony, replacing also what was, or was meant to be, a wider one ... must have been put in almost immediately after the completion of the transept ...').

³ D.J. Stewart, *On the Architectural History of Ely Cathedral* (London 1868) p.31.

⁴ T.D. Atkinson, '[Topography, City of Ely:] cathedral', in *Victoria History of the Counties of England (VCH). Cambridge and the Isle of Ely*. Vol.4. (London 1953) p.51, n.15, for this and the following quotations. Stewart, *op. cit.* p.32, blamed the removal of the marks of the junction on masons employed to clean the church of its coats of plaster and white-wash.

⁵ At the lower level, which is all that concerns us in this instance, the later date for the construction of the north arm vis-à-vis the south is the appearance of cushion capitals in the two north chapels of the east side, and then on the piers of the west aisle. From this point on, cushion capitals are used exclusively at Ely, in contrast to the volute capitals

were in contrast to Stewart's, for the latter wrote as if he was certain that both end aisles had been built.

Archaeological evidence has recently come to light which strongly supports the thesis that the cross aisle of the south arm was actually built. In her Ph.D. dissertation, S. Ferguson reported remains of groin vaulting which would have covered the eastern of the two bays of the cross aisle proper.⁶ The remnants of this vault (Plate 2) are located in a space behind the arcade of the narrow walkway, or 'bridge', which now connects the gallery levels above the transept's east and west aisles (Plate 3). Access can now be gained from a hole broken through the side wall of the fourteenth-century stair-turret, which is located at the junction of the east aisle and the walkway. The stump of a rubble vault survives, bonded into the well-cut ashlar of the inner face of the south wall of the transept arm. The vault still even has an area of plaster on its under surface. These remains are clearly those of a vault which has been torn down, not of one which was never completed.⁷

Thus, despite Atkinson's objections, there is strong evidence that a cross aisle was built in the south arm. Other more easily visible architectural features, hitherto ignored, support the hypothesis. For, despite Stewart's report (before 1868) that the evidence, 'at one time very distinct', had been 'obliterated', and Atkinson's apparent failure to see any evidence to the contrary, there remain, I think, strong indications in the spandrels of the east and west sides of both transept arms that the cross aisles were indeed built.⁸

which appeared in the south arm and southeast bays of the north arm. On the exterior, there is a change in the design of the window frames at the northeast angle of the north arm: the windows of the north and west wall have jamb-shafts and a continuous billet moulding surround, while those of the south arm (west wall and east bay of south wall — all the windows of the east walls of both arms have been altered) are smaller, with plain jambs and a moulded arch.

⁶ S. Ferguson, 'The Romanesque cathedral of Ely. An archaeological evaluation of its construction' (unpubl. Ph.D. dissertation, Columbia University, New York 1986) Appendix C pp.308-10, Figs. 44, 47-8.

⁷ Ferguson, (*ibid.* p.310, Fig.47) also pointed out other evidence of the vault inside the fourteenth-century stair turret in the form of an 'arched mortar joint that follows the elliptical section of a groin'. This scar is actually five voussoirs of the outer order of the southernmost arch of the east aisle, which is embraced by the turret, cut back to conform to the curve of the inner wall of the turret.

⁸ Ferguson, (*ibid.* pp.194,310) mentioned 'scars' and 'masonry disturbances' in the east and west span-

The former existence of the two bays of the cross aisles has been mostly hidden by careful rebuilding of the outer order of the arch of the southernmost bay on each side. The unmoulded voussoirs of the outer archivolts are identical in style to the other arches of the east and west aisles, so much so that initially they all appear to be of one — original — build. However, the spandrels above the round piers in the south arm (Plates 4 and 5) each bear a distinct vertical scar at exactly the point where one would expect the face of the arcade of the cross aisle to have abutted the east and west side aisles. In addition to the vertical scars, there is an important irregularity which is nearly identical on each side. Unlike the other arches of each aisle, the southern end of the outer order of each of the penultimate bays does not spring from the pier capital with a series of voussoirs whose extrados describes a curve parallel to their intrados. Rather, the curve of the extrados becomes defined only at a point well above the impost surface, at the sixth course on the west side and the ninth on the east. The best explanation of this anomaly is that it was likely that the springing of these orders had initially been built at right angles to an existing flat wall. The vertical scar occurs at just the point where the face of an abutting arcade would be expected, well to the north of the axis of each pier. It is clearest above the point where the extrados curve begins, and is particularly evident due to an irregularity in the plane of the spandrel: the new section was not quite aligned with the old in terms of its surface plane.

The reconstruction of the southernmost arch on each side has, on the whole, been carried out quite carefully in order to create an impression of continuity and uniformity with the bays to the north. It is very likely that the close stylistic agreement of the two orders of the end arcades is due to the fact that the outer orders are indeed actually the arches of the cross aisle reset. The early groin vaults of the western aisle of the south arm are separated by wide transverse arches of only one order. These arches project only slightly below the surface of the vault. In the end bays, the arch spanning from round pier

drels of the south transept arm's aisle arcades but did not provide any further details; nor did she discuss (pp.116-18,176) the evidence for the construction of the cross aisle in the north arm. Her Figs 85 and 151 imply that the north cross gallery was never even started, let alone built; cf. p.322, n.46 (on p.329), 'it [is] impossible to determine whether a transept tribune had been built before the present bridge was put in'.

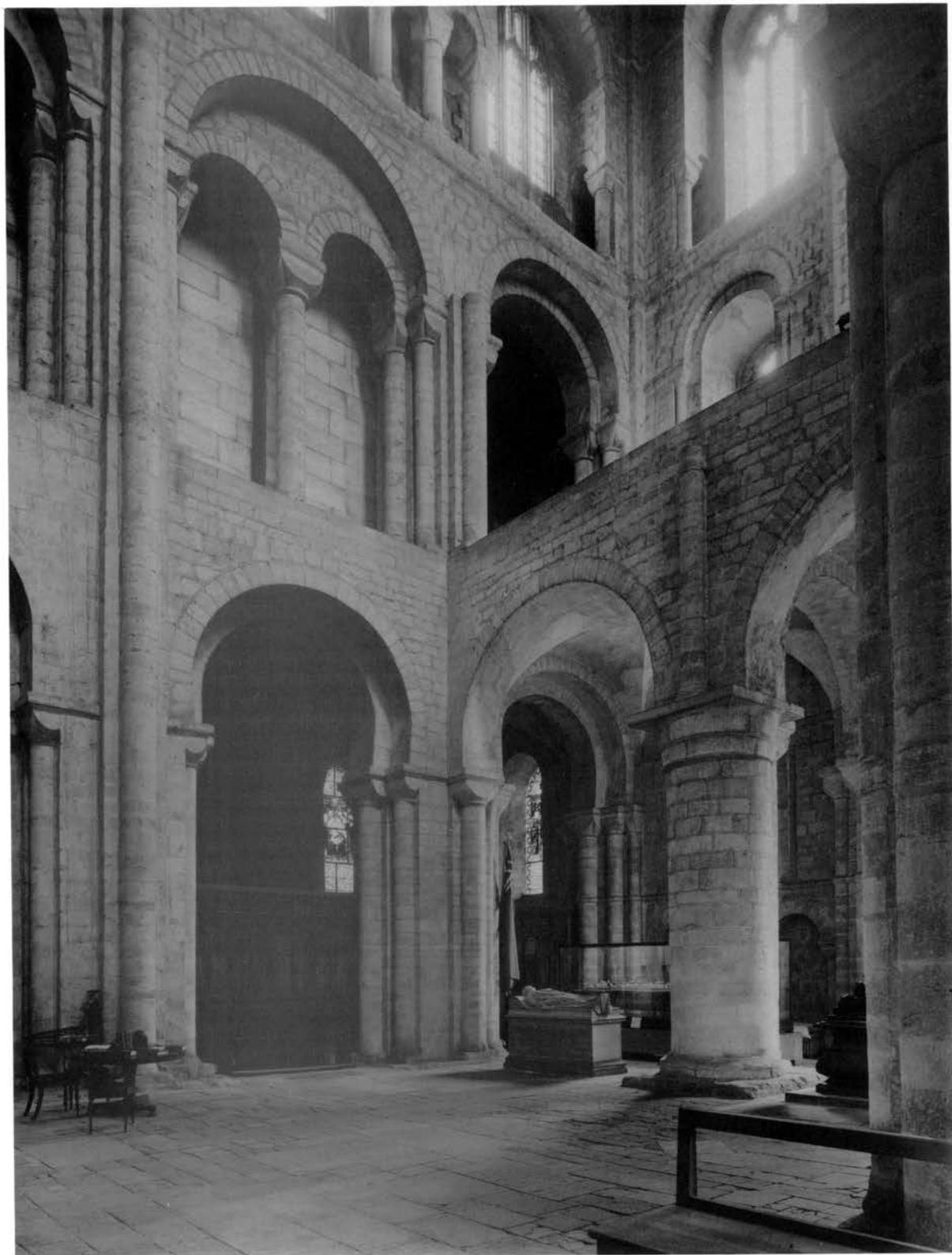


Plate 1. Winchester Cathedral. North transept arm. (photo: RCHME, Crown Copyright)

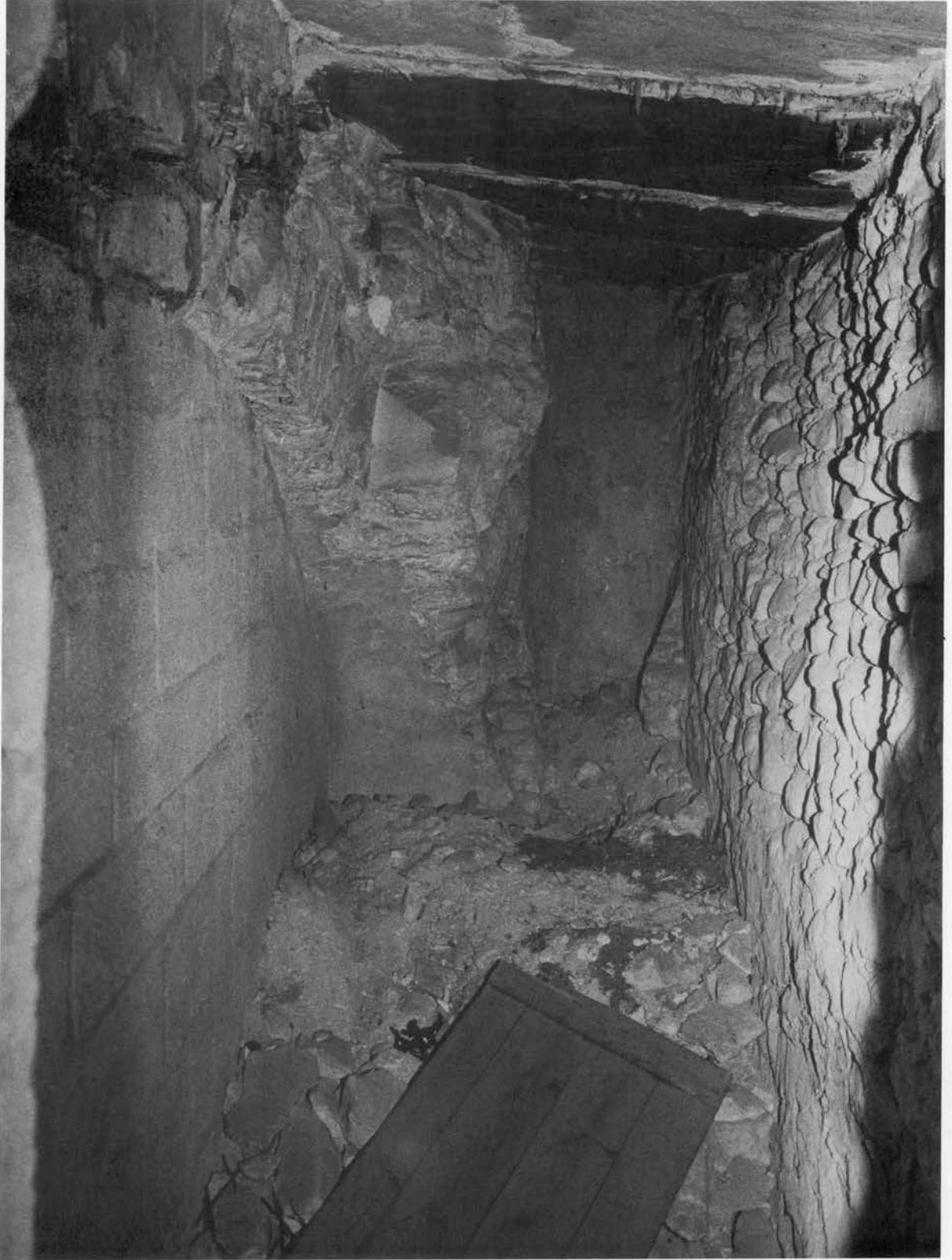


Plate 2. Ely Cathedral. Remains of groin vault against S wall of transept (inside bridge structure).
(photo: author)

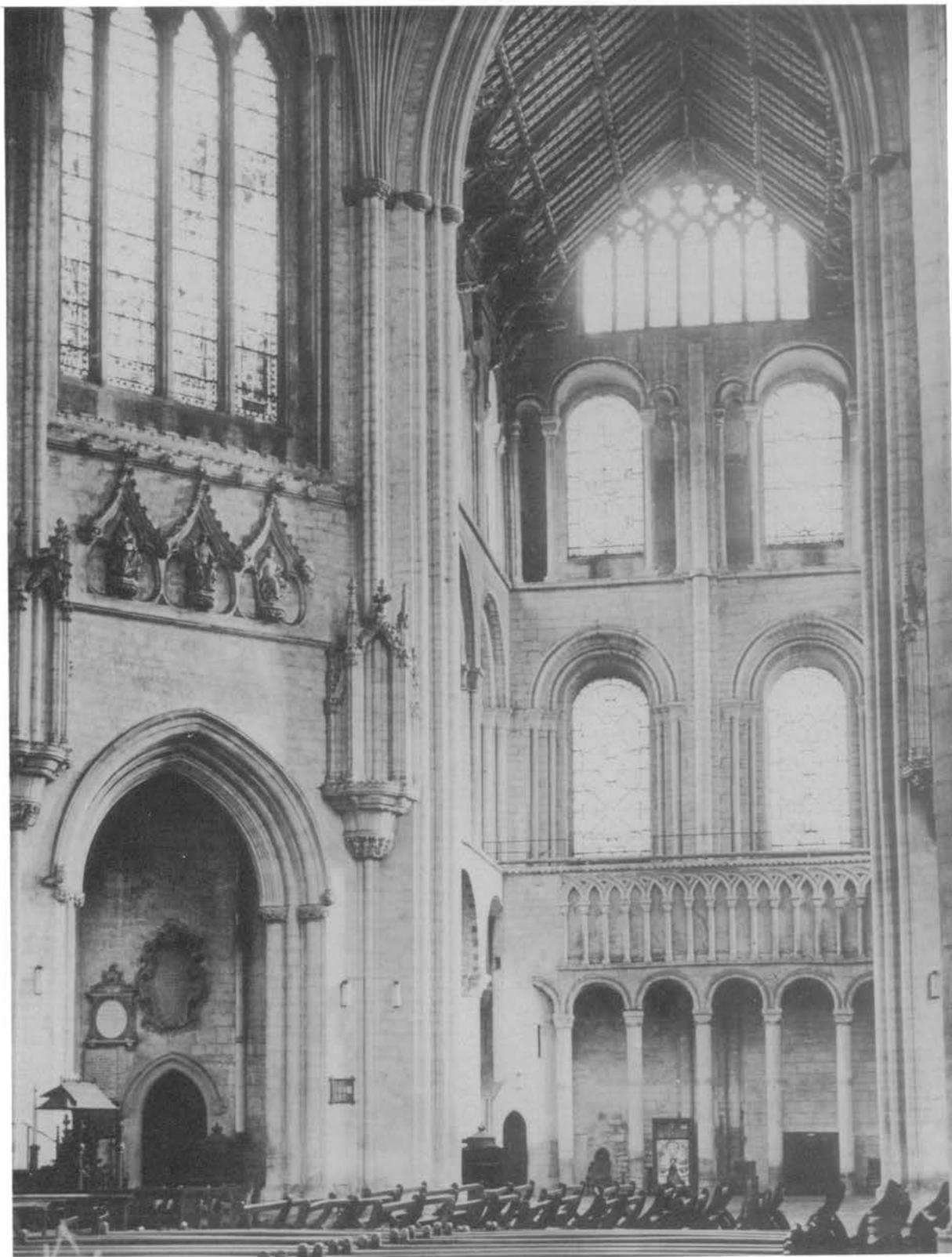


Plate 3. Ely Cathedral. South transept arm viewed from octagon. (photo: RCHME, Crown Copyright)

to wall was necessarily supplemented — and strengthened — by the addition of the voussoirs of the single order of the dismantled arches. The billet-decorated string-course above must also have been reset from the cross bays.

This evidence on the south side can be matched on the north closely enough, despite the different conditions, to support the conclusion that the cross aisle here, too, was actually built. There is no parallel to the inserted stair-turret of the south arm, as the original newel-stair in the north wall (just west of the north responds of the east arcade) begins at floor level. However, evidence of the former groin vault of the cross aisle can be found below the vaults of the narrow cross walkway (Plate 6). In the middle of the wall, the original respond for the cross aisle pier is still in position, consisting of a double layer of pilasters with a half-shaft on the axis and smaller shafts in the angles. The respond was placed between the two end windows and is now under the central bay of the arcade supporting the walkway. Above the east angle-shaft of this now 'useless' respond, the springing of a groin vault is still visible, a fragment which makes no sense in the context of the vaulting of the walkway which actually engulfs it. The former transverse arch has been cut back and refaced to form a curving surface which rises over the respond half-shaft.⁹

Due to the asymmetrical design of the pier system of the Ely transept arms, the piers which correspond in position to the round piers on the south are compound on the north. (They are those which Atkinson thought a more appropriate support for two arcades departing at right angles to each other.) On both the east and west sides, disturbances in the masonry of the piers indicate once again the removal of a cross arcade. On the east side, these irregularities are especially evident at the level of the capital and impost (Plate 7). The shaft which here rises from pier base to gallery floor string-course is neatly constructed up to the level of the volute capitals of the aisle arcade. At that point the coursing of the shaft includes one unusually high course and is succeeded by one unusually low course. These courses correspond to the coursing heights of the adjacent arcade capital (high) and impost (low). The surfaces of the two courses are not in the same plane as the curving surface of the half-

shaft below, and bulge out slightly. Their form and the irregularities of their surfaces can be explained as the result of the cutting away of the outward-flaring portions of a volute capital and chamfered impost. In addition, it should be noted that the ends of the converging sections of the arcade imposts have been cut away on an irregular diagonal. Above this level, the continuation of the half-shaft is notable for the bumpy irregularity of its surface. This can be compared to the smooth regularity of the curve of the shaft below.¹⁰ The masonry of the spandrels to either side is also clearly disturbed and rough-surfaced, which suggests that a wall had been ripped out and that blocks for the continuation of the lower half-shaft had been inserted.

The situation on the west side of the north arm is almost exactly identical (Plate 8). Once again, at the level of the arcade capitals, which here are single scallop ('cushion') in form rather than volute, there is an interruption in the general uniformity of the heights of the courses. A high course is followed by a very low one, thus corresponding to the heights of the capitals and impost to either side. The slightly projecting surfaces of these blocks, as on the south, sustain the interpretation that a capital and impost have been trimmed back to continue the curve of the half-shafts. Here, too, the adjoining ends of the arcade imposts have been hacked off. Consequently, the zone at the level of the capital and impost, on both the east and west sides, forms a distinct contrast to the corresponding zone of the southernmost pier on the east side (now partly engulfed by the pier of the fourteenth-century Octagon). As no capital was intended or removed at this point, the shaft at the level of the respond capitals of the pier consists of two narrow courses of masonry with the impost directly abutting the shaft on each side (Plate 9). Furthermore, the upward continuation of the half-shaft in the end bay displays the same irregularity of surface as that on the east. The coursing of the masonry in the adjoining spandrel surfaces is likewise disturbed, again suggesting that the shaft above the level of the impost has been inserted. It would also seem, as on the south, that the arches under the cross gallery were reset to form the north arches of

⁹ Ferguson, (*ibid.* pp.321-2) attributed this addition to Wren's restoration campaign (see below n.11) on the basis of its 'smooth-grained stone'.

¹⁰ Atkinson, 'Cathedral', p.51, n.15, did observe a 'slight kink in the shaft against the northeast pier rising from floor to roof'. This he explained as follows: 'This shaft would be interrupted by the wall of the cross-aisle; when that was removed it was found that the upper part was not exactly over the lower part; thus the length of shaft to be built to connect the two had to be built slanting'.

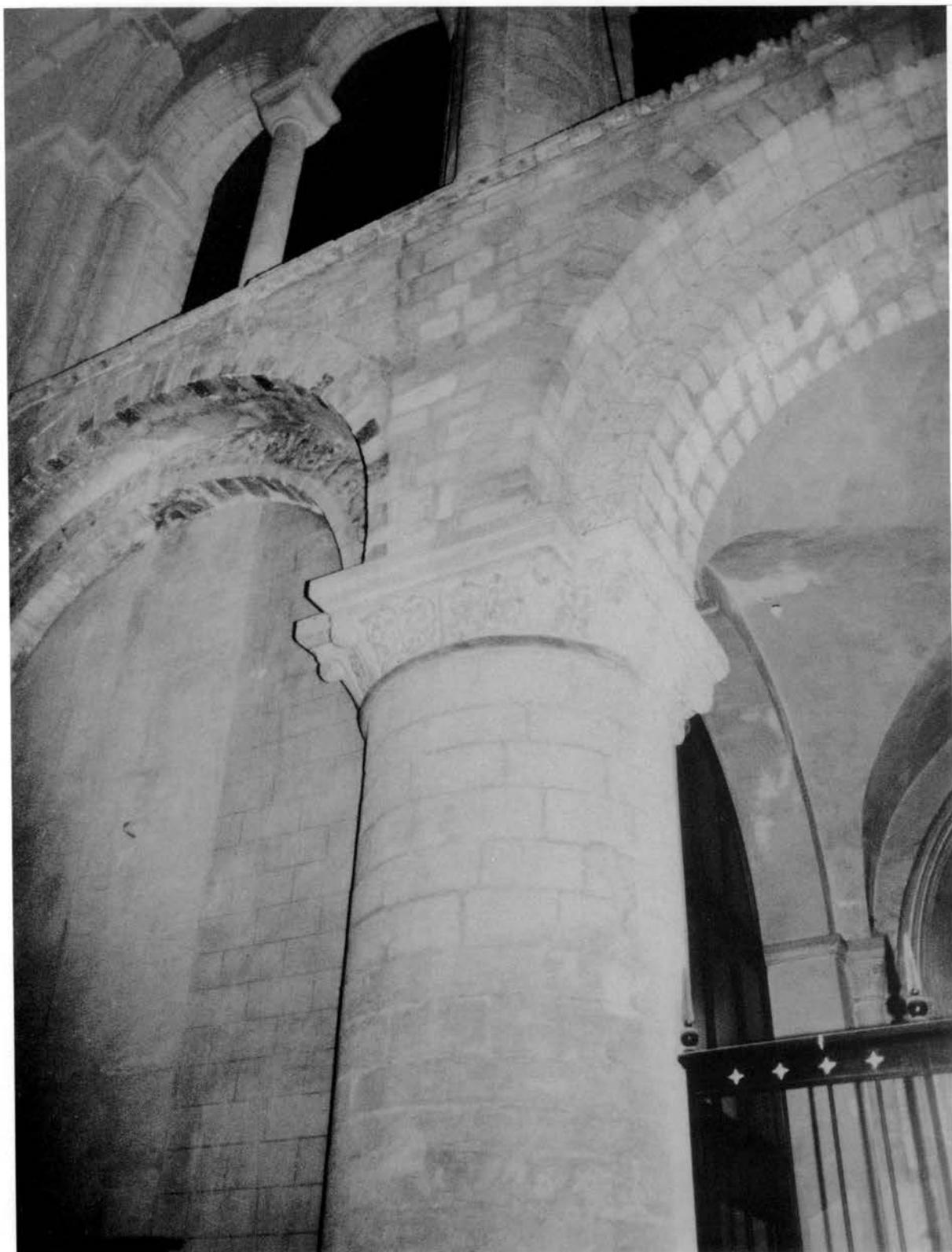


Plate 4. Ely Cathedral. Spandrel above south pier on east side of south transept arm. (photo: author)

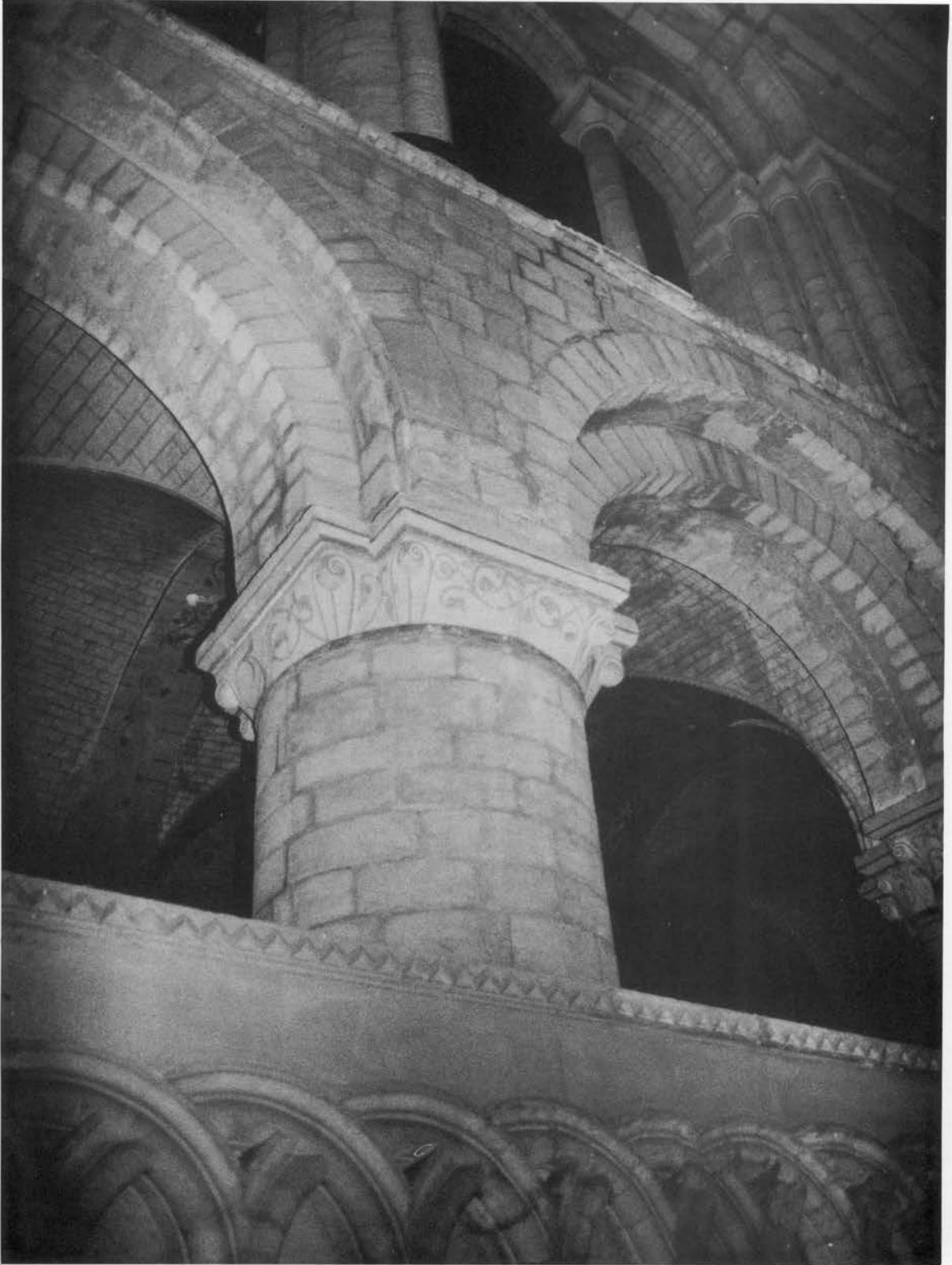


Plate 5. Ely Cathedral. Spandrel above south pier on west side of south transept arm.
(photo: author)



Plate 6. Ely Cathedral. Remains of groin vault under bridge across north wall of transept.
(photo: author)



Plate 7. Ely Cathedral. Spandrel above north pier on east side of north transept arm. (photo: author)



Plate 8. Ely Cathedral. Spandrel above north pier on west side of north transept arm. (photo: author)

the aisles.¹¹ Thus, the spandrel areas of all four locations provide ample testimony to the construction of both cross aisles.

The cross aisles were, therefore, built; it then may be asked why — and when — they were removed. Unfortunately, there is no evidence which would allow an answer to the former question beyond remarking that in some way they had lost their function.¹² The latter question is almost equally impossible to answer, since there is no evidence except that which is suggested by the style of the walkways which replaced the two bays of the cross aisles (Plates 10 and 11). Obviously, the style of the walkways can only produce an approximate date, since the dating depends upon comparisons with other parts of the building which, undated by any precise external evidence, are equally dependent upon a subjective interpretation of the evolution of the features which constitute their style. Consequently, there is no firm evidence by

which to establish when the cross aisles were removed.¹³ The most distinctive feature of the walkways is the band of intersecting arcading of the southern one, a motif which first occurs in the primary structure only in the westernmost bay of the south aisle of the nave. The conclusion could be drawn that the crossing aisles were removed as the western transept was begun, that is, at a period around 1150 or later.¹⁴

Nonetheless, it can be observed that there are strong stylistic differences between the lower level of the transept aisles and the succeeding gallery level (Plates 4, 5 and 9). These differences are marked most obviously by the change from volute capitals to the peculiar and distinctive form of the cushion or scallop capital, which was to prevail at Ely throughout the remainder of its long building history, and by the shift from blunt, unmoulded arches to the use of roll mouldings. There is, in the over-all quality, a conspicuous coarseness or crudity to the earlier work which yields to a more refined, even more delicate work which is still robust but no longer so blunt and insistent. The destruction of the choir perhaps makes the gap between the two levels appear greater than it actually was at Ely — that is, a transitional or evolutionary stage may have been present in the gallery (and clerestory?) of the choir. Alternatively, the change in character of the work could be explained by the passing of a certain period of time during which the general style evolved, so that the opening of a new

¹¹ The last arch on the west, at the north end, has been rebuilt, due to the collapse of the northwest angle of the transept in the seventeenth century. It collapsed on 29 March 1699: the Chapter blamed an earthquake (Cambridge University Library, E.D.C., 4/6/8, item 12); this was no doubt the earthquake of 1692. Rebuilding was supervised by Christopher Wren (E.D.C., 2/1/2 [Order Book, 1660–1729], p.229; 4/5, item 40).

¹² The removal of the two bays of the cross aisle would not have affected either access to or the function of the gallery level on the east side of the transept arms or around the east end, as a newel-stair was located in the east bay of the north end wall. There may have been chapel altars in the gallery transept arms, but no physical evidence of them has survived: see A. Klukas, *Altaria superiora: the function and significance of the tribune chapel in Anglo-Norman Romanesque*. A problem in the relationship of liturgical requirements and architectural form' (unpubl. Ph.D. dissertation, University of Pittsburgh 1978) pp.382–4. At Winchester, a three-foot deep arched alcove in each east bay formed a recess for an altar at gallery level: see Klukas, pp.368–9, 374; he suggested 'the transept bridges [at Ely] allowed responsive singing across the choir stalls'.

These ideas are repeated again in Klukas, 'The continuity of Anglo-Saxon liturgical tradition in post-conquest England as evident in the architecture of Winchester, Ely, and Canterbury cathedrals', in *Les mutations socio-culturelles au tournant des XIe–XIIe siècles (Spicilegium Beccense. Vol.2. Actes du Colloque international du CNRS: Études anselmiennes, IVe session, Le Bec-Hellouin, 1982)* (Paris 1984) pp.114,116,118 (where he notes 'traces of paint and other decoration [in 'the north transept eastern tribune' at Ely] point to its original function as a chapel space'; he, however, mislocates the position of the stair vices in Fig.2, placing one in the eastern angle buttresses of each arm. Neither was included in the original phase of construction; eventually, one was inserted in the north arm, at the end of the east arcade, during the second phase).

¹³ Ferguson, *op. cit.* pp.191–5, dated the walkways to c.1106–9, on the basis of the base mouldings of the columnar arcade which she compared to those appearing in the nave. Her fourth building 'phase', c.1106–10, comprising the present second, third and fourth bays of the south nave arcade with the third and fourth bays of the south aisle wall, was characterised especially by 'short bases and straight chamfered filleted [more correctly, "astragaled"] abaci'.

¹⁴ In her dating of the walkways, Ferguson, *op. cit.* pp.191–5, ignored the intersecting arcading; she dated, p.249, the beginning of the west transept to 'by at least 1125'. Pevsner, *op. cit.* p.276, simply remarked that '[i]ntersected arches seem to appear at Ely only in the second third of the C12 ...', and, p.278, suggested that the style of the nave and west transept are so different that work 'must have been interrupted' during the civil war between King Stephen and the Empress Matilda.

'Short bases', bases with a rather vertical profile in which the scotia and torus are given equal emphasis, are also characteristic of the west bay as are a mixture of hollow or straight chamfers to the abaci, as occurs in the intersecting arcading of the south walkway. Some of the abaci in the west aisle bay, i.e., those against the aisle wall, also have an astragal.

campaign introduced the latest fashion or tastes. The new campaign, therefore, formed a sharp contrast to the previous one because the evolution of one stylistic phase into another was not accomplished at Ely itself. On the other hand, one could argue that the change in style was not due to a significant lapse of time, but rather to the introduction of a new workshop with more advanced or up-to-date ideas which replaced a more old-fashioned, conservative one.

In any case, it is clear that when the construction of the gallery level was carried out, any idea — if such there had been — of continuing the gallery arcade across the end of the transept arms had been abandoned. The gallery piers which stand over the end piers in each aisle arcade show no sign of any preparation for a cross arcade. Nor do they bear any sign of alteration, as appears on the piers below, which would signify the removal of capitals for a cross arcade. It seems unlikely that the cross aisle was intended to support two upper stages because the arcade arches could only have been of one order, rather than of two as on the east and west aisles, and so probably would not have been strong enough to play that role.¹⁵ However, as the gallery at Ely was unvaulted, the east and west arcades would have to have been extended to the end walls to support the clerestory and its passageway, even if a screen arcade had also been carried across between them.

Winchester Cathedral offers the closest surviving parallel for this aspect of the architecture of Ely. Illustration of how the relation between the cross aisle and gallery to the side aisles and galleries (and clerestory) might have been solved at Ely is, however, not possible as the builders at Winchester abandoned the design after completion of the cross aisle. A half-shaft introduced above the impost of the central pier, which is round, in contrast to the other aisle piers of compound form, suggests that a screen at gallery level may have been intended, but it clearly was never executed. The half-shaft, at both the north and south ends, terminates rather feebly without a capital, several courses below the edge of the platform (Plate 12). None of the facing responds of the last gallery piers,

in the form of half-shafts, shows any evidence that a capital to support a cross arch ever existed.¹⁶

Regardless of the height to which it was initially projected to carry the cross aisle at Ely, the results are likely to have looked visually awkward and uncomfortable — unresolved. If only an aisle was intended, with its vaults forming a platform between the east and west aisles at gallery level, the continuation of the upper elevation of gallery and clerestory straight to the south or north terminal wall would have produced an odd effect, as it does today at Winchester (Plate 1). If the gallery arcade was to have been carried over the cross aisle arcade, producing a screen effect, its termination at the sill of the clerestory level would have resulted in an equally odd appearance. Only if a clerestory had been carried across the end walls above the aisle and gallery arcades, would there have been a complete, 'finished', design. This solution, however tidy from the interior point of view, would have eliminated the possibility of a coherent transept façade for the exterior: the aisle and gallery, with the gallery covered by a sloping wooden roof, would be seen to wrap around the taller nave-like volume of the central void of the transept arm. Whether these visual considerations concerned the builders is a moot point. They clearly elected to maintain the tradition of a transept façade in the form of a wall all in one (vertical) plane.

There are no exact parallels elsewhere for the appearance of the cross aisles and their galleries in the transept arms of Winchester and Ely. Galleries do appear in the transepts of a number of Norman churches, both earlier and later than the two English examples, but they are all in the context of transept arms which lack east and west aisles. The earliest Norman example may have been Jumièges Abbey (1040–67), where evidence indicates that the entire area of the transept from crossing to end wall was filled by a platform.¹⁷ In other, and later, churches in

¹⁵ An observation paralleling that made with regard to Winchester Cathedral: see J. Crook and Y. Kusaba, 'The transepts of Winchester Cathedral: archaeological evidence, problems of design, and sequence of construction', *Journal of the Society of Architectural Historians* 50 (1991) p.309 (Appendix B).

¹⁶ Willis, *op. cit.* p.24, considered a gallery arcade a possibility on the basis of these shafts. Crook and Kusaba, *op. cit.* p.309, think that any intention of a gallery arcade was unlikely.

¹⁷ L.-M. Michon et R. Martin du Gard, *L'abbaye de Jumièges* (Paris 1927) pp.59–62; cf. L. Musset, *Normandie romane. Vol.2. La Haute-Normandie* (La Pierre-qui-Vire 1974) pp.116–17. Similar transept platforms may have existed at Bayeux Cathedral (begun 1046/9), and in several English buildings. Extended galleries have been suggested for Westminster Abbey (begun c. 1050) and Lincoln Cathedral (1072–92) and once existed at Christchurch Priory (Hampshire, begun before 1100). For the former see R.D.H. Gem, 'The

Normandy, the 'platforms' were confined to the portion of the transept arm which projected beyond the line of the aisle walls.¹⁸ Such platforms or galleries still remain at Saint-Étienne (begun c. 1063) and Saint-Nicolas (begun 1083) at Caen,¹⁹ Cerisy-la-Forêt (last quarter of the eleventh century),²⁰ and the abbey church of Saint-Georges at Saint-Martin-de-Boscherville (begun c. 1115).²¹ At Saint-Étienne and Cerisy, the platforms are associated with upper level apsidal chapels on the east. This also seems to have been the case at Saint-Ouen (1056/66–1126) at Rouen, where the platform was probably two bays wide to correspond with the two apsidal chapels in each arm on each level.²²

In three of these four surviving cases, the axial pier is compound and an axial shaft of the pier rises up into the spandrel area to end ineffectively, without a capital, below the level

of the platform floor.²³ At Cerisy, the shafts suggest an intention to construct a cross arcade at the second level; there are short shafts with capitals engaged against the pier, between the galleries over the choir and nave aisles, and the projecting bay.²⁴ From the height of these shafts, it is clear that the arcade would not have been as high as the regular gallery openings. Similarly, nook-shafts at the east and west ends of the galleries at Saint-Nicolas, with capitals at the same level as those of the arcading which fronts the aisle roof-space, imply an intention to continue an arcade of similar height across the gallery.²⁵ The same explanation is possible for the heavy projecting jambs at each end of the south gallery at Saint-Étienne, which now stop so inconclusively at a level below the capitals of the adjacent jambs of the choir or nave galleries.²⁶ At Saint-Georges de Boscherville, the axial or central pier is round and, in contrast to the other buildings and Winchester, there is no half-shaft 'decorating' the spandrel.²⁷ Yet, even here, half-shafts at either end of the galleries, with capitals at the same level as those belonging to the arcading which fronts the roof-space, were probably intended to be linked by an open arcade of similar height to that zone.²⁸ Thus, the evidence of Cerisy suggests that a cross arcade at gallery level is not an impossibility at Ely and Winchester, and, as at Saint-Étienne and Saint-Nicolas, it may well have been intended when work began.²⁹ None of the Norman

Romanesque Rebuilding of Westminster Abbey', *Proceedings of the Battle Conference on Anglo-Norman Studies* (1980). Vol. 3. (1981; reprinted as *Anglo-Norman Studies*. Vol. 3. [1982]) pp. 40, 46, Plate 5; for the latter two see Clapham, *op. cit.* pp. 22, 26, 38. For further on Christchurch see C.R. Peers in *Victoria History of the Counties of England. Hampshire*. Vol. 5. (1912) pp. 101, 105–6. Romanesque York Minster is another possibility: see E. Gee, 'Architectural history until 1290', in G.E. Aylmer and R.E. Cant (eds), *A History of York Minster* (Oxford 1977) pp. 117–18.

18 In England, Canterbury Cathedral (1070–7) may have been an example of this restricted form: see F. Woodman, *The Architectural History of Canterbury Cathedral* (London 1981) p. 31, Fig. 13. Worcester Cathedral (1084–1113?) certainly was: see R.D.H. Gem, 'Bishop Wulfstan II and the Romanesque Cathedral Church of Worcester', in G. Popper (ed.), *Medieval Art and Architecture at Worcester Cathedral* (*The British Archaeological Association Conference Transactions for the Year 1975*). Vol. 1. (1978) pp. 28–30. In these Norman and English buildings, the 'tribunes' or platforms were associated with upper level eastern transept chapels.

19 L. Serbat, 'Caen: architecture religieuse' *Congrès archéologique* 75 (Caen 1908) I pp. 34–5 (Saint-Étienne), p. 55 (Saint-Nicolas).

20 A. Rhein, 'L'église abbatiale de Cerisy-la-Forêt', *Congrès archéologique* 75 (Caen 1908) II pp. 561–3.

21 Musset, *La Haute-Normandie*, pp. 151–2, Plate 72. Upper-level transept chapels were lacking at Saint-Georges.

22 A. Masson, *L'église abbatiale Saint-Ouen de Rouen* (Paris 1927) pp. 27–9. The outermost double chapel survives in the rebuilt north arm. The blocked arcades of an aisle remain in the north transept arm (with slighter traces in the southern) at Saint-Taurin, Evreux, c. 1100: G. Bonnenfant, *L'église Saint-Taurin d'Evreux et sa Chasse* (Paris 1926) pp. 40–2, Plates IV, V.

Aisles across the ends of the transept arms were intended at Lessay (E. Lefèvre-Pontalis, 'Église de Lessay', *Congrès archéologique* 75 [Caen 1908] I p. 244), and at Notre-Dame-de-Guibray, Falaise (Serbat, *op. cit.* p. 35, and Rhein, *op. cit.* p. 562).

23 See L. Musset, *Normandie romane*. Vol. 1. *La Basse-Normandie* (La Pierre-qui-Vire 1967) Plates 14, 17, 32, 60. Serbat, *op. cit.* pp. 34–5, had no explanation for these half-shafts 'sans objet', although he rejected the explanation of G. Bouet, 'Analyse architecturale de l'Abbaye de Saint-Étienne de Caen', *Bulletin monumental* 31 (1865) pp. 440–1.

24 See Musset, *La Basse-Normandie*, Plate 60. For Rhein (*op. cit.* p. 563) it appeared impossible to determine 'leur rôle primitif'. Rhein, p. 563, identified the existing low balustrade of blind arcading as 'moderne'; Musset, *La Basse-Normandie*, p. 158, claimed it was original ('romane').

25 The gallery has been completely removed from the north arm.

26 There is no evidence of similar jambs in the north arm, though the insertion of an elaborate eighteenth-century screen could have occasioned their removal.

27 See Musset, *La Basse-Normandie*, Plate 72. The axial piers at Saint-Taurin were also round: see Bonnenfant, *op. cit.* Plate V.

28 The shafts are now used to support the later vault ribs.

29 This conclusion is at variance with that of Crook and Kusaba, *op. cit.* p. 310, n. 50. After a brief consideration of three Norman examples, they decided '[t]he most likely explanation of the half-shafts is that they were entirely decorative'. C. Wilson, 'Abbot Serlo's church at Gloucester (1089–1100): its place

buildings indicate how the design may have been 'resolved' at clerestory level. Indeed, they rather imply that there was no resolution.

The other major but inexact parallels for these buildings are found in the two great pilgrimage churches of Saint-Sernin, Toulouse, and Santiago de Compostela. Since they were both begun in the 1070s, they are only slightly earlier than Winchester and Ely.³⁰ The transept arms of Saint-Sernin and Santiago possess aisles on the east and west which are continued across the end walls, and each of the aisles has a vaulted gallery above. The end galleries, of course, were covered by half-barrel vaults, as is the case with the galleries over the aisles elsewhere in these buildings. However, as the internal elevation of these buildings lacks a clerestory, the design of the two levels of the three sides of each arm could be identical, with the elevation completed by a barrel vault on east and west and closed by a lunette wall at the ends.³¹ Therefore, because of the two-storey elevation and the use of vaults both at gallery level and over the main spaces, a completely coherent, symmetrical, 'finished' design results, in contrast to the wooden-roofed,

three-storey elevations of the English and Norman churches.

The design of the transept elevation on the exterior of the pilgrimage churches was also complete, since the main roof over the high vaults was of a broad pitch and at a level close to the lean-to roof over the half-barrel vaults of the gallery.³² On the end wall, the emphasis was on the wall corresponding to aisle and gallery, with the lunette wall of the vault showing only partially between gallery roof and main roof. This contrasts with the tall gable walls of the English and Norman churches with their steeply pitched roofs.

Platforms or galleries across the ends of aisleless transepts are found occasionally elsewhere in non-Norman churches such as Preuilley-sur-Claise (Indre et Loire), Saint-Sever (Landes), and Saint-Chef (Isère),³³ to which Saint-Genou (Indre) may also be added. However, of these buildings, only Saint-Sever seems at all relevant: a two-bay aisle at the end of the transept arm supports a gallery with a screen of four arches rising to a level just below the springing of the barrel vault covering the arm.³⁴ This is the most concrete parallel for what may have been intended at the Norman churches.³⁵

There were, therefore, no proper precedents or models for the three-aisle transept arms as projected by the builders of

in Romanesque architecture', in T.A. Heslop and V.A. Sekules (eds), *Medieval Art and Architecture at Gloucester and Tewkesbury* (British Archaeological Association Conference Transactions for the Year 1981), Vol.7. (Leeds 1985) p.76, n.10, suggested that this half-shaft may have echoed wall shafts over the columnar piers in the choir. L. Hoey, 'Pier form and vertical wall articulation in English Romanesque architecture', *Journal of the Society of Architectural Historians* 48 (1989) p.267, n.60, noted that these shafts had 'no real place to go', suggested that they may 'have been intended to participate in some sort of screen or balustrade spanning the tribune platform', and pointed to similar 'illogical' shafts at Saint-Étienne and Cerisy.

³⁰ M. Durliat, *L'art roman* (Paris 1982) pp.487,543. Of the classic group of five Pilgrimage churches, Santiago and Toulouse are the only ones in which the aisles are carried around three sides of the transept arm. At Saint-Martial, Limoges, and Sainte-Foi, Conques, the smallest, there were no cross aisles (or galleries). In the case of Saint-Martin at Tours, the cross aisle formed the inner half of a massive four bay tower-porch built over each transept end. See K.J. Conant, *Carolingian and Romanesque Architecture, 800-1200* (Harmondsworth 1959) Figs 28 (plans), 30 (Saint-Martin).

³¹ For Saint-Sernin see: M. Aubert, *L'église Saint-Sernin de Toulouse* (Paris 1933) pp.20-6; J. Peyrade, *Saint-Sernin de Toulouse* (Toulouse [c.1956]) unnumbered plates. For Santiago see: K.J. Conant, *The Early Architectural History of the Cathedral of Santiago de Compostela* (Cambridge [Mass.] 1926) Fig.19, Plate VI; *idem*, *Carolingian and Romanesque*, Fig.29.

³² For the restoration of the 'original' roof levels at Saint-Sernin by E. Viollet-de-Dic, carried out after 1860, see M. Durliat, *Saint-Sernin de Toulouse* (Toulouse 1986) pp.195-7, and, for the (possible) return to the late Medieval roof form, pp.199-203. For Santiago see: Conant, *Carolingian and Romanesque* Plates IV,A,52A; *idem*, *Cathedral* Plates II,IV,VII, Fig.12.

³³ Rhein, *op. cit.* p.562, drew attention to these examples.

³⁴ See: E. Fels, 'Saint-Sever-sur-l'Adour', *Congrès archéologique* 102 (Bordeaux et Bayonne 1939) pp.345-64, especially pp.351,354-6,363. The church was begun before 1072.

³⁵ For Saint-Genou, c. 1080/1110, where a non-projecting transept possessed galleries under towers oblong in plan, see F. Deshoulières, 'L'église de Saint-Genou', *Bulletin monumental* 105 (1947) pp.41-53. For Saint-Pierre de Preuilley, c.1100, where tribune levels surmounted by towers open towards the crossing through pairs of twin arches, see R. Crozet, 'Les églises de Preuilley-sur-Claise', *Bulletin monumental* 92 (1933) pp.306-8,325. For Saint-Chef, where chapels in two storeys are located under an oblong tower at the end of each arm, as part of an apse and transept added to an earlier nave c.1100, see M. Varille and E. Loison, *L'abbaye de Saint-Chef en Dauphiné* (Lyon 1929) pp.98,103-4,116-20, Plates II,IV,VII-VIII, Fig.2 (on p.100).



Plate 9. Ely Cathedral. South bay of east side of north transept arm. (photo: author)

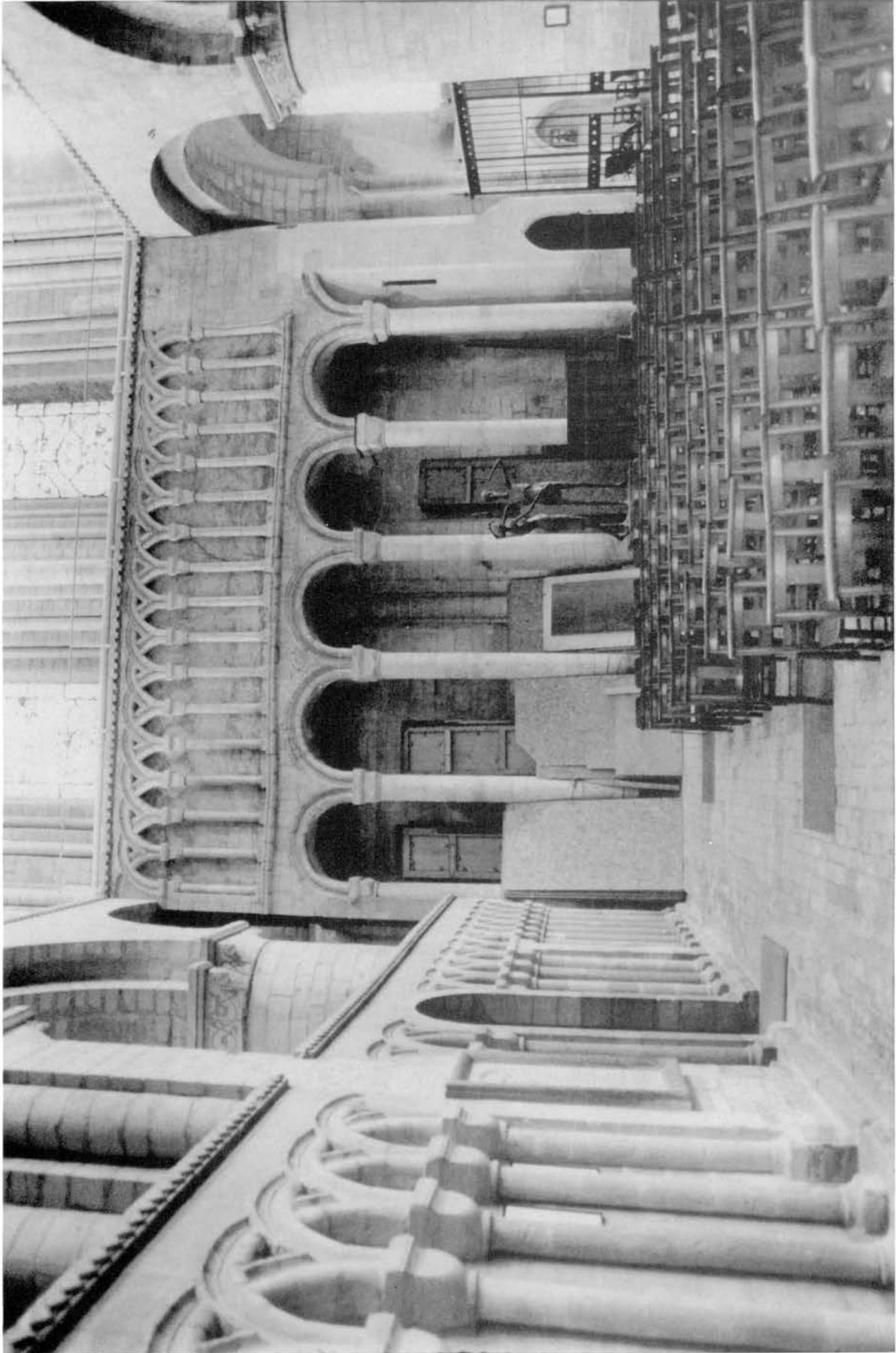


Plate 10. Ely Cathedral. Walkway of south transept arm. (photo: author)



Plate 11. Ely Cathedral. Walkway of north transept arm. (photo: author)

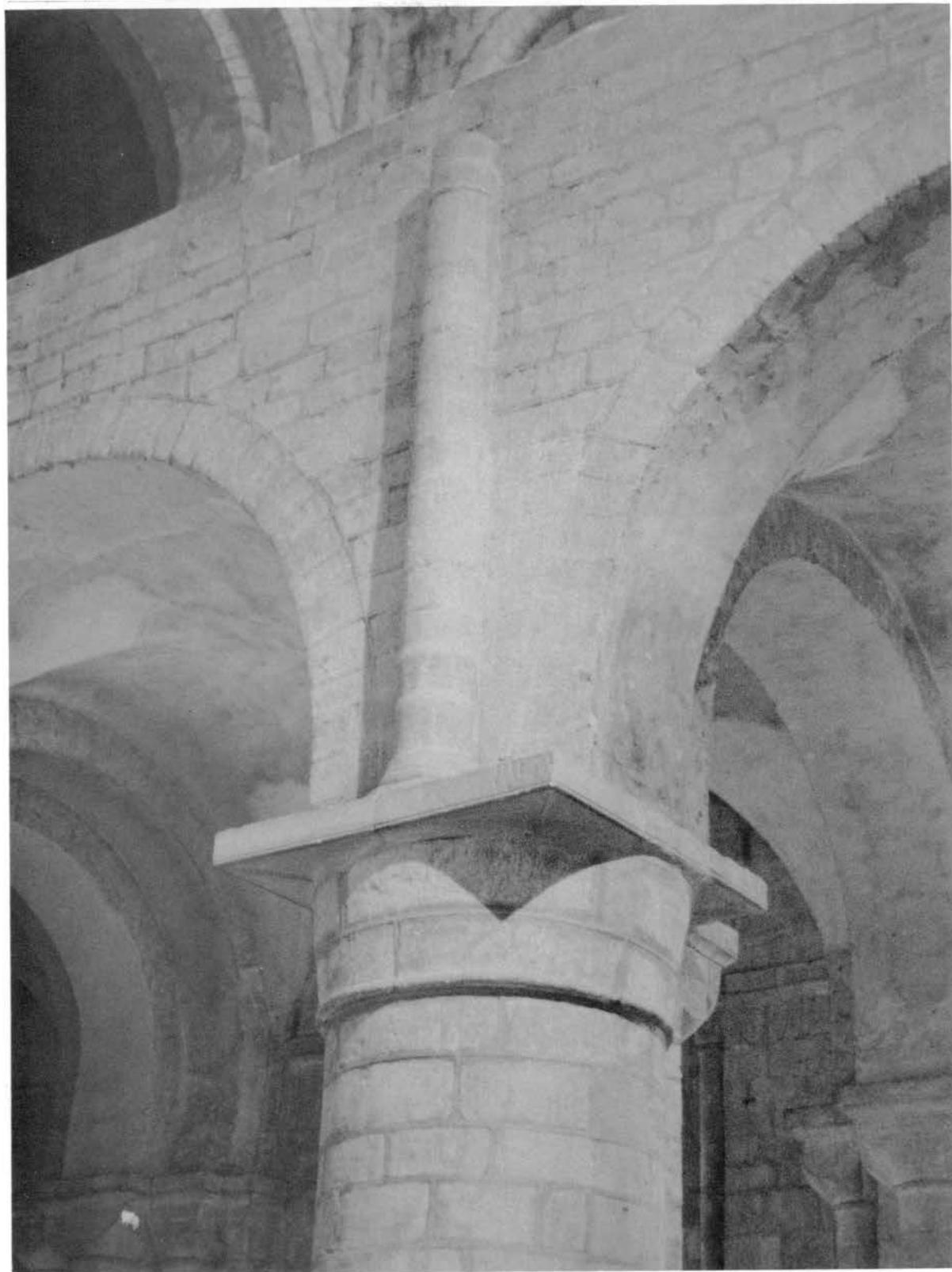


Plate 12. Winchester Cathedral. North transept arm, detail of round pier and spandrel half-shaft.
(photo: author)

Winchester and Ely.³⁶ It is possible that a second-level arcade was abandoned because it resulted in an even more visually awkward solution, in the context of a three-storey elevation, than that of terminating the elevation at the floor of the cross gallery. But it still seems curious that at Winchester and in the Norman churches this truncated design was not finished off, particularly by the termination of the shaft with a capital and a more visually effective — and possibly functionally efficient — horizontal element than a billet string-course, perhaps in the form of a coping or balustrade. This suggests that arguments based upon an idea of a visually resolved design are not totally adequate to explain the removal of the cross aisle at Ely. Nonetheless, by removing the two bays of the cross aisle, they produced a situation more capable of being resolved as a harmonious

design, on both the exterior *and* interior. As it seems that the twelfth-century rebuilders carefully reset the arches of the cross aisles to form the last arcade arch on east and west in each arm, thereby preserving the visual continuity of the original design at that level, it can be suggested that they could have been motivated by aesthetic (or stylistic) concerns.³⁷

Acknowledgments

Research for this paper was made possible as part of a generous grant from the Social Sciences and Humanities Research Council of Canada.

The Society and author are grateful for a grant from the Marc Fitch Fund, which has made a substantial contribution towards the costs of publishing this paper.

³⁶ Fels, *op. cit.* p.359, suggested that the origin of these transept end galleries was to be found in the transept of Saint-Riquier.

³⁷ This would hold true whether the alteration was carried out as early as 1106/9 or as late as after 1150, for by both dates the use of moulded arcade voussoirs had replaced the original plain ones.

Proceedings of the Cambridge Antiquarian Society

Notes for Contributors

The Editor welcomes the submission of papers which are principally on the history and archaeology of the County. Papers will be sent out to referees.

Typescripts

Typescripts or printouts should be double-spaced, on one side of A4 paper. The number of words the text contains, the names of the authors as they wish to appear and suggested running heads (of not more than 80 letters and spaces) should be stated at the top of the paper.

Notes and References

Notes should be numbered consecutively throughout the paper. The notes themselves should be typed, double-spaced, at the end of the paper.

References should be cited as follows:

Manuscripts: citation should follow conventional styles, abbreviations being explained at the first reference, as: Buckinghamshire Record Office (hereafter *Bucks RO*) Dormer estate, D/93/Box 2, Court roll of Ravensmere manor, Hughenden 1752.

Books: Edward Gibbon, *The History of the Decline and Fall of the Roman Empire*. Vol.3, ed. by William Smith (London 1862) pp.23-4.

Theses: Mark Campbell, 'The changing residential patterns in Toronto, 1880-1910' (unpubl. M.A. thesis, University of Toronto 1971).

Articles: K.R. Dark, 'Archaeological survey at Sidney Sussex College, Cambridge, 1984', *Proceedings of the Cambridge Antiquarian Society* 74 (1985) pp.81-4.

Chapters in books: John Patten, 'Changing occupational structures in the East Anglian countryside, 1500-1700', in H.S.A. Fox and R.A. Butlin (eds), *Change in the Countryside: Essays on Rural England, 1500-1900* (London 1979) pp.103-21.

Subsequent references to previously cited works should use *ibid.*, *op. cit.* or *loc. cit.*, but if more than one work by an author is cited the reference should be given thus: Patten, 'Changing occupational structures', pp.115-17.

Tables

Tables should be typed on a separate sheet, and the approximate position in the text should be marked. All tables must have a heading. Units must be stated for every quantity, usually at the head of each column. Tables should be set out with as few horizontal rules as possible and without vertical rules.

Figures and Illustrations

Glossy black-and-white prints of photographs should be submitted at the size at which authors would ideally wish them to appear. The maximum height for a full-page illustration is 24 cm; the maximum width is 15.5 cm.; the width of a column is 7.5 cm.. Drawings should be in their finished, publishable, form, with adequate keys and scales, and at the size at which they are intended to be printed. Titles must not be lettered on the drawings. Captions for all illustrations should be supplied on a separate typewritten list. When a paper has been accepted, the author must submit the originals of any drawings. All figures (maps, diagrams and photographs) should be numbered consecutively with Arabic numerals.

Floppy Discs

The *Proceedings* are produced electronically. When their paper is accepted contributors will be asked, if appropriate, to provide copies of their final text both on paper and on a floppy disc.

Copyright

Papers are accepted for publication on the understanding that they have not already been accepted for publication elsewhere. The copyright will normally remain with the Society.

Other Information

Twenty-five offprints will be supplied of each paper. Further offprints may be ordered at extra cost at proof stage. It would assist the Editor if contributors who know of possible sources of subventions towards the cost of printing their paper would inform her of this when submitting their typescript.

The *Proceedings* are produced for the Society by Christopher Chippindale & Dora A. Kemp
Printed and bound in Great Britain by Warwick Printing Co. Ltd., Theatre Street, Warwick CV34 4DR.

Proceedings Volume LXXXI, 1992

Price £10 for members, £12 for non-members

Contents

Survey Excavation on the Long Field at Rookery Farm, Great Wilbraham W.H.C. Frend & A. Cameron	5
Anglo-Saxon Burials at the 'Three Kings', Haddenham 1990 Ben Robinson & Corinne Duhig	15
Three Earthwork Surveys Cambridge Archaeology Field Group	39
A Note about the Transept Cross Aisles of Ely Cathedral J. Philip McAleer	51
The Medieval Wall Paintings of St Mary and All Saints, Willingham Julie Chittock	71
Changes in the Huntingdonshire Landscape, 1550-1750 Stephen Porter	81
Who Were the Fen People? Polly Hill	97
Wyatville's Remodelling and Refurbishment of Sidney Sussex College, 1820-1837 Peter Salt	115
Field-Work in Cambridgeshire: July 1991-December 1992 Alison Taylor & Christopher Evans	157
<i>Index</i>	169