

THE ROMANESQUE FACADE OF WINCHESTER CATHEDRAL: PART I

By J PHILIP McALEER

ABSTRACT

The Romanesque west front of Winchester Cathedral is completely destroyed except for a remnant of the core of its south wall. Excavations in the mid-nineteenth century uncovered foundations in front of the existing Gothic facade: they measured twelve feet in thickness and formed a square central compartment with flanking rectangular ones. These foundations, partially revealed again between 1966 and 1970, have been variously interpreted as having supported a westwork-type structure, a two-tower facade-block, or a west transept with an axial tower. The latter idea has received some additional support from the fact that the bishop of Winchester, Walkelin, who began the construction of the Romanesque church, was brother to Simeon who, as abbot of Ely (and a former prior of Winchester), is often credited with the introduction of the west transept and its west crossing tower at that church. But an examination of the surviving Romanesque masonry at the west end of the nave of Winchester suggests that the intended structure, which may never have been built, was most likely a two-towered facade-block similar to that at Saint-Étienne, Caen.

DOCUMENTED BUILDING HISTORY

The Romanesque building was begun in 1079 by Bishop Walkelin (1070–1098).¹ Construction of the east end advanced rapidly and was finished and put into use in 1093.² The westward advance of construction probably was temporarily halted by the collapse of the crossing tower in 1107.³ It was soon rebuilt and work proceeded on the nave which, judging from its style, was finished well before mid-century, possibly in the time of Bishop William Giffard (1100/07–1129) (c. 1125?).⁴ This nave stood until the end of the fourteenth century when the present one was started about 1394, by Bishop William of Wykeham (1366–1404).⁵ The reconstruction was accomplished partly by recutting the old Romanesque piers and eliminating the Romanesque arcade, and partly by restructuring and replacing most of the

Romanesque clerestory.⁶ Rebuilding of the nave had been preceded by the construction of the existing facade by Bishop William Edington (Edendon) (1345/6–1366), who was therefore responsible, presumably, for tearing down the old Romanesque one. Edington's facade seems to have been wrapped around the west end of the Romanesque nave, as the two west bays of the north aisle wall, and first bay of the south aisle wall also belong to his work.⁷ But the westmost nave arcades are later, as are the vaults of the west bays of the aisles: they are all the work of William of Wykeham.

ARCHAEOLOGICAL EVIDENCE

Massive foundations in front of the fourteenth-century facade were uncovered by Owen B Carter; they were reported by the Revd Robert Willis in his architectural history of the cathedral, published in 1845 (Fig 1).⁸ The foundations were described as being twelve feet thick, forming a rectangular block 128 feet wide by sixty feet deep which projected seventeen feet beyond the existing aisle walls.⁹ Two internal east–west cross walls, also twelve feet thick, created a square (thirty-six feet) central compartment and two rectangular side ones (twenty-two feet wide by thirty-six feet deep).¹⁰ At the north-east corner, the base of a wall, with a double chamfer offset, was uncovered.¹¹ It was said to match that of the south transept arm where the plinth is preserved only on the west face and consists of a single chamfer;¹² a single chamfer also runs along the sides of the adjoining slype, and one is also visible just above the present ground level on the north and east faces of the north transept arm.

The mass of rubble masonry which now rises to the south-west of the Gothic facade, incorporated

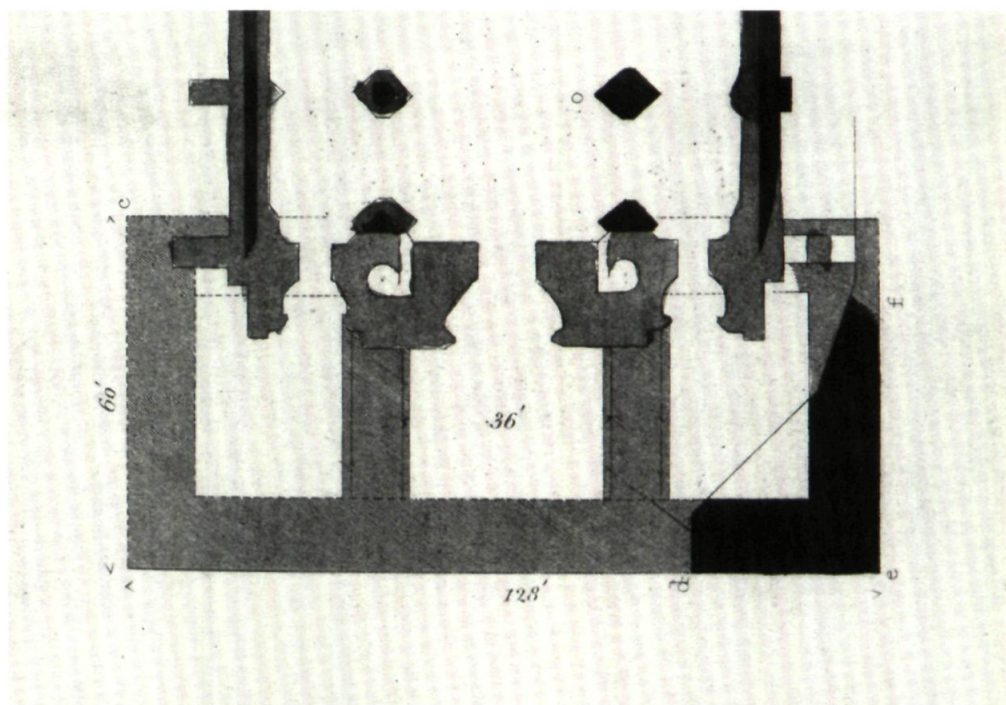


Fig 1. Winchester Cathedral. Plan of excavated foundations of Romanesque west front (from *Proceedings of the Archaeological Institute* [Winchester, 1845], figure 36)

into the north boundary wall of a garden (No 11, The Close), has been identified as the core of the south wall of the Romanesque facade structure (Figs 2, 3).¹³ None of its original ashlar facing nor any architectural details have been preserved.

The north-west angle of the foundations was revealed again in 1966, during the excavation of the site of the Old Minster.¹⁴ In 1969, the whole of the north side was uncovered: the foundations were constructed of courses of horizontally-laid rubble, and it was revealed that the surface of the ground around the front had been finished with a layer of plaster.¹⁵ With the completion of the investigation of the Old Minster, its site and the Romanesque west front foundations were once again covered over.¹⁶

PREVIOUS INTERPRETATIONS

In his 1845 study, Willis speculated that the foundations 'must either have belonged to the two

west towers, or to a kind of west transept'.¹⁷ In 1912, C R Peers and H Brakspear preferred an explanation of 'a single tower in the middle of the front, flanked by shallow western transepts; a form of plan akin to those of Ely and Bury St Edmunds, though less developed, the scheme derived from Saxon prototypes'.¹⁸ In support of their interpretation of a single axial tower, they cited a reference to a tower begun and finished in 1200.¹⁹ Because the existing (rebuilt) crossing tower is clearly earlier in date, and because whatever had been built of the transept facade towers had been almost immediately removed, their conclusion that the reference was to a western tower seems logical, if not inescapable.

Later in this century, in 1934, Sir Alfred Clapham repeated the earlier theory that the appearance of a west transept at Winchester may have been a reflection of Saxon tradition and influence,²⁰ while G Webb writing in 1950 thought that it may have influenced that later



Fig 3. Winchester Cathedral. No 11, The Close, north face of north wall (photo: author)

erected at the cathedral of Ely.²¹ R N Quirk repeated these ideas a few years later, in 1957, and added his own, suggesting the western structure may have been a kind of westwork.²² The excavator of the Old Minster, M Biddle, reverted to the alternate proposal of Willis: his references to the Romanesque foundations and facade structure either assume it had or simply describe it as having two towers.²³ R Gem, writing briefly about the facade in 1980, allowed the possibility of either a two-tower facade, in the manner of Lanfranc's Canterbury Cathedral, or a single west tower with flanking arms, the westwork of the Old Minster serving in this case as the most obvious source.²⁴ In recent studies, A Klukas has also taken up the theme of a type of westwork and proposed a galleried structure.²⁵ Finally, J Crook, in a restoration drawing of the Romanesque cathedral as seen from the north-

east, published in 1989, showed two west towers with a narrow structure between them rising higher than the nave roof and transversely roofed – a sort of *massif transversal saxon*.²⁶

It would seem the idea of a west transept has been advanced primarily because of the association of Simeon, brother of Bishop Walkelin, with both Winchester and Ely Cathedral – where a west transept was later constructed,²⁷ and on the basis of the square central compartment which strongly suggests an axial tower, on the strength of comparisons with the later structure at Ely and also that at the abbey church at Bury St Edmunds. The enormous and complex west front of the later has been reduced to a partial skeleton.²⁸ Nevertheless, the surviving walls clearly indicate that the transept space was equal in width only to the nave and aisles. Flanking two-storeyed chapel-

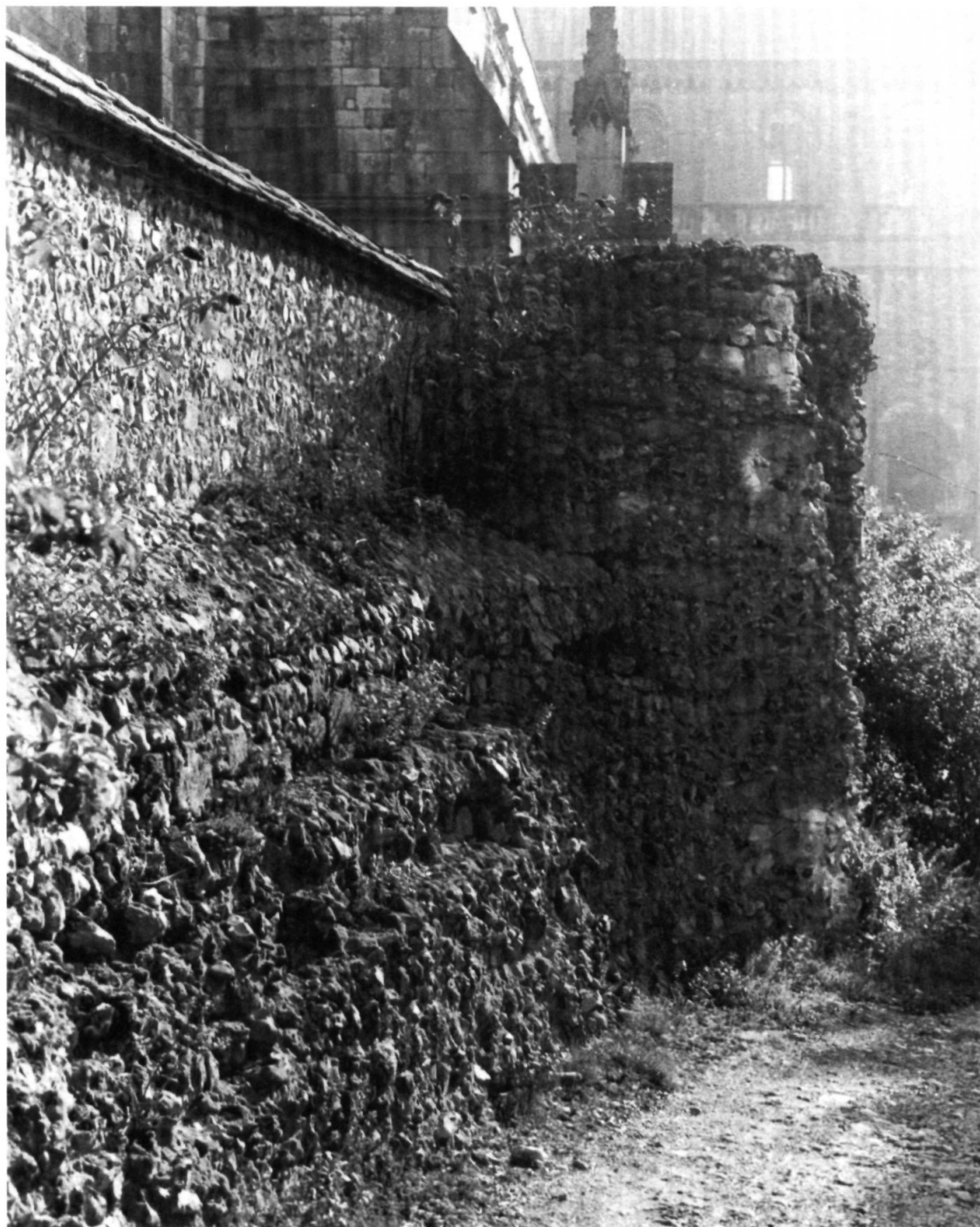


Fig 2. Winchester Cathedral. No 11, The Close, south face of north wall (photo: author)

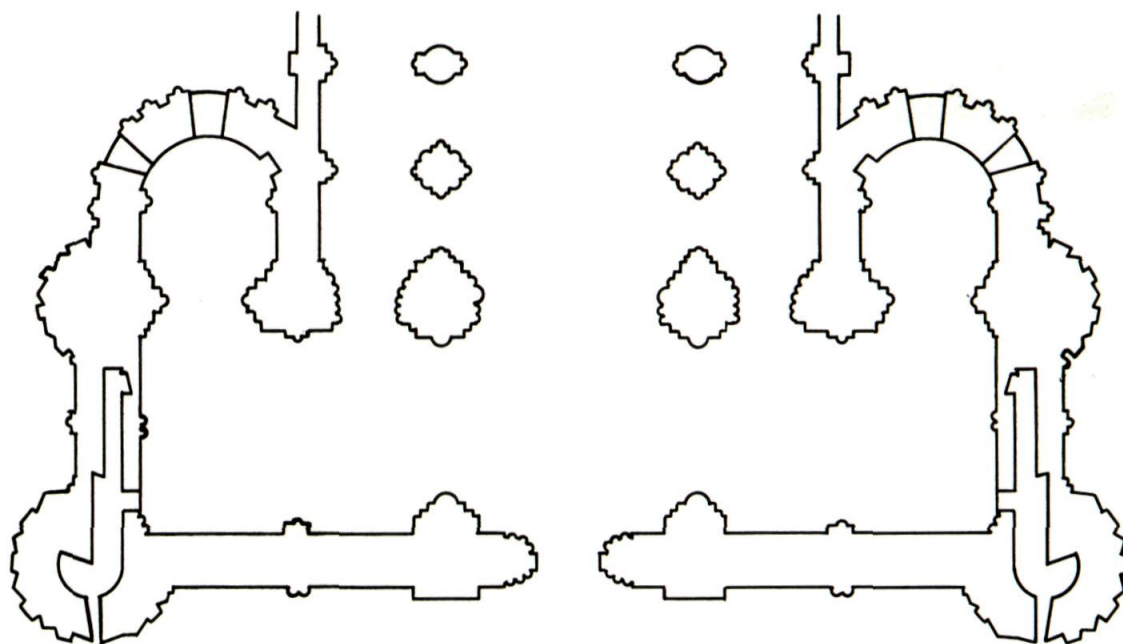


Fig 4. Ely Cathedral. Plan of west transept as originally built. (author's restoration: drawing by K L Clark).

blocks were almost independent units, communicating with the transept through large arches in its end walls. There is no longer any trace of the axial crossing tower for which, however, there is ample testimony in numerous documentary references.²⁹ The west front of Ely is a much simpler affair, as it consists only of a transept with an axial lantern tower (Fig 4).³⁰ In contrast to the transept at Bury, that at Ely projected beyond the aisles and thus accommodated double-storeyed apsidal chapels which opened off the east side of each arm. The transept at Bury was certainly nearing completion by *c* 1140 (the church was begun *c* 1081); that at Ely was not started until *c* 1125 at the earliest, more likely *c* 1150/55.³¹ It should be noted that, if there was a transept at Winchester, it was not the interior space which would have projected but primarily the thickness of the end walls. Thus, it would have been closer to Bury than to Ely in its internal effect.

The proposals of a type of westwork have been motivated by the precedent of the Old Minster

and possible liturgical customs or traditions, while analogies with Saint-Étienne's facade structure are presumably the result of its approximate contemporaneity and, of course, the Norman origins of English Romanesque. None of the solutions put forward have been based upon an examination of *all* the material evidence available at Winchester, nor on an analysis of the formal or structural requirements of the various types of facade buildings suggested.

THE SOUTH-WEST RESPOND

Willis pointed out that the eight (actually seven) western 'Perpendicular' piers on the south side still retain their Romanesque ashlar casing; this is true of the existing south-west respond as well, as Willis also mentioned.³² Nonetheless, the south-west respond has not been looked at closely in the several considerations of the possible types of superstructures which may have been built on the western foundations. Since it retains its



Fig 5. Winchester Cathedral. South-west respond of nave arcade (photo: author)

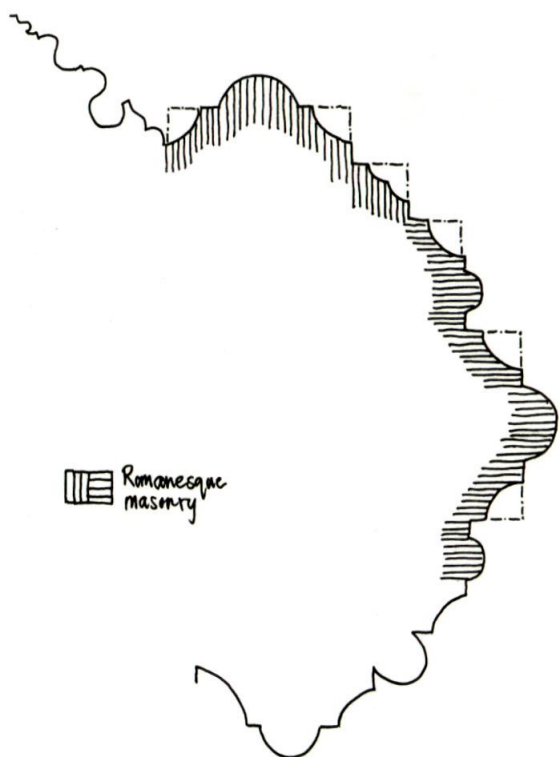


Fig 6. Winchester Cathedral. Diagrammatic plan of south-west respond (author). Dotted line represents portions of Romanesque pier cut away in Perpendicular reshaping.

Romanesque ashlar casing, some information about the original design and size of this western respond can be ascertained. There are two curious and unexpected characteristics present in this respond: one, it is composed of both twelfth- and fourteenth-century shafts and mouldings; and two, its form is rather more than half of a lozenge-shaped pier projecting from the east face of the Gothic west wall (Figs 5, 6).³³

On the east face of the respond there are three half-shafts – a major one against a dossier the angles of which have been hollow chamfered, flanked by slightly thinner half-shafts – which correspond to those on the east and west faces of the arcade piers to the east (Fig 7). The north face of the respond bears a large half-shaft like those marking the axis of the nave piers on the south side where Romanesque masonry survives. On the east of the large half-shaft, there is a series of

hollow chamfers, the result of Gothic recutting of (three) Romanesque angles, as also occurs on the piers of the south arcade. To the west of this large half-shaft there is one hollow chamfer – again cut out of a former Romanesque angle – before a series of finer, more curvaceous late fourteenth-century mouldings link the respond to the inside of the Gothic west wall.

The west respond may best be compared to the arcade piers immediately to the east where the Romanesque masonry, generally characterized by low courses and thick mortar beds, can be easily detected up to a level about one course below the (Gothic) arcade capitals. The Romanesque masonry rises higher in the shafts and mouldings facing towards the nave, of course, than on the east and west faces where they corresponded to the lower Romanesque arcade arches. Some Gothic masonry, generally composed of higher courses than the Romanesque, intrudes here and there below the level of the capitals in an irregular pattern varying from pier to pier. On the major north-facing shaft of the south-west respond, the plinth, base, and first four courses above the base mouldings are Gothic followed by low courses of a slightly darker stone which continue up to about course thirty. Of the moulded section immediately to the east of the shaft, the first six courses appear to be Gothic, then courses seven to seventeen of the moulded section towards the arcade appear to be Romanesque, and course horizontally with the shafts facing north and east. On the east face of the respond, the plinths, base moulding and first course of the Romanesque shafts are Gothic, followed by fourteen courses of Romanesque masonry. In these respects, the masonry 'pattern' of the respond seems very similar to that of the nave arcade piers to its east.

In other words, the respond is not simply the reflection of the west face of a freestanding pier; rather it is more than half of the standard Romanesque pier design as found to the east, plus some fourteenth-century shafts or mouldings added to fill the gap between the Romanesque masonry and the inner face of the Gothic west wall. It is important to emphasize that the change to masonry of c 1360 in the respond does not occur until *after* the maximum north-south



Fig 7. Winchester Cathedral. Penultimate west pier of south nave arcade (photo: author)

thickness of the respond has been reached, and that there is some Romanesque masonry to the west of this axis which is marked by the large half-shaft (Fig 6). Because the arrangement of its shafts matches the other piers, it is rather like three-quarters of the normal Romanesque nave pier at Winchester attached to the inner face of the fourteenth-century west wall (as is shown on the Willis and *VCH* plans, (Figs 1, 8). Consequently, the shape of the Romanesque masonry in the existing composite 'respond' suggests it originally could have belonged to a Romanesque pier of the same dimensions as the other Romanesque piers east of it, and may not be a surviving or reused Romanesque west respond.

THE RELATIONSHIP OF THE FOUNDATIONS TO THE ROMANESQUE WORK IN THE NAVE

As Gem pointed out (without citing specifics), the *VCH* plan of 1912 seems not to be completely

accurate when compared with the plan of the foundations uncovered in the 1960s.³⁴ And, indeed, if the *VCH* plan is compared to the Willis plan of 1845, there are other discrepancies.

Compared to the plan published by Willis (Fig 1), the scale of the *VCH* plan (Fig 8) indicates a central compartment of thirty-two or thirty-three by thirty-six feet, and side ones of twenty-six or twenty-seven by thirty-six feet, with cross walls of only eight feet thickness. The discrepancies in the thickness of the walls are of less importance than the more crucial relationship of the foundations to the remains of the Romanesque fabric at the west end of the nave. The two plans indicate slightly differing alignments relative to the line of the Gothic west facade. Again comparing the *VCH* plan with that of Willis, one can note that the line of the east face of the foundation is located only slightly east of the east side of the westernmost or eleventh north aisle wall (Gothic) buttress, whereas in Willis' plan (Fig 1) it lies three and a half feet east of that buttress. This means that, on the one hand (Willis), the present east face of the west facade falls well west of the east face of the Romanesque foundations or, on the other (*VCH*), the two planes are very close together (although the east face of the west facade is still, in the latter case, in a line west of the east face of the Romanesque foundations). In either case, the existing west responds consequently oversail the Romanesque foundation, the bulk of their mass projecting well east of the east face of the foundation.³⁵

The discrepancy was not resolved during the recent excavations, for Biddle's 1970 plan (Fig 9) shows the east face of the wall plinth at the north-east angle of the foundations as being six feet east of the east face of the westernmost fourteenth-century buttress, a distance which is nearly twice as much as that indicated by the scale in Willis' plan (three and one-half feet).³⁶ Biddle's 1970 plan also shows the end wall as being nearly fourteen feet thick, not twelve feet as reported by Willis, although projecting seventeen feet beyond the north aisle wall of the cathedral as Willis stated. Furthermore, in this plan, the east face of the Romanesque foundations is not shown as parallel to the axis of the Gothic buttress (and facade west wall) but rather as running at a

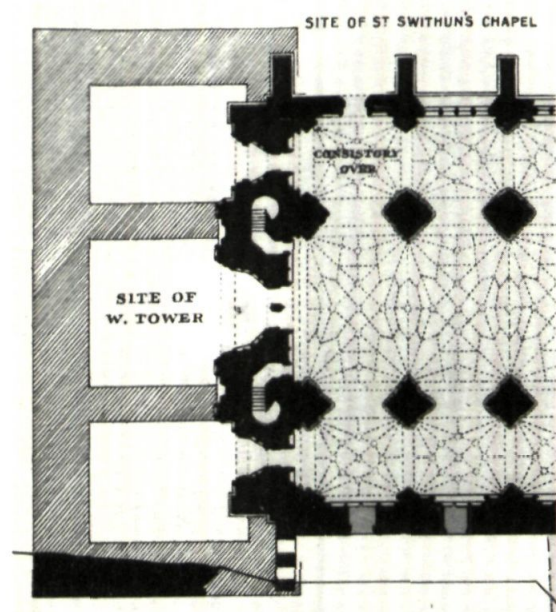


Fig 8. Winchester Cathedral. Plan of excavated foundations of Romanesque west front (from *VCH, Hampshire and the Isle of Wight*, V [1912], between 50/51 – with permission)

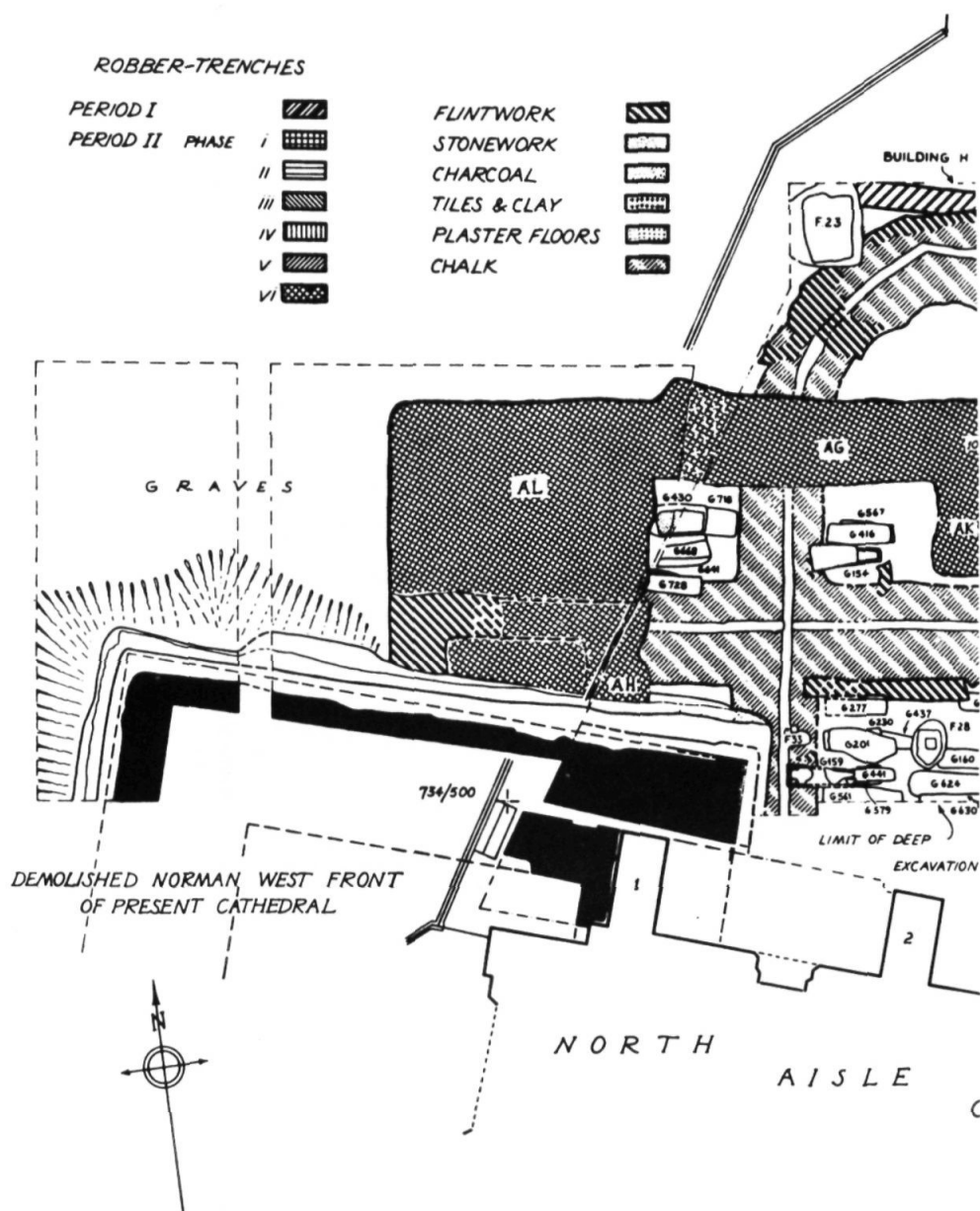


Fig 9. Winchester Cathedral. Plan of excavated portion of Romanesque west front (1969) (from *Antiquaries Journal*, L [1970], fig 12 – with permission)

decided angle, diverging to the east as it runs south.³⁷ E Fernie noted a discrepancy regarding the depth between Willis' sixty feet and Biddle's sixty-one feet eight inches. He deduced a depth of sixty feet eight inches for the upper wall to wall surface – exclusive of the plinth, although the published plan suggests a total depth of not quite sixty feet.³⁸

Thus, none of the three plans is in total agreement with any other; especially open to question is the exact location or alignment of the foundations with respect to the Gothic west wall and its responds. In his plan, Willis showed a goodly portion of the existing west responds (north and south) as falling to the east of the east face of the Romanesque east foundation wall (Fig 1). The *VCH* plan shows *all* of the mass of the existing west responds as falling east of the east face of that same foundation wall (Fig 8). In neither plan do the west responds fall directly on top of the east foundation. The Biddle plan does not include the plan of the present west front. However, if two and a half feet are added to the line of the foundation's east face in Willis' plan, or approximately six to seven feet are added to the line of the east face in the *VCH* plan, the mass of the west responds is just barely encompassed within that of the east foundation wall. As the south-west respond contains Romanesque masonry, there seems to be a curious lack of coordination of it with the Romanesque foundations.

If an axial tower, or even twin-towers, had been constructed over the foundations, the Romanesque masonry of this 'respond' should have belonged to the pier which stood under the south-east angle of the central tower or the north-east angle of the south tower. Thus it is surprising that this respond – or putative former pier – does not fall *on* top of the east foundation (any wall or pier built on them would have been thinner) and, instead, that the mass of the respond/pier actually seems to fall all or mostly to the east of the foundation's east face. Furthermore, one would expect a pier in this position to be very much larger than the other Romanesque nave piers. This would be true especially if there had been an axial tower, since a pier in this position would have served as one of the massive crossing piers (Fig 4), but it would be equally true of the

alternate possibility, for the nave piers under twin west towers are also enlarged as, for instance, at Durham Cathedral (Fig 10). Indeed, not surprisingly, in all known examples of twin-tower facades in Britain later than Durham, eg Westminster Abbey (1375–c 1506) or Canterbury Cathedral (1391–1434), the piers under the towers are significantly larger than the normal nave arcade piers. Consequently, the Romanesque masonry in the south-west respond could not have formed part of a tower pier serving as a support for either a central tower or a flanking (twin) tower, both because it does not fall on top of the foundations and because it was not enlarged in size.

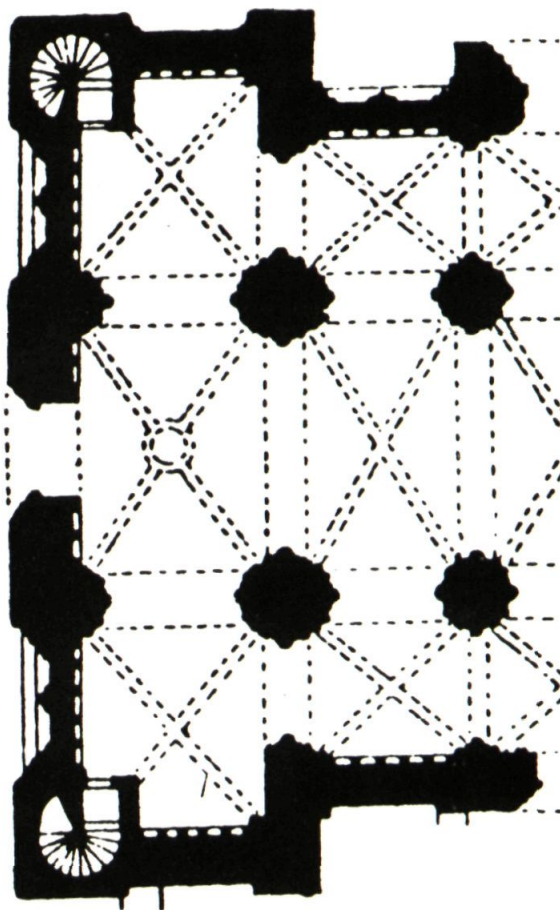


Fig 10. Durham Cathedral. Plan of west towers (after *Archaeological Journal*, LXXIX (1922), 106)

ROMANESQUE REMAINS ABOVE THE GOTHIC AISLE VAULTS

The rear arches of the former Romanesque gallery openings are still visible above the later aisle vaults, in every bay, on both the north and south sides.³⁹ In each case, they consist of one unmoulded order, a chamfered impost, and a scallop capital for a single angle shaft (now missing). In each bay, there is a buttress about three feet in width, projecting about fourteen to seventeen inches, with at least two feet of wall surface between it and the springing of the gallery arches making the total width between arches a little over seven feet.⁴⁰

At the west end of both gallery arcades, there is a stretch of wall approximately seven feet two inches in extent following after the west jamb of the westernmost gallery arch (Figs 11, 12, 13). On both sides, it is broken through at the west end by

the passage from the later newel-stair contained in the fourteenth-century facade wall. (The vices of Edington's facade wall did not provide access to the level of the Romanesque gallery. Originally, the fourteenth-century newel-stairs rose to what must have been the level of the Romanesque clerestory passageways.⁴¹ Only when the nave was remodelled and the existing aisle vaults were built in the fifteenth century was an entrance to the roof space made on each side. A rough opening was made in the wall of the fourteenth-century newel-stair and a short passageway was hacked through flint rubble masonry at the end of the arcade.) There are also traces of a projecting element, which has been ripped out, at a distance two feet four and a half inches on the south side or three feet on the north side west of the inner face of the springing and western jamb of the westernmost gallery arch. On the south side, the traces are in the form of three angle quoins which



Fig 11. Winchester Cathedral. Remains of Romanesque gallery at west end, above south aisle vaults (photo: author)

have been removed in alternate courses. On the north side, the core of the wall above the exit from the passage cut through the wall from the stair-turret projects beyond the plane of the Romanesque ashlar wall immediately to the east.

The west wall presently at the end of each of the ex-galleries shows no sign of late eleventh- or early twelfth-century masonry: both appear to be completely fourteenth- (and fifteenth-) century work. Curiously, neither exterior aisle wall now visible above the vaults bonds in with its corresponding west wall (Fig 14). Towards the outer end of each west wall, there is a long stretch, approximately fifty-one inches, of drip moulding (it has been chiselled off on the south) with a section of the east face of an angle buttress above. These fragments of drip mouldings provide evidence of a lower roof level over the west bays which was introduced at the time the Gothic facade was built. (A lower roof level also is suggested by the difference in the design of the two phases of Gothic work most easily seen on the north side. The two west bays of the aisle attributed to Bishop Edington have shorter windows than the others to the east, with a setback immediately above the windows marking the original height of the wall. This wall was heightened by the later Gothic builders before they added their own parapet. On the west front, the panelled section of walling represents the original parapet. The drip moulding mentioned above may be the remains of the coping of the first parapet.)

Furthermore, there is no bond between the west wall and the gallery arcade wall. On each side, the west jamb of the opening from the fourteenth-century stair-turret consists of the base of the thin pilaster visible above the aisle roof rising parallel and adjacent to the polygon of the stair-turret (Figs 11, 13). Below it, there is a chamfered setback and a downturned drip moulding which imply the late fourteenth-century aisle roof would have abutted the wall at a level only slightly above the impost of the Romanesque gallery arches. This suggests the rebuilding scheme for the nave envisioned a clerestory extending much lower than that actually executed to a changed design in the fifteenth century.⁴² Thus, the builders of the Gothic facade sliced off

the Romanesque one – whatever its form may have been – at precisely that point which renders the surviving evidence at gallery level ambiguous. The remaining stretch of Romanesque walling between the last complete gallery arch and the Gothic newel-stair is not significantly longer to prove beyond doubt that another gallery arch did not follow. Yet, it must be emphasized that at the junction of the newel-stair with the Romanesque masonry there is no sign of a jamb, capital, impost, or arch intrados. What is evident at this level, is that there is no increased mass of masonry suggestive of enlarged tower piers. Therefore, it must be asked: did the arcade continue to a west wall represented by the west line of the foundations?

If two additional bays, based on the centre to centre measurements (derived from the *VCH* plan) of the bays in the south arcade, are added, the piers still do not seem to coincide logically with the foundations: the centre (or axis) of the west (fourteenth) pier, which should actually form a west respond, would lie to the east of the east face of the west foundation. If Fernie's plan of Walkelin's building is the basis, the results are somewhat different, but no more satisfactory.⁴³ Adding three bays of 6.71 m (the width of the penultimate bay) to the last (eleventh) pier, the centres of the twelfth (the existing west respond) and fourteenth 'piers' (the latter, hypothetically, forming a respond) fall west of the east faces of the east and west foundations by a distance equal to about half the width of the transverse aisle arches, that is, an amount less than half the east-west thickness of the piers. Thus, a hypothetical twelfth pair of piers still does not properly coincide with the east foundation, nor with the actual *in situ* Romanesque masonry of the present west respond, just as the respond at the end of a hypothetical fourteenth bay does not fall west of the east face of the west foundation.

In the light of this negative result, the nature of the alterations to the Romanesque masonry at the end of the gallery level becomes more significant. If it had formed the pier between two gallery arches, the middle of the face would have been occupied by a buttress about three feet in width. That the joint described above could represent the east face of such a buttress is evident,



Fig 13. Winchester Cathedral. Entrance to north aisle roof space from fourteenth-century stair vice made in fifteenth-century through twelfth-century masonry (photo: author)



Fig 14. Winchester Cathedral. Junction of fifteenth-century north aisle wall with fourteenth-century west wall (photo: author)

especially on the south side, for it occurs at the appropriate distance from the west jamb of the last complete gallery arch. But there is no evidence of a joint marking the western angle despite the fact that about five feet of wall exist west of the eastern angle joint. It is clear that this wall is the consequence of refacing in the fourteenth century. (On the south only, the refacing projects slightly – four and a quarter inches – and continues up above the aisle roof.) If there had been a buttress, and a following stretch of the flat inner face of the gallery pier, there really was no need to remove the projecting buttress and reface the wall, particularly as there was no exit from the newel-stair initially. Thus, according to this scenario, the Romanesque gallery pier buttress should have remained complete until it was damaged when the fifteenth-century builders broke through the wall to create access from the existing (fourteenth-century) newel-stair to the roof space newly created over their aisle vaults. The removal of something projecting and the refacing of the wall only makes

sense if the something projecting removed was a thick cross wall at the west end of the gallery. It therefore seems more likely that it was a cross wall, rather than a buttress, which was removed by the late fourteenth-century builders who refaced the scar, and it was this surface which the fifteenth-century builders broke through when they made the access to and from the fourteenth-century newel-stair.

In other words, evidence for the form of the twelfth-century facade is very meagre and inconclusive. What does emerge, however, is the fact that the nave arcade did not continue one or two more bays to the west, as the masonry in the composite south-west respond suggests, because it appears to have belonged to a pier similar in design and scale to those further east in the nave section. How, then, to reconcile what appears to be conflicting evidence of the two levels: a nave arcade which continued with a pier rather than ending with a respond, and a gallery which did end at a point over the existing west bay?

NOTES PART I

1. *Annales monasterii de Wintonia*, in *Anglia Sacra*, ed H Wharton, 2 vols (London, 1691), I, 294, and *Annales Monastici*, ed H R Luard, 4 vols (Rolls Series, XXXVI: London, 1864–69), II (1865), 32; also O Lehmann-Brockhaus, *Lateinischen Schriftquellen zur Kunst in England, Wales und Schottland vom Jahre 901 bis zum Jahre 1307*, 5 vols (Munich, 1955–60), II (1956), 658, no 4715.
2. *Annales monasterii . . .*, in *Anglia Sacra*, I, 295, and *Annales*, ed Luard, II, 37; also Lehmann-Brockhaus, II, 659, no 4722.
3. *Annales monasterii . . .*, in *Anglia Sacra*, I, 297, and *Annales*, ed Luard, II, 43 (cf Lehmann-Brockhaus, II, 662, no 4732 [*Annales Cicestrenses*]). See also *Anglia Sacra*, I, 271 (Thomas Rudborne, *Historia maior de fundatione et successionem ecclesie Wintoniensis*).
4. Willis, 17–20. For the building history see also Peers and Brakspear, 51; the completion of the nave is there dated to 'not later than the first decade of the twelfth century'. Gem, 2, accepted the possibility of an earlier date, 'about 1098 or shortly thereafter'. M Biddle and D J Keene in F Barlow, M Biddle, O von Feilitzen and D J Keene (ed M Biddle), *Winchester in the Early Middle Ages, An Edition and Discussion of the Winton Domesday (Winchester Studies*, gen ed M Biddle, I, Oxford, 1976), 309, dated the construction of the nave between 1093 and 'probably before 1122–4'; the evidence for its completion about 1121 is very circumstantial, and the period 1126–9 is equally possible: see esp n 3. The date of the completion of the nave will be discussed further at the end of this paper.
5. Willis, 54–65; Peers and Brakspear, 51, 57–8.
6. See Willis, 66–75, see esp 71, fig 31.
7. Willis, 58.
8. Willis, 65–6, figs 30 and 36. Carter (1806–1859) was a Winchester architect in whose office the young G E Street was articulated (1841–44). Willis' accurate analysis may be contrasted with that of Edward Cressy, 'Winchester Cathedral', *Transactions of the British Archaeological Association: Second Annual Congress, Winchester, 1845* (London, 1846), 355–400; Cressy did not mention the foundations discovered at the west end.
9. Willis, 65, fig 36.

10. The figures cited by Willis in his text (65) yield a width of 22 feet (total width [128] minus the thickness of four walls [$4 \times 12 = 48$] and minus the width of the central bay [36], divided by two [$128 - 84 = 44 - 2 = 22$]). However, the application of the scale to his plan (fig 39) produces dimensions of 23/24 by 36 feet for the side bays, 32 feet for the width of the central bay.
11. Willis, 65, fig 30.
12. Willis, 65.
13. Willis, 65; Peers and Brakspear, 52.
14. Biddle (1967), fig 6 (266), pls LIb and LIX. (The first six interim reports of the excavations of the Old Minster were gathered together and published as [M Biddle,] *Excavations near Winchester Cathedral, 1961-1967* [Winchester, 1968]; they also appeared in the *Winchester Cathedral Record*, XXXII [1963] to XXXIX [1970].)
15. Biddle (1970), 317, fig 12 (316/17), pls XLIX and L. Biddle did not describe the foundations.
16. In 1990, a sondage revealed the top of the centre section of the west line of foundations just below the present ground surface.
17. Willis, 66.
18. Peers and Brakspear, 52; plan between 50/51.
19. Peers and Brakspear, 51. The reference is found in the *Annales monasterii . . . : s^{ec} Anglia Sacra*, I, 304; *Annales*, ed Luard II, 73; Lehmann-Brockhaus, II, 671, no 4778.
20. A W Clapham, *English Romanesque Architecture After the Conquest* (Oxford, 1934), 38.
21. G Webb, *Ely (Cathedral. Books, 1950)*, 8. Construction of Ely was begun sometime between c 1081 and 1093, when Simeon was abbot, although its west transept was erected only decades later: it was certainly not begun until after c 1125, at the earliest (see below, n 31).
22. R N Quirk, 'Winchester Cathedral in the Tenth Century', *Archaeological Journal*, CXIV (1957), (28-68) 54-5; he speculated 'these mysterious foundations' may even have been 'those of a construction by Ethelwold'.
23. Biddle (1967), 267; Biddle (1968), 278; Biddle, in *Winchester in the Early Middle Ages*, 310-11, proposed that the 'Norman west front was almost [he did not explain why 'almost'] a western transept perhaps incorporating twin towers as in the Conqueror's two great abbeys in Caen'. In N Pevsner and P Metcalf, *The Cathedrals of England: Southern England* (Harmondsworth, 1985), 330, Biddle is cited as having 'concluded that there were twin towers as at Caen, rather than a W tower with side chambers, as at Ely, or a westwork'.
24. Gem, 8.
25. Klukas tends to use 'transept' and 'westwork' interchangeably, although they are quite distinctly different forms (the westwork a staged structure, the transept essentially a vast space). In *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* (PhD dissertation, University of Pittsburgh, 1978), 367-8, he seemed to favour a transept with an axial tower in the manner of Bury and Ely, although it was not clear if his 'chapels on two floors' would have opened off the transept space or filled the transept arms (as at St Pantaleon, Cologne, 966-980/1000). See also idem, '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, II [Actes du colloque international du CNRS: Études anselmiennes, IVe session, Le Bec-Hellouin, 1982], ed R Foreville, Paris, 1984), 112, 114-15; and, idem, 'The Architectural Implications of the Decreta Lanfranci', *Proceedings of the Sixth (1983) Battle Conference: Anglo-Norman Studies*, VI (1984), 151-2. In the latter study, Klukas suggested the central space (under an axial tower) would have formed a narthex with a royal loggia above: actually a type of westwork, not a transept.*
26. J Crook, 'The Romanesque East Arm and Crypt of Winchester Cathedral', *Journal of the British Archaeological Association*, CXLII (1989), 2, fig 1. In I T Henderson and J Crook, *The Winchester Diocesan: The Saving of a Great Cathedral* (Crawley [Hants], 1984), 17, Crook suggested a twin-towered westwork, 'virtually western transepts, similar to those found at the church of Saint-Etienne de Caen . . .'. The facade of Saint-Etienne, as will be discussed below, is neither a westwork - it lacks any form of western gallery - nor a transept - as the nave space does not extend laterally across the aisles - but is an early form of a twin-towered facade (*façade harmonique*) because the staged towers at the ends of the aisles flank the west bay of the nave.

27. Simeon was prior of Winchester, 1065–1081/2, before becoming abbot of Ely, 1081/2–1093. Both Walkelin and Simeon had been trained at the abbey of Bec in Normandy, and were relatives of the Conqueror.
28. A B Whittingham, 'Bury St. Edmunds Abbey: the plan, design and development of the church and monastic buildings', *Archaeological Journal*, CVIII (1951), 171–2.
29. See Whittingham, 'Bury', 172, 175.
30. T D Atkinson in *VCH, Cambridge and the Isle of Ely*, IV (London, 1953), 50, 54–7.
31. The beginning of the construction of the Ely transept has usually been considered no earlier than 1155/60, more usually c 1170, but a date of c 1125 has been argued for by S Ferguson, 'The Romanesque Cathedral of Ely: An Archaeological Evaluation of its Construction' (PhD dissertation, Columbia University, New York, 1986), 216–56, esp 249, 253.
32. Willis, 66. The first pier from the crossing retains Romanesque work, including the arcade capital; piers 2, 3, and 4 are all rebuilt (Gothic); beginning with pier 5, the piers contain considerable recut Romanesque masonry.
33. A plan and section of the west front is found in J Britton, *The History and Antiquities of the [See and] Cathedral Church of Winchester* (London, 1826) or *The Cathedral Antiquities*, III. *Historical and Descriptive account of the Cathedrals of Winchester, Lichfield, and Hereford* (London, 1836), pl V. Britton, of course, did not distinguish between Romanesque and Gothic masonry.
34. Gem, 8.
35. Willis drew up his plan 'after a sketch of the excavator', thus perhaps its dimensions and the alignment should not be taken as an absolutely accurate statement. Presumably the *VCH* plan was redrawn after Willis's. Efforts to locate any contemporary material recording the 1845 excavation have not proved successful. For instance, nothing is to be found in the papers of Willis in the Cambridge University Library.
36. More confusingly, when the scale is applied to the plan, Biddle (1968), pl LXIX, the resulting dimension is even more, at least seven feet.
37. Also see Biddle (1967), pl LIX and Biddle (1968), pl LXVIII.
38. Fernie, 19, n 11 (measurements supplied by Mrs Kjolbye-Biddle), cf Biddle (1970), fig 12.
39. Willis, 66, 73–4, fig 35.
40. The three western piers over the south aisle vaults measured: 2 ft 4 in./1 ft. 5 in/2 ft 11 in/1 ft 5 in/2 ft 1 in; 2 ft 3 in/1 ft 5 in/2 ft 11 ½ in/1 ft 4 in/2 ft 1 in; 2 ft 4 in/1 ft 2 in/3 ft 0 in/1 ft 3 ½ in/1 ft 10 in (jamb partially broken away). The span of the second arch (from the west) was 15 ft 9 in, and of the third, 15 ft 10 in.
41. The well-made exits lead to passages which, via a right-angle turn, give (after a descent, on the south) on to the present aisle roofs. The inner walls of these passages are Romanesque masonry, including a section of a quirked, hollow chamfer impost in the southern one.
42. Bishop Edington left money in his will for the completion of the nave: *Registrum Langham*, cited in *Anglia Sacra*, I, 317; Willis, 54.
43. Fernie, fig 5, did not indicate the remains of the actual Romanesque pier respond in his plan; rather he drew in a proper and simple respond. It is not clear why the existing Romanesque masonry of the south-west respond was not shown; as a result, the width of the existing westernmost bay was not calculated by Fernie.

Author: J P McAleer, Faculty of Architecture, Technical University of Nova Scotia, PO Box 1000, Halifax, Nova Scotia, Canada, B3J 2X4.