

## *The evidence for the stages of Construction of The Nave Of Peterborough Cathedral*

The bays and piers of the Nave are numbered from the east, the first pier west of the Crossing being pier 1. The level above, commonly called "triforium", provided with windows in the outer wall from the beginning, is the Tribune. There are 10 bays in the Nave, and so 10 piers. The important piers are 8 and 9 as they are associated with the uncompleted twin-towered West Front.

Three types of evidence have been used:

- 1 String and blind arcading mouldings.
- 2 The style of the capitals.
- 3 Masons' banker marks.

The principle adopted is that, where ever a combination of these three types of evidence can be shown to form discrete masses of structure which, without exception, are in a set sequence on both sides of the Nave, then a complete constructional history, albeit it undated, has been established. The method will allow any early work independent of the rest to become obvious.

There are three chief sections of blind arcading and three of strings, and these are described, for convenience, from east to west. Where possible, plates from the book have been cited, but as any researcher will know, one person's set of photographs seldom provides all the information required by another. Some of the instances are not in the Nave, because the suites described are not exclusive to the Nave, and that has a lot to say about the order of construction.

- 1 Blind Arcading At the east end and running through the aisles of the Presbytery the section has, offset from the orthogonal faces by shallow chamfers, a roll. Running round the Transepts, through the first bay from the east in the north aisle of the Nave and through the eastern seven bays of the south aisle of the Nave this section is repeated, except for a small rebate on the fascia next to the chamfer (pl.57). The third section runs through the rest of the Nave and lacks the rebate as the chamfer is now so prominent (pls.55, 59) that there is no room for it.

Strings As far as the Nave is concerned, it is only that under the aisle windows which is important. Right round the east end and for the first three bays of the Nave on the north side and the east bay only of the south Transept, there is a prominent chevron. On the north side of the Nave that is replaced by a plain roll. On the south side there is neither chevron nor roll, only a straight projection with a shallow and wide chamfer along the top. As this section was not intended to be decorative, being the weathering required to cover the junction of a roof with a wall, it has nothing to say about constructional stages and everything about attached structures.

- 2 The Style of the Capitals These are in five groups, and their precise occurrence is covered in the description of the Nave below.
  - a The capitals for the blind arcading are simple cushions in the main (pl.57) and match the big scallops in the capitals of the piers and responds (pl.26 arcade, Tribune extreme right, pls.39, 46, 53). The latter sometimes have beading and there is the bold use now and again of inverted Vs between the scallops as well as a tapering curved element with a hollowed top in which nestles a single bead.
  - b The forms are more varied, very few being made up of large scallops. The suite is characterised by sharp angles, flutes and a combination of Vs and flutes, often with a line defining the lower edge of the main faces of a capital (pl.27 left, pls53-5).
  - c A very small group of what can only be described as floriated capitals along with the very occasional appearance of a bell capital (Mackreth 1994, figs 1-6).
  - d Scalloping is more regular and occurs with the occasional corner volute and frequently with geometric decoration carved into the surface of the scallops as they rise from the necking ring. Occasionally there is a flute running down a scallop and in most cases there is a line defining the lower edge of the vertical faces of the capitals. (pl. 16, but not arcade pier right).
  - e Almost all decoration has disappeared, nearly all capitals being scalloped and without the outlining above. Inverted Vs between the scallops appear again, but these are never of the exaggerated forms found in groups b and d (pls.2, 5 left, 86-9). Those capitals which are not scalloped betray the emerging C13 style.
- 3 Masons' Banker Marks A survey of all the easily accessible masons' marks in the Cathedral from the east end, including the New Building, up to the west end of the Nave has been carried out by the writer. Masons' marks are capable of various interpretations and many marks had a long life, being used by successive "generations" of masons. However, there are distinctive ones which only seem to occur in certain areas of the building. To these can be added some rare ones which show by their different incidence that they can be used as an additional indicator within an overall group. There are four groups and only the truly distinctive ones, i.e., they do not occur in the other groups, are given prominence.

Common marks such as the X, pentagram, equal-armed crosses, the A with serifs at the bottom, the ordinary intersecting V should be taken for granted. The occasional appearance of letters of the alphabet such as B, H and R, unless there is a distinctive characteristic, are also ignored.

- i The dagger with a proper hilt; the arrow with a curved back to the V forming the point; a long thin rectangle with two smaller ones on one side at the end; the S with a pronounced C serif at each end; the bow and arrow with curved double lines for the bow; the A with a spread top, serifs and a double V for the cross-bar; an arc with a straight line running across it; and a figure which could be described as a knife with a long handle and very short blade. This group occurs with capitals of group a.
- ii There is a very low incidence of marks in this group. The two outstanding marks are IuO or IOu, standing possibly for Ivo, and a carefully drawn and elaborate leaf or frond of recognizably twelfth-century form. These marks occur only with capitals of group b.
- iii This group is divided into 2 main parts. Firstly, two triangles touching at apices; two intersecting Vs with only the tips interlocking; a curious figure of a straight line with up-turned ends and an extra very shallow curve attached between the turned-up ends; an R with a small arc at the top and an ogee end stroke; and a shield divided into quarters. These occur on the pier with the major capitals of group c. Thereafter, there are an IS; two half arrows joined by a cross-bar points with a cross away from the; an elongated repeat of the two touching triangles with a line running through the join; a seriffed U; a quartered lozenge; a spear with lines attached as a pennant; a seriffed T; and an X with ^ on top. All these, along with the first, are found with group d capitals.
- iv Here the incidence of marks drops markedly and only an elongated reversed N is common, but a seriffed E with the outer serifs turning in at an angle and that on the cross bar forming a cross; two conjoined lozenges; and an arrow with a triangle for the head. This and the others in the group are found with group e capitals

These sets of details combine to form discrete masses of building which, as will be seen, are layered one on top of the other and form a coherent sequence from east to west with no intermission. The one proviso that has to be made is that there is clear evidence that material prepared for one building stage, and still "in stock" when there was a change was incorporated in the new work. A clear example not in the Nave is to be seen in the lowest tier of windows of the west side of the South Transept where the billeted mouldings belonging to the early work to the east are used in the central window and the capitals were clearly prepared for elsewhere as they do not, exceptionally, match the depth of the course in which they lie.

One last item needs to be covered, the matter of bases. There are three styles. The first belongs to groups a and b, the second to c and d, the last exclusive to group e.

First Stage. The combination of blind arcading arch section 2 with capitals of group a and masons' marks of group i are found on the south side of the Nave in bays 1-7 in the outer aisle wall, piers 8 and the east part of 9 in the aisle arcade, and if the rebuilt SW pier of the Crossing is to be trusted, in the Tribune level of that and thereafter in Pier 8 and the east part of pier 9 of the Tribune. On the N side, the group is confined to the arcade level of the Crossing, bays 1-5 in the outer wall of the aisle and piers 1-3. There is nothing at Tribune level which belongs to this stage. The external string with the chevron appears only once in the Nave, on the outside of bays 1-3 of the north aisle. Precisely why it was used is a matter for discussion, but re-use of old stock or material taken from the demolished lower parts of the aborted west aisle of the North Transept are possibilities. On the outside, this stage of construction can be seen to step down through bays 4 and 5 to end at the east side of the Dean's Door in bay 6. Such details are a commonplace, but less easy to spot in the regular coursing of C12 work and no further comments are made here.

Second Stage. The emphasis here is on consolidation. On the south side, bays 1 and 2 of the Tribune and bay 1 of the Clerestory were built, but without the pointed wall ribs for the vault. There is also the outer wall of the aisle in bays 8 and 9 with which goes the whole of bay 9 in the Tribune and the lower half of pier 8 there. In other words, the main intention was to support the Central Tower. This shows more clearly on the north side where the same two bays of the Tribune and one in the Clerestory are repeated. In the arcade, the arch in bay 3 was completed and piers 4 and 5 were built along with the arch in 4. Further west, the bases for pier 8 and the east half of 9 were placed.

Although there is no architectural detail or mason's mark, the lower part of the aisle wall below the bases of the colonettes was probably laid up to the proposed west wall, probably with the return for that: the required thickening for the new north-west tower was provided. The west wall on the south side was provided up to the base of the Clerestory and the whole of the Tribune level of the south-west tower built. The opening to the wall walk across the proposed West Front can just be detected.

Third Stage Here new territory is entered, for the evidence described by Peers for the beginnings of a high vault in the Nave (Peers 1906, 439) can be amplified. Groups c and d of the capitals and group iii masons' marks belong here. On the south side, the Tribune was completed in bays 2-7 and bays 2-8 of the Clerestory built. The emplacements required for the high vault were in-built as the Clerestory progressed. The most prominent surviving highly visible part is the line of pointed wall ribs over all the openings in each Clerestory bay, save the first where, significantly, there is a very poor match. This is because the ribs were inserted into pre-existing work (Irvine Papers in Cathedral Library, vol.4.84, 344-5, 350). On the north side much more work was needed and the whole of bays 6-10 was finished at arcade level. In the Tribune all up to and including both the east and west side of pier 9 was done and all of the Clerestory to a point in pier 8.

A break between this stage and the next can be seen in the wall walk passage over pier 8 on both sides of the Nave: a properly faced arch trapped in the vault is matched by a break in the ashlar wall coursing below. In other words, the passage was brought to an end more or less in line with the projected east faces of the twin-towered front. It might even be argued that, on the south side, that arch butted the face of an already built stage, the wall courses being roughly matched into facing in the required Clerestory opening. However, the plan for the West Front had already been altered, for no provision for a north tower was made when the Tribune level was put in. Therefore it is possible that there was a moment when only one tower in the west front was contemplated.

All along the Nave a triplet support was provided for the transverse arches of the high vault. The central element was the mast rising from the ground to which a short corbelled shaft was added on each side. All three lay under a combined capital, very probably like those supporting the west arch. The side shafts were later chiselled away leaving only occasionally their profile complete with capital. The layout of the stone shows that all were built into the wall, deeper stones than those in the normal wall coursing being placed for the capitals. In the Clerestory wall walk are the haunches for the transverse arches and these have the ashlar of the side walls rising over them, showing that they are exactly contemporary. In the base of the outer wall of the wall walk are the holes, nearly all plugged now mostly with C19 stone, for staging running out into the Nave. Just how much of the vault was built, and what its later history was, will be dealt with after describing Stage Four.

Fourth Stage This consists of the absolute west end of the Nave and the beginning of the Western Transepts. On the south side it is the whole of bay 10 at aisle and Tribune level, the Clerestory in bays 9 and 10, but how much of the latter is uncertain as much was removed later. On the north side, only the outer wall of the aisle was needed at arcade level and it is here that the first real sign of the emerging C13 style is to be found. At Tribune level bay 10 was built and work in the Clerestory repeated the south side.

Although this discussion is exclusively about the Nave, it will be appreciated that no building work on a structure of this size in the C12 is likely to have ended in a sheer vertical face. The work in the Western Transepts is the first stage in the development of the West and the Stage Four structure can be seen to step down: the walling below the aisle window level was carried round to the west wall and returned to form part of that, but no trace is left as it was ripped out back to the corners. The Clerestory floor and the walling under the windows was built round to the Nave-side of the major piers in line with the aisle outer walls. The walling then drops to the point of the arches of the east windows and again down to the top of the capitals on the east side of the large north and south windows in the Western Transepts. The break is absolute. Everything built before had been diagonally dressed on flat faces, but now all became vertically dressed.

The capitals used in the blind arcading in bay 10 on each side are markedly different. On the south, they are of group b. Those on the north are in a style in advance of anything seen so far, save for capitals of group c which are crucial for understanding the *chronology* of the building, all successive stages being so far only relative, divorced from anything other than being generically C12 in style. The capitals on the south probably derived from the west wall of Stage Two now demolished to continue the Nave.

#### Comment

There is a great temptation to equate stages of building precisely with an abbot and there must, of course, be some connection, but its form is not at all clear. Abbots and masons do not coincide in their deaths and the latter may be changed for other reasons. An abbot may begin work with one mason and one design which itself will not have existed as a grand master drawing along with all the details required by today's clients. Medieval accountancy counted every last farthing, and building works were expensive: material in stock, as has been pointed out, would be used if possible. An instance of this occurs in the north arcade in pier 5. The masons' marks are of group ii but set with bases and capitals of group d. The pier is at a glance indistinguishable from the rest, its section and height being fixed by the others to the east, but the heights of the courses were not. What the masons' marks show is that the facing of the whole pier was more or less prepared in the lodge and then taken away to be assembled. This is a marked case, but the study of the mason's marks reveals much about the relationship of the work done in the lodge and what was assembled on site.

The capitals of group c form an extreme example. These can not only be allocated to an abbot, Benedict in this case (1177-1193), but can be dated to the very beginning of his reign. They are palpably related to the style of capitals in the western parts of the choir at Canterbury which was being built under his general supervision when he left for Peterborough. A note has been published on these removing a need for further discussion (Mackreth 1994). The stones had been cut, set in place in pier 3 but although the style was not to be followed, they remained and the others of the suite were put in place here and there.

One cannot leave the nave without considering the high vault. The basic evidence for its intended existence and for at least its partial creation has been dealt with. At the least, one can conjecture, upon the surviving archaeological evidence in the building, on how much of the vault had been built. The lower outer edge, a metre or more, of each wall rib had been cut away, and in many instances roughly patched up in mortar. A good reason for removing the edge would have been that it was getting in the way of the web rising in the space between the rib and the springing at least of the transverse arch. The lower part of the wall rib is vertical and not suited to a curved surface running out into the void of the Nave. If this argument holds, then more of the vault had been built than has been suspected.

Whether it was only the springing of the transverse arch or the whole arch can be resolved by looking at the west arch in the Nave and the vaulting beyond that. The base of the arch on each side forms a *tas-de-charge* incorporating the springing of diagonals for a vault in the Nave and the central cell of the Western transepts, yet that was only built after the introduction of a new style of dressing. Inspection of the diagonal vaulting ribs in the Western Transepts shows that most have a slight change in direction at the approximate top of their *tas-de-charges*. It should surely be the case that, in order to support such a large projecting mass of stone, the main transverse arches would have been completed so that the whole did not fall. It follows therefore that all the transverse arches in the Nave should also have been built. What would have been of great interest is what happened in bay 1 next to the tower which had been completed before the vaulting was begun, but no vault was suspected when the tower was taken down last century, J.T. Irvine dividing his time between Lichfield and Peterborough (Irvine Papers, vol.5.9 368; vol.4.45 305; vol.4.89 349; vol.5.19 378). In any case, any evidence would have been compromised when the Central Tower was rebuilt in the C14.

The abandonment of the vault abandoned led to virtually all traces of it, save for the wall ribs, being eradicated, the Clerestory string being carved out of the stones in place and made to run round the mast. This was carried up in new facing, as Peers noted, between the wall ribs in the Clerestory itself, it has a smaller diameter and does not necessarily sit conformably with the lower mast. As for when this was done, the style of the dressing used may offer a clue. At the E end, most are diagonally dressed, but when the west end is reached it is almost exclusively vertical. Is this a case of clearing away of old stock at the very beginning of the new style of dressing?

In plain terms in dealing with the recorded history of the building of the Nave there is seemingly little choice: Martin de Bec introduced the monks into the new Presbytery in 1140; William de Waterville completed the three stories of the Tower and the Transepts, laid out the Choir; Benedict finished in wood and stone the Nave up to the Front, built the pulpitum and began that magnificent work next to the brewhouse. In terms of the observed archaeological details in the Nave, Stage 1 above belongs to de Bec, Stage 2 mainly related to propping the Central Tower is de Waterville's, Stage 3 is the main part of Benedict's work with Stage 4 relating to the Western Transepts which really should be part of the magnificent work. Who, however, was responsible for the new work at the W end marked by vertical dressing is another matter. It might have been Benedict's immediate successors, but it equally might have been begun by Benedict. There is no evidence either way, one may be looking at only the effectiveness of a new mason, and not a new abbot.

However, there is one intriguing remark which occurs in the brief *vita* of Robert de Lindsey, Abbot, 1214-1222: he is credited with *dealbare volsuras in retrocoro*. This, at base, means whitening the vaults in the retrochoir. In fact, as can be seen from the vaults in the aisles and the Western Transepts, the work was a little more elaborate there being the representation on the white surface of regular ashlar laid out in red. What is less easy to understand is what is meant by *retrocoro*. The "traditional" siting of this behind the high altar is a nineteenth-century invention. The retrochoir is behind the Choir and it depends how one sits in that.

In short, the medieval use of the word appears to be Cistercian and refers to the area between the clerical Choir and the lay Choir in the Nave. In other words the area immediately W of the pulpitum which housed the Nave altar. In a Benedictine house this does not strictly apply, there being no lay brethren. However, the church is still divided up in such a way that there is, in reality, little choice. E of the Choir lies the Presbytery which, in Peterborough in the earlier thirteenth century ended in the great apse. Sitting in the Choir, for most of the monks, would have placed the areas behind them in the aisles, but these were processional routes and not liturgical spaces. Therefore the only logical place for a retrochoir would be, in fact, precisely where the Cistercian usage would have it, the Nave.

Hence the remark made by the monkish chronicler should mean the Robert de Lindsey was responsible for finishing the Nave and, incidentally, the Western Transepts with vaults. If that is acceptable, then we have a new date for a large part of the West Front. It had to be there in an effective form before 1222 as it was needed to close off the Western Transepts and to support the vaults over those. Having arrived at this conclusion, we can look at the reasons for removing the vault in the Nave. A view along the N clerestory wall-walk shows that there is a pronounced bow, deviating at least 300mm, possibly 450mm, in the centre from a straight line drawn from the Crossing to the Western Transepts. The centre, therefore, of the vault would have exhibited cracks and there may well have been falling plaster. The vault was removed after 1222 for Robert de Lindsey would surely not have been credited with finishing something if it had to be removed in his lifetime.

Now we can turn to the surviving springers for the diagonals in Bay 10 of the Nave. It is one thing to cut back *tas-de-charges* along the Nave wall once the loads they supported had been removed. Equally, it was relatively easy to replace the newly exposed rag walling above the wall ribs in short sections by insertion. But it may have been a different matter when it came to the W arch. Transverse ribs of arches rely upon being locked into a close containing structure and along the length of the Nave would receive support from the vaults on each side. But at the W end this was no longer the case. The springers for the diagonal ribs which survive are an integral part of that arch and it may be that they were not trimmed back for fear of disturbing the still standing structure.

D. F. Mackreth, July 1998