Archaeology in Chester Cathedral 1995–97

by Simon Ward

The archaeological project at Chester cathedral was the result of proposals to replace the floor paving of 1777 and install an underfloor heating system in the nave and part of the south transept. A thorough process of evaluation and survey was carried out prior to excavation. Excavation was limited in depth but located a possible Saxon church extending westwards from the present church. Details of the Norman, possible 13th-century and long drawn-out 14th- to 15th-century rebuildings were recovered. The alterations introduced following the change from abbey to cathedral in 1541 indicate a period of decline in use and low status burials. Eighteenth- and 19th-century restorations marked a renewal of activity.

Chester Cathedral stands in the north-eastern quarter of the walled city, aloof both from the planning and development that has beset Chester and from the input and involvement of archaeological fieldwork that such development has increasingly come to entail. Since 1995, however, both these aspects of modern urban existence have caught up with the Cathedral's governing body. In this paper I wish to consider some of the issues that arose in planning and implementing the project and also to present an initial interpretation of the results. A more detailed interim report has been published by Chester Archaeology (Ward 1997).

The project arose in response to a proposal by the Dean & Chapter to replace the severely-worn floor in the nave and part of the south transept of the church. At the same time they wished to address the problem of the inadequate heating arrangements and install a modern underfloor system. A little to its surprise, the Dean & Chapter found itself enmeshed in a series of negotiations and planning meetings in which archaeological work was not something that would merely fit in along the way, but was in fact a very real constraint which might determine the future of the proposal. To allow the Cathedrals Fabric Commission to make a valid assessment of the proposals, a thorough programme of evaluation was instituted comprising three stages: a desk-based assessment; stone-by-stone survey of the existing floor with analysis and historical research; and, finally, limited excavation. After considering the evaluation results the development was permitted subject to a major archaeological programme of excavation and recording.

The proposals raised a certain amount of controversy, particularly over replacement of the sandstone floor. The survey and research demonstrated that this was basically the floor laid in 1777. A strong case was put forward to undertake detailed stone-by-stone repair rather than wholesale replacement. This would have preserved the old floor for the present, though it may not have resolved the problems resulting from its worn condition or have provided a long-term solution. Installation of an underfloor heating system would also have been prevented. This illustrates in microcosm, the conflict that inevitably occurs between preservation and redevelopment. The decision to replace the floor was probably inevitable, a necessary corollary of maintaining the cathedral as a functioning part of the community into the next millennium.

Historical summary

Chester Cathedral as an institution dates only from 1541. It was one of the new foundations of Henry VIII following the Dissolution. Ecclesiastical use of the site, however, goes back to obscure Saxon origins at least as early as the 9th century. By the time of the Norman Conquest the church was a major collegiate establishment and it was refounded as a Benedictine Abbey by the Norman Earl Hugh in 1092. The abbey grew to be amongst the best endowed in the country until it was dissolved in 1540.

The present complex of buildings is basically the preserved late medieval abbey. It was constructed in a series of prolonged building campaigns starting in the mid 13th century and continuing up to the eve of the Dissolution. Major elements of Norman date (the north transept, north-west tower and north wall) also survive. The post-medieval history of the building is characterised by a long period of neglect and decay resulting in part from a poor endowment. In the 19th century the condition of the building became critical and extensive restorations were carried out. These transformed the external appearance to such a degree that it is easy to overlook the extent of medieval survival. Although not the greatest

example of Gothic achievement, the cathedral is of considerable interest on account of the wide range of styles which are represented (a product of the extended building campaigns) and because it retains a considerable proportion of the claustral buildings.

Assessment and evaluation

The evaluation consisted of excavation of 12 trial trenches in the nave and south transept, representing approximately 3.25% of the total floor area. In addition, two trenches were excavated in the cloisters.

The process of floor survey and analysis, evaluation and finally limited-depth excavation provided amongst other things an opportunity to test the validity of the conclusions drawn during the assessment stages. The results of the evaluation proved mainly accurate in a general sense although some of the detailed conclusions required revision. In particular, certain structural features revealed during the evaluation were found to be atypical of the site.

The evaluation demonstrated that significant archaeological deposits were indeed preserved under all areas of the cathedral nave and south transept. Complex structural remains and foundations survived beneath the upstanding walls and arcades. In the limited areas examined, it appeared that the intervening areas were generally filled with a loose homogeneous soil deposit, produced by and containing a large number of burials. However, subsequent excavation showed a more complex picture. Significant, albeit limited areas of horizontal stratigraphy and even floor surfaces also survived – the evaluation trenches missed them. On the wider scale of the excavation a large number of intersecting cuts for burials could in fact be identified. The vast majority of the burials were laid in deeply-cut graves and would not be disturbed by the heating proposals. However, the evaluation also failed to intersect any of the relatively small number of shallow graves that were subsequently exposed.

The evaluation also showed that a considerable number of services of varying functions had been inserted below the floor, some just below the paving and others in major trenches. This density of pipes and cables was confirmed by excavation. Although the insertion of these must have entailed lifting and relaying areas of floor, this was not always evident in the paving itself.

Another interesting discrepancy between the floor survey and subsequent excavation was the location of grave slabs and brick burial vaults. There was a large number of both in the nave aisles but their precise locations did not always correspond. The inference presumably must be that when the slabs were laid following a burial in a vault, they were positioned with reference to the paving scheme and pre-existing grave slabs as well as the grave beneath.

Finally, the evaluation accurately predicted the large number of disarticulated human bone and medieval floor tile fragments that were to be discovered. A great proportion of these came from disturbed contexts, such as the loose deposit below the 18th-century floor and the service trenches.

Excavation

The evaluation suggested three possible courses of action: to replace the floor with minimal disturbance of deposits beneath and not permit installation of the heating system; to excavate the entire site and permit building work to proceed without restriction; or to excavate relatively disturbed deposits to the minimum depth necessary to allow the project to be carried out. The heating system required a maximum excavation of 300mm below finished floor level and was sufficiently flexible to allow areas to be left undisturbed where shallower features survived. This option was chosen. It was accepted that there would be some truncation of deposits but the loss would be more than offset by the increase in knowledge achieved. It would also meet the aspirations of the Dean & Chapter. Ironically, in most of the south transept the evaluation demonstrated that the large and tightly-jointed York stone paving slabs which were laid billiard-table smooth in 1900 were set on a substantial layer of concrete and hard-core. Lifting this would have resulted in minimal archaeological damage but it was decided that the process of lifting the paving and removing the hard-core would be too difficult and that element of the scheme was dropped.

The resulting excavation consisted of the uppermost 300mm throughout both the nave and one and half bays of the south transept. A watching brief was maintained on the heating ducts and paving replacement which were carried out simultaneously in the south and east cloister walks. The excavation posed a number of interesting technical challenges in addition to the problems of scheduling and working alongside other contractors that frequently arise on modern excavations. The cathedral is a heavily-used building with religious services and concerts booked months in advance. The archaeological programme had to be carried out in a phased sequence with other elements of the project. The work progressed from east to west and as excavation of one area was completed it was handed back to the building contractors. They, in the meantime, had prepared the next section and lifted the floor slabs. Only portions of the site, therefore, could be seen at any one time.

The area of excavation was equivalent to a good-sized urban site. The quantity of finds and complexity of intersecting features were also characteristic of an urban site.

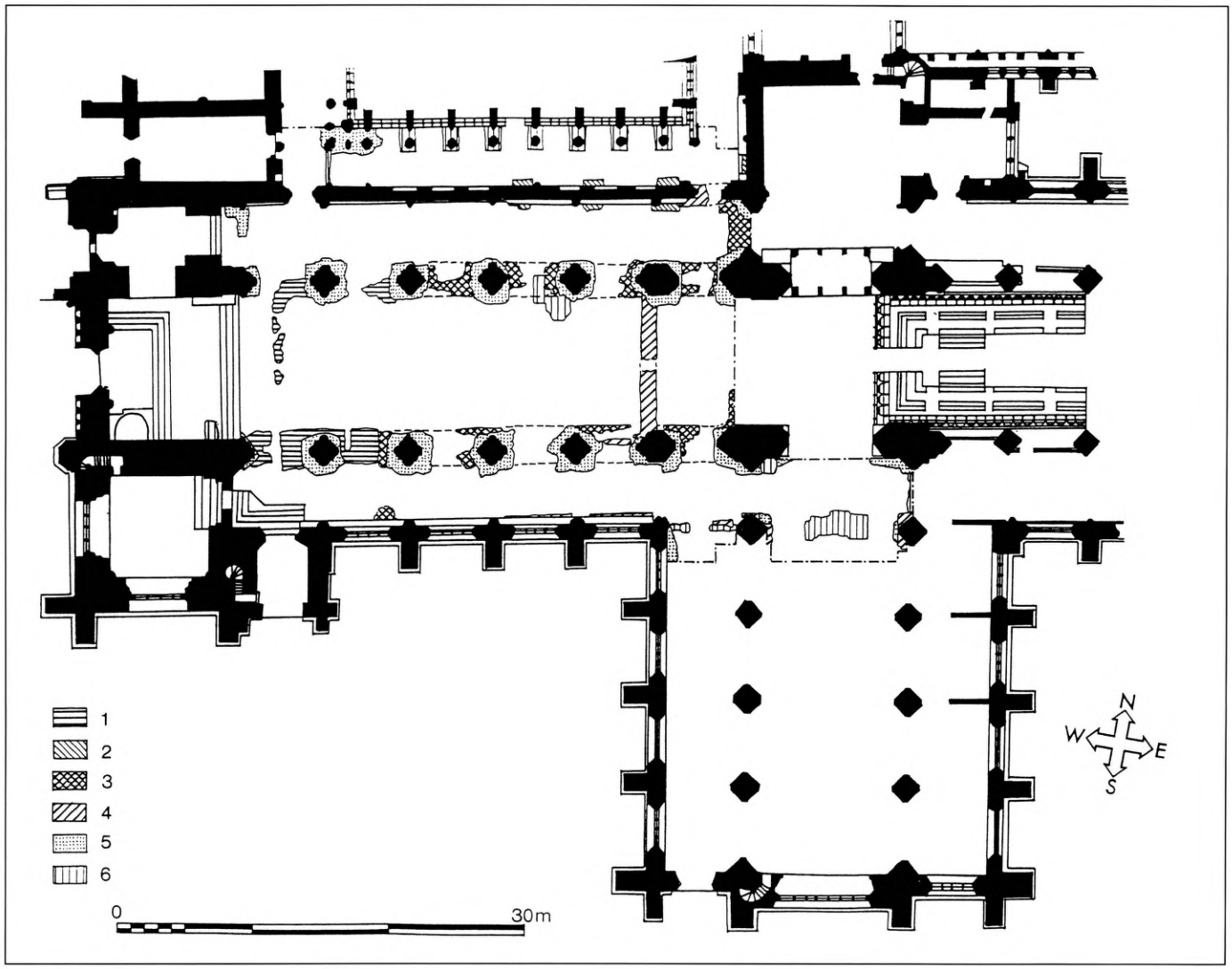

Fig 1 Excavated remains at Chester Cathedral. Key: (1) Phase 1, Saxon remains; (2) Phase 2, early Norman; (3) Phase 3, the Norman nave; (4) Phase 4, Norman or Early English; (5) Phase 5, the late-medieval rebuilding; (6) Phase 6, post-medieval (Illustration: Simon Ward)

However, the limited depth of excavation and restriction to relatively disturbed deposits were perhaps more akin to a rural site. The large quantities of floor tile and disarticulated bone were recorded and their distribution plotted by area (a technique borrowed from field walking) on the basis that human bone (and by implication other finds), when disturbed by subsequent graves or insertion of services, may have moved in the vertical plain, but relatively little in the horizontal. In the early stages of the post-excavation programme, the validity of this procedure is still to be determined.

The range of finds was also limited. In particular, the normal ceramic assemblage which would be a major tool for dating was almost absent. To offset this, the cathedral is probably the best documented and architecturally studied building in the city. The character of the deposits was also unusual for Chester. In the nave, they were completely desiccated, a product of the site's location on a sandstone hill and of the fact that it has been covered by a roof for several centuries. It seems that in the nave, as successive burials were inserted, surplus soil was removed and not replaced by new material brought in to fill subsidence and compression. As a result the deposits have lost virtually all their cohesion. Interestingly, those sampled in the evaluation trenches in the south transept were more compact and contained a greater mix of material. In the post-medieval period this area functioned as a parish church and burials came under parish authority not the cathedral. It would appear that there was a different practice when it came to filling graves and restoring the floor surface.

Interpretation of structural remains

Below the late medieval foundations lay earlier masonry. These remains appear to relate to more than one structural phase but their significance and relationships are not always clear (Fig 1). In the absence of artefactual

Fig 2 West end of the nave with possible Saxon foundations below the late medieval north arcade (Photo: Simon Ward)

dating evidence, interpretation of the various phases depends largely on the stratigraphical relationships and the chronological significance of each of the phases is not always clear.

Phase 1, Saxon remains

The earliest structures, remains of foundations, were found beneath the arcades in the two westernmost bays of the nave. The southern one was more substantial and extended westwards to the western steps. The northern one terminated half way across bay 6. A rough return ran south from this termination but petered out half-way across the nave (Fig 2). These structures could well be part of the Saxon church extending westwards from the present building. Further short stretches of potentially Saxon masonry were also found under the north and south transepts. If the dating of these is correct, they must be from separate and not necessarily contemporary buildings.

Phase 2, early Norman

This phase, the hardest to interpret, comprised the lowest courses of the north wall of the church adjoining the cloister. They had a chamfered offset and incorporated three square projections like bases for buttresses. These bases reappear as rectangular projections on the southern (church) side of the wall. However, the later walling above them is Norman. It incorporates early grave niches and has no trace of buttresses. The features are therefore earlier than the Norman church but appear to respect its plan. They could, but are unlikely to have been a further piece of Saxon work. A more plausible interpretation is that they were part of an initial Norman layout which was altered during construction.

Phase 3, the Norman nave

The major features of this phase comprised two massive walls about 2.5m wide underlying the present nave arcades as far west as pier 4 on each side where they butted onto the phase 1 foundations. The large number of burials interred under the arcades had reduced them to a series of fragments beneath and around each of the piers (Fig 3). At its eastern end, the northern wall met a northward return of similar dimensions across the end of the north aisle. These large walls are most obviously interpreted as sleeper walls for the Norman arcades. Indications of the piers suggest bases of cruciform shape as opposed to the round piers known from the choir.

Phase 4, Norman or Early English

This comprised a series of ashlar masonry fragments which directly underlay the south transept piers and pier 1 on the south side of the nave. The various fragments are not necessarily contemporary. In the case of the south transept they are almost certainly the remains of a smaller Norman south transept. The remains under pier 2 in the nave are perhaps part of a Norman or later nave pier as they did not appear to be directly associated with the sleeper wall. They may relate to an early 13th-century building programme for which there is a little evidence.

Associated with these remains was a wall spanning the centre of the nave between the first piers. It was presumably the base of the original rood screen demarcating the east end of the nave. Patches of fine mortar floors (of which a sequence of at least three was recorded) survived against the west face of the wall (Fig 3). A further sandstone structure was set upon the mortar surface between piers 1 and 2 on the south. This may have been the base of the sedilia.

Phase 5, the late-medieval rebuilding

The long building campaign indicated by historical and architectural examination (Burne 1962, 134–35) for construction of the present church does seem to be borne out by the excavated record. In many instances, the foundations overlay or intersected earlier masonry and a development in their style was observable.

The foundations of the crossing piers comprised substantial blocks; they included reused fragments and grave slabs and replaced any earlier masonry. The arcade piers in the

Fig 3 Pier 2 in the south arcade with chamfered base cutting remains of earlier mortar floor and Norman sleeper wall showing through beneath (Photo: Simon Ward)

south transept, on the other hand, rested directly on earlier masonry, which is assumed to be part of a smaller Norman south transept (phase 4). In one place, the earlier masonry had been extended with rubble to support the slightly overlapping pier.

In the nave, the south arcade was again built on earlier masonry. The foundations of the piers were divisible into pairs. The first pair was set on diagonally-aligned square plinths which were buried below the floor but which had been designed to be seen above a lower floor level which was apparently never laid (Fig 3). The next pair rested on foundations constructed of rough slabs and blocks. These foundations were clearly intended to be buried and therefore were designed for a floor level coincident with the current one. The final pair (the engaged piers at either end of the nave) was characterised by the reuse of architectural fragments and grave slabs.

In contrast, the north arcade foundations presented a much more uniform construction comprising rough-hewn blocks, frequently of massive dimensions, set in large pits cut down through earlier masonry to the rock.

These developments in the foundation design, although not closely datable by archaeological evidence, do support the historical evidence for a long-drawn out building programme extending from 1360.

The floor contemporary with the 15th-century completion of the nave arcades did not survive. It lay at the same level as the 18th-century paving and must have been dug away when the latter was laid. Although the nave is recorded as being unpaved 'like a barn floor' (Burne 1958, 80) at the end of the 16th century, the volume of medieval floor tiles recovered suggests that at least some areas of the floor had been tiled at one time. Curiously, these tiles seem to date generally from the late 14th to early 15th centuries, the period between construction of the two arcades when the old north arcade was still standing. By 1600, perhaps wear, coupled with the extensive grave-digging had more or less destroyed any tiled floor that had been laid. Certainly, the graves had removed virtually all the horizontal stratigraphy over most of the area.

The building was completed with the construction of the west front around 1500. The present arrangement of steps and landings at the western end dates only from 1777 but a small area of the earlier floor survived below the paving. This comprised a surface of unglazed tiles, laid diagonally. Dislodged examples were even impressed with a Tudor rose.

Phase 6, post-medieval

Several features were discovered which date to the church's post-medieval use as a cathedral, although most appear to be late in this period (18th and 19th century).

The sandstone paving laid in 1777 was bedded in a very loose material which was otherwise similar to the tops of the grave fills below and it was probably derived from them. When the floor was laid, the preceding surface and the uppermost deposits were dug over and raked smooth to form the bedding for the sandstone slabs, rather than being replaced with imported material.

In the south transept the foundation for a screen which separated it from the body of the cathedral was discovered. From at least as early as the 16th century the parish church had been in the south transept. The excavated structure probably dates to the heightening of the screen up to the roof in 1828 as it cut through at least one brick burial vault. The screen was removed in 1880 when the parish church was moved to a new building.

In the nave, adjacent to the second pier on the north side, there was a substantial concrete foundation for a pulpit. At least two phases were discernible, the latest one being for the existing pulpit which has since been moved.

Burials

As anticipated, a large number of graves was located throughout the nave and south transept. Most of the skeletons lay below the depth of excavation and were not disturbed. However, their distribution and the burial practice used reflect the functioning of the nave. In the aisles, burials were interred in brick vaults many of which intercut. They date from the 18th and 19th centuries and represent fairly elaborate burial practices. These vaults coincided with the distribution of grave slabs in the aisles. However, as noted above, the position of a slab did not necessarily correspond precisely with that of the vault which it commemorated.

In the centre of the nave lay numerous individual burials, the majority of which would seem to have been a simple shroud interment without a coffin. These are thought to be largely of late medieval to early post-medieval date (although some are certainly earlier) and represent a wide section of the population, including women and children. A number of graves were so shallow that the skeleton was exposed. At the west end, this may be partly the result of the truncation of once higher, earlier floor levels. Further east they appeared to be intentionally shallow, perhaps to minimise disturbance of lower burials. These graves do not appear to be of particularly high status and perhaps reflect the perceived status of the cathedral in the early post-medieval period. Their density and the nature of their soft, loose fills would seem to indicate that the nave was not heavily used for services at that time. A similar low level of use has been demonstrated at Canterbury cathedral (Blockley *et al*

1997, 149–155). The abolition of monastic communities and the change to Protestant practices seems to have made large areas of the great cathedral churches surplus to requirements. It is perhaps fortunate for us that the energy and resources to demolish them was lacking. The most significant individual burial was found in the south-east corner of the cloister, adjacent to the church, and was in a large sandstone coffin. It lay in the location in which it is recorded that the first abbot, Richard of Bec, was buried in 1116 and may well belong to him. The coffin had been disturbed at some time in the past; the lid was missing and it contained a scatter of bones from more than one individual.

Conclusion

Various interesting lessons can be learnt from this project. The parallels between the circumstances of the work at Chester and recent work at Canterbury are remarkable, namely the replacement of an 18th-century floor and installation of an underfloor heating system. The process of evaluation and excavation was also similar and it is interesting to note parallels in the results. Clearly, a limited and partial excavation will produce only partial results but this was an explicit and accepted corollary of the excavation policy. The nature of the remains at Chester are less grand than they were at Canterbury but it was found, as is frequently the case, that the structural history revealed by excavation is at least as complex as that which documentary and architectural study indicates.

This excavation, like those at Canterbury and elsewhere, demonstrates what an important and fragile resource is preserved beneath our great churches. The fossilization of ancient floor levels within a building means that there is no 'buffer' of recent accretions in which modern alterations and improvements can be carried out. Clearly the buildings will be adapted and modernized to allow them to continue as active centres of worship in the 20th century. The challenge for those charged with their care is to find that point of balance between the preservation and recording of the buildings as historic monuments and the continuance of their function and place in the community.

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Simon Ward is a Senior Archaeologist for Chester City Council and has carried out and published many excavations in the city, specialising in ecclesiastical and medieval urban remains.

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