

Excavations in the Cloister of St. Frideswide's Priory, 1985

By CHRISTOPHER SCULL

With contributions by JOHN BLAIR, NIALL DONALD, DEBORAH DUNCAN, ALISON R. GOODALL, IAN H. GOODALL, MARY HARMAN, ARTHUR MACGREGOR, N.J. MAYHEW, MAUREEN MELLOR and SUE STALLIBRASS

SUMMARY

Excavation in the cloister garth revealed burials, almost certainly belonging to the cemetery of the Anglo-Saxon minster church. Many graves had been destroyed or damaged by medieval pits, probably associated with construction of the Augustinian priory buildings after A.D. 1122 and subsequent episodes of building. Exposed masonry in the garth was shown to be part of a rectangular, corner-buttressed foundation, dated to the second quarter of the 16th century and interpreted as the footing of a timber belfry.

INTRODUCTION

Upon completion of renovation work in the cathedral cloister, Christ Church, in 1985, the College proposed to improve the appearance of the garth by replacing the grassed area with a formal garden. This involved reducing and burying the stone foundation which had been exposed in a cross-of-Lorraine shape on the cloister lawn since the 19th century.

The foundation was uncovered in 1871, when the level of the garth was lowered during George Gilbert Scott's restoration work.¹ It had apparently been buried since the 17th century, when alterations were made to the cloister which included raising the level of the garth (below, p. 73). A small trench dug against the northern end of the foundation by David Sturdy in 1958 revealed that its rubble fabric incorporates fragments of late 15th- or early 16th-century window cusping,² demonstrating that it is not part of a medieval monastic building, as had been suggested previously,³ but that in all probability it post-dates Cardinal Wolsey's suppression of the Augustinian priory in 1524.⁴ It has most often been assigned to the period 1524-9, when the buildings of

¹ H.L. Thompson, *College Histories: Christ Church* (1900), 240; S.A. Warner, *Oxford Cathedral* (1924), 38.

² D. Sturdy, 'Recent Excavations in Christ Church and Nearby', *Oxoniensia*, xxvi-vii (1961-2), 29.

³ E. Venables (ed.), *Handbook to the Cathedrals of England: Eastern Division* (1881), 40-1; E.W. Watson, *The Cathedral Church of Christ in Oxford* (1935), 44.

⁴ H.E. Salter, 'Priory of St. Frideswide, Oxford', *V.C.H. Oxon.* ii (1907), 100-1; *R.C.H.M. Oxford* (1939), 29; M. Maclagan, 'Christ Church', *V.C.H. Oxon.* iii (1954), 228-9; J. Cooper, 'St. Frideswide's Priory', *V.C.H. Oxon.* iv (1979), 364-5.



Fig. 9. Renovation and excavation in St. Frideswide's cloister, 1985.

Wolsey's secular college were being erected on the site of the suppressed priory, and has been interpreted as the western foundation of an unfinished free-standing stone bell-tower, whose completion would have entailed demolishing the eastern cloister range.⁵ However, neither the exact date of the foundation nor its full plan were known, nor its purpose properly understood; so the College invited the Oxford Archaeological Unit to examine and record the foundation before its partial demolition and burial with a view to elucidating these problems. This also afforded an opportunity to investigate earlier pits and burials in the cloister garth, first revealed by Sturdy's 1958 excavation,⁶ which it was hoped might reflect the development of adjacent priory buildings and the history of the site before conversion of the Anglo-Saxon minster to an Augustinian priory in the first half of the 12th century.⁷

EXCAVATION AND STRATIGRAPHY

Two weeks' preliminary trenching under the supervision of Peter McKeague in April and May was followed in July and August by five weeks of more extensive excavation

⁵ *R.C.H.M. Oxford*, 29; J.G. Milne and J.H. Harvey, 'The Building of Cardinal College, Oxford, *Oxoniensia*, viii-ix (1943-4), 152; N. Doggett, 'Footings in the Cathedral Cloisters, Christ Church College' (1982), unpublished MS at Oxford Archaeological Unit.

⁶ Sturdy, *op. cit.* note 2.

⁷ See below, pp. 90-2, 227-8, 236-40.

(Fig. 9) supervised by Christopher Scull. Brian Durham, who was responsible for overall direction of the project, observed builders' work when the paving of the garth was renewed in September.

The preliminary excavation revealed two burials to the E. of the exposed N.-S. foundation wall and a sunken internal floor to its W., demonstrating that the visible masonry was not complete in itself, nor the western part of an unfinished project, but the eastern half of a building foundation situated in the centre of the cloister garth and partially concealed beneath the paving. For the main excavation the trench was extended to allow complete excavation of the accessible interior of the building and examination of burials and deeper stratigraphy down the E. side of the cloister garth (Trench One). Flagstones were also lifted in two places to confirm the presence of foundations beneath the paving (Trenches Two and Three). All the work between April and August was recorded as a single excavation. The results are described as a series of excavation stages which correspond inversely to the phases in which the site is interpreted. These are integrated in Fig. 10.

The excavated material is housed at the Ashmolean Museum. The original site records are at the Oxford Archaeological Unit, site code OX:CCL 1985.

STAGE A (PHASE 6: 19TH & 20TH CENTURIES)

The modern cement capping of the foundation (F6/1) was removed to expose the original masonry (F6/2). Beneath the turf, set into the topsoil (L1) around the foundation and along the W. edges of the lawn, was a border of orange-brown sandy clay (L2), presumably originally intended to offset the foundation as a garden feature. Below the topsoil were modern disturbances, land drains and service features F4-5, F11/12, F42, F44-6, F76-7. Baulks were left to support the functioning water pipe in F11/12 and the ground-water drain in F77. The most recent feature uncovered was Sturdy's 1958 trench (F152).

STAGE B (PHASE 5: 17TH CENTURY) FIG. 12

To the E. and S.E. of the foundation the modern features overlay or cut a layer of disturbed brown gravelly loam (L3, L41) which, to judge by the thin and discontinuous traces overlying the fill of F78 and the dump layers within the foundation, had been truncated during lowering of the garth in 1871 (below, p. 242 n.95). This contained pottery of the late 17th century and earlier, a single mid 18th-century sherd, and a few intrusive fragments of 19th- and 20th-century ceramics. Below L41 in the angle between the S.E. buttress foundations was a thin spread of hard white mortar (L43) which petered out to the S. and S.E. into a compacted earth surface with inclusions of mortar, sand and clay (L47), which also extended S. of the foundation. Both these surfaces lipped-up against the foundation. Traces of a similar earth surface (L51), presumably the same as L47, survived below L3 to the E. of the foundation: although encountered at this stage, both L51 and L47 appear to have been formed by compaction of, and accumulation on, a surface exposed for a considerable time (see below, Stage D). L43 did not appear to be an intentional surface, and most probably resulted from mortar-mixing against the angle of the buttresses. L47 was cut by a small pit filled with powdered mortar and fragments of masonry rubble (F57).

Beneath a very thin and discontinuous layer corresponding to L3 between the N.E. buttress foundations was a shallow rectangular pit filled with a silty loam containing inclusions of powdered mortar and masonry rubble (F78), overlain by a localised layer of ash (L80). It had cut earlier burials, and charnel from these (L103) had been redeposited neatly against the S. side of the pit before it was backfilled.

STAGE C (PHASE 4: 16TH CENTURY) FIG. 12

Beneath the modern levels and a very thin and discontinuous layer corresponding to L3, the interior of the foundation was filled with a dump-layer of sandy silt and powdered mortar (L8/9) containing much decorated floor tile and freshly-broken fragments of ornamental masonry, some painted and gilded. Sealed by this, and lipping-up against the masonry, was a surface of compacted silty material incorporating lenses of charcoal and mortar (L15, L18, L20, L27), interpreted as the floor of the building. Post-hole F14 cut L15, and so must either

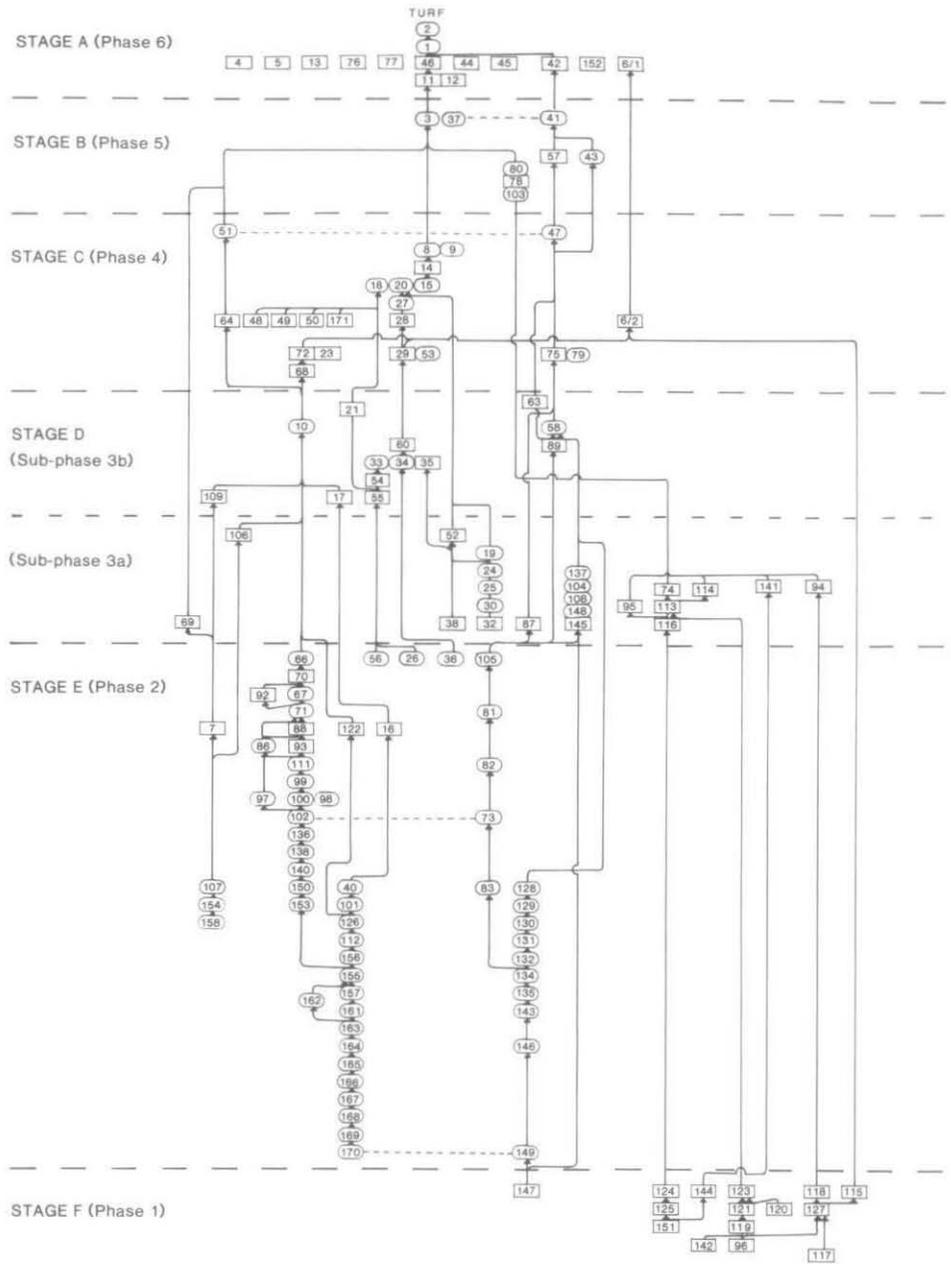


Fig. 10. Excavated stratigraphy (Trench One).

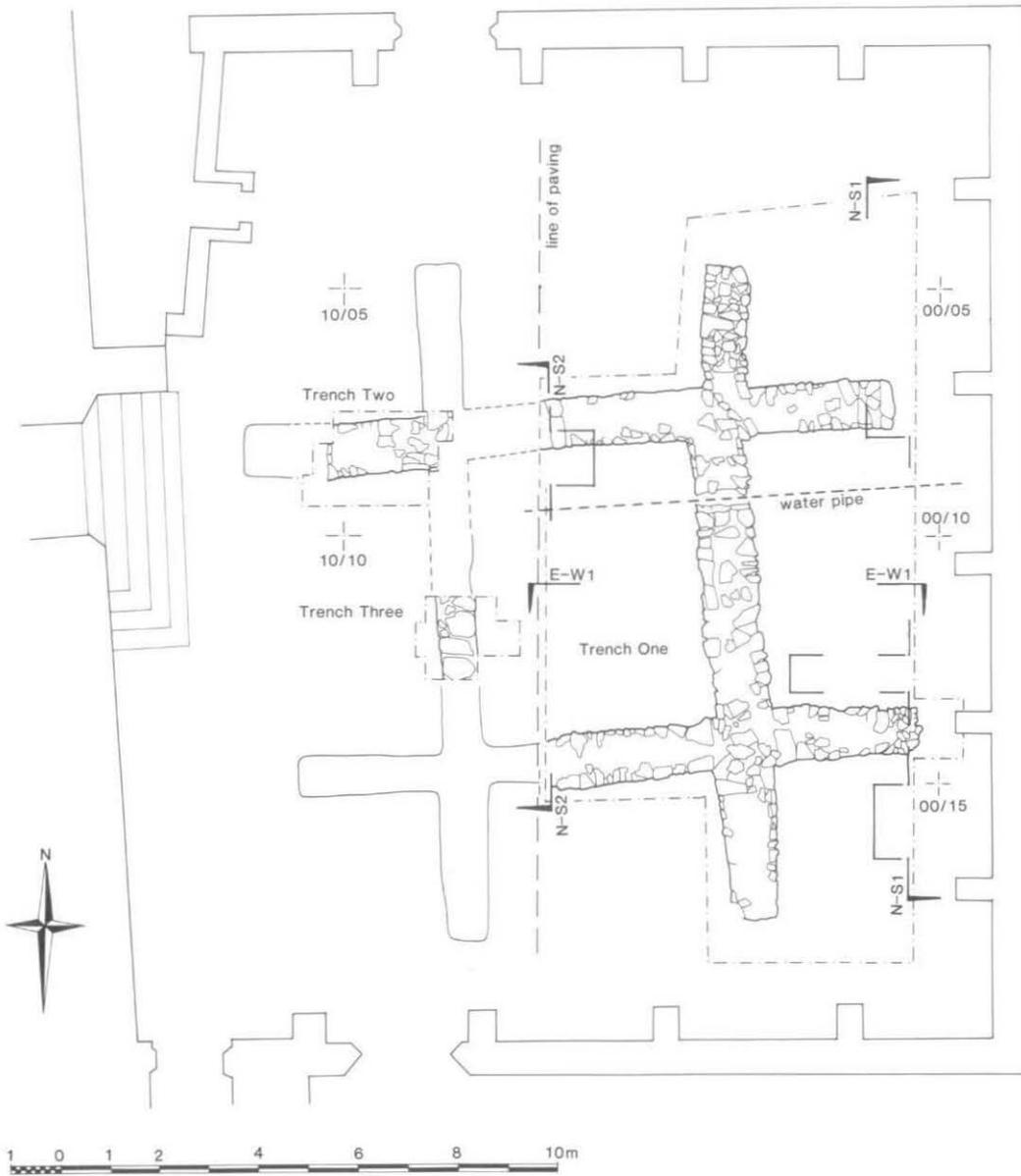


Fig. 11. Location of trenches and sections.

post-date accumulation of part, if not all of the floor, or else have held a post around which the floor levels accumulated.

Sealed by the floor levels were post-holes F48-50, shallow trenches F28 and F171, and the foundation construction trench (F29, L53), which was also detected externally along the E. wall (F23) and around the S.E. buttresses (F72, F75, L79). Post-hole F38 cut the fill of construction trench F29 and was only partially sealed by L20 in a manner suggesting that the floor levels had accumulated around a standing post. F28 also cut F29. F72 cut F68, a feature only detected in the section. The shallow pit F64 contained human bone, presumably re-buried after being disturbed during construction of the foundation.

STAGE D (PHASE 3: SECOND HALF OF THE 12TH CENTURY – EARLY 16TH CENTURY) FIG. 13

Externally, the foundation was cut into a layer of gravelly loam containing no pottery later than the late 15th or early 16th century (L10, L58), the surface of which, compacted over a considerable time, formed L47 and L51. Internally, this layer had been dug away to form the sunken floor, but the bottom of a shallow pit (F21) containing pottery contemporary with this horizon survived. In the area between the S.E. buttress foundations a shallow pit (F63) containing worked masonry was defined below L58, but may have been cut through it, or from a level within it, as some of the masonry protruded through L58. It cut the fill of a grave containing an unaccompanied supine inhumation, orientated W.-E. (F89), which was sealed beneath L58 and had been cut by construction trench F75.

The fills of intercutting medieval pits were exposed below the late 15th- and 16th-century levels. The density of pits was greatest towards the centre of the garth. Part of pit F35, and of pit F38, and a sequence of pit fills and other contexts in the N.W. corner of the trench, were excavated within the foundation during trial-trenching. It was often difficult to distinguish between the fills of different features, and this exacerbated the problem of relating newly-exposed stratigraphy to excavated contexts when the trench was extended. In addition, some relationships were obscured by the water-pipe baulk. It was never intended to investigate the medieval layers within the foundation during the main excavation, and from this stage work concentrated on the east side of the garth, the interior of the building being backfilled and used for dumping soil. However, sufficient artefactual and stratigraphic evidence was recovered to date and phase the medieval features sealed by L20 and associated contexts. Where they survived, L10 and L58 sealed all contexts of Stage D which had been cut into the backfill of earlier extraction features.

The later medieval pits, F35, F54-5 and F60, clustered towards the centre of the garth. Only F35 was excavated: the others were defined by trowelling over, and dating material was obtained from this cleaned surface. F35 was cut by F60 and cut F54, which appeared to cut F55.

Pits of the later 12th and 13th centuries were more dispersed. Within the foundation, contexts L19, L24-5, and L30 overlay pits F32 and F38. The relationship between F52, F74 and F106 had been destroyed by the foundation, but they may all have been part of the same large pit. In the area between the N.E. buttress foundations a series of shallow features containing charnel (F113-4, F116, F141), and a possible infant burial (F95), were cut into the upper fills of earlier burials, and were themselves cut by pit F74. The upper fills of pit F145, at the S.E. of the site, were cut by construction trench F75.

Pits F69 and F87, post-holes F109 and F17, and shallow trench F94 were also excavated at this stage but contained no datable artefacts and cannot be closely dated stratigraphically.

STAGE E (PHASE 2: FIRST HALF OF THE 12TH CENTURY) FIGS. 14-15

Construction trench F72 cut into the fill of a broad V-sectioned gully (F140) sloping away under the E. cloister range. The lowest levels within this were dark sticky fills L140, L138, L136 and L102. These were overlain around the E. margins by a thin intermittent layer of gravel and clay (L98/100), and towards the E. by a dark sticky fill apparently contemporary with L98/100 (L97). A probable turf line (L99) overlay L98/100. The horizon L97-100 appears to represent an attempt to consolidate the partially infilled gully. L99 was overlain around the N. and E. sides of the gully by a dump-layer of sandy loam (L111). This was cut by a small pit (F93) and overlain by three distinct layers of gravelly loam (L86, L71, L67). Cut into L86 and F93, but sealed by L71, was an unaccompanied supine inhumation, orientated W.-E., with a stone at either side of the skull (F88). Only four gully fills, L73, L81-2 and L105, were discerned S. of the construction trench. L73 appeared to correspond to L102. L105, which directly underlay L58, appeared to be a turf line.

L86 and L71 were cut by a shallow pit, F92. This also cut L67, but the relationship between them had been destroyed by another shallow pit, F70, which cut both. L67 and F70 were overlain by a thin localised spread of clean yellow sand (L66), which formed the interface between this horizon and the overlying L10.

North of the gully, sealed by later medieval and post-medieval levels, were two supine inhumations, orientated W.-E., in mortared stone cists (F7, F16). The right leg and lower left leg of inhumation F7 had been

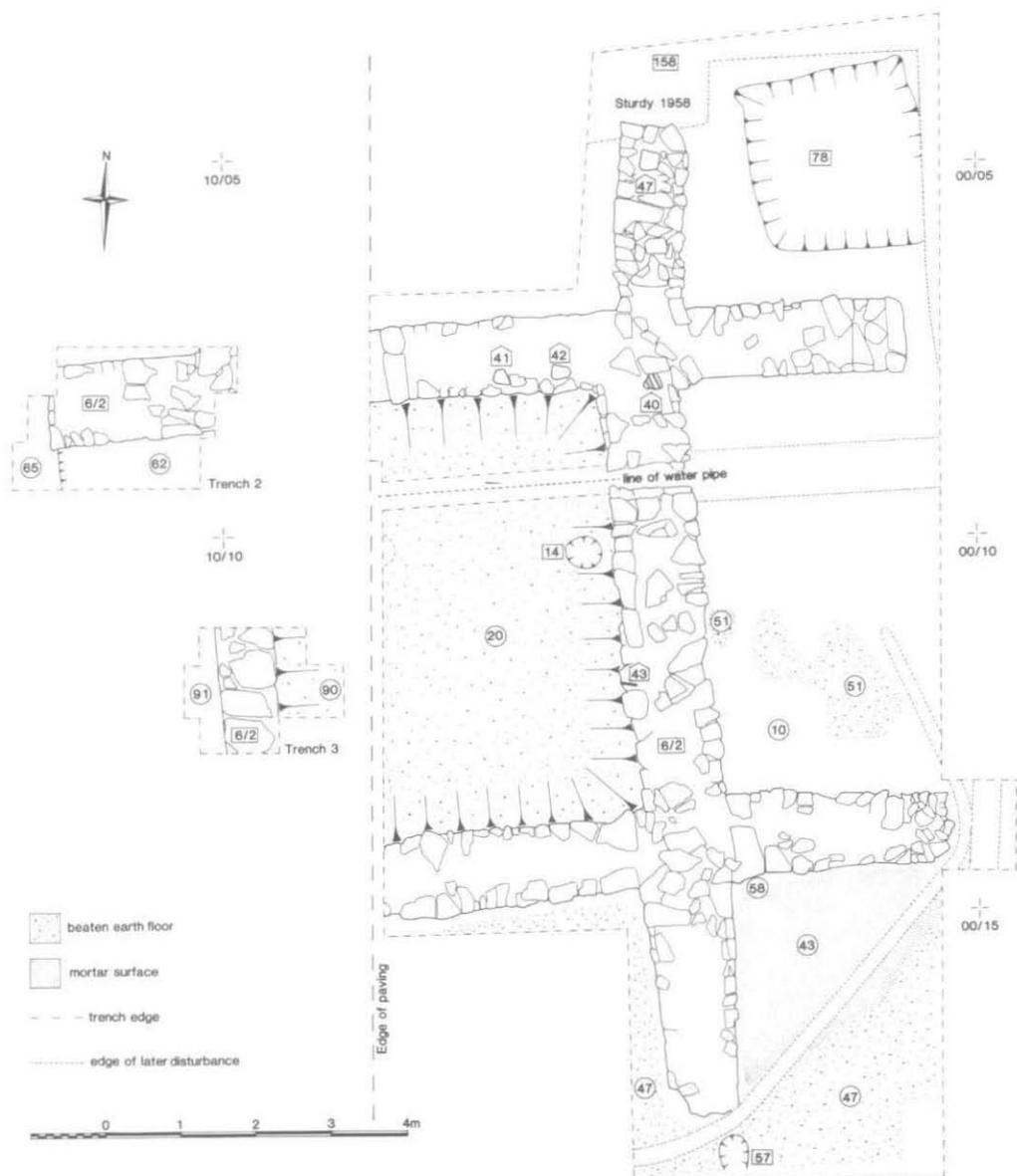


Fig. 12. Excavation Stages B and C.

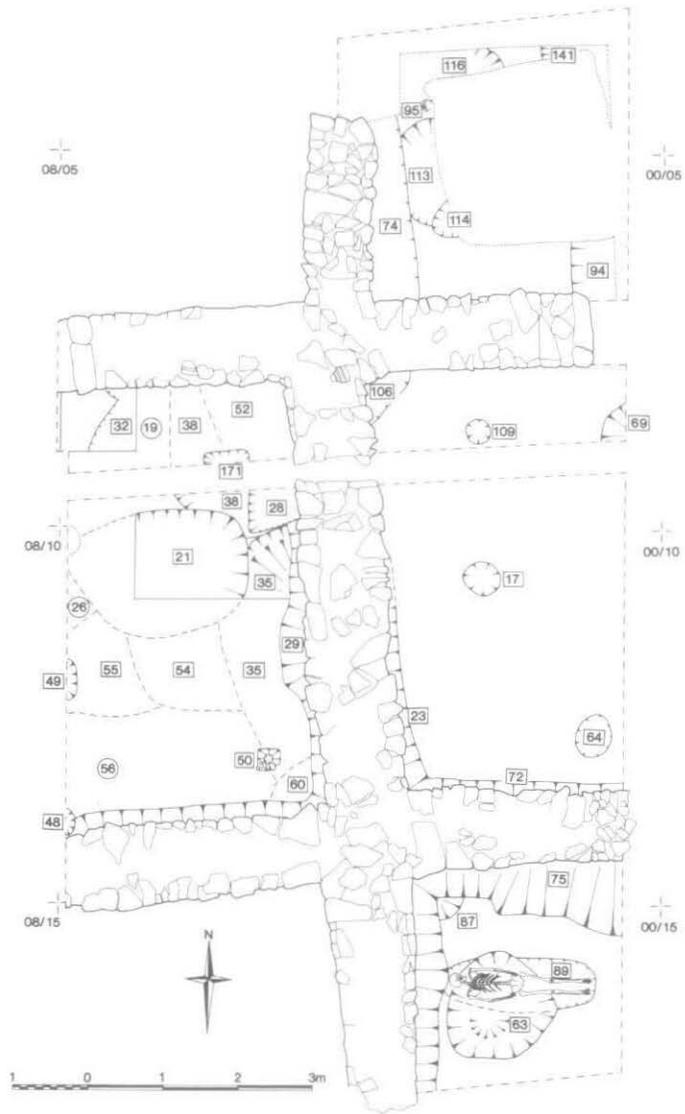


Fig. 13. Excavation Stage D.

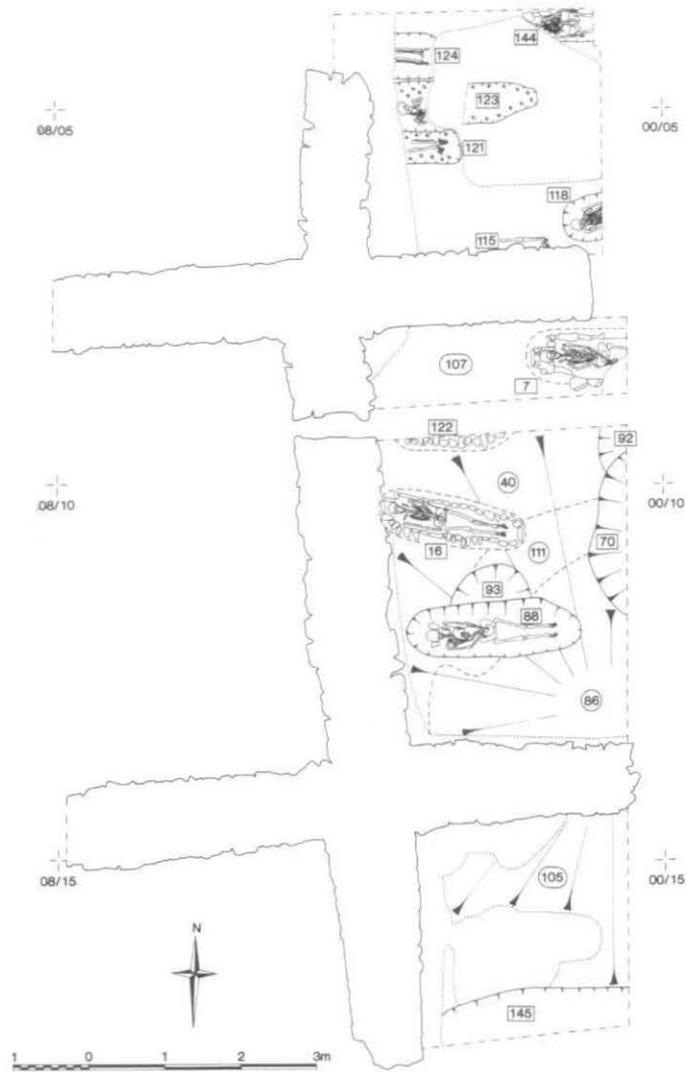


Fig. 14. Excavation Stages E and F (upper stratigraphy).

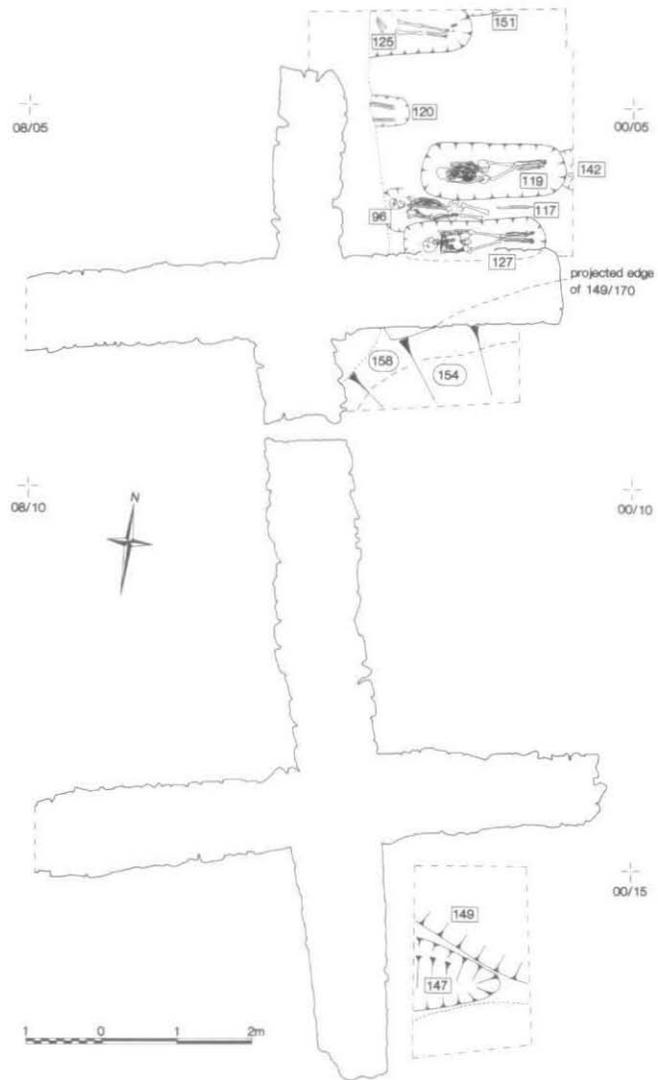
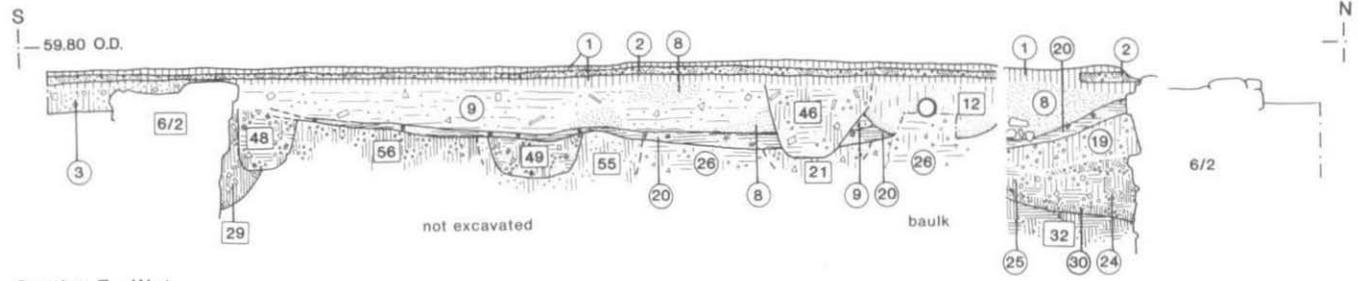
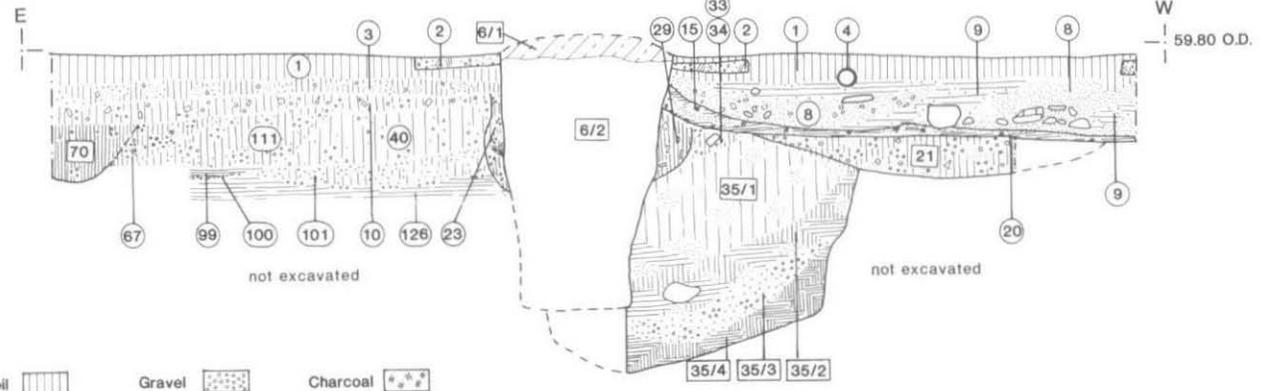


Fig. 15. Excavation Stages E and F (lower stratigraphy).

Section N - S2



Section E - W 1



Topsoil		Gravel		Charcoal	
Loam		Sand		Stones	
Silt		Mortar/Plaster		Clay	



Fig. 16. Sections N.-S. 2 and E.-W. 1.

cut away by pit F69; redeposited human skeletal material was recovered from the fill of F7. A third cist (F122), also orientated W.-E., lay beneath the water-pipe baulk and so was not excavated.

The gully F140 was formed by a depression in the backfill of a large pit (F149/170), into which most of the medieval features within the foundation, as well as burials F7, F16 and F122, had been cut. This feature was c. 10m. from N. to S. and over 2m. deep where excavated, and extended beneath the E. cloister range. Like pit F145, it appears to have been backfilled shortly after excavation, before any erosion or collapse of the sides could occur. Covering the bottom was a thin layer of burnt clay covered with charcoal and compacted ash (L170, L149/2-3), which was overlain by a localised layer of burned pebbles (L169), and by layers of silt and burned clay with lenses of charcoal, ash, sand and unburned clay (L162-8, L149/1). Above this, the pit was filled with a series of interleaved dump layers of sandy silt, loam, gravel and rubble (L40, L83, L101, L107, L112, L126, L128-36, L143-6, L154-8, L161-2). L26, L36 and L56, exposed within the foundation, may also be part of the backfill of this feature.

STAGE F (PHASE 1: PRE-CONQUEST) FIGS. 14-15

Between the N.E. buttress foundations the surface of the natural gravel survived at a depth of c. 0.6m. below the modern level of the garth. It was capped by a disturbed layer of red-brown gravelly loam (L139). Cut into this horizon were fourteen inhumations (F96, F115, F117-21, F123-5, F127, F142, F144 and F151). These cut each other to a considerable extent (see site matrix, Fig. 10), and some had been partially destroyed by later features; their condition consequently varied greatly, from the *in situ* bones of a single limb (F115, F117) to complete skeletons in intact grave pits. Charnel from earlier burials was recovered from the fills of F96, F118, F119, F124 and F127. So far as could be ascertained, all burials were unaccompanied, supine and orientated W.-E. Two were in grave pits lined with charcoal, with a layer of charcoal over the body also (F121, F123). Another appeared to be within the remains of a stone cist (F144). Nails from the fills of F96 (SF116, 123) and F144 (SF131) suggest that they *may* have been cofined; however, the possible nail-shank from F124 seems too large to come from a coffin. No other coffin traces were detected.

Features cut into the capping loam or the surface of the natural gravel survived only in this area of the site. Elsewhere, they had been destroyed by features of the 12th century or later. The density of burials here, where the gravel had not been quarried, suggests that most of them antedate pit F149/170.

At the S. end of the site, the upper fill of F147, a pit, or possibly a ditch terminal, was cut by F149/170.

TRENCHES TWO AND THREE

Beneath the bedding of the flagstones (L59, L84), Trenches Two and Three revealed a W. buttress at the projected N.W. corner of the foundation and a N.-S. return wall, suggesting a rectangular plan with angle buttresses at each corner. This was confirmed by Brian Durham's subsequent observations.

Of the contexts exposed in these trenches, L61 and L91 appeared to correspond to L3, L85 to L8/9, L65 to L10, and L90 to the pit fills sealed by L20. The foundation appeared to have been robbed-out just S. of the N.W. corner and the resulting trench backfilled with building debris (L62).

THE FINDS

POTTERY by MAUREEN MELLOR (Figs. 18-19)

736 sherds were recovered from stratified contexts.

Phase 1

Only one sherd was recovered, from F147, an Oxford Early Medieval Ware (Fabric AC, Group IB) which would not be expected before the mid 11th century.⁸

⁸ B.G. Durham, 'Excavations at All Saints Church, Oxford', *Oxoniensia* (forthcoming): 5% AC in Phase 3b, associated with a coin of Edward the Confessor dated 1044.

Phase 2

A much larger assemblage is associated with Phase 2. Oxford Early Medieval Ware (Fabric AC, Group IB) is dominant (Fig. 18, Nos. 2 and 4), but sandy wares (Oxford Medieval Ware, Fabric Y, Nos. 3 and 6; Abingdon Medieval Ware, Fabric AG, No. 1) are in strong competition. Continental imports include a Pingsdorf type (Fabric BV); regional imports include glazed Stamford-type pitchers (Fabrics Z and AT).

The contemporary pots in Oxford Early Medieval Ware are cooking/storage vessels (Nos. 2 and 4). The sandy wares from the group have rather larger vessels (Nos. 1 and 3), but probably served similar functions. A glazed sherd in Oxford Medieval Ware (Fabric Y, from F138) probably represents a pitcher. One small unglazed sherd (No. 6) with incised decoration and an applied finger-pressed strip may also represent a smaller jug.

This group can be paralleled with an assemblage from 79–80 St. Aldates, dating to the first half of the 12th century.⁹ It is consistent with the date of c. 1125–1150 for the contexts of Phase 2 proposed by the excavator (below), but accumulation nearer the earlier rather than the later date, or *vice versa*, cannot be ruled out.

Some residual Saxon sherds, including grass-tempered sherds, were found in F16 and F67. St. Neots-type ware (Fabric R, Group IA) was also recovered from the latter context. Residual Late Saxon wares (Fabrics B and R, Group IA), were recovered from F16 and F138. One sherd of Oxford Late Saxon Ware (Fabric B, Group IA) was decorated with an applied thumb-pressed strip (No. 5). This style of decoration has not been noted on this fabric previously in Oxford, and may indicate a new form type: a storage jar.

TABLE 1: SHERD NUMBERS IN EACH FABRIC SHOWN AS A PERCENTAGE OF THE TOTAL IN EACH PHASE

FABRIC	Ph1	%	Ph2	%	Ph3a	%	Ph3b	%	Ph4	%	Ph5	%	TOTAL
IA	A												
	B			2	0.9		1	0.5	2	1			
	R			7	3		2	1					
IB	AC	1	100	109	48	17	20	40	21	22	14	2	3
	BR			1	0.4								
II	AQ					3	3			3	2	1	1
	BF			10	4			2	1	2	1		
III	Y			40	18	39	45	18	9	12	8	1	1
	Z			2	0.9							1	1
	AG			37	16	3	3	4	2	2	1	2	3
	AH					4	5	1	0.5				
	AM			1	0.4	15	17	19	10	13	8	8	12
	AP								1	0.5			
	AT			1	0.4								
	AW					1	1	1	0.5				
	BV			1	0.4								
	BN							4	2				
	BX			1	0.4			73	37	61	39	7	10
	ST					1	1	4	2	14	9	25	36
	DA									4	3		
DB											1	1	
DE									4	3			
DF							5	3			2	3	
DG							1	0.5	1	0.6	7	10	
DH									1	0.6			
DI									1	0.6			
DT									1	0.6			
DX							2	1	2	1			
ZZ			15	7	4	5	17	9	12	8	12	17	
TOTAL	1		227		87		195		157		69		736

⁹ B.G. Durham, 'Archaeological Investigations in St. Aldates, Oxford', *Oxoniensia*, xlii (1977), 133: associated with a coin of Stephen c. 1141.

Phase 3A

In the earlier contexts of this sub-phase (F32, F38, F104, F106, F108, F137 and F148) Oxford Medieval Ware (Fabric Y, Group III) dominates, with only a few regional imports represented (Fabrics AG and AH). An early 13th-century date is suggested.¹⁰

Oxford Late Medieval Ware (Fabric AM, Group III, Brill/Boarstall types) dominates in the later contexts (F24, F25, F30 and F74). The underglaze plastic decoration and the use of copper oxide in the glazes suggests a mid 13th-century date.¹¹

Oxford Medieval Ware included cooking/storage vessels, a dish with combed decoration (No. 8),¹² and 8 glazed sherds, probably from pitchers. Glazed sherds, probably of ovoid jugs¹³ or small pitchers with strap handles (No. 7),¹⁴ in Fabric AH were present in both the earlier and later contexts of this sub-phase.

Phase 3B

Pottery from beneath the belfry floors and the contemporary external surface includes a considerable element of residual material (Oxford Early Medieval Ware, Fabric AC, Group IB, from F21, F33 and F54/55, and from L10, L58, L65 and F89).

Brill types dominate (Fabric BX), but small amounts of Raeren-type Rhenish stonewares, and white and red earthenwares, are also present. Vessel types include jars, both plain (No. 10) and partially glazed (No. 12); deep-sided pans (Nos. 13 and 14); and jugs (Nos. 18 and 19), some with rod handles (No. 11), others with wedge-sectioned strap handles (No. 21). Decoration is confined to deep horizontal grooves (No. 15) and partial glazing in clear or mottled dark-green glazes. Cups (Nos. 9 and 20) and drinking tankards (Nos. 16 and 17) were also present. A similar assemblage can be paralleled at the Hamel Phase E4(2), dated to the early or mid 16th century,¹⁵ and this would complement the preferred dating of the latest contexts of this sub-phase to the end of the 15th century and the first quarter of the 16th (below, p. 66).

Phase 4

Pottery from the infill of the belfry continues to be dominated by the Brill-type coarsewares, and a slightly wider range of red and white earthenwares were also present. The vessel forms associated with Brill show no evidence of development from those of Phase 3b. A few other vessel-types were recovered from the post-holes within the foundation: a dripping pan with a thick carbon deposit on the exterior (No. 30), and a skillet-handle (No. 32). Jars (No. 27), some with knife-trimmed bases (No. 31), and jugs, partially glazed in mottled green (No. 29), continue in use. One vessel contained a thick deposit of calcium carbonate on the internal surface (No. 28), suggesting that water had been heated in it. It also had evidence of frost-pitting externally.

Smaller cups or tankards with internal and external glaze were found (No. 22), one a Cistercian type with purplish glaze (No. 23, Fabric 126), obviously a 'second' since it had a small hole in its base.

Rhenish stonewares accounted for 9 per cent of the assemblage, an increase over the previous phase. Plain stonewares included Raeren-type drinking vessels (Nos. 24-6) and a single sherd of a Raeren copy of a Cologne oak jug or drinking mug, from L9.¹⁶ Their *floruit* is c. 1500-50. One drinking vessel was clearly a 'second', the handle having fractured prior to or during firing and the glaze having trickled into the fracture, leaving the handle very insecure! There is nothing amongst this assemblage which would not conform to the date of 1545-6 proposed for the infilling of the belfry (below, p. 72).

¹⁰ N. Palmer, 'A Beaker Burial and Medieval Tenements in The Hamel, Oxford', *Oxoniensia*, xlv (1980), 161, Fig. 8, Phase D3b.

¹¹ G. Lambrick, 'Further Excavations on the Second Site of the Dominican Priory, Oxford', *Oxoniensia*, I (1985), 177: south-western area Phase 1, dated c. 1250, with a coin of Henry III (1216-72) probably deposited 1230-50. Palmer, *op. cit.* note 10, 161, 176-8: Phase B10b, dated 1250-65.

¹² Palmer, *op. cit.* note 10, Fig. 10(18): dated late 12th/early 13th century.

¹³ R.L.S. Bruce-Mitford, 'Archaeology of the Site of the Bodleian Extension in Broad Street, Oxford', *Oxoniensia*, v (1940), Fig. 10(4).

¹⁴ Palmer, *op. cit.* note 10, Fig. 10(23): mid 13th century. Bruce-Mitford, *op. cit.* note 13, Pl. 10(4) for pitcher with tubular spout and strap handle: 12th/early 13th century.

¹⁵ Palmer, *op. cit.* note 10.

¹⁶ I am grateful to John Hurst for identifying this rare copy. For examples of oak-leaf only see *Steinzeug* (Cologne, 1971), 267.

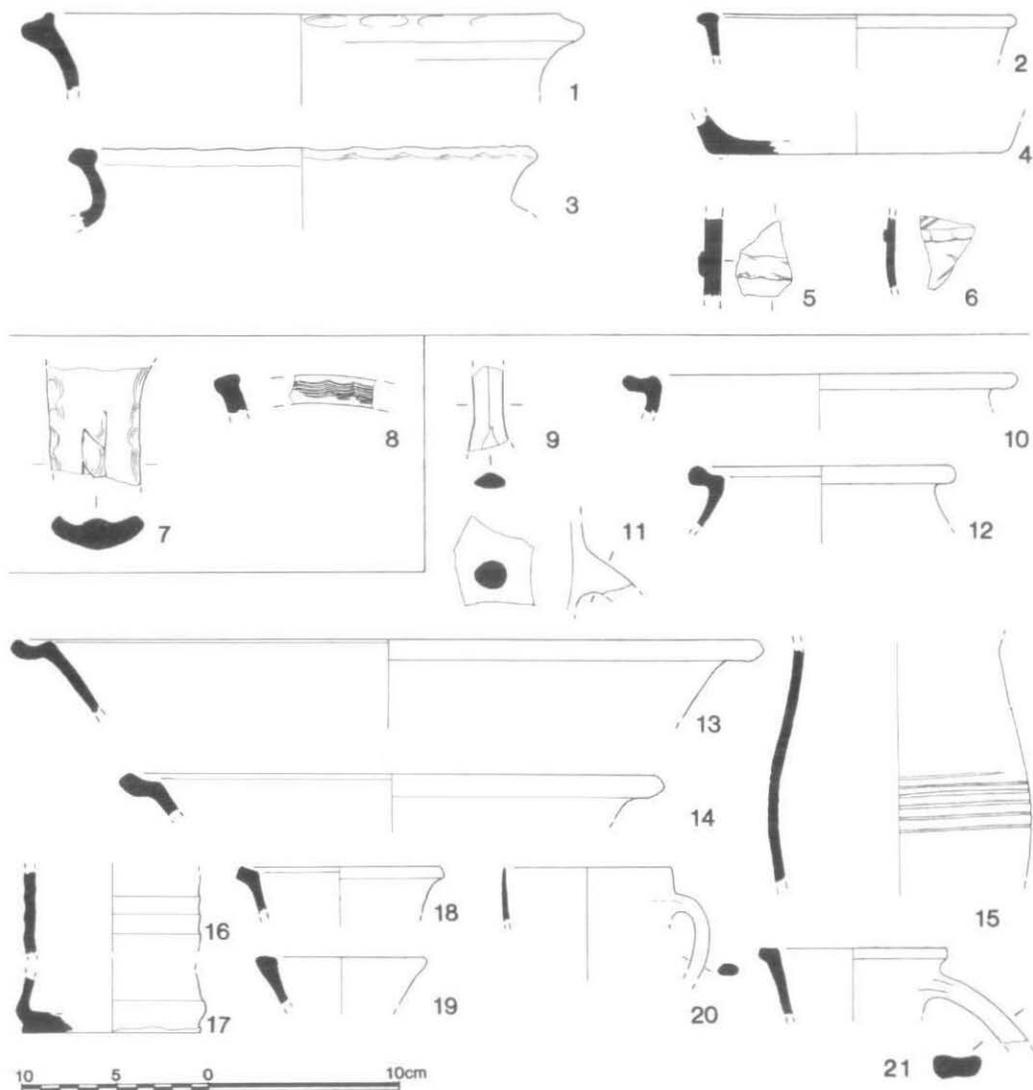


Fig. 18. Pottery. Scale 1:4.

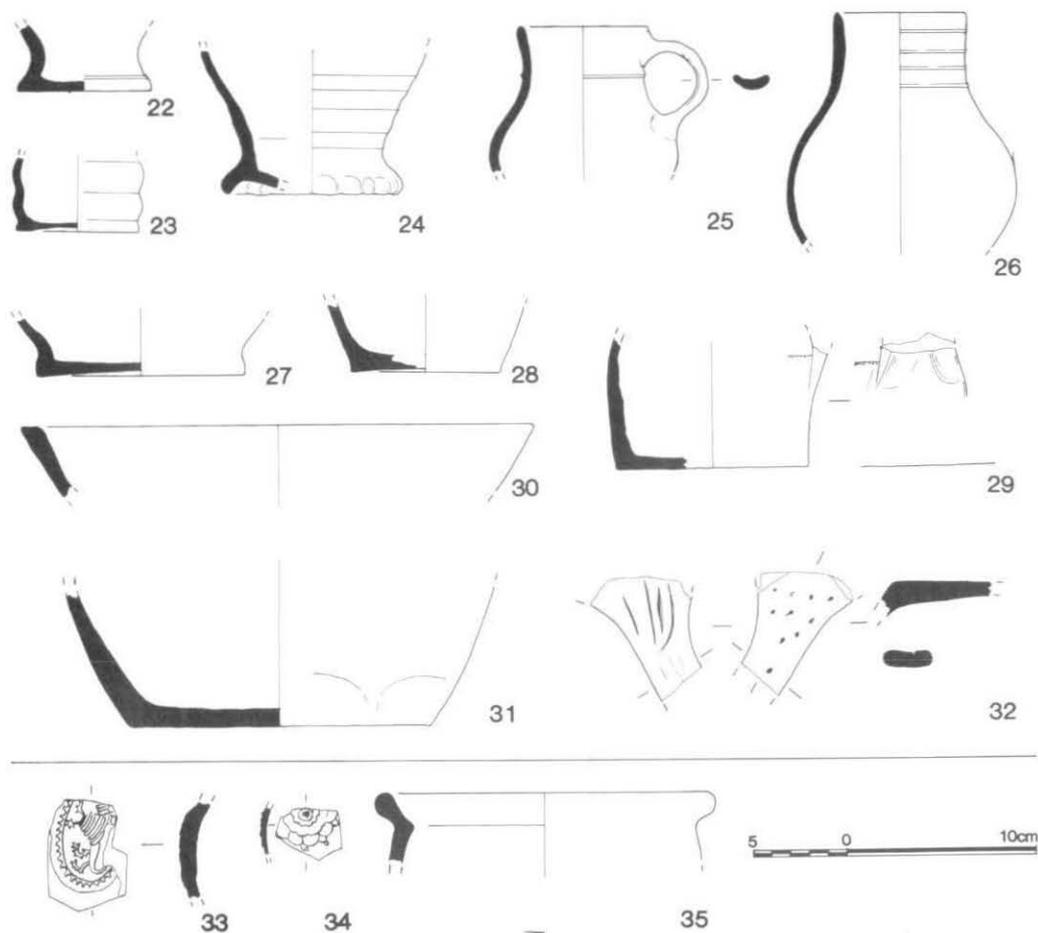


Fig. 19. Pottery. Scale 1:4.

Phase 5

This phase yielded a smaller assemblage of pottery, which was largely from one context, the fill of F78. It is clear from this material that the medieval Brill-type fabric was no longer so popular and had been replaced by another fabric (Fabric 124), also believed to have been made at Brill: a red earthenware, often glazed orange internally (No. 35).¹⁷

Rhenish stonewares appear to dominate, a characteristic not noted on tenement sites in Oxford. Raeren types were present, but Frenchen flagons and globular tankards dominate, some with bellamine masks, with fake heraldic medallions.¹⁸ A Nuremberg jetton of Hans Krauwinckel gives a *terminus post quem* of c. 1580–1610 for the deposition of the assemblage from F78 (below, p. 38); the stonewares suggest a mid 17th-century date.

¹⁷ T.G. Hassall, C.E. Halpin and M. Mellor, 'Excavations in St. Ebbes, Oxford, 1967–1976: Part II: Post-Medieval Domestic Tenements and the Post-Dissolution Site of the Greyfriars', *Oxoniensia*, xlix (1984): Red Earthenware Fiche II E4–E6.

¹⁸ See Hassall et al., *ibid.*, Fig. 65(5), for a similar, though not identical, medallion.

A fine rosette from a Jackfield jug (No. 33), glazed black both internally and externally, was recovered from L3, and dates to the mid 18th century. However, given the modern disturbance of L3, this piece, like the 19th- and 20th-century ceramics, may well be intrusive.

Conclusions

The earlier medieval sequence is useful, as little or no late Saxon contamination was present. It is, however, significant that a few sherds of early Saxon type were found in association with ceramics of recognisably 10th-century traditions. This may indicate that local middle Saxon ceramics included grass-tempered and shelly limestone fabrics.

However, the Christ Church pottery is most interesting for the 16th-century material. The assemblages from beneath the floor of the belfry, from the floor itself, and from the infill are not large (indeed, 16th-century assemblages within the City have always been meagre in comparison with groups of the 12th, 13th and 14th centuries, and those from the mid 17th century onwards). There is nevertheless sufficient to show that the predominating Brill-type fabric was similar to the medieval fabric, but with less quartz and varying amounts of iron ore. It is hard-fired and breaks to a smooth fracture. The vessel forms show little or no stylistic development over half a century (c. 1500–50), despite considerable religious upheavals and changes in fashion of dress. But a stylistic development does occur over the next 50 to 70 years, and we need further well-stratified groups for this period in order to fit the earliest excavated post-medieval Brill kiln into the sequence.¹⁹

COINS AND JETTONS by N.J. MAYHEW

Four of this group of six items may be dated securely to the 16th century, all jettons. The earliest combines a typical French *écu*-type obverse (shield of France modern) with a typical Nuremberg reverse of Reichsapfel within a *tressure* of three curves alternating with three angles. It is of larger diameter than the other jettons, and it is this feature, together with the combination of typical French 15th-century obverse with typical Nuremberg 16th-century reverse, which suggests that it is the earliest of the jettons found. This piece is pierced. The other three jettons are all of the same type, Barnard No. 84,²⁰ with varying legends. Two name the famous Nuremberg jetton maker Hans Krauwinckel (c. A.D. 1580–1610), while the third has a garbled legend. The two coins are a very worn and clipped French *douzaine* or *blanc* of the 15th or 16th century, and a Roman piece of Valens. The latter, and the jetton No. 5, are clearly residual.

1. Roman coin of Valens, A.D. 369–378. *Securitas Reipublicae*. SF125 L134 Ph 2.
2. Uncertain French *douzaine* or *blanc*, 15th or 16th century. Very worn and clipped. SF59 F50 Ph4.
3. Nuremberg jetton with French-type obverse. Perhaps early 16th century. SF39 topsoil.
4. Nuremberg jetton, Krauwinckel type, though illegible. SF1 L8 Ph4.
- 5–6. Nuremberg jettons of Hans Krauwinckel. 5, SF87 L3 Ph5; 6, SF101 F78 Ph5.

LEAD BULLA by ARTHUR MACGREGOR (Fig. 20)

Lead *bull*a of Pope Innocent IV (1243–1254).

Obv. *SPASPE*; conventional heads of SS Paul and Peter within dotted pear-shaped outlines and in the centre a Latin cross, all within a dotted border.

Rev: *INNO/CENTIVS/PP-III*. within a dotted border.

Vertical string-hole. Diameter (max.) 38 mm., Thickness 5 mm., Weight 45.9 g.

SF103 L84 modern.

A lead sealing of the standard type from a papal document.²¹ The issues of Innocent IV are among those most commonly found in England. This find is from the bedding of the cloister garth paving.

¹⁹ M. Farley, 'Pottery and Pottery Kilns of the Post-Medieval Period at Brill, Buckinghamshire', *Post-Med. Arch.* xiii (1979), 127–52.

²⁰ F.P. Barnard, *The Casting Counter and the Counting Board* (1916), Pl. 33.

²¹ cf. C. Serafini, *Le Monete e le Bolle Plumbee Pontificie del Medgliere Vaticano i* (Milan, 1910), 29.

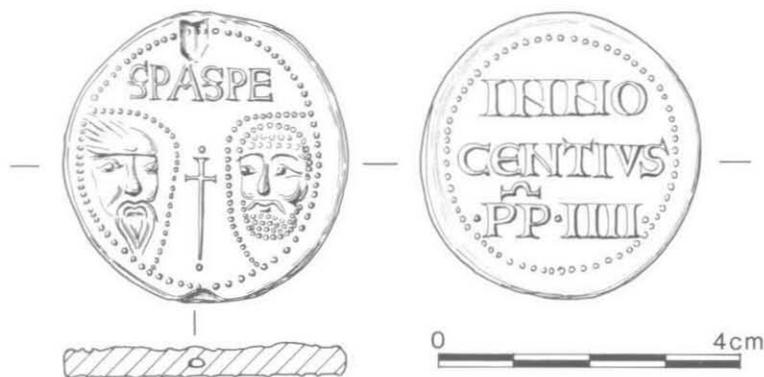


Fig. 20 Lead bulla. Scale 1:1.

NON-FERROUS METAL OBJECTS by ALISON R. GOODALL (Figs. 21-3)

Monastic and ecclesiastical sites typically produce few copper-alloy finds related to costume and personal ornament, except in the case of graveyard excavations. No. 8 is probably a buckle-plate and the strap-end, No. 9, could have come from a belt. The wire eye, No. 10, and the many lace-ends, represented by Nos. 12-14, are also from costume. However, these sites often provide evidence for the presence of books, which is less frequently found on town and village sites. The cathedral cloister is no exception: Nos. 1-5 are clasps from book-bindings.

Most of the lead fragments are from window leads, and all but two of these are of the type made by drawing a cast rod or came through a vice.²² The other two fragments appear to have been made by the earlier method of casting.

Copper-alloy Objects (Figs. 21-2)

- 1-3. Hooked book-clasps. All are of typical late medieval to early post-medieval form. Nos. 1 and 2 have incised decoration and No. 3 is plain. No. 2 retains some leather between the plates. Similar book-clasps have been found, for instance, at Basing House, Hants., dating perhaps from before the building of the house in 1531,²³ and on book-bindings of the 15th and 16th centuries.²⁴ 1, SF48 L8 Ph4; 2, SF34 L9 Ph4; 3, SF56 F12 modern.
- 4-5. Eyes from book-clasps. These would probably have been used with hooks similar to Nos. 1-3. Comparable examples have been found at the Carmelite Friary, Newcastle-upon-Tyne,²⁵ and the Austin Friars, Leicester, where it was identified as a buckle-plate.²⁶ 4, SF79 L10 Ph3b; 5, SF151 L8 Ph4.
- 6-7. Perforated plates, possibly from book-bindings or from belts. No. 7 (not illustrated) is incomplete. 6, SF66 L35 Ph3b; 7, SF81 L58 Ph3b.
8. Probably a buckle-plate. The upper surface has a *repoussé* hump and there appear to be a pair of spacers between the plates. SF6 L33 Ph3b.
9. Strap-end with two rivets and retaining leather between the plates. SF31 L9 Ph4.

²² I. Davies, 'Window Glass in Eighteenth-Century Williamsburg', in I. Noël Hume et al., *Five Artifact Studies* (Colonial Williamsburg Occasional Papers in Archaeology i, 1973), 82.

²³ S. Moorhouse, 'Finds from Basing House, Hampshire (c. 1540-1645): Part II', *Post-Med. Arch.* v (1971), 59, Fig. 24(162).

²⁴ For example, a book on display at Sudeley Castle, Gloucestershire, dated 1429, with an embossed leather binding: it is not clear if the date also refers to the binding. Also a book of c. 1600 in Bayntons' Museum of Bookbinding, Bath.

²⁵ B. Harbottle, 'Excavations at the Carmelite Friary, Newcastle-upon-Tyne, 1965 and 1967', *Archaeologia Aeliana* 4th ser. xlv (1968), 222, Fig. 18(154).

²⁶ P. Clay, in J.E. Mellor and T. Pearce, *The Austin Friars, Leicester* (C.B.A. Research Report xxxv, 1981), 133, Fig. 48(35).

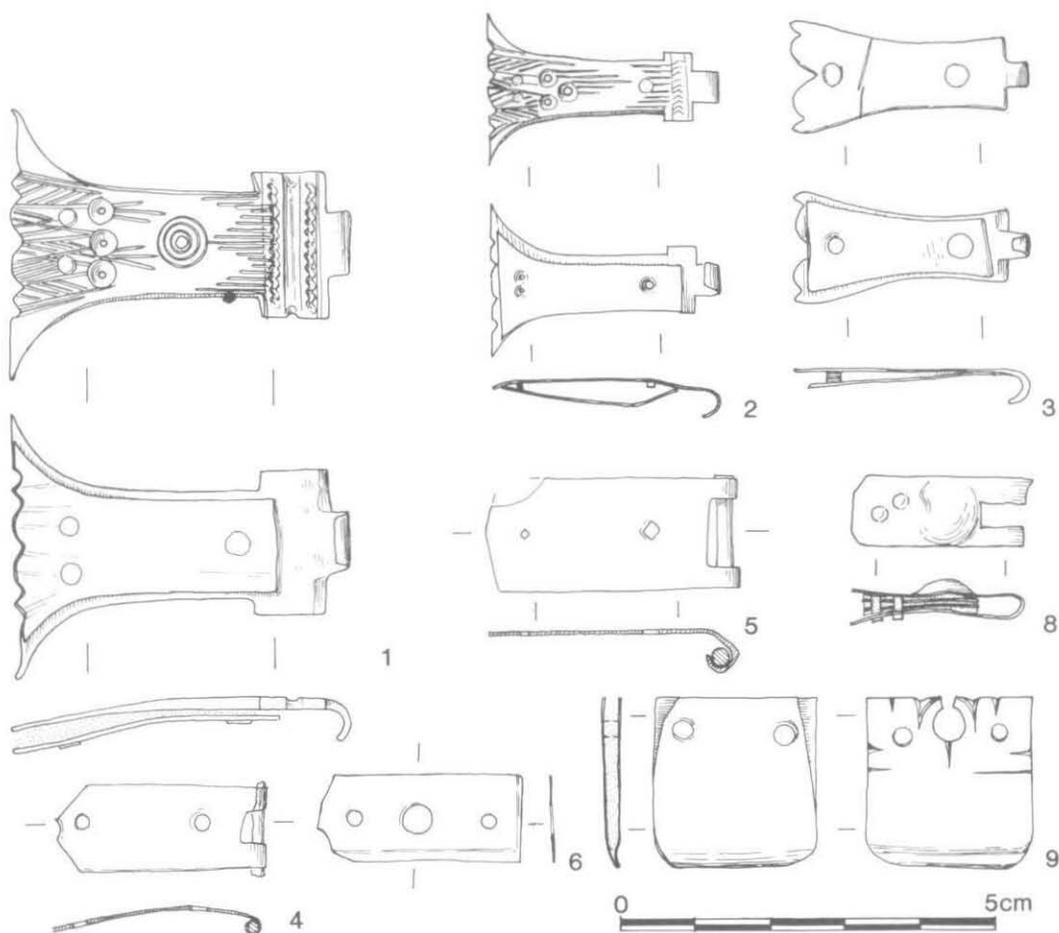


Fig. 21. Copper-alloy objects. Scale 1:1.

10. (Not illustrated) Wire eye from a hook-and-eye. SF62 L20 Ph4.
11. Hinged manicure set, attached to a suspension loop. It consists of a curved nail-cleaner, scoop, pointed implement, and another curved implement which possibly did not always belong to the set since it has a decorated surface and lacks the cast moulding of the other pieces. Other manicure sets come from Hull,²⁷ dating from the late 13th to early 14th century, and from a late 15th century context at Lyveden, Northants;²⁸ but these examples, although similar to each other, do not resemble this one from Christ Church closely. SF138 L10 Ph3b.
- 12-14. Lace-ends. No. 12 is unusually narrow and has been bent through 90 degrees, but otherwise resembles a lace-end. Nos. 13 and 14 have been made from rolled sheet and were secured by a rivet. 12, SF71 L58 Ph3b; 13, SF20 L18 Ph4; 14, SF32 L9 Ph4.

²⁷ A.R. Goodall, 'Objects of Copper Alloy' in P. Armstrong and B. Ayers, 'Excavations in High Street and Blackfriargate', *East Riding Archaeology*, viii (1987), 206, Fig. 117(225).

²⁸ J.M. Steane and G.F. Bryant, 'Excavations at the Deserted Medieval Settlement at Lyveden. Fourth Report', *Jnl. of the Northampton Museum and Art Gallery*, xii (June 1975), 114, Fig. 43(49).

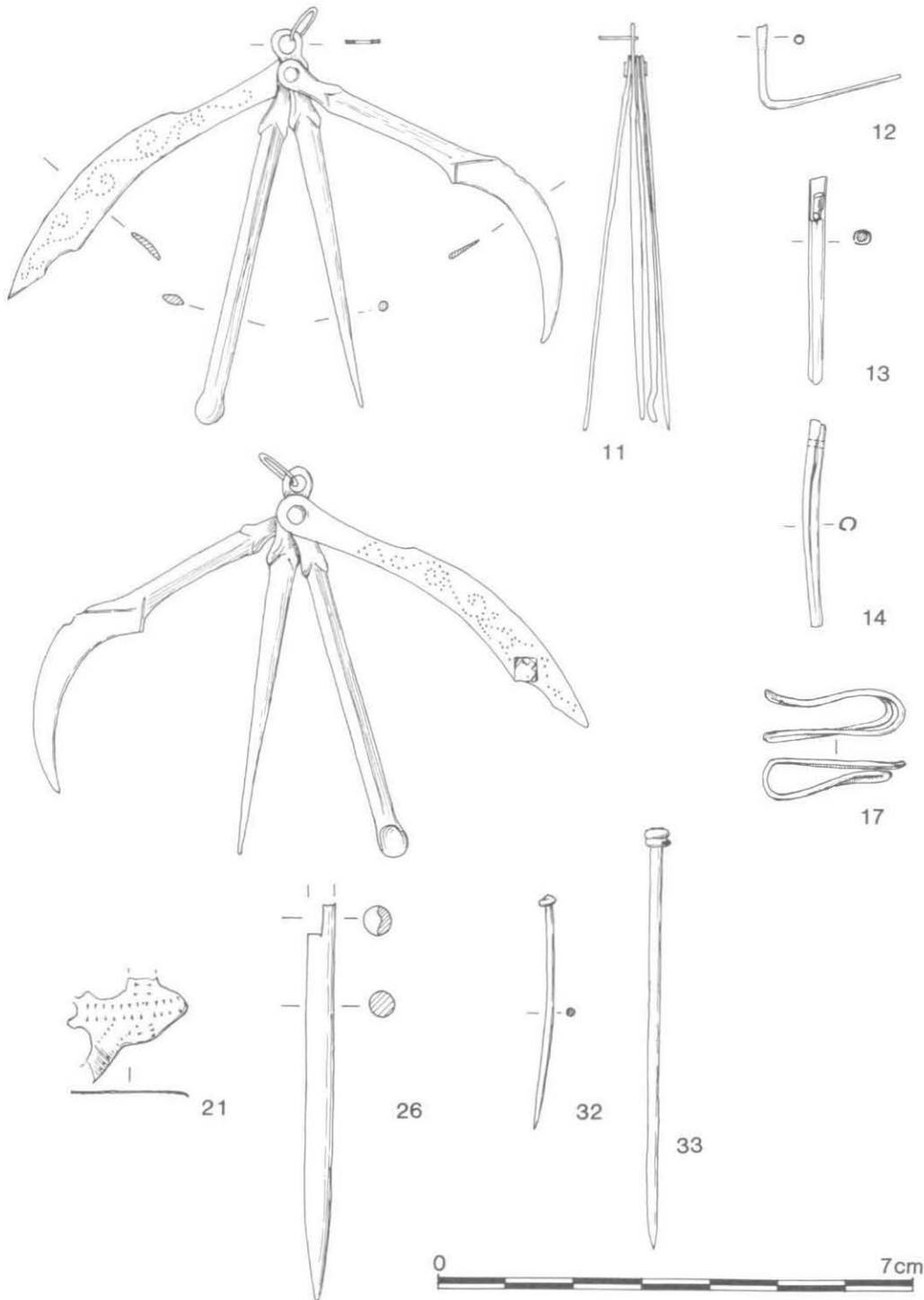


Fig. 22. Copper-alloy objects. Scale 1:1.

There are a further 38 lace-ends of this type, 25 of which appear to have rivets; two of these have a black coating on them. None comes from a context earlier than Phase 3b. Phase 3b: SF74, 102, 106, 171. Phase 4: SF2, 9, 37, 60. Phase 5: SF14, 25, 58, 68, 99, 148. One lace-end has been made from folded rather than rolled sheet. It has been suggested that lace-ends of this type are later than the rolled ones.²⁹ SF65 F49 Ph4.

- 15-16. (Not illustrated) Lower halves of sheet-metal bells, with dumbbell-shaped openings. No. 15 has a diameter of 16.5 mm. and No. 16 of approximately 28 mm. 15, SF33 L9 Ph4; 16, SF95 F77 modern.
17. Chain link, apparently cast rather than of drawn wire. SF157 L38 Ph3a.
18. (Not illustrated) Roughly cast ring with file marks on surface; diameter 22 mm. SF76 L58 Ph3b.
19. (Not illustrated) Probably a fragment from a vessel rim. SF28 L45 modern.
20. (Not illustrated) Strip of thin sheet with rivet holes; possibly a patch. SF86 L3 Ph5.
21. Small decorative fragment. SF167 L100 Ph2.
22. (Not illustrated) Rolled strip with rivet holes; width 7.5 mm. but broadening at one end. SF175 L21 Ph3b.
23. (Not illustrated) Fragment of round plate with remains of two nail holes with countersinking for heads. Surviving width 31 mm. SF158 topsoil.
24. (Not illustrated) Rounded fragment with two holes, possibly a sequin; width 10 mm. SF70 L58 Ph3b.
25. (Not illustrated) Strip of wood covered with leather which has been attached with a row of six, closely spaced, gilt-headed studs; head diameter 10 mm. Probably from furniture. SF73 F45 modern.
26. Pointed object with a rebate at the blunt end. SF121 L98 Ph2.
- 27-31. (Not illustrated) Sheet fragments and off-cuts; 27, SF118 F109 Ph3b; 28, SF57 L9 Ph4; 29, SF176 L8 Ph4; 30, SF47 L3 Ph5; 31, SF91 L80 Ph5.
- 32-33. Pins. No. 32 has a head made from coiled wire and a relatively thick shank. No. 33 is similar but, as with most post-medieval pins, the head has been attached to the shank by stamping it between moulds, giving it a more regular shape than No. 32. 32, SF75 L58 Ph3b; 33, SF144 L3 Ph5. Two more pins resemble No. 32 (SF35 and SF61, both Phase 4), while there are a further 12 pins of the same type as No. 33, of which four show evidence of white-metal plating. Phase 3b: SF82. Phase 4: SF3, 61, 82, 94, 104 (8 specimens). A further pin, SF65 (F49 Ph4) is of indeterminate type.
- 34-35. (Not illustrated) Wire. No. 34 is a roll of fine wire; No. 35 is a piece of thick, 2.5 mm., wire. 34, SF4 L18 Ph4; 35, SF98 F78 Ph5.
- 36-38. (Not illustrated) Lumps, possibly from metalcasting. 36, SF109 F74 Ph3a; 37, SF97 F78 Ph5; 38, SF105 F78 Ph5.

Lead Objects (Fig. 23)

1. Piece of cut sheet. SF26 L9 Ph4.
2. Sheet, possibly from roofing or flashing. SF72 L10 Ph3b.
3. Pieces of window lead, probably from rectangular or diamond-shaped panes. Nearly all of the leads have been made from cast bars or comes which have been drawn out and shaped in a glazier's vice. SF177 L8 Ph4.
There are 15 similar pieces of lead: Phase 3a: SF113. Phase 3b: SF162. Phase 4: SF13, 18-19, 21, 38, 44, 55, 114, 180. Phase 5: SF67, 147. Modern: SF43, 163. Two pieces of lead appear to have been made simply by casting, without being drawn through a vice: SF30 L9 Ph4; SF152 L85 Ph4.
4. (Not illustrated) Narrow strip, probably a tie used to secure a window to iron cross-bars. SF63 L20 Ph4.
- 5-6. (Not illustrated) Probably caulking. 5, SF52 L9 Ph4; 6, SF120 L85 Ph4.
7. Fragment with longitudinal grooves. SF7 topsoil.
- 8-10. (Not illustrated) Strips. 8, SF85 topsoil; 9, SF161 L21 Ph3b; 10, SF155 F28 Ph4.
11. Iron nail wrapped in lead sheet. SF166 F12 modern.
- 12-13. (Not illustrated) Fused lead. 12, SF50 L9 Ph4; 13, SF77 L58 Ph3b.

²⁹ G.E. Oakley, 'The Copper-Alloy Objects', in J.H. Williams, *St. Peter's Street, Northampton: Excavations 1973-1976* (1979), 262-3.

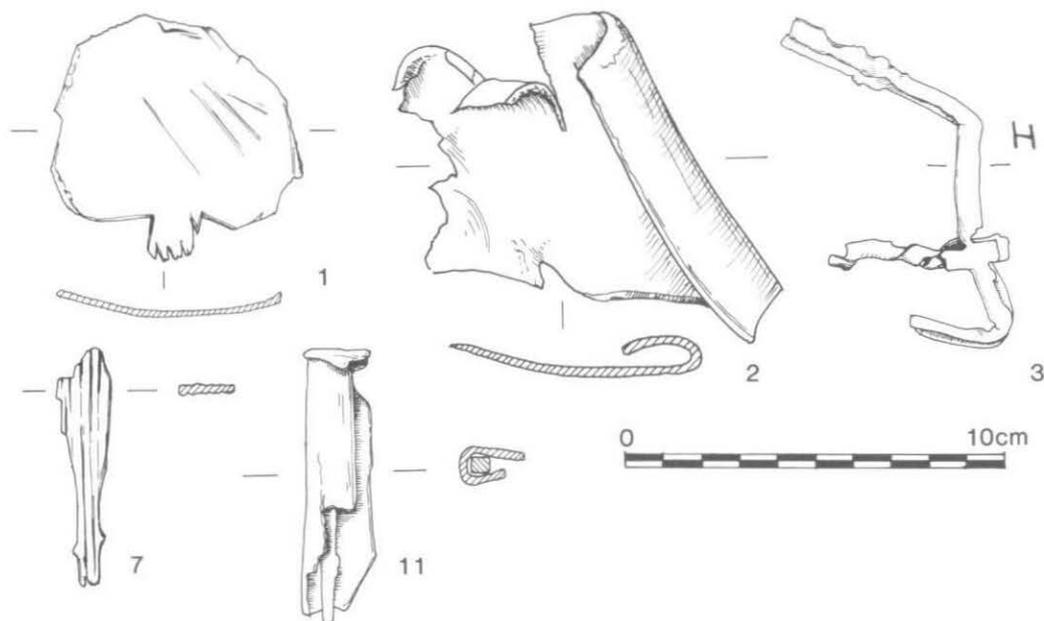


Fig. 23. Lead objects. Scale 1:2.

IRON OBJECTS by IAN H. GOODALL (Fig. 24)

- 1-4. Knives. No. 1, with a whittle tang, was probably lost soon after manufacture since its cutler's mark is not inlaid, the practice followed from about the mid 16th century.³⁰ Nos. 2-4 are late medieval scale-tang knives, 4 (not illustrated) a 37 mm. long blade fragment with the stub of the tang. 1, SF36 L8 Ph4; 2, SF49 L9 Ph4; 3, SF181 L8 Ph4; 4, SF64 F28 Ph4.
5. Shears blade with cusped top. SF53 L9 Ph4.
- 6-7. Hinge or strap terminals with projecting tips. Such shaping is rare on most hinges, and these may be from a door or chest. Some indication of the elaborate form of hinges and fittings on some 12th-century doors is given by that at Stillingfleet, North Yorkshire, and some of its contemporaries.³¹ 6, SF128 L101 Ph2; 7, SF160 F21 Ph3b.
8. (Not illustrated) Strap fragment, 31 mm. long, 17 mm. wide. SF11 L8 Ph4.
9. Tip of a stapled hasp, commonly used in conjunction with a lock fixed to a chest. The lock bolt passed through the staple, the two together thereby securing the chest, while the projecting scrolled tip enabled the hasp to be easily removed from the lock when free. SF142 L3 Ph5.
- 10-11. Arrowheads, both of the blunted type used in medieval and later times for target practice and found in considerable numbers both at Baile Hill, York,³² and in Coventry.³³ 10, SF185 F29 Ph4; 11, SF117 F78 Ph5.

³⁰ J.F. Hayward, *English Cutlery, Sixteenth to Eighteenth Century* (1957).

³¹ P.V. Addyman and I.H. Goodall, 'The Norman Church and Door at Stillingfleet, North Yorkshire', *Archaeologia*, cvii (1979), 75-105.

³² P.V. Addyman and J. Priestly, 'Baile Hill, York: a report on the Institute's Excavations', *Archaeological Jnl.* cxxxiv (1977), 121, 140, Fig. 10 (29-49).

³³ C. Woodfield, 'Finds from the Free Grammar School at the Whitefriars, Coventry, c. 1545-1547/8', *Post-Med. Arch.* xv (1981), 87, Fig. 3(1-9).

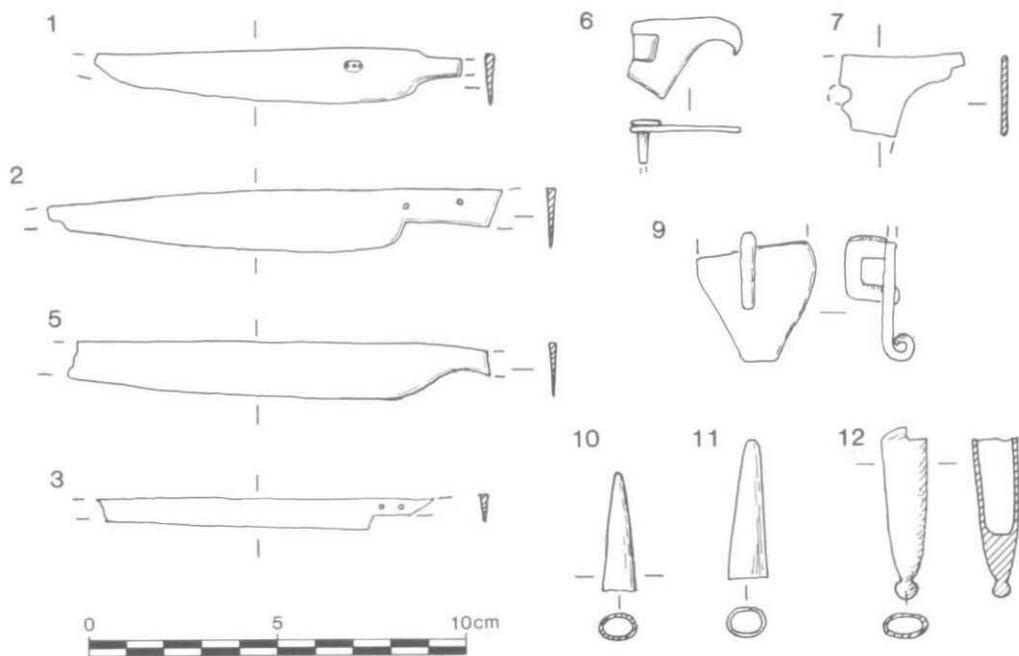


Fig. 24. Iron objects. Scale 1:2.

12. Chape with knobbed tip. Iron chapes are not common, but other, probably late, examples are known.³⁴ SF164 L3 Ph5.
- 13-17. (Not illustrated) Timber nails from graves. Nos. 13-15, all from F96, are complete, 59 mm., 69 mm., and 72 mm. long respectively, with flat circular heads 21 mm. in diameter. Nos. 16 and 17 are nail shanks. 13 and 14 SF123, 15, SF116, F96 Ph1; 16, SF131 F144 Ph1; 17, SF136 F89 Ph3b.
18. (Not illustrated) Possible shank of large timber nail, square-sectioned, 155 mm. long. SF122 F124 Ph1. Many other complete nails and fragments, representing at least 192 nails in addition to Nos. 13-18, were recovered. The great majority, a minimum of 147, were from post-medieval contexts, 68 from Phase 4. 32 were recovered from Phase 3b, 12 from Phase 3a, and 1 from Phase 2.

BONE OBJECTS by ARTHUR MACGREGOR

1. Antler connecting plate from a composite comb, parallel-sided and **D**-shaped in section; broken at either end, both breaks running through rivet holes. One edge is marked by repeated transverse saw cuts. 45 × 12.5 × 3.5 mm. SF126 L136 Ph2. It is unclear whether this piece comes from a single-sided or double-sided comb: the thin cross-section and straight edges are more appropriate for a double-sided comb; the transverse saw-cuts (from cutting the teeth) on one edge only might be taken to indicate a single-sided comb, although instances are known of double-sided combs with single opposing edges marked in this fashion.
2. Bone gouge, made from sheep or goat metatarsal. Length 44 mm., diameter 14 mm. SF88 F78 Ph5. Possibly from an unfinished 'apple-scoop', a well-known post-medieval implement type, often made from sheep metatarsals. The distal end is usually left intact while the shaft is cut through to form a

³⁴ I.H. Goodall in P. Wade-Martins, *Excavations in North Elmham Park* (East Anglian Arch. ix, 1980), 516, Fig. 267(129); I.H. Goodall in C.M. Cunningham and P.J. Drury, *Post-Medieval Sites and their Pottery: Moulsham Street, Chelmsford* (C.B.A. Research Report liv, 1985), 57, Fig. 34(84).

gouge. Although usually identified as scoops with which toothless ancients ate their apples, other functions have also been attributed to them, including taking core samples from cheeses to test for ripeness.³⁵

WINDOW GLASS by NIALL DONALD (Fig. 25)

223 stratified fragments of glass were recovered, 63 of them painted. Most seem to be 14th-century, although fragment No. 19 could be early or mid 15th-century. Nearly all came from post-medieval contexts, but five fragments were recovered from medieval contexts (F74, L94). None of these is painted and, apart from one clear glass fragment, any colour is indistinguishable. These fragments, from Phase 3a, are the earliest glass from the site.

The illustrated fragments show the range of recognisable patterns and motifs. There are geometric patterns (Nos. 1, 6-7, 17, 18), several of which are backpainted. Background (Nos. 2-4, 8, 19, 26) and border (Nos. 5, 9-12, 25) designs occur: No. 19 has a characteristic seaweed foliage design; Nos. 25 and 26 have been picked out of a matt wash, and No. 25, like No. 20, is part of a quarry design with no clear parallels in the *Corpus Vitrearum Medii Aevi* for Oxfordshire.³⁶ Nos. 13 and 14 are fragments of *grisaille*, and No. 21 is a large fragment from a *grisaille* quarry with a foliage of daisies similar to glass excavated in the Latin Chapel. Nos. 15, 16, 22 and 23 have architectural details: 22 has been picked out of a matt wash to give the effect of masonry; No. 23 is unlikely to be drapery due to the narrowness of the design.

The majority of the glass comes from the floor of the belfry and the dump layers which sealed it: 86 fragments, of which 22 are painted, came from the dump, and 46 fragments from the floor, of which 25 were painted. The similarity between the glass fragments from the floor (Nos. 1-5) and the dump (Nos. 6-16) suggests that they share a common source. It is clear that some glass was dropped on the floor, and other fragments dumped on a builders' dump which was then used to backfill the belfry. In the main report it is argued that this material is the result of work carried out in the church in 1545-6; it seems likely, therefore, that this included destruction of, or alterations to, at least some of the glass. The character of the assemblage, composed of borders, backgrounds and *grisaille* without any definite fragments of drapery or figural pieces, suggests the stripping of lead or the replacement of old windows in new frames; the glass and lead from the floor suggests that this may have been done in the belfry before its demolition and infilling.

BRICK AND TILE by DEBORAH DUNCAN (Fig. 26)

928 stratified pieces of ceramic tile and brick were recovered, of which 425 were too fragmentary to classify as either roof or floor tile. One Romano-British box or half-box tile (No. 1), with a roller relief pattern (Lowther W-chevron type),³⁷ was recovered from Phase 3b.

Brick

8 pieces of brick were recovered, including one corner-piece from Phase 2. There is no archaeological reason to think that it is intrusive, and it has the same fabric as two floor tiles from contexts of the same phase.

Roofing Material

197 fragments of roof tile were recovered. The majority were ordinary tiles, but 9 were identifiable as peg-tiles and 7 as spurred ridge-tiles. The coarse red sandy fabric with a few white clay inclusions indicates a local source.

³⁵ A. MacGregor, *Bone, Antler, Ivory and Horn: the Technology of Skeletal Materials since the Roman Period* (1985), 180, Fig. 97. For another example excavated from Oxford, see A.G. Hunter and E.M. Jope, 'Excavations on the City Defences in New College, Oxford, 1949', *Oxoniensia*, xvi (1951), 28-41.

³⁶ P.A. Newton and J. Kerr, *The County of Oxford: a Catalogue of Medieval Stained Glass (Corpus Vitrearum Medii Aevi i, 1979)*.

³⁷ A.W.G. Lowther, *A Study of the Patterns on Roman Flue Tiles and their Distribution* (Research Papers of the Surrey Archaeological Society i). I am grateful to Leigh Turner for this identification.

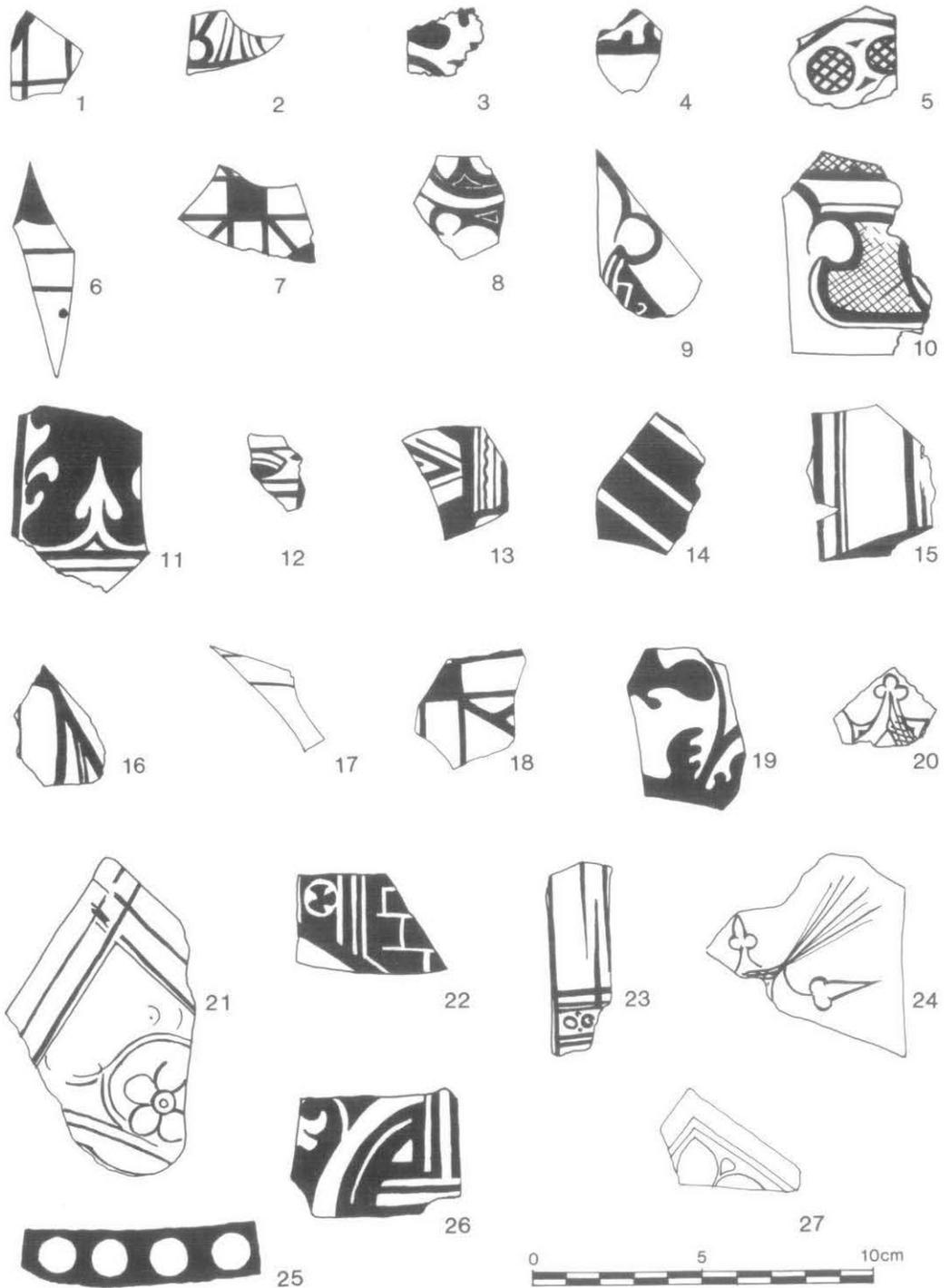


Fig. 25. Painted window glass. Scale 1:2.

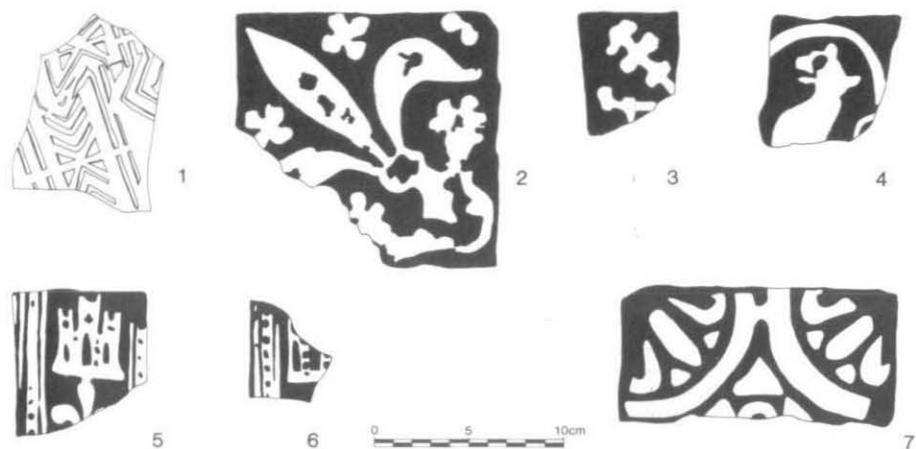


Fig. 26. Tile. Scale 1:4.

Floor Tile

Most of the floor tile was recovered from post-medieval contexts, the majority, including much decorated tile originally from the Priory church, from the infill of the belfry. Two tile fragments were recovered from contexts of Phase 2. These are plain, thicker than usual (32 mm.), and dark grey in colour with a high iron content and rounded calcareous inclusions. The fabric is identical to that of a roof tile from Mount House, Witney.³⁸

Post-medieval material included 32 pieces of large paving slabs, 4 green-glazed, the rest yellow-glazed, identified as Flemish.³⁹ The 1528-9 building accounts for Wolsey's college record payments to one John Norton for yellow and green paving tiles.⁴⁰

Of the decorated medieval fragments, 169 are inlaid 'Stabbed Wessex' types, 16 are printed. Identifiable designs are listed below, where possible by Haberly's serial number;⁴¹ an asterisk denotes types not previously known from Christ Church. Also found was one dark green, almost black, glazed border tile of a different fabric from the rest.⁴²

Inlaid Tiles

'STABBED WESSEX' TYPES

XI*		XXXVI*	2 fragments
XXII		XXXVIII	
XXIII*	2 fragments	XLIX*	2 fragments
XXV		LI*	
XXVI		LII	
XXXI		LV*	
XXXII/LIII	2 fragments	LXI	
XXXIII	4 fragments	CCIX* ⁴³	

³⁸ D. Duncan, 'The Tiles', in B.G. Durham, 'Witney Palace', *Oxoniensia* (forthcoming).

³⁹ Initial identification by Sarah Jennings.

⁴⁰ *V.C.H. Oxon.* iii, 231.

⁴¹ L. Haberly, *Medieval English Paving Tiles* (1937).

⁴² See M. Mellor, 'The Tiles', in T. Hassall and C. Halpin, 'Excavations in St. Ebbes, Oxford, 1967-1976: Part I', *Oxoniensia* (forthcoming).

⁴³ cf. A.B. Emden, 'Medieval Floor Tiles in the Church of St. Peter in the East, Oxford', *Oxoniensia*, xxxiv (1969), 39-40, Fig. 12(11).

Possibles

XVI		LI or ? variant of L	3 fragments
XXIV or			
XXIVa or XXV	5 fragments	LII	2 fragments
XXXI		LV	
XXXVI		LXV or LXVI	
LI or L			

Variants

L⁴⁴
 XXXII/LIII (No. 2)
 ?XLII (No. 3)

Others

Reverse of a similar tile found at the Dominican priory, Oxford (No. 4).⁴⁵
 Two fragments of border designs with castles and *fleurs-de-lis* (Nos. 5 and 6). These may be described as 'Chertsey type' since, although they are local 'Stabbed Wessex' types, they are copies of designs originating from Chertsey in the 1290s.⁴⁶

Printed Tiles

CX*
 CLXVII
 CCXXIX*

Variant

Two fragments of a combination of CLXVI and CLXVII (No. 7).

CLAY PIPES by CHRISTOPHER SCULL

17 stem fragments and a single bowl were recovered, from contexts of the 17th century or later. The bowl, from L47, is of local form B, dated *c.* 1650–90.⁴⁷

WORKED STONE FROM THE CLOISTER, LATIN CHAPEL AND PRIORY HOUSE by JOHN BLAIR (Figs. 27–9)

Of greatest intrinsic interest are the fragments of St. Frideswide's shrine (Nos. 19–28), all recovered from the infill of the belfry except for one canopy fragment from the Priory House; detailed discussion of these is reserved for a future publication. The other material from the cloister and Latin Chapel is not usefully stratified, and most of the former is late. It is, however, of interest that the W. part of the Latin Chapel produced three fragments (Nos. 2–4) from a Romanesque structure which had been heavily burnt and subsequently painted several times, on one occasion in red and black. These suggest that some part of the northern chapels existed before 1190, was damaged in the fire of that year, but survived thereafter through several repaintings.

⁴⁴ *Ibid.*, 36–7, Fig. 11(1).

⁴⁵ G. Lambrick and M. Mellor, 'The Tiles', in Lambrick, *op. cit.* note 11, 181, Fig. 20(5).

⁴⁶ E. Eames, *English Medieval Tiles* (1985), 46.

⁴⁷ A. Oswald and J. Rutter, 'Clay Pipes', in Hassall et al., *op. cit.* note 17, 251–62.

The three groups of material are listed and illustrated together, arranged by date and type. Items from the 1985 cloister excavation are referenced 'CCL' followed by the layer or feature number and the worked stone number. Items from the 1962-3 Latin Chapel excavation are referenced 'LC' with Sturdy's cutting number (below, pp. 77-86). The two items found among rubble during renovation of the Priory House in 1986 are referenced 'CPH'. All pieces are in local oolitic limestone except where otherwise stated.

12th and 13th Centuries

1. Part of a small block worked on one face with a chevron; possibly the outer edge of a voussoir. (LC unstrat.)
2. Fragment from end of shaft of c. 11 cm. diameter. Heavily fire-stained, with traces of (i) white and (ii) black paint-layers over the staining. (LC, cutting 2W)
3. Obtuse-angled edge of block. Heavily fire-stained, with at least three layers of white paint over the staining. (LC, cutting 2W)
4. Fragment from corner of block with quarter-hollow moulding and quirk. Fire-stained, with paint layers over the staining: (i) white; (ii) quarter-hollow red, quirk black; (iii) yellow; (iv-vi) white. (LC, cutting 2, from rubble layer)
5. Straight 12-cm. length of attached keeled shaft. (LC, cutting 2)
6. Small fragment of shaft. (LC unstrat.)
7. Straight 17-cm. length of attached round shaft or string. (CCL, F6/2 WS41)

Late Medieval and Indeterminate

8. Trefoiled finial from some elaborate structure with ogee cusping, probably mid 14th century. (LC unstrat.)
9. Straight 12-cm. length of window mullion with bulbous filleted roll. (CCL, F63 WS44/1)
10. Straight 17-cm. length of window mullion with bulbous filleted roll; small incised cross on end of block. (CCL, F6/2 WS40)
11. Fragment of standard window mullion; small incised cross on end of block. (CCL, F63 WS44)
12. Straight 13-cm. length of mullion from unglazed structure. (CCL, L7 WS25)
13. Straight 12-cm. length of ?polygonal shaft with slightly concave faces. (CCL, L8 WS3)
14. Straight 9-cm. length of bulbous fillet. (CCL, L9 WS20)
15. Straight 12-cm. length of beaked moulding. (CCL, L9 WS11)
16. Fragment of small block with concave face. (CCL, F78 WS46)
17. Corner of parapet of elaborate late Gothic structure with crenellated top and frieze of blind quatrefoils. Probably from a tomb, shrine or something similar. (CCL, L8 WS5)
18. Carved block with a fleuron on one side and ?a wimpled female face on the other, forming the junction of two lengths of upwards-pointing bulbous filleted moulding. This strange object is perhaps best interpreted as one corner of a polygonal or coffin-shaped trough or basin. The moulding and the fleuron suggest a 15th-century date. (CPH, WS5)

Fragments from the Late 13th-Century Shrine-Base of St. Frideswide

- 19-23. Five fragments of moulding and cusping from the canopy; hard shelly limestone. (CPH, WS6; CCL, L9 WS12, L3 WS48, L8 WS28, L9 WS10)
- 24-5. Two fragments of shaft bases; Purbeck marble. (CCL, L9 WS9, F12 WS4)
- 26-7. Two fragments of quatrefoil-section shafts; Purbeck marble. (CCL, L9 WS15, L9 WS17)
28. Fragment of pinnacle or detached buttress; Purbeck marble. (CCL, L9 WS14)

Not illustrated

Block with flat plastered face and traces of red pigment. (CCL, L9 WS27)
 Indeterminate fragments. (CCL, WS9, 12, 13, 16, 18, 19, 21-4, 30, 32-9, 42-4, 47)

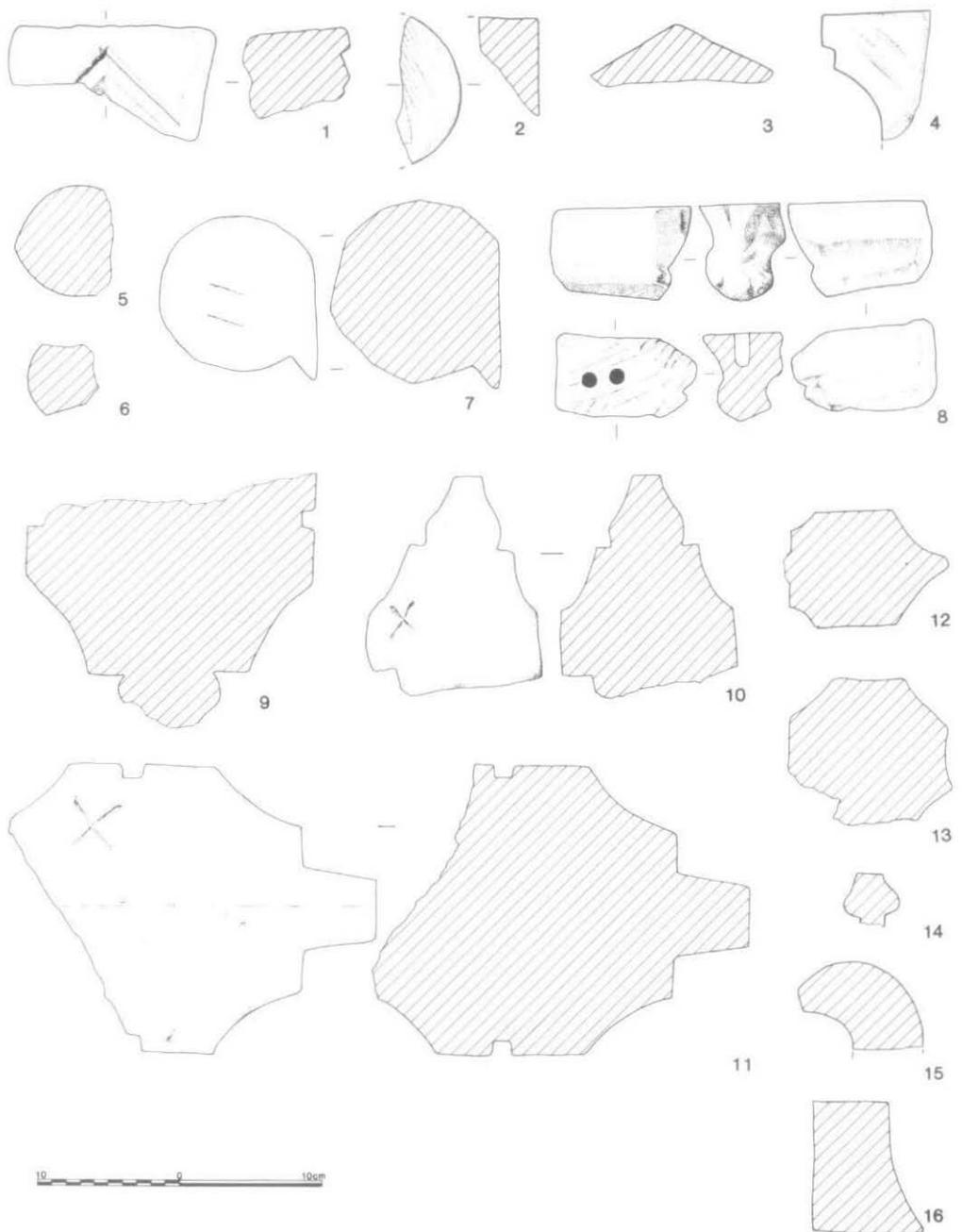


Fig. 27. Worked stone. *Scale 1:5.*

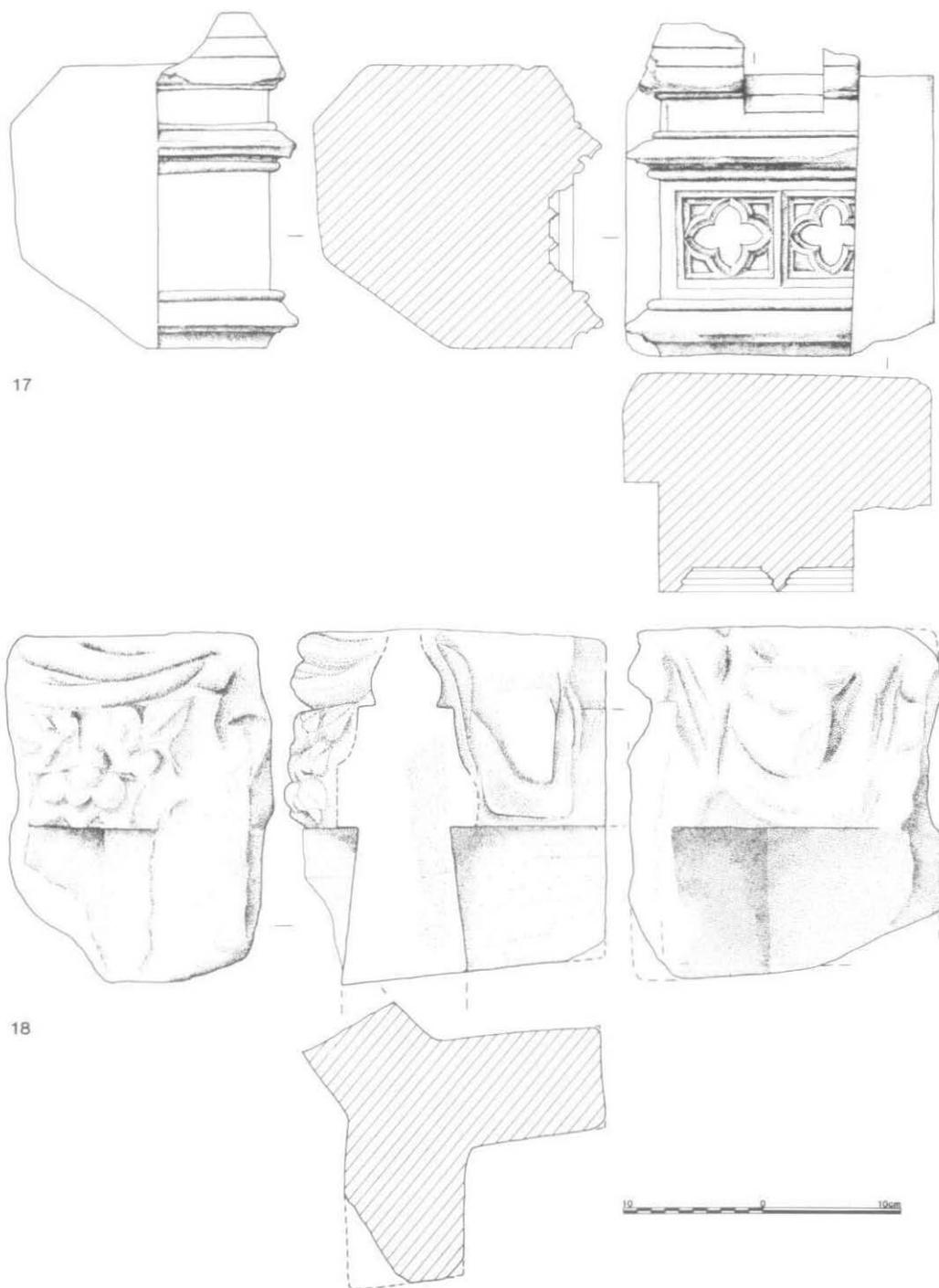


Fig. 28. Worked stone. Scale 1:5.

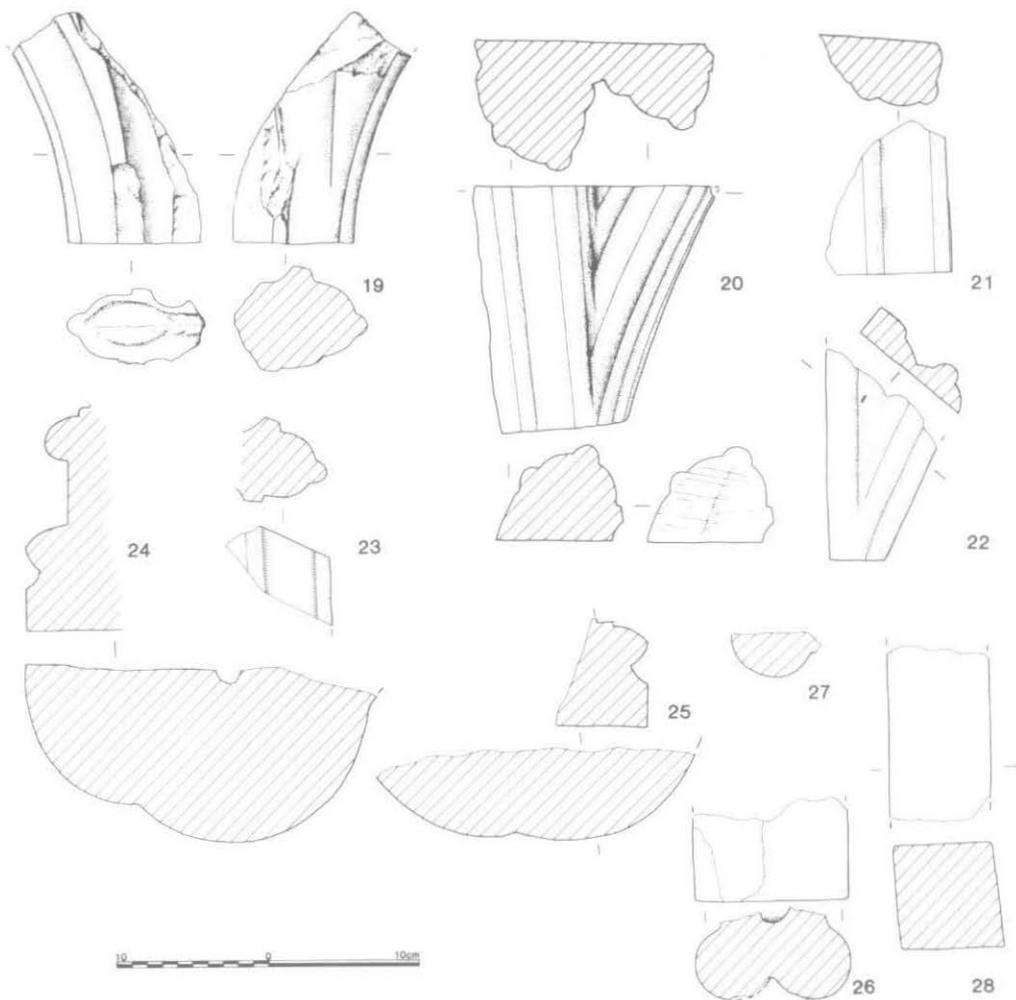


Fig. 29. Fragments from the shrine-base of St. Frideswide. Scale 1:5.

HUMAN SKELETAL MATERIAL AND FAUNAL REMAINS

THE HUMAN BONES by MARY HARMAN

All of the bones recovered were examined. Most were in good condition, but some from the lowest levels were poorly preserved, and many, particularly those which had been redeposited, were broken. Unfortunately, owing to extensive re-use of the site, many graves were disturbed and the majority of bones recovered had been redeposited, there being only seven virtually complete skeletons, and thirteen partially complete despite having been disturbed in antiquity. Three of the latter, from F87, F118 & F127, and F127 respectively, had been entirely redeposited, but there were enough bones of the right size and conformation to be confident that, although they were amongst charnel, they belonged together. The skeletons were recorded as units, and the disturbed bones listed under the number of the context in which they were found. Copies of the basic records are in the site archive.

In the case of skeletons, the sex of adults was decided where possible from the relevant features of the skull and the pelvic girdle, using the criteria recommended by Ferembach *et al.*,⁴⁸ and if possible the sex of individual skulls and pelvises from the charnel was also recorded. The age of adults was assessed where possible from the degree of wear on the teeth, using Miles's chart,⁴⁹ while the age of children was assessed from the state of tooth eruption and of epiphysal fusion and from the length of the diaphyses, though this was more difficult when the bones were broken: the ages are based on information given in Ferembach *et al.*⁵⁰ The height of adults was calculated where possible from the total length of long bones using the formula of Trotter and Gleser as published by Brothwell.⁵¹

The amount of information which can be derived from a small number of skeletons and a mass of jumbled bones is limited, but the charnel, representing minimum numbers of 28 adults and 22 children (based on the number of skulls), can in some areas augment the more intact burials to provide information based on a larger sample. This group is important in being the only middle or late Saxon human material extant from Oxford, and thus provides the nucleus for information on the population of the area between the early Saxon and high medieval periods, for both of which larger samples are already available.

Table 2 shows the basic details of each identifiable individual; Table 3 presents the remainder of the skeletal material recovered as total numbers of fragments of each bone from adults and from children of different ages. Both men and women are represented, and while there is only one possible child's grave among the more intact burials, new-born babies and children of various ages are represented among the charnel, though their bones are not as numerous as those of adults. Table 4 shows the age at death, based on the skeletons and the maxillae and mandibles from the charnel. The gap in the 25–30 age group probably results from the smallness of the sample; otherwise the table shows a high mortality among children under 10 years, and also that a high proportion, about a quarter, survived beyond 40 years, and severe tooth wear in some individuals suggests an age considerably greater than this. Table 5 shows the state of dental health; generally this became worse with increasing age, though the number of carious teeth is proportionately greater in the 30–40 year age group, and dental health was generally remarkably good, particularly compared with the modern British population.

The incidence of normal variations in the skull is as follows: coronal wormian bones: 0 of 20 possible occurrences; parietal wormian bones: 1 of 20; lambdoid wormian bones: 5 of 17; inca bones: 1 of 19 (this is an asymmetric bipartite inca bone); open metopic suture: 2 cases of 20 possible. These frequencies are not unusual.

Some of the individual skeletons exhibit unusual variations and evidence of disease and injury. No. 2, a man of 40–45 years, has cervical vertebrae 2, 3 and 4 joined at the arch and body: this is probably an unusual developmental anomaly. No. 11, a man of the same age, has a very unusual spinal anomaly; the neural arches of the first three thoracic vertebrae have not completely joined so that there is a narrow gap: on the first two, the gap is on the right side; on the third, it is on the left side. The third and fourth vertebrae are joined by the arch. The gaps in the neural arches are narrow and the person is unlikely to have been aware of any abnormality. Spina bifida occulta of this sort is not uncommon in the sacrum, and the first and last vertebrae of the spinal column, but is rare in other parts of the spine. No. 2 also has a separate acromion process on the right scapula, and possibly on the left. This is probably a growth anomaly, and is unusual.

Several individuals have some degeneration in the spine; all were over 35 years of age: four women, Nos. 3, 7, 14 and 15, and one man, No. 4, had minor osteophytes mostly on the thoracic and lumbar vertebrae, and another man, No. 2, had small osteophytes on the bodies of nearly all the vertebrae, and also irregular hollows in the articular surfaces of the bodies of several thoracic vertebrae and the first lumbar vertebrae. This man was an unfortunate individual: in addition to the above he had small areas of growth around the left femur head and a patch of eburnation and extra bone growth on the right first metatarsal and its first phalanx; he was also one of those who had a healed fracture of the lower arm, and this was unusual in that the broken ends of the ulna had not united, though the radius was not broken. No. 6, an adult of whom only the right arm survives, has a slight swelling towards the distal end of the ulna, possibly a healed fracture. This may be related to an area of eburnation on the distal end of the radius, where it articulates with the ulna. Among the redeposited material there is a left ulna from F96 which may have a healed fracture towards the distal end, and a right radius from F127 which quite clearly has a healed fracture just below the mid shaft, which mended at an angle; the ulna must have been broken.

⁴⁸ D. Ferembach, I. Schwidetzky and M. Stloukal, 'Recommendations for Age and Sex Diagnoses of Skeletons', *Jnl. Human Evolution*, ix (1980), 517–549.

⁴⁹ A.E.W. Miles, 'Assessment of the Ages of a Population of Anglo-Saxons from their Dentitions', *Proc. Royal Soc. Medicine*, lv (1962), 881–6.

⁵⁰ Ferembach *et al.*, *op. cit.* note 48.

⁵¹ D.R. Brothwell, *Digging up Bones* (1981).

TABLE 2: DETAILS OF INDIVIDUAL IDENTIFIABLE SKELETONS. Nos. 16, 17 and 18 are redeposited, No. 19 probably so.

No.	Context	Bones present	Sex	Age	Height	Caries, abcess, loss in remaining teeth and tooth sockets	Other comments
1	F7	Upper half.	M	30-35		00/22 00/25 00/25	4 lambdoid womian bones. Periostitis on R. clavicle.
2	F16	Virtually complete.	M	40-45	1.64 m	04/22 07/31 01/32	2 lambdoid womian bones. Cervical vertebrae 2, 3 & 4 joined. Separate acromion process on scapula. Fracture of L ulna. L femur and R toe pathological. Spondylosis on mid thoracic and lumbar vertebrae.
3	F88	Virtually complete.	F	45+	1.67 m	02/29 02/29 23/32	Inca bone. Spondylosis on lower thoracic and lumbar vertebrae.
4	F96	All except L arm, lower legs.	M	35-45	1.72 m	00/25 00/22 01/26	
5	F115	L leg, feet.	?	16-22			
6	F117	R arm.	?	Adult			Fracture of R Ulna. R radius pathological.
7	F118	Head, chest, upper arms.	?F	40-45		01/32 00/32 00/32	
8	F119	Virtually complete.	F	30-35	1.58	01/25 00/27 00/30	
9	F120	Lower legs.	?	Adult			
10	F121	Lower legs.	?F	Adult			
11	F123	Head, upper chest and arms.	M	40-45		02/30 03/32 00/32	Thoracic vertebrae 1, 2 & 3 cleft arches.
12	F124	Lower legs.	?	Adult			
13	F125	Lower L arm, legs.	?F	Adult	1.59 m		
14	F127	Virtually complete.	F	35-40	1.66 m	01/27 04/32 01/32	?R ulna fractured.
15	F144	Lower jaw, body, arms.	F	25+		00/05 01/12 01/12	Spondylosis on thoracic and lumbar vertebrae.
16	F118/127	Parts.	?	3-4			
17	F127	Arms, thighs.	M	Adult	1.69 m		
18	F87	Most post-cranial.	M	25+	1.59 m		
19	F95	L arm and chest.	?	c.2.5			
20	F89	Virtually complete.	?	18-23		02/28 00/28 00/28	Lumbar vertebrae 5 has cleft neural arch. R tibia pathological.

TABLE 3: REDEPOSITED HUMAN SKELETAL MATERIAL. Numbers are given for fragments of each bone, except for skulls, for which the minimum number of skulls represented is given. Numbers of complete maxillae (detached from skulls) and mandibles are given in the centre of the columns. Other numbers in centre columns are not attributable to either right or left.

Bone	ADULT		CHILD									
	R	L	Age not known		10-15		5-10		0-5		0 years	
			R	L	R	L	R	L	R	L	R	L
Skull		28	18					1		1		2
Maxilla	3	4	1					1				
Mandible	4	23	4		2		5	2	8			
Vertebra		141		9								
Clavicle	17	3	23	3	2		1		2		1	
Scapula	14	2	14	5	6							2
Humerus	32	10	38	3	3	4	8	6	5	8	1	2
Radius	27	9	20		4	1		1	1	2	1	1
Ulna	16	8	20	2	4	1	1	1	1	6	2	1
Metacarpal		85		2		6						
Pelvis	31	1	36	12		11	2					
Femur	37	30	50	5	8	5	1	3	5	1	4	8
Tibia	44	12	46	2	4	2	2	2	4	3	6	8
Fibula	10	37	12		9			1	1	1	1	1
Astragalus	12	1	6									
Calcaneum	21		12		2							
Metatarsal		10			10							
Phalanx		59										

TABLE 4: AGE OF INDIVIDUALS AT DEATH, BASED ON WHOLE SKELETONS, AND REDEPOSITED MAXILLAE AND MANDIBLES (EXCLUDING MATERIAL FROM F87, F89 AND F95).

Age in years:	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40+	Adult
No. of individuals:	10	7	2	2	5	0	4	15	21	13

TABLE 5: DENTAL HEALTH; SHOWING TOTAL NUMBERS OF CARIOUS TEETH IN TEETH FOUND, AND ABSCESSSES AND TEETH LOST BEFORE DEATH IN TOOTH SOCKETS FOUND, ARRANGED BY AGE GROUP

Age in years	No. of people and jaws	Caries	Abscess	Loss
20-30	4	00/17 0%	00/51 0%	00/52 0%
30-40	19	23/187 12%	09/276 3%	03/284 1%
40+	21	15/255 6%	24/338 7%	22/363 6%

No. 1, a man of 30–35 years, has severe periostitis on the left clavicle; there are small areas on the right clavicle also, but none of the other bones is affected.

The late medieval or post-medieval burial, F89, was that of a young person between 18 and 20 years of age. The lowest lumbar vertebra has a cleft neural arch, and the shaft of the right tibia is swollen with a spongy appearance on the medial and lateral aspects of the shaft, though the posterior aspect is unaffected. There is no evidence to suggest why this person should have been buried in what at that time would appear to be an irregular place.

Some of the redeposited bones, besides those lower arm bones showing fractures already described, had some evidence of disease. A pair of clavicles from F7 have bony growth at the sternal end, with very rough and uneven articular surfaces, the right clavicle showing eburnation on both the sternal and scapular ends. A group of vertebrae from F119 consist of the lowest four thoracic and the first three lumbar vertebrae, of which the upper two and lower five are joined by a smooth-surfaced bony growth covering most of the bodies, and are joined also at the arches, so that the whole group has a slight inward curve. Two further lumbar vertebrae from an unstratified deposit are joined by a single large lump of extra bony growth on the right side. Part of a left femur from F54–5 has a growth on the greater trochanter, mostly on the lateral aspect, and a right femur from F96 has on the distal end an area of severe degeneration and eburnation on the patellar surface.

Minor spondylosis in the spine is normal with increasing age; further comments on abnormalities would depend on diagnosis from a pathologist, but the frequency of fractures of the lower arm is interesting and may be the result of brawling.

THE ANIMAL BONES by SUE STALLIBRASS

The animal bones recovered are very well preserved and show few signs of mixing due to residuality. Although the assemblage is small, it provides an interesting span of material from early medieval to late post-medieval times.

The bones from all contexts were scanned for a quick listing of identified species. These are recorded in a table of frequency of occurrence (Table 6). In addition, all fragments from selected contexts were identified and recorded in Table 7. A context was selected either because it was a well-sealed pit and/or because it produced a comparably large group of animal bone fragments.

Table 6 shows that sheep/goat and cattle are the two most common species represented throughout the six phases of the excavated area. Sheep/goat always occur slightly more frequently than do cattle (78–100 per cent occurrence per phase, but 44–89 per cent for cattle). Within each context, sheep/goat fragments also appear to be more common than those of cattle, and this observation is supported by the more detailed figures recorded for the selected contexts (Table 7). The third most frequently occurring species in all phases is pig. However, pig is never the dominant species in a context, and its frequency of occurrence varies greatly between phases, probably due to the great ranges in sample sizes from different contexts. Bird bones are present in *c.* 24–50 per cent of contexts in all phases excepting Phases 1 and 2, in which they are sparse. Other identified species are: dog, cat, horse, fallow deer and red deer. These are always rare, even when present. Rabbit and fish are also occasionally present, but only in Phases 4, 5 and 6, the 16th–20th centuries. The bird and fish bones have not been identified to species but, amongst the bird bones, it was noticed that those from domestic fowl appear to be dominant. One of the fragments from L8 and L9 (Phase 4, 16th century) is very large and probably comes from a peacock or swan.

Almost all of the bones appear to be food refuse. There are almost no fragments from skulls nor bones from the foot. These are likely to have been removed during primary butchery at another location, and only the dressed carcasses brought to the site. One possible exception to this observation concerns Phases 2 and 3, from some contexts of which some sheep/goat metapodials and horncores were recovered. However, none of these was from large groups that could be compared with the selected contexts of Phases 3, 4 and 5. Butchery marks are common, both those incurred during jointing and those due to meat removal. In the selected contexts, 43 per cent of Phase 5 and 35 per cent of Phase 4 bones show cutmarks. Only 15 per cent of the Phase 3 bones studied show cutmarks, however, and this difference is probably significant since the Phase 3 bones also have a different level of chewing (Phase 3: 10 per cent; Phase 4: 4 per cent; Phase 5: 6 per cent) indicating different patterns of bone disposal.

It is interesting that animal bones were recovered from the fill of some graves of Phase 1, suggesting that these had been cut through earlier deposits containing domestic refuse.

The only bones that do not fit the interpretation of food refuse are horncores from sheep and goats. Most of these are particularly large (the sheep horncores appear to be from rams). Although these horncores are never particularly common, they do appear to occur more frequently than do the concomitant skull fragments, and it is possible that they were deposited at the site as a result of horn-working rather than food consumption. They occur only in contexts of Phases 2 and 3. Sheep horncores were recovered from L126, L138, L140 and L150 (Phase 2) and F21 (Phase 3b); goat horncores from F16 and L86 (Phase 2), L104 (Phase 3a) and L10

TABLE 6: FREQUENCIES OF OCCURRENCE OF IDENTIFIED SPECIES OF ANIMAL BONE

PHASE	DATE RANGE	contexts with ID ANIMAL BONE	contexts with CATTLE		contexts with SHEEP/ GOAT		contexts with PIG		contexts with BIRD		contexts with DOG	contexts with CAT	contexts with HORSE	contexts with FALLOW DEER	contexts with RED DEER	contexts with RABBIT	contexts with FISH		
		N	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
6	19th/20th C	5	3	60	4	80	4	80	1	20						1	20	1	20
5	17th C	8	5	63	7	88	2	25	2	25	1	13		2	25	1	13	1	13
4	16th C	17	12	71	15	88	9	53	8	47				3	18	1	6	2	12
3b	late 14th – early 16th C	9	8	89	9	100	6	67	5	56			2	22	2	22	1	11	
3a	late 12th – late 13th C	17	9	53	14	82	5	29	6	67	2	12	1	6	1	6	1	6	
2	first half of 12th C	38	28	74	33	87	12	32	3	8		1	3	2	5	2	5		
1	pre-conquest	9	4	44	7	78	3	33											

CONTEXTS CONTAINING IDENTIFIED ANIMAL BONE:

PHASE 6: 1, 11, 12, 42, 45

PHASE 5: 3, 37, 41, 43, 47, 78, 80, 103

PHASE 4: 8, 9, 14, 15, 18, 20, 23, 27, 28, 29, 48, 49, 53, 64, 72, 75, 79

PHASE 3b: 10, 17, 21, 33, 35, 54/55, 58, 63, 89

PHASE 3a: 24, 25, 30, 32, 38, 69, 74, 87, 94, 104, 106, 108, 113, 116, 137, 145, 148

PHASE 2: 7, 16, 26, 36, 67, 70, 71, 81, 82, 86, 88, 92, 93, 97, 98, 100, 101, 102, 107, 111, 112, 126, 128, 129, 130, 131, 134, 135, 138, 140, 143, 146, 150, 153, 154, 156, 161

PHASE 1: 96, 115, 118, 119, 121, 123, 125, 127, 147

TABLE 7: DISTRIBUTION OF ANIMAL BONE FRAGMENTS IN SELECTED CONTEXTS FROM PHASES 3, 4 AND 5.

	SHEEP/ GOAT	S/G SIZED	CATTLE	CATTLE SIZED	CALF	CALF SIZED	PIG	PIG SIZED	FALLOW DEER	RABBIT	CAT	HORSE	TOTAL
PHASE	N	N	N	N	N	N	N	N	N	N	N	N	
5	122	75	24	75	13	8	6	11	1	5	3		343
very young	1				13	8	1						23
cut	44	43	10	34	5	3	2	7					148
chewed	10	2	4		2		1						19
4	134	126	36	138	77	17	10	10	3	4			555
very young	4	4			77	17	4	3					109
cut	47	47	28	51	15	2	3	4					197
chewed	15		1	1	4								21
3	98	27	75	85	2		18	5	1			2	313
very young			1	1	2		1						5
cut	10	8	6	20	1		1	1					47
chewed	14	1	10	5			1						31

KEY: **PHASE 5:** context 78
PHASE 4: contexts 8 & 9
PHASE 3: contexts 58, 54/55, 35, 74

TABLE 8: SUMMARY STATISTICS FOR SHEEP/GOAT MEASUREMENTS

Measurements have been taken in accordance with A. von den Driesch, 'A Guide to the Measurement of Animal Bones from Archaeological Sites', *Peabody Museum Bulletin*, i (1976).
All measurements are in millimetres.

SCAPULA	GLP	SLC	NECK HEIGHT	
Number	17	22	21	
MEAN	32.0	18.8	19.5	
SD	2.55	4.15	1.87	
Minimum	28.6	16.2	16.1	
Maximum	39.3	23.8	23.6	
HUMERUS	SD	BT	hght T	GLC
Number	16	49	50	1
MEAN	14.6	27.7	18.0	145
SD	1.13	1.37	1.09	
Minimum	12.0	24.5	15.1	
Maximum	16.4	31.8	20.6	
RADIUS	Bp	SD	Bd	GL
Number	35	53	10	4
MEAN	30.2	17.4	27.9	141
SD	1.37	1.12	0.78	4.74
Minimum	26.8	15.4	27.1	135
Maximum	32.6	21.8	29.4	147
TIBIA	SD	Bd	Dd	
Number	24	37	36	
MEAN	14.0	25.2	19.3	
SD	3.15	4.55	3.53	
Minimum	11.7	22.9	17.6	
Maximum	17.2	30.1	23.2	

(Phase 3b). The presence of the goat horncores is particularly interesting since none of the postcranial bones from the site could be positively identified as definitely deriving from goats, whereas many of them could be identified as sheep.⁵²

Throughout the phases, some of the sheep/goat and cattle bones conform to the slender-boned types common throughout Holocene Britain until the post-medieval period. However, there are also some massive cattle bones, and some wide sheep/goat bones in the later phases. Massive cattle bones were noted from L8 and L9 (Phase 4, 16th century), and L3 and F78 (Phase 5, 17th century). Large sheep/goat bones were also noted from L3 and F78. It is significant that none of the earlier phases produced any of these larger bones, which probably derive from early forms of 'improved' breeds. The newly re-founded college may have had access to these (then) comparatively new forms. Evidence of this kind is still comparatively uncommon on British sites, but there is a growing interest in this topic (see, especially, the work of P.L. Armitage). Standardised measurements using von den Driesch⁵³ were taken on the sheep/goat bones and the few cattle bones for which they were feasible. The detailed measurements and summary statistics for each phase are

⁵² Identifications were aided by the use of W. Prummel and H-J. Frisch, 'A Guide for the Distinction of Species, Sex, and Body Size in Bones of Sheep and Goat', *Jnl. Archaeological Science*, xiii (1986), 567-77, and J. Boessneck, 'Osteological Differences between Sheep (*Ovis aries* Linne) and Goat (*Capra hircus* Linne)', in D. Brothwell and E. Higgs (ed.), *Science and Archaeology* (1969), 331-58.

⁵³ A. von den Driesch, 'A Guide to the Measurement of Animal Bones from Archaeological Sites', *Peabody Museum Bulletin*, i (1976).

given in tables kept with the site archive and will be made available upon request to the Oxford Archaeological Unit. Table 8 gives summarised data for the commonest sheep/goat measurements.

The ages of the animals tend to cluster around adolescence and young adulthood, when they would have been in prime condition for meat. Very few jaws or teeth were recovered, so estimates of age are based mainly on epiphyseal fusion states. The majority of the sheep/goat radii have their proximal epiphysis fused and their distal epiphysis unfused, indicating an age (in modern sheep) of between one and three years.⁵⁴ There is no indication of any pathology due to any disease, trauma nor ageing process on any of the bones in the total assemblage. Many of the pig bones come from very young animals (perinatal or just a few weeks old). The few pig jaws and teeth that were recovered indicate that the animals were young males (whether they were wild or domesticated cannot be ascertained). Similarly, a few of the sheep/goat bones come from neonatal lambs or kids, and most of the pelvis that could be sexed appear to come from entire or castrated males. Calf bones were recovered from several contexts of Phases 4, 5 and 6. L8 and L9 (Phase 4) produced fragments from several jaws and skulls of calves, as well as a large number of post-cranial calf bones (many of which have butchery marks). The jaws come from calves that had been weaned (the teeth have light wear indicating that the animals had been eating vegetation rather than just suckling milk), but the wear is so slight and the eruption of the first and second molars is at such an early stage that it is unlikely that the calves were more than two or three to six months old when they died.⁵⁵

In summary, the majority of the animal bones from the excavation almost certainly represent refuse from prime meat sources, mainly mutton and beef, with a little pork and chicken and occasional wild game. The graves of the earliest phase (Phase 1) appear to have cut through earlier refuse deposits and, in Phases 2 and 3, some manufacturing activity may be hinted at by the presence of sheep and goat horncores. However, the material from Phase 3 onwards indicates that, from the late 12th century until modern times, the people eating the beasts whose bones were deposited in the excavated area enjoyed a very high standard of meat consumption. Quantities cannot be guessed at, but the quality was certainly excellent. Succulent young animals (calves, piglets and lambs/kids) sometimes formed quite a considerable proportion of the diet represented. The presence of large bones from 'improved' breeds as early as the 16th century is yet another indicator of the privileged position held by these people. It is important to note that this evidence is for earlier improvement than is suggested in documentary sources, though the latter do not become informative until *after* the earliest late medieval breed improvements had taken place. The analysis has thus been able to show that the changes in types of livestock occurred nearly a century earlier than is usually assumed from written evidence, and (as shown by Armitage's work) is supported by material from sites in London.

DISCUSSION AND INTERPRETATION

Phase 1: Pre-Conquest

Sequences of up to four superimposed graves were excavated in the N.E. area of the site. Their density and regular layout, and the quantity of charnel from these and later contexts, suggests that the excavated area had been part of a more extensive cemetery in use for a considerable time. Burials found in Tom Quad in 1972 are presumably of the same cemetery.⁵⁶

The activity of Phases 2 and 3 (below) dates the end of formal burial on the site to the mid 12th century, but no archaeological horizon was excavated which might provide a *terminus post quem* for the earliest graves, and so some indication of when the cemetery came into use. The only such evidence came from the Tom Quad burials, charcoal from one of which gave a radiocarbon date centering on the 9th century.⁵⁷ Bone samples from four stratigraphically-related inhumations (F96, F119, F123, F127), two of which (F96,

⁵⁴ Figures taken from I.A. Silver, 'The Ageing of Domestic Animals', in Brothwell and Higgs, *op. cit.* note 52, 250-68.

⁵⁵ *Ibid.*

⁵⁶ T.G. Hassall, 'Excavations in Oxford 1972: fifth interim report', *Oxoniensia*, xxxviii (1973), 270-2.

⁵⁷ *Ibid.*

TABLE 9. RADIOCARBON DATES FROM BURIALS AT CHRIST CHURCH

Site	Context	HAR-Ref.	¹⁴ C Age	Calibrated Age(s)	Calibrated Ranges		
					one σ	one σ	
OXCCL 1985	F96	6817	1160 \pm 40bp	BP 1064	AD 886	AD 808-941	AD 775-976
OXCCL 1985	F119	6818	1150 \pm 40bp	BP 1061	AD 889	AD 827-954	AD 779-982
OXCCL 1985	F123	6819	1110 \pm 40bp	{ BP 1050	AD 900	AD 888-980	AD 827-1009
				{ BP 1048	AD 902		
				{ BP 997	AD 953		
OXCCL 1985	Mean of HAR 6817-9		1140 \pm 25bp	BP 1059	AD 891	AD 884-940	AD 820-972
OXCCL 1985	F127	6820	1250 \pm 40bp	BP 1178	AD 772	AD 685-790	AD 668-884
TOM QUAD 1972		none	1110 \pm 100bp	{ BP 1050	AD 900	AD 790-1020	AD 680-1157
				{ BP 1048	AD 902		
				{ BP 997	AD 953		

NOTE: The alternative calibrated ranges for OXCCL F123 and Tom Quad 1972 are generated by the radiocarbon calibration curve.

F123) bracketed the same stratigraphic sequence (Fig. 10), were therefore submitted to the low-level measurements laboratory at A.E.R.E. Harwell for radiocarbon dating. The results, and that from the Tom Quad grave, were calibrated by R.J. Otlet, using the University of Washington Quaternary Isotope Laboratory radiocarbon calibration programme 1987, and are presented in Table 9.⁵⁸ Three of the results, from F96, F119 and F123, accord with the observed stratigraphic relationships and are statistically indistinguishable, their weighted mean giving calibrated date-ranges for the sequence of burials of A.D. 884–940 at one σ and A.D. 820–972 at two σ . The fourth, however, from F127, gave a significantly earlier date which, at one σ , reverses the stratigraphic relationship between F127 and F96. There are no grounds for querying the observed stratigraphy, and so, although this result can be reconciled with the other calibrated ranges at two σ , the contradiction must otherwise remain unresolved.

Although from a small and fragmentary sample, these results confirm a pre-Conquest date for the cemetery, which was in use during the 9th, or, at latest, by the 10th century. F123, stratigraphically the latest burial to be radiocarbon dated, is unlikely to post-date the early 11th century at latest, and may be considerably earlier. This might suggest a hiatus in burial of up to 150 or 200 years before re-use in the first half of the 12th century, when there is unequivocal stratigraphic evidence for formal inhumation on the site (Phase 2, below). However, this may apply only to a small area. Equally, it is possible that other excavated graves are later than F123 and represent continuous burial until the final abandonment of burial on the site: the median radiocarbon determination for F123 is the same as that from the 1972 Tom Quad grave, also a charcoal burial, which is cut by later graves.⁵⁹

The importance of the cemetery is twofold: it demonstrates the existence of a 9th- or 10th-century community, and it may imply the existence of a contemporary religious foundation. The later graves, if it is accepted that burial was continuous through the 11th century and into the 12th, must almost certainly have been associated with the pre-Conquest minster. In view of the tradition that a monastery was founded here for, or by, St. Frideswide in the later 7th century (below, p.225), it is disappointing that the radiocarbon date for F127 must be treated with caution.

F147 is unlikely to be earlier than the mid 11th century (above, p. 33), and although assigned to Phase 1 on stratigraphic grounds it could equally be attributed to Phase 2. The residual Romano-British and possibly early Saxon material is too sparse for any assessment of activity on the site before its use as a cemetery, although it should be noted that some of the Phase 1 burials appear to have been cut through earlier deposits containing domestic refuse (above, p. 56).

Phase 2: First Half of the 12th Century (Fig. 30)

Only 20 sherds were recovered from the backfill of F149/170, insufficient, in themselves, to date it securely. However, some 200 sherds were retrieved from the contexts which had accumulated, or been dumped, immediately over the backfill in gully F140, enough for chronological conclusions to be drawn with confidence from a sherd count by fabric type. 68 per cent of the sherds from these contexts were of local fabrics AC and Y, which

⁵⁸ M. Stuiver and G.W. Pearson, 'High-Precision Calibration of the Radiocarbon Timescale, A.D. 1500–500 B.C.', *Radiocarbon*, xxviii (1986), 805–38.

⁵⁹ Hassall, *op. cit.* note 56.

constitute respectively 48 per cent and 20 per cent of the assemblage. The relative proportion of these fabrics is chronologically significant.⁶⁰ Fabrics AC and Y constituted *c.* 60 per cent and *c.* 30 per cent respectively of the pottery from St. Aldates Phase 6b, dated to the first half of the 12th century,⁶¹ but in assemblages from contexts dated to the second half of the century, such as St. Aldates Phase 7 and The Hamel Phase D2, fabric Y has replaced AC as the largest single group.⁶² This suggests that the contexts immediately overlying the backfill of F149/170 accumulated during the first half of the 12th century, and the predominance of fabric AC suggests that the gully had been filled by the middle years of the century. F149/170 appears to have been open for only a short time before backfilling, and so a date in the first half of the 12th century also seems likely for its excavation; the small pottery assemblage from the backfill is consistent with this. The function of F149/170 is unclear. Two possibilities suggest themselves: that it was a gravel pit; or the excavation for the undercroft of a S. cloister range which was never built. Such a project might be attributed to the 1130s, being abandoned when royal permission allowed building further S. on the line of the city defences, but with any subsequent work being suspended as Oxford's defensive requirements became paramount during the civil war between Stephen and Matilda.⁶³ This theory is attractive, but it has to be stressed both that the full dimensions of the feature and its orientation are unknown, and that this alternative does not explain similar but slightly later adjacent substantial excavations, such as F145 (Phase 3, below), which are consequently interpreted as gravel pits. However, an excavation of this size is most plausibly associated with major building work in the immediate vicinity, and, given its apparent date, this seems most likely to have been rebuilding of the church, or construction of conventual buildings, after the site of the minster was confirmed to the Augustinian canons in *c.* 1122 (above, pp. 227–8).

Of the four graves overlying F149/170, which represent the final episode of formal burial on the site, only F88 can be closely dated: it is stratified within the fill of gully F140 and so must be assigned to the second quarter or middle years of the 12th century. It seems unlikely that the three cist burials (F7, F16, F122) are much later than F88; indeed, if the partial infilling and consolidation of gully F140 (L97–100, L101, L86) was to extend the area available for burial, this might imply that F88 is the latest of the four. In either case, abandonment of this area of the cemetery shortly after the mid 12th century at latest is argued. Supporting the head of the corpse with a stone at either side, as in F88, is a common feature of 10th- and 11th-century burial practice,⁶⁴ but is less common at this later date. Inhumation in mortared cists, however, can be paralleled at the 12th-century graveyard of All Saints church, Oxford.⁶⁵ Charnel from later medieval pits cut into the backfill of F149/170 suggests that they destroyed other graves of this phase, and some of the burials at the N.E. of the site, in particular the possible cist burial F144, may also be this late.

Very little is known about the earliest Priory buildings, which were damaged by fire in 1190 (below, pp. 134–5, 240–2). However, it is clear that neither the cloister, nor any

⁶⁰ M. Mellor, 'Pottery', in Palmer, *op. cit.* note 10.

⁶¹ Durham, *op. cit.* note 9, Fig. 14.

⁶² *Ibid.*, Palmer, *op. cit.* note 10, Figs. 7 & 8.

⁶³ I am grateful to Brian Durham for this suggestion. See T.G. Hassall, 'City Walls, Gates and Posterns', *V.C.H. Oxon.* iv, 301.

⁶⁴ W. Rodwell, *The Archaeology of the English Church* (1981), 158; W. Rodwell and K. Rodwell, 'St. Peter's Church, Barton-upon-Humber: Excavation and Structural Study, 1978–81', *Antiquaries Jnl.* lxii (1982), 301–2.

⁶⁵ Durham, *op. cit.* note 8. [And see below, p. 89, for another cist-burial at St. Frideswide's cut by the late 12th-century choir.]



Fig. 30. Excavated 12th-century features along the E. side of the cloister. The deep feature in the centre is the partially-excavated F149/170.

associated buildings S. of the church, including the chapter-house, could have been built on their present site while the pit F149/170, or the subsequent gully F140, remained open. While there is no conclusive archaeological reason why the backfilling of gully F140 and the subsequent burials should not be dated nearer to 1125 than 1150, the evidence for several episodes of activity post-dating the presumed *terminus post quem* of 1122, including, apparently, an attempt to consolidate the edges of the gully, argues that none of the claustral buildings was begun much before the middle of the century at the earliest; and, given that the surviving W. wall and doorway of the original chapter-house are of the 1140s or 1150s (below, p. 116–21, 160–7), and that there is archaeological evidence to suggest that the cloister itself was not completed until well into the second half of the century (Phase 3, below), a later rather than earlier date seems likely.⁶⁶ In the interim, a claustral layout elsewhere belonging to the minster church may have remained in use.

It seems to have been the building work, rather than the conversion to an Augustinian priory, which forced the eventual abandonment of this part of the minster cemetery, which elsewhere presumably continued to serve the parish of St. Frideswide through the 12th and 13th centuries.⁶⁷ The quarrying of the minster cemetery is difficult to explain, and may strengthen the suggestion that this part of the cemetery was temporarily disused. The prompt backfilling suggests the undesirability of an open quarry here; however, the gully which remained was left open and used for refuse disposal before it was partially consolidated and used for burial. The layers of gravelly loam which sealed the fill of F88 (L71, L67), are interpreted as deliberate infilling to level the site, perhaps preparatory to building, with which pits F70 and F92 may have been associated.

Phase 3: Second Half of the 12th Century – Early 16th Century

This encompasses the time when the excavated area was part of the Priory cloister garth. Most features of this phase fall into two distinct periods. However, others cannot be closely dated (see above) and may be associated with any, or none, of the episodes attributed to sub-phases 3A and 3B.

Sub-Phase 3A: Second Half of the 12th Century – Mid 13th Century

The four shallow pits containing redeposited human skeletal remains (F113–4, F116, F141), in one of which (F116) was the possible infant burial F95, formed a distinct horizon cut into the upper fills of the latest graves at the N.E. of the site, but were not cut by subsequent graves, arguing that they post-date abandonment of formal burial on the site. They were cut by pit F74, dated to the first half or middle of the 13th century. F145, a substantial feature excavated and backfilled towards the end of the 12th century, is interpreted as a gravel pit. This also seems a plausible explanation for F32, dated to

⁶⁶ This may seem a long delay, but it is not unparalleled. For instance, at another Augustinian house, Haughmond Abbey in Shropshire, the cloister was not attended to until some thirty years after a general rebuilding began c. 1170. See W.J. Blair, P. Lankester and J. West. 'A Transitional Cloister Arcade at Haughmond Abbey, Shropshire', *Med. Arch.* xxiv (1980), 210–11. John Blair has also pointed out to me that the present cloister at Christ Church seems to be contained within a southward extension of the town defences created for this purpose, and that the settled years after 1154 provide a plausible context for the deflection of a town wall in the interests of a religious house (see below, pp. 236–7).

⁶⁷ *V.C.H. Oxon.* iv, 381.

the late 12th or 13th century, and F74, both cut into the natural gravel and, like F145, containing less material than might be expected if they had been dug for refuse disposal.

Gravel digging at this time was presumably prompted by the extensive rebuilding which followed the fire of 1190.⁶⁸ Work on the church had begun by 1194,⁶⁹ and the chapter-house was rebuilt in the first half of the 13th century;⁷⁰ and it seems likely that such an extensive reconstruction also involved work on the cloister. The lower layers overlying F32 (L24–5, L30) contain pottery of the mid 13th century, and were perhaps dumped to raise or level the garth after the completion of building work.

F145 is very close to the cloister arcade, and almost certainly extends beneath it. This suggests either that the cloister had not been completed by the time of its excavation, or that for some other reason – severe damage, or demolition before rebuilding, for instance – it was no obstacle to gravel extraction here. It is interesting that there are no deep features at the N.E. of the site; presumably gravel digging here would have posed too great a threat to the standing remains of the church and chapter-house, and to any completed, or surviving, sections of the cloister.

Sub-Phase 3B: Late 14th Century – Early 16th Century

The later medieval pits were all cut into the fills of earlier features, and were all in the centre of the garth, presumably so as not to undermine the buildings of the cloister. Their purpose is obscure: they *may* have been refuse pits, although this seems inappropriate to the garth, but they contained relatively little pottery and bone; the lower fills of F35, the only one to be substantially excavated, which was bottomed at over 2 m. below the modern ground level, were virtually sterile. It is possible that some were abortive attempts to dig gravel, undertaken without knowledge of the extent of previous quarrying. The latest features contained pottery of the late 15th or early 16th century, and so a context for such activity might be sought in building work of the late 15th century, when a Prior's lodging was added to the S. of the dormer-range and the cloister rebuilt.⁷¹ The latter had been completed by 1499.⁷² The layer of gravelly loam (L10, L58) which seals the fill of earlier features was presumably dumped to raise or level the garth after rebuilding of the cloister had been completed. Its level, relative to the surviving surface of the natural gravel, suggests that subsidence due to the settling of pit fills may have been a problem, and perhaps underlay the need to rebuild the cloister.

It is difficult to account for inhumation F89. Residual pottery gives it a *terminus post quem* in the late 13th century at the earliest, but lace-ends from the fill, which are otherwise known only from contexts contemporary with or later than L58, indicate a date in the late 15th or early 16th century. There is no other indication that the garth may have been used for regular burial at this date.

⁶⁸ *Ibid.*, 364–5.

⁶⁹ *Ibid.* cf. below, p. 134.

⁷⁰ *R.C.H.M. Oxford*, 29, 46.

⁷¹ *Ibid.*, 29, 46–7. cf. below, pp. 188–91.

⁷² *Ibid.*, 46; M.E.C. Walcott, 'The Bishops of Chichester from Stigand to Sherborne', *Sussex Archaeological Collections*, xxix (1879) 25, and cf. below, pp. 97–8.

Phase 4: 16th Century (Fig. 31)

The foundation was of rough mortar-and rubble masonry. Its depth, where established, varied from as little as *c.* 0.3 m. where it was bedded directly on undisturbed natural gravel to *c.* 1.7 m. where it cut into the medieval pit fills.⁷³ It was nowhere wider than *c.* 1 m. at the highest level to which it survived, and sloped inwards below this. This tapering, and the nature of the construction trench, which where detected was discernible only as a shallow and usually narrow disturbance, indicates that the foundation was trench-built. It was *c.* 13 m. across the buttresses, which protruded 2.5–3.0 m. beyond the line of the walls. The N.–S. walls were slightly closer together than the E.–W., forming a rectangular interior *c.* 5.7 by 4.5 m.



Fig. 31. The 16th-century stone footing revealed in Trenches One and Two.

⁷³ Where the northern E.–W. wall of the foundation ran under the paved area of the garth the natural gravel was very close to the modern ground surface, and the foundation was little more than a shallow spread of mortar on the surface of the gravel.

There is no known record of either the erection or the demolition of the building to which this foundation belonged. It cannot have been constructed before the late 15th century, as mouldings of this date were re-used in its fabric. These probably came from demolished Priory buildings: the foundation is aligned on the E. range of Tom Quad rather than the Priory cloister, and so almost certainly post-dates 1525, when the W. end of the Priory church and the W. cloister range were demolished, and work began on the buildings of Wolsey's college.⁷⁴ Fragments of Rhenish stoneware from the internal floor levels confirm that these accumulated after *c.* 1500; construction in the second quarter of the 16th century therefore seems likely. The post-holes and shallow features sealed by the internal floor levels (L48-50, F28, F171) were most probably associated with erecting the superstructure. This was presumably dismantled before the interior was filled in, but the condition of the internal surfaces suggested little or no time-lapse between the two events, indicating that demolition and backfilling should be treated as a single episode. Pottery and small-finds from the dump layer are compatible with deposition in the middle years or second half of the 16th century, but a demolition date after 1577 seems unlikely as no reference to this has been identified in the disbursement books, which survive for 1548 and in an unbroken sequence for the years 1577-1617.⁷⁵ The fragments from St. Frideswide's shrine give a *terminus post quem* for the backfilling of 1538, the traditional date of its destruction,⁷⁶ but whether this can also be considered a *terminus ad quem* for demolition and infilling is another matter. The decorated floor tile and other masonry almost certainly comes from the Priory church, but the presence of 16th-century green- and yellow-glazed domestic floor tiles may argue against the backfill deriving from any single episode of demolition or building; the shrine fragments may therefore have come from a builder's dump which also included material from subsequent work. It is argued below that the most plausible recorded context for demolition of the building is refurbishment of the church in 1545-6, when the See of Oxford was transferred from Oseney to St. Frideswide's.

The foundation is too flimsy and irregular for a stone building. It is certainly not the base of a stone bell-tower, and is most unlikely to be part of the original plan for Wolsey's college: the foundations of Wolsey's work in Tom Quad, where investigated by Sturdy, are at least 3 m. deep and *c.* 3 m. wide. Most probably it was the footing of a timber-framed building, supporting sill-beams above the level to which it had been reduced. The superstructure must have been substantial. The length of the buttresses implies heavy external bracing of the corner posts and considerable height, and the depth of the footing is also surprising even in relatively unstable pit fills: 16th-century house footings cut into similar material at 79-80 St. Aldates, although of similar width, were no more than 0.7 m. deep.⁷⁷

The function of such a substantial timber-framed building is unclear, and its location in the garth puzzling. Perhaps it is most plausibly interpreted as a timber belfry, the sunken interior being the floor of the ringing chamber. The basic structural elements suggested by the footing are very similar to those of the 15th- and 16th-century timber belfries of Essex and Worcestershire churches. At their simplest these are turrets which appear integral with the church roof when viewed from the outside, but which in fact stand on corner posts, joined with tie-beams, braces and framing, which are visible inside the building. Where set up outside the church, abutting the W. wall of the nave,

⁷⁴ R.C.H.M. Oxford, 29; V.C.H. Oxon. iii, 228-30.

⁷⁵ W.G. Hiscock, *A Christ Church Miscellany* (1946), x-xi.

⁷⁶ V.C.H. Oxon. iii, 235.

⁷⁷ Durham, *op. cit.* note 9, 92, 99.

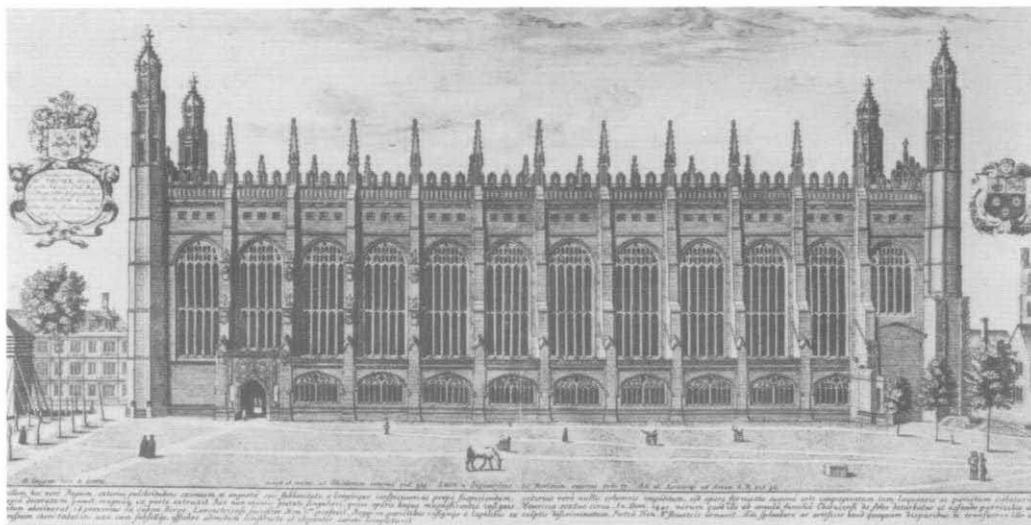


Fig. 32. David Loggan's 1690 engraving of King's College Chapel, Cambridge, showing (extreme left) the timber belfry.

the belfry in effect forms a W. tower, but is in fact free-standing.⁷⁸ In many such cases, as at the churches of St. Lawrence, Blackmore,⁷⁹ St. Margaret, Margaretting,⁸⁰ St. Thomas, Navestock,⁸¹ and All Saints, Stock,⁸² all in Essex, and at St. Peter's, Pirton, Worcestershire,⁸³ the belfry is surrounded by lower aisles or an ambulatory, the framing of which supports and buttresses the main structure. At Christ Church the evidence suggests external buttressing, and there is no trace of aisles or ambulatory, but these are superficial differences: these lower stages are in effect simply framing external to the main structure which has been roofed and walled. There is a great similarity between the plan of the Christ Church footing and the sill-beams of the Blackmore belfry, which also appear to rest on rough stone foundations. The main structure at Blackmore (dated to the late 15th century), which is supported on four substantially-braced corner-posts with a single less substantial intermediate post on the N. and S. sides,⁸⁴ gives an idea of how a belfry erected on the Christ Church footing might have been framed. However, still more striking is comparison with the 15th-century timber belfry which survived at King's College, Cambridge, until the 18th century.⁸⁵ This is shown on the extreme left

⁷⁸ R.C.H.M. Essex iv (1924), xxxiv; N. Pevsner, *The Buildings of England: Essex* (1954), 28; G.A. Hewett, 'The Timber Belfries of Essex: their Significance for the Development of English Carpentry', *Archaeological Jnl.* cxix (1962), 225-44.

⁷⁹ R.C.H.M. Essex ii (1920), 11-15; Pevsner, op. cit. note 78, 76-7, Pl. 23; Hewett, op. cit. note 78, 233.

⁸⁰ R.C.H.M. Essex ii, 183-5; Pevsner, op. cit. note 78, 268-9; Hewett, op. cit. note 78, 232-3.

⁸¹ R.C.H.M. Essex ii, 190-1; Pevsner, op. cit. note 78, 276; Hewett, op. cit. note 78, 227-9.

⁸² R.C.H.M. Essex iv, 155-6; Pevsner, op. cit. note 78, 372-3; Hewett, op. cit. note 78, 230-2.

⁸³ N. Pevsner, *The Buildings of England: Worcestershire* (1968), 244; V.C.H. Worcs. iv (1924), 182-4.

⁸⁴ R.C.H.M. Essex, ii, 11-15; Hewett, op. cit. note 78, 233-5, Pl. 34.

⁸⁵ R. Willis and J.W. Clark, *The Architectural History of the University of Cambridge* i (1886); J.W. Clark, 'History of the Peal of Bells belonging to the King's College, Cambridge', *Cambridge Antiquarian Society Communications*, iv (1878-9), 233-44; J. Saltmarsh, 'King's College', *V.C.H. Cambs.* iii (1959), 388 n. 56.

of Loggan's 1690 engraving of King's College chapel from the S. (Fig. 32),⁸⁶ and also appears on three 16th-century maps of Cambridge – by Richard Lyne (1574), George Braun (1575) and John Hamond (1592)⁸⁷ – which clearly show a two-stage building with a pyramidal roof and, at the first stage, heavy external bracing of the corner-posts pitched at about 45 degrees. The foundation, plotted as a parch-mark in the lawn in 1955,⁸⁸ is very similar in plan and dimensions to the footing at Christ Church. The main difference is the presence at King's of a third buttress foundation midway along each wall, but these appear to be late 16th-century additions to the structure: they are shown on Hamond's map of 1592, but not on those by Lyne or Braun. Loggan's engraving shows further alterations: the middle buttresses have been removed and a second post, pitched at a steeper angle, has been added at each corner, bracing the upper stage; also, a stage of louvred walling just below the roof has replaced the window-like openings shown in earlier depictions. Loggan's engraving suggests that the King's belfry was c. 45 ft. high. The similarity in ground-plan dimensions may suggest a very similar height for the Christ Church belfry, although it may have been taller if it was intended that the bell should be heard far over the surrounding buildings. The conjectural reconstruction offered in Fig. 33 is based on these sources.

The building accounts of Wolsey's College contain references to work which might help to explain this structure (and see Martin Biddle's discussion below, pp. 205–10). Four enigmatic entries in the accounts for 1528–9 record payments 'for carriage of earth and rubbell from the fayre gate and the newe stepull', 'for makinge scaffolds for the takinge downe of the old stepull', 'for two crowes for the carpenters to take downe the bells with', and, to William Hobbs and Richard Cooper, 'for bringinge in of the bell frame in their drinkinge time'.⁸⁹ Unfortunately these accounts were incomplete, and are now lost, so neither the exact nature of the work nor the sequence of events referred to is known. The 'old stepull', however, is almost certainly that of the Priory church: taken together, the payments suggest that the bells of St. Frideswide's were being taken down, or that it was intended that they should be taken down, prior to re-housing in the projected 'new stepull' of Wolsey's College.⁹⁰ But on Wolsey's attainder and death in the autumn of 1529 the College, with all its revenues and effects, reverted to the King and building work stopped.⁹¹ Henry VIII may at one stage have intended to demolish Wolsey's buildings, but the College continued to function, and was formally re-founded by the King in 1532.⁹² In 1545, upon translation of the See of Oxford from Osney to St. Frideswide's, the College was again surrendered to the King, to be re-established as the Cathedral and Academic College of Christ Church by Letters Patent of 4 November 1546.⁹³ The Osney bells, including Great Tom, were transferred to St. Frideswide's in

⁸⁶ D. Loggan, ed. J.W. Clark, *Cantabrigia Illustrata* (1905), Pl. 10.

⁸⁷ J.W. Clark and A. Gray, *Old Plans of Cambridge, 1574–1798* (1921); G.R. Versey, 'Some early Maps of the City and of the County of Cambridge', *Bulletin of the Society of University Cartographers*, vi(i) (1971), 12–16.

⁸⁸ R.C.H.M. *City of Cambridge*, i (1959), plan opp. 102.

⁸⁹ J. Gutch, *Collectanea Curiosa* (1789), 205–6.

⁹⁰ That the footing in the garth was the foundation of the 'new stepull', as suggested in R.C.H.M. *Oxford*, 29, and by V.C.H. *Oxon.* iii, 231, now seems unlikely. The coupling of the 'fayre gate' with the 'new stepull' in the account may suggest that both were on the same site, and that Wolsey intended a bell tower to rise above the main entrance to his college: cf. the contemporary detached bell tower at Evesham Abbey, V.C.H. *Wores.* ii, 390–1; Pevsner, op. cit. note 83, 145, Pl. 39. However, Martin Biddle argues forcefully that Wolsey's 'new stepull' was either the tower E. of the hall, or was to be built on another site now unknown (below, p. 207).

⁹¹ J. Ingram, *Memorials of Oxford*, i (1837), 43; V.C.H. *Oxon.* iii, 231.

⁹² V.C.H. *Oxon.* iii, 232.

⁹³ *Ibid.*



Fig. 33. Conjectural reconstruction of the timber belfry from the W.

1545,⁹⁴ and surviving accounts indicate that considerable work was required in the bell-loft of St. Frideswide's before they could be hung.⁹⁵ This suggests that the bell-loft had been wholly or partially dismantled in 1528–9, but it is also possible that this work was necessary in order to accommodate the Oseney ring alongside some or all of the original bells. As Martin Biddle points out (below, p. 209), there is no direct evidence that any of the original bells were actually taken down from the steeple of the Priory church in 1528–9; the fate of the original St. Frideswide's bells is obscure. The Oseney ring was famous for its quality,⁹⁶ and this presumably prompted the decision to transfer it to the new Cathedral.

⁹⁴ *Ibid.*, Hiscock, *op. cit.* note 75, 143–51; J. Cooper, 'Oseney Abbey', *V.C.H. Oxon.* iv, 365.

⁹⁵ W.H. Turner (ed.), *Selections from the Records of the City of Oxford*, ii (1880), 182–4.

⁹⁶ Wood, *City*, ii (1890), 220–1.

These events suggest a possible explanation for a timber belfry: that it was erected in 1528–9 to house the St. Frideswide's bells pending their installation in the new steeple. It may never have housed the bells; if it did, it is plausible that it remained in use as a *campanile* for the College after work on Wolsey's buildings stopped: it may in fact be the bell-tower referred to in an account book of 1530, which records payments to one William Bassett, bellringer, for work apparently of installation, and repair or unkeep, of bells.⁹⁷ Similar circumstances explain the belfry at King's College, Cambridge, which was intended to house the bells presented by Henry VI until they could be hung in the great bell-tower originally envisaged but never built.⁹⁸ In much the same way the more modest timber bell-house at St. Mary's church, East Bergholt, Suffolk, was built when the projected stone tower of the church was left unfinished c. 1525.⁹⁹ It seems unlikely that the similarity between the belfry at King's and that suggested by the footing at Christ Church is coincidental. Their occurrence in such similar contexts is also suggestive. There must be a strong possibility that the belfry at King's served as a model for that at Christ Church.¹⁰⁰

A temporary belfry would have been redundant after installation of the Oseney ring, and so work in and around the new Cathedral in 1545–6 would provide a plausible context for its demolition and infilling.¹⁰¹ Unfortunately, the archaeological evidence is not sufficiently sensitive to confirm this date decisively and it is possible, though perhaps unlikely, that the *campanile* remained standing into the third quarter of the 16th century. However, it had almost certainly been demolished by 1577; there is no mention of it in the Disbursement Books for this or any subsequent year, and it does not appear on Agas's 1578 map of Oxford.¹⁰²

Phase 5: 17th Century

Pit F78 was filled with builder's debris. Pottery indicates deposition in the second quarter of the 17th century, when a considerable amount of rebuilding work was undertaken in or near the cloister. Brian Duppa (Dean 1629–38) initiated a remodelling of the Cathedral interior which involved demolition of several funerary monuments to make way for new stalls in the choir, replacement of much of the medieval glass, and re-paving of the nave, choir and aisles.¹⁰³ Samuel Fell, as Treasurer (1611–38) and Dean (1638–48), completed Duppa's work in the Cathedral and built the vaulted roof of the great staircase.¹⁰⁴

⁹⁷ J.S. Brewer (ed.), *Letters and Papers, Foreign and Domestic, of the Reign of Henry VIII*, iv(iii) (1876), 3064.

⁹⁸ Willis and Clark, op. cit. note 85; Clark, op. cit. note 85; Saltmarsh, op. cit. note 85.

⁹⁹ T.H. Bryant, *County Churches: Suffolk*, ii (1912), 183–5; N. Pevsner, *The Buildings of England: Suffolk* (2nd edn. 1974), 195–6; H.M. Cautley, *Suffolk Churches and their Treasures* (4th edn. 1975), 58, 224.

¹⁰⁰ There is also an intriguing connection between Christ Church and Blackmore. The parish church of St. Lawrence was originally the church of Blackmore Priory, during which time the belfry was erected. The priory was suppressed by Wolsey in 1525, and its land and revenues granted to his college at Oxford the following year. See R.C. Fowler, 'Priory of Blackmore', *V.C.H. Essex*, ii (1907), 146–8.

¹⁰¹ The surviving accounts for this work record a payment to 'John Wesburne, carpenter, and his iij servants', for 'vj daies about the klok howse' separate from his work of installing the bell-frame and bells in 'Friswides steeple'. The 1530 payments to William Bassett for work about the bell tower included 20*d* 'pro capistro magna campanae et horologii', and it is tempting to conclude that the bell tower mentioned in the 1530 accounts and the 'clok howse' mentioned in those of 1546 are the same structure. See Turner, op. cit. note 95, 183; Brewer, loc. cit. note 97.

¹⁰² *Old Plans of Oxford* (O.H.S. xxxviii, 1884), sheet 4.

¹⁰³ A. Wood, ed. J. Gutch, *The History and Antiquities of the Colleges and Halls in the University of Oxford*, iii (1786), 462–3; *R.C.H.M. Oxford*, 37; J. Cooper, 'Christ Church Cathedral', *V.C.H. Oxon.* iv, 369–70.

¹⁰⁴ *R.C.H.M. Oxford*, 29; *V.C.H. Oxon.* iii, 232; below, pp. 215–17.

Only a little pottery was recovered from L47 but it included, in addition to sherds of the 16th century and earlier, material which could not have been deposited before c. 1650, including the clay pipe bowl of c. 1650–90, indicating that the 16th-century surface of the garth, and consequently the footing, remained exposed into the second half of the 17th century. Pottery from the mortar spread L43 shows that it was deposited after the middle of the century, perhaps during repair work in the cloister c. 1660.¹⁰⁵ Pit F57 contained no dating evidence.

At some time during the second half of the 17th century the surface of the garth was raised with a layer of gravelly loam (L3, L41) which originally buried the footing but which now survives only to the level to which it was reduced in 1871. The few fragments of later ceramics from this layer may be considered intrusive, deriving either from Gilbert Scott's work or from subsequent disturbances.

An engraving in Ingram's *Memorials of Oxford* records the N.E. quadrant of the cloister as it remained until 1871.¹⁰⁶ It shows, in addition to the high level of the garth, a path laid to give direct access from the hall to the chapter-house *via* a door inserted in the eastern arcade, from which the window tracery has been removed. Thompson attributed this arrangement to Brian Duppa,¹⁰⁷ but it is now clear that the garth was raised many years after his time as Dean, most probably under John Fell (Dean 1660–86) or one of his successors. However, Duppa does appear to have instituted some work in the cloister alley,¹⁰⁸ and, as it is impossible to determine archaeologically the date at which the tracery was removed and the door constructed, it remains possible, in principle, that he was responsible for one or both of these alterations.

ACKNOWLEDGEMENTS

The excavation was carried out under the auspices of the Oxford Archaeological Unit. Excavation and post-excavation were funded by Christ Church, and the governing body's generosity is gratefully acknowledged; especial thanks are also due to the Treasurer, Mr. J.K. Batey, and the Clerk of Works, Mr. R. Branch, for their whole-hearted and sympathetic co-operation during excavation. In addition to specialist contributors to the report, many individuals have been generous with advice and discussion; my thanks to them all, especially Dr. C. Currie, for advice on timber belfries, and Mrs. Mavis Batey, whose freely-shared knowledge and enthusiastic support have been invaluable. Thanks also to Mrs. E. Beard, who prepared plans, sections and drawings for publication, and last, but by no means least, to Judith Affleck, Bob Bailey, Hugh Cameron, Niall Donald, Sally Jones and Gerry Wait, who were as capable and enthusiastic a team of excavators as one could hope for.

¹⁰⁵ W.D. Caroe, *Wren and Tom Tower* (1923), 5, 7.

¹⁰⁶ Ingram, *op. cit.* note 91.

¹⁰⁷ Thompson, *op. cit.* note 1, 239–40.

¹⁰⁸ Wood, *op. cit.* note 103, 369, records that the cloister was 'new paved' at about the same time as the cathedral, and this almost certainly refers to re-paving of the alley rather than work in the garth: it is hard to accept that any of the 'monumental stones' removed as part of the old pavement could have come from the garth, which by this time had been greatly disturbed, and which had not been used for regular burial since the 12th century; burial in the cloister alley, on the other hand, was common monastic practice.