

Chapter 4: Building Materials

SUMMARY

The assemblage of building materials recovered is modest, considering the number of buildings examined and the fact that the site was never redeveloped after the abandonment of the manor. Potential for understanding the architectural character of the manor is therefore limited without recourse to stylistic parallels. The documentary evidence strongly suggests that the site was methodically demolished and all usable materials recovered for use elsewhere.

TILE

by S Robinson

Floor tile (Fig. 4.1)

[Editor's note. The floor tile was recorded by Chris Storey and a report was prepared for publication by S Robinson shortly after the end of the fieldwork. The following account summarises the main elements and conclusions of Robinson's report, which is available in the project archive. Table 4.1 has been compiled by Kate Atherton from the records in archive.]

A total of 236 fragments of floor tile were found during the excavation, of which 55 were unstratified. Of the remaining 181 fragments, 107 had recognisable surface decoration, 31 had unidentifiable decoration and 43 were plain. The floor tiles were divided into groups according to their site provenance. Group 1 tile came from contexts located around and within the possible pentice, structure A13, and the main domestic buildings. Group 2 consists of the tile from building A11 (the probable chapel), and Group 3 contains tile from miscellaneous contexts, chiefly a general demolition layer. All contexts that produced only plain tile make up Group 4. Decorated tiles were classified according to Haberley (1937) and compared with published types from Penn (Hohler 1942). Three decorative designs were not identifiable amongst Haberley's types or the Penn material, and were classified as Types A, B and C. Table 4.1 presents the quantity of tile fragments, including unstratified tile, by group and decorative type. Types in Roman numerals are from Haberley. Two different fabric types were identified, which correspond to two fabrics recorded from the Hamel, Oxford (Mellor 1980, fiche 2: D10). The decorated floor tiles, and all but one of the plain tiles, are of the same fabric type (IIIC) with quartz and grog inclusions. The fabric of one plain tile (context 156) has pink and white quartz inclusions (IIIB), which is paralleled by a pottery fabric (AG) originating to the south of Oxford (Haldon 1977, 114–120).

Printed floor tiles were produced at Penn from the mid 14th century to the early 15th century and

certainly no earlier (Eames 1968, 18). Several of the Chalgrove decorated tiles show similarities with the Penn designs suggesting that they were the products of a local workshop whose tilers possibly had some connection with Penn. Fabric type IIIC probably came from south-east Oxfordshire, centring on Nettlebed. Samples of decorated floor tile have been examined in detail by x-radiograph fluorescence and atomic absorption methods. The results show the Chalgrove tiles to be similar to decorated floor tiles from Stonor House (Bond *et al.* 1980), suggesting a similar area of production for both sets of tiles in south-east Oxfordshire.

Plain tiles

A total of 44 plain tiles were recovered and the majority (27 fragments) were retrieved from a single context (1005). These had been reused in a tile-on-edge hearth during the occupation of the main building (A1) during Phase 4. Other fragments came from various contexts including an ash deposit (context 534) that may represent the remains of a Phase 2 building or the demolition of an earlier structure (see above). Two plain tiles were found from a tile-on-edge oven (context 151) in Building B and other examples were found in a wall from Building H and from Area F's floor surface.

Decorated tiles

All of the decorated tiles are of the unkeyed, printed variety, such as were produced at Penn (Eames 1980, 221–6). Eleven different designs were identified but only three of the designs match the Penn types identified by Hohler (1942).

Group 1 (Main range and Structure A13, possible pentice)

The 60 tiles in this group all came from contexts located around and within the main group of domestic buildings (Building A1, Rooms A3, A4, A5 and A9, Structure A13 and Building A14). Of these, 48 are from Phase 5 demolition features and layers. One unidentifiable tile was found in a Phase 3 context in Room A5 and eleven tiles were found from four Phase 4 contexts, including two found *in situ* in the floor of the pentice, Structure A13. The four recognisable designs found in this group all correspond to types described by Haberley (1937) (see Table 4.1) and the complete tiles measure 115 mm square.

Group 2 (Building A11 and surrounding area)

The tiles in this group derive from occupation and demolition deposits associated with the possible chapel (building A11). Complete tiles measure

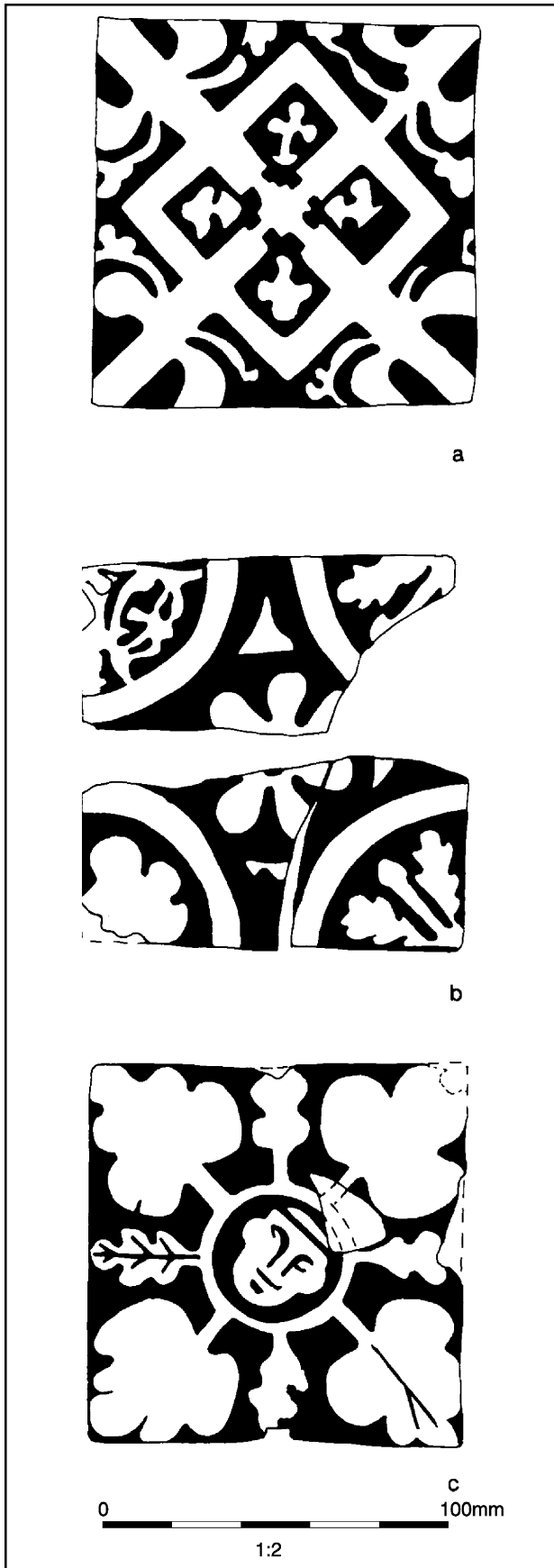


Figure 4.1 Decorated floor tiles.

Table 4.1 Quantification of decorated and plain floor tile by Haberley type (1937) and context classes

Type	Group 1	Group 2	Group 3	Group 4	Unstratified	Total
LXXIX	31		22		31	84
CIX	7		9			16
CLXXXI	9		4		5	18
A		9			6	15
B		4	1		2	7
C		4	1		4	9
CCLIV	1					1
LXXVII			1			1
CII			1			1
CVII			2		1	3
CXVI			1			1
Unrecog.	10	5	16		5	36
Plain	2	1	1	39	1	44
Total	60	23	59	39	55	236

c 115 mm square. A number of tiles were scored longitudinally before firing and were then broken in half as if to fit the edge of the floor. This implies that they were laid square to the walls of the building.

The three recognisable designs present do not occur among the types published by Haberley (1937) or Hohler (1942) and are illustrated in Figure 4.1 (Type A Fig. 4.1a; Type B Fig. 4.1b; Type C Fig. 4.1c). Type A has ornamental leaves and trefoils reminiscent of Penn types P88–89 (*ibid.*), while Type C has an unusual design featuring what appears to be the head of a monk within a central circle.

Group 3 (miscellaneous contexts)

This group contains tiles from miscellaneous contexts, of which the majority came from a general Phase 5 demolition layer (context 186). All but one of the tiles were decorated, although many were unidentifiable designs.

Roof tile

[Editor's note. A large quantity of roof tile was recovered from the excavations, of which only a sample was examined and recorded in detail. A subsequent cursory examination of the remainder suggested that the sample was representative of the site as a whole. The sample chosen comprised 204 fragments of tile from a single stratified sequence in the cross-wing (Rooms A9 and A10) and the immediately surrounding area. The analysis appears to have been undertaken with a view to identifying tile fabrics and any significant chronological or spatial patterns in fabric distribution. The data collected are set out in Table 4.2, and suggest that no useful results were obtained from this study since the great majority of fragments of all fabric types were recovered from demolition contexts. The report

Table 4.2 Fabric types from the stratified sequence of roof tiles (including miscellaneous)

Phase	Building	Context	IIIA	IIIB	IIIC	IV	Total
5	10	19	2	6	15		23
5	12	26		1	3		4
5	10	234			1		1
5	–	275		1			1
5	9	500	3	5	11	3	22
5	9	501		1	1		2
5	9	502	2	1			3
5	9	510			1		1
5	9	511		1	1		2
5	9	512	9	3	48	2	62
5	9	515		1	2		3
5	9	520	4	5	19	5	33
4	10	44			1		1
4	9	639		3	1		4
4	9	733		3			3
4	9	737	1		3		4
4	9	739	1				1
4	9	741	1				1
4	9	765	2		1		3
4	9	806			1		1
4	9	825			1		1
3	10	56	1	2	2		5
3	9	763		1			1
3	9	766	2		3		5
3	10	927	1				1
3	9	982	2	1	4		7
3	9	1053	1				1
2	Moat	356	1		4		5
2	Moat	924			2		2
1	–	839		1			1
Total			33	35	126	10	204

that follows here is a revised version of the original report by S Robinson, which is available in the project archive.]

The stratified sequence

Of the 204 tile fragments in the stratified sequence, 152 were positively identified as roof tiles. The remaining 52 were too small to identify and measure and have been classified as miscellaneous. All of the tile fragments recorded, with the exception of two, are flat roofing tiles with peg holes (hole diameter of 16 mm) for wooden pegs to hold the tiles onto the roof. Some tiles also have traces of mortar on their underside, suggesting they were mortared to prevent them moving. A few fragments are covered with mortar indicating that they were reused as building material. This interpretation is supported by a number of fragments found elsewhere on the site within a wall (context 992). Only one complete roof tile was recovered (context 19). It was 275 mm long and 170 mm wide. Several other half tiles were recovered, all with widths between 165 and 175 mm.

No fragment is thicker than 18 mm and most are 13 or 14 mm thick. Two ridge tile fragments are present (contexts 44 and 520). Both are the same shape, with neither glaze nor any form of ridge decoration.

Four different fabric types were identified which have been described in detail elsewhere (Mellor 1980, fiche 2: D10). The fabric types present are characterised by pink quartz inclusions (IIIA), pink and white quartz and iron (IIIB), white quartz and grog (IIIC) and grey and white quartz and grog (IV). The variation in fabric types, especially the presence of the pink quartz fabric (IIIA), indicates that roof tiles were brought from different manufacturing centres to roof the buildings. No clear chronological patterning is evident in the use of the different fabric types.

The first fabric (IIIA) is paralleled by a pottery fabric type that derived from an area east of Oxford, centring on Brill and the second fabric (IIIB) is paralleled by one originating to the south of Oxford (Haldon 1977, 114–20, fabrics AM and AG respectively).

Three tile fragments are of particular interest. The first (context 19) is made from the white quartz and grog fabric (IIIC) and it contains a sizeable patch of white (pipe) clay within the body of the tile. White clay is found at Shotover, south of Oxford, in the Reading beds. A deposit of white clay also occurs in the parish of Henley (*Geol. Soc. Mem.* 1908). The presence of white clay suggests that tiles of this fabric may have been manufactured in south-east Oxfordshire, and there is documentary evidence to suggest that this white quartz and grog fabric is from this area of the county (Bond *et al.* 1980). It is likely that the grey and white quartz and grog fabrics (IV) were being produced in the same area. Documents of 1312–13 record the delivery of 15,000 flat peg and 150 crests and ridge tiles for the roofing of a new byre in Cuxham, the parish adjacent to Chalgrove. The place of manufacture of these tiles is not mentioned but it may well have been Nettlebed, which was a major production centre for roof tiles in the mid 14th century and probably was making tiles before this. The first reference to Nettlebed is in 1365, when 35,000 tiles were supplied for Wallingford Castle. References continue into the mid 15th century. There is also documentary evidence that ridge tiles were being manufactured at Penn in the late 13th century (Jope 1951, 86). This production centre is also a possible source for the Chalgrove roof tiles although Penn is twice the distance of Nettlebed from Chalgrove (c 15 km).

The other two fragments of interest (contexts 26 and 516) are made from the pink and white quartz and iron fabric (IIIB). Both tiles have been fired hard in reducing conditions and are vitrified. One also exhibits a grey 'glaze' on its unbroken edge, which is probably due to the presence of soda-sand during firing. The presence of this sand and the high degree of firing may be accidental but the introduction of soda-sand and the technique of hard firing were later used by brickmakers to produce decorative grey and blue headers.

The remaining tiles

The remaining roof tile fragments were cursorily examined and only three additional features were revealed which are worth noting.

In addition to the four fabric types already discussed, there were four tile fragments with limestone and white quartz inclusions and voids (VIIA). This fabric is dated to the later medieval period and this is supported by the contexts at Chalgrove from which the fragments were found.

Several tiles had impressions of animal feet. Dog paw prints and the hoof prints of goats or deer are represented. One fragment has a slightly curved line impression on its underside.

Examples were also found of corner or hip tiles, used for covering the corners on hipped roofs. These tiles have a square hole, measuring 8 mm in diameter, some showing signs of iron staining, which suggests that they were fixed by nails rather than wooden pegs.

BRICKS (FIG. 4.2)

by John Steane

Introduction

Samples submitted for identification and comment comprised two joining fragments from a single brick, and five other brick fragments. All were either unstratified or from Phase 5 demolition layers. At the time there was considerable doubt about the identification of these pieces as brick, since they were of a soft chalky/sandy fabric and a yellow-buff colour totally unlike other bricks from known medieval contexts in the area, such as Stonor Park, Ewelme and the Chantry House at Henley. The identification was confirmed following archaeomagnetic intensity investigation at the Research Laboratory for Archaeology and the History of Art at Oxford University, and consultation with the Brick Development Association. The bricks were made from an iron-depleted clay, probably Gault clay, which outcrops in the Chalgrove area. Further details are available in the project archive.

Catalogue

- 4.2.1. **Brick fragment**, soft, sandy fabric. Side: straw/grass impressions. Edge: mould impressions. Munsell 2.5Y 8/4. L: 190, W: 105, Th: 55 mm (WS 15, Ctx 26, Ph5 Building A12).
- 4.2.2. **Brick fragment**. Side: structures caused during moulding. Laminated clay has been pressed into a mould and the top layer of clay cleaned off with a strike or similar traditional brickmakers' tool. Other side: possible straw impressions. Munsell 10YR 8/3. L: 120, W: 105, Th: 55 mm (WS 52, Ctx 26, Ph5 Building A12).
- 4.2.3. **Brick fragment**. Mortar dab on underside. Top shows striations from smoothing the clay after it has been pressed in the mould. Underside pit-marked where the suction of the clay in the mould has caused some to be torn from base of brick. Munsell 2.5YR 8/4. L: 150, W: 90, Th: 60 mm (WS 32, Ctx 512, Ph5 Room A9).
- 4.2.4. **Brick fragment**, small, moulded. Smooth upper side, pitted lower side. Straw/grass impressions on one edge. Brick is bevelled with semi-circular section but bruising has

removed the top surface and the original profile only survives on half the brick. Munsell 10YR 6/2. L: 110, W: 65, Th: 55 mm (WS 18, unstratified).

- 4.2.5. **Moulded brick**, sufficiently complete to make total reconstruction. 2 bevelled edges, one with rectangular piece cut out of one corner. The 2 bevelled edges and the top are smooth, the rest are pitted. Munsell SY 8/3. L: 230, W: 110, Th: 50 mm (WS 17, unstratified).
- (NI). Small fragment (WS 53, Ctx 565, Ph5).

Discussion

These fragments illustrate some of the techniques of medieval brickmaking (Brooks 1939, 155–56; Firman and Firman 1967). They confirm that the brickmaker sanded or wetted his mould, then threw into it a lump of prepared clay. The surfaces of the bricks were distinctly sandy to the touch. Surplus clay was sliced from the top of the mould by a strike, a wooden stick, which has left striations on the surface. The wet moulded bricks were then taken to the drying ground and laid out to dry on straw or grass. Their weight and plasticity caused the stalk impressions noted in three of the fragments (1, 2 and 4). There are no stony inclusions, but an occasional void suggests the former presence of grass in the fabric which was burned out during firing. The fabric is uniform in colour throughout the brick and there is no core of material of a different colour suggesting overfiring. Perhaps the most interesting feature is the evidence for moulding and cutting the bricks into decorative shapes. Two fragments (4 and 5) were clearly specially moulded to fulfil particular functions in the overall design. The chamfered edges, on the other hand, may simply have been cut down from standard bricks. One fragment (6) has been cut as well as moulded.

The use of moulded brick is found in Belgium from as early as the 13th century (Sosson 1972, 129–53). Moulded brick was used on a limited scale at Stonor Park. In 1416–17 Thomas Stonor bought 200,000 bricks from Michael Warwick for £40 and 'The Flemings' are mentioned making bricks at 'Crockernende' (Bond *et al.* 1980, 3–5). The medieval expression for moulded brick is 'hewentile' and there are references in the Kirby Muxloe accounts of the 1480s to 'breke leyers and hewers' for chimneys and vaulting (Hamilton-Thompson 1913–14, 205, 208). Since the bricks at Chalgrove were not found fixed in any structural context, their function is uncertain. It is possible that they were specially fashioned to provide a polychromatic and, therefore, contrasting edging to a fireplace or hearth. Their soft and crumbly surface would have made them unsuitable for any external use or any surface which was exposed to high temperatures. They are probably late medieval or early post-medieval in date.

ARCHITECTURAL STONE (FIGS 4.3–4.4; TABLE 4.3)

[Editor's note. A total of 35 freestone fragments were identified by John Blair during and shortly after the

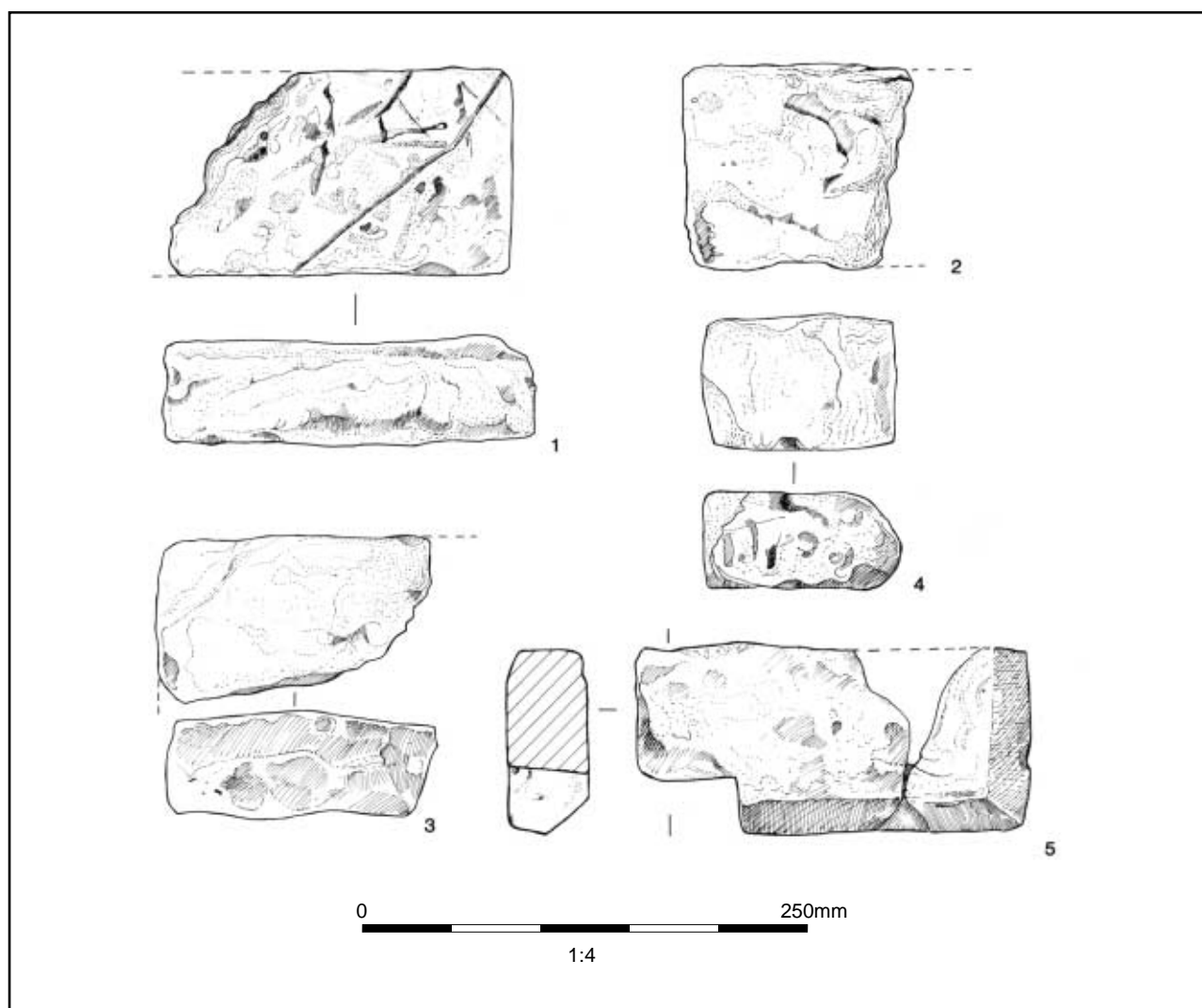


Figure 4.2 Medieval bricks.

end of the fieldwork. Of these, 17 were of particular interest and are discussed and catalogued below. The remainder have been listed by Kate Atherton in Table 4.3, together with other miscellaneous items of undiagnostic stone recorded in the archive.]

Architectural stone catalogue by John Blair

Voussoirs from a Romanesque doorway (Figs 4.3–4.4, Nos 1–5, Fig. 4.4A–C)

Numbers 1–5 are five voussoirs from a doorway arch with a calculated width of *c.* 1.20 m. Bands of chevron on the main face and soffit meet at the arris to form lozenges, each of which contains a small carved fleuron. This pattern of chevron ornament, Borg's type 4, was popular in Oxfordshire during the second half of the 12th century (Borg 1967, 135–6, 40). The voussoirs were found in a context associated with Building A12 (see above). A sketch reconstruction of

the arch created by voussoirs 1–5 is presented in Figure 4.4A. Figure 4.4B presents a section at the centre of the voussoir and Figure 4.4C a section at the edge of the voussoir.

Catalogue

- 4.3.1 Romanesque **voussoir** WS 2 (Cxt 27, Ph 4, Building A12).
- 4.3.2 Romanesque **voussoir** WS 3 (Cxt 27, Ph 4, Building A12).
- 4.4.3 Romanesque **voussoir** WS 4 (in two pieces) (Cxt 27, Ph 4, Building A12).
- 4.3.4 Romanesque **voussoir** WS 5 (Cxt 27, Ph 4, Building A12).
- 4.3.5 Romanesque **voussoir** WS 9 (Cxt 27, Ph 4, Building A12).

Voussoirs from a Gothic doorway (Fig. 4.4D)

Three voussoirs were recovered, probably from a Gothic doorway; the calculated radius of the curve is *c.* 0.60 m. The moulding profile comprises an arris roll with two side fillets flanked by hollows. These are probably 14th-century, but all were unstratified. A section is shown in Figure 4.4.D.

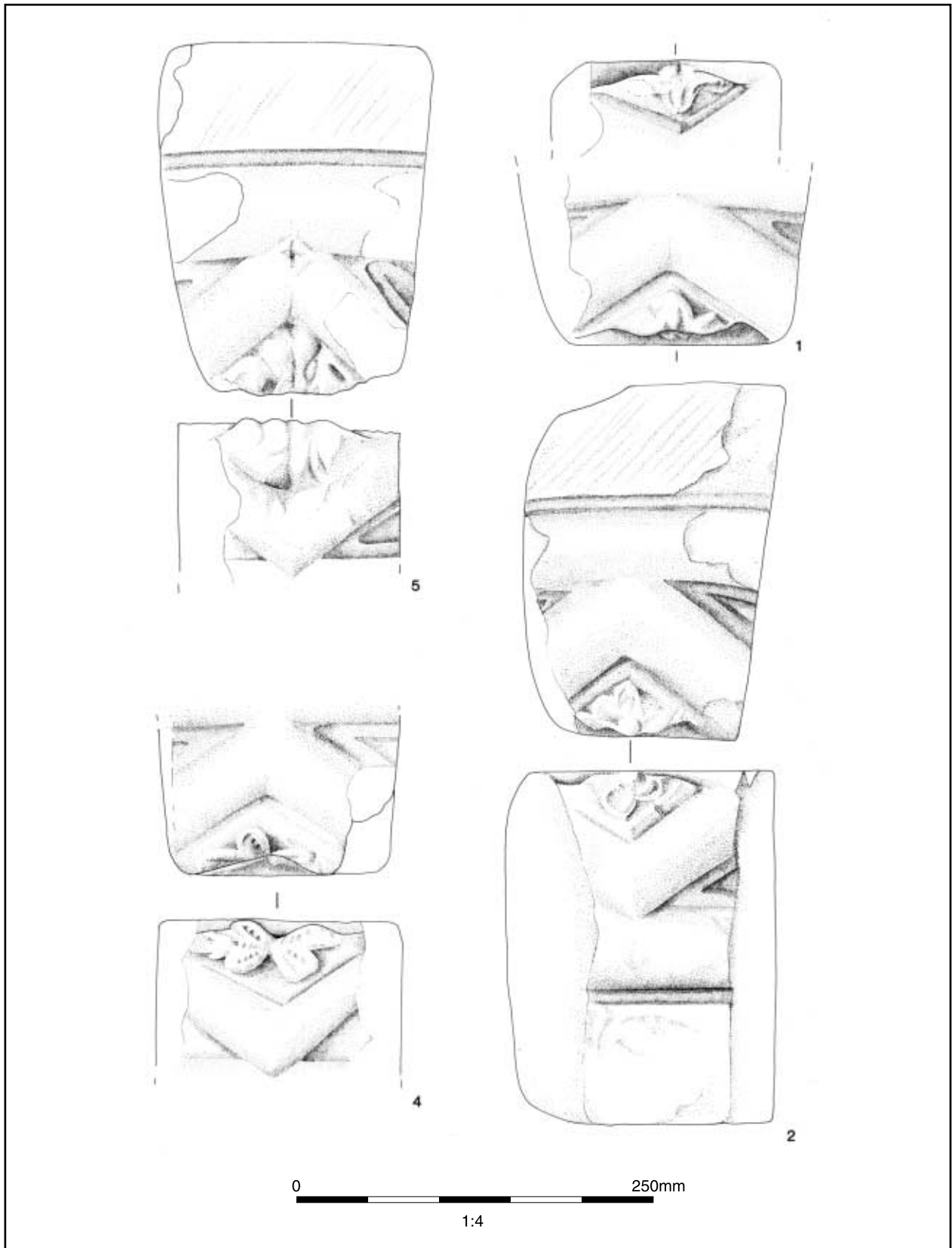


Figure 4.3 Architectural stone.

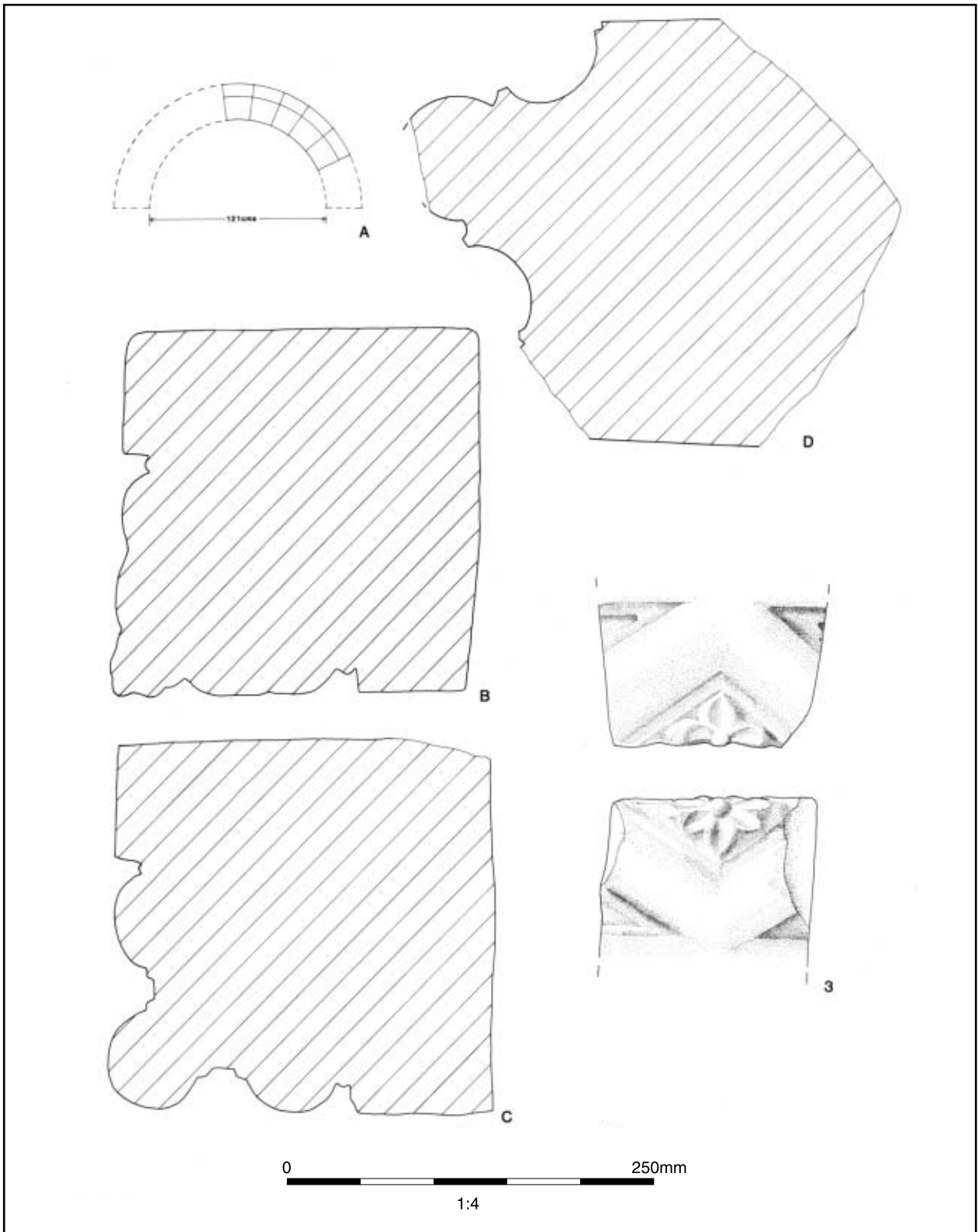


Figure 4.4 Architectural stone.

Table 4.3 *Miscellaneous architectural worked stone (WS)*

WS no	Context no	Phase	Building/ Room	Description
12	23	4	A12	Burnt limestone, secondary use of groove
16	132	5	A10	Chamfered door jamb?
20	57	U/S	U/S	Part of chamfered door jamb?
21	500	5	A9	Fragment
22	512	5	A9	Part of door jamb?
23	520	5	A9	Fragment
24	542	5	A1	Part of door jamb?
25	542	5	A1	Part of door jamb? Thinner than WS 24
26	591	4	A13	Fragment
27	599	5	A4	In two pieces
28	186	5	demolition	Fragment
29	267	4	T	Fragment
30	606	5	A14	Corner fragment
31	511	5	A9	Fragment
33	520	5	A9	Fragment
34	628	5	A3	Fragment
35	512	5	A9	Fragment from chamfered block stone
36	357	3	A10	Fragment
37	357	3	A10	Fragment
42	885	4	A1	Reddish sandstone with hole (joins WS 43). Natural?
43	885	4	A1	See above
44	966	1	Yard surface	Corner of squared block
45	600	3–5	A4	Chamfered block
50	1080	5	demolition	Fragment
51	1080	5	demolition	Fragment
–	U/S	U/S		Worked corner with projection; shelly limestone
–	186	5	demolition	Slab fragment; Th: 37 mm
–	527	5	demolition	5 worked limestone fragments
–	1209	2	moat upcast	Unworked burnt sandstone

U/S: unstratified contexts.

Catalogue

- 6 Gothic **voussoir** (NI), WS 6 U/S
 7 Gothic **voussoir** (NI), WS 7 U/S
 8 Gothic **voussoir** (NI), WS 8 U/S

Column-drum fragments

Four fragments (WS 38–40, 49) were found that would originally have been part of the outer casing of a plain circular pier or piers. The thickness of the casing is 0.10 m and the calculated diameter of the complete pier is *c* 0.61 m.

Catalogue

9. **Column-drum** fragment (NI), joins WS 39 to form quarter-arc of circle (WS 38, Ctx 962, Ph3, Room A9).
 10. **Column-drum** fragment (NI), joins WS 38 (WS 39, Ctx 962, Ph3 Room A9).
 11. **Column-drum** fragment (NI) (WS 40, Ctx 962, Ph3 Room A9).
 12. **Column-drum** fragment (NI) (WS 49, Ctx 983, Ph2).

Miscellaneous moulding fragments

Numbers 15–17 come from an arch or window with a profile similar to the Gothic voussoirs (Nos 6–8) but about two-thirds the size.

Catalogue

13. **Scroll moulding** (NI). Straight 120 mm. Material not certain (WS 47, Ctx 1073, unstratified).
 14. **Hollow moulding**, indeterminate fragment (NI) (WS 1, unstratified).
 15. **Roll-moulding** (NI) D: 60 mm (WS 12, Ctx 26, Ph5 Building A12).
 16. **Roll-moulding** (NI) (WS 14, Ctx 26, Ph5 Building A12).
 17. **Roll-moulding** (NI) D: 55 mm (WS 19, unstratified).

STONE SLATES (TABLE 4.4)

by Philip Page and J Carlinge

A total of 78 pieces of slate were recovered from the excavation. These represent a minimum of 54 individual slates of which 21 were complete. These have been assigned to 2 different quarry sources by the authors in conjunction with Philip Powell of the Oxford University Natural History Museum. Fabric A is Forest Marble, the nearest source of which is at Filkins, Oxfordshire. Poulton, near Fairford in Gloucestershire, was known to produce slates from at least the 17th century. Fabric B is Stonesfield Slate from the north of Oxfordshire. Fabric C was not identifiable. The use of the three sources throughout the different phases of the site's history is quantified in Table 4.4.

Slates were recovered from almost all of the domestic buildings, Buildings J, I, H and Area F and around the courtyards. The largest number of slates, apart from the five found in the moat upcast, was a group of five from Phase 4 occupation deposits (contexts 7 and 535) of Building A12. Four fragments each were found in contexts associated with the occupation and demolition of Room A9 and

Table 4.4 *Quantification of each slate stone type by phase*

	Fabric A	Fabric B	Fabric C	Total
Phase 2	3	1	1	5
Phase 3		10	1	11
Phase 3–4		3		3
Phase 4	1	13		14
Phase 5	1	32	3	36
Unstratified		9		9
Total	5	68	5	78

Building H. A layer of slates (context 1148) noted between Buildings A1 and D may represent building debris from the construction of Building D during Phase 2. The demolition of the building in Phase 4 would probably also have provided the slate fragments found in the dump (573) that sealed the remains of the building. The majority of the slates, if they were not reused anywhere on the estate, are likely to have been sold, and this may help to explain the small size of the assemblage.

PLASTER, MORTAR AND DAUB (TABLE 4.5)

by *S Smithson*

Approximately 284 fragments of plaster were recovered from 35 locations at the site. Three fragments were painted red, two from Buildings A1 and A11, but no designs were evident. The majority of the structures produced faced plaster, including Building H. Some was also found in Area F, suggesting some redeposition was in progress. Unpainted plaster was found *in situ* on walls in Rooms A9 and A10. However, approximately 80% of the plaster came from Phase 5 demolition contexts and could, therefore, have come from any location. No plaster was found associated with the Phase 1 structures, although there were fragments in the building platform onto which the Phase 2 manor was built. It is likely that the majority of the structures were internally faced with plain plaster (as in Rooms A9 and A10) from Phase 2 onwards.

Mortar was evident in several locations around the site and only representative samples were taken. A total of 74 fragments of mortar were retained from 37 locations. These included samples from the Phase 2 wall of Building A1 (993) and from the Phase 3 walls of Room A4 (contexts 526 and 536). Samples were also taken from mortar floors where they survived, including a mortar floor in Building A1 (context 1017).

Among the deposits and layers of mortar recorded, but not kept, was a dump of mortar in the corner of Building J (context 368), a mortar floor in Structure A13 and the remains of a floor in Building A1, and Room A3 comprising pinkish mortar (context 1068). Pink mortar was also observed in a demolition context associated with Room A9 (context 512) and also with a Phase 3 occupation deposit from Area F (context 508). Mortar floors in Building A11 and Structure A13 were associated with floor tiles, unlike the floor in Building A1 which had no tiles. Unlike plaster, traces of mortar were found in Phase 1 deposits.

Three fragments of daub were found from three contexts. These were confined to Phases 1 and 2.

WINDOW LEAD (FIG. 4.5.22 A AND B)

by *Barry Knight*

[Editor's note. The window lead was identified and catalogued by Barry Knight. The catalogue has subsequently been arranged in phase order by Kate Atherton, with added information about the prove-

nance of individual pieces. Most of the window lead consists of small decayed twisted fragments from demolition layers, and therefore does not convey much information about the chronology of the glazing of the house.]

Typology

Type A has thick diamond-shaped flanges and a prominent casting flash along the outside edge. It was cast in a hinged two-piece mould about 0.50 m long, as described by Theophilus in Book II, Chapters 24–5 (Hawthorne and Smith 1963, 67–9). One of the Chalgrove fragments (SF 520) is particularly interesting because it appears to have come from the bottom of the mould and has been discarded unused. Type B (not represented here) and Type C were made as Type A cast came and the casting flash was scraped off. This process is described by Theophilus in the last paragraph of Book II Chapter 26 (*ibid.*, 70). The only difference between Types B and C is the amount of lead removed from the flange. Types A and C occur throughout the medieval period and do not, therefore, provide much chronological information. The absence of milled lead, perhaps introduced in the late 15th and early 16th centuries, accords with the documentary evidence for the abandonment of the site by this time.

Catalogue

- SF 198 (NI). 2 twisted **fragments**, Type C. Possibly remains of 2 triangular quarries, 1 measuring $c 50 \times 45 \times 70$ mm. (Ctx 673 Ph4 Structure A14)
- SF 526 (NI). **Fragment**, Type C. (Ctx 561 Ph4 courtyard)
- 4.5.22a. **Remains of rectangular quarry**. Type C. (SF 203B). Coloured glass remains (see Window glass No. 10), L: $c 22$, W: 45 mm. (Ctx 666 Ph5 Structure A14)
- 4.5.22b SF 66. **2 small decayed fragments**. Type C, split in web. Remains of 2 rectangular quarries, L: $c 35$ and 23 mm. (Ctx 520 Ph5 Room A9).
- SF 517 (NI). **Fragment**, Type A, with casting flaws (bubbles) in web, L: 70 mm. (Ctx 26 Ph5 Building A12)
- SF 518 (NI). **Decayed fragments**, Type C. (Ctx 124 Ph5)
- SF 519 (NI). **2 tiny fragments**, split in the web, possibly Type C. (Ctx 125 Ph5 Building A11)
- SF 520 (NI). **2 joining fragments**, Type A. This piece appears to be unused; one end comes from the bottom of the mould and other has been cut off. Total L: 210 mm. (Ctx 186 Ph5)
- SF 521 (NI). **3 small fragments**, Type C. (Ctx 221 Ph5)
- SF 522 (NI). **1 small fragment**, split in web, Type C. (Ctx 520 Ph5 Room A9)
- SF 523 (NI). **1 small fragment**, split in web, Type A. (Ctx 542 Ph5 Building A1)
- SF 524 (NI). **1 small fragment**, split in web, Type C. (Ctx 549 Ph5 Building A1)
- SF 525 (NI). **1 fragment**, Type C. (Ctx 550 Ph5)
- SF 527 (NI). **1 fragment**, split in web, plus flat piece apparently melted, Type A. (Ctx 590 Ph5 Building A1)
- SF 528 (NI). **1 small fragment**, split in web, Type C. (Ctx 666 Ph5 Structure A14)
- SF 243 (NI). **1 fragment** comprising 2 pieces soldered together and split in web, Type C. Possibly used to tie a glazed panel to a window bar. L: $c 50$ mm. (U/S)

Table 4.5 Quantities of plaster, mortar and daub for each building by phase (number of contexts in parentheses)

Building	Phase 1	Phase 2	Phase 3	Phase 3–5	Phase 4	Phase 5	U/S	Total
<i>Plaster</i>								
Moat upcast		2 (1)						2 (1)
A1			2 (1)		13 (2)	65 (5)		80 (8)
A3				10 (1)		5 (2)		15 (3)
A4						13 (1)		13 (1)
A9						5 (2)		5 (2)
A10						99 (3)		99 (3)
A11						10 (2)		10 (2)
A14						1 (1)		1 (1)
Area F						2 (1)		2 (1)
H					1 (1)			1 (1)
Other		20 (2)	3 (2)		1 (1)	27 (4)	6 (3)	57 (12)
Total		22 (3)	5 (3)	10 (1)	15 (4)	227 (21)	6 (3)	285 (35)
<i>Mortar</i>								
Moat upcast		1 (1)						1 (1)
A1		1 (1:s)	17 (6, inc 2 s)		5 (3:s)			23 (10)
A3			2 (1:s)					2 (1)
A4			2 (2:s)	6 (1:s)				8 (3)
A9					6 (2)	5 (2)		11 (4)
A10			1 (1:s)			3 (1)		4 (2)
A12						1 (1)		1 (1)
A14						2 (1)		2 (1)
D					1 (1)			1 (1)
F			3 (1)			1 (1)		4 (2)
W			2 (1)					2 (1)
Other	2 (2)				7 (4)	5 (3)	1 (1)	15 (10)
Total	2 (2)	2 (2)	27 (12)	6 (1)	19 (10)	17 (9)	1 (1)	74 (37)
<i>Daub</i>								
Yard	1 (1)							1 (1)
Moat upcast		1 (1)						1 (1)
Other		1 (1)						1 (1)
Total	1 (1)	2 (2)						3 (3)

s: sample from wall or deposit.

U/S: unstratified contexts.

SF 253 (NI). **1 fragment**, soldered joint split in web, probably Type C. L: 29 mm. (Ctx 900 cleaning reference Building D)

SF 529 (NI). **2 twisted fragments**, Type C. (U/S)

WINDOW GLASS (FIG. 4.5.7–8)

by Jill Channer

Introduction

[Editor's note. The majority of the window glass was identified and catalogued by Jill Channer shortly after the excavations (Nos 1–23 below). Two further fragments of window glass were identified by Jeremy Haslam amongst the vessel glass assemblage, and these have been added to the end of Jill Channer's catalogue and identified by their original Vessel Glass (VG) numbers. Further fragments present in

the archive were noted by Kate Atherton and are listed at the end of the catalogue.]

The total amount of window glass, 42 fragments, recovered from the excavations was very small. The fragments formed an area of only approximately 300 square millimetres of which less than 13% was painted. Presumably most of the windows at the manor were removed when it was demolished. The glass was generally poorly durable, although not fire-damaged, and burial had caused deterioration. Some fragments were obviously corroded before burial, indicating that they were in windows for some time.

A small quantity of the glass is of 13th- or probable 13th-century date, and shows geometric designs. There are architectural designs from the 14th to 15th century, with an interesting fragment showing an angel's wing (Fig. 4.5.7) and a few fragments of

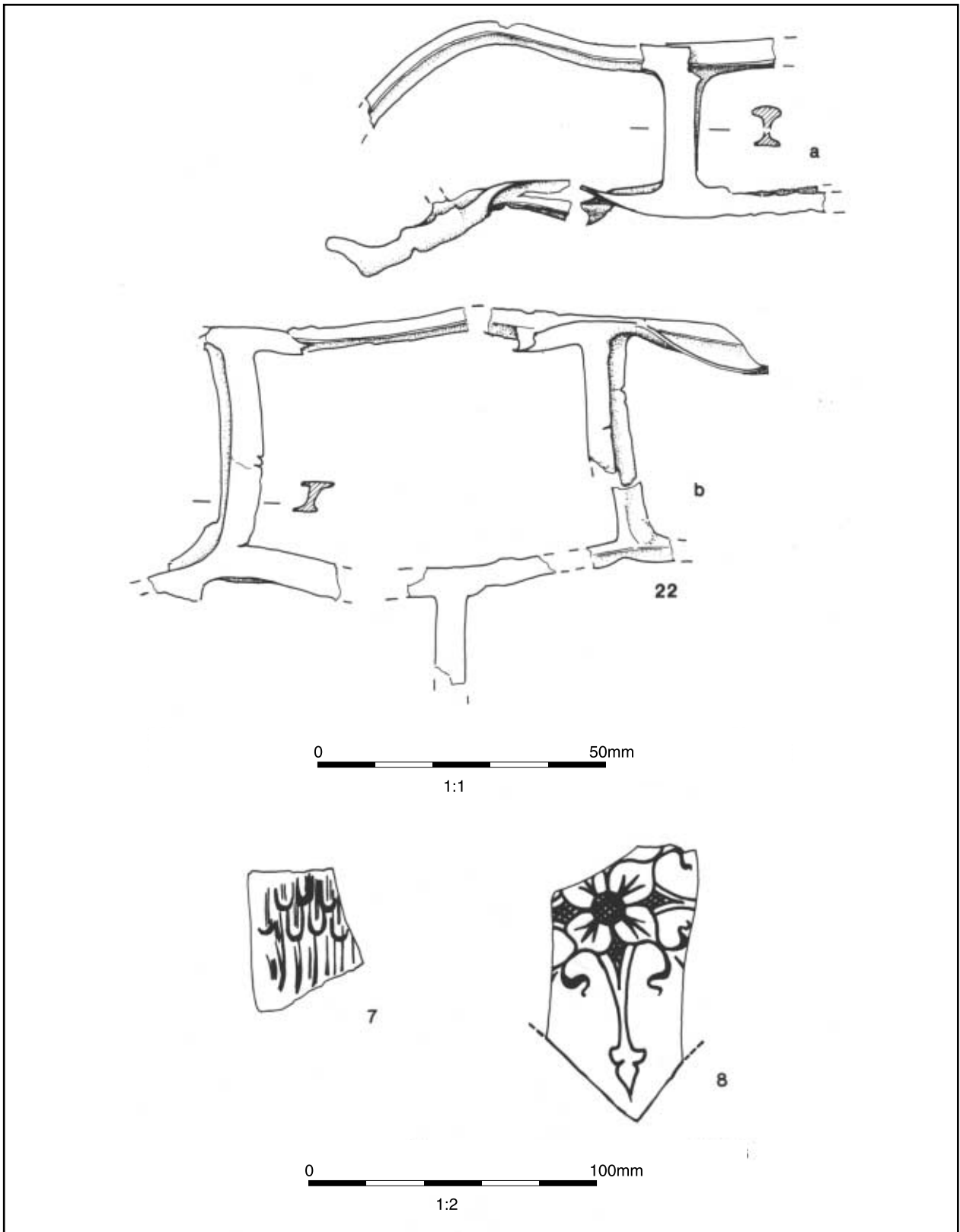


Figure 4.5 The window lead and glass.

15th-century quarry glazing. Fragment No. 4.5.8 is comparable with designs in a mid 15th-century window at Marsh Baldon Parish church, not far from Chalgrove.

Catalogue

13th-century glass (not illustrated)

1. **5 fragments**, cross-hatched background, geometric design and edge strip. Corroded before burial. Mid to late 13th century (SF 22, unstratified).
2. **Fragment**, originally white, Th: 4 mm. Formal geometric design, paint very decayed. Design picked out of matt wash, exterior pitted. 2 grozed edges (SF 47, Ctx 170, Ph3).

Possible 13th-century glass (not illustrated)

3. **Decayed fragments**, like 1, possibly 13th century (SF 215, Ctx 593, Ph4 Building A1).

14th/15th-century glass

- 4 (NI). **2 fragments**, devitrified crown glass, Th: 4 mm. No paint visible. Poorly durable, 1 grozed edge. Probably later than 14th century (SF 235, Ctx 748, Ph5 Room A8).
- 5 (NI). **Fragment**, edge of architectural design and serpentine trail, dots in interstices, no back painting. Design picked out of matt wash. 1 grozed edge, no lead shadow. Colour not discernible (SF 105, unstratified).
- 6 (NI). **Fragment**, possible architectural design, fragmentary paint. Very poorly durable, corroded on exterior before burial. Late 14th/early 15th century (SF 164, Ctx 140, Ph4).
- 4.5.7. **Fragment**, white glass, angel's wing picked out in ?matt wash. 1 grozed edge. L: 48, W: 38 mm. ?14th/15th century (SF 20, unstratified).

15th-century glass

- 4.5.8. **Fragment** showing quarry design, combining elements of quarry types 5 and 9. Both designs occur in a mid

15th-century window at Marsh Baldon parish church (Newton and Kerr 1979, Window J, As and 1a, 1b, 1c, 2a, 2c, 3a, 3c) (SF 102, Ctx 556, Ph5).

- 9 (NI). **2 fragments**, poorly durable quarry glazing (SF 96, Ctx 547, Ph5).

Glass of uncertain date (not illustrated)

10. **Small fragment**, coloured glass (not red) cemented into H-shaped lead came with a round head. Pre-16th century (SF 203A, Ctx 666, Ph5 Structure A14).
11. **One fragment** of white glass, remains of paint. Too fragmentary to discern design. One fragment of plain white quarry glass (SF 103, Ctx 549, Ph5 Building A1).
12. **Fragment**, originally green pot metal glass (*ie.* not flashed onto surface). 3 grozed edges, no paint visible (SF 86, Ctx 518, Ph5). 13. **Fragment**, poorly durable, originally white glass with line paint showing architecture or drapery (SF 87, Ctx 525, Ph5).
14. **Tiny fragment**, 1 painted line, 1 partly grozed edge (SF 118, Ctx 590, Ph5 Building A1).
15. **Fragment**, white, unpainted glass, possibly edge of quarry glass, not early (SF 202, Ctx 665, Ph5).
16. **Fragmentary painted glass**, perished and decayed (SF 532, Ctx 44, Ph4 Room A10).
17. **Fragment, painted glass**, stripes (SF 533, Ctx 44, Ph4 Room A10).
18. **Fragmentary plain glazing** (SF 535, Ctx 186, Ph5).
19. **Fragmentary painted glass**, perished or decayed (SF 536, Ctx 189, Ph5).
20. **Fragmentary plain glazing** (SF 537, Ctx 554, Ph3-4 Room A3).
21. **Fragment, plain white glazing** (SF 538, Ctx 584, Ph5 Room A3).
22. **Fragment, plain white glazing** (SF 540, unstratified).
23. **Fragment, plain white glazing** (SF 330, Ctx 573, Ph4).
- VG 7 **Probable window glass**, completely decayed. ?Late medieval (SF 534, Ctx 134, Ph5 Building B).
- VG 9 **Fragment**, much decayed, slightly curved, one edge possibly grozed. Late medieval (SF 544, Ctx 554, Ph3-4 Room A3).
- Small fragment**, decayed (SF 539, Ctx 596, Ph3-4 Room A3).
- Small fragment**, decayed (SF 33, Ctx 130, Ph3).
- 9 **other fragments**, some with geometric design (SF 292, Ctx 986, Ph4 Structure A13).