Proc. Hants Field Club Archaeol. Soc. **34**, 1978, 49-52.

EXCAVATION AT BEAULIEU ABBEY, 1977

By DAVID A. HINTON

A SMALL excavation was undertaken in February, 1977, by the Department of Archaeology, University of Southampton, at the west end of the church at Beaulieu Abbey, founded in the early thirteenth century by King John. The work was done at the invitation of Lord Montagu, to ensure that the construction of a new wall to replace a line of conifers would not cause any damage to the medieval foundations.

The plan of the church, cloisters and subsidiary buildings was revealed during excavation in 1900–6 (Hope and Brakspear 1906), and the existence of a galilee at the west end of the church was discovered in 1932 by Sir Thomas Troubridge (Atkinson 1934, 312). In the 1977 excavation, an E-W trench 15 m × 2 m (× 4 m at its E end) was dug from the present path, across the galilee and west wall of the church, and along the E-W sleeper wall of the north aisle arcade, as far as the first pier base. The walls and floor levels were cleaned, and the trenches dug by gardeners and by Brakspear were emptied. The surviving medieval levels were deliberately left undisturbed.

Brakspear's plan of the church shows a door at the end of the north aisle, but there is no evidence of this in the surviving structure, and the existence of a galilee, unknown to Brakspear, makes a door in this position perhaps unlikely. Otherwise, Brakspear's plan was found to be reliable: the E-W sleeper wall is *c.*2.25 m wide, the pier base *c.*1.70 m N-S/E-W, the great west wall is *c.*2.60 m wide, and the galilee wall *c.*0.40 m wide on footings 0.70 m wide. The galilee wall had a foundation trench 1.30 m wide, cut through a 'raft' of mortar. This mortar was also cut by a foundation trench, 0.25 m wide, for the west wall. Inside the church, Brakspear's trench was more than a metre deep, destroying the junction of the west wall and the interior floors. His trench was used to give a N-S section through the aisle floor. This showed a mortar floor 60 cm thick, resting on a 10 cm layer of gravel, with gravel and clay below that, to an unknown depth; the bottom of the footings of the E-W sleeper wall could not be traced because of the water table, but were over a metre below the interior floor. The wall had no foundation trench cut through the mortar, and was bonded into the west wall.

The footing trench of the sleeper wall seems to have been dug into what is probably natural clay and gravel, the up-cast being a base for the mortar floor. There is no evidence that large quantities of clay or mortar were dumped to raise a platform first. It has often been suggested that this happened at great church sites, but at one supposed example, the Blackfriars at Oxford, it has recently been shown that the natural subsoils were all that was used (Lambrick and Woods 1976, 173). The mortar floor was put in after the wall had been built, explaining the absence of a foundation trench.

Outside the church, the mortar floor of the galilee was earlier than the west wall, since a foundation trench had been cut through it. Presumably the masons laid the mortar down as a path or working surface, up to a temporary screen on the line of what was to be the west wall. When the west wall foundations were dug, the existing floor had to be cut back. Similarly, a foundation trench had to be dug into the mortar for the wall of the galilee. This need not therefore be a later addition to the church, although of course it could be, on the stratigraphical evidence.

The subsoil below the church at Beaulieu appears to be a mixture of gravel and clay deposits, and the depth and width of the wall foundations is a measure of the builders' distrust of the stability of the ground, as well as of the expenses incurred by the founder and patron, King John. The use of a sleeper wall rather than a series of isolated rafts as footings for the north arcade also shows the need to secure the foundations. Recent excavations at two great thirteenth-century churches in Oxford have revealed a contrast between the Greyfriars, sited on a stable gravel terrace, and the Blackfriars, on a low-lying alluvial marsh. The former had much shallower, narrower foundations (Lambrick and Woods 1976, 206), yet even at the latter it was not considered necessary to have a sleeper wall for the arcade (*ibid.*, 188). No risks were run at Beaulieu, and the builders established a church which never needed substantial repairs despite the problems raised by the site. Beaulieu was the largest Cistercian house in England (Hockey 1976, 30), and although so little of the superstructure of its church now survives, the footings alone are a testimony to its scale and grandeur.

The Finds

Since no medieval levels were excavated, all the finds were unstratified, and the only ones of interest were clay floor-tiles, nearly all broken, dumped back into Brakspear's trenches and other ground disturbances. The tiles were divided into six groups on the basis of fabric and patterns (for terminology, see Eames 1968). The fabric divisions were confirmed by thin section analysis undertaken by Dr. D. F. Williams, to whom I am very grateful, at Southampton University.

Group 1: 'Tile mosaic', i.e. small quarries cut into triangles (77 × 55 × 55 mm), squares (63 mm), and an open circle with cusped exterior (Fig. 1). Fabric: compact, red clay with numerous grains of subangular quartz, average size 0.10–0.30 mm. Scoop keys on the squares. Some coated in white slip, others reduced to give a dark green glaze.

Group 2: 'Inlaid'. Square quarries, 130–135 mm. Fabric: red clay with fewer, larger subangular quartz grains, up to 0.80 mm across, and frequent red and white clay pellets; white clay inlay extremely micaceous. Scoop keys. Patterns: Greenfield 1892, Pl. A, 1; Pl. A, 10 (inc. minor variant lacking the overlapping stem in the corner); Pl. B, 2; Pl. B, 6 (variant as illus. in Norton 1974, Fig. 1, no. 2); Pl. E, 12; and Pl. F, 6.

Group 3: 'Inlaid'. As last, but fabric almost equal parts of red and white clay, with a scatter of large fragments of limestone and frequent grains of subangular quartz, average size 0.20–0.30 mm. Unkeyed. 125–130 mm square. Patterns: Greenfield 1892, Pl. C, 6 (variant with border frame); and Pl. D, 1 (variant with two six-foils and two trefoils, not four trefoils).

Group 4: 'Inlaid'. Fabric: light buff clay with large grain quartz. Scoop keys. A single example, not thin-sectioned. Pattern: Green and Green 1949, Diagram 5, no. 7.

Group 5: Plain, the surfaces scored into thirds or ninths, some broken into the subdivisions; one unscored. Square when complete, *c.*125 mm. Fabric: red clay with white clay composing up to one-third, mixed with temper similar to Group 3 tiles. Unkeyed. Nail holes pierced in top surfaces, in a single diagonal line of three on each tile (cf. Norton 1974, 25).

Group 6: Plain. Unscored. Square, *c.*130 mm. Some with white slip surface coating. Fabric: more white than red clay, temper as Group 3 tiles: very badly levigated, and laminated in fracture. Unkeyed. Nail holes as Group 5.

The most interesting group is the 'Tile Mosaic' of Group 1. This technique of flooring is particularly associated with the great Cistercian houses of northern England, but it is likely that its earliest use was at Canterbury Cathedral, in a floor laid *c.*1220 (Eames

1961, 138). Tile mosaic was recorded at Beaulieu by Brakspear, although not of course by that name (Hope and Brakspear 1906, top of Plate XV). He illustrated various shapes, including lozenges, curves to form circles, triangles, vesicae, and a tau-cross with bevelled arms. Examples of the last are in the museum at Beaulieu. The 1977 excavation produced one new shape, illustrated in Fig. 1, a circle with a cusped outer edge and an open centre. The pattern survives only in a single fragment, but this is more than half the tile, and shows that it was not simply semi-circular, which would have been an easier shape for the tilers to make. Some of the triangular tiles illustrated by Brakspear appear also to have had open centres, a technique not apparently used in the northern English tile mosaic floors.

Beaulieu has also produced specimens of inlaid tile mosaic (Hope and Brakspear 1906, Plate XVI), and of tiles with inlaid letters (*ibid.*, Plate XVII). Unfortunately no examples of these were found in 1977. They appear to have been very similar to those used in the King's Chapel at Clarendon Palace, near Salisbury, laid *c.*1244 (Eames 1968, Plate II). They may have been made by the same tilers who made the tile mosaic floor, but none survive at Beaulieu, so a fabric comparison cannot be made.

The church at Beaulieu was not dedicated until 1246, but enough had been completed by 1227 for a consecration service to be held (Hockey 1976, 22). The east end of a church was usually built and brought into service first, and it was probably in the east end at Beaulieu that the mosaic tiles were laid, since the floor of the nave had an inlaid tile floor, described below. The chancel floor may have been laid with tile mosaic by 1227, in which case it was one of the first tile floors to be laid in England. Alternatively, the east end was not floored until the 1240s, and both (plain) mosaic and inlaid mosaic used. This would make the floor contemporary with that at Clarendon Palace, and some of the tilers might have worked on both contracts, since Henry III was a Beaulieu benefactor. There seems to be no plain mosaic at Clarendon, however, so it may well be that there were two early flooring campaigns at Beaulieu, one in the 1220s with the plain mosaic, and one in the 1240s with the inlaid mosaic.

The difference in fabric between the Group 1 mosaic and the Group 2 inlaid tiles is important. Dr. Williams comments that there is nothing in either fabric to suggest a particular origin, but that both could have been made locally, although not from the same clay source. This may not, of course, mean that they were made at a different time, although this is likely since the Group 2 fabric is less carefully prepared than that of Group 1. The patterns include 'Clarendon-Salisbury' derivatives (Eames 1968, 13), with designs similar to those used in the Queen's Chamber at Clarendon in *c.*1250 (Eames 1968,

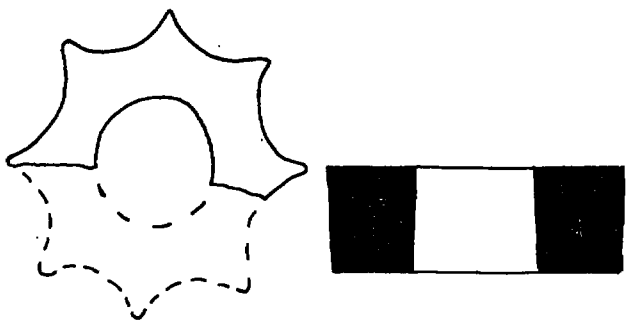

Fig. 1. Beaulieu Abbey, tile mosaic. Scale ½.

Pl. V). As they are less carefully cut than the Clarendon tiles, they are likely to be later in date, made at any time after the dispersal of the Clarendon-Salisbury school. In this case, they must have been added to the church at Beaulieu after it had been completed and hallowed in 1246, for it is Group 2 patterns which formed the floor of the nave as discovered by Brakspear, and which still survive partly in situ. All the inlaid patterns found in 1977 have been recorded previously at Beaulieu.

The difference in fabric between the three inlaid groups, 2, 3 and 4, may eventually prove to be significant, and help to establish a dating sequence for tile designs in Hampshire, but this cannot be pursued from such a small sample. The patterns include some in the Winchester College Group 1 (Norton 1974, 26–7), which the college appears to have acquired second-hand (*ibid.*, 39). Unfortunately the patterns in Groups 3 and 4 do not appear in the college series, so their dating is not furthered.

The nail holes on the surfaces of the plain tiles in Groups 5 and 6 can be compared to the Winchester College tiles. The Beaulieu holes are in diagonal lines, not in the corners as at Winchester, but were presumably similarly used in the trimming-off process (Norton 1974, 25, type A). At Winchester, it is argued that the plain tiles are from consignments imported from Flanders in 1397 (*ibid.*, 32–4). The Group 5 and 6 tiles at Beaulieu are the same size as those at Winchester—and larger than the inlaid Group 2 tiles—and are clearly comparable to those from Winchester. Their fabric is similar to that of the Group 3 inlaid tiles, which are also unkeyed. Unfortunately there is only one which can be measured, but its size also conforms to Groups 5 and 6. Dr. Williams states that it is not possible to be precise about likely origins, but a local source utilizing the Oligocene clays would be in keeping with the range of inclusions present. An origin in Flanders is not, however, geologically excluded. The possibility that inlaid as well as plain tiles were being imported to southern England at an earlier date than has previously been suggested (Knapp 1956; Ward-Perkins 1937) opens a line of enquiry which would repay further study.

REFERENCES

Proc.=Proc. Hants. Field Club Archaeol. Soc.

Atkinson, T D 1934 Architecture 1933, *Proc.* **12**, 311–2.

Eames, E S 1961 A Thirteenth-Century Tile Kiln Site at North Grange, Meaux, Beverley, Yorks., *Med. Arch.* **5**, 137–68.

Eames, E S 1968 *Medieval Tiles,* London, British Museum.

Green, P M and Green, A R 1949 Medieval tiles at Titchfield Abbey, Hants., *Proc.* **17**, 6–30.

Greenfield, B W 1892 Encaustic tiles of the Middle Ages, especially those found in the south of Hampshire, *Proc.* **2**, 141–66.

Hockey, F 1976 *Beaulieu, King John's Abbey,* Beaulieu.

Hope, W H St J and Brakspear, P 1906 The Cistercian Abbey of Beaulieu in the county of Southampton, *Archaeol. J.*, **12**, (2 S), 129–186.

Knapp, G E C 1956 Flemish Medieval Pavingtiles in Hampshire, *Proc.* **20**, 29–33.

Lambrick, G and Woods, H 1976 Excavations on the Second Site of the Dominican Priory, Oxford, *Oxoniensia* **41**, 168–231.

Norton, E C 1974 The Medieval Pavingtiles of Winchester College, *Proc.* **31**, 23–42.

Ward-Perkins, J B 1937 Late medieval Flemish inlaid tiles in England, *Antiq. J.* **17**, 442–4.

Author: D. A. Hinton, Department of Archaeology, University of Southampton.