# 166 SUFFOLK INSTITUTE OF ARCHÆOLOGY

The Icklingham pavement is likely to date to the first quarter of the 14th century, since it shows so many similarities to the Ely pavement and other tiles of this group.

## ACKNOWLEDGEMENTS

The writers are very grateful to Mrs. Elizabeth Eames and Dr. R. D. H. Gem for reading this paper in typescript and for commenting on it. They are especially indebted to Mr. John Hopkins and Mr. John Kenyon of the Society of Antiquaries of London library for considerable assistance, to Mrs. A. Klingelhöfer for undertaking the examination of the tiles from Icklingham and Denny Abbey, and to Mrs. E. Baker for allowing reference to the pavement at Old Warden.

### REPORT ON TILES AND BRICKS FROM DENNY ABBEY AND ICKLINGHAM

#### by A. Klingelhöfer

Because the tiles at Icklingham clearly belonged to the same group of tiles found at a number of other sites in the region it was thought desirable to carry out detailed analysis of a tile found loose in the churchyard and also to compare this with tiles from Denny Abbey, Cambridgeshire, on which one of the writers is preparing a report.

An examination of 3 glazed tiles and one brick from the Cambridgeshire-Suffolk region was carried out by thin section and heavy mineral analysis. Two tiles came from Denny Abbey, labelled Denny 1 and 2 respectively, one tile from Icklingham and the brick also from Denny. All 4 thin sections are relatively similar, though the two from Denny are more closely related. Several characteristics are common to the clay matrix of each sample; each is mottled in colour, fine grained with few mineral inclusions and with frequent pockets of clay which have not been broken down.

Denny 1 is pink in colour (Munsell 5 YR 7/4) with inclusions of quartz, some quartzite, red iron ore, and rarely microcline feldspar. The quartz grains are generally rounded with an average diameter of 0.2mm or angular with an average length of 0.3mm. Denny 2 varies widely in colour from very pale brown to light brown grey at the core (Munsell 10YR 8/3 to 10YR 6/2), however, the inclusions are the same as for Denny 1. Quartz grains are of two types fairly evenly distributed; rounded with an average diameter of 0.2mm and angular with an average length of 0.3mm. The Icklingham tile is a mottled pale yellow (Munsell 5 Y 7/3) with inclusions varying more in size than the Denny tiles. Quartz, some quartzite, red iron ore and decomposed iron ore are all present again with

PLATE XII



Mosaic pattern 1.

(copyright B. T. Batsford)

PLATE XIII



Mosaic pattern 2.

(:opyright B. T. Batsford)

#### MOSAIC TILE PAVEMENT, ICKLINGHAM

an average quartz grain diameter of 0.2mm and average length of 0.3mm. The brick is of a white fabric (Munsell 5 Y 8/2) and streaked with decomposed red iron ore. Inclusions of quartz, quartzite, and red iron ore occur again, though here the iron ore inclusions are very large. Rounded quartz grains average 0.2mm in diameter and angular grains average 0.3mm in length. The clay matrix of each sample examined was found to be optically isotropic giving another similarity between the tiles.

Heavy mineral analysis resulted in a small number of grains, consequently, a frequency count has not been used. The common mineral among the four pieces analyzed is zircon, with several variations of other minerals. Denny 1 contained zircons with an average length of 0.1mm of a rounded oblong shape, colourless and clear. Cloudy pinkish garnets, colourless kyanite, and deep red rutile occur occasionally, but with rounded edges as the zircons. The Denny 2 tile was similar except for the average length of zircon, which here is 0.2mm. The Icklingham tile showed a predominance of zircons, colourless and clear in a rounded oblong shape with an average length of 0.2mm. Rarely seen are tourmaline and anatase, both slightly brown, cloudy, and angular, red oblong rutile, and clear pale brown rounded squares of garnet. The brick sample contained only one primary heavy mineral, zircon, with the occasional garnet, rutile, and kyanite. All are of the same shape and colour as the Denny tiles with an average zircon length of 0.1mm.

All 4 samples appear to be related, that is, from the same area but not necessarily from the same deposit. The 2 Denny tiles are more similar to each other in quartz grain size, microcline feldspar, and heavy mineral inclusions. The Icklingham tile comes close to the same type, but does contain a few other heavy minerals, which may depend upon sampling. The brick is the least similar, but not enough to determine it as completely different from the Denny tiles.

According to the solid and drift charts of the region, both sites are on river gravel and alluvial valleys with deposits of brickearth clay. Nearby are large drifts of Gault, London and Boulder clay. The similarity in the geology of the two regions and the slight differences between the Denny and Icklingham tiles suggests that they may have been made near the find site in each case. Therefore, the use and availability of the same clay beds would account for the similarities.

167