

# THE PRODUCTION OF MEDIEVAL DECORATED FLOOR-TILES AT BOARSTALL, WITH A NOTE ON BOARSTALL'S LATE MEDIEVAL MAP

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*The Brill-Boarstall pottery industry is well-known as a supplier of pottery to Buckinghamshire, Oxfordshire, and further afield during the medieval period. Finds from Boarstall village, including those from an excavation in the grounds of Boarstall Tower, confirm preliminary evidence presented in an earlier article that decorated floor tiles as well as pottery were being made here. Tiles of the designs noted at Boarstall occur at many locations in Oxford and its region, and it is tentatively suggested that Boarstall may have been the supplier a proportion of these tiles. The industry here is the fourth confirmed decorated-tile production site to have been identified in Buckinghamshire.*

*It is of particular interest that Boarstall is depicted in some detail on a well-known mid fifteenth-century map. The extensive ceramic finds from the village, together with other evidence, re-affirm the accuracy of this map.*

## INTRODUCTION TO BOARSTALL VILLAGE AND ITS MEDIEVAL MAP

Although this article is about Boarstall's medieval tile industry, recent discoveries in the field have an impact on the interpretation of a well-known map showing late medieval Boarstall and this is discussed first.

During the medieval period Boarstall, like Brill, was at the heart of a number of administrative functions relating to Bernwood Forest (Fig. 1). It was the home of the holder of the title 'Forester of Bernwood', a forest-serjeantry, and came with a small manor (Salter 1930, 67–8; Harvey 1997). Boarstall Tower, a striking medieval survival and now a Grade 1 listed building owned by the National Trust, has a dendrochronological date of 1312 which matches the date of a licence to crenellate (Marshall 2010, 8). South of the tower and its grounds to the west of the present village road are earthworks indicating former house plots which are scheduled as an ancient monument (Fig. 2).

In the course of the Civil War, between 1643 and 1646, Boarstall suffered considerable damage and the village changed hands several times. Its principal house was besieged on a number of occasions and it was probably during this period that the house was surrounded by a deep moat accom-

panied by a substantial rampart (Porter 1984, 87) reflected in the three-sided moat that survives today. Lesser homes nearby were taken down at the time to improve the line of fire, etc. and in 1644 the king gave permission for the village church itself to be demolished and for the bells to 'be delivered to Oxford for ordinance'. Subsequently Lady Penelope Dynham 'saw to the re-building of the church' (Lipscomb 1847, 77; Porter 1984, 90) and an intact church is shown on a print of 1695 (Marshall 2010). However, Lysons (1813, 518) reported that the church '... which was *nearly* demolished ... was *repaired* by Lady Denham', or in Sheahan's words (1863, 336) 'rebuilt on its original foundations'. The Archaeological Institute (1899, 149) noted it to be 'modern with the old materials used' and the Royal Commission (1912, 57) also concurs that the church was rebuilt in 1818 'on the site of the original church'. These observations seem to confirm that the present church occupies the same site as the original church, which is relevant to the interpretation of a well-known fifteenth-century coloured map of the village discussed below. The Royal Commission observes that the church contains at least one item of pre-Civil War date, presumably derived from the earlier church, and that 'in the churchyard is the base of a fifteenth-century cross.' Lipscomb



FIGURE 1 Part of Speed's 1666 map of Buckinghamshire showing Boarstall, Brill, Bernwood and Notley [Abbey] and the border with Oxfordshire. Courtesy Centre for Buckinghamshire Studies

(Vol. I, 94) notes: 'In the church-yard is part of a stone cross, mentioned by Delafield, as in its time standing almost entire: but another cross, "then lying near a pond by the highway at some distance" is no longer to be found'. The second cross, is also relevant to the map's interpretation.

Both village and tower are depicted on the map of c.1444–6 noted above (BRS 1964; Hoyle 1997), which is said to be among the earliest detailed village maps in the UK (Harvey 1986, 211–219). By general agreement, south is at the top of the map and, accepting this view, Boarstall Tower is shown on the west side of a straight main street with the church on its eastern side. There are houses on the east side of the street which terminates in a market cross at the south end where there are further houses at a T-junction. Unconventionally, and perhaps controversially, to facilitate comparison with modern mapping, the early map is here published upside down (Fig. 3).

The map's accuracy has been challenged in the past. Salter (1930, 75) stated: 'It is impossible to make the plan harmonise with the geography of

the village, for it marks a road running between the church and the manor house, whereas they are adjacent, as is usually the case, and there could never have been a road between them.' Subsequently Harvey (1986) wrote a very full description of the map and the background to its production. He rejected Salter's view of inaccuracy and cited the 1695 bird-eye view of Boarstall House (noted above) which depicts an 'enclosed walk and a boundary wall, which still survives, corresponding to the likely line of the road'. He argues that the lord of the manor (prior to the 1695 view) diverted the road to its present position east of the church. Such a diversion was common. The present writer supports Harvey's view and notes below a few additional factors which strengthen his position.

The comment by Salter might have been influenced not only by the proximity argument, but by a perception that from a modern viewpoint there would not have been room for a road between the house and church. However, it is probable that the moat's present size and shape was determined only during the Civil War and was subsequently



FIGURE 2 View of Boarstall looking west. Upper centre: scheduled field with ridge-and furrow and homestead closes on the east sited adjacent to the course (part visible) of pre-diversion road. Boarstall Tower centre right with church to south-east. Uninvestigated moated site beneath trees bottom right and golf-course earthworks upper left. (*Michael Farley, November 1997*)

preserved during development of the gardens (although interestingly, it is not evident on the 1695 view). An earlier moat encompassing the Tower and its adjoining buildings might have been smaller allowing more room for a road (or at least a track) to pass between the house and church as depicted on the map (it may be noted that there is also another moat in the vicinity, see below). However, Harvey's observations on the road's course apart, there is other evidence that the early course of the road was in the position shown on the map separating the two buildings.

A later map of 1697 (CBS D/AF 266) shows the northern part of the road's presumed course but terminating at the north-east corner of the existing moat, whose construction, accepting that it is of Civil War date, would have interfered with most of its continuing course near the house. Harvey correctly observed that the course of the old road was followed by features recorded on the 1695

view, but he does not note an impressive gated entrance to the Tower grounds shown on the same view at the southern end of its proposed course where it joins the 'new' road. He was probably also unaware of the earthworks within the adjacent scheduled area south of the moat, which include a hollow-way meeting the same gate and marking the road's former course, with adjacent enclosures (Fig. 2). The 1697 map also shows a triangle of land where the cross depicted on the fifteenth-century map might be presumed to have stood, and perhaps where Delafield (above) had noted the lost second cross as 'by the highway'. The distribution of medieval pottery finds etc., adds further evidence for occupation in the same area as the buildings depicted on the map.

Finally, a little distance south-west of the T-junction and adjoining the fields 'Frithfild', 'Arnegrov Fild' and 'Costowod', a large unnamed building with a short length of north-south track



FIGURE 3 Boarstall in 1444–1446. The image is intentionally ‘upside down’ with north at the top for comparison with modern maps. Reproduced by kind permission of Sir Henry Aubrey Fletcher and the Centre for Buckinghamshire Studies. [Note the colours have been slightly strengthened to facilitate interpretation]

adjacent is shown. This is not identified by Harvey, but it seems very probable that this building's location is marked today by 'Honeyburge', which modern maps show connected to the southern part of Boarstall village by a road (leading south on Fig. 4). The road's earlier former presence is probably indicated on the medieval map by a curving hedgerow that leads north from the building.

The only feature which might be expected to appear on the medieval map but is not shown, is a second moat which survives a little east-south-east of the church (seen on Figs 3 & 4 and on a map of 1817: CBS D/AF/268R), but if this was a home-  
stead moat it might have preceded occupation of the Boarstall Tower site and have had no relevance by the fifteenth century. To the writer there now seems little doubt that the layout shown on this late-medieval map is remarkably accurate.

#### THE DECORATED TILE FINDS FROM BOARSTALL IN CONTEXT

The long-lived pottery industry at the nearby larger village of Brill is well-known, and over the past few decades an increasing number of production-sites have been identified here (summarised in Farley & Hurman 2015). The potters' products were distributed from the medieval period onwards over a wide area of Buckinghamshire, to Oxford city, eastern Oxfordshire and beyond. In 1982 five locations where pottery was also being produced at Boarstall in the medieval period were first noted (Farley 1982). The products are very similar to those of the Brill industry and both are now usually referred to as of the 'Brill-Boarstall' industry. The 1982 publication noted that the potters were also making decorated floor-tiles at one site (HER 2431), a product not so far recorded at Brill. The current article describes investigations in the village carried out subsequent to the 1982 report, dealing specifically with locations which have provided additional evidence for floor-tile making.

Four decorated tile-production areas have now been identified in the village, principally by fieldwalking, and largely overlapping with the pottery production areas previously identified. In the account which follows Buckinghamshire County Council's Historic Environment Record Numbers (HERs) have been used to record their location, namely 2431, 5211, 5233 and 6325 (Fig. 4). All the material from fieldwalking is in Bucking-

hamshire County Museum; the fieldwalk-record maps are with the county's Historic Environment Record.

Apart from tiles collected during fieldwalking, a few others have also come to light on other occasions in the village. In particular, parts of seven were discovered during an excavation in 2008 on the site of the house that formerly accompanied Boarstall Tower, or within its precincts (Marshall 2010), and four are illustrated here. (For the record, finds from the excavation also included ten plain but slipped/glazed tiles, three plain floor tiles, and thirteen pieces of ridge tile). It seems likely that these would have come from the buildings to which the Tower was a gatehouse (see plan of tower in Lipscomb I, 88). Another possibility is that they came from the adjacent chapel whose later history has been noted above. The chapel, whose foundation date is uncertain, was originally a chapel of Oakley, becoming parochial in 1418 (Lipscomb I, 89). In its early history the chapel might once have had a tiled floor, but by Lipscomb's time it was '... paved with fine white stone'. Even if it did once have a tiled floor since the chapel remains on its original site, it fairly seems unlikely that such tiles would have been dispersed in the adjacent manor grounds. Whether from here or from the Tower buildings there is little doubt that all but one of the tiles described here were made in the village; indeed, the most complete of those recorded from the excavation, although just usable, is almost a waster in itself.

The area scheduled as an ancient monument, west of the village road and south of the Tower, noted above (HER 0430) was not available for fieldwalking as it was under grass. As noted previously, it includes part of a hollow-way that marks the former course of the old north-south road. In late or post-medieval times, a short distance east of this hollow-way and of the present diverted village road, were arable fields laid out over the sites of the enclosures. These would have accompanied the buildings indicated on the medieval map that fronted the old road. Of the four fieldwalked sites, one is at the northern end of the village, one opposite the scheduled area and two at the southern end of the village. The first two were fieldwalked in the 1980s. Subsequently, construction of a golf course to the south (where unfortunately a requested archaeological condition was not attached to a planning consent) resulted in a rapid recovery of

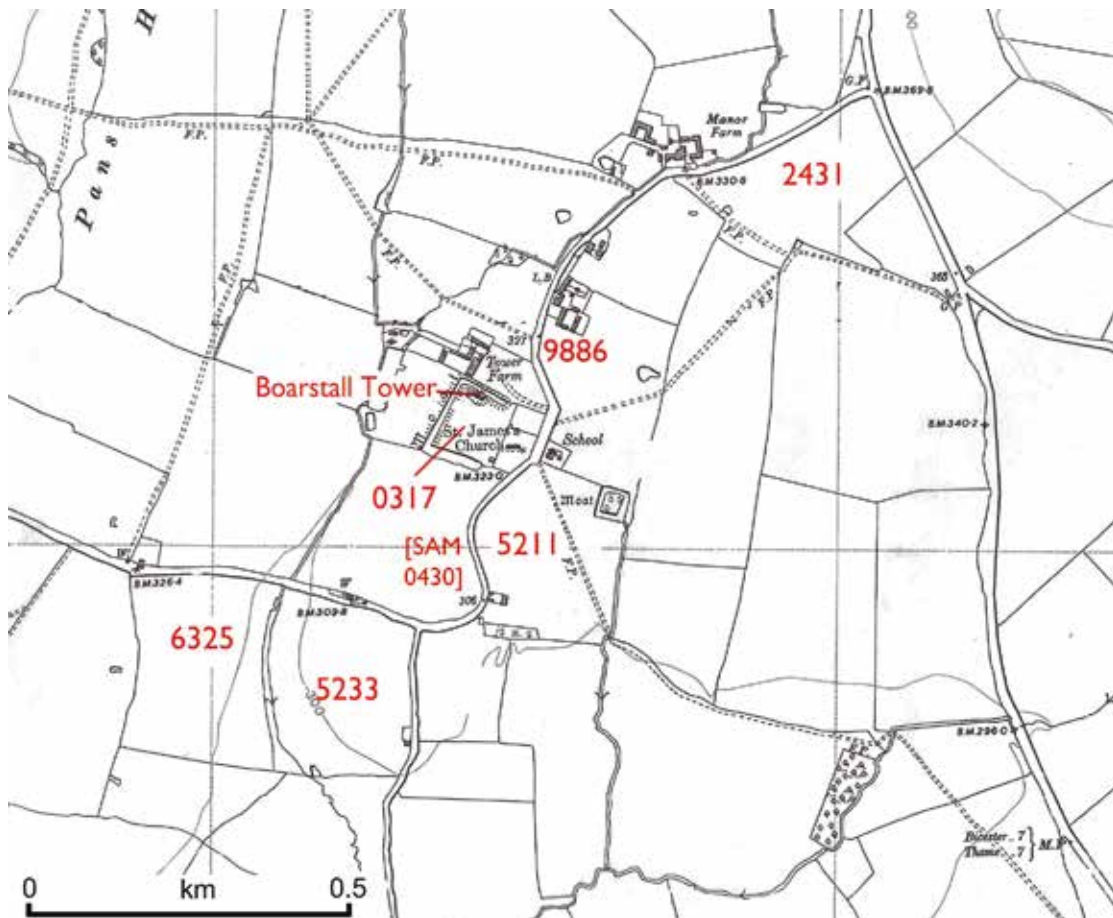


FIGURE 4 Map showing by HER number the location of floor-tile tile finds (except 9886, the site of trial-trenching that located a possible kiln structure). Based on Ordnance Survey 6" 1950 revision

further finds from two other areas.

Figure 5 lists the number of pieces of tile of different character retrieved from each of the four locations. All of the sites were also producing functional pottery (as indicated by wasters) and there are indications of further pottery producing areas in the village not shown here. The distribution of medieval ceramic confirms that medieval occupation extended east of the modern road and was also present along the east-west road at the southern end of the village (as indicated on the 1444–6 map). The whole seems to indicate a rural settlement which for a period at least during the medieval period was densely occupied by potters. Unsurprisingly, there is no indication of their activities on the map, although it is possible that

the industry might have ceased by the mid fifteenth century.

## THE DECORATED FLOOR TILES

### (a) Introduction

Decorated floor tiles have long been a source of interest to art historians and archaeologists on account of their surface images which can provide rich sources of information on medieval society. Tiles that have been laid at their final destination, commonly ecclesiastical establishments but also important secular buildings, often have worn surfaces but their designs are normally relatively easy to determine since more than one example of a particular tile is frequently present. The identi-

Location (HER ref)	Decorated Floor	Glazed / Slipped Floor	Plain Floor	Plain Roof	Glazed Roof	Plain Ridge	Glazed Ridge
<b>2431</b>	3	3	6	35	3	1	1
<b>5211</b>	29	30	18	100	69	33	57
<b>5233</b>	3	1	0	0	0	0	0
<b>6325</b>	18	16	10	31	17	3	10
<b>Totals</b>	<b>53</b>	<b>50</b>	<b>34</b>	<b>166</b>	<b>86</b>	<b>37</b>	<b>68</b>

FIGURE 5 Table of tile types by site. Decorated floor; undecorated glazed/slipped floor grouped together; plain floor (may be those whose finish is incomplete); plain roof and glazed roof tiles – the former less systematically collected than the latter; ridge tiles – glaze on ridge tiles was not regularly applied so some ‘plain’ tiles may be sections of those glazed elsewhere

fication of designs at unexcavated production sites where ‘waster’ tiles, or parts of them are present on the surface only can be more complicated as they have been weathered, fragmented by ploughing, and are often over-fired, as is to be expected. Misfired tiles may also have been re-used during the construction and operation of the kilns themselves.

In terms of categorising the designs on the Boarstall tiles, Buckinghamshire is fortunate in that Christopher Hohler in the 1930s carried out a recording exercise in many churches in the county and beyond and was actively involved in the excavations at Notley Abbey, where a tile floor was examined (Hohler 1941 and 1942). Many of the tiles that Hohler recorded *in situ* in churches are now concealed or have been removed. It is Hohler’s design numbers that have been used in this article. Hohler also made extensive use of earlier publications, in particular Lloyd Haberly’s book (1937), which he describes as ‘... indispensable and infuriating...’ and for which he provides a long list of corrections and additions in a footnote. Since Hohler and Haberly’s day there have been many other regional tile publications and a magisterial catalogue of the British Museum’s collection by Elizabeth Eames (1988). An online source of watercolour images is also available at <http://tileweb.ashmoleanmuseum>.

The principal groupings Hohler identified were of tiles made at Penn, at Little Brickhill, and a less-geographically specific ‘Late Wessex’ group (his W1-33). The latter he noted to be:

‘...about 5½ inches square (sometimes as much as 6½ inches square), ¾ inches thick [19mm], with

a number of small pits on the back, and have a dark, usually brittle and overbaked fabric.’

The type is principally distinguished from those found in the Wessex region by the presence of stabbing which is uncommon in Wessex itself (Eames 1980, 203). Eames term ‘stabbed Wessex’ is utilised here. It is to this group that all of the identifiable Boarstall tiles (apart from one tile that is recorded by Haberly but not by Hohler) belong: namely Hohler’s W7, 8, 19, 24, 28, 31, and 38/39. The only complete decorated tile from Boarstall is from the excavation at the Tower, and measures 156 x 156mm. This fits with the customary normal dimensions of Wessex tiles (around 5½ inches) recorded by Hohler and in other publications. Although many fragmentary pieces cannot be allocated a Hohler design, small but distinct features do permit the allocation of others. As noted above, Hohler recorded the thickness of Wessex tiles to be about ¾” (19mm). Although several of the Boarstall tiles have split horizontally it has been possible to measure the thickness of many; the results are shown in Figure 6. It will be seen that the graph depicts a normal curve indicating a preferred thickness of 20-21mm which matches almost precisely Hohler’s measurement (19mm).

Hohler described the design on Wessex tiles as being ‘quite deeply impressed’. Depth is obviously determined principally by the relief height of the image on the wooden stamp used to impress the design, but may also depend on the amount of pressure exerted on the stamp and the firmness of the clay which can also slightly alter the outline of the image. Although it has rarely been possible to determine inlay depth on Boarstall

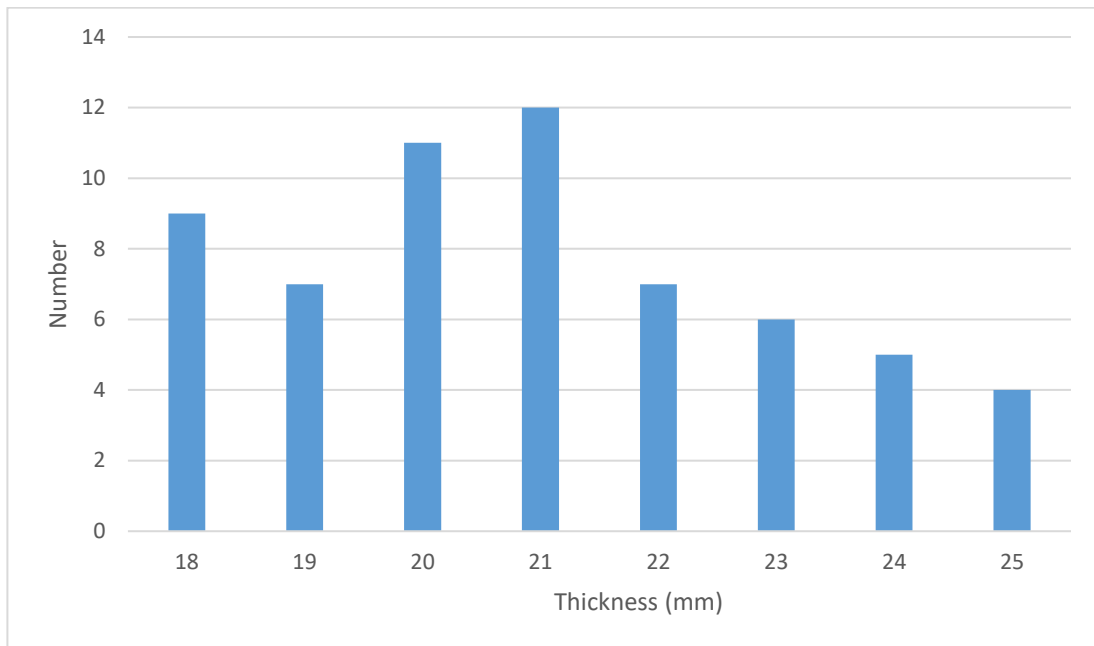


FIGURE 6 Thickness of decorated floor tiles.

tiles, available measurements suggest about 3mm, although many appear to be shallower. Stabbing holes into the underside of tiles reduce the risk of their exploding during firing, and the round stab marks characteristic of Wessex tiles have been noted on many from Boarstall, but owing to their fragmentary nature their absence on a surviving piece does not mean that they were not present elsewhere on the tile.

Apart from the single whole tile from Boarstall Tower noted above, 137 floor tile fragments of all kinds have been recovered from the village. Of these 53 were (or certainly had been) decorated. A further 50 were either glazed, or slipped and glazed, and 34 were unglazed. All of the fragments where an element of design can be identified are illustrated (Figs 7-12). These are followed by a group where the surviving design is insufficient to enable identification with some examples of wasters, and glazed but otherwise undecorated pieces (Figs 13-17).

### The Illustrated Designs

The descriptions below are by design number in numeric sequence: 'W' indicates a Hohler 'Wessex' type design number and 'Hab' the

Haberly reference number. In order to save space, in a few instances the illustrations do not follow the same order as the design numbers.

The four-figure Historic Environment Record number (HER) gives the location of the find in the village of each piece. Where relevant a fieldwalk grid reference number follows. Plans of these are in the HER. 'BT' indicates a piece found during the excavations at Boarstall Tower or in the grounds. In view of the difficulty of producing drawings of the often unclear designs, photographs have been used. In a very few cases the colour contrast of an image has been artificially strengthened, notably with W8-1 where the design is scarcely visible due to over-firing. A small reference image of a complete example of each design group is included. Individual descriptions of each piece are generally not provided with the exception of the complete tile (W8-1) or where a particular feature is felt worth noting.

Finally, the occurrence of the design elsewhere is recorded. Bracketed initials give the source of this information; H = Hohler, Hab = Haberly, E = Eames (Eames 1980). Publication references are given for other sources. The design descriptions of tiles below are principally those used by Hohler or Haberly.



**W7:** Double-headed eagle in a frame, with quatrefoils in the outer angles. The design on the tile Boarstall tile is a slight variant from that illustrated by Hohler in that the quatrefoil linked to the frame by a line in Hohler's design is in a different position. (Fig. 7)

1. 5211: I 13A.

*Bucks:* Chetwode (H; fragment seen in church in 2016)

*Oxon:* Osney Abbey (H); Christchurch [St Frideswide's Priory], Oxford (H); Woodperry (H)

**W8:** Eagle looking right between two cinquefoils in a broken square frame (Fig. 8)

1. BT: 5019.1. A complete tile (two joining pieces), from the 2008 National Trust excavation. Tile image considerably enhanced in order to make the design visible. The white slip is very shallow, scarcely impressed. Dark green-brown glaze, slightly tapered sides, thirteen random circular stab-marks about 6mm dia. on the underside. No indication of mortar on the underside but possibly some within the stabbed recesses. Slightly over-fired. Stuck to its surface are traces of the edges of two or three other tiles in three rows, indicating a problem within the kiln during firing. Although probably laid in a floor here, under normal circumstances it would be regarded as a 'second' or waster. 148 x 148 x 19mm.

2. BT: 5002.4. Pre-cut for later division. 3. 5211: I 13A; 4. 6325: J 15; 5. 5211: I 17A.

*Bucks:* Hanslope (H)

*Oxon:* Eynsham Abbey, Oxford (H); Rewley Abbey, Oxford (Hab); St Peter's in the East, Oxford (Emden 1969). The author noted seven pieces of this design amongst material stored in the former crypt in 2008; Goring Priory, Oxon (H); St Martin's Church, Carfax, Oxford (H); Greyfriars, Oxford (Mellor 1989); Pyrton (H); St Andrew's, Headington (Emden 1969); Godstow (H: Howard-Drake 1970)

*Berks:* Streatley (H)

*Other:* Hailes Abbey, Gloucs (Eames 1980; Sassoon 2008)

**W19:** Fret, attached to double quadrants enclosing dots at the angles. (Fig. 7)

1. BT: in Tower collection. 2. 5211: I 13A

*Bucks:* Ludgershall (H); Notley Abbey (H)

*Oxon:* Godstow Nunnery (H); Christchurch [St Frideswide's Priory], Oxford (H)

St Peter's in the East, Oxford (Emden 1969); Greyfriars, Oxford (Mellor 1989)

*Northants:* Canons' Ashby (H).

**W24:** Gryphon facing left cut by a quadrant nebuly (Fig. 9)

1. 5211: I 13A

*Bucks:* Notley Abbey (H)

*Oxon:* Godstow Nunnery (H); Littlemore Church (H); Osney Abbey (H); Christchurch [St Frideswide's Priory] Oxford (Green 1999); Greyfriars, Oxford (Mellor 1989)

**W28:** Four-tile pattern; a cross formed of four fleurs-de-lis in a quatrefoil, with trefoil ornament in the outer angles (Fig. 10)

1. BT: watching brief (Oxford Archaeological Unit 1999).

*Bucks:* Hanslope (H); Notley (H); Bradwell Priory (Eames 1974)

*Oxon:* Brightwell Baldwin (H); Dorchester Abbey (H); Eynsham Abbey (H: Eames 1980); Godstow Nunnery (H); Goring Priory (H); North Moreton (H); Osney Abbey (H); Christchurch [Frideswide's Priory], Oxford (H); Woodperry (H)

*Northants:* Canons' Ashby (Whitcomb 1956); Harrington Church (Whitcomb 1956).

*Other:* Leicester Abbey (Whitcomb 1956).

**W31:** A four-tile design of formal foliage in a quatrefoil, with foliage and fleurs-de-lis cut by a quadrant in the outer angles. (Fig. 9)

1. 5211: K 17

*Bucks:* Notley Abbey (H)

*Oxon:* Broughton Castle (H), Dorchester Abbey (H), Osney Abbey (H), Christchurch [St Frideswide's Priory], Oxford (H), St Peter's in the East,



1



W7



1



2



W19

FIGURE 7 Boarstall tiles W7 and W19 (2/3 scale)

Oxford (Emden 1969).

*Others:* St Peter's Abbey, Gloucs. (H); Evesham Abbey, Worcs, (H); Worcester Cathedral (H).

**W38/W39:** Four tile pattern of a floreat cross

[the form of which requires two design numbers], enclosed in a quatrefoil surrounded by a circle powdered with pellets; two concentric quadrants and an annulet in the outer angles. Hohler's W38 and W39 are very similar and it has not been possible to



FIGURE 8 Boarstall tiles W8 (2/3 scale)



W24



W31



FIGURE 9 Boarstall tiles W24 and W31 (2/3 scale)

separate all of them here among fragmentary pieces so the list of locations below includes both. This is unfortunate as the W38 designs seem generally confined to Oxfordshire and Buckinghamshire, whereas W39 has a wider distribution. (Figs 11-12)

1. BT: 2002.3. Shallowly impressed; tapering worn surface with trace of glaze, orangy slip on red body; rich brown glaze on sides and underside, also mortar on these faces; two circular stab holes under; 2. 2697: County Museum; 3. 2431: prev. illus. (Farley 1982); 4. 6325: M6; 5. 5211: I 13A; 6. 5211: I 13A; 7. 5211: K16

*Bucks:* Chetwode Priory (H and fragment in church 2016); Notley Abbey (H); Hanslope (H); Bradwell Priory (Eames 1974)

*Oxon:* The following are all Hohler records

unless marked otherwise:

Bloxham; Brightwell Baldwin; Broughton Castle; Dorchester Abbey; Eynsham Abbey (both H and Eames 1980); Goring Priory; North Moreton; Northmoor; Christchurch [St Frideswide's Priory] Oxford (also Green 1988); St Martin, Oxford; Beaumont Palace, Oxford; Hertfordshire College site, Oxford, Pyrton, Rewley Abbey, Woodperry; Brightwell Baldwin: Great Haseley: St Peter's in the East (Emden 1969); Godstow Nunnery (Howard-Drake 1970); Greyfriars, Oxford (Mellor 1989) and (<http://oxfordarchaeology.com/community/westgate-excavations>). Accessed December 2016)

*Northants:* Catesby Priory (H and Swann 1952); Greyfriars, Northampton (Eames 1978 and Swann 1952); Harrington Church (H); Canon's Ashby (Swann 1952)

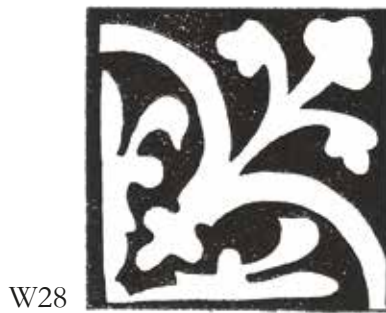
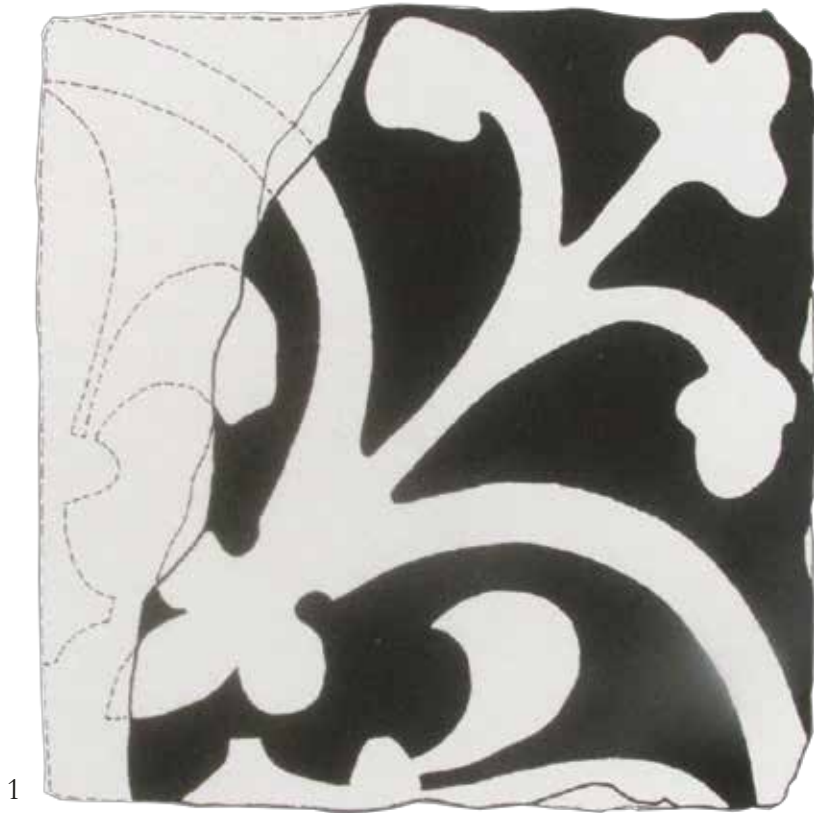


FIGURE 10 Boarstall tile W28 (upper image), from Marshall 2010 (2/3 scale)

*Wilts:* Amesbury; Great Bedwyn; East Grafton; Stanley Abbey (all H)

*Other:* St Peter's Abbey, Gloucs (H); Leicester Abbey (Whitcomb 1956); Keynsham Abbey, Somerset (Eames 1980); Evesham Abbey, Worcs (H)

**Haberly CV1:** Foliage, four large elliptoid leaves with smaller leaves at the angles between; open dots at the junction of each (Fig. 13). The design of this tile from Boarstall Tower is quite unlike that of 'Wessex' tiles and it was probably 'printed' not stamped, so it is unlikely that it was produced here.



FIGURE 11 Boarstall tiles W38/39, part 1 (2/3 scale)

1. BT: 5002.1 Worn surface, trace of clear glaze, no stab marks, tapering, crisp outline of design, red fabric, grey core, fine sandy, less than 0.05mm, occ. white ?grog inclusions, th. 18 mm.

*Bucks:* Notley Abbey (Hab); Long Crendon (Hab); Chilton (Hab).

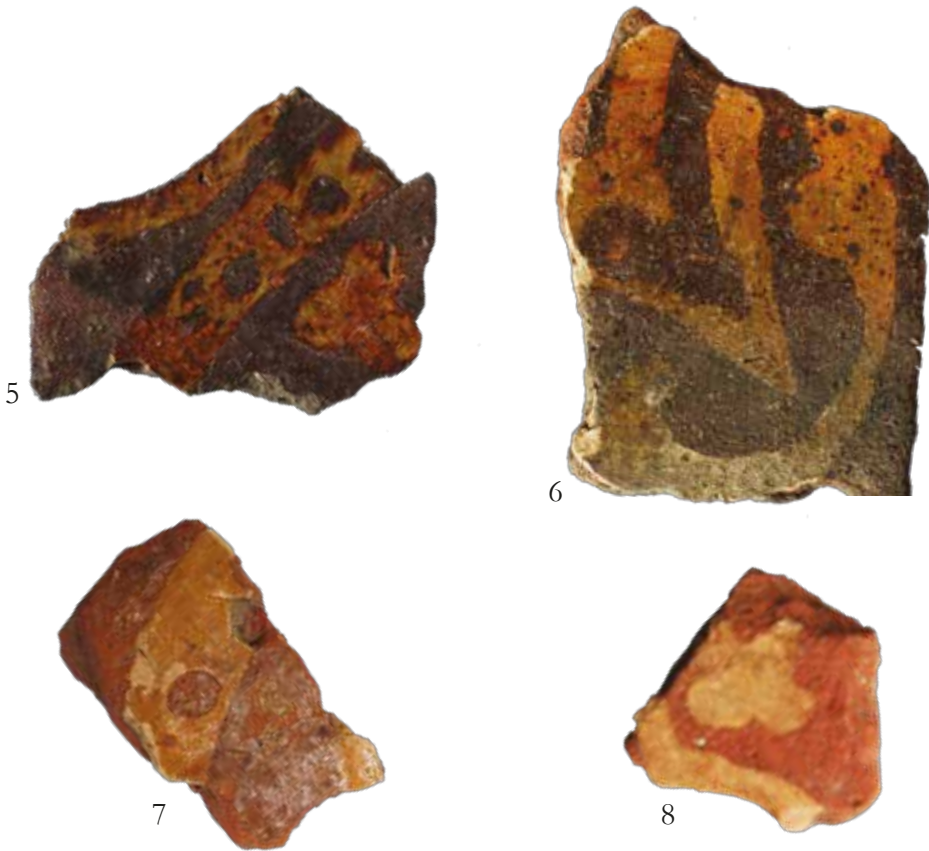
*Oxon:* Christchurch [St Frideswide's] Oxford (Hab); Marston (Hab); Dominican Priory, Oxford (Lambrick 1985, tile 30, incomplete but 'printed' and seems closely related).

**Decorated tile fragments of uncertain design, other wasters and divided tiles (Figs 13-17)**

Almost all of the tile fragments with traces of an image are included here, apart from two pieces noted but not illustrated in the writer's report on the tiles from the Boarstall Tower excavation

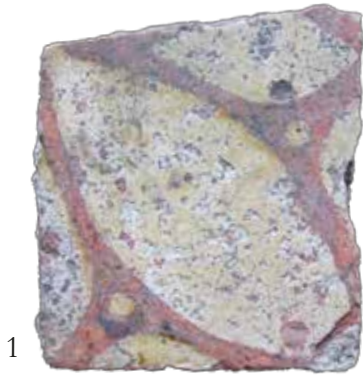
(3002.1 and 3002.2). Both of these had traces of a single line border as Hohler W8, above.

1. 6325: N 9; 2. 6325: P 9; 3. 5211: 5211: 13A; 4. 5211: M 11. Fired but lacking slip inlay; 5. 5211: I 13A Ceramic adhering. 6. 2697; 7. 5211: J 17C; 8. 5211: I 16. Clear circle in left image; 9. 6325: I 14; 10. 5211: K 14; 11. 5211: L 12; 12. 6325: K 14; 13. 6325: M 2; 14. 6325: N 2; 15. 2339: County Museum Acc 149.76; 16. 5211: I 13A. A border line on the upper central image may indicate that this is a Hohler W8; 17. 6325: K 13 Part of a vessel adhering; 18. 6325: M 6; 19. 6325; Q 2; 20. 2431: Part of a tile adhering, prev. pub. (Farley 1982); 21. 0430 Pre-cut unto 1/8ths; 22. 5211: L 13.



W38/39

FIGURE 12 Boarstall tiles W38/39, part 2 (2/3 scale)



Hab CVI



FIGURE 13 Tile of Haberly CVI design top (probably not made at Boarstall) and fragmentary and waster tiles (part 1) below (2/3 scale)





FIGURE 14 Fragmentary and waster tiles (part 2) (2/3 scale)

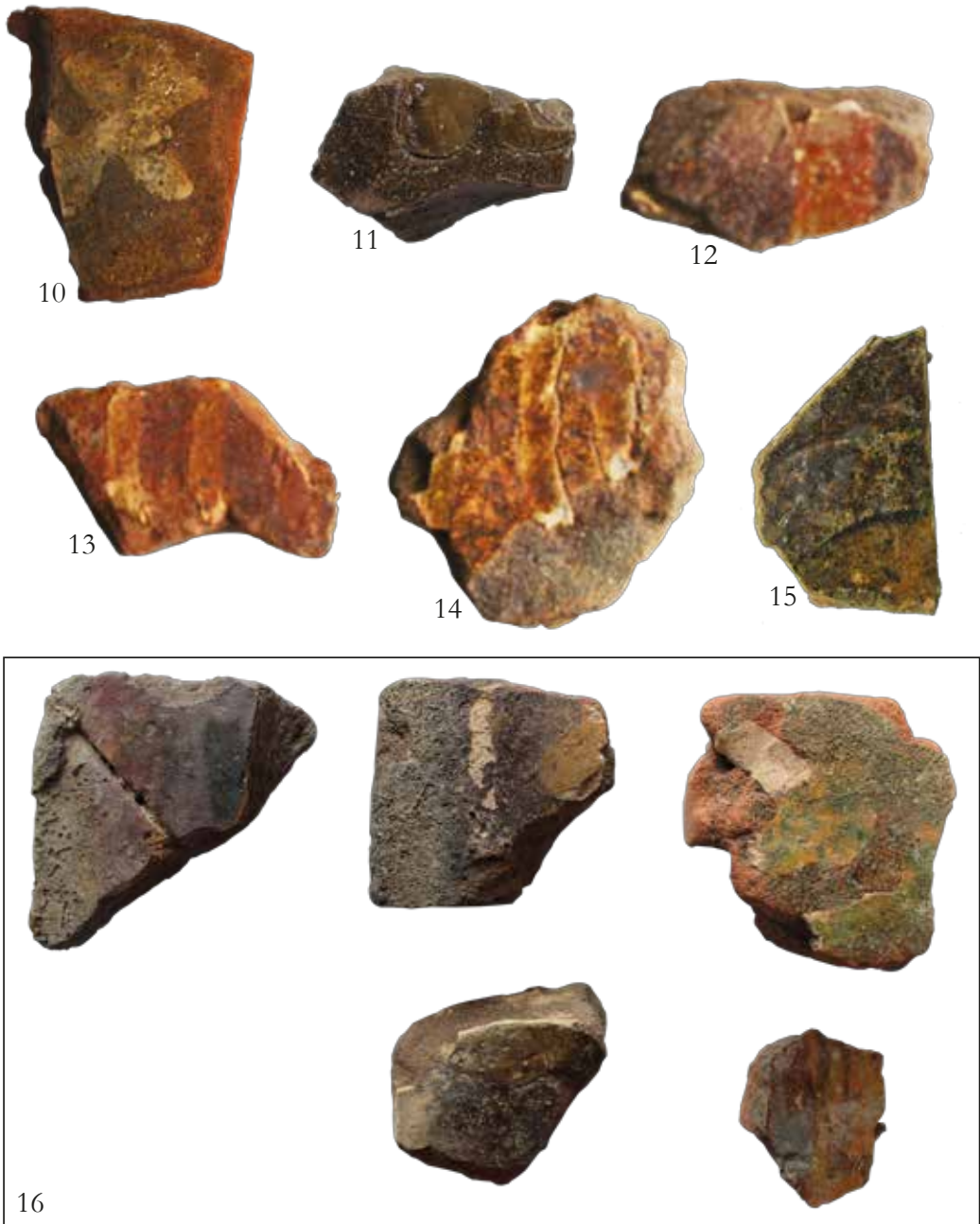


FIGURE 15 Fragmentary and waster tiles (part 3) (2/3 scale)



FIGURE 16 Fragmentary and waster tiles (part 4) (2/3 scale)



FIGURE 17 Divided glazed and slipped tiles (2/3 scale)

## OTHER TYPES OF TILE MADE IN THE VILLAGE

As at Boarstall, it was common for locations that made decorated floor tiles to produce also many other forms of tile, for example at Clarendon Palace (Eames 1988) and Danbury (Drury *et al* 1975). Boarstall's non-decorated products are not discussed in detail here as scarcely any approached completeness, but a few descriptive notes are given below. Figure 5 shows the number of pieces of tile of all kinds recovered, by site and category. Floor tiles which are slipped and or glazed floor tiles but otherwise undecorated have been grouped together here in view of the difficulty in determining the maker's intention among waste material.

### **Undecorated Floor Tiles with Glaze, Slip or Both** (Fig. 16, 20; Fig. 17, 21–2)

These all had bevelled edges to facilitate laying in mortar. Some were stabbed but not all. They were clearly cheaper to produce than those with an impressed design. Some were simply glazed, others were covered in a light-coloured slip (presumably the same clay as used for the inlay) and then glazed. A few slipped but unglazed fragments must have been rejects as slip on unglazed tiles would have no resistance to wear on a floor. A few of these, like a few decorated tiles, had pre-firing cut lines to facilitate breaking (Fig. 17). Eames (1978) notes that associated with Wessex tiles from Greyfriars in Northampton were a group of plain tiles with the same body as they had and also stabbed on the underside, but cut into rectangular halves, triangular quarters and eighths.

From the Boarstall Tower excavation (Marshall 20110: ref 3002.4) came one tile with a white slip, green glaze almost a waster, where the glaze had run down one side and on the other a small piece of tile adhering. Also from the excavations, pieces of seven floor tiles with dark green/black glaze but unslipped and unstabbed, four of which were between 34–44mm thick. The latter seem untypical of tiles observed in the production areas and may be of a later date or made elsewhere.

### **Plain Floor Tiles**

Five pieces of plain floor tile came from the Boarstall Tower excavation. One was a 'standard' Boarstall product but the four others were between

34–36mm thick, not certainly tapered, and resembling floor bricks rather than tiles. A few were unstabbed. A small proportion of these tiles may be unfinished tiles that might later have been glazed/slipped. Not many examples came from the production sites.

### **Plain Roof Tile**

Although it is probable that most observed pieces of glazed roof tile will have been picked up during fieldwalking in the village, the same cannot be said for small pieces of unglazed roof tile so these will be under-represented in Fig. 5 which is likely to correspondingly distort the collection of part-glazed roof tiles. There does not seem to be a great deal of consistency of thickness of roof tiles which vary between from 12–19mm, although about 16mm seems commonest. Pegholes (round) were only occasionally observed. No complete tiles were found.

### **Glazed Roof Tiles**

See observation above. It is clear that only parts of these tiles were glazed, firing to a dark green to almost black colour indicating overfiring. One was recorded with glaze over a break. Although it has been noted that roof tiles often formed part of the main structure of a tile kiln, none of the recovered tiles were fused together although one, perhaps a spacer within a kiln, had a waster stuck to its surface.

### **Plain Ridge Tiles**

It was difficult to distinguish the lower parts of such tiles from ordinary flat roof tiles (see above) but the impression was gained that they tended to be thicker than roof tiles. The absence of glaze need not indicate absence elsewhere on the tile.

### **Glazed Ridge Tiles**

Hurman (2010, fig. 43) noted three pieces of glazed, crested ridge-tile with side slashes beneath a cockscomb-type crest from the Boarstall Tower excavation. These can be paralleled among the fieldwalked material from HER 521 where eleven ridge tiles with similar crests have been noted. One piece from the same location had a trimmed flat top. Glaze on these pieces is thin and fairly erratically applied. Mellor (1989) noted of glazed roof tiles of fabric IIIa, from Phase IIa (the second half of the thirteenth century), from the Greyfriars,

Oxford, that they ‘may represent ridge-tiles made in the vicinity of Brill, Bucks’.

### ‘Bricks’

About a dozen pieces of ceramic often in poorly mixed clay and best described as ‘brick’ were recorded. Normally only one face survived but where thickness was determined it ranged from 30–54mm. These are likely to have been used in kiln structure and some may have been roughly formed for a specific function within kilns.

## MAKING AND DISTRIBUTING THE BOARSTALL DECORATED TILES

### Manufacture

The design of kilns for producing tiles changed little over several hundred years. One of the best known is that at Clarendon, Wiltshire, which had twin-arched double flues (Eames 1988, and extensive discussion of kilns in Eames 1989), but the same design has been recorded at many other locations, for example Danbury in Essex (Drury 1975), Lyveden, Northants (Steane & Bryant 1975, 33–43, 95), Chertsey, Surrey (Gardner & Eames 1954), and in Buckinghamshire at Little Brickhill (Mynard 1975), Ley Hill (Farley & Lawson 1990), Brill (Yeoman 1988), Penn (Zeevat 2009) and Shenley (Edmondson *et al* 1989). All double-flue kilns seem to have produced roof tile for which there was always considerable demand, but others also produced floor tiles and some pottery. That said, numerous kilns of quite different form which were designed specifically for pottery production are also well-known, so both types were probably present at Boarstall.

Apart from investigative work within the Tower grounds, the only below-surface investigation recorded in the village has been trial-trenching near Village Farm (Millbank 2008: HER 9886). This exposed two short alignments, one of small bricks, the other of roof tiles, suggesting the presence of one or more kilns here, although their character is unclear. Associated pottery was dated to the early-mid fifteenth century. Elsewhere dark soil-patches indicative of firing were noted in the 1982 article (HER 2431) and subsequently Mrs J Strong observed them also in an area previously fieldwalked (HER 5211). Eames (1980, 31) suggests that the life of a kiln may not have been greater than four years. Tile kilns could be built from

many materials, most commonly roof tile, but handmade ‘bricks’ were also sometimes incorporated. Several amorphous (and badly weathered) brick-like items were noted here. There is Romano-British occupation in the parish, some close to the village centre, and some forty sherds were noted during fieldwalking, also twenty pieces of *tegula* (one very overfired) and two of box flue. The number of pieces of tile found seems out of proportion to the number of pottery sherds so it is possible that these useful pieces of tile items might have been acquired from a local Roman site and used in the structure of either tile or pottery kilns.

The Boarstall potters used a light-firing clay for pottery and a coarser red-firing clay for tiles. Boarstall lies on a junction between three geologically defined zones running roughly north-south (BGS 1994). West of the Tower is the West Walton Formation – one possible clay source; the Tower itself is on the Arncliffe Spiculite Member, principally a sandstone or siltstone (Corallian), and east of the north-south road through the village is the Oakley Member, consisting of a variety of lithologies including marls (Horton *et al* 1995, respectively 30, 37 and 53). It is probably on the latter deposit that Millbank noted features possibly related to a later medieval kiln (Millbank 2008: HER 9886) and recorded a clay described as a ‘brown grey silty clay’, a ‘firm mottled orange grey clay’, and (as previously) with ‘very occasional small sub-angular limestone fragments’. Fresh-dug clay was normally spread out in winter for weathering and for removal of intrusive pieces of stone etc. The Boarstall tiles were occasionally red but often dark grey and commonly quite high-fired, with a fabric difficult to determine in hand specimen but with fine well-sorted sandy inclusions, always less than 0.5mm and sometimes less than 0.3mm. (A fabric description of a pottery sherd was included in the 1982 article (pp 111–112). A convenient stream, which would have provided water for damping down clay and during making, runs near the village on its western edge (Fig. 4). There is little doubt that the lord of the manor would have been in receipt of clay gavel that the potters would have paid for the privilege of digging their raw material and regulations would have been in place covering their acquisition of brushwood etc. from Bernwood Forest.

Many writers have commented on the process of making decorated floor-tiles. Ensuring a standard thickness could have been easily achieved by rolling

out clay between two blocks of wood of the required height, although slight differences in clay may produce some variability in thickness after drying. Rolling would produce a sheet of clay from which one or more tiles could be cut, possibly around the tile stamp itself. Alternatively, and taking up less space, would be the use of open-ended frames such as are used in brick making. I am grateful to Andrew MacDonald of The Pot Shop, Lincoln, who has used the latter method, for advice. The four-sided open-ended frame he has used for reproducing medieval tiles has the same depth as the tile and sloping sides to form the bevel. The frame is knocked on the bench and the blank easily drops out. The design was cut in relief in wood and wood-grain occasionally be seen on a tiles surface (e.g. Lewis 1999, 3). While he did not use one of wood, Andrew MacDonald found that the stamp could be used on the clay almost immediately. Although there is no doubt that the design on the Boarstall decorated tiles were made with a stamp, the impression is very shallow. A number of approaches have been suggested for filling the impression with white slip. Diana Hall, who made reproductions for Winchester Cathedral, found that simply pouring liquid slip into the impression, leaving it until leather-hard and then cutting the excess back is effective (<http://www.buildingconservation.com/articles/floortiles/floor-tiles.htm>, consulted Dec 2016). A slightly different method has been used by Andrew MacDonald: he found that once the blank was leather-hard, it was most effective to smear rather than pour a fairly thick slip over the tile before later trimming. This avoided the possibility of shrinkage between infill and impression.

The material for the lead-based glaze would have to be acquired from a considerable distance west of Buckinghamshire unless it came from recycled lead utensils. In firing any glazed ware there is a constant risk that some glaze will melt and run off the item onto adjacent surfaces. Surface scars on some of the Boarstall tiles shows that this occasionally happened here. One effective method of stacking the tiles on edge within the kiln to minimise this risk has been suggested by Kent and Dawson (1998).

### **Distribution**

There is frequently a close connection between those making roof tiles and those producing floor tiles. Roof tiles, for which there would have been

a larger market, appear to have been in production before the latter, for a short period at least. By the mid-fourteenth century the close link between the two crafts can be very clearly seen, for example at Windsor Castle where Penn tilers (see on) are documented to have been providing both (Keen 2000, 228). As the production of ceramic items was generally impractical in winter months when clay was being prepared by weathering and product drying was impractical, another form of livelihood would have been necessary for such craftsmen even if they continued living in the same village.

Much ink has been spilt discussing the circumstances under which tiles with identical designs occur at widely-separated locations. There are a number of possible explanations including tilers supplying tiles over a wide area from one base (transport costs defining the limit of activity), tilers travelling into an area for specific commission and using stamps already in their possession, the stamps themselves passing from hand to hand, and so on. Competent roof-tile makers would no doubt also have been able to produce floor tiles if they wished, and vice versa; the only significant differences being in the frequent use of glaze on floor tiles (although it was also often frugally used on roof tiles), and access to the necessary woodcarving skills for making stamps, which could in any event have been provided by another craftsman. So, on occasion although it may have been floor-tile makers from an existing production site who moved to meet a specific contract, it might also have been convenient for them to liaise with local roof-tile makers, perhaps even sharing their kilns, as suggested by Eames (1980, 279).

Since some tile kilns, such as those at Clarendon in Wiltshire, were sited very close to substantial buildings, it is reasonable to presume that they were built specifically to meet that structure's needs. Interestingly, not far away from Clarendon there is also a pottery industry at Laverstock, so the two may have had a close relationship. In due course Clarendon was abandoned and hence in this case became accessible for archaeological investigation, but if the tilers' work was for prestigious buildings that were subsequently continuously utilised, such as Westminster Abbey, then the chances of finding remains of any on-site kilns becomes less likely, so proving conclusively whether tilers set up on site or worked from a base a few miles away may be difficult to prove.

Betts (2002), who studied a large assemblage of so-called 'Westminster' tiles that were certainly produced somewhere in London in the mid-late thirteenth century, makes an important point in connection with the 'travelling stamp' theory. He records that the same stamps used for the London group were also used on tiles found in Leicester and Warwickshire. Although local clay was used he notes features in the manufacturing technique that closely reflect the same techniques used by the London potters, and reasonably concludes that in this instance at least, it was the potters who had travelled with their equipment.

At Boarstall it might also have been the case that travelling craftsmen moved in to satisfy a local demand for tiles during a particular building phase. This could have been, for instance, during construction of the Tower which has a dendro-chronological date of AD1312. However, an alternative and earlier possibility might be the provision of tiles for the capital message which was already in existence here, owned by Sir John Fitz Nigel in 1288 (Lipscomb I, 59). Brill certainly, and probably Boarstall, already had a strong tradition of making ceramic by that date. The decorated tile-making here could, therefore, represent but one short phase in an ongoing ceramic industry as the field evidence shows that, apart from decorated tiles, numerous plain tiles and ridge tiles – the bread-and-butter products of a long-lived industry, were also being produced here. A further possible complication in tying down a date, as noted previously, is that there is another uninvestigated moated site within the village (previously noted HER 0318) which, if a homestead moat, could precede the Tower site and might also have had an earlier requirement for floor tiles.

The 'visiting tiler' version of the evidence could be described as the minimalist view of decorated tile production at Boarstall, but a case can also be made for the existence of a much larger and longer-lasting industry here. Whilst recognising that only seven identifiable tile designs have so far been found at Boarstall (apart from the Tower tile finds), these fragmentary pieces recovered after ploughing obviously represent only kiln failures and the result of limited opportunistic investigations in the village. A greater range of 'stabbed Wessex' designs may well be discovered in the future. It is notable that they were produced at more than one location in the village, certainly

indicating more than one kiln and possibly more than one production phase.

As noted above, the majority of tile designs produced here have been found associated with significant medieval buildings in west Buckinghamshire, in east Oxfordshire, and particularly in Oxford itself. Apart from a site at Bagley Wood two miles south of Oxford (Haberly 1937, CXX and CXXa), whose tiles had very simple images, no kilns producing Wessex tiles have to date been discovered either in the city or anywhere near it.<sup>1</sup> Of course, an as yet undiscovered production site may be uncovered closer to the city than Boarstall, perhaps initially supplying tiles for one of its many substantial buildings (for which see e.g. Hassall 1986) and then perhaps continuing to make tiles for other Oxford buildings. However, as previously noted Brill and Boarstall were already very important pottery-supplying villages for Oxford. Munby (2007, 36) for instance, records that 92% of the identifiable medieval pottery found at Rewley Abbey came from the Brill/Boarstall industry and it may be noted, for example, that four of the 'stabbed Wessex' tile designs found at Boarstall so far were also present at St Peter's (Emden 1969). It is not therefore impossible that Boarstall's role in supplying Oxford may have been a great deal more significant than the limited evidence so far available would allow.

As previously noted, the greatest number and greatest variety of design types occur in east Oxfordshire and into Berkshire, being particularly associated with ecclesiastical establishments – although this distribution may alter with future investigation of secular sites. Within Buckinghamshire the distribution of Wessex tiles is much more limited but there may be reasons for this. Hohler noted their presence at Notley Abbey (the closest monastic site to Boarstall: for location see Fig. 1) where five of its designs were present, also Chetwode, Hanslope, Ludgershall, Nether Winchendon and Bledlow, to which may now be added Bradwell Abbey. However, apart from the three monastic churches noted above, no finds of 'Boarstall' tile have been recorded from the four of the other monastic sites in the centre and north of the county; respectively Lavendon, Luffield, Tickford, and Ravenstone, and only single tiles of any kind have come from Biddlesden and Snellshall. In other words, six major ecclesiastical establishments apparently did not have decorated tile floors,



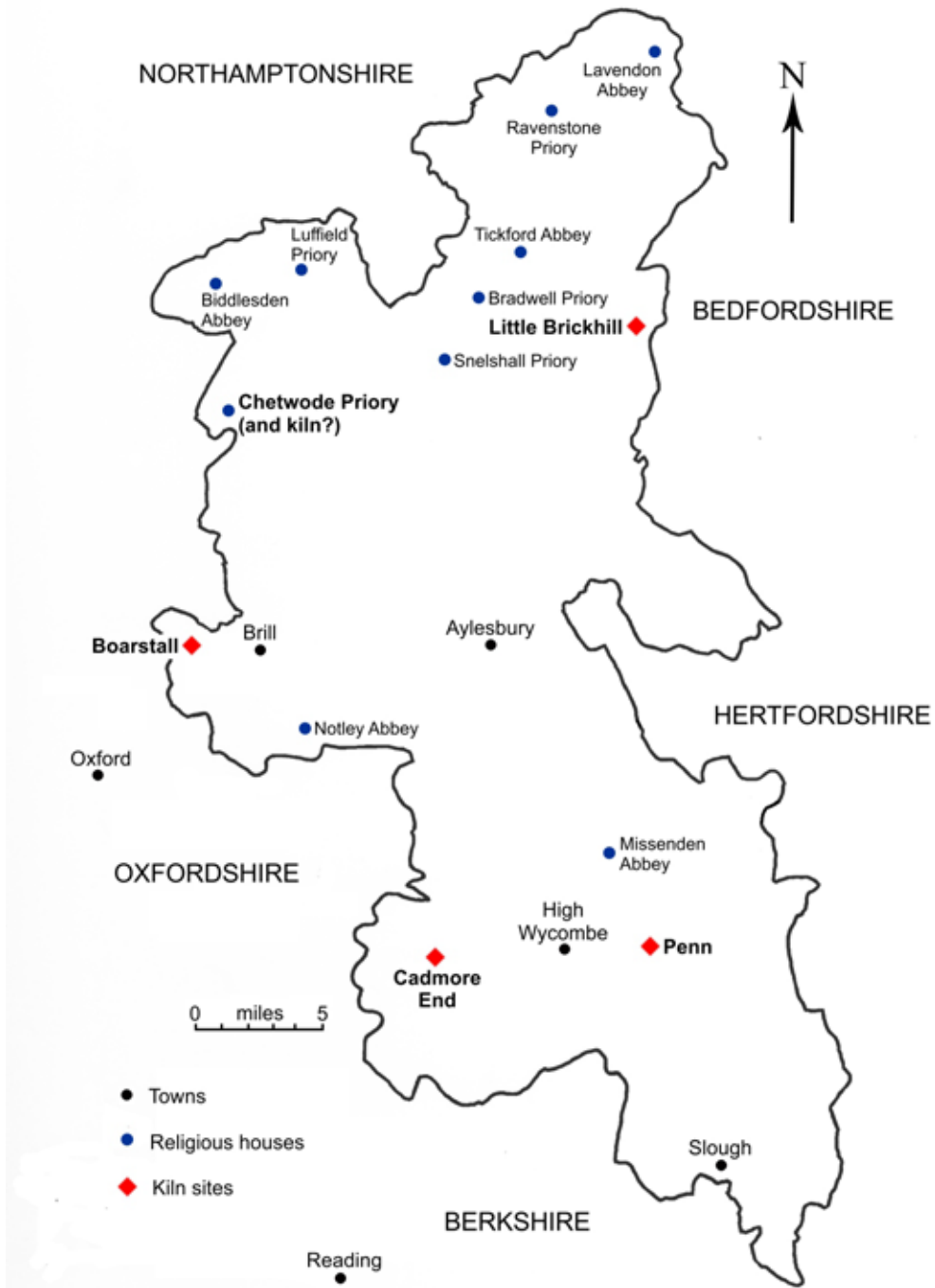


FIGURE 18 Buckinghamshire's decorated floor-tile production sites and location of the principal religious houses of north Buckinghamshire

which seems to say the least, to be highly unlikely. Of course in practice, nothing can be deduced from this absence since archaeological investigation at all six sites has been minimal so the current known distribution of tiles (of any kind) is unlikely to reflect the true situation. The only location where their absence may have some significance is at Missenden Abbey in the Chilterns where some small-scale work has been carried out. Here there are plenty of later Penn tiles but only one earlier tile (information kindly supplied by Marion Wells), but even here it would be surprising if there were no tile-enhanced floors prior to the Penn series of the mid fourteenth century. So, the true extent of the distribution of Boarstall/Wessex tiles in a region which might have been served by Boarstall remains an open question.

Beyond the core areas of Oxfordshire and Buckinghamshire, the distribution of ‘stabbed Wessex’ tiles is fairly limited. To the west and south the Gloucestershire connection has been previously noted; there are two locations in Worcestershire, two in Wiltshire, and one in Sussex. To the north there is an isolated occurrence in Northamptonshire at Catesby Priory, and one record in Leicester (W 38/9). Established tilers working in a location such as Boarstall probably felt able to supply nearby demand centres such as Oxford only ten miles distant, and possibly, although less likely, Catesby Priory, west of Daventry and nearly thirty miles distant (VCH 1970, 121–5; RCHM(E) 1981, 40). Transport costs would no doubt have precluded their supply to Leicester Abbey, and some tilers, from whatever base they operated, must have relocated to supply an establishment at that distance, as was almost certainly the case with the Westminster tilers who also seem to have worked in Leicester (Betts 2002, previously noted). In conclusion it may be noted that Stopford (1992 and 1993) has examined the whole issue of transport and location in more detail than has been covered here.

#### DATING THE DECORATED TILES

Dating medieval floor tiles is rarely an exact science, particularly when their distribution is widespread. Unless a tile happens to include some useful image such as a heraldic shield, the installation of flooring is mentioned in a contemporary source (as is the case with the later Little Brickhill tiles), or the tiles occur in a well-dated archaeo-

logical context, there may not be much to go on. Even when it is clear that a single stamp has been utilised to produce many tiles, slight variations can arise through differences in pressure on the stamp itself which can affect line thickness and depth of impression (and perhaps on occasion be deliberate due to a wish to minimise the amount of slip used), to slight variability in firing conditions, clay body, etc. Moreover, a popular stamp could, in theory at least, be replicated by a competent woodcarver. That said, Boarstall’s complete ‘eagle tile’ (Hohler W8) is an example where an impression from a single tile stamp, or one very closely related to it, can be fairly closely tied to one from Hailes Abbey in Gloucestershire, where it can be broadly dated.

Hailes Abbey was founded in AD 1245/6 by Richard of Cornwall, King of the Romans, who is heraldically linked to an eagle. In 1270 his son Edmund gave a relic of the Holy Blood to Hailes and this gift triggered a building programme at the abbey which was completed by 1277 (Eames 1980, 285). One of the eagle-design tiles from Hailes, a single-headed eagle on a shield-shape looking left not right as at Boarstall (Eames design 1542), certainly appears to have been laid before 1277 in the floor of the extended abbey, as does another tile from Hailes which matches the Boarstall tile (W8) closely except in one minor detail: firstly the Hailes line border is slightly thicker (which might be due to the stamp being more deeply impressed), but the tail feathers of the Hailes eagle are squared, whereas those from Boarstall and the Oxford region are rounded. There is no doubt, however, that one stamp-cutter must have been following the design of the other most closely. A further close Hailes – Boarstall link is that both an eagle tile from Boarstall and one from Hailes have a diagonal break-line that has been cut before firing, which bisects the eagle tail-feathers. A date around the 1270s seems reasonable at least for the inception of this design.

The above dating is strengthened by a closely-matched tile from Rewley Priory, Oxford (Eames 1980, 204 and see Munby 2007), founded in 1280 by the same patron as Hailes, Edmund of Cornwall (Eames 1980, 205). Eames (1980, 280) suggests that ‘the tilers who had worked for Edmund, Earl of Cornwall during the 1270s ... then established a commercial tiliary producing tiles of the ‘stabbed Wessex’ series, although the location of their tiliary remains unknown.’ Emden

(1969) describes a group of unstratified tiles found at St Peter in the East, Oxford, one of which is a twin of the complete W8 eagle tile from Boarstall described above. He notes a number of ‘stabbed Wessex tiles’ ‘all closely related in workmanship’ and that a fragment of surviving pavement was found ‘in association’ with three coins dating between c.1280 and 1304. Further possible dating from Oxford comes from construction of a tiled pavement in c1340s or 1350s in the Latin Chapel of Oxford Cathedral (St Frideswide’s: Sturdy 1989 and Green 1989). It is suggested that this pavement disturbed a pre-existing pavement of Wessex tiles (which would have included Hohler’s W38/9). It is speculated that the earlier ‘Wessex’ floor, may have been laid on the installation of a new shrine here in 1289. It is interesting that so many building projects were taking place in and around Oxford region in the later thirteenth and early fourteenth centuries. Finally, and apparently not previously noted, is that in 1301 an indulgence was granted to those who assisted with the rebuilding of the conventual church of Catesby, and in 1312 another was granted to those ‘who would assist in paving the cloisters and house of the priory’ (VCH 1970, 123). It is a long shot, but a single Wessex-type tile of type W38/9 noted above comes from this poorly recorded priory, although the circumstances of its discovery are not known and its location on the ground is inferred (RCHM(E) Northants 3). The sum of the evidence therefore, gives some confidence in dating the Boarstall tiles to the later quarter of the thirteenth century or perhaps the first couple of decades of the fourteenth.

#### OTHER DECORATED TILE PRODUCTION SITES IN BUCKINGHAMSHIRE

##### **Penn**

Penn is by far the best-known Buckinghamshire centre for the production of decorated tiles, roof tiles and some pottery (Hohler 1941 and 1942; Green 2005; Farley & Hurman 2015). For a recent thorough and wide-ranging survey see Green (above). Penn tiles were widely distributed between c.1350–80 finding particular favour in several high-status Thames Valley establishments including Windsor Castle, Westminster Palace, the Tower of London and Baynard’s Castle. Orders from some establishments could reach 10,000 (Keen 2000, 219). They were extensively

used in Buckinghamshire churches and monastic establishments, including for example Missenden Abbey, but London apart, their use extended well into Hertfordshire and Essex and Penn tiles have now been found on one hundred and fifty sites (Keen 2000, 228 and Fig. 9). The tiles were produced using a simpler technique, conventionally described as ‘printed’, than used for the Boarstall impressed tiles. Although the production process remains open to debate it was clearly economical.

##### **Little Brickhill**

This centre was less prolific (and later) than Penn and distributed over a more restricted area. The design of these tiles were described by Hohler (1941, 15) as ‘atrocious and their manufacture little better...’. The kilns were first discovered in c.1915 and more fully excavated in 1929–30. Mynard (1975) re-examined the surviving site and described its products and their distribution in local churches. Subsequently two Little Brickhill tile pavements uncovered in the nave of Great Linford Church (Mynard & Zeepvat 1992, 114–115, 210–211, plates 27–28) can almost certainly be related to a memorial inscription that records the paving of the church in, or shortly after, 1473. Hohler (1941, 15) notes their presence at Hillesden, a church substantially rebuilt after 1493 (Pevsner & Williamson 1994). Investigations elsewhere in the Milton Keynes area have found further tiles which are described in the Milton Keynes Monograph Series. Although many churches in the Milton Keynes area were paved with Little Brickhill tiles, it is worth noting the suggestion that, on grounds of fabric, some North Buckinghamshire tiles may have been produced at Potterspury, Northants, better known for its pottery industry (Mynard 1994, 184). The writer has recently been shown Little Brickhill tiles found by Tom Clark as far distant from the site as Doddershall.

##### **Cadmore End, Fingest**

A good case has been made for a centre at Cadmore End, where an impressed tile with leaf-shaped design was found in circumstances suggesting a kiln (Hurman 2004). The design had previously been noted by Hohler as his P87. The same design has been recorded at Radnage, Christchurch [St Frideswide’s Priory], Oxford, and Streatley. A pavement which consists of recycled tiles laid

in the Allestree Library, Christchurch, Oxford, probably in the late sixteenth or early seventeenth century, is said to include a second design probably from Cadmore (Keevill *et al* 2014, 36, 41). Although there is no documentary evidence for decorated tiles being produced at Cadmore, there is documentation for the operation of ‘tylers’ supplying roof tiles of various kinds from the mid fifteenth-century onwards.

### Chetwode (?)

Hohler (1941, 4-5, 17) refers to wasters of ‘Wessex’ type at the site of Chetwode Priory and (apart from tiles he may himself have seen) refers to an earlier record by Lowndes (1868, 374). The latter does illustrate six tiles but does not describe them as wasters. Pantin (1941) who was closely involved with Hohler’s excavation at Notley Abbey in 1937 but possibly lacked direct information about Chetwode himself, may have misunderstood Hohler’s comments when he mentions ‘kilns’ having been found here. Subsequently Eames (1980, 736) seems to accept Hohler’s statement at face value. A recent visit to the church did note nineteen pieces of decorated tile on display, amongst which Hohler types W7 and W25 and W 38/39 were present, but none were obviously wasters. Although there may well have been tile production here, supporting evidence seems to be no longer available.

### FUTURE RESEARCH

Fieldwork has confirmed that Boarstall’s late medieval map does depict quite accurately the areas of medieval settlement (and very probably the sites of the earlier potter’s homes and workshops). Although potter’s working areas have been partly-investigated archaeologically at e.g. in Buckinghamshire at Olney Hyde (Mynard 1984), and Lyveden in Northants (Bryant *et al* 1969), there is still much more to learn about this subject. On present evidence it seems that decorated tile production at Boarstall may have been confined to a few decades in the later thirteenth-century, perhaps extending to very early fourteenth-century, but more accurate dating of the period during which pottery was produced here would help elucidate the relationship between the two branches of production as might an extensive geophysical survey. Then there is also the interesting possibility that Boarstall supplied substantial number of decorated tiles to Oxford: a

focussed programme of fabric analysis might prove the proposition one way or the other.

Investigations within the grounds of the Tower have given some insight into the early history of the principal house but as the excavator would be the first to admit, this trial work leaves many questions unresolved about its early history in relation, for instance, to the second possible ‘moat. Then there is the Civil War episode which although well-documented historically is little understood in the field. For an earlier period, it seems probable that there was quite extensive Romano-British occupation here at what may have from an early period a favoured settlement area. Obviously there is ample scope for further investigations both archaeological and historical at Boarstall but perhaps of particular value would be an extension of the scheduled area to discourage construction of another M40 or other such unwelcome development removing more of this interesting settlement within the former Bernwood Forest.

### ACKNOWLEDGEMENTS

Thanks are firstly due to George Lamb who many years ago noted the presence of wasters among a collection of pottery from Boarstall, and secondly to numerous members of the former County Museum Archaeological Group who gave extensive assistance in following up this initial discovery many years ago. Several other previous contributors are acknowledged in the initial article on the village. In more recent years Brett Thorn of the County Museum has retrieved numerous boxes from stores; Beverley Nenck at the British Museum kindly retrieved tiles from Hailes Abbey and Eynsham; Tom Clark drew attention to his finds of Little Brickhill type, and Mrs J Strong answered queries about her finds in Boarstall. Gary Marshall of the National Trust allowed re-working of an earlier tile report, and Dennis Mynard provided several references. Andrew MacDonald of The Pot Shop, Lincoln, kindly gave advice regarding tile production. Julie Wise of the County Archaeological Service provided much detail from the HER. Lee Upton of Amberflare assisted greatly in the production of the coloured figures of the tiles and Bob Zeepvat provided a graph and dealt with the editing. Barbara Hurman’s extensive help has been acknowledged at the commencement of this article, and finally Jackie Farley kindly improved the English.

NOTES

1. It should be noted that Cotter, writing on finds from Rewley Abbey (in Munby 2007, 55), has noted a similarity of fabric between Wessex tiles found in Oxford and pottery believed to have been produced in the Newbury-Reading area. In the same article, Tibbles notes 'at least three tiles ... displaying glaze over breakage and/or misfiring suggesting their use as seconds.' but does not elaborate further.

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*To be noted –*

Further to my article concerning the Late-Medieval decorated floor tile from the kiln area at Cadmore End Common, Fingest, Buckinghamshire in *Records of Buckinghamshire* **44** (2004), 21–26, parallels of the Cadmore tile are now known to be in The Allestree Library at Christ Church, Oxford on a pavement of medieval floor tiles, by a reference to a short note published in *Oxoniensia* **79** (2014), 36, *The Allestree Library at Christ Church, Oxford, and its Tiled Pavement*, by Graham Keevil, Maureen Mellor and Judith Curthoys.

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