

A LATE MEDIEVAL KILN AT KNIGHTON, ISLE OF WIGHT

By L. R. FENNELLY

with contributions from

D. C. MYNARD, K. J. BARTON and G. C. DUNNING

THIS report describes the first pottery kiln so far discovered on the Isle of Wight. It is dated to the last half of the 15th century.

The excavation was carried out by L. R. Fennelly,¹ and the pottery report and drawings were prepared by D. C. Mynard in conjunction with K. J. Barton, who made the final assessment and gave much appreciated help and advice during the excavation. An assessment of the costrel was kindly contributed by Dr. G. C. Dunning. Mr. F. G. Bravery provided a note on the local geology. The excavator is indebted for permission to dig to the landowners, the Carter Estate, and particularly to the farmer of Lower Knighton Farm, Mr. S. Pepler, who by his warm interest and co-operation made the dig possible.

The site was discovered about 1964 by Mr. Pepler, when, having noticed pottery in the field, he turned up some tiles which were identified by Carisbrooke Castle Museum as of medieval date. In 1967 he drew the attention of the writer to the site, and indicated the spot with such precision that the first trench was dug right on the structure. The excavation was carried out between October 1967 and January 1968.

THE SITE

The kiln (Nat. Grid Ref.: sz 56978564) is situated in a field lying on the south side of the downs, about 60 yards west of Hartsash Cottage and 500 yards east of the site of Knighton Gorges Manor (destroyed c. 1820). It is separated by the Lower Knighton Brook from the medieval village of Knighton, and it has access through the lane which comes out at the present Knighton Waterworks to the main north-south road, which ran across the Eastern Wight through the old strip parish of Newchurch. This road itself, at a point 500 yards to the north, crosses the ancient main ridge road along the downs from Brading to Newport. The field is known as 'Barn Ground' but there is no local tradition of a barn or other building on the site. However the 1810 one inch Ordnance Survey map shows two buildings over or near the kiln.

Geologically the site lies just south of a ridge of Upper Greensand left on the south side of the main chalk ridge by the pre-glacial erosion processes which shaped a gap at this point. Subsequent valleys follow the line of outcrops and it is on the south facing side of one such valley that the kiln was sited. The supply of wood fuel would present no problem as the Upper Greensand is still the least cleared of all the Island strata, and below towards the Yar the 'waterlogged' copses of the uncleared heavier soils of the Lower Greensand could have been used.

¹ We would like to express our thanks to those who Robinson, P. Sprack, R. Woodcock, P. Hoare, and helped in the excavation and particularly Messrs. J. Miss A. M. Woodhouse and Miss B. Hudson.

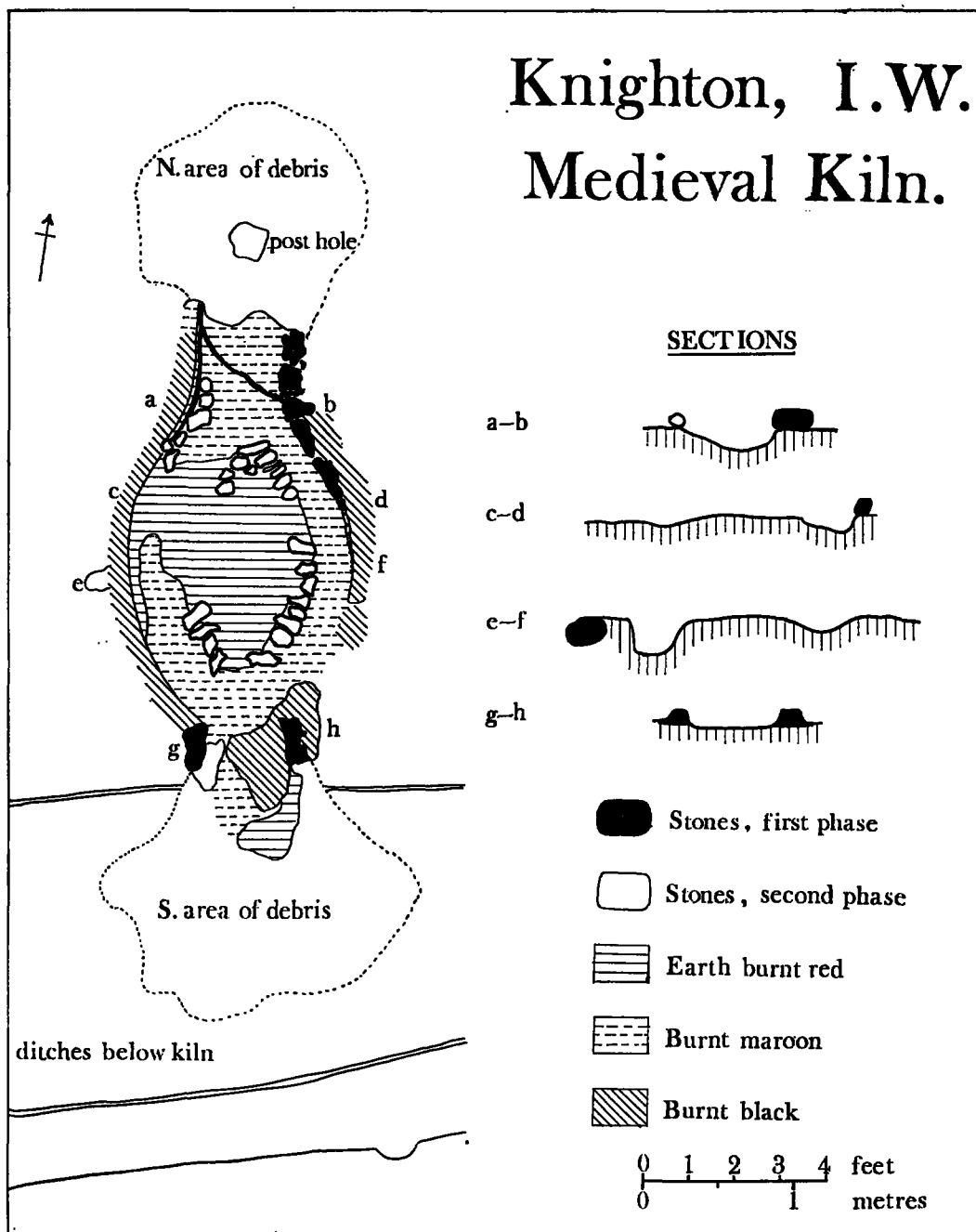


Fig. 36. Plan of Kiln.

THE KILN

The kiln is of double flue up-draught type. It is on a sort of plateau on the crest of the field, overlooking the valley. Its axis is north-south (349°) with the south flue facing the prevailing south-west winds.

The site is shallow, there being about 7 in. to a foot of loamy soil above bright yellow subsoil. The kiln was dug an inch or two into the subsoil at the north end, in order to obtain a level base.

The sandy floor of the kiln was burnt a bright red in the centre, maroon in the channels, with a black area in the south flue. The crust of the floor was 2 in. thick, and the depth of burning was 6 in. throughout. Below the red band on the surface was a maroon band and below that a black, and these remained strictly parallel in a curve that ran right across the kiln, regardless of the channels. The line of the walls was marked by a bright red strip of oxydisation with outside it a black strip sharply defined, and in places a maroon area outside that. There was a complete gap in the burning, 9 in. wide, in the south-east arc of the wall. The top soil was very shallow over the west wall, which had completely disappeared.

The area of burnt floor in the north flue finished sharply at its mouth, and outside it, on a level with it, was an area of debris 2 in. thick, consisting of charcoal like material containing relatively few small sherds. The south flue on the other hand was much more heavily burnt, the burnt crust extending well outside. The size of the north debris area would seem to indicate that the kiln was not in use for very long. There was a post-hole outside and in the exact centre of the north flue. The only suggestion as to its use is that it may have supported a large stone used as a baffle across the flue.

The north-east wall and the south flue were set in the clean subsoil and belong to what may be called the first phase of the kiln. The south flue stone was set on $\frac{1}{2}$ in. of mortar and had mortar on top. The stones of the inner platform and the north-east wall all belong to a second phase for they include tiles and pottery from the kiln. (See for example the base shown on the plan, fig. 36, at end of west wall of north flue.) The stones of the point of the platform were built on a packing of soil filled with chalk fragments overlying a hard burnt floor. In some places they were mortared, and there was a scatter of mortar on the floor. This platform had been formed by scraping out a channel of varying depth around most of it. The channels were filled with pottery, in the case of the east channel with fragments of tile.

Despite careful examination, there was no evidence of a clay cover, but some fragments of a burnt mixture of chalk and clay ('cob') were found.

When the kiln was abandoned wasters were thrown back in and the stones of the walls collapsed over the centre and south flue. The main debris area was outside the south flue, and contained much pottery with large stones on top. Pottery was not found outside the line of the kiln walls except in the two debris heaps and in the plough soil, where it had been distributed over a wide area. A considerable amount of bright red burnt soil forming a slight crust was found over the main mass of stones and sherds in the centre of the kiln. It is presumed that this was the clay lining, collapsed. No kiln furniture was found.

The fragments of a medieval mortar (fig. 39) and a small whetstone were found among the stones.

PROCEEDINGS FOR THE YEAR 1969

Except for one piece of iron slag no metal was found, and as the floor was too friable for remanent magnetism dating there is no direct dating evidence.

The area excavated was 12 ft. by 24 ft., but the dig was continued to the west to investigate a complex of structures that antedate the kiln and which will be reported on later. It was not possible to uncover a wider area to look for traces of buildings or other kilns, but the field scatter after ploughing does not suggest any other kiln in the immediate vicinity.

The products of the kiln have not been traced on the Isle of Wight, nor at the moment is any building known which used its tiles.

THE POTTERY

By D. C. MYNARD and K. J. BARTON

The principal products of the kiln were:

1. Pottery

- large bung-hole pitchers
- large wide flanged dishes

and as lesser products

- small jugs
- handled cooking pots
- handled cups
- large jar or wide-mouthed jug
- round or oval dripping dishes

2. Tiles

- crenellated ridge tiles
- flat roof tiles
- floor tiles

The pottery recovered was weighed with the following results:

	<i>Grey surface</i>	<i>Red surface</i>	
Pottery -			
Body sherds	44 lb.	22 lb.	
Bases	15 "	1 "	
Handles	13 "	2 "	
Spigots	2 "	0 "	
Pitcher rims	8 "	1 "	
Bowl rims	2 "	1 "	
	84	27	Total: 111 lb.
Tiles -			
Ridge tiles	130 lb.		
Floor tiles	25 "		
Flat roof tiles	25 "		
	180 lb.		

(The figures for tiles are given as a guide only, as the allocation of smaller fragments between ridge tiles and flat roof tiles could not be made with any certainty.) There were about 70 fragments of 'crenellation' recovered.

One pitcher, fig. 37, no. 1, was reconstructed (50 per cent) and this gave a weight for a pitcher of 6 lb. The costrel, fig. 37, no. 21, and fig. 40, no. 1, which was of the same dimensions as the small jug, fig. 37, no. 20, though decidedly thicker and heavier, weighed about 2½ lb. These figures make the number of different pitcher rims surprising in relation to the quantity of body sherds.

The large proportion of pitcher sherds and ridge tile fragments recovered may of course only indicate that the more complicated forms gave the larger number of wasters.

General Description

The ware is hard-fired and moderately tempered with a fine, white sand. Four-fifths of the ware is completely reduced, or reduced on the surface with an oxydised core; the remainder is either completely oxydised or oxydised with a grey core. There is no general pattern of oxydisation related to types.

The vessels appear to have been somewhat hastily thrown and have a crude finish. However considerable skill was required to throw the large pitchers and they are reasonably well-finished. The handles have no special fixing and are merely pushed on to the outside of the vessel, from which they frequently appear to have dropped off in the kiln. Bungholes were also applied in the same manner, but less frequently came off. The lower parts of most vessels were knife-trimmed. All bases are flat. There is little evidence of any attempt to decorate the vessels. Glazing is haphazard and poor in quality. It is found occasionally on the upper outside part of the body, but mainly on the inside of the bases of the small jugs and dishes. On the latter the glaze is usually of good quality, whereas inside the jugs it is frequently heavily reduced or overfired.

DESCRIPTION OF TYPES

Bunghole pitchers (figs. 37 and 38, nos. 1-13)

The only example that could be reconstructed is no. 1, which is the basic form of vessel to which can be attributed the six rim forms, which are:

(a) Upright rim with external bevel and bead below; top edge slopes down internally. Nos. 1 and 2.

(b) Similar but slightly everted and hardly any bevel or bead externally. Nos. 4 and 5.

(c) Heavier rim, thickened externally around top, gentle swelling below, two bevels round neck. No. 6.

(d) Thin, almost upright rim, pointed top with external bevel below. No. 7.

(e) Almost square in section but top is concave and slopes down internally. Angle of neck is more sharply defined. No. 8.

(f) Like nos. 1 and 2, but with pronounced internal concavity. No. 9.

There were 71 examples of *a*, 84 of *b*, 2 of *c*, 4 of *d*, 3 of *e*, and 2 of *f*. One rim had a simple pulled out lip, no. 3. The handles for these vessels were of simple strap type,

of varying widths: no. 10, 3 cm., 12 examples; no. 11, 4 cm., 32 examples; over 5 cm., 19 examples. Bungholes were fairly consistent in size and form, nos. 12 and 13, being typical. Twenty-one examples were found. Two had fallen away from the body in firing.

Flanged dishes (fig. 38, nos. 14-19)

Wide mouthed dishes with prominent flanges appear with four rim types:

(a) External bevel, pointed top and internally concave. No. 14.

(b) Similar, but with a more pronounced external bead, which is undercut. Nos. 15-17.

(c) Simple everted flange. No. 18.

(d) Everted flat-topped rim, sloping down internally. No. 19.

There were 11 examples of a, 9 of b, 2 of c and only 1 of d.

Small jugs (fig. 38, no. 20)

Of such vessels the one illustrated was the only reconstructable form. No rims were found to fit it. The narrower strap handles (no. 10) might well belong to this form in view of their small size.

Costrel (fig. 38, no. 21 and fig. 40, no. 1)

For a detailed consideration see pages 108-10.

Cooking pot (?) (fig. 38, nos. 22-23)

The sherd no. 22 appears to come from a small globular vessel with an S profile, which is similar in form to a cooking pot and which may have one or two handles. The only other examples of this form are plain rims similar to the illustrated example no. 23, and part of another handle. The paucity of cooking pots in this group and the suggested date range may indicate that these fragments belong to another type of vessel.

Cup (?) (fig. 38, no. 24)

Two fragments of similar form which appear to be from a cup with one or more handles. It has a pointed rim and a biconical body.

Large jar or wide-mouthed jug (fig. 39, no. 25)

Twelve sherds from one vessel which has a similar fabric to the bunghole pitchers.

Dripping dishes (fig. 39, no. 26)

Fragments from two small oval (?) dishes with vertical sides, knife trimmed externally, flat bases and unglazed.

Description of the Illustrated Sherds (figs. 37-9)

Nos. 1-13. Bunghole pitcher.

1. Complete profile of pitcher with rim of type a. Height 36 cm., rim d. 12.4 cm., base d. 17 cm. Grey ware with occasional white grits larger than usual. The body has fine finger rilling, high spots have been smoothed down and it is knife trimmed towards the base. Part of the handle remains attached to the rim and this has a thumb press on both sides.

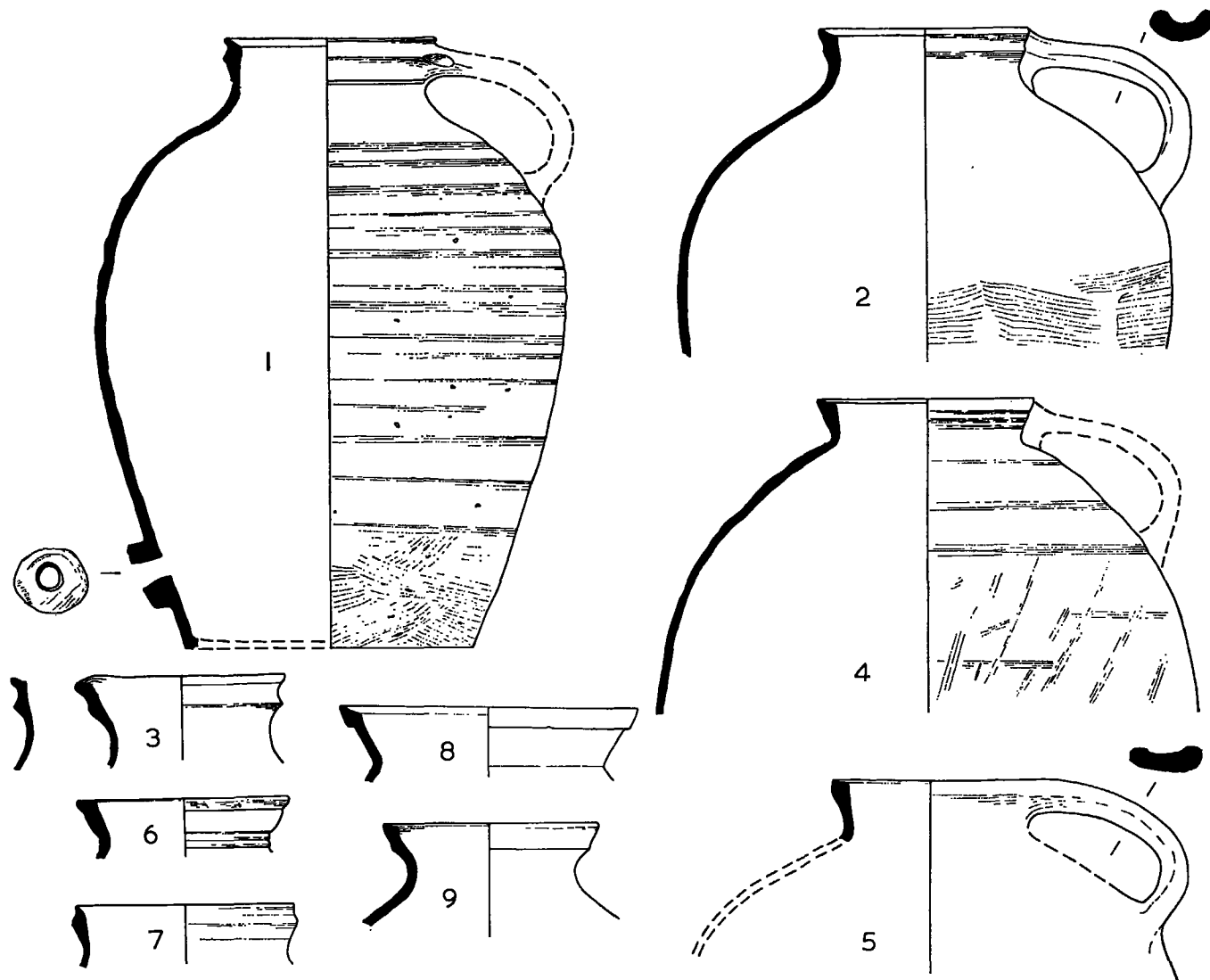


Fig. 37. Knighton Kiln. Pottery; bung-hole pitchers (with rim types). Scale 1/4.

2. Upper part of similar pitcher, rim type a. d. 12.3 cm. Red-brown, slightly sandy ware. Knife trimmed on body. The strap handle had come away in firing from the rim, but had broken off at the bottom where it had been firmly but crudely pressed in.
3. Rim (distorted) without handle, of pitcher. d. 12 cm. Simple drawn out lip. Fabric as no. 1. Grey reduced.
4. Upper part of pitcher less handle. Rim type b. d. 12.1 cm. Pink brown with buff core tempered with sand grits. Surface treatment as no. 1.
5. Rim and handle; fine sandy ware, pink brown with thick grey core, grey patches on surfaces. Rim type b. d. 11.3 cm.
6. Rim of type c. d. 12.5 cm. Dark-grey, quite sandy.
7. Rim of type d. d. 12.9 cm. Buff-pink. This rim has a scar where the handle has fallen away.
8. Rim of type e. d. 17.6 cm. Grey core with pink-brown surfaces.
9. Rim of type f. d. 12.6 cm. Fabric and colour as no. 4.
10. Strap handle, width 3 cm. Light grey with darker surfaces.
11. Strap handle, width 4 cm. Colour as no. 5.
12. Wall sherd with bung-hole, red-brown with grey core in parts, dark grey exterior surface.
13. As no. 12, but grey.
- Nos. 14-19. Flanged dishes.
14. Rim type a. d. 30.7 cm. Grey core with orange-brown margins, and dark grey surfaces. Knife trimmed towards base externally. Good quality olive green glaze towards base internally - upper limit of this shown as dotted line.
15. Rim type b. d. 43 cm. Knife trimming externally towards base. Completely oxydised red-brown throughout.
16. Rim type b. d. 33.6 cm. Fabric as no. 15.
17. Rim type b. d. 42.8 cm. Completely oxydised red-brown throughout; two light grooves round body externally.
18. Rim type c. d. 42 cm. Red-brown throughout with fine white sand.
19. Rim type d. d. 23 cm. Fabric as no. 18.
- No. 20. Small Jugs.
20. Almost complete profile, less handle and rim. Hard fabric with thin grey surface, smoothing marks on shoulder. Flat base, d. 12.5 cm. Suggested height c. 24 cm. Traces of an overfired glaze on shoulder, remaining as a grey scum.
- Nos. 21-26. Other forms.
21. Complete base and greater part of profile. Fine sandy fabric, purple-red with dark grey exterior surface. Remains of overfired green glaze on upper part and shoulder. Knife trimming on the body towards the flat base. Slight flat cordon below groove on the upper part. After throwing, the back was flattened over an area about 5 in. each way, and the adjacent lower parts of the side were also flattened to a lesser extent. These features enable the pot to be identified as a costrel, as restored in the drawing, with pierced flat lugs on each side of the short neck. Since costrels are uncommon in the late medieval period, Dr. G. C. Dunning has added a note (pp. 108-10) with the comparative material.
22. Handle and rim of cooking pot (?) d. 20.5 cm. Dark grey reduced fabric. The handle is round in section with a single groove running down its outer edge. Rim slopes down internally.
23. Rim of similar vessel (?). Sharply everted, flattened bead externally, slightly concave inside. d. 23 cm. Dark-grey with red-brown core in places.
24. Rim of cup (?) d. 11.5 cm. Completely reduced dark grey colour with a bubbly green/clear glaze internally and externally. This sherd has two scars where a handle attached to the rim and shoulder of the cup have broken away.

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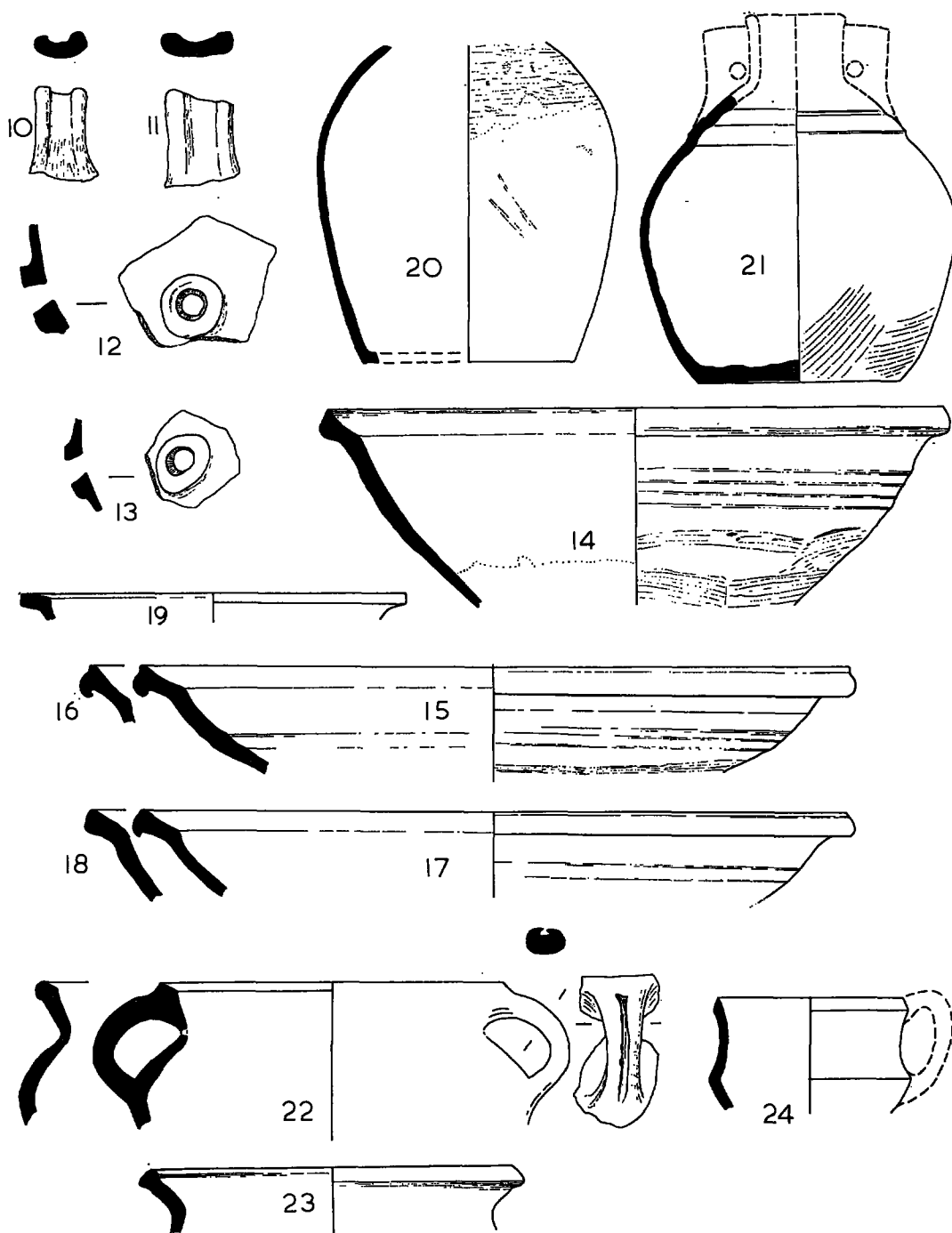


Fig. 38. Knighton Kiln. Pottery; flanged dishes (with rim types), and miscellaneous products.
Scale 1/4.

25. Almost complete profile of a large jar or wide-mouthed jug. Rim d. 17.7 cm. of simple everted flange type. The fabric is red-brown with a reduced grey core. The surface treatment of smoothing off, the finger rilling and knife trimming towards the base are exactly similar to that used on the bunghole pitchers.
26. Several sherds of a straight sided dish either round or oval in plan. Hard, sandy, dark grey fabric. Knife trimmed towards base.

Tiles

As shown above the majority of tile fragments came from crenellated ridge tiles. No complete tile was recovered nor was it possible to reconstruct one to determine the exact length. The example shown in fig. 39, no. 27, is typical both in size and asymmetrical appearance. These crenellations are not as marked or carefully cut as the Sussex examples they copy, but are rounded on the cut edges in the same way as cockscomb ridge tiles – but in these examples the top is trimmed flat. The crenellations were often but not always applied, and some had come away in the kiln. The tiles were sand-moulded, and roughly knife-trimmed on the outside and for the bottom 3 cm. on the inside. Many tiles showed signs of glazing, but only in two cases was it in good condition – one green and one brown. The glazing appeared to be chiefly on the crest and along the top part of the sides.

The fabric was the same as that of the pottery, often containing small grits or coarse sand. None of the tiles were consistent in colour, all showing patches of red and grey.

The occurrence of such tiles on the Island is of interest as crenellated tiles are considered to belong wholly to Sussex, ridge tiles in Hampshire belonging to the South Western cockscomb form. However such buildings as exist in the Island that still have their early roofing tiles occasionally have both forms in evidence.

The flat roof tiles were identical in fabric and surface treatment to the ridge tiles. Again no complete tile was found but the dimensions are 15 cm. wide, 1.2 cm. thick, and possibly 28 cm. long. Two fragments containing a round peg hole 1 cm. in diameter were found.

The floor tiles were relatively few in number, though very heavy. They were of two sizes, one 16 cm. wide, and 3 cm. thick, and the other 21 cm. wide and 3.5 cm. thick. Both were presumably square.

Description of Illustrated Sherd (fig. 39)

27. Fragment of tile broken in kiln. All surfaces and edges grey-black. Chips show core to be brownish-red. Crest and top 5 cm. of side are quite thickly covered with glaze – now quite decomposed (white and brown). Irregular area of glaze at bottom edge also. Inside surface characteristic of sand-moulding, but bottom 3 cm. smoothed to give chamfering. Outside surface smoothed with knife rather carelessly in bands 2 cm. wide. Crenellations cut with a tool with shallow serrations. The lower curved cut on one side, and the steeper higher cut on the other are characteristic. The top of the crenellation shows serrated markings, and appears to have been cut in one movement with the deeper curved side.

Conclusions

The fact that the principal products from this kiln are bunghole pitchers and flanged bowls, rather than jugs or cooking pots, are a pointer to the place of these

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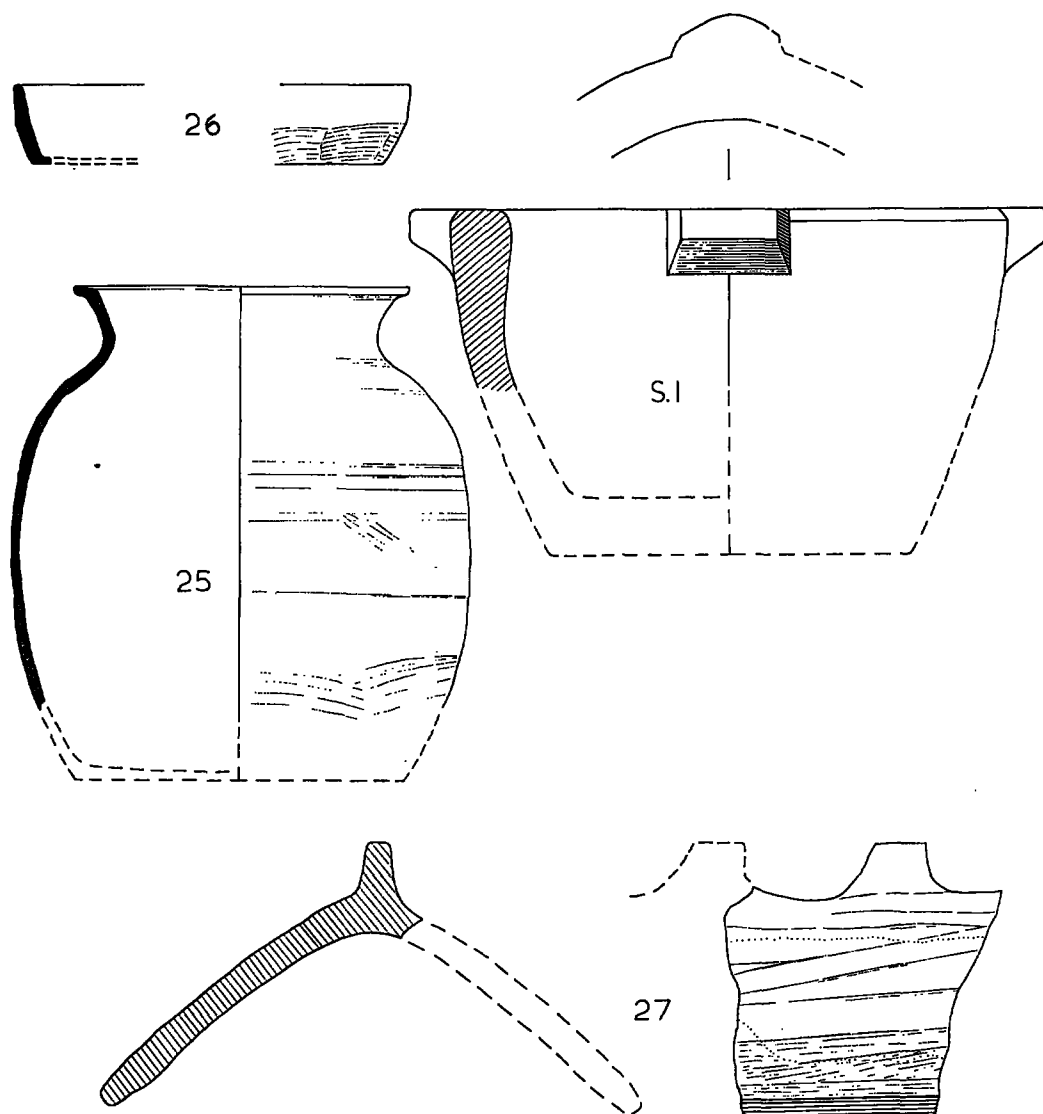


Fig. 39. Knighton Kiln. Pottery; jug, dripping dish, ridge tile and stone mortar. Scale 1/4.

wares in the late medieval period. It has by now become generally accepted that the jug/cooking pot products commonly associated with the Middle Ages are being replaced with a wider variety of vessels by the beginning of the 15th century. The accurate dating of such wares in the south is far from clear, and the nearest parallel that can be drawn is a group from a well in Tarring, Sussex, where globular bunghole pots with white slip decoration occurring with wide flanged dishes have been dated by association with a coin, jettons and early imported ceramics, to about 1500. There is still a dichotomy between such types readily recognised as of 14th century date, and those of the

16th century. Such wares as those from Knighton fall between these two dates and although the pottery is crude and the kiln form of standard medieval type, there is no reliable indication of an early date, and so basing the date on Sussex examples is the only parallel that can be offered. Therefore these wares should fall somewhere in the last half of the 15th century.

THE STONE MORTAR (fig. 39 S1)

Found in the kiln with other stone rubble and possibly used as part of the kiln structure were several fragments of a stone mortar made out of the local Greensand. It is a copy of a type of mortar made during the 13th and 14th centuries and well known in Purbeck Marble. Mortars of that material were often copied in more readily available local stones. Generally as with our example the sides of the copies were more curved than those of the Purbeck ones.²

The rim diameter is *c.* 30 cm., the height uncertain, the reconstructed profile being based on a Purbeck example of late 13th century date from Northolt, Middlesex.³ This is the first published mortar in such a soft stone as Greensand. The fragments are very abraded and show signs of considerable wear on the sides of the bowl internally. It could not have had a very long life.

THE TYPOLOGY OF THE KNIGHTON COSTREL

By G. C. DUNNING

In form the Knighton costrel is transitional between the flattened spherical or mammiform type of the medieval period,⁴ and the flask-shaped type that replaced it in post-medieval times. In technique, however, it belongs to the later series. To demonstrate the sequence, front, side and base views of the Knighton costrel are shown in fig. 40, no. 1, together with drawings of three other costrels.

The mammiform type is represented by the costrel of green-glazed white Surrey ware (no. 2) from the 15th-century kiln at Cheam.⁵ This is, however, atypical in having four small feet to steady the rounded base; usually the costrels are either entirely circular or have the base slightly flattened. Typical examples of late medieval costrels in white Surrey ware are among the products of kilns at Farnborough Hill, Surrey, excavated by Mr. F. W. Holling and Mr. J. W. Ashdown in 1968–69.⁶ These costrels are mammiform in front and flat at the back; one has a flattened base. On these costrels the wheel-marks or rilling are in the vertical plane; apparently after the body was thrown, leaving a hole in the front, the dome was completed by a separate plug as on the cylindrical costrels from Winchester.

² Dr. G. C. Dunning in report on the Mortars from Northolt, *Med. Arch.*, vol. V (1961), 282.

³ J. G. Hurst, 'The Kitchen Area of Northolt Manor', *Med. Arch.*, vol. V (1961), fig. 74, 2 and p. 279.

⁴ See my study of costrels in Barry Cunliffe, *Winchester Excavations*, 1949–60, I, 127.

⁵ *Surrey Arch. Collns.*, XXXV (1924), 86, fig. 8.

⁶ Interim report in *Post-Medieval Archaeology*, 2 (1968), p. 186. Mr. Holling has kindly shown me the costrels and permitted their mention here.

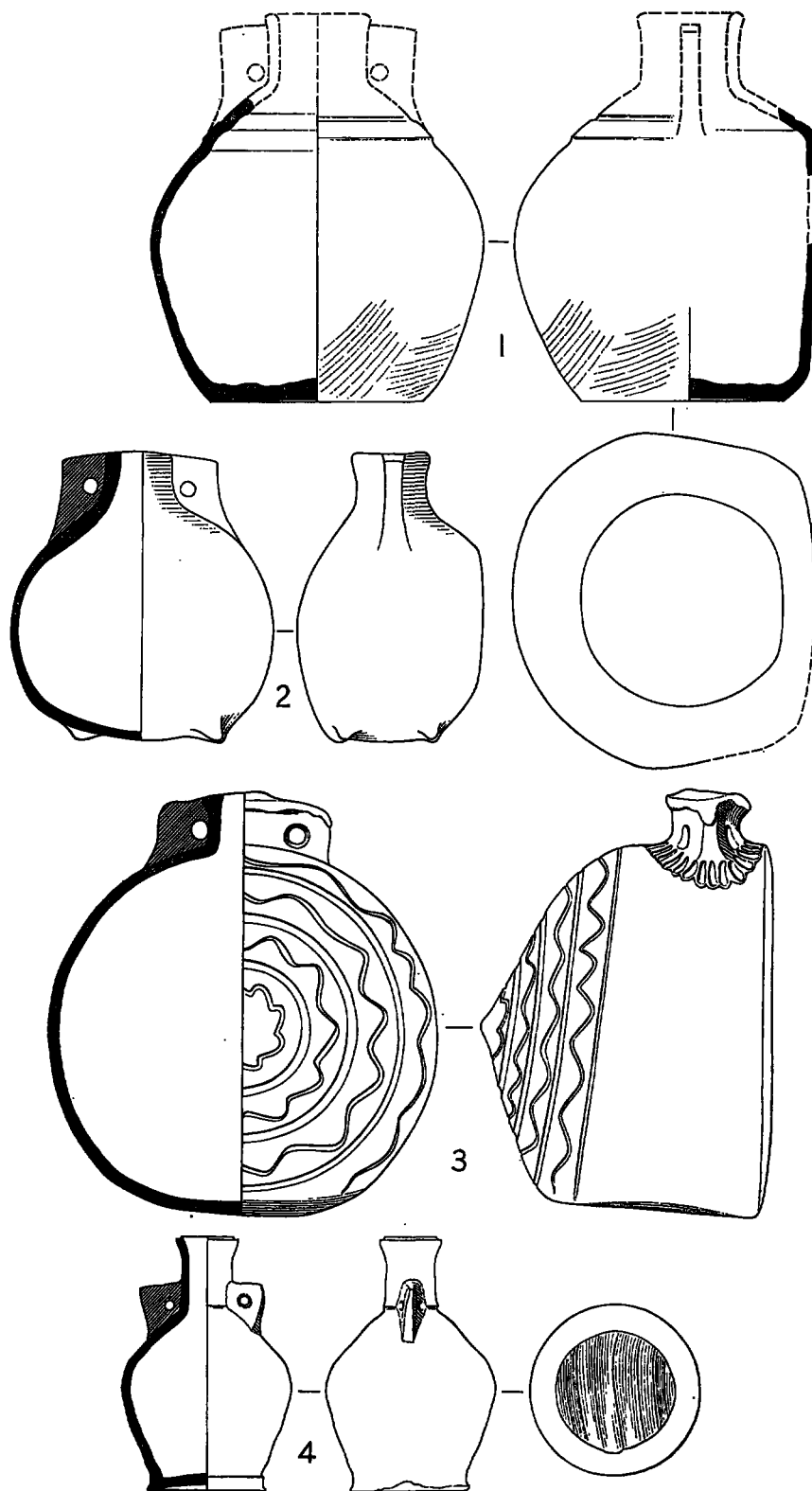


Fig. 40. Knighton Kiln. Pottery; costrel with comparative material from other kilns. Scale 1/4.

Some of the late medieval costrels of this type are large in size, for instance one 14 in. in diameter from London.⁷ Another, found near Sutton Ambien, Leicestershire,⁸ was evidently discarded at the Battle of Bosworth Field in 1485. Ambien Hill, only one mile south-west of Sutton Cheney, played a decisive part in the battle,⁹ and other equipment discarded by the defeated royalists includes 'divers of pieces of armor, weapons and other warlike accoutrements, and many arrow-heads' found near Sutton Cheney in the 18th century.¹⁰ The Bosworth costrel (no. 3) is made of highly-fired grey fabric with light red surface, partly covered by thick yellow glaze on the lugs and body. The sharply conical front carries on the mammiform shape, and is decorated with concentric incised circles and wavy lines. The large size of the costrel, 8½ in. in diameter, is appropriate for a container slung from the saddle of a horseman.

The Knighton costrel (no. 1) fits into the development at this point. Its plain, slightly domed front represents the last stage in the devolution of the mammiform type, while the flat back and side facets still recall the usual medieval form (*cf.* no. 3, side view). On the other hand, the rilling marks are horizontal and in the same plane as the base, so that the vessel was thrown in the upright position and its upper part produced by drawing up. In this change of technique, well suited to mass-production, the slightly biconical profile as seen from the front, and the flat base, the Knighton costrel anticipates the flask-like costrels in Cistercian ware of the late 15th and 16th centuries.¹¹ This form continued and became widespread in England in the 17th century.¹²

To illustrate this final stage in the series, an example in brown-glazed light red fabric from London Wall has been selected (No. 4).¹³ The pierced lugs of this costrel are peaked, thus recalling the form on medieval costrels, in contrast to the curved or even flattened shape usual at this late date. Moreover, the base shows 'cheese-wire' marks caused in removing the pot from the wheel-head.

Finally, it should be mentioned that the position and form of the lugs on the Knighton costrel were determined partly from the pot itself and partly by analogy. On the right side as seen from the front, the groove and cordon are effaced where the lower part of the lug was attached. Since the costrel occupies an intermediate place in the series, the lugs have been given the pointed shape as on other late medieval examples (*cf.* nos. 2 and 3), not rounded as on the more recent flasks.

⁷ British Museum, registry no. 1915, 12-8, 190. The front of this costrel has a bung-hole near the base, a warning that not only cisterns had this feature.

⁸ Leicester Museum, accession no. 63, 1951.

⁹ A. H. Burne, *The Battlefields of England* (1950), pp. 137 ff. and sketch-map 18 on p. 141.

¹⁰ W. Burton, *The Description of Leicester* (2 ed., 1777), p. 44.

¹¹ H. E. Jean Le Patourel, 'Pottery from Excavations at Pontefract Priory', *Publ. Thoresby Soc.*, XLIX (1964), 115-19, type 5. *Post-Medieval Archaeology*, I (1967), 19-21, fig. 6, no. 19.

¹² *Post-Med. Arch.*, I (1967), 33, fig. 12, no. 6. P. C. D. Brears, *A Catalogue of English Country Pottery in the Yorkshire Museum, York* (1968), pp. 12-13, fig. 2, types 28-31.

¹³ Guildhall Museum *Catalogue* (1908), p. 194, no. 322, pl. LXX, 7.