

◆ A medieval pottery production centre at Norlington Lane, Ringmer, East Sussex

By David Gregory

The Lewes Archaeological Group (LAG) undertook a two-year excavation programme on a medieval pottery production centre which was under threat from deep ploughing. The first year showed that a substantial deposit originating from a waster heap had been spread over the workshop remains. The second year uncovered a kiln, for which it was a priority to obtain an archaeomagnetic date. Following the excavations, the LAG instigated a programme to evaluate the pottery by using a database, and to obtain a petrological analysis of the fabrics, along with a drawing record of the pottery types. The results would help with understanding of the medieval Ringmer pottery industry, accomplish a more accurate dating for Sussex pottery, and develop our understanding of medieval kiln technology.

INTRODUCTION

The site lies within the belt of the Lower Greensand, with a shallow drift deposit of loamy clay known as Head. To the south of the site is a narrow belt of Gault Clay. It is from these clay beds that the Ringmer potters established their industry.

Ringmer had a long tradition of medieval pottery production; some field names such as Potters Field and Crockendale recall this industry. An unpublished map in the Lewes Archaeological Group's archive shows several sites of kilns around Bishops Lane and the Green area in Ringmer; unfortunately, most of the sites have no published references. One kiln excavated in 1979 (Hadfield 1981) showed carbon14 evidence of a date in the late c.12th–early 13th century. However, the documentary evidence only shows that the earliest records started from 1285, and the industry (which may also have included tilers and brick makers) lasted until 1590, with as many as eight potters being recorded in 1305/6 (Bleach 1982; Le Patoural 1968).

METHOD AND ARCHAEOLOGY

The site was discovered by a local resident, Mr Greenwood, who dug a small hole in the field opposite his house in Norlington Lane (Fig. 1). He discovered a quantity of medieval pottery in conjunction with charcoal and black clay at a depth of about 30cm. He reported his find to Barbican House Museum, which requested someone from

Lewes Archaeological Group (LAG) to go and investigate.

Over the area pointed out by Mr Greenwood it was noted that there was a large scatter of medieval pottery sherds. Three small test pits were dug five metres apart; two found the same results as Mr Greenwood. LAG decided to undertake an excavation on the original find spot, under the direction of the author, with the following aims: to find out whether the pottery was related to a pottery workshop, if so to locate the kiln, and to obtain an archaeomagnetic date. It was also hoped to establish any threat to the archaeological features from deep ploughing over the field in question.

In the late spring of 1993, an area of 8 × 6 metres was dug over the original find spot (Figs 1, 2 and 6, Trench A). Directly below the plough soil were the remains of a large medieval deposit (Context 2). This deposit lay on top of a ditch (Context 6), probably a water channel that would have been kept open during the life of the pottery workshop. The fill of this ditch produced some of the best preserved vessels, which showed a degree of sophistication not previously associated with Ringmer ware, and probably represent some of the last fired vessels from the workshop. Once the pottery workshop ceased to exist, the land was presumably used for agriculture. The first feature to be filled in was the ditch (Context 6), and the deposit (Context 2), probably from a waster heap, was used to level the site. Associated with the water channel (Context 6) were three shallow E–W gullies (Contexts 7, 8 and 9). These

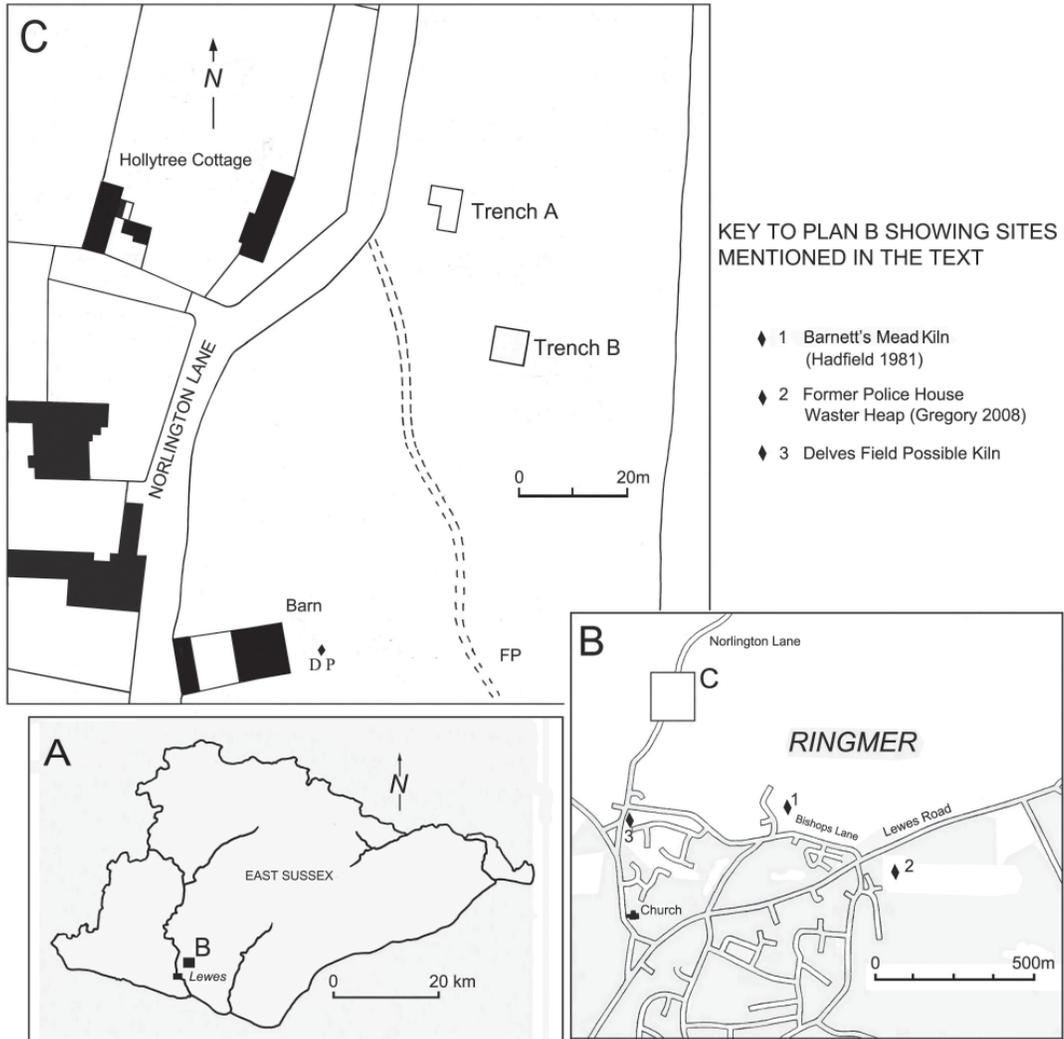


Fig. 1. Location plan showing the site in relation to the village of Ringmer.

gullies did not quite cut into the ditch, and their exact relationship is uncertain. Interpretation of this area was difficult; the gullies were either the foundations of workshops, or areas for processing the clay. However, the excavation of Trench A confirmed that this was indeed the site of a pottery workshop.

Following on from the 1993 excavation, a magnetometer survey was undertaken over the area to locate possible kilns. From the results of this an excavation was carried out over the area showing the highest readings (Figs 1, 3 and 7–9 in Trench B).

Excavation started in July 1994, with the following aims: to obtain an archaeomagnetic date for the kiln, to relate the pottery from this excavation to the pottery from the 1993 excavation, and finally to assess the vulnerability of the site to ploughing. The magnetometer survey also showed readings of another feature, possibly a boundary ditch, adjacent to the kiln. It was decided at this juncture to concentrate on the kiln and not extend the excavation.

A 6 × 6m square was dug directly over the area that showed the highest readings from the

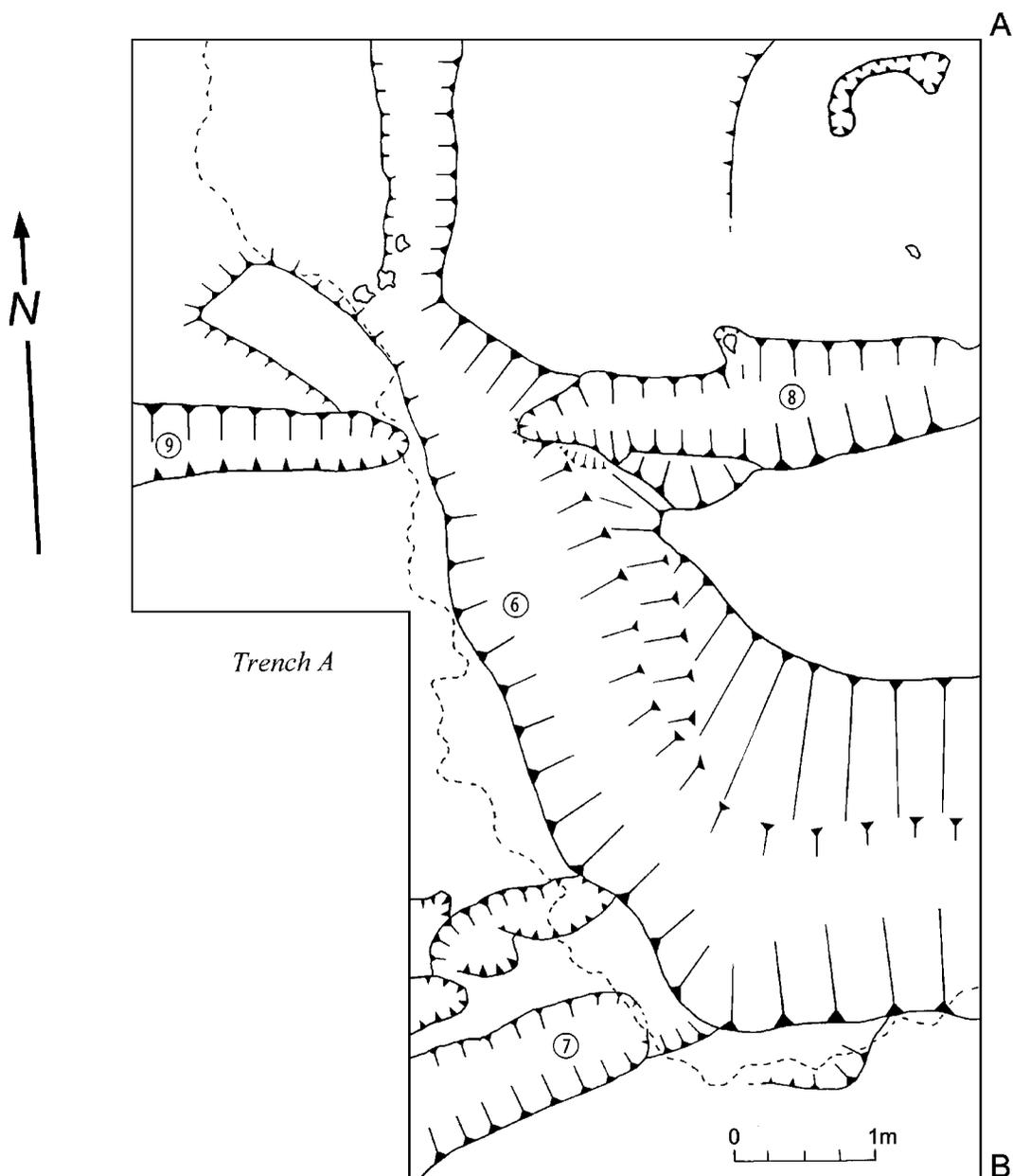


Fig. 2. Trench A shows medieval features connected to the pottery workshop. The dotted line represents the spread of the waster heap (Context 2) above the shown features.

magnetometer survey. Once the plough soil had been removed, it became evident that there was a kiln. This was indicated by large concentrations of burnt red clay, clay mixed with charcoal, and the usual masses of medieval pottery sherds. Eventually,

a dome-like feature, aligned approximately south west to north east, consisting of reworked Lower Greensand, with an oval-shaped spread of burnt clay on its upper surface, was exposed. It was left intact until Dr Tony Clark could arrive to take

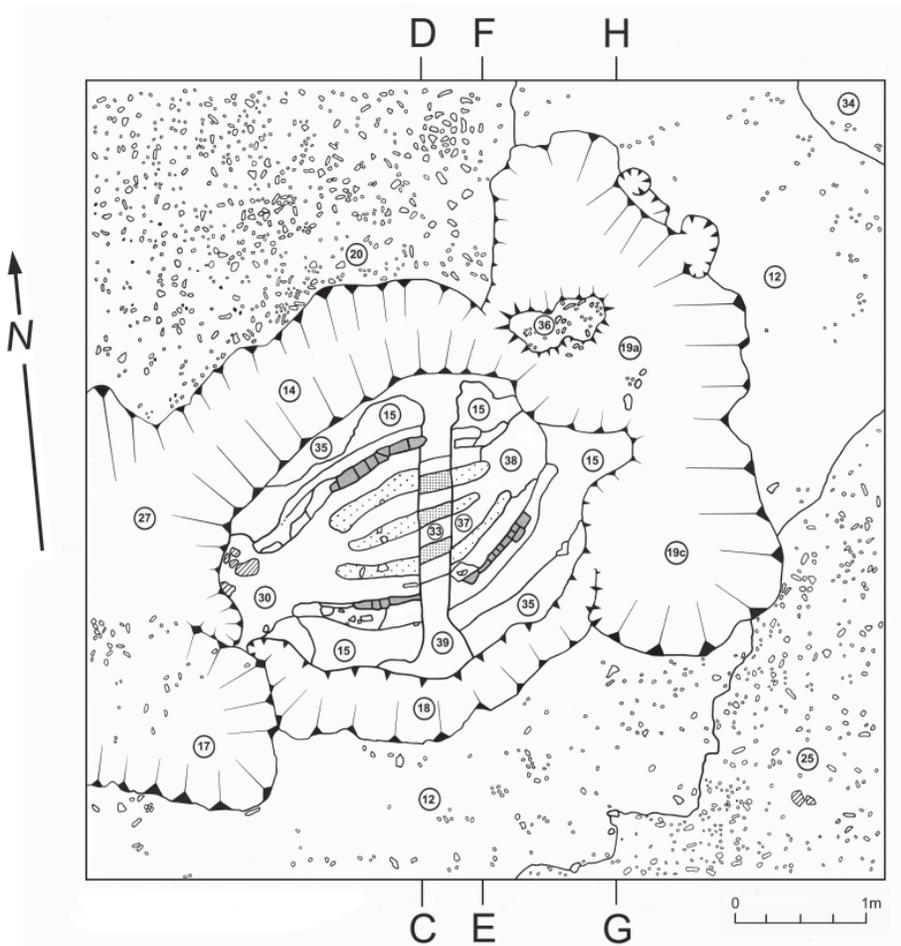


Fig. 3. Plan of Trench B showing the kiln and associated feature. See Fig. 8 for the key.

samples for archaeomagnetic dating in December, but it was clear that more than one phase of the kiln was represented. Samples were taken from the surface of Phase 2 internal kiln structure (Context 31) (Gregory 1995), and at both entrances of the kiln, and from the Period 1 kiln.

Work continued on investigating the stokeholes and other associated features (South West stoke hole, Contexts 17 and 27), (North East stoke hole, Contexts 19a, 19b and 19c), which were dug into reworked deposits of the Lower Greensand. Around the sides of the kiln and connecting the stokeholes were two gullies (North, Context 14, South, Context 18). We also found the remains of two waster heaps, one to the north of the kiln (Context 20) and the other to the south (Context

25). In the final days of the excavation, the remains of a third possible waster heap was discovered in the NE corner (Fig. 3, Context 34). The assemblage of pottery, although small, related to the Period 2 kiln. One of the problems found was identifying stratigraphy within features of mixed clay, pottery fragments and charcoal deposits.

When Dr Tony Clark was present, a half-metre section was cut through the oval feature covering the kiln. At a depth of about 20cm the remains were found of a kiln of very similar form to that encountered at Orchard Street, Chichester (Down and Rule 1971). It was also similar to the Barnett's Mead kiln (Hadfield 1981), but there were two significant differences: it was almost a metre longer, and in the Barnett's Mead kiln there was no internal



Fig. 4. The Phase 2 kiln.



Fig. 5. The Phase 1 kiln with the Phase 2 interior kiln walls removed.

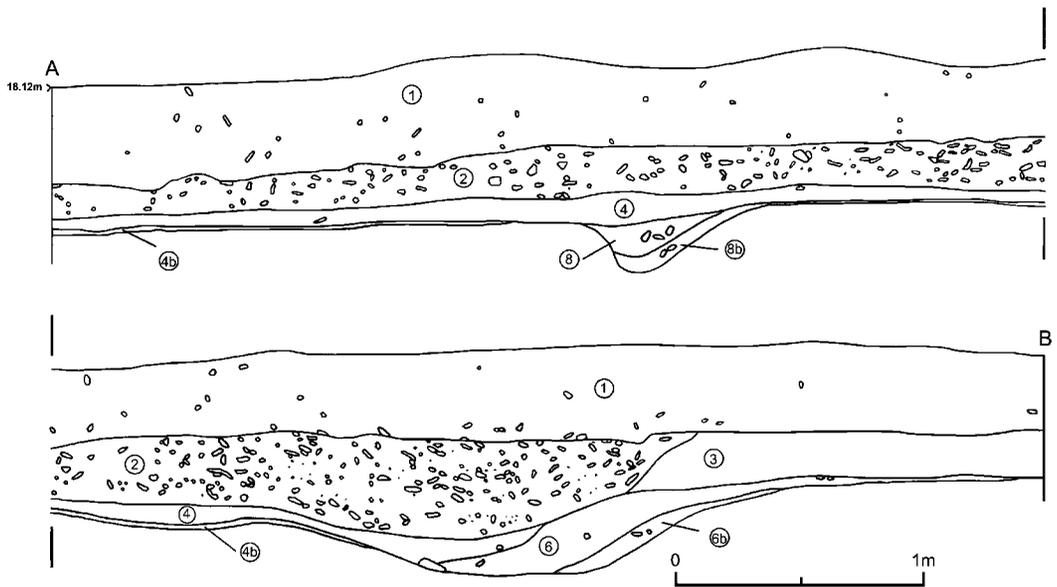


Fig. 6. Section through AB on the plan of Trench A. The section shows the relationship between the waste heap, Context 2, which was removed from another area, and the features Contexts 6 and 8.

structure (but Hadfield reported that the kiln was badly damaged).

Two periods of kiln construction were identified. Period 2 built on the internal walls of Period 1, both with the same configuration, with an internal structure of three walls (Figs 3, 4 and 5). The internal (Context 15) and external walls were made of clay, but the exterior wall was of a more sandy clay (Context 35). This was an integral part of the structure, and the whole had probably been consolidated in the first firing. The kiln was built with two opposite stokeholes, indicating

a possible sub-type 2a kiln (Musty 1974). The Period 2 kiln was slightly wider than the Period 1 kiln, and the exterior wall dates from the Period 2 construction. The kiln was made of fired clay and appeared to have been initially supported on a wattle or wicker superstructure before it was fired for the first time. Several fragments of burnt clay from the kiln structure showed evidence of a lattice pattern caused by the fabrication of an organic material. At 0.1m a shelf was built with a course of tiles on top, which would have been used to support firebars or similar. However, there was no

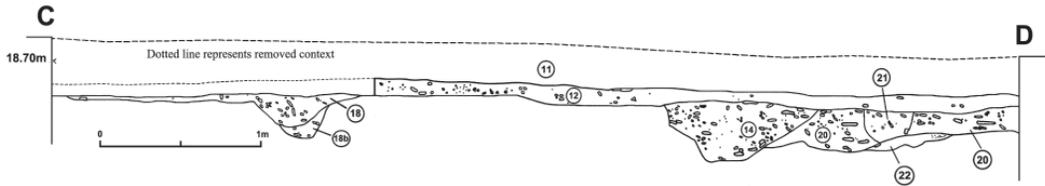


Fig. 7. Section through CD on the plan of Trench B. The section shows the profiles of the gullies. Contexts 14 and 18 to the south and north.

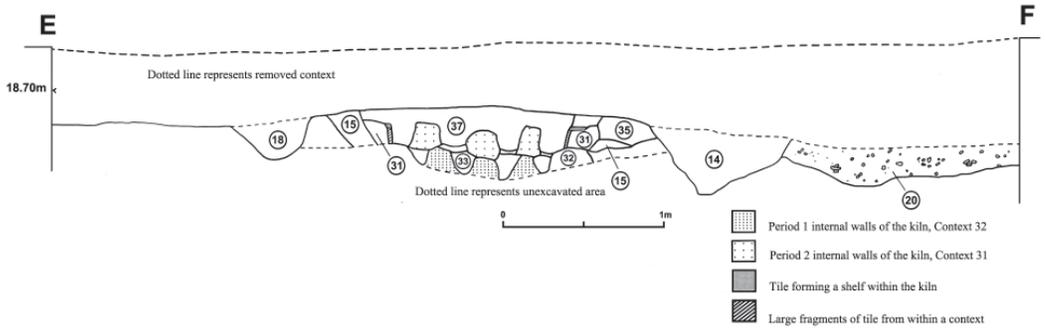


Fig. 8. Section through EF on the plan Trench B. The sections shows details of the Period 1 kiln with the Period 2 kiln built directly on top of it.

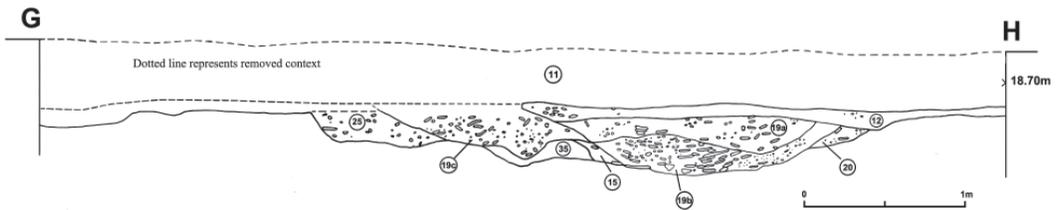


Fig. 9. Section through GH on the plan of Trench B. Section shows the eastern stokeholes Contexts 19 and 19c.

evidence of firebars from the site (fragments were found at the Chichester kiln) and in all probability tile fragments were used instead. Certainly several tiles were found from Context 2 in Trench A with concentrations of globules of degenerated glaze on both surfaces.

A channel had been deliberately cut through the middle of the Period 2 kiln (Context 39). This was part of the original construction, not later damage; the ends of the internal walls were neatly finished off, an innovation that did not apply to the Period 1 kiln. It may have facilitated clearing out ashes during or after firing, or to allow more air (oxygen) in during firing.

A lot of the pottery found associated with the Period 1 kiln was very different from the pottery found in the watercourse (Trench A, Context 6). This pottery was very similar in type to the pottery

found at Barnett's Mead (Hadfield 1981), and is the kind normally associated with Ringmer ware. At Norlington it is represented as mainly Fabric 4, and usually all the sherds are highly oxidised. A crucial difference between the wares from the two kilns is that the Period 2 products had been fired to a higher temperature. The Period one kiln used mainly an oxidising atmosphere, whereas a large proportion of the sherds showed evidence that a reducing atmosphere was used in the Period 2 kiln (Newell 1998–99). This marked difference in the pottery allowed us to establish a sequence of events for the construction of the various features, and assign them to either the Period 1 or Period 2 kiln.

There did not appear to be any major difference in the construction of the two kilns, with the exception of the channel cut in the Period 2 kiln. Analysis of the pottery from the

south west stoke holes showed that Context 27 was from the earlier kiln (69% of Fabric 4). In Context 17, Fabric 4 made up only 12% of the assemblage. Conversely, on the north eastern side of the kiln, the stokehole Context 19c relates to the Period 1 kiln and Contexts 19a and 19b relate to the Period 2 kiln.

Surrounding the kiln were two gullies. Pottery finds from the northerly gully (Context 14) consisted of 70% Fabric 4 sherds, and the southerly gully (Context 18) had 70% Fabric 4 sherds.

POTTERY REPORT

METHODOLOGY

Because the pottery assemblage was so vast – 114,268 sherds were recovered – it was decided to sort through Context 2, 11 and 12 deposits and simply record those sherds without any identifiable features as a whole figure. Thus, from Context 2, 68,950 sherds were not examined in any detail and were simply weighed and counted. A similar method was used for Context 11, 4320 sherds, and Context 12, 3380 sherds. The remaining 36,812 sherds in the assemblage were recorded on a database but unfortunately, as this software had not been upgraded to be read on the Microsoft XL platform, the finished database had to be transferred to Microsoft Excel, resulting in the loss of some 7000 individual comments on the pottery record. One of the consequences was that it was impossible to identify the quantities of definite waster sherds, though it was noted that in all the contexts, concerning most of the fabrics, there was evidence of blow-outs, in which a large portion of the vessel's surface is blown away. This was probably the most common case, followed by several incidences of misshapen vessels, and there was some slight evidence of under-fired vessels. Sooting was also noted in the comments on the pottery record. It was rare, and probably occurred during the firing process, but a very few could have resulted from domestic use; one example of this was noted (Fig.12, No. 24). The above-mentioned sherds from 2, 11 and 12 were buried close to the site with lead context markers, shown on the plan (Fig. 1c) as DP. The remainder of the assemblage is stored at Seaford Barn Store, Alfriston Road, Nr. Seaford. All drawn artefacts will be offered to the SAS.

Weight was calculated by weighing vessel parts in each context. The combined weight of the 36,812 sherds was 810,974 grams.

For this report, EVEs (estimated vessel equivalents) are not used. It became evident early on that, with the large number of rim types found in some of the contexts, it would be too unwieldy to convert these rims to whole vessels, but in all cases rim percentage was recorded. Because of the large quantities of sherds recovered, it was difficult to reflect the assemblage by means other than sherd count and weight. Table 1 shows all the pottery fragments recovered in the contexts listed. Only Fabrics 1 to 4 are listed, these being the main categories relating to the recovered pottery.

In this report the term 'wide-necked jars' is preferred to the more common name of cooking pots; all pottery vessel descriptions conform to classification as in the Medieval Pottery Research Group's guide (M.P.R.G. 2001).

The ratio of Fabric 4 pottery in both is therefore similar, and it is probable that these features are contemporary with the construction of the Period one kiln.

Adjoining the kiln were the remains of the two waster heaps, Contexts 20 and 25, of which only the lower parts had survived. As a result, the proportion of Fabric 4 pottery was fairly high, the waster heap directly to the North (20) containing 49% Fabric 4, while that to the South (25) contained 65% Fabric 4.

FABRICS

Fabric 1

Abundant sand inclusions, well sorted, average size 0.2–0.3mm, with smaller abundant quartz inclusions in the matrix, along with occasional larger quartz inclusions up to 1.00mm, also mica flecks and iron mineral inclusions. Hard and well fired, with a fairly rough feel, colour of the core is generally light grey and the surface orange, reduced grey varieties being common.

Fabric 2

This fabric is fundamentally the same as Fabric 1, with the difference that it has probably been fired to a higher temperature. Very hard and well fired, slightly rough feel, colour of the core is often dark grey with some thick orange margins, the surface being reduced grey to dark grey. Frequently used in the manufacture of jugs.

Fabric 3

Very well sorted and abundant sand inclusions, average size 0.1mm, with occasional larger quartz, and flint inclusions up to 0.5mm, mica flecks, and tiny limestone inclusions. Very hard and well fired, generally a smooth feel. Colour is often harmonious throughout, ranging from orange to grey, with little or no different core colour.

Fabric 4

Fairly well sorted sand inclusions, average size 0.4–0.8mm, also tiny inclusions of quartz in the matrix, along with frequent angular flint inclusions 0.5–1.8mm. Matrix includes mica flakes and occasional iron minerals. Hard but medium fired, rough feel. Colour ranges from an overall orange/red, through oxidation in the firing process, to a grey surface with a light grey core.

Fabric 5

Roughly sorted sand inclusions up to 2.0mm, along with large flint inclusions 1.0mm in size, also abundant quartz grains, mica and possibly feldspar in the matrix. Medium fired, very rough feel. Grey surface with dark grey core. Only eight fragments recovered, unlikely to be a product of the Phase 1 or 2 kiln.

Fabric 6

Medium sorted sand inclusions, average size 0.8mm, some extending to 1.5mm, with smaller quartz inclusions 0.3–0.4mm and rare tiny mica fragments. Medium fired, fairly rough feel, orange/brown surface with a dark grey core.

Table 1. Illustrates the four most frequently found fabrics and their percentages within those contexts. Fabric 1 is more commonly associated with the Phase 2 kiln, and Fabric 4 is usually found in Phase 1 contexts.

	Context	Fabric 1	Fabric 2	Fabric 3	Fabric 4	Total sherds for Fabrics 1–4
Phase 2 contexts	1	32%	19%	41%	8%	37
	2	52%	6%	10%	37%	20,654
	3	52%	3%	23%	22%	431
	4	74%	2%	19%	5%	1273
	6	41%	2%	53%	4%	1483
	7	69%	2%	16%	13%	45
	11	44%	4%	22%	30%	1635
	12	49%	4%	31%	16%	2563
	17	62%	8%	18%	12%	2563
	19	47%	1%	9%	43%	1075
	20	49%	0%	2%	49%	1048
	30	48%	0%	52%	0%	21
	34	56%	2%	3%	7%	46
	Phase 1 contexts	14	25%	2%	3%	70%
18		23%	1%	6%	70%	540
25		29%	0%	6%	65%	544
27		29%	0%	2%	69%	420
31		21%	0%	1%	79%	80
34		9%	0%	0%	91%	229
All contexts		51%	5%	30%	14%	35,197

Twenty four fragments recovered, unlikely to be a product of the Phase 1 or 2 kiln, but the number would suggest a kiln source within close proximity.

Fabric 7

Very well sorted sand inclusions, 0.1mm and smaller in size, and some flint 0.3mm, occasionally extending to 1.5mm. Very hard and well fired, smooth feel, orange surface and thin margins with a light grey core. Overall 108 fragments recovered. This fabric is usually associated with the floor tiles, Phase 2 kiln.

Fabric 8

Medium sorted sand inclusions 0.2–0.7mm, with smaller quartz grains in the matrix, along with rare flecks of mica, iron minerals, and rare flint inclusions 0.4mm. Very hard and well fired, fairly rough feel. Colour is usually brown/red surface and either a grey or an oxidised red core. Usually associated with tiles; 1210 fragments were identified, probably associated with both Phase 1 and 2 kilns.

Fabric 9

Abundant relatively medium sorted sand inclusions 0.3–0.4mm, with occasional grains extending to 0.8mm. Also in the matrix tiny quartz fragments along with occasional large flint inclusions 0.5–1.5mm. Medium fired, fairly rough feel. Brown/red surface, with a grey core. A rare fabric, only nine

Table 2. Identified pottery forms showing comparisons between Phase 1 and Phase 2 deposits.

Pottery forms	Phase 1 pottery		Phase 2 pottery	
	No. of sherds	%	No. of sherds	%
Wide-necked jars	675	50%	1637	35%
Bowls	106	8%	425	9%
Uncertain, either wide-necked jars or bowls	139	10%	269	6%
Large wide-necked jars	36	3%	75	2%
Small necked jars			5	
Jugs	85	6%	1683	36%
Skillets	5		12	
Curfew lids	2		7	
Aquamaniles			1	
Pipkins			1	
Chimney-pots	10	1%	22	1%
Roof tiles	290	22%	398	9%
Brick or hearth tiles			99	2%
Floor tiles			21	
Identified vessel totals	1348		4655	
Number of sherds represented	2452		7368	
Total weight of sherds represented	115,744gm		325,555gm	

fragments identified, and probably not associated with the Phase 1 or 2 kilns.

Fabric 10

This fabric was not included in the petrological report, as it was identified only later on in the pottery analysis. Abundant roughly sorted sand inclusions 0.5–1.0mm in size, with occasional large flint inclusions 0.5–1.5mm. Medium fired, rough feel. Colour red/brown surface with an orange or grey core. A tile or brick fabric, only 256 identified fragments, a majority of sherds found in contexts associated with the Phase 1 kiln.

For a detailed appraisal of the petrological analysis of the fabrics, refer to the ADS supplement, Petrological Report by K. Knowles. For specific details of the kiln phases which fabrics 1–4 were identified, see Table 1.

PHASE 1 POTTERY

The deposits

Phase 1 deposits are represented by contexts 14, 18, 25, 27, 31 and 34 (see Table 1). The associated Phase 1 pottery consists of 2452 sherds, with a weight of 115,744 grams. This material is fairly easy to distinguish from the Phase 2 pottery, having usually an oxidised cork-like appearance and feeling softer than the Phase 2 pottery. In all the above contexts, intrusive Phase 2 pottery was present, generally at the interface of

deposits. Phase 1 pottery shows a lot of similarities with the pottery recovered at Barnett's Mead (Hadfield 1981) and Delves Field excavated by LAG in 1973. All these fabrics are similar in appearance and colour, ranging from red to salmon pink, and are commonly referred to as Ringmer ware.

Table 2 shows the totals of identified pottery forms found in the contexts listed in Table 1. They also include probable examples; the only exception is for wide-necked jars or bowls, which could have been either vessel type. The data does not necessarily reflect the potters' output of vessel types, but the percentages do give some indication of the rank of the products produced at the workshops. Wide-necked jars are the most prominent in Phase 1, being used for both cooking and storage. Next in volume of Phase 1 wasters are tiles, indicating that the potters must have produced large numbers of tiles for local use. Chimney-pots also formed a small proportion of the workshops output, 10 examples. Bowls are the next most common form; it is surprising that the volume is greater than for jugs, but it could be just an anomaly of these contexts. Finally, skillets, cisterns and curfew lids make up the remainder of this assemblage. Only one pipkin fragment occurred in the whole of the Fabric 4 identified vessels, from context 12, so it is probable that these vessels did not figure in the workshop's range of products at the time.

Decoration

The decoration on Phase 1 pottery was fairly simple. Only 16 examples of wide-necked jars, and seven bowls, had thumb-impressed strips of clay applied. The 18 examples of pricked holes on the rims of wide-necked jars, and 9 examples on bowls, demonstrate that bowls and wide-necked jars were treated in a similar way. Six examples of rims with an incised wavy line were recovered; three of these are of Fabric 1, and probably intrusive, and three are Fabric 4, so it is possible that this decoration was used at this period. Five bowls also had thumb-impressed decoration on the top surface of the rim. Another form of decoration noted on the Phase 1 vessels was wheel-rouletting, but only on the rim vessels.

Glazing occurred on 121 fragments. The largest volume was found on jugs, 44 examples. Eleven bowl fragments were recorded with an internal glaze. Twenty-four tile fragments showed evidence of glazing, eight being from definite ridge tiles; it is possible that the other 16 tile fragments were also the remains of ridge tiles. It would be unusual to have plain roof tiles intentionally glazed. The glaze on 98% of these examples ranged from light to dark green, the other 2% being dark brown examples on Phase 2 jugs, most probably intrusive.

Wide-necked jars

Of the Phase 1 wide-necked jars 633 examples were identified and demonstrated different rim types; eight main types are shown in Table 3. The types are illustrated in Fig. 10.

Diameter size of the vessels did not seem to make any difference to a particular rim type, 16cm being the smallest size (3%). The average size appeared to be 20cm (47%), and 18 cm (22%) and 22cm (19%) were also common. The largest, at 26cm (2%), and 28cms (1%), are from storage vessels. A single vessel appeared to have a diameter of 34cm, but with large diameters, unless a large percentage of the vessel remains, distortion of rims can lead to inaccurate measurements.

Bowls

The 166 bowl rim fragments identified had a very similar

Table 3. Proportions of rim types of wide-necked jars and bowls.

Wide-necked jar and bowl rim types	Wide-necked jar rim sherds	Bowl sherds
1	161	38
5	1	1
6	232	22
11	6	
24	15	1
25	211	1
51		1
54		5
Total number of sherds	626	69

Table 4. Frequency of bowl rim diameters.

Bowl rim diameters (cm)	Number of sherds
18	1
20	4
22	1
24	5
26	9
28	5
30	11
34	9
36	3
Total number of sherds	48

pattern of rim types to that of the wide-necked jars, with the exception of rim type 25. Rim diameters appeared not to have any relation to rim types, as was the case with the wide-necked jars, but Table 4 shows that the rim diameter pattern is more complex for bowls. The quantity of bowl rims in the 30–32cm group suggests that this is a measurement that the potters wanted to achieve.

Jugs

Phase 1 jug rims were very sparse, with only four identifiable rim types and 11 jug rims to analyse. Rim type 13 (Fig. 10) was the most prominent, with six examples. Other rim types present were rim type 12–1, rim type 16–2 and rim type 57–2. In total there were four diameters of 8cm and ten of 10cm.

Bases

Types 1 and 2 are the most numerous, and can be related to both wide-necked jars and bowls, most with a diameter of 22cm. Type 32 probably relates to bowls, as suggested by the average diameter of 26cm. Types 73 and 74 relate to thumbbed or frilled bases, and in most cases would belong to jugs. Type 74 is the same as Type 73, but used for bases where the decoration was not continuous around the whole of the base (Fig. 10). However, the diameters of these bases are notoriously difficult to measure accurately, especially if only a small percentage of the vessel remains. Only Type 73 is represented in Table 5. The round thumb-impressed base appears to be the only type of decoration employed in Phase 1, in contrast with the wide variety of base decoration used

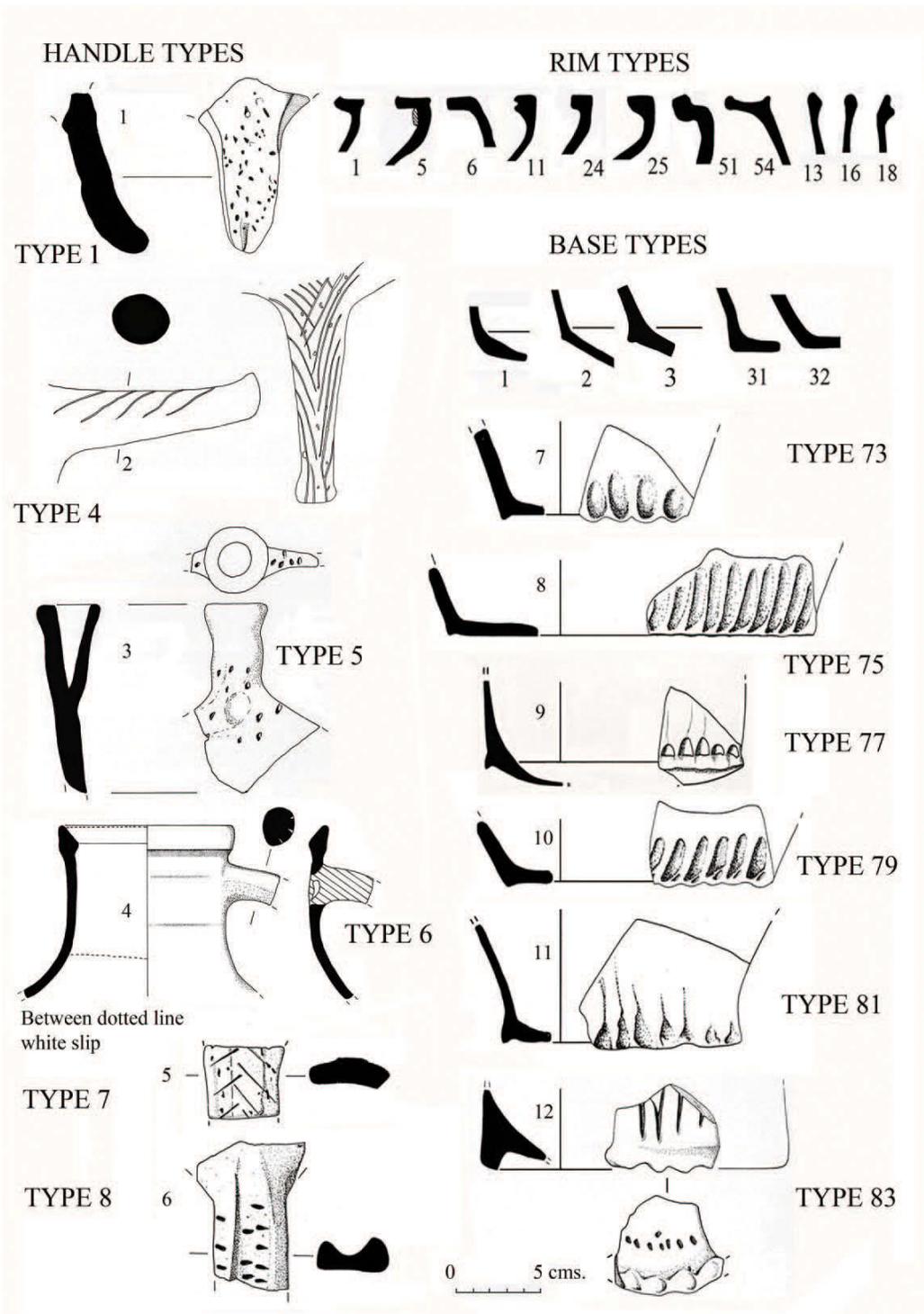


Fig. 10. Vessel types that relate to numbered rim types, base types and handle types mentioned in the text. Details of drawings 1-12 can be found in the descriptions in the catalogue.

Table 5. Significant base types in relation to diameters for all vessels from Phase 1 (Fig. 10).

Base types	Base diameters in centimetres										Total sherds
	18	20	22	24	26	28	30	32	34	36	
1	1	20	33	1							55
2	4	36	55	21	27	7	5	4	2	4	165
3	1		3	4	1						9
31		1	2	1	1			2	4	2	13
32			1	5	7	4		2	2	2	23
73	1	3	3		1	1					9
Total sherds	7	60	97	32	37	12	5	8	8	8	274

on the Phase 2 vessels. Type 83 is an unusual base shape, perhaps used for the bases of Chimney-pots; only three base diameters were obtained for these vessels, 36, 34 and 24 cm.

Handles

Altogether 18 handles were noted in the Phase 1 contexts represented. Types 2, 4 and 5 were not common, with only one piece of Type 6, a rod circular section handle (Fig. 10). Type 7 is a simple strap handle with five examples measuring between 26mm and 45mm across. Type 8, a grooved strap handle, is represented by handles measuring between 28 and 50 mm across.

Type series for vessels mentioned in the text

Catalogue (Fig. 10)

1. Type 1 handle (Pulled Handle). Context 4, Fabric 1, Phase 2 kiln. Dark grey interior, dark orange with grey underside or exterior, core dark brown. A profusion of stabbing over the surface of the handle.
2. Type 4 handle, possibly from a pipkin (Straight Rod Handle). Context 3, Fabric 1, Phase 2 kiln. Light brown handle and orange interior of the bowl, grey core. Evidence of a yellow glaze on the remains of the bowl interior.
3. Type 5 handle from a skillet (Socketed Handle). Context 35, Fabric 4, buff /brown exterior and interior. Grey/brown core. Hollow handle with slight thumb indent at the base.
4. Type 6 handle (Rod Handle). Jug rim, neck and remains of a rod handle, Context 2, Fabric 3, Phase 2 kiln. Drawing shows how the handle was attached to the body of the jug. Dark grey exterior and interior, dark orange core, dark green glaze exterior. White slip on the interior of the neck.
5. Type 7 handle, jug strap handle fragment (Strap Handle), Context 2, Fabric 1, Phase 2 kiln. Buff/brown exterior and core. Fairly hard and well fired, oxidised surface. Fairly coarse. Wheel-thrown.
6. Type 8 handle (Grooved Strap Handle). Jug strap handle fragment, Context 2, Fabric 3, Phase 2 kiln. Buff/brown exterior and core. Fairly soft fabric, not very well fired. Wheel-thrown with a central groove.
7. Type 73 base (Frisled Base, Thumbed). Jug base fragment, Context 2, Fabric 1, Phase 2 kiln. Orange to brown exterior, orange/brown interior. Grey core.
8. Type 75 base. Jug base fragment (Frisled Base, Drawn Down Thumb or Finger), Context 2, Fabric 3, Phase 2 kiln. Salmon pink to buff exterior, grey buff exterior and glazed dark green.

9. Type 77 base (Frisled Base, fingernail). Jug base fragment, Context 2, Fabric 1, Phase 2 kiln. Light orange exterior, and interior, light grey core.
10. Type 79 base (Frisled Base, Flat Knife Blade). Jug base fragment, Context 2, Fabric 1, Phase 2 kiln. Red/orange exterior, dark grey interior, grey core. Some evidence of dark-green glaze.
11. Type 81 base (Frisled Base, Drawn Down Knife Point). Jug base fragment, Context 2, Fabric 1, Phase 2 kiln. Pink/buff exterior and interior, grey core. Trace of green glaze, knife decoration on the base.
12. Type 83 base, uncertain vessel. Context 18, Fabric 4, Phase 1 kiln. Buff/orange exterior and interior, buff /yellow to grey core, well oxidised and fairly soft.

Phase 1 pottery shown in Fig. 11 is represented only by contexts that are reasonably certain to have originated from the Phase 1 kiln. All are Fabric 4.

Catalogue (Fig. 11)

13. Wide-necked jar fragment, Context 3. Orange exterior, yellow/orange interior and grey core.
14. Wide-necked jar fragment, Context 18. grey throughout.
15. Wide-necked jar fragment, Context 18. Buff/orange with some grey area on the exterior. Interior buff/orange, same for the core. Very crudely made and misshapen, possibly made by a child.
16. Bowl, Context 16. Buff/orange exterior and interior, grey core. Very oxidised and fairly soft.
17. Skillet, bowl rim, body, base and handle, several fragments, Context 16. Orange to buff orange throughout. Fairly hard and sandy and fairly coarse.
18. Jar, Context 33. Light-brown exterior, interior and core. Reasonably hard, very sandy fabric. fairly coarse.
19. Jug handle, Context 16. Buff/red exterior and interior, oxidised red core. Stabbed with wide broad instrument. No evidence of glaze. Coarse ware jug, handle in two fragments.
20. Chimney-pot, top of vent fragment, Context 18. Buff top to buff/orange sides, buff orange interior, oxidised throughout.

PHASE TWO POTTERY

For this report Phase Two pottery is represented by Contexts 3, 4, 6, 7, 17, 19, 30 and 34 (Figs 12–20): a total of 7368 sherds with a weight of 325,555 grams.

The ratio of vessel types produced at the workshop is very similar to that of the Phase 1 pottery (Table 1), with the exception of jugs. The predominance of jugs was also

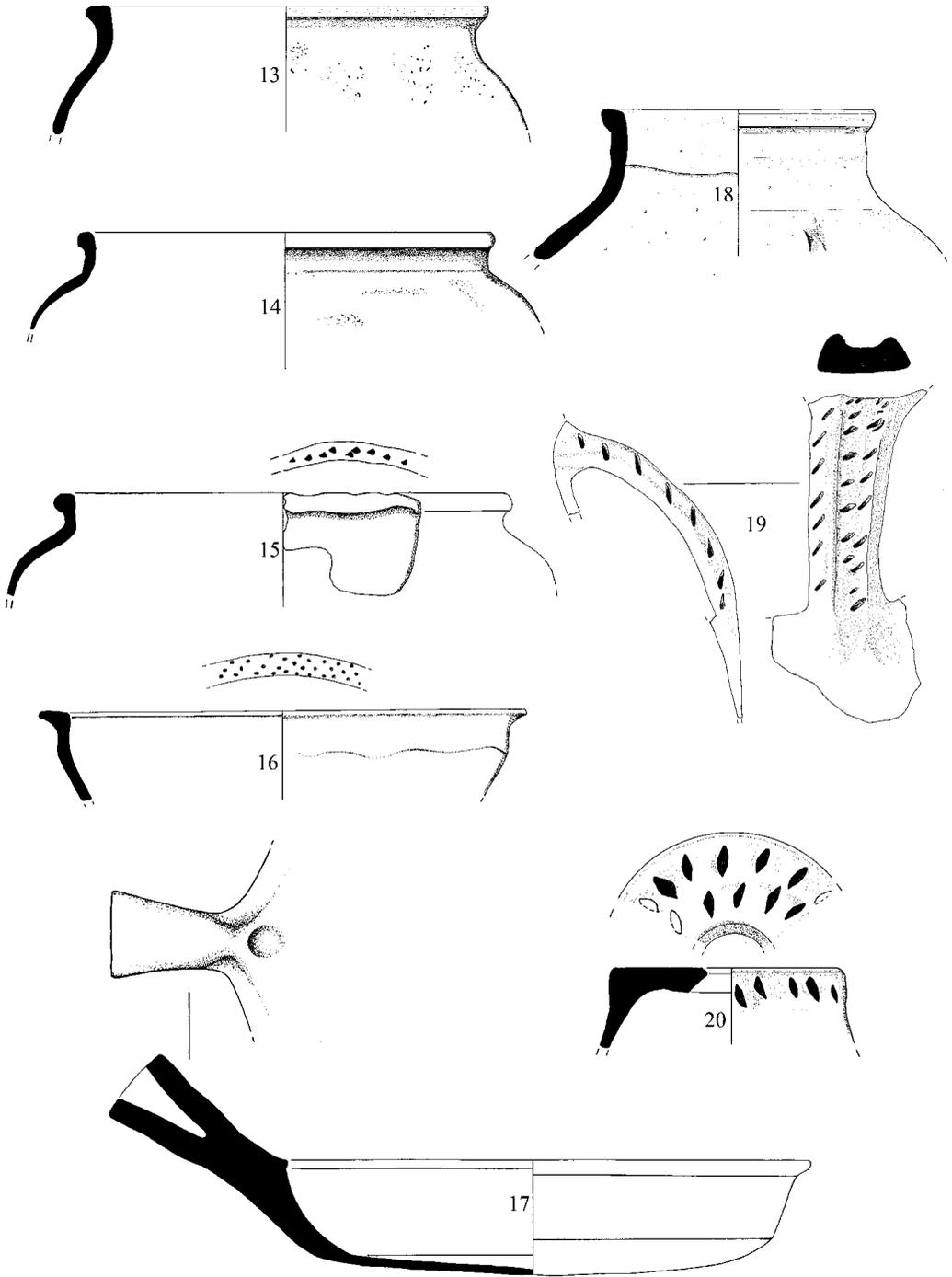


Fig. 11. Fabric 4 vessels from the Phase 1 kiln.

noted at the Laverstock kilns, with a date range similar to that of the Norlington kiln (Musty, Algar and Ewence, 1969, 111). The range of products was increased to include items such as aquamaniles, but these vessels always constituted a minority of the workshops output. Floor tiles and bricks/hearth tiles showed up significantly for the first time in the assemblage. These products were not totally absent from the Phase 1 workshop, but they didn't register during the current work. It appears that the roof tile output was reduced in the Phase 2 workshop.

Decoration

One of the marked differences between Phase 1 and 2 pottery is the sophisticated use of glaze in the Phase 2 workshop. Whereas light green glaze was the predominant medium used in Phase 1, various colour glazes were used in the Phase 2 products, and sometimes a combination of coloured glazes was used to create a pattern. Dark green was the most usual glaze colour, but dark brown, orange and yellow were also found in various hues. At this period a white slip was a common feature, on the upper inside surface of the jug's neck, a characteristic totally absent on the Phase 1 jugs.

Many of the jugs had a frilled base, showing a wide variety of decoration, the most frequent being thumb- or finger-impressed, sometimes in a continuous band, or in a grouping on larger vessels; some of the latter may not be jugs. The finger used was occasionally very small, which would suggest that children or women were employed in this aspect of production. More rarely, a knife or tool had been used for the frilled base, and at times a thumbnail drawn down towards the base.

Another decorative feature applied to jugs was mould-stamping, where a mould is held against the wall of the vessel, and the clay is pressed into the mould. The most frequently found was a daisy-type flower, or more rarely an ear of wheat.

Rims on both wide-necked jars and bowls had a variety of applied decoration, including the wheel-rouletting found on the Phase 1 pottery.

Wide-necked jars (Figs 12–13)

By far the most frequent rim type identified was Rim Type 1: 301 examples with a diameter that could be measured. Rim Type 6 was represented by 94 sherds with a measurable diameter, and also showed a significant total (Table 6 ADS Supplement). On these two rim types a 20cm diameter was the most usual (175 examples of a total 395 rims). Even in the remaining rim types, with 35 sherds, the 20cm diameter occurred in 15 cases. This is the same result as that for the Phase 1 wide-necked rims. The other notable feature found with the Rim Type 1 pottery was the frequency of the wavy line decoration on the top of rim, which occurred in 24% of the rims.

Bowls (Figs 14–15)

Some 421 bowl fragments were identified as either certain or probable. Of these, 187 were Rim Type 1, and 36 were of Rim Type 6. Of the 225 vessels with a diameter that could be measured (see Table 7, ADS Supplement), 32cm was the most common (36% of the rims). Fabric 1 accounted for 78% of the bowls, the remaining 22% being made up of Fabrics 3 and 4 in nearly equal proportions. A majority of bowls had some sort of decoration, on the rim, on the external surface, or glazing. The most frequent was the wavy incised line on the rim;

of the 173 identified decorated fragments 111 were decorated in this way. Various other types of rim decoration were used including roller rouletting, as found on the Phase 1 pottery. Glazing on the internal surface was also fairly common, with 153 examples being recovered. Much rarer was external glazing, with only 15 examples. Dark green was fractionally the most used colour, rather than the light green, and there were also seven examples of orange and two of brown glaze.

Jugs (Figs 16–18)

Of all the identified forms from the contexts used for the Phase 2 pottery, jugs were the dominant vessel type (1683 sherds). Fabric 1 (466 sherds), Fabric 2 (201 sherds) and Fabric 3 (986 sherds, 58%) were the most common types, the 30 Fabric 4 sherds probably being residual Phase 1 sherds. As mentioned under *decoration*, mould-stamping along with incised lines was a common form of decoration, 96 examples of the daisy stamp motif being noted. The most frequent form of decoration was use of incised lines (242 sherds). Six examples of two glaze colours making a pattern on jugs demonstrate that the workshop was intent on producing quality, attractive items, rather than just functional vessels. Altogether 1324 jug fragments were found with glaze, representing 79% of the identified jugs (see Table 8 ADS Supplement).

A dark green glaze was the most favoured colour on the jugs, but the ferrous dark brown, and sometimes almost red, glaze was also very popular. The white slip applied to the interior of jug necks was of frequent occurrence; this is shown separately in Table 8 because another glaze colour was often found on the exterior.

Jug rims that could be identified numbered 157, Rim Type 13 being the most frequent (44 examples), followed by Rim Type 16 (25 examples) and Rim Type 18 (14 examples). As with the wide-necked jars, rim types appeared not to make any difference to the rim diameter, but 10cm was the most frequent for all rim types (49%), 8cm being the second most frequent (28%). One rim was found to measure 16cm, and the fact that 10% of the rim survived means that this is a reasonably accurate figure and large jugs were also being produced.

There were 259 identified jug bases. Bases without any embellishment make identification of a plain jug base difficult; only four specimens of plain bases could be reasonably identified as jugs. Jug bases can be fairly large, so examining base diameters would not help. Frilled bases can reasonably be associated with jugs (Table 9 ADS Supplement), but one instance of a large storage vessel with knife-impressed frilling on the base (Fig. 13, No. 34) shows that this isn't exclusively the case. By far the most frequent frilled base found was Base Type 75 (Fig. 10), the thumb or finger drawn down towards the base.

There were 120 fragments of jug handles, rod handles being the most numerous (80 examples in total: 67%). No clear pattern emerged from looking at the rod diameters, 35mm being the thickest and 25mm the most common. There were 40 fragments of strap handles. All the handles were pricked or stabbed to reduce the likelihood of damage in the firing process in the kiln; in fact, any large or thick body of clay was treated in this way. Rod handles tended to be stabbed with either a nail-like implement or a very thin-bladed knife. Strap handles tended to be stabbed with a thicker-bladed implement, the stabbing being more prominent and usually in some form of pattern. All the strap handles examined were

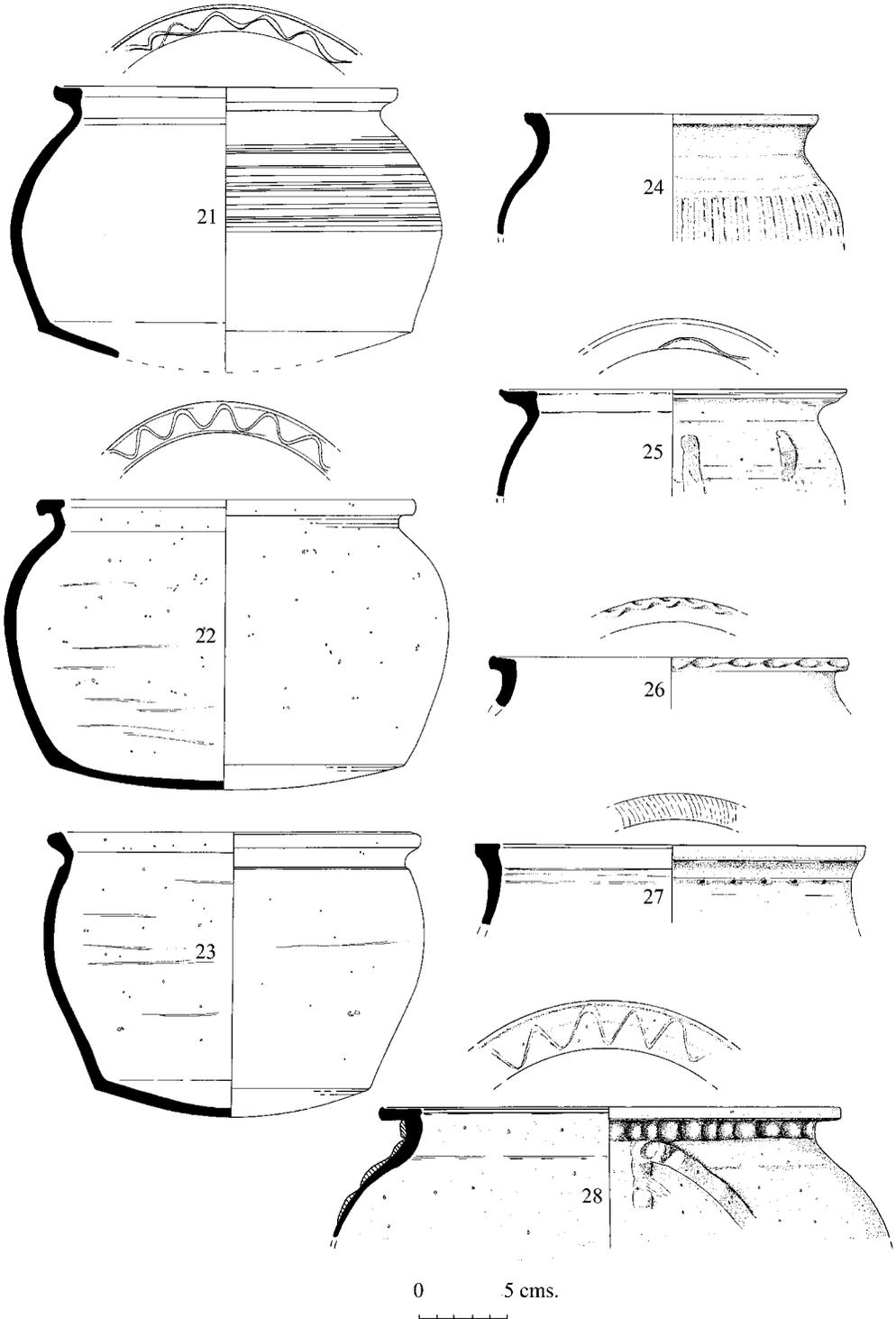


Fig. 12. Wide-necked vessels, Phase 2 workshop.

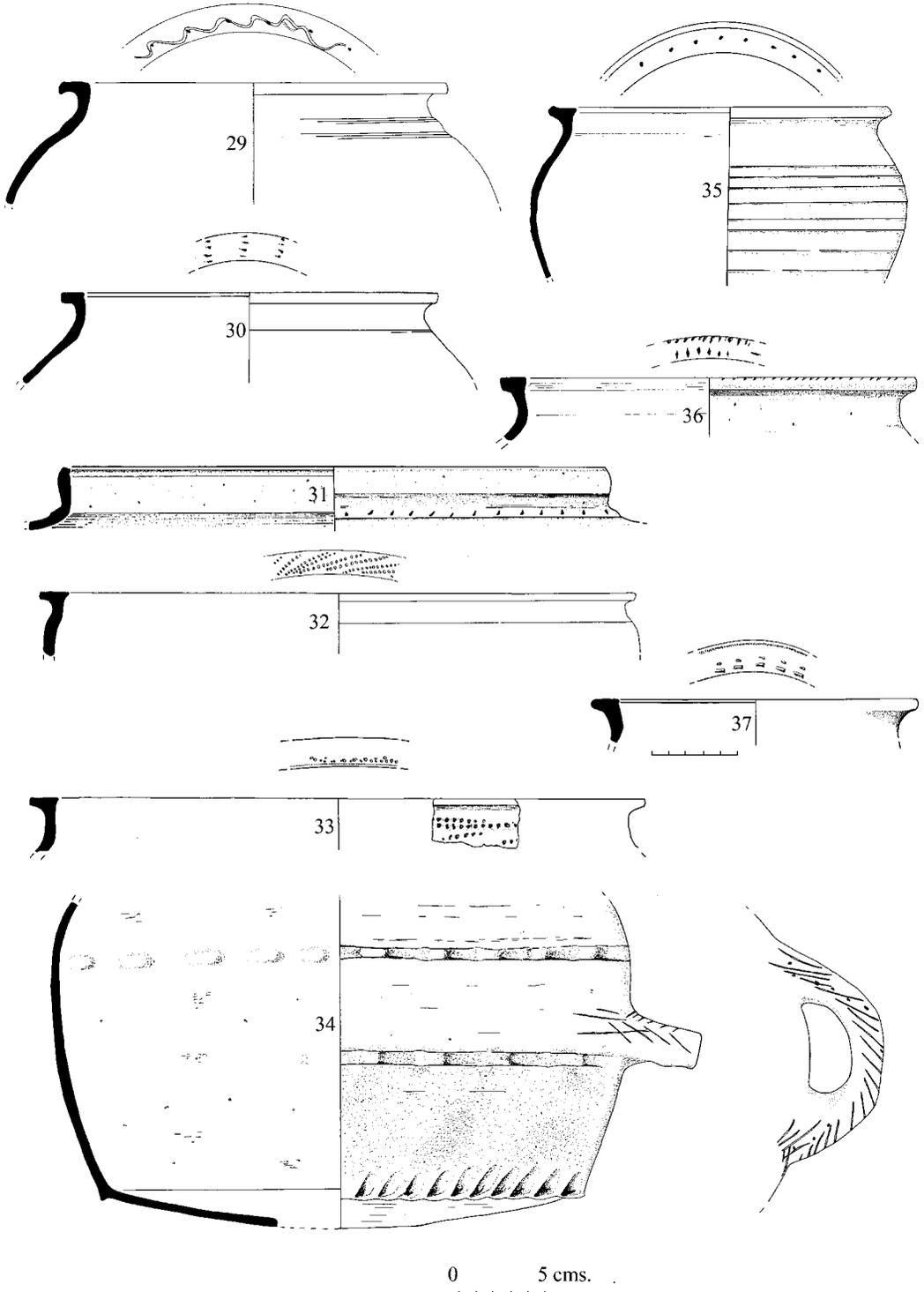


Fig. 13. Wide-necked vessels, Phase 2 workshop.

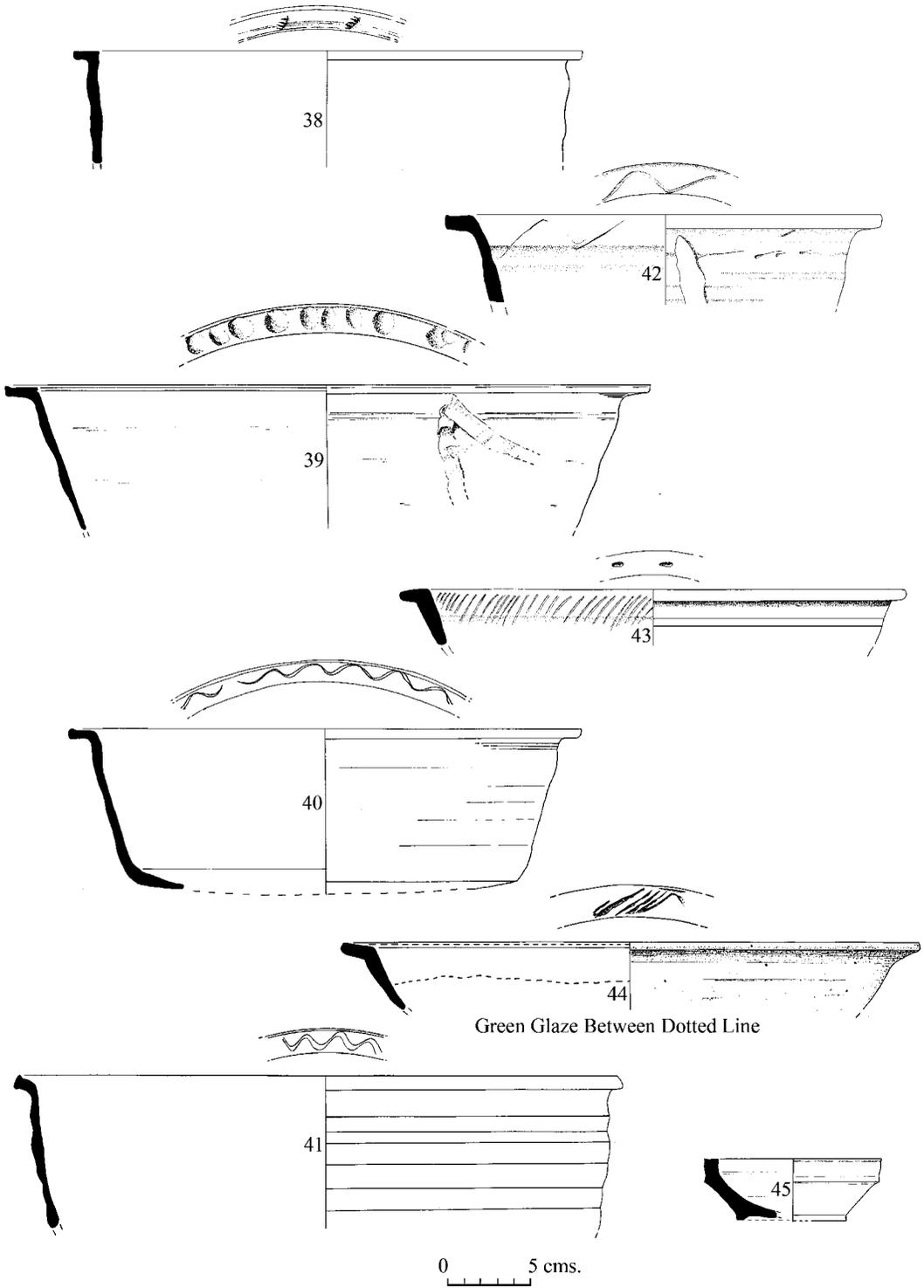


Fig. 14. Bowls, Phase 2 workshop.

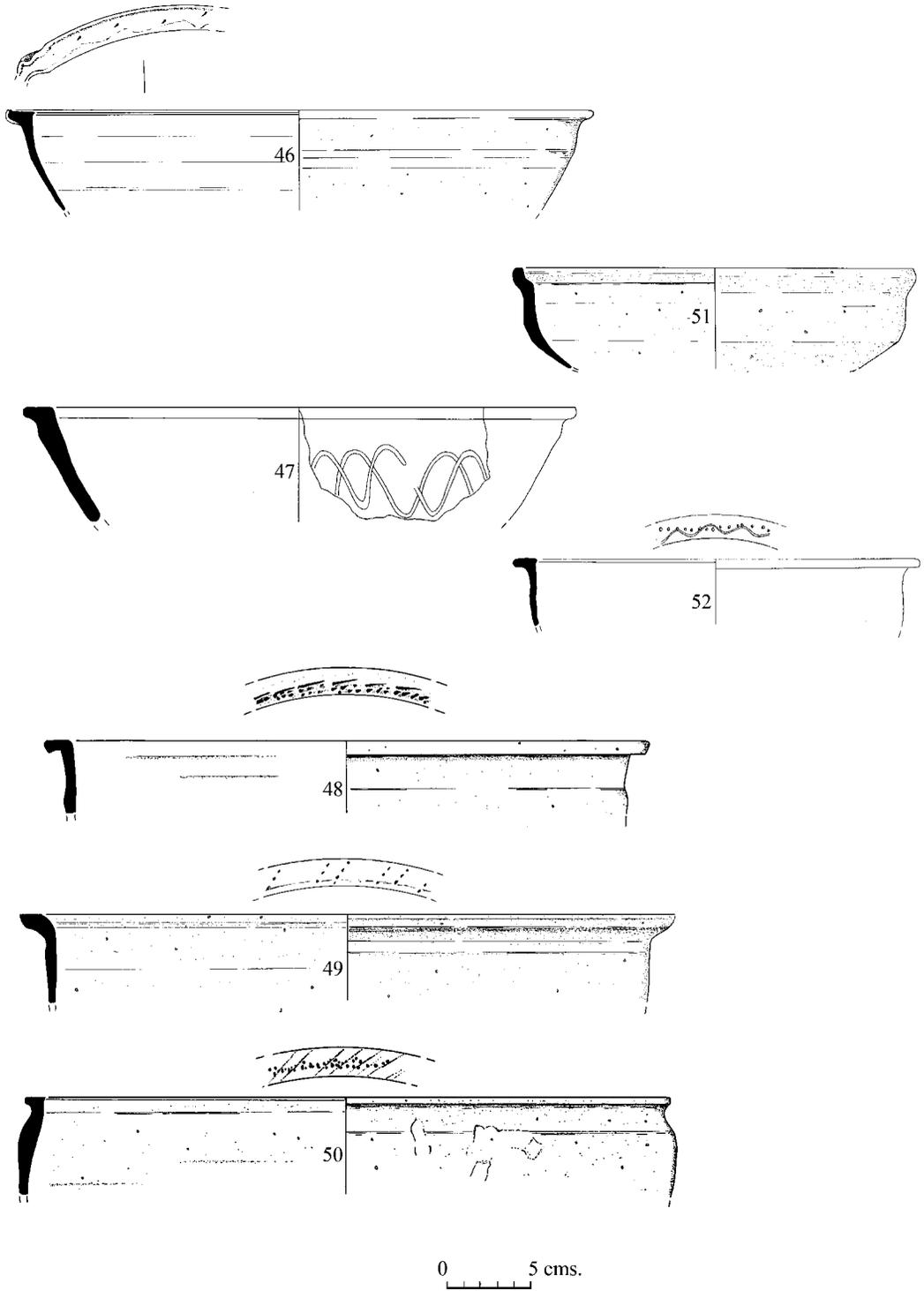


Fig. 15. Bowls, Phase 2 workshop.

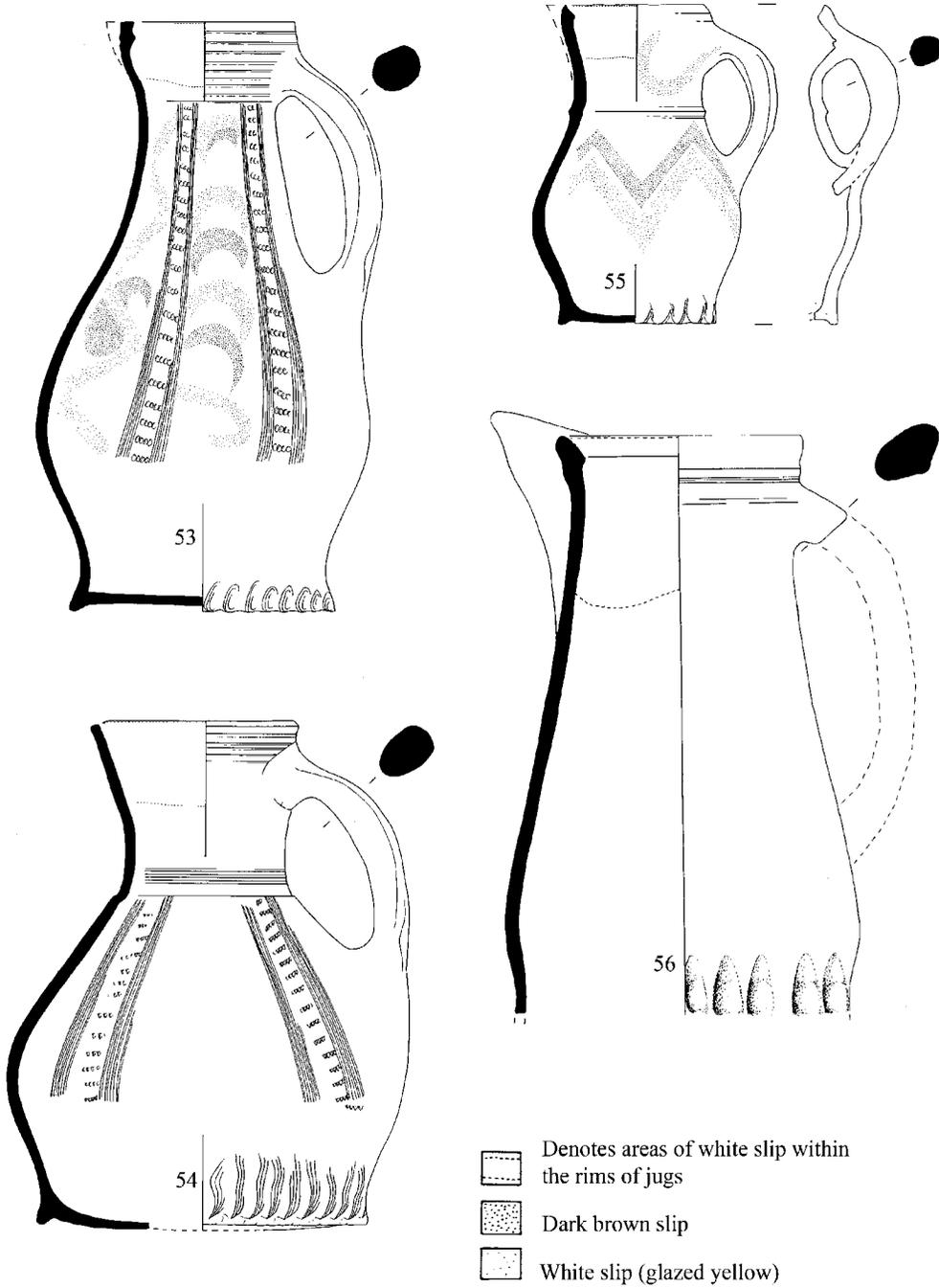


Fig. 16. Fine-ware jugs, Phase 2 Workshop.

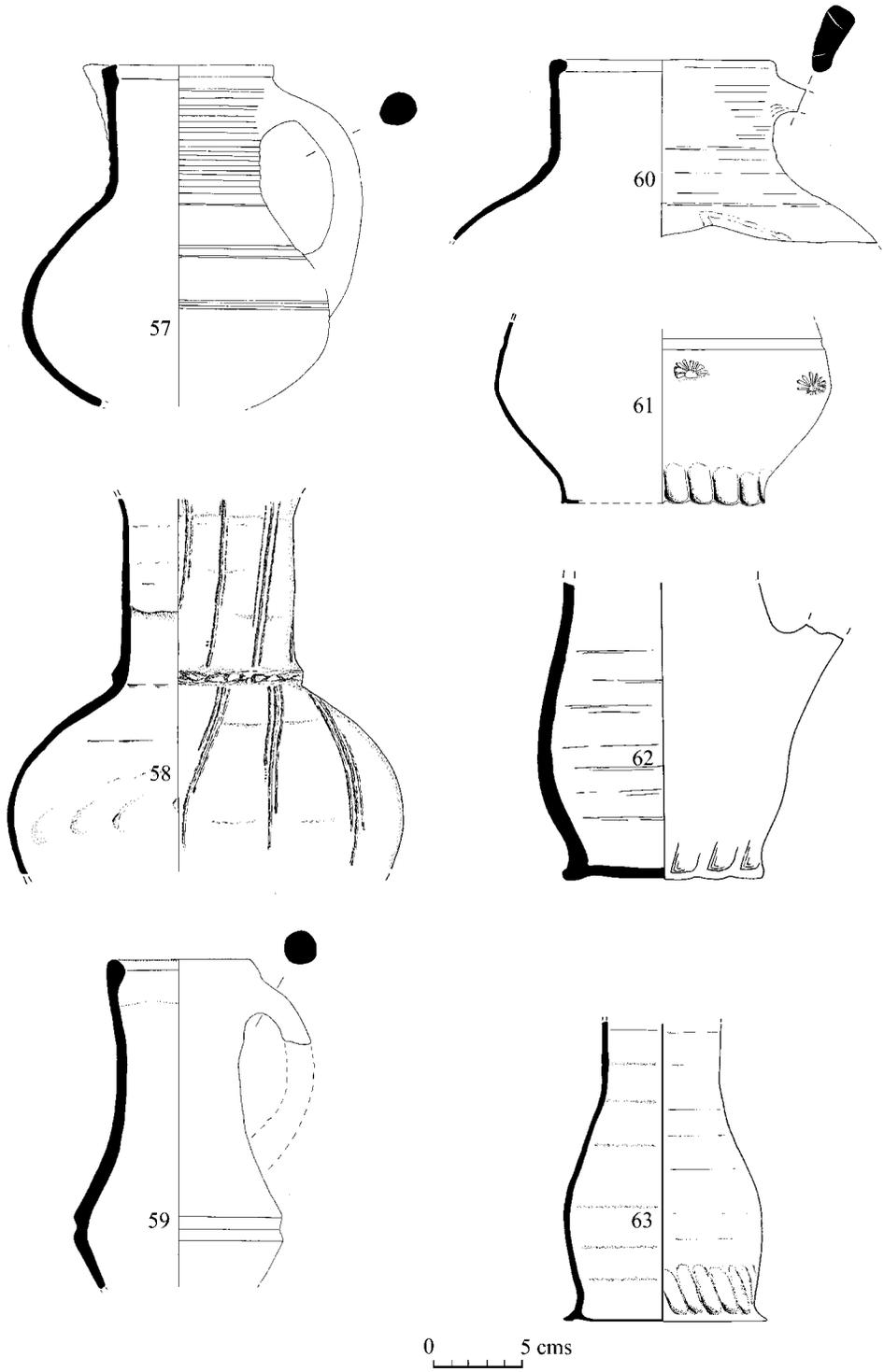


Fig. 17. Fine-ware jugs, Phase 2 workshop.

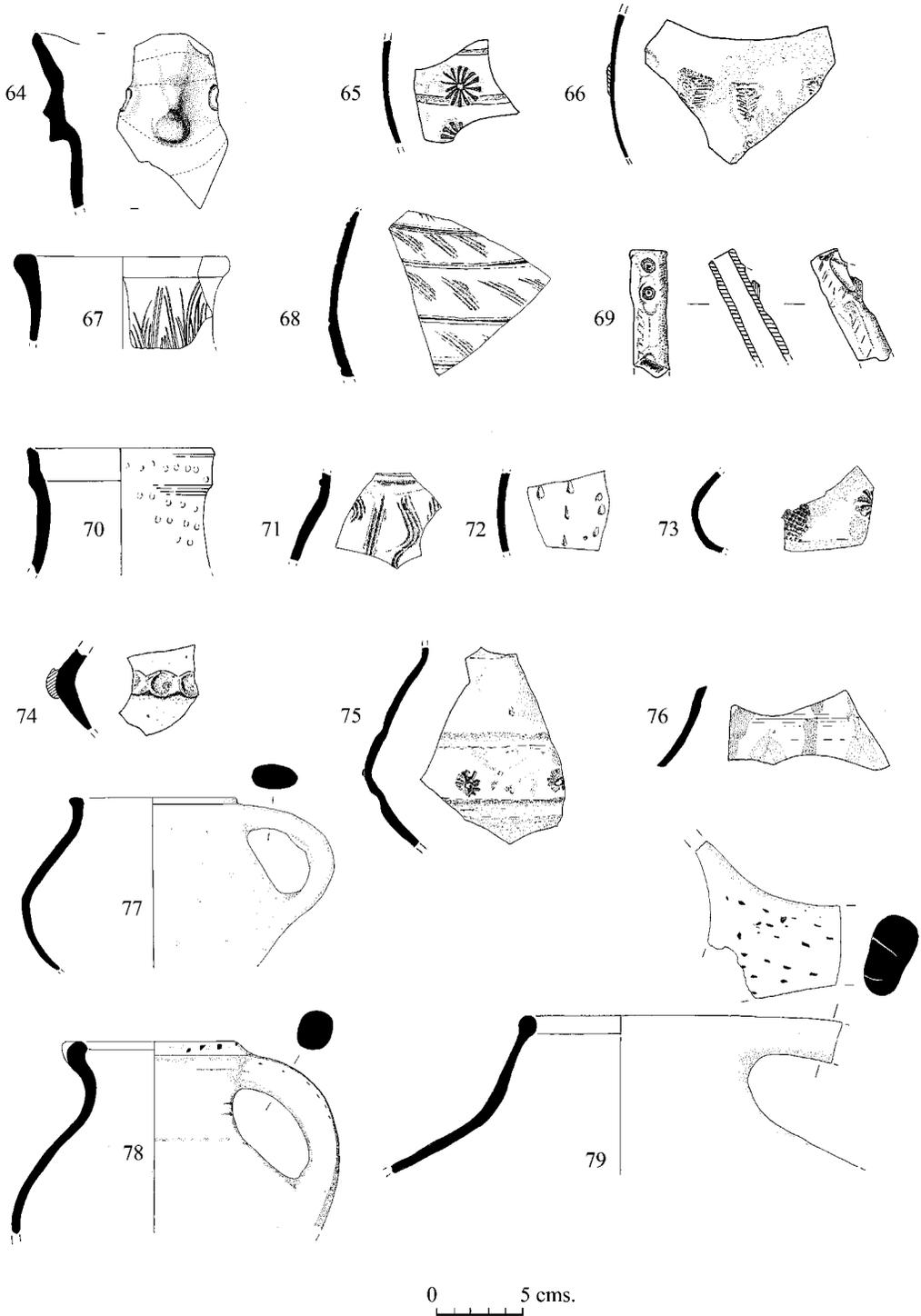


Fig. 18. Fine-ware jugs fragments and Coarseware jugs. Phase 2 Workshop.

formed on the potter's wheel and, as with the rod handles, no clear pattern was formed by looking at these handles' widths. Most were 40mm wide, the widest being 53mm. Handles were fixed to jugs by cutting two holes in the body of the vessel, pushing the handles through and subsequently using clay to smooth the exterior and interior of the vessel.

Spouts or lips on the jugs were formed by pulling and pinching the rim slightly outward. One spout fragment was found with anthropomorphic decoration (Fig. 18, No. 64), the only fragment recovered with these characteristics. A similar fragment has been found in Ringmer, but with a different fabric, suggesting that it came from another Ringmer workshop (Barton 1979, 110, 114). Another jug fragment found in the top soil is from a tubular spout with the remains of a supporting strut (Fig. 18, No. 69). Although a one-off find, the fact that it appears to be in Fabric 3 suggests that it probably originated from the Norlington kiln. Jug types that could be specifically identified include pear-shaped (Fig. 16, No. 53), conical (Fig. 16, No. 56), rounded (Fig. 16, No. 54) and squat (Fig. 17, No. 57). It is thought that very few complete pear-shaped jugs found in the London area have survived, and they are mostly restricted to north French and highly decorative styles (Pearce, Vince and Jenner 1985). Fig. 16, No. 55, a small rounded jug, demonstrates a similarity to Rouen-type decoration (Barton, 1965), but not enough pottery survives to say that northern French influence is evident at Norlington Lane.

Other vessel forms (Figs 19–20)

These vessels are not exclusively taken from contexts 3, 4, 6, 7, 17, 19, 30 and 34, but include other deposits to compile the full range present. Fabric 4 vessels have been excluded.

Skillets still proved to be a popular item among the Phase 2 products but, at less than 1%, marginal forms. Socketed handles were still popular, but solid hooked or plain straight handles were also found (Fig. 10, Handle Type 4).

Pipkins, although rare, were being produced at the Phase 2 workshop (Fig. 19). Two examples had a band of green glaze on the interior surface, one light green and the other dark green, just below the rim. On the one vessel that had light green glaze there were also obtuse knife cuts on the rim (Fig. 19, No. 92). Another example with a hooked handle with an added strip of thumb-impressed clay to the underside was also recovered. Curfews were also present in small numbers; all appeared to be flared or bowl type, with a central handle on the lid with two holes pierced into the lid at each end of the handle (Fig. 19, Nos 87, 88).

Possible Cauldrons or Tripod Pipkins were identified only by the remains of their feet. Although not common, several applied feet were recovered, both circular and triangular in section (Fig. 19, No. 89, and possibly No. 90). Large storage vessels were identified only by the wider diameters of the bases and rims, and are covered by the paragraphs on the Wide Necked Jars. However, one reconstructed vessel of large dimensions of about 33cm across should be mentioned here (Fig. 13, No. 34). This had a frilled base formed by a knife blade, two rows of thumb-impressed clay strips, and a rounded side handle applied approximately half-way up the vessel in a horizontal position. It also had thin knife slashes cut into the surface and the adjacent areas around the handle.

Other rare Phase 2 items recovered include a solitary aquamanile fragment in the shape of a ram's head (Fig. 19, No. 80), and a single saucer candlestick holder fragment with

the remains of the socket but with most of the green glazed drip-tray missing (Fig. 19, No. 81). Lid fragments were also recovered. Most notable was the remains of a domed lid with an intact clubbed knob handle at its apex, with dark green glaze exterior and a flanged rim (Fig. 19, No. 84). There were also a few fragments that defied vessel identification, and a couple that are very uncertain but are given possible interpretations of vessel type. Of the latter is the spout or lip of a possible dripping pan (Fig. 19, No. 82). Whatever vessel the fragment was a part of, it appears to have been a very shallow dish with remains of a light green internal glaze. Three separate fragments appear to be from the middle section of a small unglazed biconical jug with a thick strip of thumb-impressed clay around the middle (Fig. 18, No. 74). This may be a Cruet fragment, but without more evidence to support it, this hypothesis must remain tentative (Dunning 1969, 226, 227). Among items that could not be identified was a fragment of a shallow vessel with no remains of a base (Fig. 20, No. 102). It appears to be an arc fragment from what is best described as a large pottery ring sloping slightly outwards at an obtuse angle with thin slashes making the shape of a row of triangles to the exterior, small thumb-impressed decoration to the rim exterior and internally obtuse slashes. The second object is equally enigmatic (Fig. 20, No. 101): a circular fragment with two pinched-in sides, cuts to the outer edge of the rim and the remains of a shallow bowl.

Roof furniture, tiles and brick

From Contexts 3, 4, 6, 7, 17, 19, 30 and 34 nine definite chimney-pot fragments were identified, and 11 probable fragments were also recorded. Although not from these contexts, a probable louvre fragment was recovered from Context 20 (Fig. 20, No. 110). Hadfield illustrates an example of one of the four chimney-pots built as supports for the opposing flue vents (Hadfield 1981), and Barton mentions that chimney-pot fragments were recovered from every kiln site in Sussex except Hastings (Barton 1979 64–8). Altogether, 31 positive and 47 probable chimney-pot fragments were recovered from the whole site (Fig. 20, No. 109). Salzman records that documentary evidence for these items is scarce (Salzman 1952).

A total of 348 certain and probable roof tile fragments were recovered from Contexts 3, 4, 6, 7, 17, 19, 30 and 34, together with 50 ridge tiles pieces, 26 of which showed signs of glaze and about 60% of which were dark green glazed. This percentage of roof tiles roughly equates to the volume from the Phase 1 pottery. A triangular hip tile fragment from Context 20 was probably from the Phase 2 workshop (Fig. 20, No. 107). This tile had a circular peghole, and carried the incomplete imprint of a foot, probably of a domestic fowl. Another roof tile fragment had part of a probable dog paw print (Fig. 20, No. 108). This was from Context 2, and again probably from the Phase 2 workshop. All roof tile pegholes were circular and 8–10 mm in diameter. A ridge tile fragment with evidence of a thumb-impressed comb along the apex was recovered from Context 2; the fabric again suggest that it is from the Phase 2 kiln (Fig. 20, No. 106).

Floor tiles were either plain squared, with a triangular variety, or smaller slip-decorated tiles. From Contexts 3, 4, 6, 7, 17, 19, 30 and 34, 15 fragments of the squared and triangular fragments were recovered, 90% of which were dark green glazed. All the encaustic tiles had the same design. Six

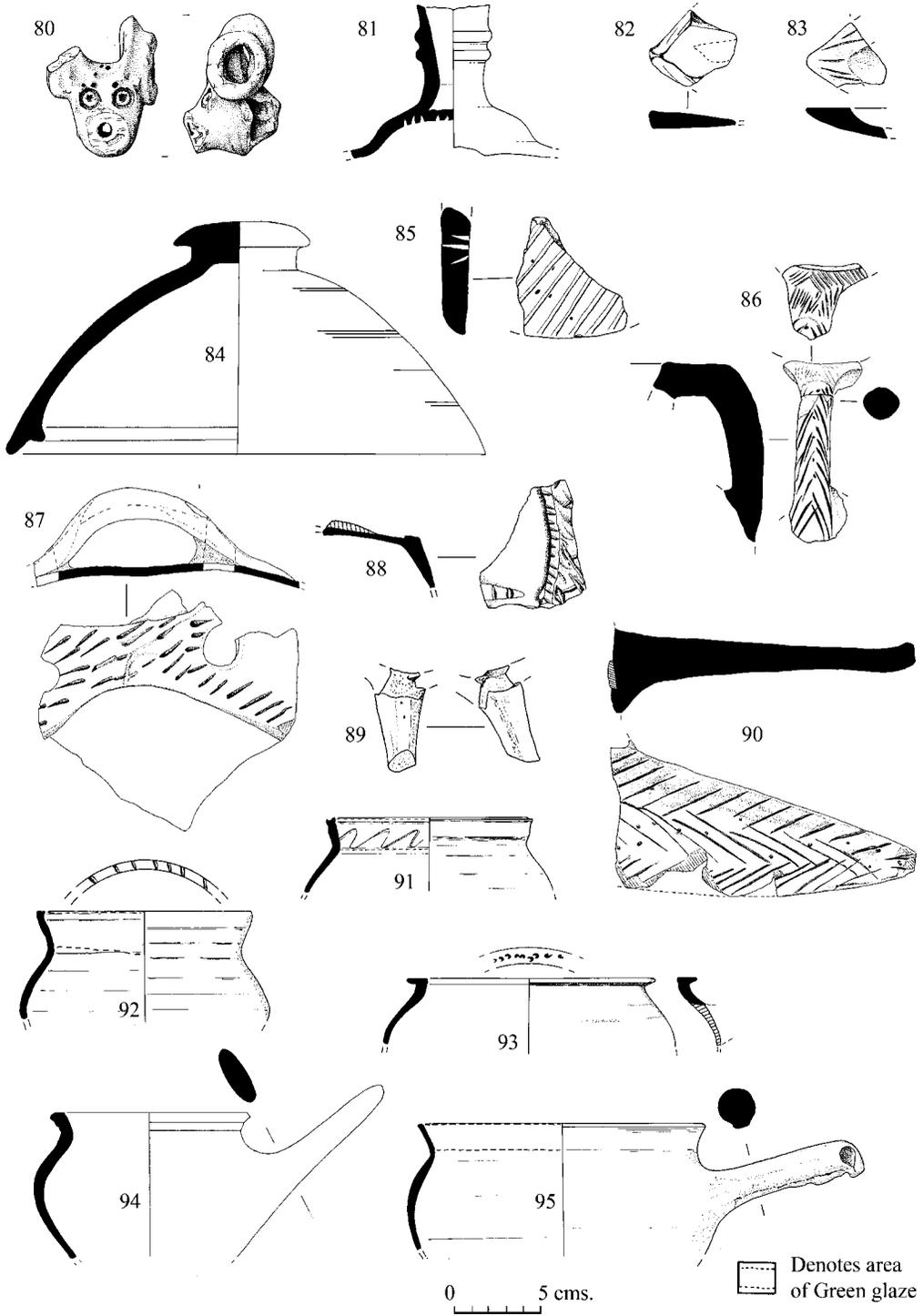


Fig. 19. Pipkins, other vessel types, and fragments. Phase 2 workshop.

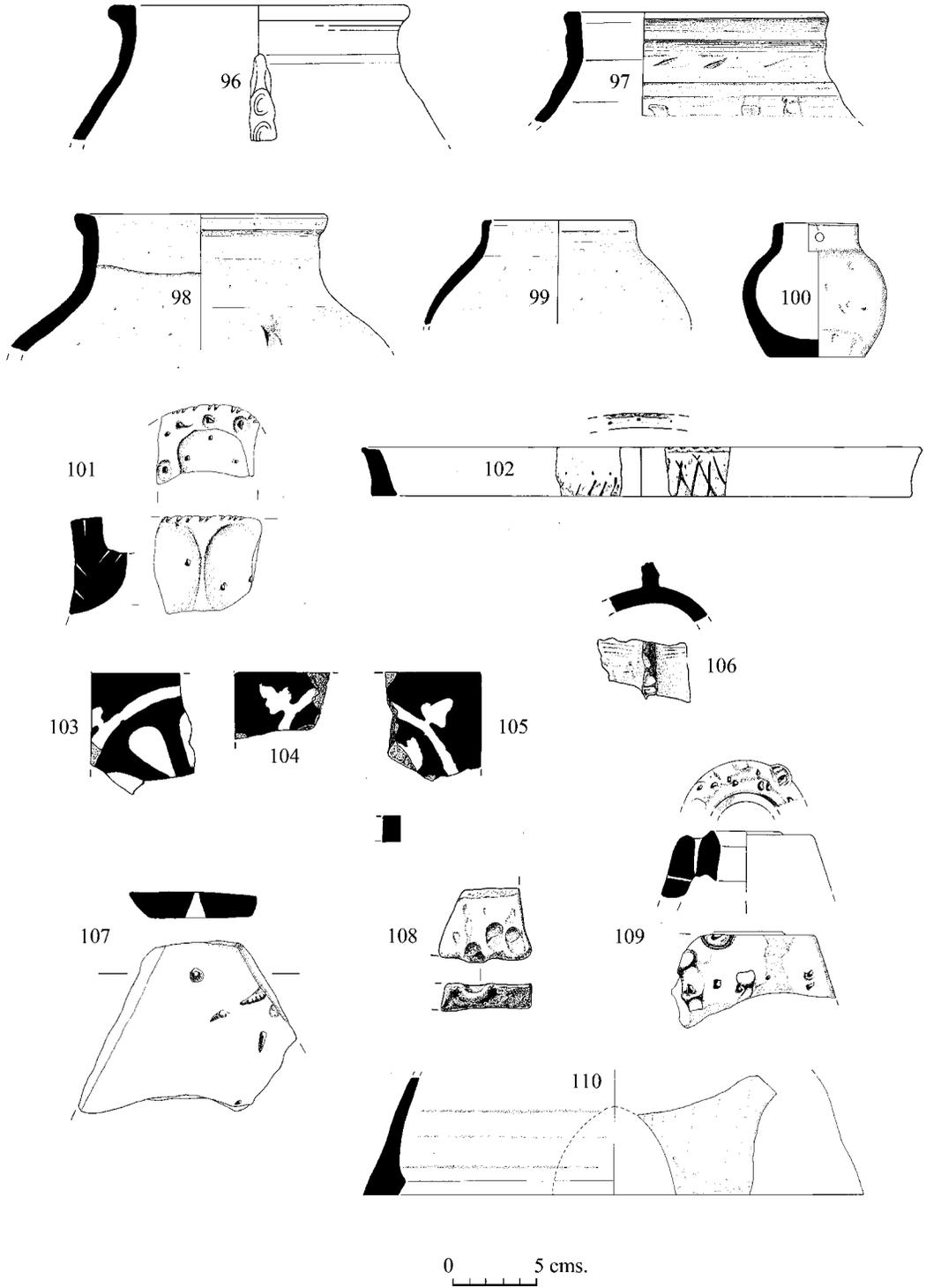


Fig. 20. Jars, other vessel types, tiles and roof furniture. Phase 2 workshop.

fragments, whose complete design required four tiles, show a daisy-type flower within a circle, and in each corner, at the apex of the arc, a fleur-de-lis facing outwards (Fig. 20, Nos 103–105). The decoration was made using inlaid white clay to make up the pattern, and either a dark brown or dark green glaze in between. It is interesting that the daisy-type motif was used for mould-stamping on the jugs. It is also noteworthy that this same motif is found on encaustic tiles from Lewes Priory (Eames 1997) and Lewes Friary (Bennell 1996), but not in the same fabric as those from the Norlington workshop. The same pattern was found at Lewes Castle, although these tiles could not be located to see whether they were of a similar fabric (Bennell 1992). All the encaustic tiles had a slightly bevelled edge and were approximately 15mm thick, the underside having random stabbing. The fabric was very fine, resembling Fabric 3, but mostly Fabric 7, usually fired with an oxidised exterior and a thick reduced grey core.

Hearth tiles or brick fragments amounted to 99 pieces, 20 of which had random stabbing to one surface and can be assumed to be hearth tiles. Brick thickness was very inconsistent, although it appeared that 45mm was the most frequent, and hearth tiles were approximately 20mm thick. No one conventional shape could be discerned from the fragments. A shaped brick fragment of 35mm thickness was recovered, although it could be argued that this is an unusually thick floor tile fragment. Unfortunately, none of the remains of the tiles or bricks could give a definitive size of width or length.

Wide-necked jars

Catalogue (Figs 12 and 13)

21. Rounded Wide-Necked Jar, Context 6, Fabric 1. Light brown exterior, interior and core. Hard and well fired. Body and base fragments. Horizontal lines prominent on the body, caused through manufacture on the wheel to make a decorative feature, referred to as banding.
22. Rounded Wide-Necked Jar, Context 7, Fabric 1. Orange/brown exterior, orange interior with light grey core. Hard and well fired, fairly coarse. 75% remains of the vessel in many fragments.
23. Rounded Wide-Necked Jar, Context 7, Fabric 1. Light orange exterior and interior. In some areas nearly oxidised throughout, but some areas have a reduced grey core. Hard and well fired, fairly coarse. Carbon deposits on some of the exterior and a hole made in the base, caused after firing, and from the outside. Fifty per cent of the vessel remaining in several fragments.
24. Rounded Wide-Necked Jar, Context 4, Fabric 1. Buff/yellow interior, exterior and core. Well fired and fairly hard, slightly coarse. Slight vertical lines incised on the body of the vessel. Appears to have slight sooting on the exterior surface.
25. Wide-Necked Jar, Context 2, Fabric 1. Buff/orange exterior, interior and core. Reasonably hard sandy fabric. Rim and body fragment.
26. Wide-Necked Jar, Context 20, Fabric 1. Light grey exterior and interior, darker grey core. Hard fabric. Decorated with thumb impressions to the rim edge.
27. Wide Necked Jar, Context 2, Fabric 1. Buff/brown to medium grey exterior and interior, Brown orange core. Hard and well fired. Slight trace of curved lines on the rim, also stabbing to the exterior just below the rim.
28. Rounded Wide-Necked Jar, Context 17, Fabric 1. Buff/orange exterior, interior and core. Well fired, slightly soft and well oxidised. Inclusions, occasional large flints and grog but well sorted. Decoration consists of a wavy line on the rim and thumb-impressed strip of clay beneath the rim, also on the body of the vessel.
29. Rounded Wide-Necked Jar, Context 6, Fabric 1. Reddish/brown exterior and interior with reduced core. Wavy line decoration plus holes pricked at various intervals on the rim.
30. Wide-Necked Jar, Context 2, Fabric 1. Grey/red exterior with red/brown interior, grey core. Well fired hard and fairly coarse. Decorated rim, little slashes in patterns of four.
31. Wide-Necked Jar, Context 2, Fabric 2. Dark grey exterior, interior and core. Very hard and well fired, slightly coarse. Glazed externally dark green. Decoration on the body, near the neck of the vessel, consists of pear-shaped indents approximately 10mm apart. It is probable that the external top rim had slight diagonal slashes, but some of the rim exterior was blown off, probably during firing, obscuring this detail; this rim decoration is not shown on the drawing.
32. Wide-Necked Jar, Context 6, Fabric 1. Orange/red exterior and interior. Grey core. Comb-indented decoration on the rim.
33. Wide-Necked Jar, Context 2, Fabric 1. Orange/brown exterior, some areas of very dark brown on the interior surface, with orange/brown core. Well fired and hard, fairly coarse fabric, jar of large dimensions, more than 400mm diameter. Evidence of roller-stamp rouletting below the rim, slight roller-stamp decoration on the inside top edge of the rim.
34. Doubled-handled Jar, Context 6, Fabric 1. Buff/orange exterior and buff/grey interior, light grey core well fired and appears to have sooting to the lower half (as far as first thumb-impressed band). The one remaining handle has shallow, thin slashes and deep stabbing. Two thumb-impressed bands to the body. Possible cauldron; there are slight remains of a support on the base (not shown on drawing), but this could be the remains of a foot, or just extra strengthening to the base. Base embellishment made with a flat tool or knife.
35. Rounded Wide-Necked Jar, Context 2, Fabric 1. Brown/red exterior and interior, oxidised throughout but some areas reduced with a light grey core. Well fired and fairly hard, slightly coarse. Decorated on the rim with intervals of pricked small holes, also well-defined banding on the body.
36. Wide-Necked Jar, Context 2, Fabric 1. Buff/orange exterior, interior and core. Reasonably hard and fairly coarse. Slight knife indents to exterior rim, and diamond-shaped stabbing on the rim. On the extreme right of the rim there appears to be a fingernail mark, although this may be part of the stabbing decoration. In this area the diamond stabbing ceases to exist.
37. Wide-Necked Jar, Context 2, Fabric 1. Buff/yellow to light grey exterior, buff yellow to orange interior and core. Hard and well fired.

The bowls illustrated show the variations that have been observed at the Phase 2 workshop. However, several of the identified bowls, especially those with large diameters, could easily be defined as Wide-Necked Jars; drawings 32 and 50

demonstrate this. Similarly very shallow bowls may fall into the category of dishes.

Catalogue (Figs 14 and 15)

38. Straight-sided Bowl, Context 6, Fabric 1. Almost black reduced exterior and interior, also core. Stamp decoration on the rim.
39. Flared Bowl, fragments found in both Contexts 4 and 6, Fabric 1. Orange/brown exterior, interior a darker brown with a grey core. Well fired and hard. Very slight traces of light green glaze on the interior.
40. Rounded Bowl, Context 6, Fabric 1. Brown exterior with some sooting, not necessarily through domestic use. Red/brown interior, and reduced dark grey core.
41. Straight Sided Bowl, Context 6, Fabric 1. Buff/orange exterior and interior, grey core. Demonstrates heavy banding on the exterior body.
42. Flared Bowl, Context 2, Fabric 1. Buff/orange exterior, interior and core. Wavy line decoration on both rim and interior of the bowl.
43. Bowl, Context 2, Fabric 1. Buff/orange exterior, interior and core. No sign of glaze. Decorated on the rim with fairly large stabbing, two horizontal lines on the exterior and diagonal lines on the interior.
44. Rounded Bowl, Context 2, Fabric 1. Buff/dark brown exterior interior and exterior, light grey core. Hard and fairly coarse. Has crude knife cuts at a diagonal to the rim, also very degenerated dark green glaze to the interior.
45. Carinated Bowl, Context 6, Fabric 1. Interior and exterior orange with a light grey core. Well fired and very hard. Dark green glaze interior. Unusually small diameter (if circular 20% of the vessel). Base is fairly crudely finished and difficult to interpret.
46. Rounded Bowl with Lip, Context 17, Fabric 4. Orange/brown exterior, interior and core. Fairly soft and coarse, well oxidised. Body shows pronounced wheel marks as a form of decoration. Rim has the remains of a lip, decoration consists of a wavy line which is very faint, and stabbing in the form of tear drops at regular intervals. Possibly Phase 1 workshop.
47. Rounded Bowl, Context 20, Fabric 1. Salmon/pink exterior and interior. Design of loops on the exterior surface.
48. Straight-Sided Bowl, Context 2, Fabric 1. Buff/orange exterior, interior and core. Well fired, fairly hard, and slightly coarse. Roller stamp, with shallow knife slashes, on the rim interior surface.
49. Straight-Sided Bowl, Context 2, Fabric 4. Buff/orange exterior, interior and core. Well fired and reasonably hard, fairly coarse. Decoration consists of a series of three fairly shallow pricks set at a diagonal on the rim, probably made with a comb.
50. Bowl, or Wide-Necked Jar, Context 2, Fabric 4. Orange/brown exterior, some areas of very dark brown on interior surface, dark orange/brown core with some dark grey areas. Well fired and hard, fairly coarse. Evidence of slight strapping on the body, on the rim two types of rouletting, one type following the middle of the rim and the other set at a diagonal to the rim.
51. Rounded Bowl, Context 17, Fabric 1. Light brown/orange exterior, interior and core. Well oxidised but fairly soft and fairly coarse. Shallow dish with a recessed lip on the interior, perhaps designed to take a lid.

52. Straight-Sided Bowl, Context 6, Fabric 1. Reddish brown exterior and interior, slight greyish core. Wavy line decoration plus holes pricked at various intervals, also very slight trace of a wavy line on interior of bowl, not shown on drawing.

Jugs

Catalogue (Figs 16, 17 and 18)

53. Pear-Shaped Jug, Context 6, Fabric 3. Almost complete, orange exterior, grey interior. Dark green glaze overall. White slip on the interior of the neck, white slip (glazed yellow) and dark green to brown slip in crescent designs up the body, with combed design with dots acting as a border. Banding on the neck, thumb-impressed base. Rod handle with small stabbed holes along the centre.
54. Rounded Shaped Jug, Context 6, Fabric 3. Orange exterior and interior, grey core. Green glaze overall. White slip on inside of neck. Rilled neck at the top and bottom of the neck. Comb decoration with dots, very similar to drawing 53's comb design. Rod handle with small stabbing down the centre.
55. Small Rounded Jug, Context 6, Fabric 3. Almost complete, but lacking the lip. Orange exterior and interior, thin grey core, well fired. Dark green glaze overall. Chevron design in dark and white slip (glazed yellow), also a white slip on the inside neck of the jug. Knife-impressed base.
56. Conical Jug, Context 6 and 4, Fabric 3. Buff exterior and interior, grey core. Well fired and hard, very slightly coarse. Light green glaze with streaks of dark green glaze. Rod handle fragment. Some fragments of this jug found in Context 4.
57. Squat Jug, Context 6, Fabric 3. Almost complete, with the base missing. Orange exterior, buff interior, grey core. Dark green glaze exterior, remains of white slip on interior of neck. Rilled neck with small stabbing.
58. Squat Jug, Context 6, Fabric 3. Interior buff/yellow/orange, core light grey. Well fired and very hard, interior only slightly coarse to touch. Four fragments with dark green glaze evenly applied to the exterior. Decoration consists of three incised lines (the two outside lines sometimes very faint) applied to the neck and body. Between the neck and the body a strip of thumb-impressed clay.
59. Small Pear-Shaped Jug, Context 6, Fabric 3. Oxidised red/orange interior and exterior, red/orange core. Dark green glaze exterior, slight trace of white slip on top interior section. Rod handle with small prick holes along the middle. Indented band near the base.
60. Jug, neck and shoulder fragments, Context 6, Fabric 3. Orange/buff exterior and interior, grey core. Light green glaze with some mottled brown. Remains of thumb-strap decoration on the body of the vessel. Remains of a strap handle with random stabbing on the handle.
61. Squat Jug, base and body fragments, Context 6, Fabric 3. Light orange/brown fabric interior and exterior, grey core. Hard fine fabric. Brown to green glaze. Two daisy stamps, bottom part on each very faint. Incised horizontal line above the daisy stamps.
62. Pear-Shaped Jug, Context 6, Fabric 3. Base and body in many fragments. Orange exterior and interior, oxidised orange core, light green glaze on exterior with spots of dark green glaze giving a speckled appearance. Thumbed base, remains of a rod handle. Remains of white slip on

the neck of the jug no rim.

63. Small Pear-Shaped Jug, Context 2, Fabric 3. Orange/brown fabric interior and exterior, fairly hard. Brown/orange glaze, no decoration except remains of a thumbled base.
64. Jug, rim fragment, a lip with anthropomorphic decoration, Context 6, Fabric 3. Orange surface, practically oxidised throughout. Well fired, hard and fairly smooth. Orange/green glaze with bands of white slip. Interior some white slip. Anthropomorphic decoration on the spout, ring-dot eyes, abstract representation of nose and chin. A similar fragment is on display at Barbican House Museum, Lewes, although not in the same fabric as from Norlington.
65. Jug, body fragment with daisy stamps, Context 2, Fabric 3. Dark green glazed exterior, oxidised orange interior with light grey core.
66. Jug, body fragment, Context 2, Fabric 3. Orange exterior, buff/yellow interior with a thin grey core. Well fired with a brown glaze. Decorated with two wheatsheaf-type stamps and remains of another two in a row.
67. Jug, rim and neck fragment, Context 20, Fabric 3. Light orange exterior and interior, oxidised core same colour. Well fired, fairly smooth. Dark green glaze with grass leaf-type incised decoration.
68. Jug, body fragment, Context 2, Fabric 3. Buff interior, grey core, dark green glaze exterior. Fragment with four indented horizontal lines in between a series of diagonal slashes.
69. Jug Spout, Context 1, Fabric 3. Tubular spout with two ring and dot-type stamps on the underside, and thin slashes to the sides of the spout. Remains of a bridge supporting the spout to the vessel.
70. Jug, rim and neck fragment, Context 2, Fabric 3. Dark orange/brown exterior, yellow ochre interior. Grey core. No glaze. Decorated with small horseshoe stamps over rim and neck.
71. Jug, body sherd, Context 2, Fabric 3. Dark green glaze. Fragment with four indented horizontal lines, between a series of diagonal wavy slashes.
72. Jug, body sherd, Context 2, Fabric 3. Orange glaze. Decorated body fragment with shallow pear-shaped indents.
73. Unknown vessel, Context 2, Fabric 3. Dark brown glaze exterior. Body fragment decorated with part-missing daisy stamp and a part-missing stamped design of small squares. Possibly from either an aquamanile or a distorted jug.
74. Body Fragment, Context 17, Fabric 3. Buff/orange exterior and interior, light grey core. Well fired and hard, reasonably smooth to touch. Fragment from a biconical shaped vessel. Sherd has a thick strip of clay with thumb-impressed decoration.
75. Jug, body sherd, Context 6, Fabric 3. Buff/orange interior with light grey core. Hard and well fired, smooth feel. Dark green glaze applied all over. Interior shows thumbmarks pushed into the body to take the stamp, also a splatter of white slip suggesting the neck would have this applied to its inner surface.
76. Jug, body sherd, Context 6, Fabric 3. Interior buff/orange with a light grey core. Well fired and very hard. Two-coloured slip decoration, dark brown line borders with white slip (glazed yellow) chevrons in between, on a dark green glaze background.
77. Small Rounded Coarse Ware Jug, Context 6, Fabric 1.

Orange interior and exterior, grey core. Well fired and fairly coarse, and unglazed. Rod-shaped handle pricked with 'teardrop shaped' stabbing, six at the top in random and two at the bottom along the centre of the handle, 20mm apart.

78. Small Rounded Coarse Ware Jug, Context 6, Fabric 1. Orange exterior and interior, grey core. Well fired and fairly hard, and fairly coarse. No glaze; stabbing on the rod handle in a random fashion.
79. Coarse Ware Jug, Context 2, Fabric 1. Orange exterior and interior and core. No glaze.

Pipkins, other vessel types, and fragments

Phase 2 workshop Catalogue (Fig. 19)

80. Aquamanile, spout fragment, Context 6, Fabric 3. In the shape of a ram's head. Green glazed with white slip applied to the horns, some evidence of white slip to the ring-dot eyes. Salmon/red exterior, practically oxidised throughout, some reduced light grey to the core of the broken horn.
81. Saucer candlestick holder, Context 6, Fabric 3. 80% complete. Nearly oxidised outside surface, reduced light grey on the base. Well fired, hard and fairly smooth. Dark green glaze all over the exterior, fleur-de-lis decoration, appears to be stabbed on the base [not shown on drawing]. Remains of another vessel fired on the base.
82. Lip, from a dish, Context 2, Fabric 1. Grey to orange exterior, light to fairly dark orange interior. Traces of dark green glaze to inside and underneath. Thin slashes to the rim. Shallow vessel, possibly a dripping dish fragment.
83. Lip, from a dish, Context 2, Fabric 1. Buff/orange exterior, interior and core, light grey. Fairly hard, well fired, and fairly coarse. Shallow vessel with some slight knife-slashing on the rim near the lip.
84. Lid, Context 6, Fabric 3. 70% complete, orange exterior and interior, light grey core. Well fired, hard and fairly smooth. Dark green glaze on interior of lid but not on the rim. Flat, round handle and wheel-turned incised lines halfway down vessel.
85. Possible Lid, Context 6, Fabric 1. Medium grey exterior and interior, grey to brown core. Grooved decoration to top side, as well as some random stabbing. Splashes of light green glaze to top surface and degenerated glaze areas on the underside.
86. Jug Handle, and part of rim fragments, Context 4, Fabric 1. In two pieces, grey exterior, interior and core. Well fired and hard. Rod handle with shallow slash decoration on the handle, particularly at the top near the rim. Very small stab holes along the centre of the handle.
87. Curfew lid, handle and cover fragment, Context 6, Fabric 1. Buff/orange exterior, brown interior plus some sooting, grey core. Well fired, hard and fairly coarse. Strap handle has deep slashes, with a hole at either end of the handle.
88. Curfew lid, fragment, Context 4, Fabric 1. Brown exterior and interior, grey core. Well fired, hard and fairly coarse. Knife cuts on the rim, thumb-impressed to form rim ridge. A tool or the end of a stick has been used to create a pattern on the side of the fragment. Remains of a handle on the top with knife cuts.
89. Foot, from a medium-sized vessel, Context 6, Fabric 3. Buff/orange overall. No decoration or stabbing. Foot has been neatly finished at the base with a knife. Probably a foot from a tripod cauldron/pipkin.

90. Handle, or possibly a foot from a large tripod vessel, Context 2, Fabric 1. Very black fabric interior, exterior and core. Very hard and well fired, slightly coarse. Slashed with a knife on one surface to form a decorative pattern. Another example with the same characteristics was found close by.
91. Pipkin, rim fragment, Context 2, Fabric 2. Dark grey exterior and interior, the core a lighter grey. Well fired, reduced, hard and slightly coarse.
92. Pipkin, rim fragment, Context 2, Fabric 1. Buff/orange to light grey exterior, interior buff orange, with light grey core. Well fired and hard, slightly coarse. Oblique knifing on the rim.
93. Pipkin, rim fragment, Context 2, Fabric 1. Buff/orange to medium grey exterior and interior, light grey core. Hard and well fired. Rim has small horseshoe-type indents. Only the remains of a hole where the handle would have been.
94. Pipkin, rim, body and handle fragment, Context 2, Fabric 1. Buff /pink exterior and interior with reduced grey core. Some sooting on the bottom, possibly due to use. Handle has some small holes pricked in a random fashion on the underside.
95. Pipkin, Context 6, Fabric 1. Orange/brown exterior, interior with a light grey core. Moderately hard, well fired and slightly coarse. Dark green glaze on interior upper section of the vessel. Handle a pulled type with random stabbing on upper surface. Underside has a thumb-impressed strip of clay added.
- Jars, other vessel types, tiles and roof furniture**
Phase 2 workshop. Catalogue (Fig. 20)
96. Jar, Context 6, Fabric 2. Dark brown exterior and interior with grey core. Very hard and well fired.
97. Jar, Context 6, Fabric 1. Red/orange exterior and interior, grey core. Hard and well fired. Coarse ware vessel.
98. Jar, Context 33, Fabric 4. Light brown exterior, interior and core. Reasonably hard, very sandy fabric. fairly coarse. Possibly Phase 1 workshop.
99. Jar, Context 6, Fabric 1. Buff/light brown exterior and interior, with medium grey core. Well fired and fairly hard. Similar in shape to complete vessel (100) found in the same context, but slightly larger and without evidence of holes near the rim.
100. Small Jar, complete, Context 6, Fabric 1. Buff/orange exterior and interior. Well fired and hard, a fairly coarse fabric. This jar is slightly distorted, and possibly made with the coil technique. Two holes, opposite one another, probably designed to hold a lid, or possibly for suspension.
101. Unknown, fragment, Context 2, Fabric 1. Orange exterior and oxidised throughout. Appears to have blown apart during firing. No idea at present of what its purpose or function was. Rather coarse, perhaps roof furniture or similar.
102. Unknown, rim and base fragment, Context 2, Fabric 1. Buff/orange to light grey exterior, buff/yellow to orange interior and orange core. Hard and fairly coarse. The vessel appears to be open at both base and top, its function is difficult to discern.
103. 104 and 105. Decorated Floor Tiles, two-coloured floor tile fragments, Contexts 2 and 4, Fabric 7. Orange exterior, reduced grey core, hard and well fired. Green glazed with white slip impressed into the stamp. The corner has a semi-circular design with a fleur-de-lis at the apex, and a quarter part of a daisy-type decoration which is part of a four-tile design.
106. Ridge Tile, crested fragment, Context 2, Fabric 7. Dark grey exterior, interior and core. Hard and well fired, slightly coarse. Crest consists of thumb-impressed decoration, also slight indents which may be made by a thumbnail. Both sides of the crest on the tile surface, consisting of three or four parallel lines.
107. Roof Hip Tile, fragment, Context 20, Fabric 8. Light brown throughout. Remains of three sides, one side with a pronounced bevel, and with a peghole near the apex. No curvature apparent, appears to be flat (a similar tile is illustrated in (Musty Algar and Ewence 1969, 140, 141) from Laverstock). Appears to have the imprint of a large bird's foot, possibly a domestic fowl.
108. Roof Tile, fragment, Context 2, Fabric 1. Light orange colour throughout. Remains of a small mammal paw print, probably dog.
109. Small Chimney-pot, fragment, Context 1, Fabric 1. Orange/buff exterior and interior, grey core. Hard and well fired, fairly coarse. Splatter of light green glaze on the top surface, although they might be accidental drips from another vessel.
110. Louvre, base fragment, Context 20, Fabric 3. Light brown interior, exterior and core. No decoration or glaze. Hard, well fired, smooth finish throughout. Remains of a vent at the base.

DISCUSSION

Much of the pottery associated with the Period 1 kiln was found to be very different from the pottery found in the water course (Context 6). The early pottery was very similar in type to the pottery found at Barnett's Mead (Hadfield 1981), and is the pottery normally associated with Ringmer ware. It would appear that, after the Period 2 kiln was constructed, higher temperatures were obtained during the firing process; this would have been necessary for the sophisticated use of glazing

techniques employed on some of the vessels. The size and frequency of the inclusions diminished in the Phase 2 pottery. These two very different styles of pottery manufacture have allowed the sequence to be established for the features found on the site, and to assign features to the pottery of either Phase 1 or 2. Unfortunately, it is not possible to establish the time interval between the last firing of the Period 1 kiln and the start of production at the Period 2 kiln. However, the foundations must have been kept in reasonable condition to allow a second kiln to be built directly on top. It is also

possible that an earlier kiln was constructed on the site but totally destroyed by later ones, leaving just the stokehole pits, but there was no definite evidence of this. During analysis it was found that a large proportion of the Phase 1 wares consist of oxidised pottery fragments of Fabric 4, whereas the vessels found in the water course (Context 6) have a higher proportion of Fabric 1 and 3. Pottery fragments from the deposit (Context 2) have a large percentage of Fabric 1 and 3, but also include a proportion of the Fabric 4 sherds. These vessels were fired to higher temperature than the wares from Period 1.

It is unlikely that the pottery workshop was in existence for more than a couple of generations, and it was probably a fairly small business. A thorough magnetometer survey was carried out over the whole area. Only one other area gave high readings on the magnetometer, but test pits revealed that it was highly unlikely that a kiln had been built there. The only other positive feature to show up on the magnetometer survey was a possible boundary ditch, on a roughly south east–north west alignment, about a metre from the eastern edge of the excavation. It was noted that the spread of pottery did not extend past this feature. It is interesting that the pottery production centre was not built in Bishops Lane, where tradition has it that most of the industry would have been sited. It may be that, because of the number of workshops using the narrow Gault clay beds along Bishops Lane, there was not sufficient room for another workshop to be built directly on the clay beds. Access to the workshop via Norlington Lane would not have been difficult, and it may be that the workshop had the strip of land extending to Bishops Lane, thus making use of the clay beds without impeding work on this valuable resource.

Of concern are the intrusive amounts of Fabrics 1 and 2 in the Phase 1 contexts, which could be due to the gradual phasing out of Fabric 4 as Fabrics 1 and 2 take over. An increase in the manufacture of jugs could have gone hand-in-hand with a marked increase in finer fabrics. Or the intrusive pottery could be explained by the plastic nature of the reworked greensand, especially when wet, in the potters' working environment. This could be attributable to a change in potter, as well as the result in chronological progression.

Dr A. Clark gives a date range of AD 1220–1255 at the 68% confidence level, and AD 1200–1270 at the 95% confidence level (Archaeomagnetic Dating Report ADS Supplement), which is similar in date to comparable products from London (Pearce, Vince and Jenner 1985). The problem with the Phase 2 products is that, although there are similarities between the jugs from Norlington and what is called 'West Sussex ware' (McCathy and Brooks 1988), there is a lack of accurate dating for West Sussex ware. This is true not only of the products, but also of the kiln technology. It would be useful to be able to say when and where the influence on Ringmer originated (Mellor 1994).

In 2003 a large quantity of medieval pottery was recovered from a service trench at the rear of the former Police House, Lewes Road, Ringmer, East Sussex. This consisted of a total of 1638 sherds, including a fragment of burnt clay (Gregory 2008). All this pottery showed a similar affiliation with the pottery from the second phase at Norlington Lane, and is probably contemporary. This provides some insight into how the industry was prepared to change, and how other potters working in the vicinity adjusted to change. It also shows that there was a continuation of Ringmer Ware with a distinctive style. One of the most interesting aspects of the pottery centre at Norlington Lane is that a change in style and manufacture is represented in the archaeological record at Norlington Lane.

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ADS SUPPLEMENT CONTENTS

Table 6. Phase 2: Wide Necked Jar rim diameters on Rim Types 1 and 6.

Table 7. Phase 2: Bowl rim diameters.

Table 8. The most frequently found glaze colours used on the Phase Two jugs.

Table 9. Frequency of jug frilled bases types.

PETROLOGICAL REPORT ON THE FABRICS

by Kathryn Knowles

COPPER ALLOY REPORT**IRON REPORT****STONE REPORT****BONE REPORT****CHARCOAL REPORT** by Joy Ede**ARCHAEOLOGICAL DATING** by Dr A. Clark and Dr W. McCann

Fig. 21. Copper Alloy objects.

