

# A Romano-British Shell-Gritted Pottery and Tile Manufacturing Site at Harrold, Bedfordshire

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## SUMMARY

*A group of kilns making shell-gritted pottery was excavated in advance of chisel ploughing. The pottery from the kilns, and that from the numerous clay pits which were also found, indicate the manufacture of this type of ware at Harrold from the mid-1st to the early 5th centuries AD. The evolving typology of the kilns and also that of the pottery is discussed. A probable tile kiln was also found; the tiles made at Harrold are described and their manufacture assigned to the late 2nd century and to the late 3rd - mid 4th century.*

## INTRODUCTION

The shell-gritted pottery and tile manufacturing centre at Harrold, Bedfordshire, lies 2 km SW of the village of that name, 400 m east of Harrold Lodge Farm and 700 m N of the parish (and county) boundary, at SP 933553 (Fig 1).

## DISCOVERY OF SITE AND CIRCUMSTANCES OF THE EXCAVATION

The site was first noted as a dense scatter of pottery in ploughed land by Mr P Panter of Lavendon in 1968. During the winter of 1968-69 one complete kiln, Kiln 1 in this report, was excavated by Mr Panter and Mr K Field of the Wolverton and District Archaeological Society, and another, Kiln 3 here, located by them (Field 1969; Mynard 1969, 16). The existence of what was evidently an important Romano-British pottery-making site - the scatter of pottery was some 2-3 ha in area - and the threat of deep ploughing using a chisel-plough, led the then Inspectorate of Ancient Monuments of the Ministry of Public Building and Works, to organise a series of short excavations to obtain information about the true nature of the site, its chronological span and the range of products made there. Accordingly, from 1969 to 1971 three seasons of excavation, each of from three to four weeks duration, were mounted, under the writer's direction, with the co-operation of the owner of the land, initially Mr W T Godber and after the first season, Mr J Northern. The work was carried out by local volunteers, particularly from the Wolverton and District Archaeological Society, the Upper Nene Archaeological Society

and the Wellingborough Archaeological Society, as well as extra-mural students from the University of Leicester Department of Adult Education. It is pleasant to record that the material and notes (by Mr R M Friendship-Taylor) of the kiln excavations carried out in 1968-69 were placed at the disposal of the writer for inclusion in this report.

## TOPOGRAPHICAL AND GEOLOGICAL BACKGROUND

The Harrold pottery site lies on the western side of the River Ouse, on a gentle slope running from west to east, between the 250 ft and 200 ft contours. To the E, the river Ouse is only 800 m away; to the W, the ground rises to a wooded ridge some 350 ft above OD, which carries the boundary between Northamptonshire and Bedfordshire. The exact line of the Roman road which ran south from the Roman town at Irchester in the Nene valley in Northamptonshire, 11 km away to the north, ceases to be known for certain as it approaches the Ouse, but presumably in a general way followed the line of the present road from Harrold to Hinwick and Podington, which carries a parish boundary for much of its length. This means that the Roman road would have passed within two or three kilometres of the site. Several scatters of Roman occupation material are known from both the high ridge to the west of the site, and from the Ouse valley itself close to Harrold; the Belgic and Romano-British farmstead at Odell, excavated in advance of gravel working during 1974-78, lay some 2.5 km away to the north-east (Simco 1984, 90; Dix 1981). Shelly pottery was made at Harrold itself in the 13th century, as well as at Olney Hyde, 7 km to the south-west, in the 14th and 15th centuries; also the deserted medieval village of Santon, where it is also considered that shelly pottery was produced, was situated 2 km away to the NW (Hall 1972; Mynard 1984).

The site is covered by a thin deposit of boulder clay. Beneath this there is probably limestone of the Cornbrash, covering shelly marls of the same series and mudstone of the Blisworth clay (geological report by Dr R Clements, pp 98-100). These marls and clays - which are of prime importance in

determining the location of the site - outcrop along the side of the valley and can be quite clearly seen in the ploughed field in which the site lies (Fig 2).

### METHOD OF EXCAVATION

During the 1969 season attention was concentrated on the excavation of the second of the kilns uncovered by Messrs Field and Panter (Trench 1) as well as a small exploratory excavation of what turned out to be a large pit to the north of this (Trench 5) (Fig 2). During the 1970 season a series of trenches was opened up over certain concentrations of sherds, tile fragments, pieces of limestone and fire-reddened stones which suggested the presence of kilns (Trenches 7, 8 and 9). In the May of 1971 a geophysical examination of part of

the site was carried out by Mr A Clark and Mr D Haddon-Reece of the Department of the Environment, using a fluxgate gradiometer, and the trenches of the 1971 season were sited over anomalies revealed then (Trenches 3, 4 and 6).

### DATING AND PHASING: ORGANISATION OF THE REPORT

The excavations in the main uncovered only two types of archaeological feature, kilns and pits. On a few occasions these cut into each other, affording a relative chronology (eg Kiln 3 and Pits 2 and 3, Trench 1), but the phasing of the features and the dating of the phases had over-whelmingly to depend upon the analysis of the pottery and other objects, including coins, which had been dumped in these features to level them off when they had gone out of

use. This analysis produced the following phasing scheme (the detailed evidence is set out in the pottery and coin reports, pp 47-79, 93-94). Fig 3 shows the features of each phase separated out within the overall trench plan.

**Phase 1** A small group of pottery, to which a mid-1st century AD date can be assigned : Pit 11, Gullies 3 and 4.

**Phase 2** The shelly Harrod ware types, mainly jars, belong to the second half of the 1st century AD, a dating supported by the presence of a little sandy grey, orange, buff and white wares: Kilns 2, 3, 4, Gullies 1 and 2.

**Phase 3** The samian, Oxfordshire mortarium fragment and colour-coated ware suggest a late 2nd century date, which is in agreement with that assignable to the bowls and jars of shelly ware from dated local sites: Kilns 1 and 9, Pits 6, 20, 21, 22.

**Phase 4** New types of pottery make their appearance, viz Oxfordshire and Lower Nene Valley colour-coated wares,

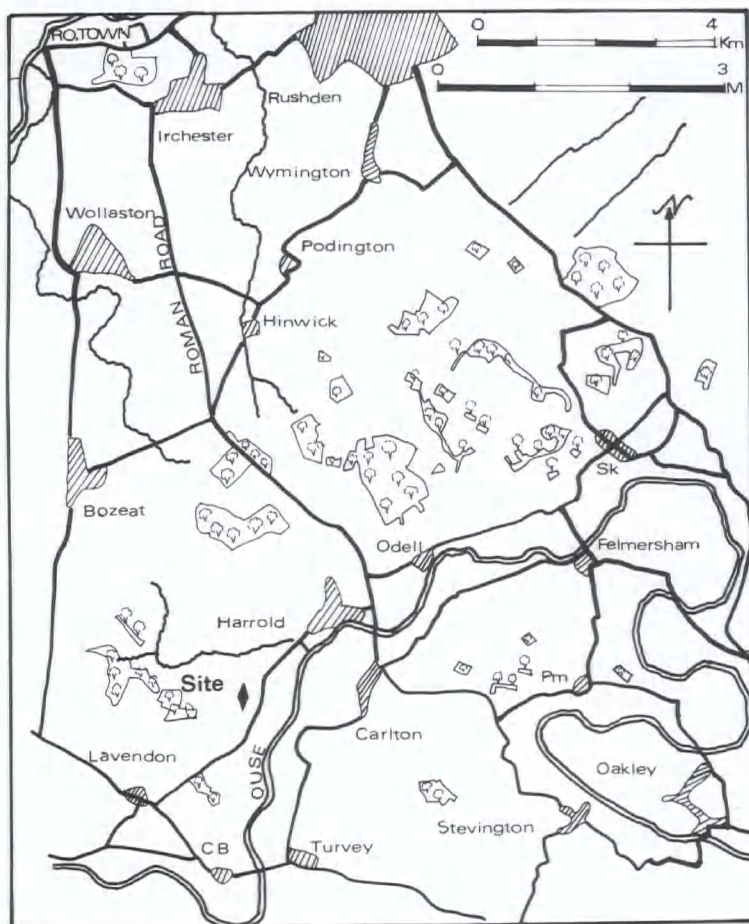


Fig 1. Harrod: site location.

CB: Cold Brayfield; Pm: Pavenham; Sk: Sharnbrook.

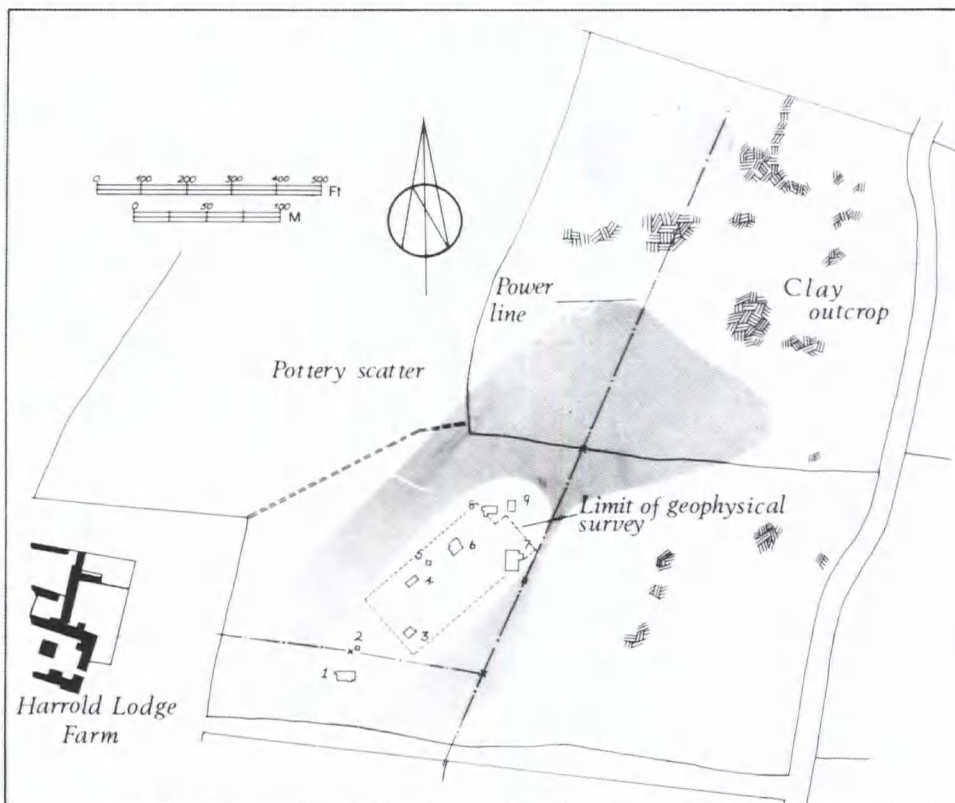


Fig 2. Location of pottery scatter, trenches and area of geophysical survey.

mortars from Mancetter-Hartshill and soft pink grogged ware; the shelly ware still has certain affinities with that of Phase 3. Later 3rd century AD: Kilns 5 and 6, Pits 9 and 17.

**Phase 5** Lower Nene Valley colour coated ware in 4th century forms is common now; some typological changes are detectable in the Harrold shelly ware compared with that of Phase 4; early 4th century AD: Kiln 7, Pits 1, 2, 4, 7, 23.

**Phase 6** Many 4th century coins going down to those of the House of Theodosius; late colour-coated forms; further typological changes in the Harrold ware to produce *inter alia* the familiar rilled shelly cooking pot: Pits 3, 8, 10, 12, 14, 15, 16, 18, 19.

#### THE EXCAVATED FEATURES: KILNS AND PITS

##### PHASE 1

**Pit 11**, Trench 9 (Figs 4, 17). Probably oval, 2.4 m

x 2 m. Excavated to a depth of 1.1 m but not bottomed. Layers: grey earth with patches of darker grey ash, flecks of charcoal; 2: brown clayey earth and stones.

**Gullies 3 and 4**, Trench 9 (Fig 4). Their real character uncertain, both were c 1 m across and consisted of trenches filled with tightly packed pieces of limestone separated by yellowish-brown clayey earth, with some patches of reddish burnt stone and dark grey greasy earth.

##### PHASE 2

**Kiln 2**, Trench 1 (Figs 5, 6; Pls 1 and 2). A well preserved sunken kiln, cut into the limestone and orientated E-W (with a stokehole at the W end). Its overall surviving length was 3.7 m (the W tip of the stokehole had been truncated by Pit 4); the diameter of the oven was about 2 m; the depth of the furnace chamber bottom below the subsoil surface was 1.1 m. The limestone into which it had been cut was burnt red along the length of the kiln to a depth of 50-60 mm. Excavation showed that the bottom of

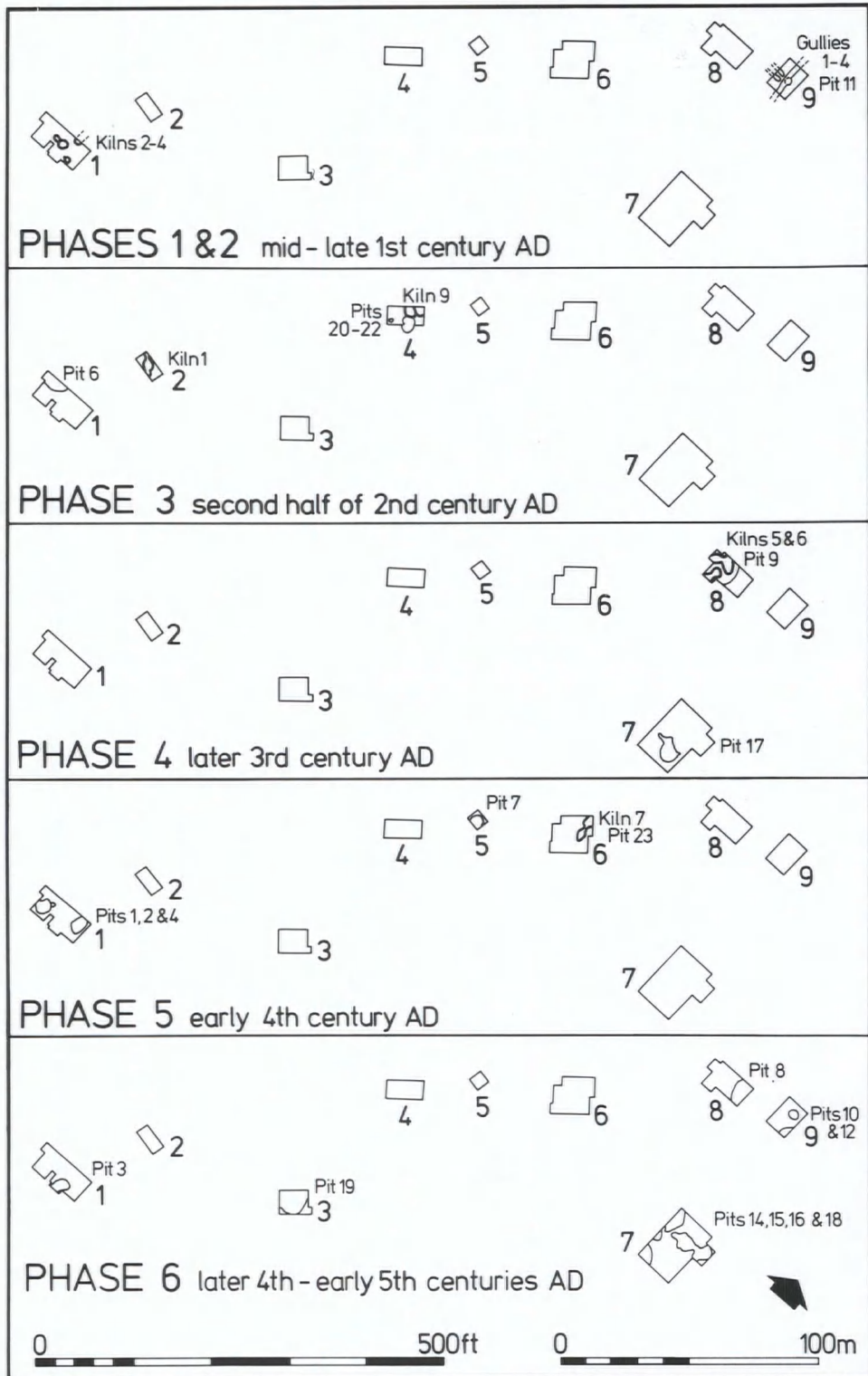


Fig 3. Phase plan.

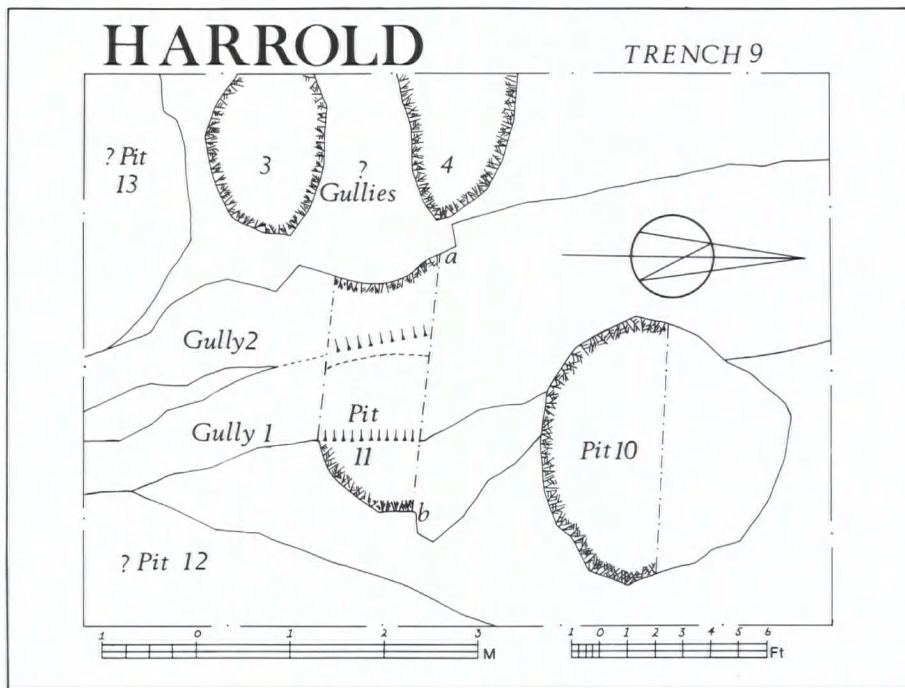


Fig 4. Trench 9.

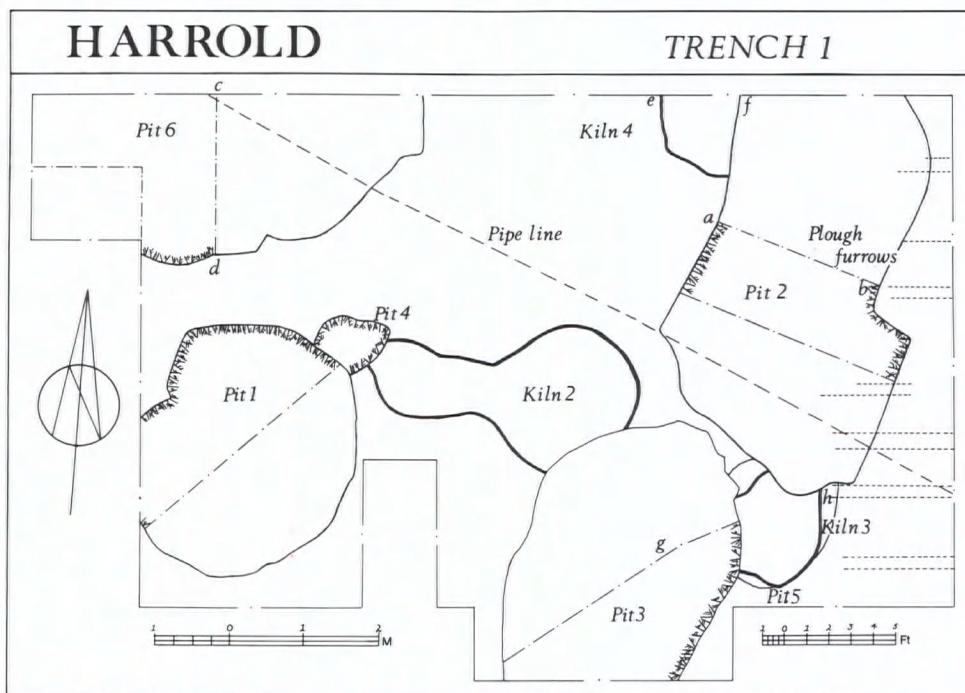


Fig 5. Trench 1.

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# KILN 2

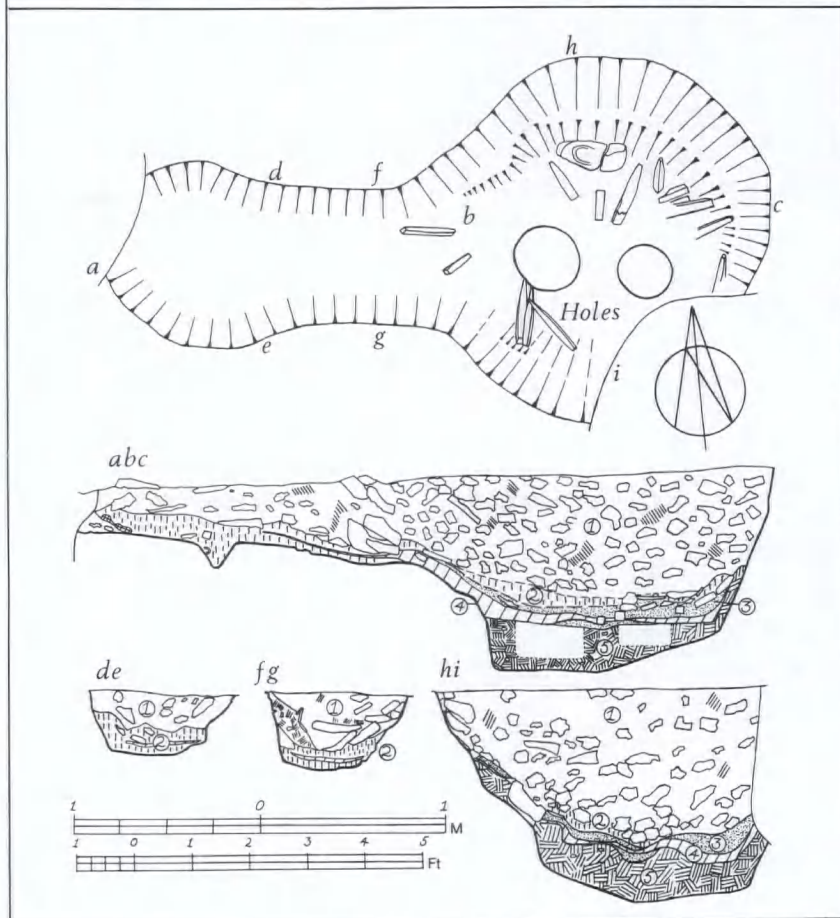


Fig 6. Kiln 2.

the furnace chamber had been covered with a layer 250 mm thick of hard dirty yellow clay (layer 5) with small stones, burnt red on its exposed upper surface, which had been continued upwards to line the furnace chamber wall in order to form a shelf on which the firebars could rest some 400 mm below the surface of the limestone, giving a maximum furnace chamber height of about 450 mm. Two regular cylindrical hollows 340 and 250 mm across had been formed in this clay floor to hold pedestals, but the pedestals had been removed and the holes left full of grey ash, with in one of them a fragment of a firebar and of a large jar.

The furnace chamber floor was covered with layers of grey (layer 3) and black (layer 4) ash, with

fragments of pottery and firebars, mostly broken but preserving something of their original radial arrangement, lying on and in them. These layers represent the remains of firings. Above was a layer of reddish burnt clay which extended westwards from the furnace for the full length of the flue and stokehole (layer 2). This weathering layer contained a few firebar pieces, pottery fragments and fire reddened stones. In the centre of the stokehole was a deposit of light grey ash. After abandonment the whole kiln had been filled up to the top with hard brownish-yellow sandy clay and large pieces of limestone, tightly packed (layer 1).

**Kiln 3, Trench 1** (Figs 5, 16; Pl 3). This kiln had



Plate 1. Kiln 2 looking east. Scale in feet.

been located during Mr Field's earlier excavations. It had been considerably damaged by the digging of deep pits. Pit 2 had taken away a portion of the N side of what had probably been the furnace chamber and Pit 3 to the W had removed the flue and stokehole entirely. The furnace chamber, which was about 1.4 m across and 700 mm deep, had been cut into an earlier pit (Pit 5; layer 4, Fig 16) containing a fill of large pieces of loose limestone mixed with yellow clayey earth and dark sooty material with flecks of reddish burnt clay; there were no finds. The furnace chamber bottom was covered with a fine clay burnt brick red, and on this was a deposit of grey and black ash (layer 3). There were no traces of pedestals or of arrangements for supporting firebars. After going out of use the furnace chamber had been filled up with a very large quantity of broken firebar and pottery fragments, while on top of these were layers of fine grey ashy material containing fragments of pottery (layer 2), and brown earth containing pieces of limestone

(layer 1).

**Kiln 4**, Trench 1 (Figs 5, 16). A portion of what was probably the stokehole of another kiln, 600 mm deep, cut by Pit 2 and running outside the area excavated. It was filled with alternating layers of black soot (layer 2) and fine brownish earth (layer 1) containing fragments of pottery, with close to the top a layer (3) of greyish-brown earth with flecks of red burnt material. The stones around the sides had not been reddened by heat.

#### **Other features** (Figs 4, 17)

**Gully 1**, Trench 9. V-shaped, 350 mm deep, 1 m across. Chocolate earthy fill.

**Gully 2**, Trench 9. Cuts Gully 1, 850 mm wide, 300 mm deep. Brownish-yellow clayey earth, smallish pieces of limestone.



Plate 2. Kiln 2, details of firebars in furnace chamber. Note hole at bottom of photograph. Scale in feet.

### PHASE 3

**Kiln 9**, Trench 4 (Figs 7, 8; Pl 4). This trench was opened up in response to an anomaly of 70y during the geophysical survey of 1971 and contained the oven, furnace chamber and part of the flue of what was probably a sunken updraught kiln orientated NW-SE. The oven and furnace chamber, 2.5 m across and 1 m deep, were of dry limestone construction, up to eight courses surviving in the best preserved portion. The flue had been unlined; its cheeks were reddened by fire. The furnace chamber floor had on it a localised layer of grey ash (layer 12), covered by a thin layer of yellow clay (11) with more thin grey ash on top of that, covering a wider area (10). These layers represent the detritus of kiln firings.

They were covered by a thin layer of reddish brown burnt clay (9), possibly caused by some slippage from the sides of the oven after the kiln had ceased to be used. On this rested a deposit of yellowish clayey earth (8), perhaps accumulation into the kiln from the surrounding subsoil. Onto this

had fallen a mass of limestone pieces, some of them burnt red on one side, representing the collapse of the upper part of the furnace chamber and oven lining. This had been covered in turn by layers of grey ash (7), stones and yellowish clayey earth (5 and 6) (perhaps more collapse); then yellow grey clay (1), hard dirty yellow clay with some pottery (2), brown clayey earth with much pottery and some tile fragments (3) and grey ash (4). Some of this material might have been derived from the fill of a pit (Pit 21) cut by the kiln on its north side, but the topmost layer seemed to have been dumped indiscriminately into kiln and pit at the same time, to level them up. There was no trace of a raised oven floor or of any support for one.

**Kiln 1**, Trench 2 (Fig 9). This kiln was excavated by Messrs P Panter, K Field and R M Friendship-Taylor in 1968-9. It turned out to be a single-chambered twin-flued sunken kiln oriented roughly E-W. The total length of the kiln was 4.7 m; the oven pit was in fact almost circular





Plate 3. Kiln 3 cut by Pit 3 in foreground. Note large quantity of firebars in furnace chamber. Scale in feet.

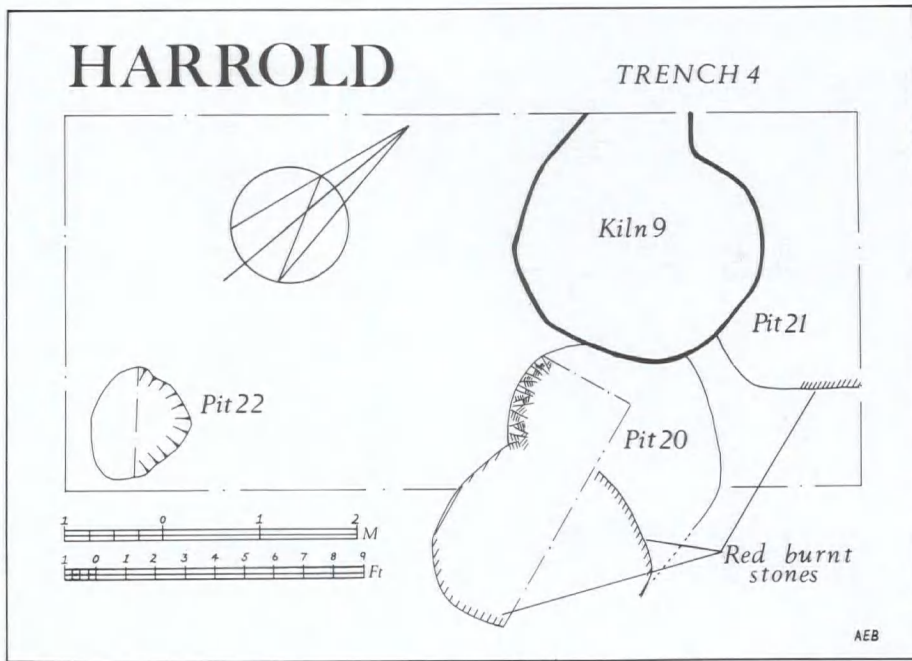


Fig 7. Trench 4.

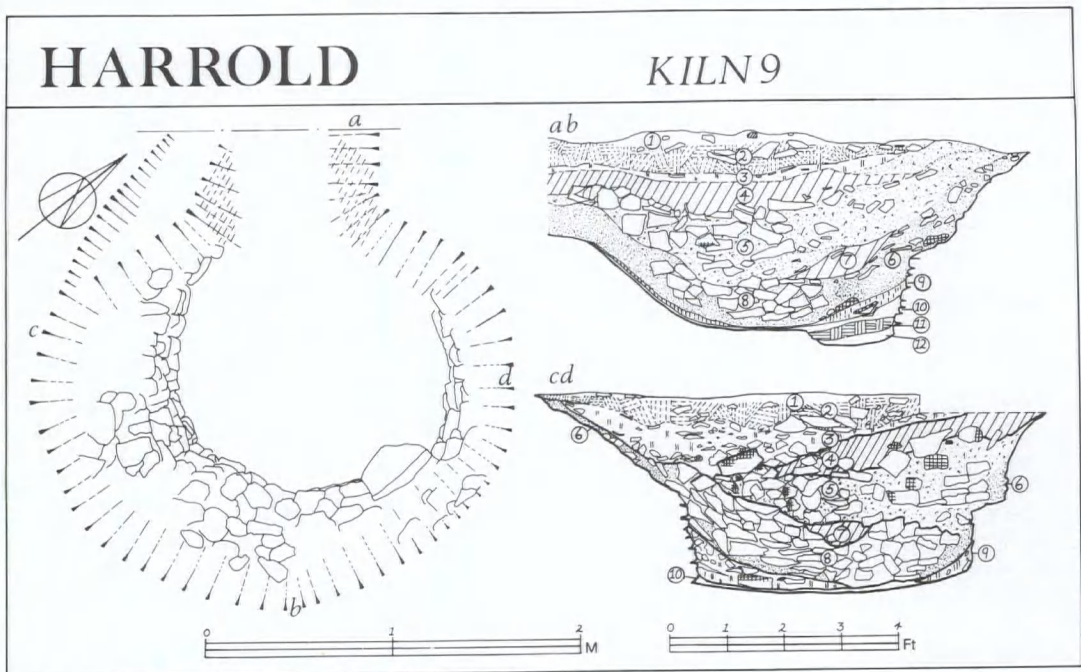


Fig 8. Kiln 9.



Plate 4. Kiln 9, looking west. Scale in metres.

in outline, with a diameter of 2.1 m; the western stokehole was bigger than the eastern one, 900 mm across as against 450 mm. The kiln floor was 1.1 m below the level of the topsoil.

The sides of the kiln had a lining of red burnt and yellow clay. On the western half of the kiln floor and the adjacent flue was a thick layer of black burnt matter (layer 10); in the eastern half was a thinner layer of corresponding material; this (layer 5) contained a lens of black-brown soil with yellow clayey streaks at its eastern end (layer 6). This pair of matching layers, which probably represented the remains of firings, covered layer 9, an area of solid yellow clay similar to that which lined the kiln and which here perhaps levelled off an irregularity in the bottom of the kiln; also layers 7 and 8, respectively thin layers of brown soil with specks of reddened clay, and yellow-brown clay.

On top of the ash on the bottom of the kiln was layer 4, brown-red burnt clay with patches of yellow unburnt clay, apparently collapse from the sides of the kiln. This was overlain by layers 1 and 2, brown-black soil and reddish soil with some small stones.

On either side of the western flue, at the beginning of the oven pit, was a single large stone. These stones could have formed the base of a flue arch; the group of reddened stones found at this point in the body of the oven could conceivably have come from this.

(**Note.** For the purpose of recording the finds from this kiln, the layers described above were combined and given new layer numbers as follows: Layer 1: the zone immediately above the drawn layers shown in Fig 8; Layer 2: equivalent to Layers 1, 2, 3, 4, 5, 6 and 10 on Fig 8; Layer 3: equivalent to layers 7 and 8 on Fig 8).

**Pit 6, Trench 1** (Figs 5, 16 ; Pl 10). Shape not really determined but probably oval, over 5.3 m x over 2.2 m. Depth 2.2 m. Layers: 1: grey earth, lighter brown clayey earth, pieces of limestone and inclusions of blue clay with some pottery and tile fragments; 2: large pieces of limestone and brown earth; 3: yellow sandy clay with inclusions of blue clay.

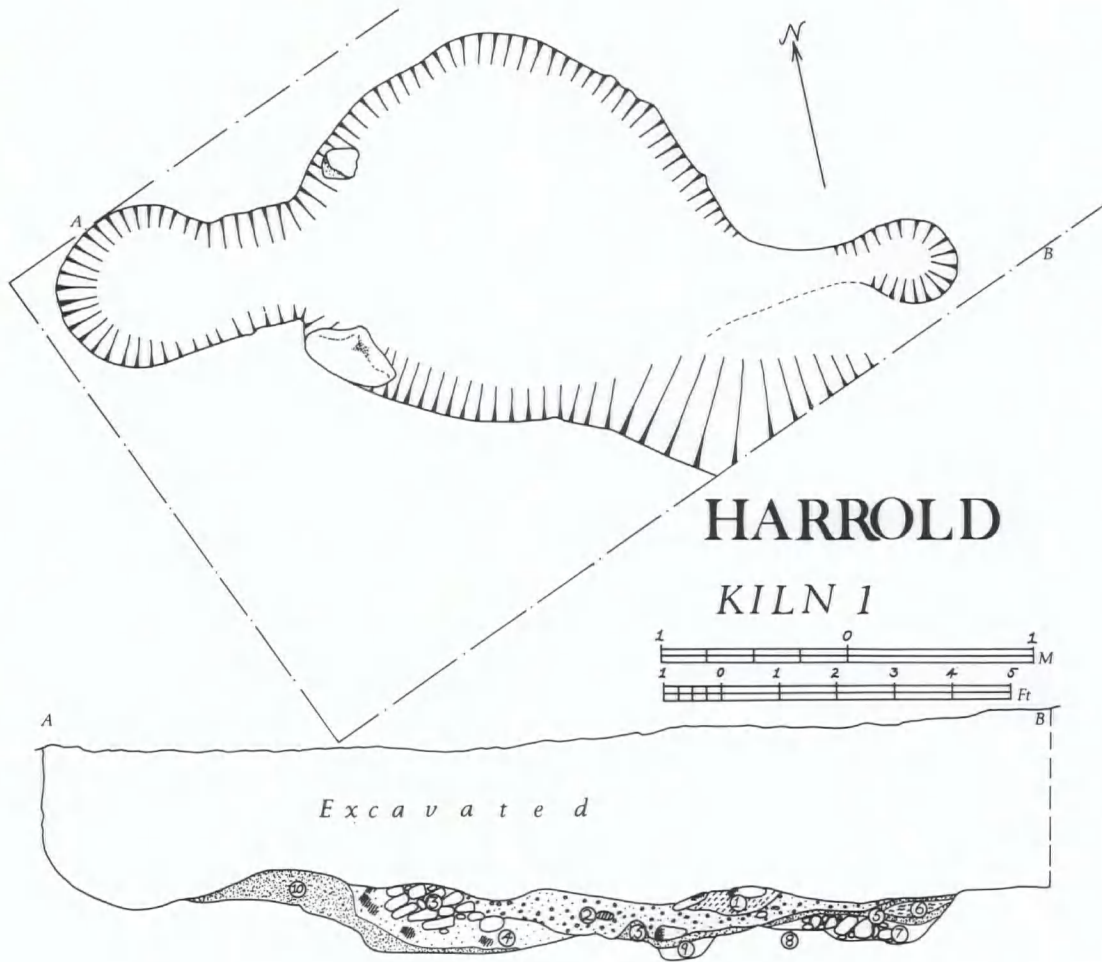


Fig 9. Kiln1.

**Pit 20**, Trench 4 (Figs 7, 17). Irregular oval, 2.4 m x 3.5 m. Depth: 2.6 m. Layers: 1: dark earth with some burnt stones and pottery fragments; 2: many pieces of limestone, some burnt, and chocolate clayey earth with a little pottery; 3: many red burnt stones with reddish brown earth; 4: yellow brown clay with pieces of limestone; 5: yellow clay, some pieces of limestone.

**Pit 21**, Trench 4. Upper layers only excavated; common to Kiln 9, layers 1 and 2 (Fig 8).

**Pit 22**, Trench 4 (Figs 7, 14; Pl 12). Circular, 1.1 m diameter; 300 mm deep. Layers: 1: hard bright yellow clay; 2: stiff greyish clay, pieces of limestone, some burnt; 3: greyish brown clayey earth, stones, flecks of charcoal.

#### PHASE 4

**Kiln 5**, Trench 8 (Figs 10, 11; Pls 5, 6, 7). This was a well preserved single chambered sunken kiln cut partly into a pocket of softish light brown sandy clay and partly into the fill of Pit 9, and orientated N-S. The full length of the kiln was not recovered, but was well in excess of 3 m; the diameter of the oven pit was 1.55 m and its depth below the top of the subsoil 750 mm.

The oven pit had been very solidly constructed with smallish pieces of limestone in eight alternately sloping and horizontal courses of double thickness, held together by hard yellow clay. The interior of the oven pit had been given a clay lining, fired to a hard grey on the outside but still a softish red on the inside. In one place it could be seen that the original lining, formed of a pre-fired slab of clay, had been

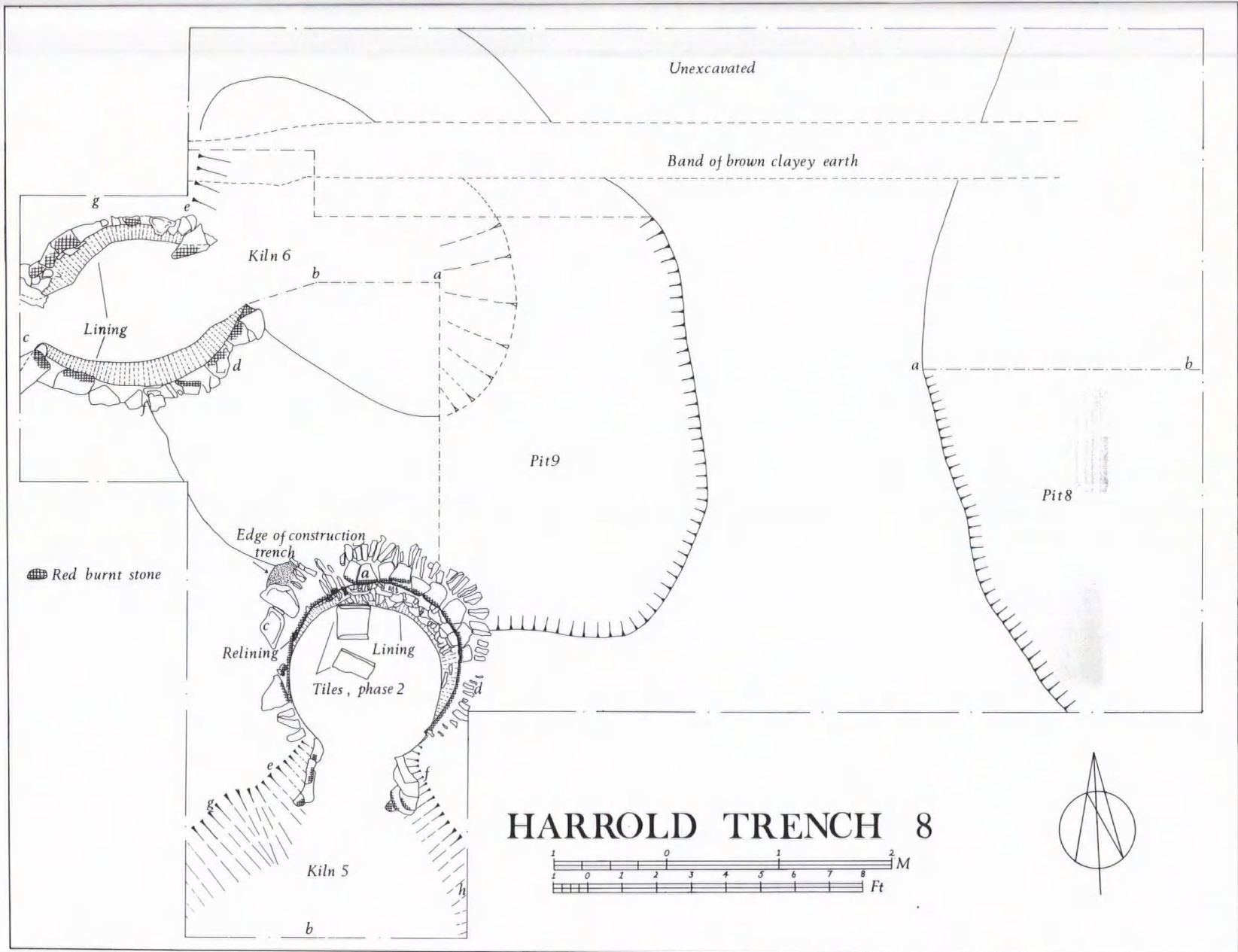


Fig 10. Trench 8, Kilns 5 and 6.



Plate 5. Kiln 5, looking north. Note pre-fired clay slab lining and re-flooding with roof tiles. Scale in metres.

covered again with a second coat of clay 20-50 mm thick. A thin layer of black ash and charcoal had accumulated on the oven pit floor and on top of this was a layer of red burnt clay in all probability representing the collapse inwards of some oven pit lining material. This in turn had been covered by a layer 60 mm thick of yellowish grey clay mixed with shell and stone, with in places complete or fragmentary tegulae fixed horizontally in its upper surface (6). This layer did not extend beyond the oven pit and seems to represent a re-flooding. More black ash (4) and red burnt clay (5) had accumulated on it.

The whole of the kiln had been deliberately filled up with a thick deposit of dark ashy material, containing flecks of charcoal and reddish burnt matter, some pieces of limestone, pockets of what appeared to be underfired prepared clay, pieces of pottery and quantities of tile fragments, including some twisted wasters (layers 1 and 2). Below this in the stokehole and flue, but extending a little way also over the re-flooding of the oven pit, was a layer (3) of softish yellow brown earth similar to the subsoil at this point, containing tile and pottery fragments, patches of yellow and red burnt clay and

many pieces of limestone, frequently burnt red. On the stokehole floor was a deposit of black ash (layer 7), covering a thin but hard deposit of chocolate clayey earth with pebbles, which could represent either trampling during the working of the kiln or a deliberate covering of the soft, sandy subsoil in order to provide a reasonable working surface.

Nowhere in the excavation of the oven pit was there any trace of pedestal, firebars or fired clay kiln material, although two hollow cylindrical pieces of kiln furniture c 170 mm long and 130 mm diameter were recovered from the filling, layer 2. A few fire reddened stones forming a springing for the flue arch were still in position in the flue.

**Kiln 6**, Trench 8 (Figs 10, 11; Pl 8). This rather unexpectedly turned out to be a large single-chambered twin-flued kiln. The full length was not recovered, but if the two stokeholes were of equal size it would have been in the region of 6 m. The oven pit was 1.5 m long and 1 m across at its widest point.

Like Kiln 5, it had been cut into the fill of Pit 9, which at this point was of softish brown earth. That portion of the stokehole nearest to the oven pit and



Plate 6. Kiln 5 under excavation, looking north at the area of the flue arch. Scale in metres.



Plate 7. Kiln 5, looking south at stokehole to show nature of fill. Scale in metres.

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## SECTIONS, KILNS 5 & 6

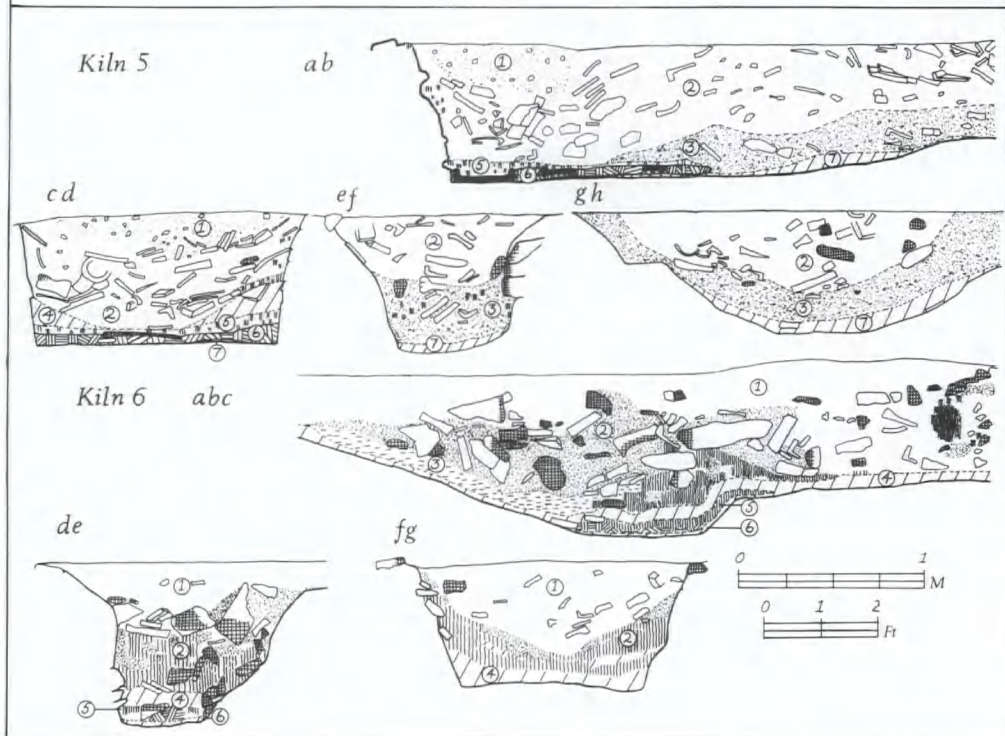


Fig 11. Kilns 5 and 6, sections.

the oven pit itself had been given a flooring of hard greyish clay and pebbles and on this black ash had accumulated (layer 6), to be covered in the stokehole only by a re-flooring of yellowish clay, burnt red on its upper surface (5). More black ash had collected on this (4). The oven pit floor sloped up to a level 150 mm above that of the stokehole. The kiln contained a large quantity of limestone blocks, many burnt red, mixed with tile fragments, red burnt clay - which predominated in the oven pit - and powdery yellow clay (2). It is probable that the sides of the kiln had originally been lined with these stones, which had been fixed in position and lined with clay; some in fact still remained in position with a hard grey clay lining in the oven pit. There is also the possibility of the collapse of a superstructure of limestone blocks and clay. In the stokehole the stones rested on some brown clayey earth (3), probably representing slippage into the stokehole from Pit 9. The space above the stone collapse in the kiln had been filled up with soft grey

rather ashy earth, with flecks of charcoal and some reddened stones as well as pottery and tile (layer 1).

**Pit 9**, Trench 8 (Fig 10). Oval, 4.75 m x at least 6.6 m. At least 2.2 m deep but not bottomed. Layers: 1 and 2 formed part of the E stokehole of Kiln 6; 3: powdery yellowish clay; 4 and 5: grey earth and yellow clay, pockets of black sooty material, flecks of charcoal, red burnt matter; 6: hard yellow clay, with intercalated layers of grey ash, reddened stones, red burnt clay and tile fragments; 8: dirty yellow clay with reddish brown burnt matter and tiles; 9: a very thick layer, 1.4 m, of yellow sandy clay, lumps of limestone and brown clayey earth.

**Pit 17**, Trench 7 (Figs 15, 16). An irregular oval, 6.2 m x 2.5 m. 1.8 m deep. Layers: 1: grey brown earth, ashy, small pieces of limestone, clayey inclusions and pottery, with some tile; 2: thick layer of solid blue clay; 3: limestone pieces and yellow clayey earth, patches of chocolate clayey earth; 4:





Plate 8. Kiln 6, looking west. Scale in metres.

dirty yellow green sandy clay; 5: yellow sandy clay.

#### PHASE 5

**Kiln 7**, Trench 6 (Figs 12, 13; Pl 9). This was a well-preserved single-chambered twin flued kiln, oriented N-S. Its full length could not be established but would have been a little over 7 m, with stokeholes approximately equal in area, but with the northernmost the deeper of the two. The oven pit, 2 m long, and 1 m across, at its widest point and 650 mm deep, was built of limestone blocks set in clay, with limestone cheeks flanking the entrances at both ends. The clay lining of the oven pit, 20 mm thick and burnt grey and black, was well preserved; in one place a tile 190 mm square had been incorporated in it. The NE corner of the oven pit was right-angled and there were indications that the NW angle had been similarly formed; the kiln might originally, therefore, have been roughly rectangular. The kiln floor was of red burnt clay, with no sharp upward slope from the stokeholes, as was the case with Kiln 6. On this and on the stokehole floors was a layer of black and grey ash, with tile fragments (layer 3), the result of the use of the kiln, rising to a thickness of 450 mm in the middle of the oven pit. This was covered by a thick

layer of crumbly yellow clay mixed with some red burnt clay (layer 2), together with a large number of pieces of limestone (and some tile) which occurred in great quantity in the oven pit, where this layer was thickest. Almost all the stones showed signs of burning, frequently along one edge only. It appears therefore that the kiln had been given a superstructure of limestone blocks, held together by clay, and that this had collapsed. Layer 1 consisted of soft dark grey sooty earth with a few pieces of reddened stone, with pottery and tile fragments.

The north stokehole of Kiln 7 had cut the lip of Pit 23. Both this and Kiln 7 had removed a large portion of Kiln 8, which was marked on the stokehole floor by an area of bright red burnt clay, bounded by a semi-circle 60 mm thick of red burnt stones, black ash, blue, red and yellow clay with in places a lining of hard red clay 10 mm thick. This kiln was not excavated and its date not determined.

**Pit 1**, Trench 1 (Figs 5, 14). Roughly circular, 3.4 m diameter, 2.2 m deep. Layers: 1: dark grey-brown clay with pieces of limestone and pottery; 2: as 1, but with yellow clayey material; 3: pieces of limestone, a little yellowish-grey clayey earth between them with pottery and tile; 4: yellow

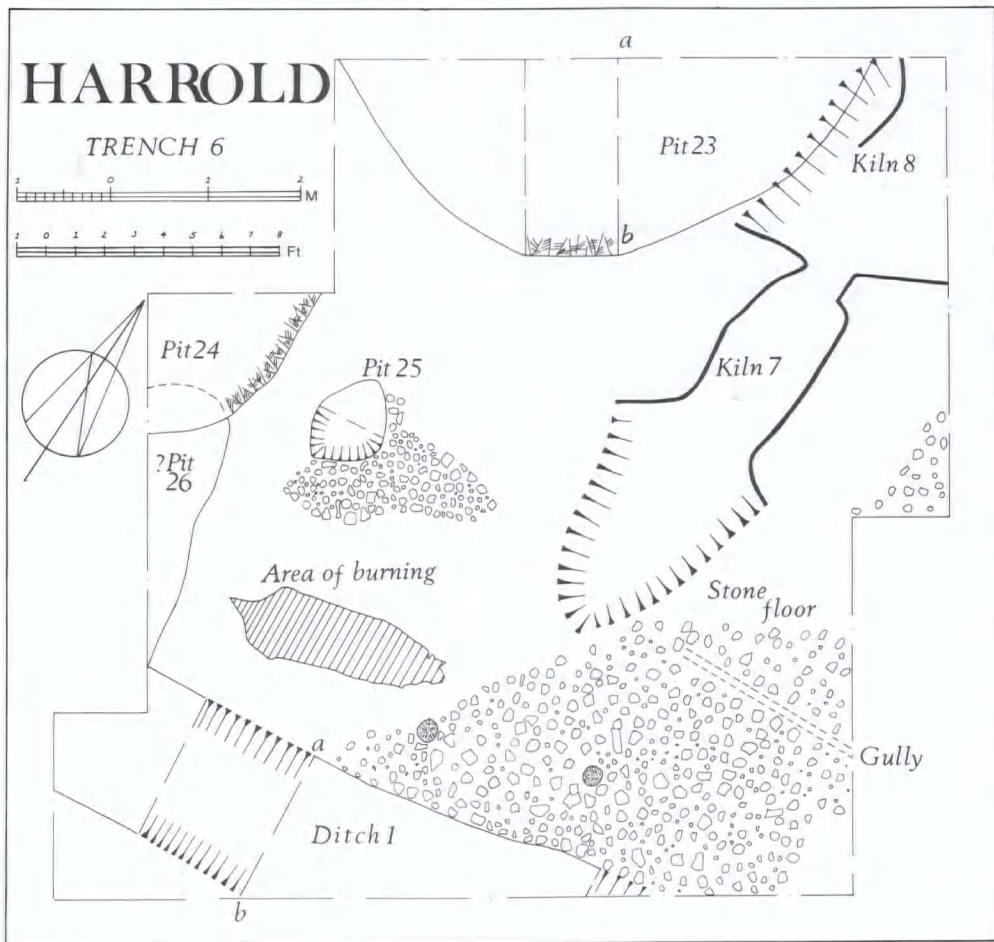


Fig 12. Trench 6.

sandy clay and dirty grey-brown clayey earth; 5: clean yellow clay merging into dirty yellow clay; 6: dirty grey clay; 7: reddish brown earth (5-7 all derived from Pit 4); 8: many pieces of limestone, brownish-yellow clay between them; 9: greyish-yellow sandy clay; 10: greyish yellow clay.

**Pit 2**, Trench 1 (Figs 5, 16). Irregular oval over 5.7 m in one direction, width varies 2.4 - 3.1 m. Depth: 2.10 m. Layers: 1: greyish-brown stoneless loam with pottery and tile; 2: limestone pieces, with dark yellowish-brown clayey earth, some burnt stones and zones of stoneless brown earth; 3: a great deal of limestone with some yellow clayey earth and brown earth; 4: large stones with some yellow clayey and brown earth; 5: light blue-grey sandy clay; 6: yellow sandy clay.

**Pit 4**, Trench 1 (Fig 5). Roughly circular 800 mm diameter, 700 mm deep. Hard brown clayey earth with stones, a little pottery.

**Pit 7**, Trench 5 (trench location, Fig 2). Shape not determined since pit occupied most of this 3 m square trench. Not bottomed, but excavated to depth of 1.7 m. Cut through rock. Layers: 1: grey-brown ashy earth, pieces of limestone, pottery and tile; 2: yellow clayey earth, much stone; 3: chocolate earth, small stones; 4: grey ashy; 5 and 6: chocolate earth with pieces of limestone.

**Pit 23**, Trench 6 (Figs 12, 17). Uncertain outline since against north side of trench, but at least 5.7 m across. Depth: 2.6 m. Layers: 1: dark brown grey ashy earth, red burnt matter, burnt and unburnt pieces of limestone and pottery; 2: yellow powdery

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## KILNS 7 & 8

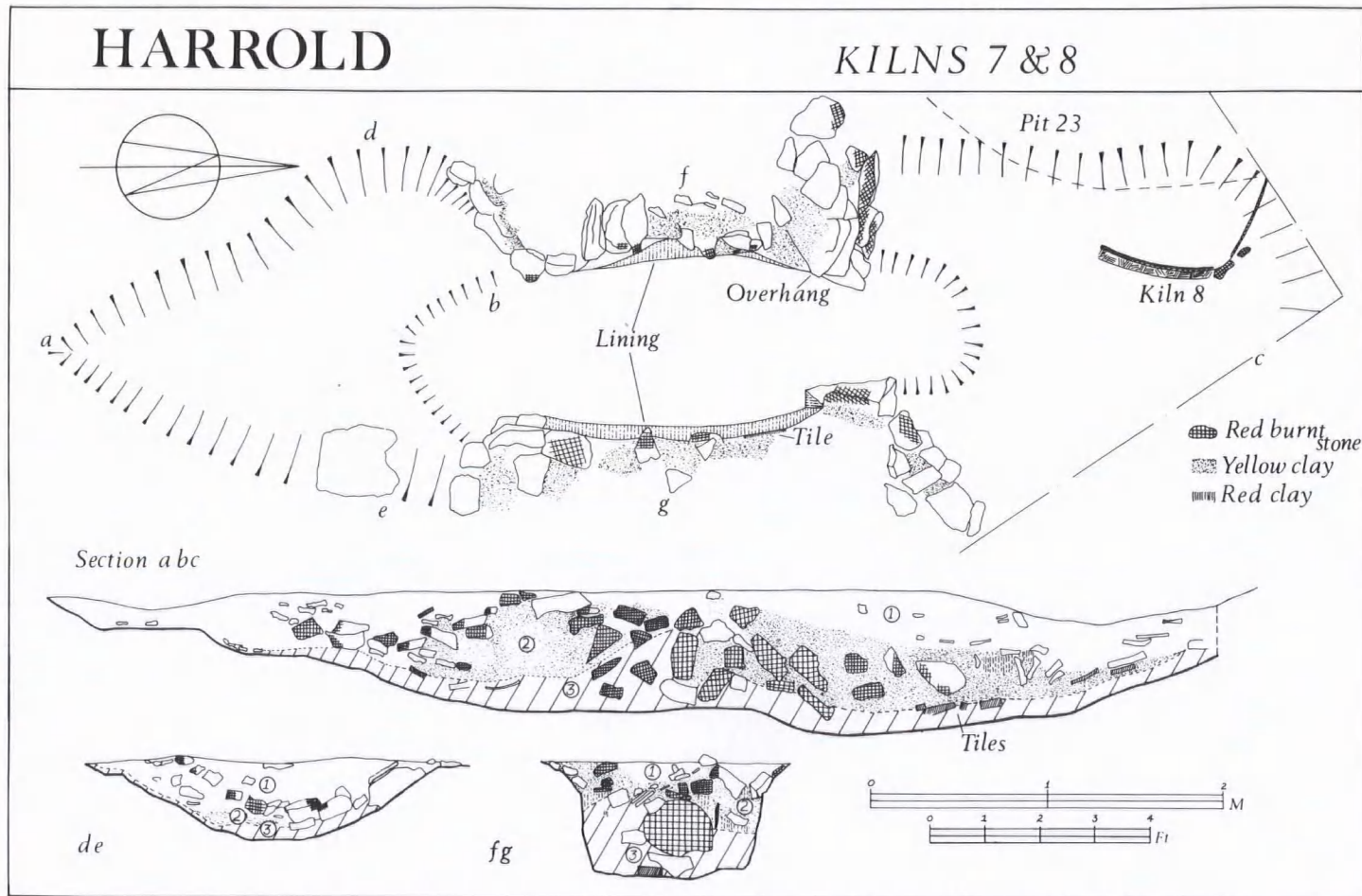


Fig 13. Kilns 7 and 8.



Plate 9. Kiln 7, looking south; stone floor beyond. Two-metre ranging rod.

clay, flecks of red, black ash, pottery and tile; 3: light grey ash, pottery and tile; 4: dark brown-grey ashy earth, red burnt matter, burnt and unburnt pieces of limestone, some pottery and tile; 5: yellow powdery clay, black ash, flecks of red; 6: dark grey ashy; 7: light grey ash; 8: dark grey ashy; 9: light grey ash; 10: light brown clayey earth; 11: dark grey ashy, flecks of red, patches of yellow powdery clay; 12: soot, red burnt flecks, small pieces charcoal, small area of brown earth; 13: yellow-brown sandy clay; 14: loose pieces of limestone separated by dirty clayey earth; 15: greenish-grey clayey, with lenses of blue clay in places.

#### PHASE 6

**Pit 3**, Trench 1 (Fig 5). Oval, over 4 m x 2.8 m. Not bottomed; excavated to a depth of 1.2 m. Layers: 1: dark grey clayey earth, yellow sandy clay and limestone; 2: limestone and yellow sandy clay; 3: limestone pieces mixed with brownish clayey earth; 4: limestone and yellow clayey earth; 5: as 3; 6: as 4.

**Pit 8**, Trench 8 (Figs 10, 17). Uncertain shape since

occupied whole of E edge of Trench 8, but at least 6 m across. Depth: 2.5 m. Layers: 1: light grey ashy with charcoal, pottery and tile; 2: pieces of limestone with black clayey earth, with charcoal and bluish clay; 3: grey clayey, lumps of limestone; 4: dirty grey-brown clayey with flecks of yellow clay and small stones, band of grey ash and charcoal; 5: yellow-grey clayey with band of grey ash; 6: light brown clayey; 7: hard yellow and reddish brown and grey clay, with stones and band of blue clay; 8: yellow-brown clay and yellow sandy, flecks of blue clay.

**Pit 10**, Trench 9 (Figs 4, 17; Pl 11). Circular, 2.5 m in diameter. Depth to water level, 2 m. Layers: 1: soft loose grey earth, some stones, pottery; 2: brown clayey earth, pottery, with pieces of limestone, not tightly packed; 3: pieces of limestone, gaps between, chocolate clayey earth, blue clay inclusions; 4: mixture of brown sandy clay, yellow sandy, a few stones.

**Pit 12**, Trench 9 (Fig 4). In corner of trench, real nature uncertain. Layers: 1: brown-yellow clayey, pieces of limestone; 2: grey earth and stones; 3: light

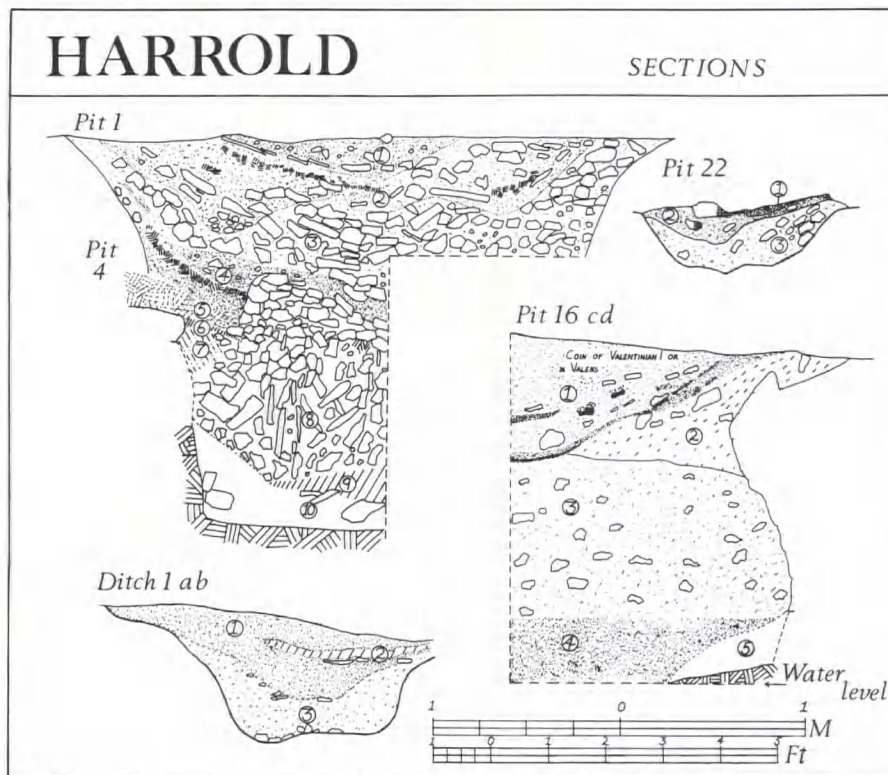


Fig 14. Sections, Pits 1, 16, 22 and Ditch 1.

brown sandy clayey.

**Pit 14**, Trench 7 (Figs 15, 16). Probably circular, 2.45 m diameter. Depth 1.7 m. Layers: 1: greyish brown clayey earth with red burnt stones in middle of pit; 2: brownish clayey earth with lumps of limestone in middle, yellowish limestone flecks elsewhere; 3: densely packed pieces of limestone; 4: greyish clayey; 5: reddish brown clayey; 6: smallish pieces of limestone with yellow sandy clay between them; 7: yellow sandy.

**Pit 15**, Trench 7 (Fig 15). In corner of trench, so shape uncertain, but at least 4 m x 3.20 m. Depth: 1.7 m. Layers: 1: fine grey ashy, stones, some burnt red, charcoal; 2: pieces of limestone, greyish-brown clayey earth with bands of yellow clay; 3: dirty yellow clay mixed with brown clayey earth and stones; band of blue clay; 4: yellow sandy.

**Pit 16**, Trench 7 (Figs 14, 15). Oval, 6.2 m x 2.5 m. Depth, 1.8 m. Layers: 1: fine dark grey ashy, band of dark ash at base; 2: brown clayey earth, few

stones; 3: yellow-brown earth, closely packed pieces of limestone; 4: dirty yellow-brown clayey, few stones; 5: yellow sandy clay.

**Pit 18**, Trench 7 (Fig 15). Irregular oval, 3 m x 2.4 m. Layer 1: grey brown clayey earth with smallish stones, alone examined.

**Pit 19**, Trench 3 (trench location, Fig 2). Trench 5 m square: pit occupied area of this and more. Not bottomed because on SE side, where section dug, the pit shelved in, but it was 2 m deep at this point already. Layers: 1: dark grey clayey earth, flecks charcoal, burnt and unburnt limestone; 2: dirty yellowish clay and chocolate clay, fragments of chalk; 3: dark grey clayey earth, fragments of charcoal; 4: light brown clay, small stones, patches of yellow clay; 5: grey clayey earth; 6: chocolate clayey and small stones; 7: yellow clay and stones; 8: soot, grey clayey earth, flecks red burnt matter; 9: grey-yellow clayey and stones; 10: brownish yellow clayey, some charcoal flecks, small stones.

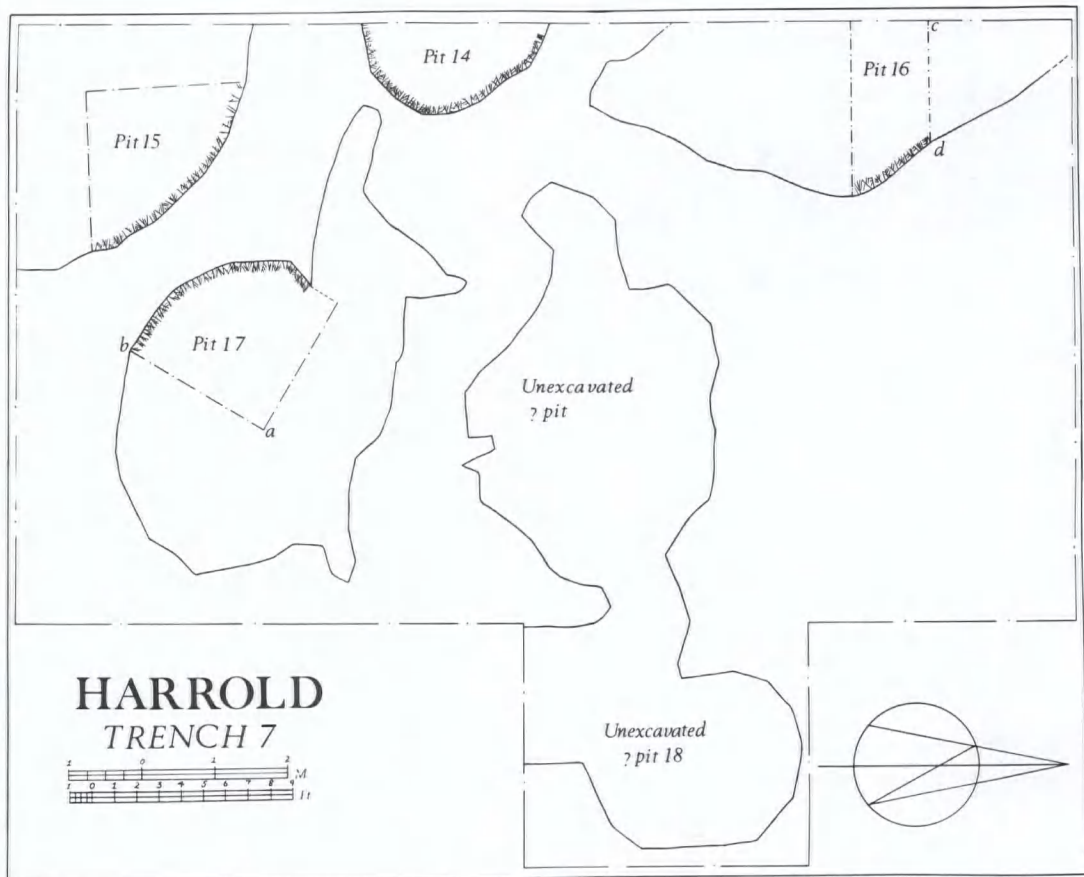


Fig 15. Trench 7.

**OTHER 4TH CENTURY FEATURES, NOT ASSIGNABLE TO A PARTICULAR PHASE**

**Pit 13**, Trench 9 (Fig 4). In corner of trench, so interpretation as a pit not wholly certain. Chocolate clay with flecks of yellow limestone.

**Pit 24**, Trench 6 (Fig 12). Same comments apply. Excavated to a depth of 500 mm. Layers: 1: grey clay and stones; 2: stones and brownish yellow clayey earth; 3: black sooty earth and stones. Cuts earlier feature, ? Pit 26, area of limestone pieces and grey earth, no finds.

**Pit 25**, Trench 6 (Figs 12, 17). Circular, 750 mm diameter, 350 mm deep. Layers: 1: yellow clay; 2: dark grey clayey earth; 3: limestone pieces.

**Ditch 1**, Trench 6 (Figs 12, 14). 1.8 m wide, flat

bottomed, 600 mm deep. Layers: 1: soft dark grey sooty, reddened stones; 2: light brown yellow clayey earth; 3: light yellowish brown clayey earth with stones. This ditch bounded a floor of pebbles, which was cut by a shallow gully 200 mm across and two depressions with the same diameter as this filled with dark grey clay, perhaps post holes.

**'Area of burning'**, Trench 6 (Figs 12, 18). An oval area, 2.25 m x 0.75 m, where the natural chocolate clay subsoil has been burnt red. At both ends were low piles of stones 5-600 mm high, with yellow powdery clay mixed with them. A brick fragment 45 mm thick sat on its edge within the area and two other similar fragments lay flat inside it. The suggestion can be made that the feature represents a clamp for the firing of bricks. In itself the feature cannot be dated but its general situation suggests a 4th century date.



Plate 10. Pit 6. Scale in feet.



Plate 11. Pit 10. Note layer of rock through which pit was dug. Scale in metres.

## THE KILNS, GENERAL

### Kilns 2, 3, 4 & 9

These kilns can usefully be considered as a group. Although much cut about by the digging of pits, what was left of Kiln 3 - a depression only 700 mm deep bearing the marks of intense heat - suggests that what survived represented the furnace chamber of the kiln rather than the stokehole. The neatly made cigar shaped firebars are very typical of early kilns in the Nene and Ouse valleys and in the case of this kiln, given the shallow nature of the furnace chamber, their ends probably rested on the ground surface, being supported in the centre of the kiln by a portable pedestal similar to the one found in Pit 23 (Fig 50, 26). This means that the kiln can be thought of as falling into the semi-sunken category of pottery kilns of La Tène III derivation recently defined by Vivien Swan (1984, 55); other examples of comparable date come from the Nene valley at Martin's Lane, Hardingstone, and Camp Hill, Northampton, 7.5 km away (Woods 1969 and Shaw 1979).

But Kiln 2 differs from Kiln 3 in that the furnace chamber was deeper and a ledge existed half way up this in order to support the ends of the firebars.

This meant that a substantial part of the oven as well as the oven floor was below ground, a technological advance on the sort of kiln represented by Kiln 3. In this respect it resembled the kilns found at Elstow near Bedford (Swan 1984, 63) and Weston Favell, near Northampton (Bunch and Corder 1954). The superstructure of this kiln may well have been of turf; this is put forward as a suggestion on the analogy between our layer 2, reddish burnt clay, and the 'orange-red clayey deposit' considered to represent burnt turfwork at the early surface-built kilns at Rushden, 10 km to the north (Woods 1974, 265).

Kiln 9 would appear to have been similar. As with Kiln 2, the base of the furnace chamber was well below the level of the flue, where the fire was clearly set, as was evidenced by patches of burning on both sides of it. Unlike Kiln 2, Kiln 9 had a carefully constructed furnace chamber and oven of stone; the upper part of this construction had collapsed, but the general disposition of the surrounding remains was quite consistent with the notion that a ledge had existed on which the ends of a raised oven floor could have rested. No long firebars were found in the kiln although a single short bar-like object



# HARROLD

## PIT & KILN SECTIONS

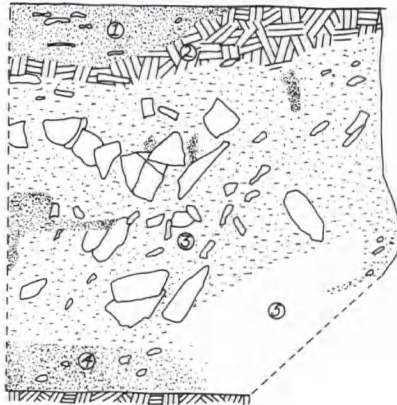
Pit 2 ab



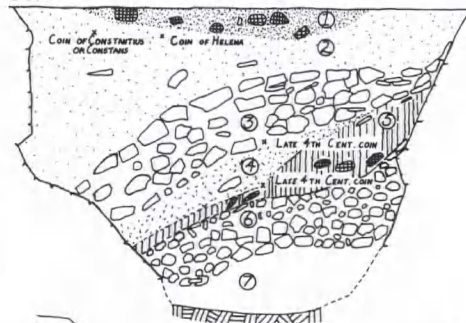
Pit 6 cd



Pit 17 ab



Pit 14



Kiln 4 ef

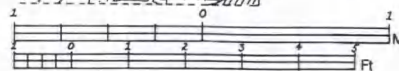
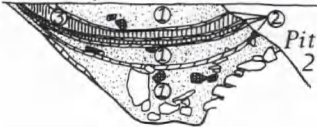


Fig 16. Sections, Pits 2, 3, 6, 14, 17 and Kilns 3 and 4.

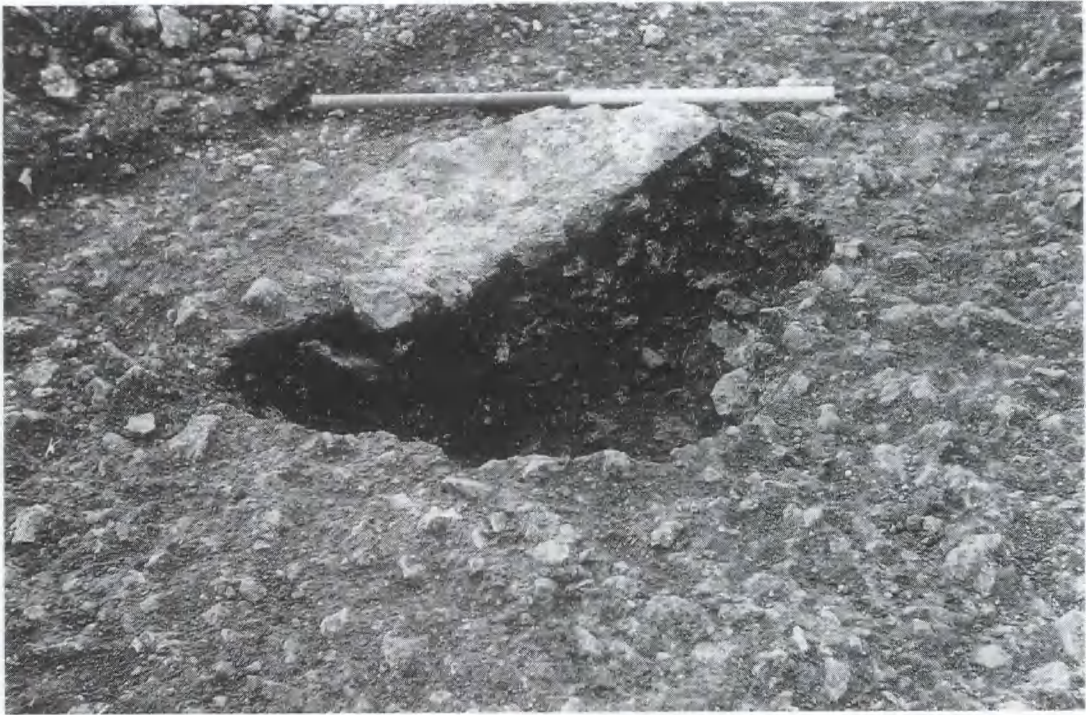


Plate 12. Pit 22. Note light clay layer on top. Scale in metres.

similar to ones from Kiln 2 was recovered (Fig 50, 14); however, a fragment of a bigger bar, apparently more substantial than the bars from Kilns 2 and 3 came from Pit 6 (Fig 50, 12), which has been assigned to the same phase as Kiln 9. Also from Kiln 9 was a perforated clay plate very much like one from Gully 1 (Fig 50, 10, 16) suggesting similar stacking arrangements. But there were no traces of a pedestal or of any method of supporting one.

#### **Kilns 1, 5, 6 and 7**

These kilns shared the following characteristics: their stokeholes, flues and kiln floors lay on roughly the same level; and there was no evidence of any kind for raised oven floors in the form of firebars or of supports for them. These kilns belong therefore to the single-chambered variety defined by Vivien Swan (1984, 113-120). Kiln 5 clearly falls into the single-flued category; its fill gave no indication of the kind of superstructure it had, or indeed whether it had one. As for the twin-flued kilns (1, 6 and 7) enough evidence was present in the fills of 6 and 7, in the form of quantities of limestone pieces reddened at one end, mixed with yellowish powdery clay, to suggest that these had been given

permanent, presumably open-topped, superstructures, and that these had either collapsed or been pushed inwards. In the cases of Kilns 6 and 7, it is scarcely justifiable to speak of the existence of flues; maybe experience showed that the relatively low temperatures which the Harrold pottery required made them unnecessary. It may be significant that it was the earliest of the single chambered kilns, Kiln 1, which possessed long flues; this kiln contained a considerable number of pottery fragments which were clearly overfired.

Harrold is of particular interest as a site at which updraught kilns in the La Tène III tradition and single-chambered kilns, which had a different ancestry and a different distribution, occurred side by side. Since Kiln 9 (La Tène derivation) and Kiln 1 (single-chambered) both belonged to Phase 3, it looks as if the change-over in technology took place in the later 2nd century. Some elements of the earlier technology, concerned with the stacking of pottery within the kiln, were apparently carried over, however; Kiln 1 produced flanged clay plates very similar to the one from Kiln 9 (Fig 50, 17, 18). But, with the exception of the two cylinders from Kiln 5 (Fig 50, 24-5) the later pottery kilns

# HARROLD

# PIT SECTIONS

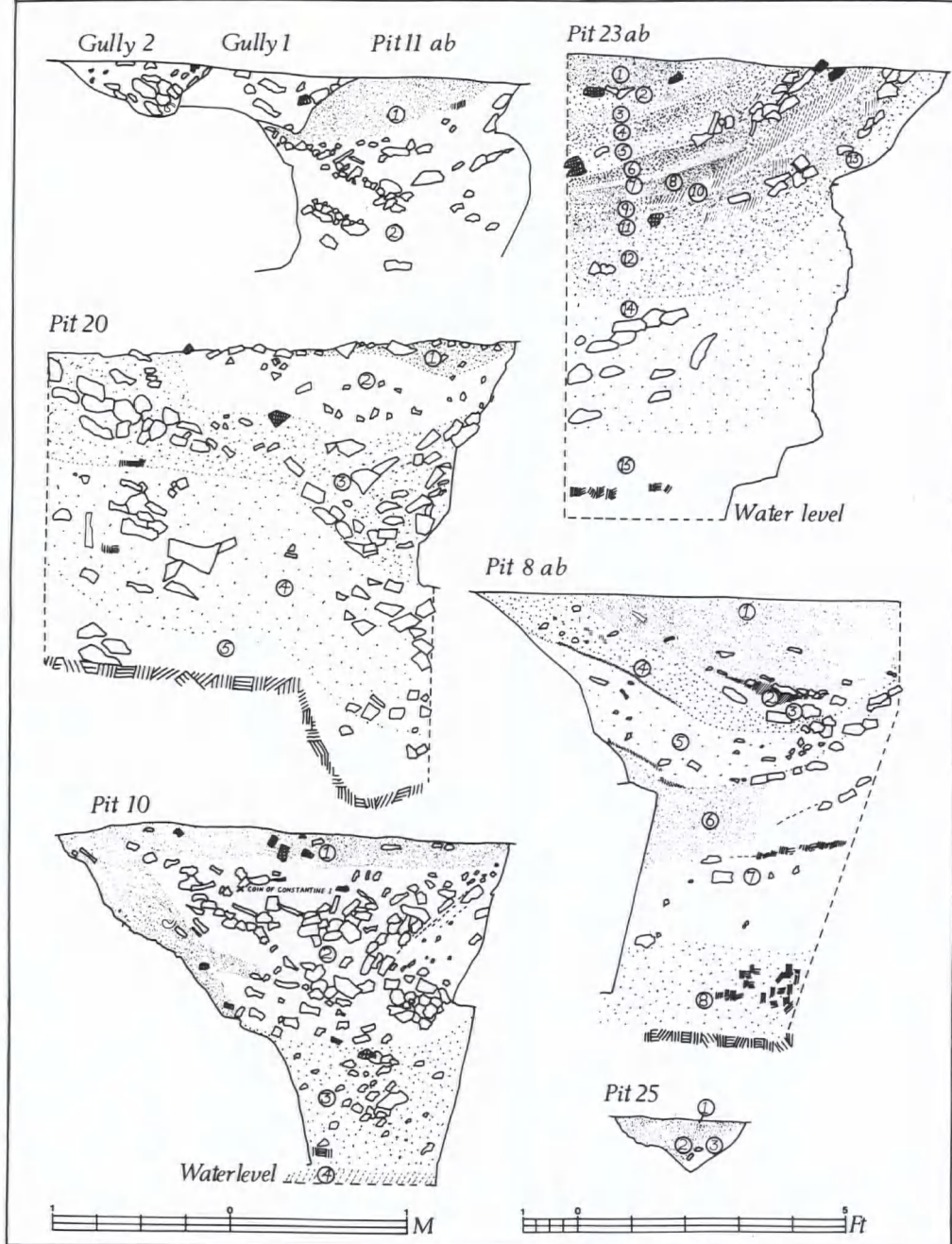


Fig 17. Sections, Pits 8, 10, 11, 20, 23, 25 & Gullies 1 & 2

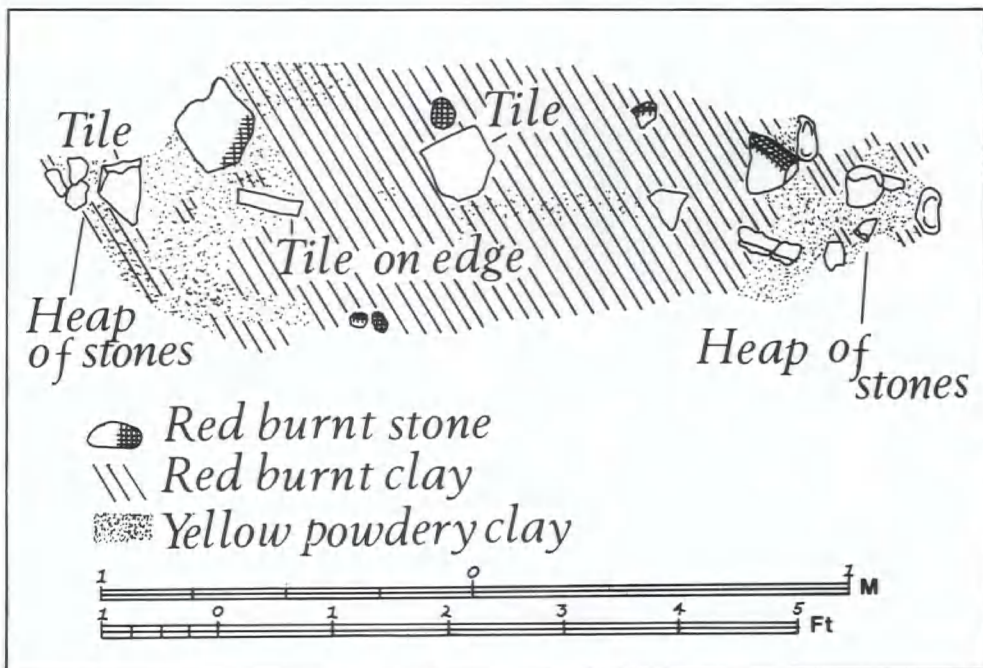


Fig 18. Burnt area, Trench 6.

yielded no evidence for stacking aids at all, suggesting a simplification in the firing process. What the pottery rested on is unknown, possibly broken sherds or pieces of tile.

Single chambered kilns possessed obvious advantages for the Harrold potters. They were very simple to construct and robust; there was no need for the kiln furniture necessary with the updraught kilns. They were simpler to operate. The aim of the Harrold potters was to produce a serviceable oxidised kitchen ware and the high degree of control over the firing process required by the producers of fine or reduced wares could be dispensed with, as the blotchy buff and grey surfaces of a number of Harrold sherds indicate. Also they were capacious, since valuable space did not have to be given up to form a furnace chamber. The switch to the single-chambered mode, and its application to the firing of tiles as well as pottery, is an indication of the adaptability of the Harrold potters.

Why double- and single-flue pottery kilns were in use on the same site at apparently much the same time is not altogether clear. A feature of a proportion of the Harrold output is the size of some of the pots (eg Figs 27, 35) and it may be that a double-flued kiln, although perhaps a little more trouble to operate than a single-flued one, avoided

cold spots at the back and so had advantages in the firing of these vessels.

Kiln 7 is unusual in its rectangularity; this contrasts quite markedly with the oval outlines of Kilns 1, 5 and 6. The possibility can therefore be raised that this kiln was used for the baking of tiles, although it would have been quite small for this purpose compared with most tile kilns elsewhere. Neither can good parallels be found for rectangular double-flued tile kilns like this, although there is apparently a class of single-flued single-chambered structures of rectangular form which have from time to time been suggested as possible tile kilns (McWhirr 1979, 101). The nearest single-chambered double-flued pottery kilns to Harrold so far known were at Much Hadham in Hertfordshire (Swan 1987, microfiche 2.358), but these were of 4th century date. Kilns very close in appearance to the Harrold double-flued ones and of the right 2nd century date have been found in Savernake Forest in Wiltshire (Annable 1962), but these are 112 km away to the west and so unlikely to have been the inspiration for our Kiln 1. Parallels of 2nd century date for the single-chambered single-flued Kiln 5 are easier to come by, as at Needham, Norfolk (Frere and Clark 1945) and Hedgerley, Buckinghamshire (Oakley *et al* 1937);

and other single-chambered single-flued kilns, with odd internal pilasters, but also of 2nd century date, are known from Horningsea in Cambridgeshire, 56 km to the east (Walker 1912). As Swan has pointed out (1984, 113), single-chambered kilns in general had a distribution in the south and east of Britain which largely excludes that of the La Tène III sunken kilns and might well represent the Romanization of a simple prehistoric firing technology; Harrold lies on the boundary of the two traditions and the potters there would have had many opportunities to appreciate the advantages for them of this particular method of firing pottery.

### THE PITS, GENERAL

These fall into two groups, large and small.

(i) Large pits belonging to all periods were found. These were designed to extract the raw material from which the pots and tiles were made. This is indicated by their sections; the men who dug them were prepared to dig through the limestone of the Cornbush in order to get at the yellow shelly marl below. Once through the limestone, the pits were undercut as far as practicable (eg Pits 1, 2, 6, 20, 16 and 14: Figs 14, 16, 17). In some cases a certain amount of the stiff blue Blisworth clay which underlies the shelly marl was also taken out, eg Pits 1 and 20 (Figs 14, 17). Thin sectioning shows that both materials, as well as sometimes limestone, were used in the manufacture of pottery at Harrold (pp 100-104.). Once the decision had been taken to abandon a pit, then it was filled up with pieces of limestone and yellow brown clayey earth, possibly from the excavation of the pit in the first place, or rather more probably, since there were hardly ever any finds from these basal layers, from the digging of the next one. These stoney layers frequently overlay layers of the yellow shelly marl which had slipped into the bottom of the pits from the sides. Almost always these big pits were levelled off with kiln rakings and rubbish; the sequence of layers at the top of Pit 23 (Fig 17) might suggest the deposition of the rakings of several successive firings.

Pit 17 (Fig 16) was unusual in that close to the top of it was a thick layer of blue clay (layer 2) which dipped down towards the middle of the pit, perhaps a device to enable water to be kept.

The sensible practice of using filled in - and quite possibly recently filled in - pits to house the furnaces of kilns began early, from Phase 2.

(ii) There were three pits belonging to the group of small ones - Pit 22 (Phase 3), Pit 4 (Phase 5) and Pit 25 (unphased but dateable to the 4th century) (Figs 14, 17, 16). They were all shallow (up to 780 mm deep) and around 1m in diameter. A feature common to Pits 22 and 25 was the presence at the top of them of a layer of the yellow shelly marl from which the Harrold pottery was made; slippage into Pit 1 (layer 5) from Pit 4 (Fig 14) shows that this pit had also contained this material. The suggestion can be made that these small pits were used in the preparation of the clay for working, in perhaps the processes of levigation or puddling.

### THE FINDS

#### THE POTTERY

##### The Samian Ware

Joanna Bird

#### Phase 2

1. Kiln 2, layer 2. South Gaulish

#### Phase 3

2. Kiln 1, layer 3. Dr 31, Central Gaul, Antonine
3. Kiln 9, layers 1 and 2. Dr 37 rim, South Gaul, Flavian - Trajanic
4. Kiln 9, layers 1 and 2. Dr 33, Central Gaul, Hadrian - early Antonine
5. Kiln 9, layer 2. Dr 18R, South Gaul, Flavian
6. Kiln 9, layer 2. Dr 18, South Gaul, Flavian
7. Kiln 9, layer 3. Dr 36, Central Gaul, Trajan - Hadrian
8. Kiln 9, layer 3. Dr 31, Central Gaul, Hadrian - early Antonine
9. Kiln 9, layer 4. Dr 31, Central Gaul, Hadrian - early Antonine
10. Kiln 9, layer 4. Dr 31, Central Gaul, Hadrian - Antonine
11. Pit 6, layer 1. Central Gaul, 2nd century
12. Pit 20, layer 1. Late Dr 27, Central Gaul, Hadrian - early Antonine
13. Pit 21, layer 2. Dr 18/31, Central Gaul, Hadrian - early Antonine

#### Phase 4

14. Pit 9, layer 7. Dr 31, Central or East Gaul: burnt. Antonine - mid 3rd century
15. Pit 17, layer 1. Walters 79, Central or East Gaul, Antonine

#### Phase 5

16. Pit 2, layer 3. Central or East Gaul, Antonine or 3rd century
17. Pit 7, layer 5. Burnt fragment, probably South Gaulish

#### Phase 6

18. Pit 3, layer 4. Dr 31, East Gaulish, late 2nd - mid 3rd century

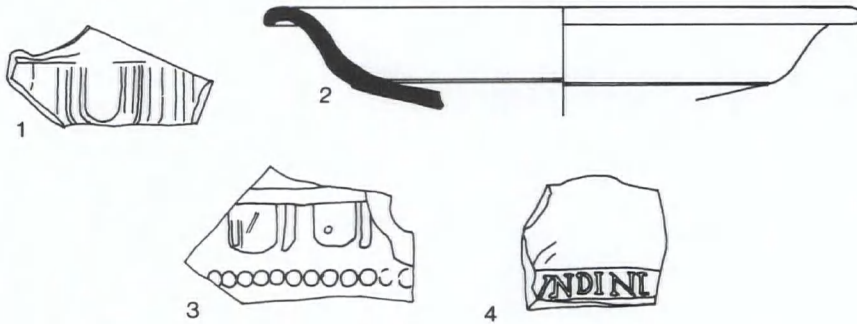


Fig 19. Samian ware. (1:4).

19. Pit 8, layer 4. Dr 18/31, Les Martres de Veyre, c AD 100-130  
 20. Pit 8, layers 7 and 8. Dr 18, south Gaul, Nero - Flavian  
 21. Pit 10, layer 2. Dr 31, Central Gaul, Antonine  
 22. Pit 10, layer 2. Dr 18/31, Central Gaul, Hadrianic - early Antonine  
 23. Pit 10, layer 2. Burnt sherd, Central Gaul, 2nd century  
 24. Pit 15, layer 1. Dr 31, Central Gaul, Antonine  
 25. Pit 15, layer 1. Dr 31, Central or East Gaul, later 2nd - mid 3rd century

26. Pit 16, layer 4. Dr 42 dish, Central Gaul, Trajan - Hadrian

*4th century features, unphased*

27. Ditch 1, layer 3. Dr 33, Central Gaul, Hadrian - early Antonine  
 28. Stone floor, Trench 6. Dech 67 probably, South Gaul, Flavian - Trajanic

From the topsoil came the following:

29. Trench 5. Dr 37, Rheinzabern. The ovolo is double bordered, with a straight tongue, bent to the left, but is too broken to identify

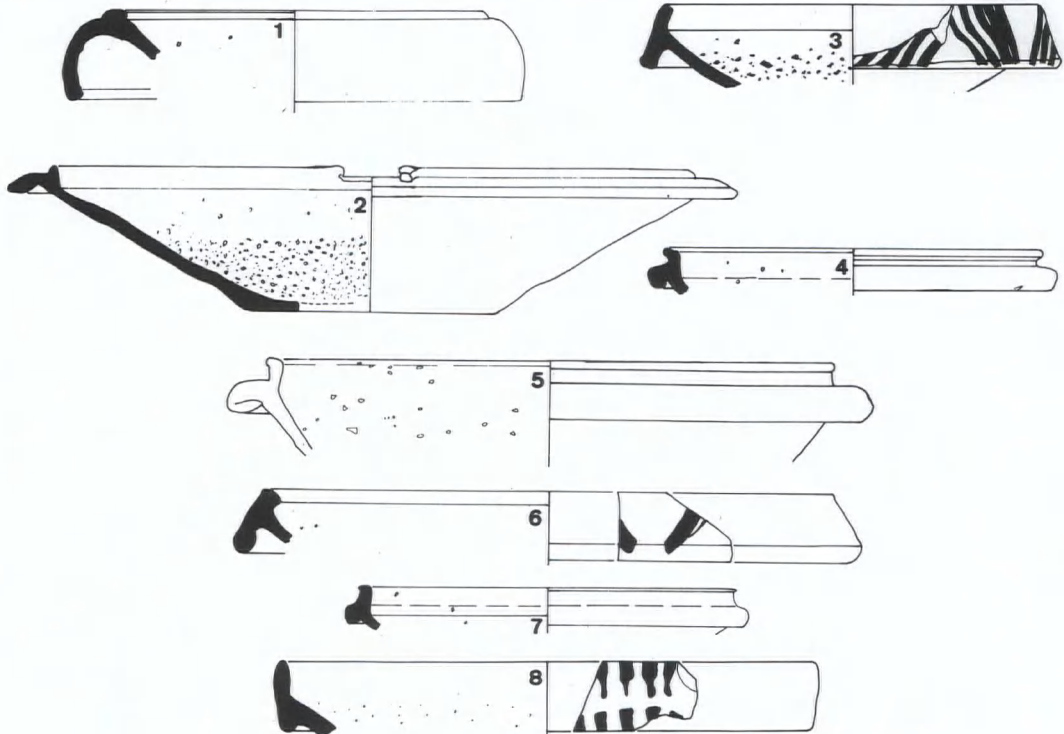


Fig 20. Mortaria. (1:4).

certainly. First half, 3rd century. (Fig 19, 1).

30. Trench 8. Curle 15/23 variant; the rim is curved over, and the internal junction of wall and base is marked by an offset. Rheinzabern, probably. Antonine. (Fig 19, 2)

31. Trench 4. Dr 37, South Gaul. The ovolo has been smudged in manufacture, but is small and square, probably single-bordered, with a straight tongue, and a row of large beads underneath. (Fig 19, 3)

32. Trench 4. Dr 33, stamped VVDINI - Secundinus of Lezoux, an Antonine potter. (Fig 19, 4)

From the topsoil over the site generally (numbers of sherds): South Gaulish Nero - Flavian, 1; Flavian, 1; later first century, 2; first century, 2; Trajanic, 1; probable South Gaulish, 1; Central Gaulish, Hadrianic - early Antonine, 4; Antonine, 4; second century, 8; probably Central Gaulish, 1; Central or East Gaulish, Antonine, 1.

## Mortaria

Katherine F Hartley

Seventeen mortaria were found at the site and apart from one mortarium dated *c* AD 140-180, none are likely to be earlier than the mid-third century. Moreover, although there are ten mortaria from the Oxford workshops which are datable to the period AD 240-400 according to Young's assessment (Young, 1977), there are none which fall into the categories which he dates AD 240-300. The sample is too small to permit firm conclusions but it suggests that more mortaria were being used here in the fourth century than at any earlier period including the third century.

The absence of any mortaria attributable to workshops in the Upper Nene valley is noteworthy and consistent with general evidence indicating that mortarium production in the small local workshops of this area ceased or declined severely at some time within the period AD 220-250. This decline could be linked with increased production of mortaria in the Castor-Stibbington area of the lower Nene Valley which probably occurred about the same time. After *c* AD 250 the three potteries situated at Oxford, Mancetter-Hartshill, Warks, and in the Lower Nene Valley were the suppliers of mortaria to this part of Bedfordshire.

### Phase 3

1. Kiln 1, layer 1. Oxford, *c* AD 140-80 (Young 1977, M3.5). (Fig 20, 1)

### Phase 4

2. Pit 9, layer 4. Mancetter - Hartshill, *c* AD 260-350.

3. Pit 9, layers 6 & 8. Lower Nene valley, *c* AD 230-350. (Fig 20, 2)

### Phase 5

4. Pit 7, layer 1. Oxford, AD 240-400 + (Young 1977, C97)

5. Pit 7, layer 1. Mancetter-Hartshill, probably 4th century. (Fig 20, 3)

### Phase 6

6. Pit 8, layer 1. Oxford, *c* AD 240-400 + (Young 1977, M22). (Fig 20, 4)

7. Pit 8, layer 1. Oxford, *c* AD 240-400 + (Young 1977, M22). (Fig 20, 5)

8. Pit 8, layer 1. Oxford, *c* AD 240-400 + (Young 1977, M22).

9. Pit 8, layer 4. Oxford, *c* AD 240-400 + (Young 1977, M22).

10. Pit 8, layer 4. Mancetter - Hartshill, *c* AD 270-360. (Fig 20, 6)

11. Pit 10, layer 1. Oxford, *c* AD 240-400 + (Young 1977, M22).

12. Pit 10, layer 1. Oxford, *c* AD 240-400 + (Young 1977, M22.14)

13. Pit 14, layer 3. Oxford, *c* AD 240-400 + (Young 1977, M22). (Fig 20, 7)

14. Pit 16, layer 1. Oxford, AD 240-400 + (Young 1977, WC7).

15. Pit 16, layer 1. Oxford, AD 240-400 + (Young 1977, M22.9/22.18).

16. Pit 16, layer 2. Mancetter - Hartshill, probably 4th century. (Fig 20, 8)

17. Pit 16, layer 3. Mancetter - Hartshill, probably 4th century.

### Summary of the mortaria from Harrold

Lower Nene Valley <i>c</i> AD 230-350 (Castor-Stibbington)	1
Mancetter-Hartshill, Warks <i>c</i> AD 260-370 (3 of them probably 4th century)	5
Oxford <i>c</i> AD 140-180	1
Oxford <i>c</i> AD 240-400	10

### Other Pottery of Non-Harrold Origin

The following is a list of pottery fabrics of non-Harrold origin identified from the site. To avoid unnecessary descriptions reference has been made to published fabric series from other areas close by, from Milton Keynes (henceforward MK; Marney 1989), and Towcester (henceforward Tow; Brown and Alexander 1982 and Brown and Woodfield 1983). Similarly, pottery from the Oxfordshire factories has been described with reference to the corpus by Young (1977) and has not been illustrated. Table 1 shows the incidence of sherds of these fabrics by phase; the figures in brackets represent the estimated number of vessels where significantly different from the sherd count.

Colours have been described using the Revised Munsell Soil Color Chart, 1967.

**Table 1.** Sherds of non-Harrold ware fabrics, by phase

Fabric	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Unphased 4th century
1	8	10		1	8	7	3
2		1					
3		5(3)					
4	1						
5		1	9		1	1	1
6			1			5	
6a			1				
6b			1				
6c		3			1		
6d		1	1				
7		14		1		1	
8			1				
9					1		
10				1			
11			3	2	1		
12			6		1	1	
12a			1				
12b-c		3(1)	11(5)				
13			3				
14			1				
15		16	15(9)	21(3)	4	23	1
15a		14(3)	3	2	12	7	
15b		8	12(4)	19	22	28	7
16		2	8(5)			1	
17			1	1		1	1
18			1				
19			1				
20						1	
21		16(5)		1		3	
22				2	6	3	
23			1				
24						4	
25		3	3			3	
25a		1		1			
26			11	24	78	148	3
27				3	25	109	
28						7	
29			3				
30				1	1		
31				63	45	57	
32					1	2	
33						4	

*1st century wares*

1. Belgic grogged ware, MK 46
2. Orange - brown sandy ware, MK 44
3. Hard, sandy, orange (2.5YR6/8), external burnishing. Butt beakers
4. Smooth, sandy, light grey (2.5YR8/2). Butt beaker, local manufacture

*Late 1st-2nd century buff-orange sandy wares*

5. Reddish orange sandy fine ware, Tow 1
6. Upper Nene Valley/Northamptonshire oxidised ware, MK17. The following sub-groups have been identified at Harrold: 6(a) - MK17(c): orange, white flecks; 6(b) - MK17(d) (into early 3rd century): brownish orange, hard; 6(c) - MK17(e): orange, pink (into early 3rd century); 6(d) - MK17(f): hard, pale pink/grey (into early 3rd century)

7. Buff sandy ware, probably Upper Nene Valley, MK43

8. Fine, brownish-grey sandy, Tow 34

9. Softish, orange - light buff, Tow 36

10. Orange, MK41(e)(to 4th century)

11. Hard sandy orange (5YR7/6 to 2.5YR6/6), sometimes with dark grey core, blotchy surfaces. Grooved flat rimmed bowls

*Late 1st-2nd century cream wares*

12. White/pink wares, MK18. The following sub-groups have been identified at Harrold: 12(a) - MK18(b): coarse, softish, yellow white, Upper Nene Valley; 12(b) - MK18(c): hard, white, cream, Northants, Oxon or ? Verulamium; 12(c) - MK18(g): white-pink- orange sandy, ? Verulamium

13. Yellow-cream, smooth, hard. Tow 41

14. Hard pinkish sandy, uneven surface. Tow 2



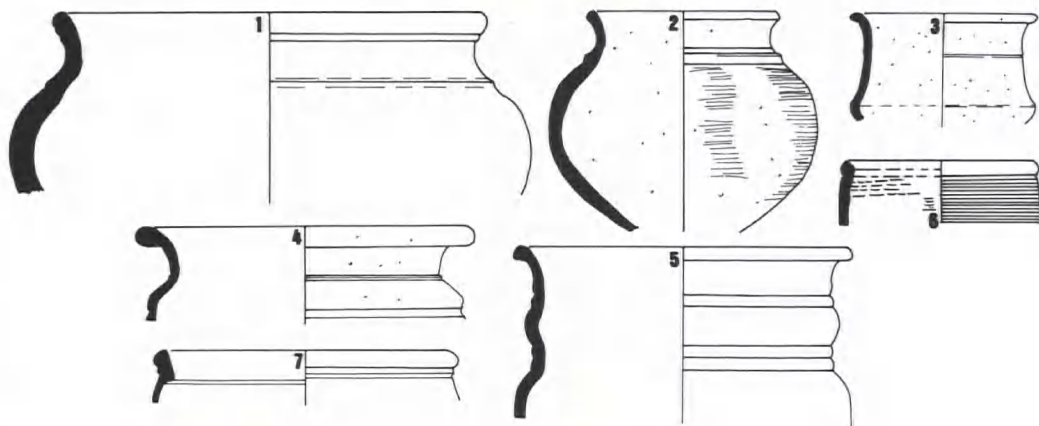


Fig 21. Pottery, phase 1 (1:4).

*Late 1st-2nd century grey and black wares*

15. Upper Nene Valley/Northamptonshire grey ware, MK14. The following sub-groups have been identified at Harrold: 15(a) - MK14(c): dark blue-grey, speckled; 15(b) - MK14/33, hard, granular.

- 16. Soft powdery grey ware MK25/30 (to 4th century)
- 17. Hard sandy shiny light grey, Tow 17
- 18. Very dark grey, buff core, Tow 26
- 19. Dark grey/black, lighter grey core, softish, Tow 24
- 20. Hard, rough, medium grey, coarse sandy, Tow 19
- 21. Black sand tempered, light grey core, red/reddish brown margins, MK9(a) (to 4th century)

*Black burnished ware and imitations*

- 22. Black burnished ware category 1
- 23. Local imitation with white grits, sandy. 2nd century
- 24. Local imitation. Muddy grey sandy (10Y7/1), interior a very lightly burnished, shiny black. A late fabric

*Colour coated wares and related*

- 25. Mica dusted ware, MK34. The following sub-group has been identified at Harrold: 25(a) - MK34(b), hard, dark buff surfaces, 2nd century
- 26. Lower Nene Valley colour coated ware
- 27. Oxfordshire colour coated ware
- 28. Oxfordshire Parchment ware
- 29. Cologne colour coated ware

*Late coarse fabrics*

- 30. Soft pink grogged, MK2
- 31. East Midlands burnished grey ware
- 32. Grey sandy, black slip, burnished, Tow 29(a)

33. Red sandy ware, Much Hadham

**Detailed description of the pottery, mainly Harrold ware**

*Phase 1. Pit 11: Gullies 3 and 4*  
(mid-1st century AD)

The surface colours of the Harrold shelly ware sherds (ie those containing fossil shell as a filler, Group 1 in the Petrological Report, pp 100) are varied, ranging from 2.5YR7/6 - 6/6 orange and 2.5YR6/3 dull orange to 2.5YR4/1 - 6/1 reddish grey and 2.5YR2/1 reddish black. A small proportion of the fragments (7 altogether), which happen to include the best preserved pieces, are in a fabric which contains a mixture of both shell and grog, and sometimes limestone, as a filler (Groups 2, 3 and 4 in the Petrological Report; this fabric could have been made at Harrold as well). In the shell tempered pieces (a total of 125, 118 of which came from Pit 11) shell is visible only in small quantities on the surfaces: most of the sherds, while hard, have a gentle, soapy feel. The thicker body sherds have broad vertical lines, 2-3 mm wide, scored on their outer surfaces and presumably come from large jars of the kind so common in Phase 2 (23 fragments, 18.4% of the total). The thinner body sherds, when not plain, have cordons (from jars like those in Phase 2), areas of burnishing or in one case a covering of fine scored lines 1 mm across; one fragment has widely spaced horizontal scored lines and another regular horizontal rilling similar to that on the channelled rim jars of Phase 2. There are three fragments from carinated bowls like no 3, a form which does not appear in Phase 2. Thirteen body

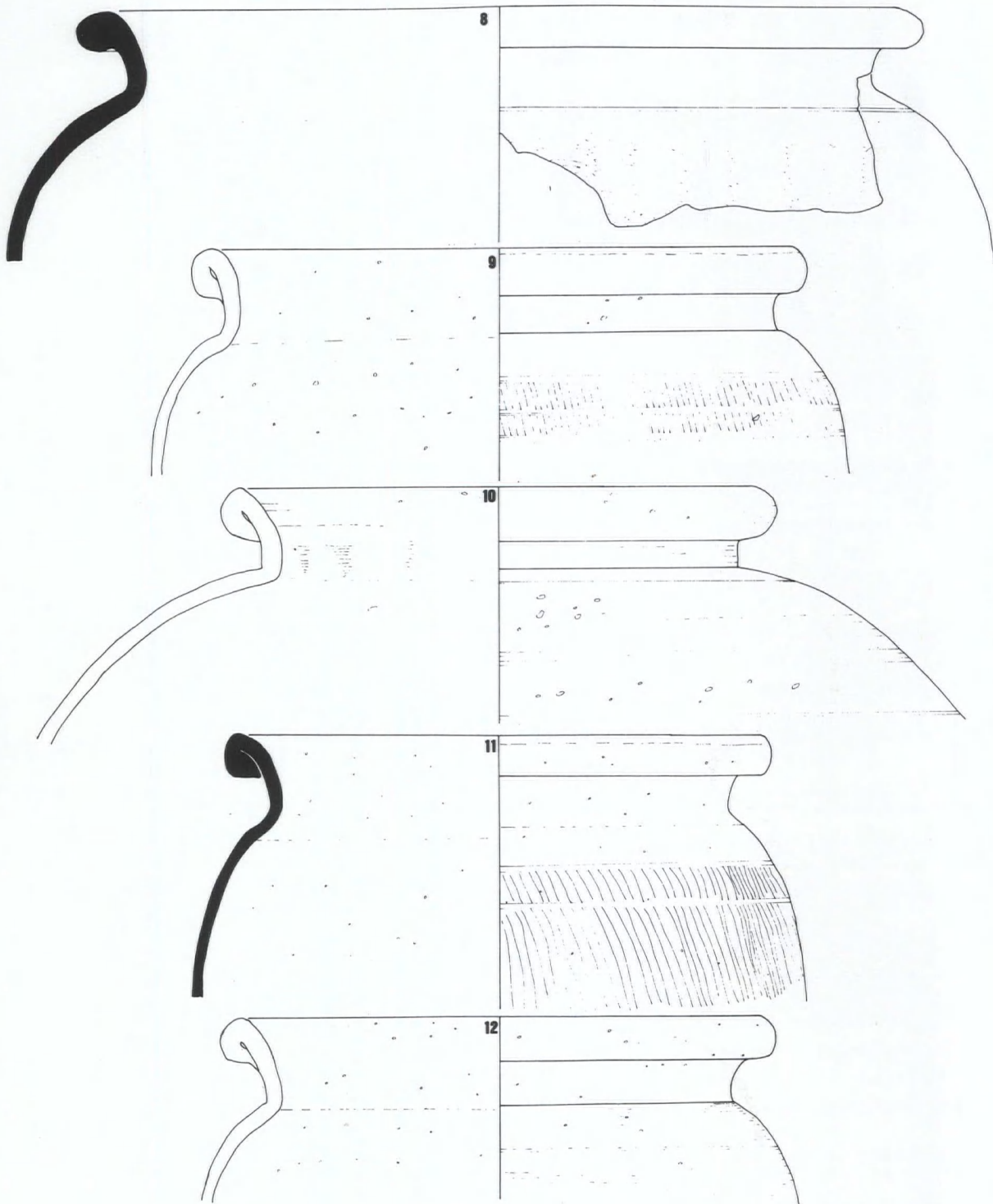


Fig 22. Shell-tempered pottery, Phase 2 (1:4).

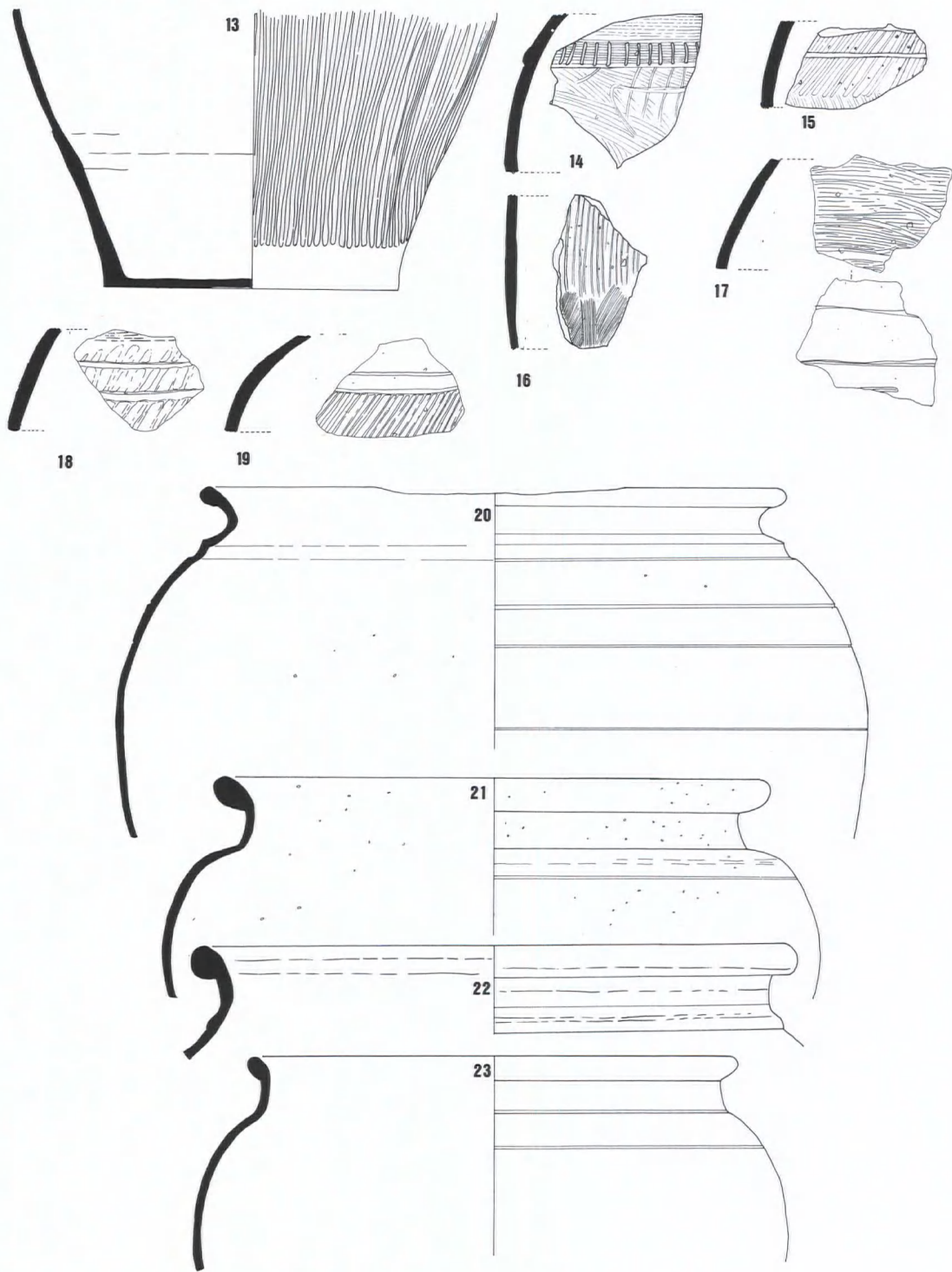


Fig 23. Shell-tempered pottery, Phase 2 (1:4).

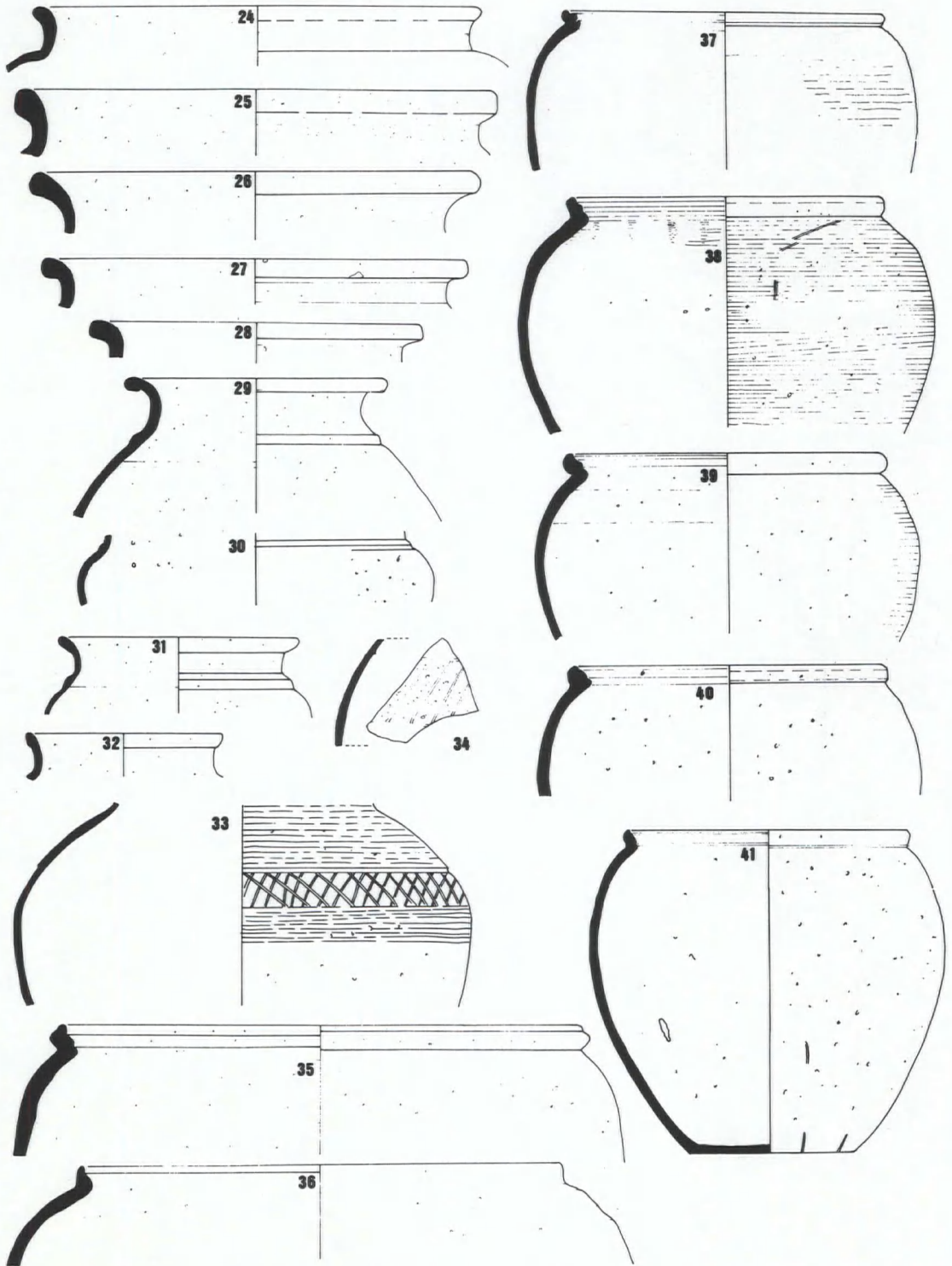


Fig 24. Shell-tempered pottery, Phase 2 (1:4).

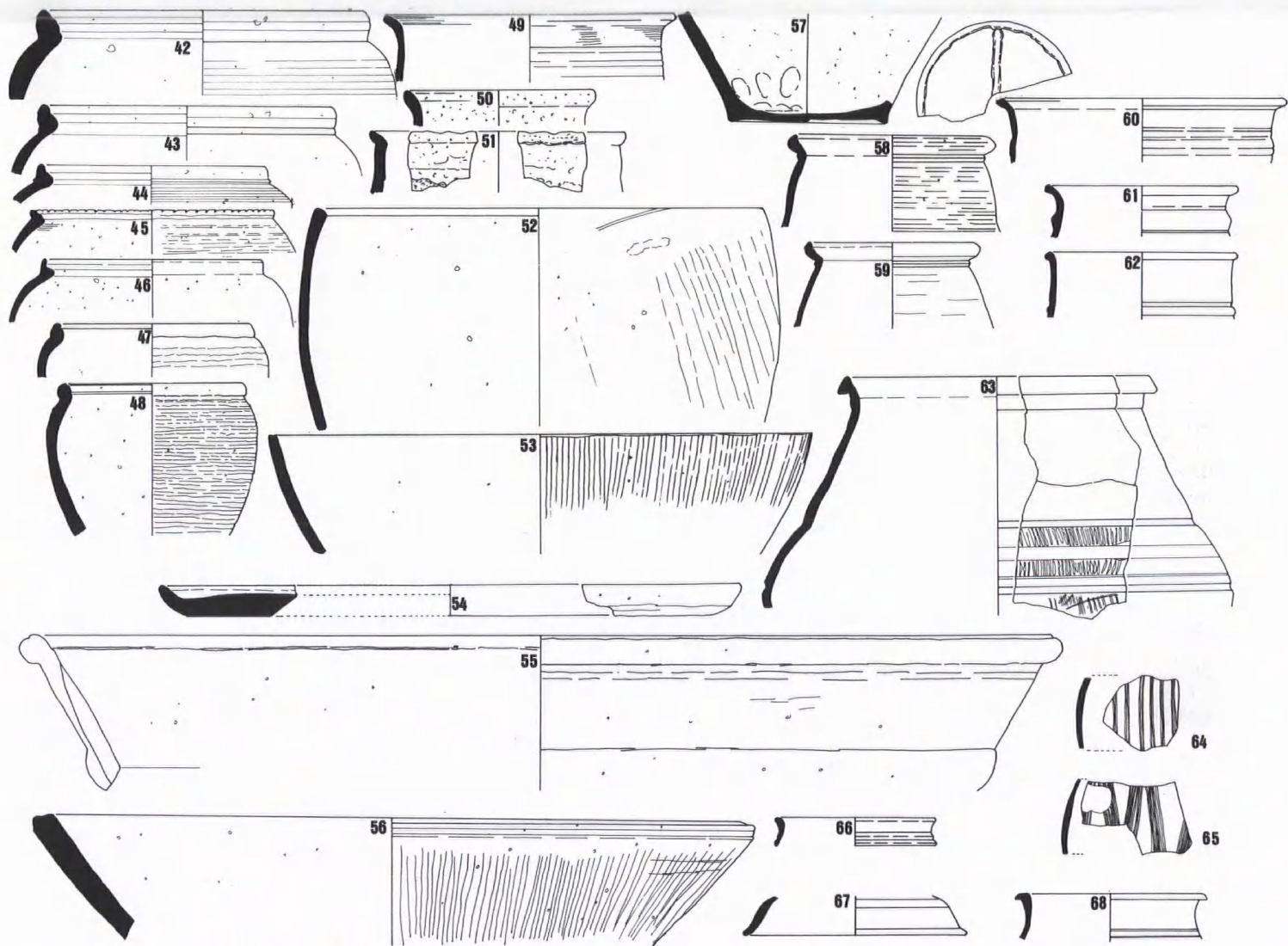


Fig 25. Nos 42-62, shell-tempered pottery; nos 63-68 are in non-Harrold fabrics, Phase 2 (1:4).

sherds have a thick grey core.

#### Illustrated Pieces

**Fig 21**, 1, 2 and 4 are in grogged and shelly ware, all from Pit 11; 3 and 6, shelly ware, Gully 3; 5, Belgic grogged ware, Fabric 1, Pit 11; 7, local copy of butt beaker, Camulodunum 113 (Hawkes and Hull 1947), Fabric 4, Pit 11.

#### Dating

The parallels for this small group come from contexts of the mid-1st century AD, as for example from the probable post-conquest kiln at Caldecotte, Bucks, where necked and cordoned jars in Belgic grogged ware similar to our nos 1, 2 and 4 occurred (Marney 1989, Fig 38, 21, 22). The cordoned carinated cup (no 5) is also a mid-1st century form: *ibid*, Fig 37, 79, 80; also at Magiovinium (Parminter, 1987, 51, mid-late 1st century) and Camp Hill, Northampton (Shaw, 1979, Fig 7, 7). In this area oxidized Belgic grogged wares are considered to be a phenomenon of the conquest period or after (Marney, 1989, 87).

#### Phase 2. Kilns 2, 3 and 4: Gullies 1 and 2

(late 1st century AD: for the distribution of the sherds, Table 2)

Except for reduced and obviously overfired pieces, the predominant surface colours of the Harrold shelly ware are orange (5YR7/6), pale orange (5YR8/4) or light yellow orange (7.5YR8/4). Unless overfired, when the fabric is harsh to the touch, the surfaces are still slightly soapy, but less so than in Phase 1. Shell, varying in size from pieces 4 mm across downwards, is only visible abundantly in breaks; it only appears in any quantity on the surfaces of the minority of vessels which have not been deliberately smoothed over. Patches of grey occur as spots with some frequency. The vessels were mostly fired orange throughout; grey or brownish buff/chocolate cores occurred on only 181 of the 2130 body sherds in this group. For thin sections of sherds from this Phase, see Petrological Report, p 100

The Harrold shelly ware can be divided into the

following types:

#### 1. Large storage jars

Often decorated with vertical or near vertical combing, varying in execution from the delicate to the savage. The individual generally flat bottomed striations vary in width from 2 to 5 mm. It is sometimes possible to see how the direction of the grooving has swerved to change course and occasionally there are rows of prick marks where the comb has pushed in harder. The comb marks stop 20-30 mm short of the vessel bases (no 13). A few pieces have bands of horizontal rilling or one or more grooves above, or cutting, the combing (nos 18, 19); also the combing could be smoothed over after execution to give apparently reserved horizontal zones around the body of the vessel. 66% of the body sherds in the group had this combing.

Surface irregularities show that a proportion of these vessels was made by hand, but others to judge from turning marks were fashioned on a wheel. The rims were formed by simply rolling the clay over and pushing it down (no 12). Most of these vessels had diameters in the range 340-400 mm.

**Figs. 22 and 23:** 8, 11, 13, Kiln 3, layer 3; 9, 10, 12, Kiln 2, layer 3; 14, Gully 1; 15, Gullies 1/2; 16-19, Kiln 4.

#### 2. Thinner, finer jars with simple outcurved rims

A group with wide variation in vessel sizes; diameters range from 350 down to 120 mm with no obvious concentration. Surfaces could be left plain, but were more often burnished, with occasional examples of bands of lattice or other forms of linear decoration. In a few cases a very fine, delicate, shallow version of the combing used on the coarse, big jars is encountered. There were six examples of vessels with raised cordons.

**Figs. 23, 24:** 20, 21, 23, 26, 30, 31, 34, Kiln 2, layer 3; 22, 29, 32, Kiln 3, layer 2; 24, Kiln 2, layer 2; 25, 33, Kiln 3, layer 3; 27, 28, Kiln 4.

#### 3. Channel-rim jars

Again a wide size range, from 120 to 360 mm in diameter, with a concentration around 200-240 mm.

**Table 2.** Phase 2. Distribution of Harrold ware (estimated number of vessels in brackets)

	Kiln 2	Kiln 3	Kiln 4	Gullies 1 and 2	
Large storage jars	11(11)	63(20)	44(7)	41(3)	159(41)
Jars, outcurved rims	8(8)	4(4)	2(2)	5(4)	19(18)
Channel rimmed jars	12(12)	6(6)	12(6)	36(13)	66(37)
Other		11(7)			11(7)
Body and base fragments	488	1418	152	222	2280

Often with horizontal rilling on the body.

**Figs. 24, 25:** 35, 39, Kiln 3 layer 3; 36, 38, 40, 41, 46, Kiln 2, layer 3; 37, 45, 47, 48, Gully 1; 42, 43, 44, Kiln 4.

#### 4. Other, miscellaneous forms, **Fig. 25**

49. Beaker, finely made, burnished on exterior. Gully 1.  
 50. Hand made. Kiln 3, layer 2.  
 51. Very roughly made by hand. Kiln 3, layer 2  
 52. Hand made, uneven surfaces. Top neatly bevelled off. Kiln 2, layer 3.  
 53. Probably hand made. Rather looks as if the vessel was made in sections, the sections put together and the scoring then done, but in this case the sections have come apart. Kiln 3, layer 3.  
 54. Platter; hand made. Kiln 3, layer 3.  
 55. Hand made. Gully 1.  
 56. Kiln 3, layer 2.  
 57. Base, hand made, raised band around underside edge and across middle. Gully 1.

#### Belgic grogged ware (Fabric 1), **Fig. 25**

58. Butt beaker, burnished exterior. 7.5YR4/3 brown - 7.5YR4/2 greyish brown. Kiln 3, layer 3.  
 59. Butt beaker, burnished exterior, 5YR5/2 greyish brown. Kiln 3, layer 1.  
 60. Beaker. Hard, smooth, finely made and grey core. Burnished. 2.5YR7/4 pale reddish orange. Gully 1.  
 61. Beaker. Hard, sparkling quartz inclusions. 2.5YR7/3, pale reddish orange - 7.5YR2/1 reddish black. Kiln 3, layer 2.  
 62. Beaker. Quartz visible. 7.5YR3/1 brownish black. Gullies 1/2.

#### Pottery from other non-Harrold sources, **Fig 25**

63. Butt beaker. Hard sandy fabric, burnished externally, thin grey core (Fabric 3). Kiln 2, layer 3.  
 64. Beaker fragment, pairs of closely set narrow grooves. Fabric as 63. Kiln 2, layer 3.  
 65. Body sherd, Fabric 2. Kiln 2, layer 3.  
 66. Jar with cordoned neck. Grey sandy fabric, Fabric 15. Kiln 4.  
 67. Lid; as 66. Gullies 1/2.

68. Jar. Dark grey sandy fabric. Fabric 15(a), Upper Nene Valley. Gully 2.

#### Dating

There are probably some residual pieces here of mid-1st century date, for example the lid-seated cooking pot with slashed rim no 45; maybe no 52; also the butt beakers in Belgic grogged ware, nos 58 and 59, which are mid-1st century at Milton Keynes (Marney, 1989, Fig 36, 77, 78). But heavy storage jars like nos 8-12 with scoring and other decoration are commonly found in deposits going down to the end of the 1st century, along with channel-rimmed jars of the type made at Harrold; for a similar group, from a ditch containing samian of c 50-70 at Irchester, see Hall and Nickerson 1967, Figs 13 and 14; also Magiovinium (Parminter, 1987, 145, 149, late 1st century); and Milton Keynes, where lid-seated jars like ours have been dated to the late 1st century (Marney, 1989, Fig 24, 2, 4, 7). That this group probably goes down to the later years of the century is suggested by nos 66 and 68, jars with grooves on the neck in a bluish-grey sandy fabric, a very common form in the Upper Nene valley, which occurs in the Irchester ditch group mentioned above but which becomes very much commoner towards the end of the century and beyond (eg Brixworth villa, Woods, 1970, 18). Lids similar to no 67 were late 1st-mid 2nd century at the Towcester Grammar School site (Brown and Alexander, 1982, Fig 9, 33). A late 1st century date for the closing of the group is supported by the body sherds of fabrics 4, 5(c) and (d), 6 and 11(b), all sandy fabrics which begin in the late 1st century, becoming much commoner in the 2nd.

#### *Phase 3. Kilns 1 and 9: Pits 6, 20, 21, 22*

(Second half of 2nd century AD. For the distribution of the pottery of this phase, Table 3)  
 Most of the Harrold sherds of this phase consist of greyish, hard, brittle and overfired pieces which give no indication of the appearance the pottery was

**Table 3.** Phase 3. Distribution of Harrold ware (estimated number of vessels in brackets)

	Kiln1	Kiln 9	Pit 6	Pit 20	Pit 21	Pit 22	
Large storage jars 1st century type	1(1)	1(1)	5(3)	1(1)			8(6)
Jars, outcurved rims	17(15)	50(25)	9(7)	4(4)	17(7)	3(3)	100(61)
Jars, triangular rims	9(9)	5(5)	2(2)	3(3)	8(5)		27(24)
Channel rimmed jars	33(20)	39(28)	6(5)	6(6)	11(7)		95(66)
Reeded rim bowls and derivatives	9(8)	8(6)		3(3)	7(7)		27(24)
Lids	3(3)	1(1)				3(3)	7(7)
Dishes		1(1)	2(2)				3(3)
Other	1(1)	1(1)	1(1)		1(1)		4(4)
Body and base fragments	308	103	261	15	88	33	1872

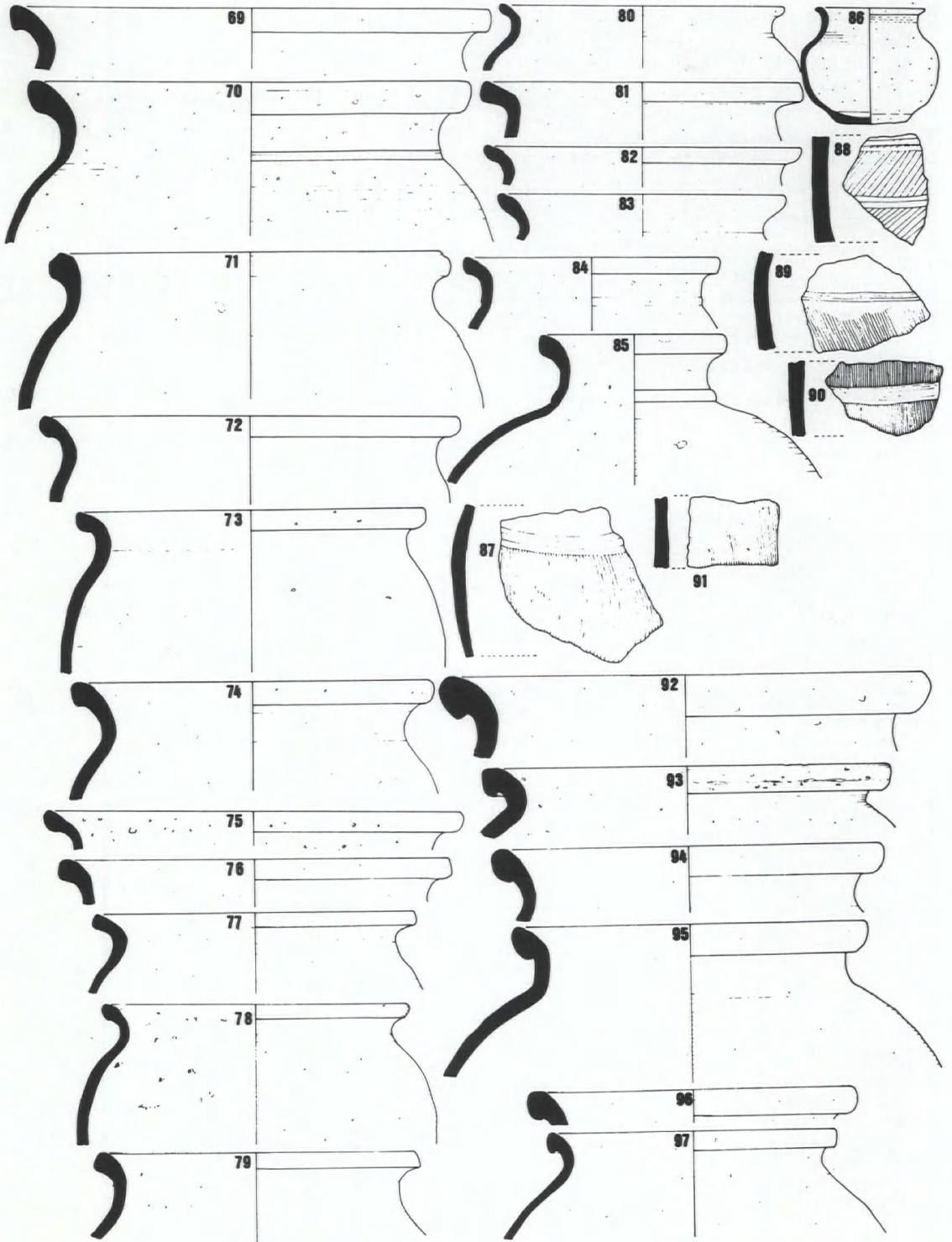


Fig 26. Shell-tempered pottery, Phase 3 (1:4).



originally intended to have. The better preserved pieces are hard yet smooth to the touch and are in the colour range 5YR8/4 pale orange - 7.5YR8/3 - 8/4 light yellow orange; 178 body sherds (10% of the total) have a grey core. Rilling occurs on 229 of the 1712 body sherds found (13%) and vertical or near vertical scoring of the more refined variety which occurs on certain of the Phase 2 jars is present on 54 body sherds of this phase (3%), perhaps residual. There are very few of the thick body sherds which could have belonged to the heavy storage jars so common on Phase 2 and only 8 rim fragments of vessels of this type.

There are the following Harrold shelly ware vessel types (for the significance of the Kiln 1 layer numbers see pp 26-29; for thin sections, p 100)

#### 1. Jars with simple outcurved rims

Derived presumably from the simple-rimmed jars of Phase 2; a few still have the cordons evident on some of the 1st century pieces. Mostly in the diameter range 140-260 mm.

**Fig 26**, 69, 74, Pit 20, layer 1; 70, 87, 88, Kiln 1, layer 3; 71, Kiln 9, layer 8; 72, 84, Kiln, layer 1; 73, 76, 77, 78, 79, 81, 83, 90, Kiln 9, layer 3; 75, 82, 91, Kiln 9, layer 2; 80, 86, Kiln 1, layer 2; 89, Kiln 9, layer 10.

#### 2. Jars with triangular, drooping rims

The beginnings of what eventually becomes the common 4th century type. The rilling so common then is present at this date.

**Figs 26 and 27**: 92, Pit 21, layer 1; 93, 94, 99, Kiln 9, layer 3; 95, Kiln 1, layer 2; 96, Kiln 1, layer 1; 97, Kiln 9, layer 6; 98, Kiln 1, layer 3.

#### 3. Channel rim jars and their derivatives

Rims heavier than the first century ones; the grooves are often left out altogether. Most examples retain the rilling. The majority are in the diameter range 120 - 220 mm.

**Fig 27**, 100, 113, 114, 117, Kiln 1, layer 3; 101, 103, 112, Kiln 1, layer 2; 102, 105, Pit 21, layer 2; 104, 106, Pit 20 layer 1; 107, Kiln 1, layer 1; 108, 111, Kiln 9, layer 2; 109, Kiln 9, layer 11; 110, Kiln 9, layer 6; 115, Kiln 9, layers 8 and 9; 116, Kiln 9, layer 5; 118, Kiln 9, layer 10; 119, Kiln 9, layer 3: 120 (cross scratched on body of vessel before firing), area of Kiln 1.

#### 4. Reeded rim bowls and their derivatives

A type not found in the earlier groups. There are a few examples of well made reeded rim bowls with

carinations, but in most cases the carinations have been smoothed out and the rims are rather heavy. The rims acquire a droop and the top may continue to carry grooves or, in one instance, wavy line decoration. Some rims have been pushed in to begin the flanged bowl series which forms such a distinctive part of the Harrold repertoire later on. A feature of some of these Harrold bowls is their size, with several pieces in excess of 260 mm in diameter.

**Figs 27 and 28**, 121, 122, 133, Pit 21, layer 2; 123, Kiln 1, layer 1; 124, 129, 134, Kiln 1, layer 2; 125, Pit 20, layer 2; 126, 127, 135, Pit 21, layer 1; 128, 131, Kiln 9, layer 3; 130, Kiln 9, layer 4; 132, Kiln 9, layer 1; 136, Kiln 1, layer 3.

#### 5. Lids

**Fig 28**, 137, Pit 21, layer 2; 138, Pit 20, layer 1; 139, Kiln 1, layer 1; 140, Kiln 1, layer 2; 141, Kiln 9, layer 3.

#### 6. Other vessel

**Fig 28**, 142, Pit 20, layer 2; 143, Kiln 9, layer 1; 144, crude hand-made dog dish, Kiln 1, layer 1; 145, Kiln 9, layer 9; 146, Kiln 9, layer 2; 147, area of Kiln 1; 148, Pit 21, layer 2.

#### Pottery from non-Harrold sources, **Fig 28**

Lower Nene Valley colour coated ware, Fabric 26  
149. Dark chocolate colour coat, cream fabric. Kiln 9, layer 1.

150. Almost black colour coat, cream fabric. Kiln 9, layer 3.

151. Light - medium brown blotchy colour coat, greyish cream fabric. Kiln 1, layer 3.

152. Pinkish cream colour coat, white painted decoration, cream fabric. Kiln 1, layer 1.

#### Other

153. Upper Nene valley oxidised ware, Fabric 6(a). Creamy buff burnished exterior, reddish brown painted bands. Kiln 9, layer 2.

154. As 153. Fabric 6(b). Light yellowish brown, grey core. Kiln 9, layers 2 and 3.

155. Light greyish brown fabric, mica dusted. Fabric 25. Kiln 9, layer 2.

156. Local imitation, black burnished ware fabric. Fabric 23. Kiln 9, layer 3.

157. Brownish grey sandy. Fabric 8. Kiln 1, layer 2.

158. Upper Nene valley/Northamptonshire grey ware. Fabric 15(b). Kiln 9, layer 3.

159. Upper Nene valley/Northamptonshire grey ware. Fabric 15(b) Kiln 9, layer 3.

160. Upper Nene valley/Northamptonshire grey ware. Fabric 15. Kiln 9, layer 2.

161. Cream sandy ware. Fabric 12(b) or (c). Pit 21, layer 2.

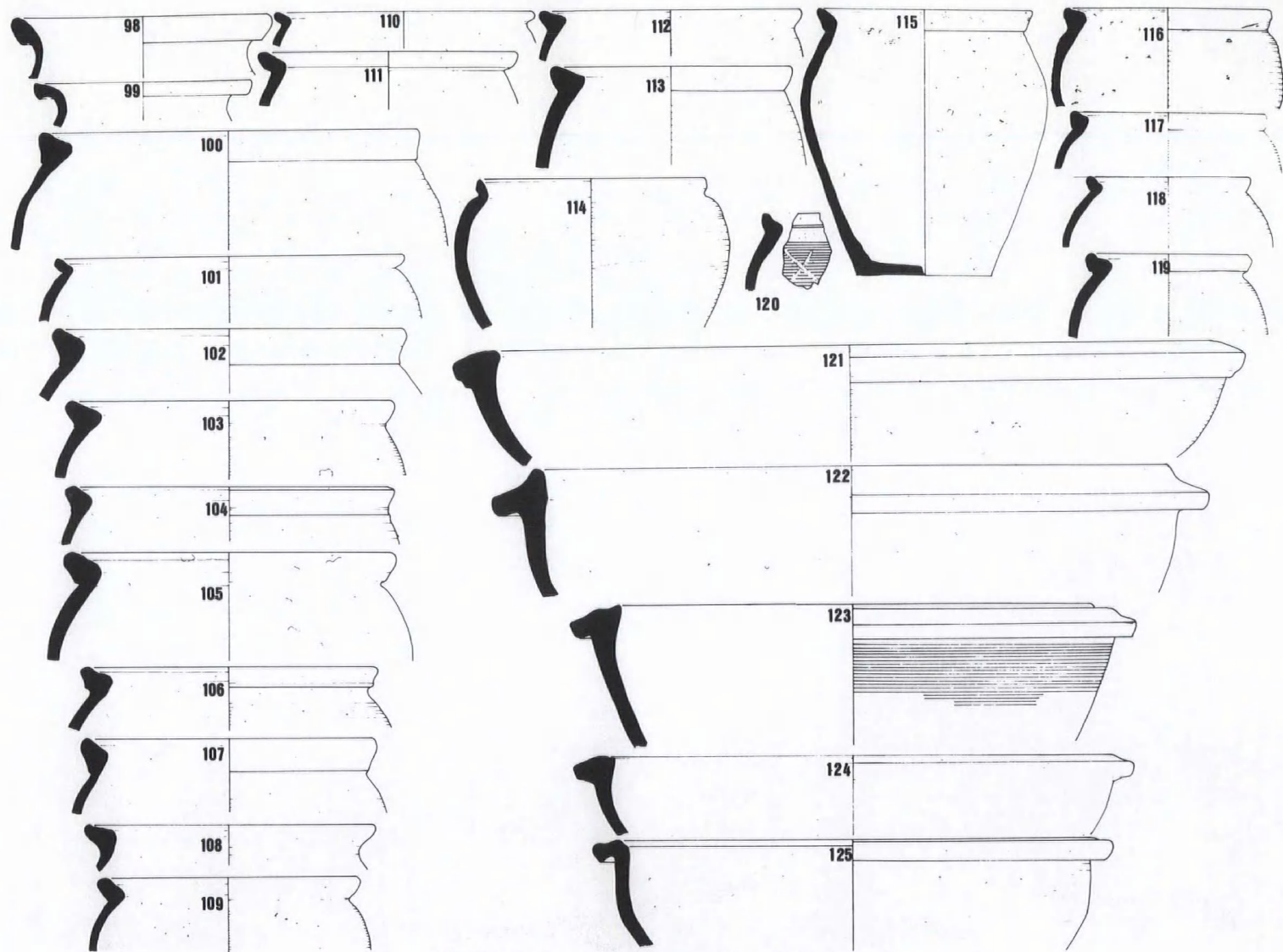


Fig 27. Shell-tempered pottery, Phase 3 (1:4).

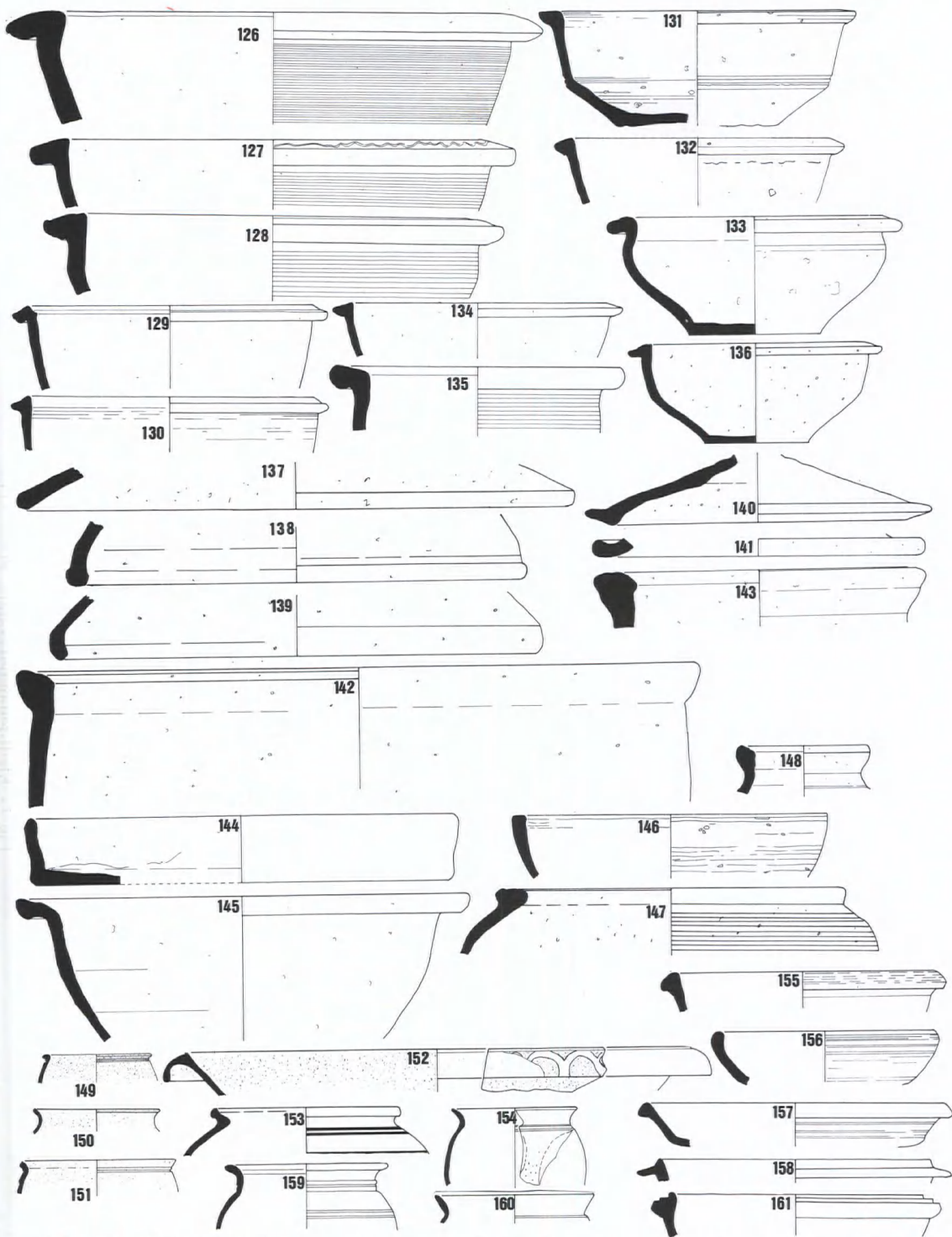


Fig 28. Nos 126-148, shell-tempered pottery; nos 149-161 are in non-Harrold fabric. Phase 3 (1:4).

Another from Kiln 9, layer 3.

### Dating

The samian ware from Kilns 1 and 9 and from Pits 20 and 21 goes down to the Antonine period; the solitary mortarium rim, from Kiln 1, is an Oxfordshire example of 140-80 AD. The lower Nene valley colour coated ware cornice rim beaker no 149 is a later 2nd century type (Howe, *et al* 1981, 46, 47), as is no 151, from a bag-shaped beaker like Brixworth, no 293-4 (Woods, 1970). No 150, from a beaker of unknown body form, would also fit the period better than a later one, when simpler upright ones were the norm. The other non-Harold pottery found consists generally of oxidized, reduced and white sandy wares of 2nd century date; there were three fragments of colour-coated beakers from Cologne. The shelly bowls, jars and channelled-rim cooking pots are paralleled at Magiovinium in the 2nd century, with the accent towards the latter part of it (Parminter 1987, 18, 49, 283, 284, bowls: 322, jar with cordoned neck: 128, 156, 299, 302, channel rim jars); also Milton Keynes (Marney, 1989 Fig 24, 8, 9, 10, (channel rim jars); 12, (lid); Fig 25, 13, 17, 18, (jars)). A date in the second half of the 2nd century can be put forward.

### Phase 4. Kilns 5 and 6, Pits 9 and 17

(later 3rd century: Table 4)

Setting aside the numerous overfired pieces, the surface appearance of the Harold shelly sherds of this phase resembles that of Phase 3, with colours in the range 2.5YR6/6 - 7/6 orange - 7.5YR8/4 light yellow orange. Almost half the body sherds have rilling, a reflection of the preponderance of jars and bowls with this form of decoration. The following vessel types have been identified in Harold shelly ware.

(Unless otherwise stated, the illustrated pieces

come from Kiln 5, layer 1. For thin sections, p 100)

#### 1. Giant storage jars

**Fig 29**, 162, 163.

#### 2. Jars, simple outcurved rims

The commonest vessel type. Mostly with diameters in the range 120-200 mm. **Fig 29**, 164-173.

#### 3. Jars with triangular drooping rims

Foreshadowed during Phase 3. **Fig 29**, 174-178

#### 4. Channel rim jars

Probably residual, these pieces mark the end of the line. **Fig. 29**, 179, 180, Pit 17, layer 4.

#### 5. ?Flagon or narrow-mouthed jar

**Fig. 29**, 181, Pit 17, layer 1, roughly made.

#### 6. Bowls

Mostly derived from the carinated and reeded rim bowls of Phase 3. Perhaps in three sizes with diameters of around 160 mm, 240 mm and 340-380 mm. **Figs 30, 31 and 32**; 182-211 (201 bowl from Pit 9, layer 1; 203 and 205 from Pit 9, layer 7). 210: wavy line decoration from a bowl similar to 208-9.

#### 7. Jars with grooved tops

**Fig. 33**, 212-214. 213: just possibly a lid to go with 212; alternatively, a section of a vessel which has come apart.

#### 8. Lids

**Fig. 33**, 215-217 (216 and 217 from Pit 17, layer 1).

#### 9. Handle

**Fig 33**, 218.

#### 10. Dog dish

**Fig 33**, 219

**Table 4.** Phase 4. Distribution of Harold ware (estimated number of vessels in brackets)

	Kiln 5	Kiln 6	Pit 9	Pit 17	
Large jars 1st century type, residual			2(2)		2(2)
Giant storage jars	13(6)			2(2)	15(8)
Jars, outcurved rims	118(48)	4(3)	21(17)	5(3)	148(71)
Jars, triangular rims	12(6)	7(4)	5(5)	1(1)	25(16)
Channel rimmed jars, residual			10(10)	3(3)	13(13)
Bowls	80(39)	3(3)	8(8)	1(1)	89(51)
Lids	1(1)	1(1)		2(2)	4(4)
Dishes	1(1)	1(1)			2(2)
Other	2(2)			1(1)	3(3)
Body sherds	523	281	112	332	1248
Residual 1st century body sherds	1		2		3

### Other Fig 33

220. Pit 9, layer 4.

221. Pit 9, layer 6.

222. Section of body of jar which has come apart. As with 223, the assumed lower edge has been roughly smoothed off and bevelled: the upper surface has been bevelled on the inside and roughly indented on the outside. Pit 17, layer 2.

223. As 222.

224. Body sherd of large jar showing line of division between sections.

### Pottery from non-Harrold sources, Fig 33

#### Lower Nene Valley colour coated ware, Fabric 26

225. Brown metallic colour coat, buff fabric. Pit 17, layer 1.

226. Blotchy chocolate colour coat, buff fabric. Pit 17, layer 1.

227. Interior, chocolate colour coat; exterior, black. Creamy grey fabric. Pit 17, layer 1.

228. Brown colour coat, cream fabric. Pit 9, layer 7.

229. Light brown metallic colour coat, creamy pink fabric. Pit 9, layer 8.

230. Light brown metallic colour coat, cream fabric. Kiln 5, layer 1.

231. Burnt. Brown colour coat, pinkish cream fabric. Pit 17, layer 1.

232. Burnt. Brown colour coat. Kiln 5, layer 1.

#### Oxfordshire colour coated ware, Fabric 27 (unillustrated, described using the classification set out in Young 1977)

Kiln 5, layer 1, hemispherical bowl C55, 240-400+; another from layer 5.

Kiln 6, layer 1, flagon base C8, 240-400+

### Other

233. Orange sandy, Fabric 10. Kiln 5, layer 1.

234. Black, sand tempered, Fabric 21. Kiln 5, layer 3.

235. Very hard, metallic grey, burnished, dark grey core. East

Midlands burnished ware, Fabric 31. Pit 9, layer 5.

236. As 235. Kiln 5, layer 2. Similar rim from Pit 9, layer 7.

237. Soft pink grogged. Fabric 30. Pit 9, layer 4.

### Dating

The samian ware from Pits 9 and 17 goes down to the mid-3rd century. Oxfordshire colour-coated ware starts to appear, in forms which begin c 240 but which continue to the end of the Roman period. The few mortaria are from Mancetter-Hartshill and the lower Nene valley of a mid-3rd to mid-4th century date range. The Lower Nene Valley colour coat beaker 225 is a 3rd century type (Howe, *et al* 1980, 49); no 227 could be 3rd or 4th century (*ibid*, 50, 52). No 229 is an imitation samian form 36, late 3rd or 4th century (*ibid*, 81). East Midlands burnished ware and soft pink grogged wares appear now, the latter in very small quantities. The Harrold ware has obvious differences compared with that of Phase 3, particularly in the disappearance of the channelled-rim jar and the apparent arrival of the giant storage jar; but in profile the bowls still have a tendency to hark back to the carinated prototypes of the 2nd century (eg nos 189, 195, 200, 209). A date in the later 3rd century is suggested.

#### Phase 5. Kiln 7, Pits 1, 2, 4, 7 and 23

(early 4th century: Table 5)

The surface appearance of the shelly pottery from this Phase is the same as that Phase 4. The following vessel types have been identified in Harrold shelly ware: thin sections, p 100

#### 1. Giant storage jar

**Fig 34**, 238. Pit 23, layer 2. A type which occurs, but less frequently, in Phase 6.

**Table 5.** Phase 5. Distribution of Harrold ware (estimated number of vessels in brackets)

	Kiln 7	Pit 1	Pit 2	Pit 4	Pit 7	Pit 23	
Large jars 1st century type, residual			2(1)	2(2)			4(3)
Giant storage jars	2(2)	2(2)	1(1)		5(5)	4(4)	14(14)
Jars, outcurved rims	39(9)	72(34)	60(15)	2(2)	26(11)	156(35)	355(106)
Jars, triangular rims	16(4)	146(41)	24(12)	1(1)	21(8)	18(10)	226(76)
Jars, decorated rims						1(1)	1(1)
Channel rimmed jars, residual		2(2)	4(4)	5(3)	1(1)	2(2)	14(12)
Bowls with flat rims		6(6)			12(10)	4(4)	22(20)
Flanged bowls	1(1)	16(8)	7(6)	1(1)	14(9)	23(20)	62(45)
Lids		1(1)			4(4)		5(5)
Dishes	2(2)	8(4)			1(1)	2(1)	13(8)
Other			1(1)	1(1)	1(1)	1(1)	4(4)
Body and base sherds	1767	1348	538	56	344	944	4682
Residual 1st century body sherds		3	37		5	8	53

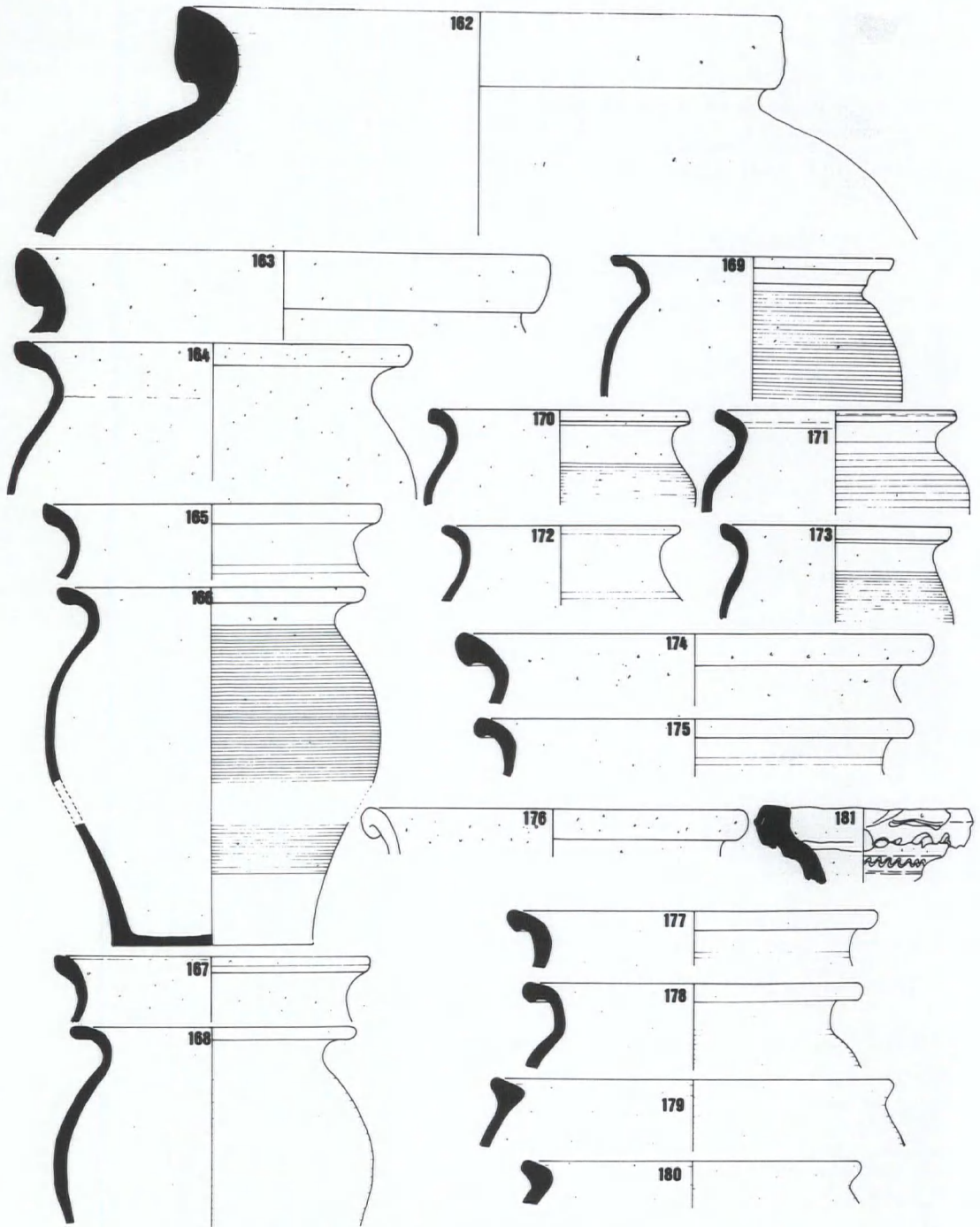


Fig 29. Shell-tempered pottery, Phase 4 (1:4).

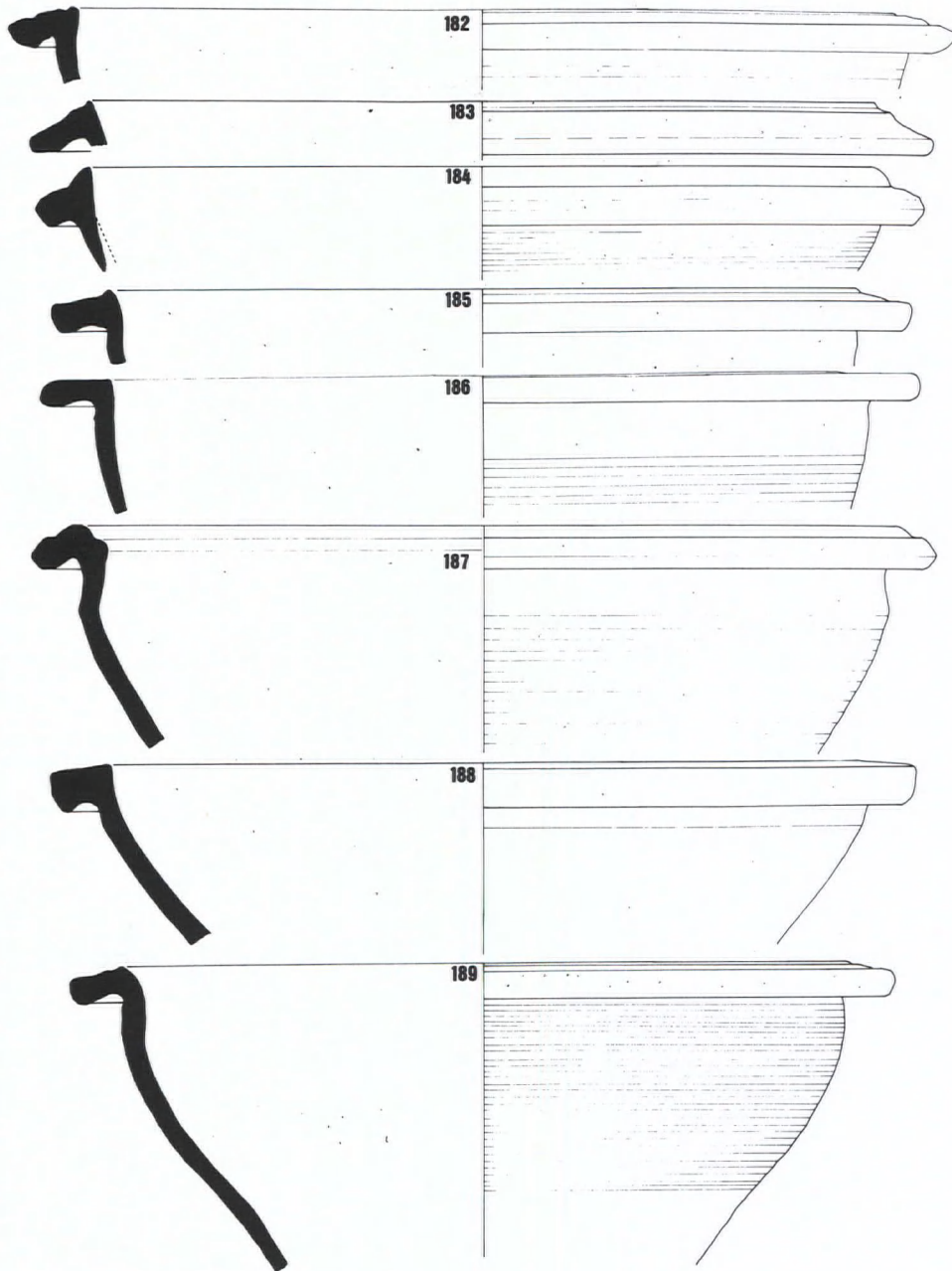


Fig 30. Shell-tempered pottery, Phase 4 (1:4).

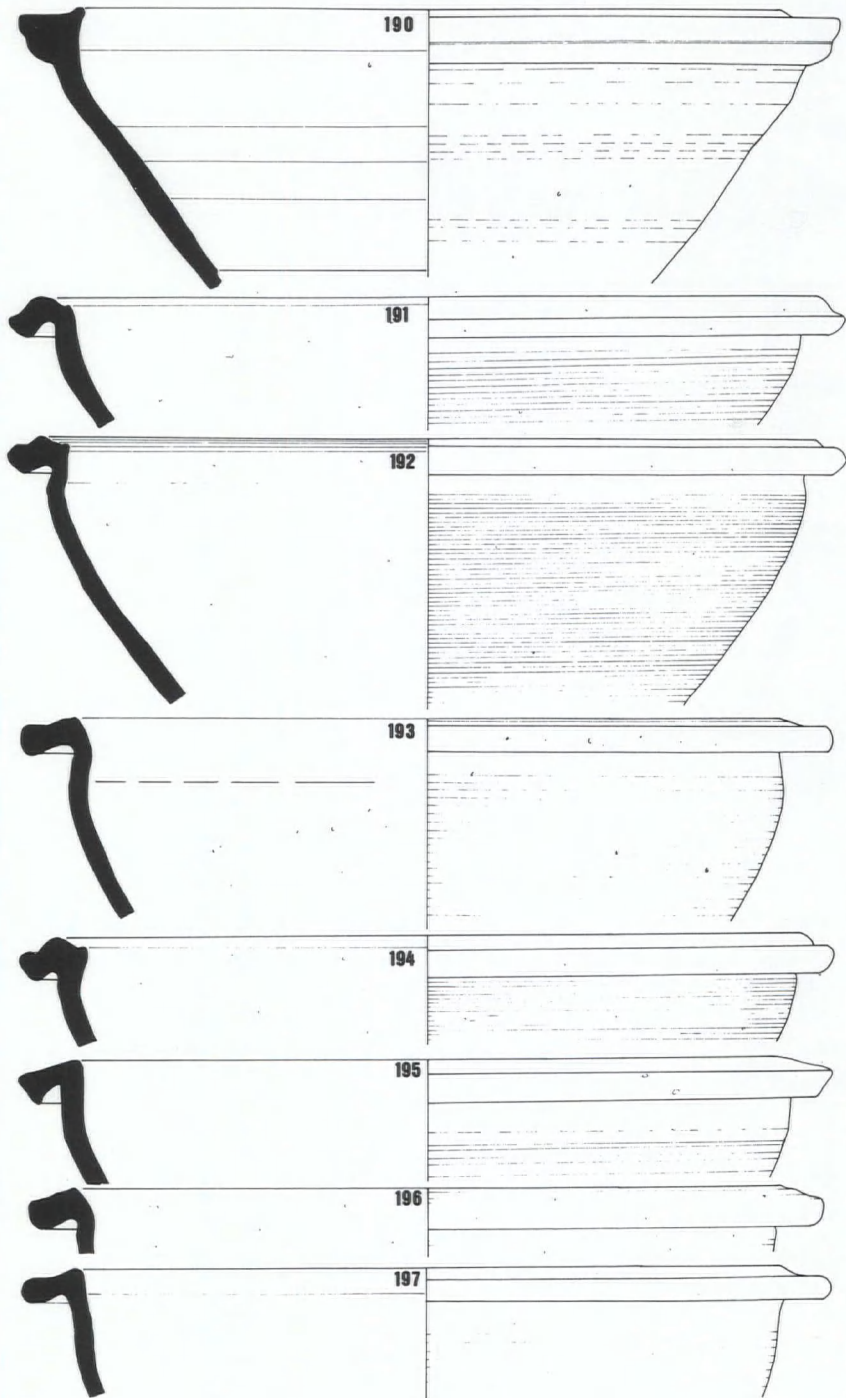


Fig 31. Shell-tempered pottery, Phase 4 (1:4).



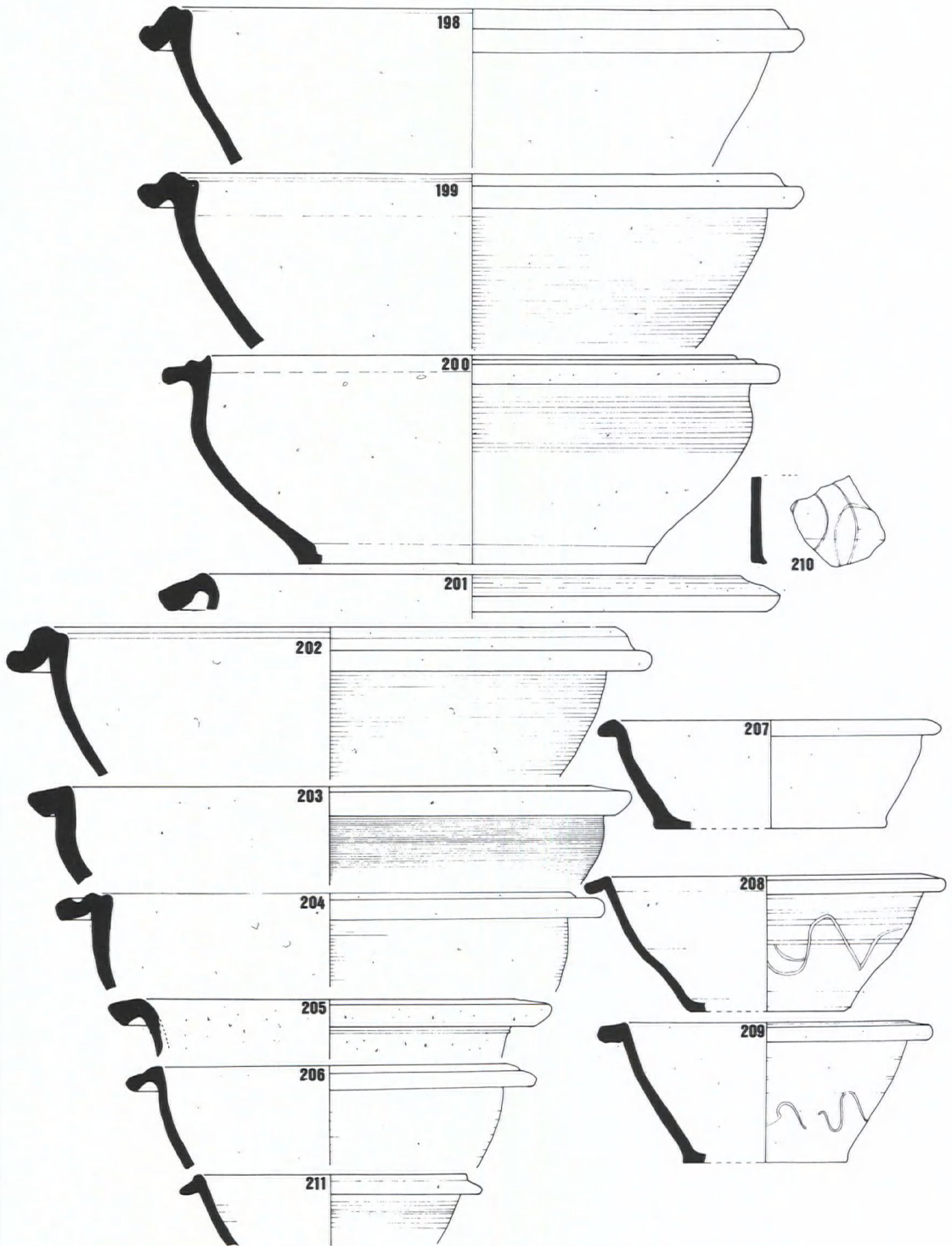


Fig 32. Shell-tempered pottery, Phase 4 (1:4).

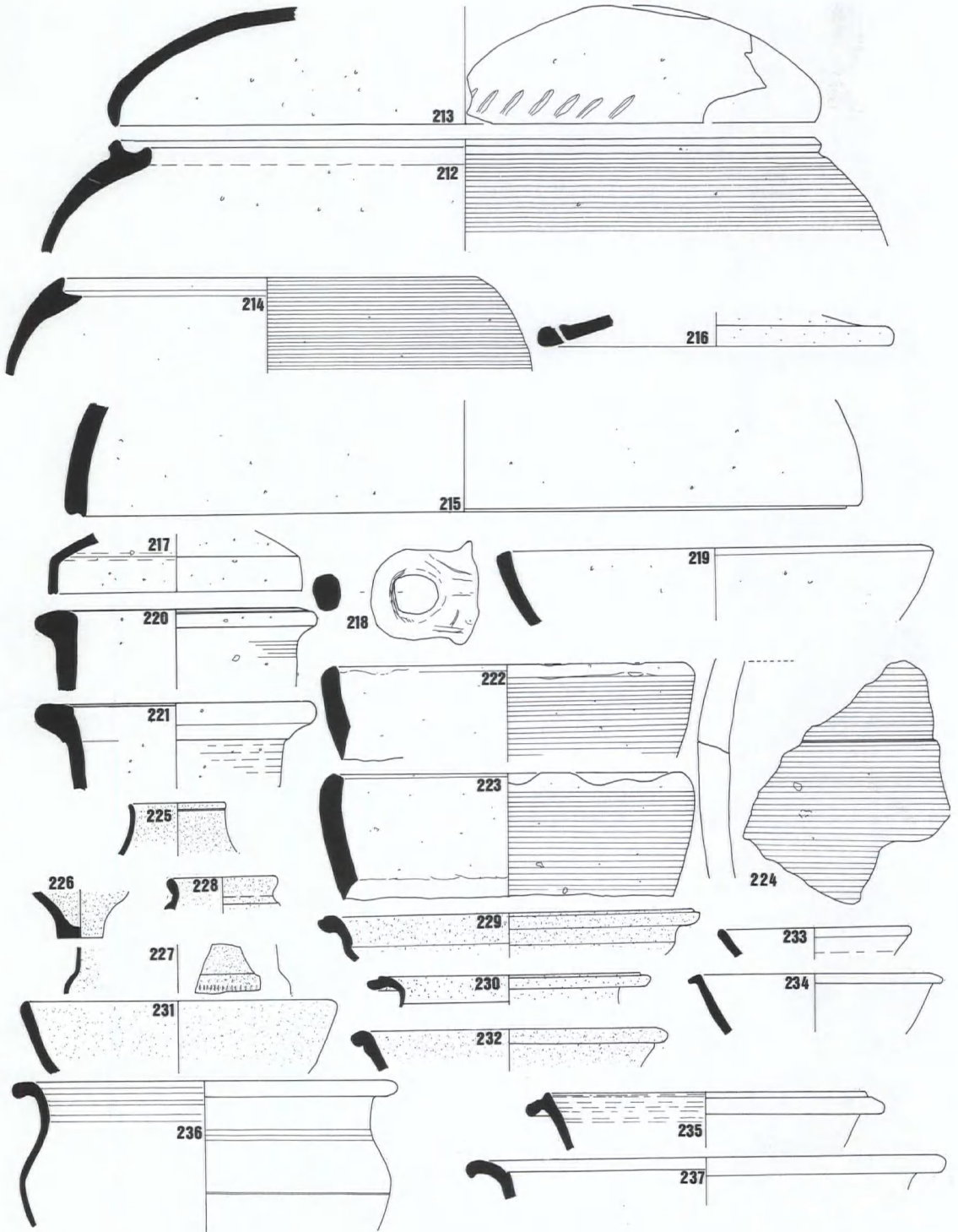


Fig 33. Nos 212-224, shell-tempered pottery; nos 225-237 are in non-Harrold fabrics. Phase 4 (1:4).

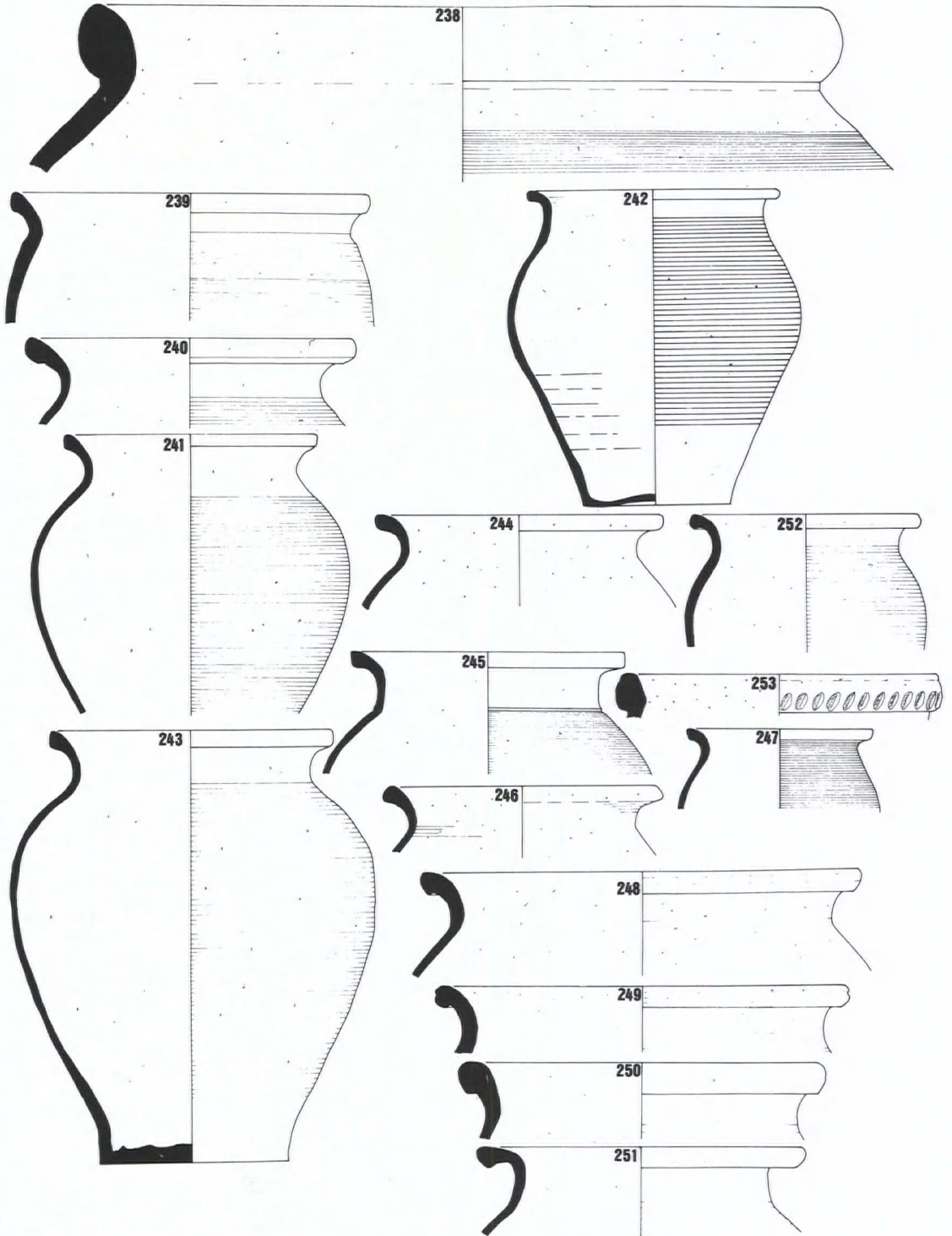


Fig 34. Shell-tempered pottery, Phase 5 (1:4).

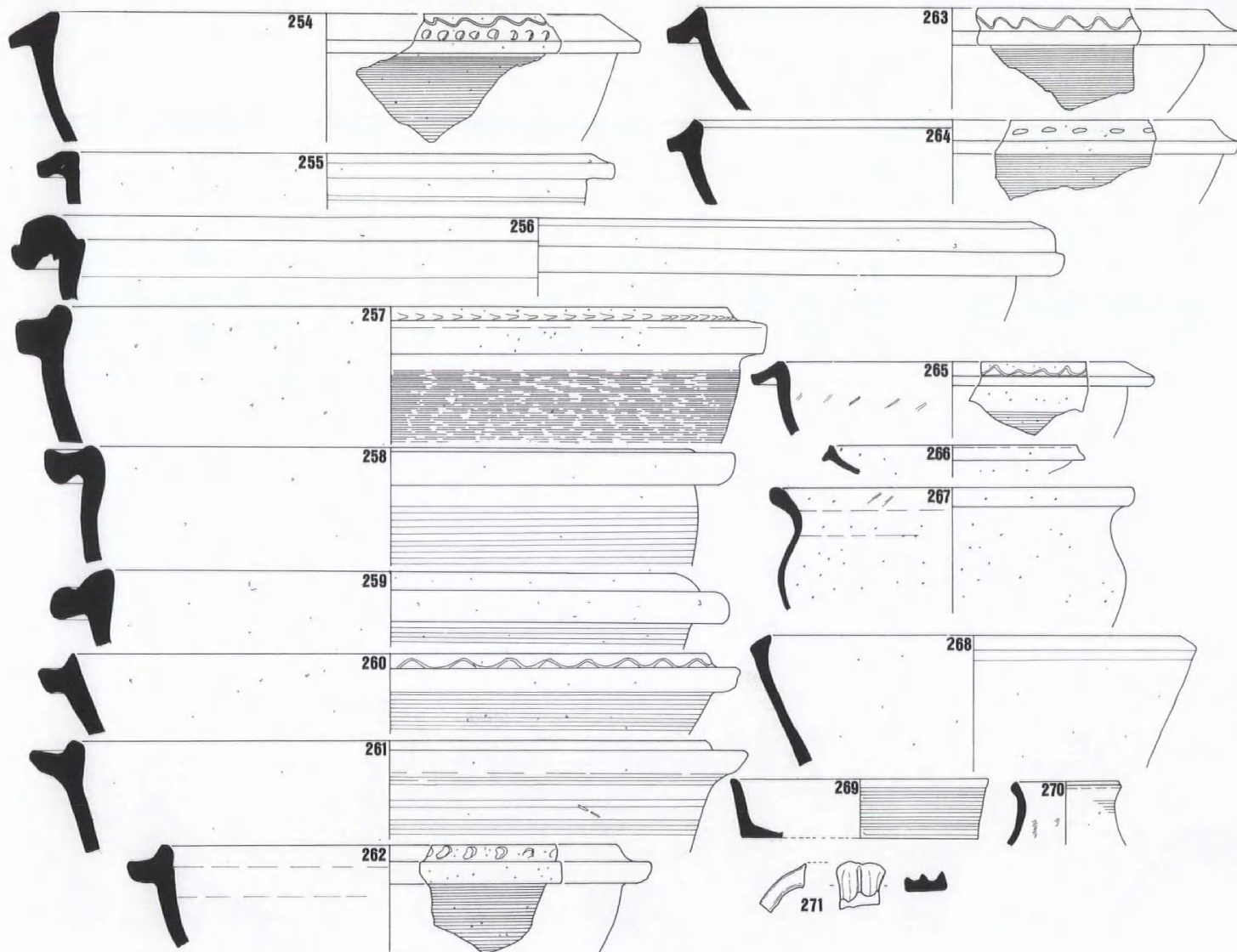


Fig 35. Shell-tempered pottery, Phase 5 (1:4).

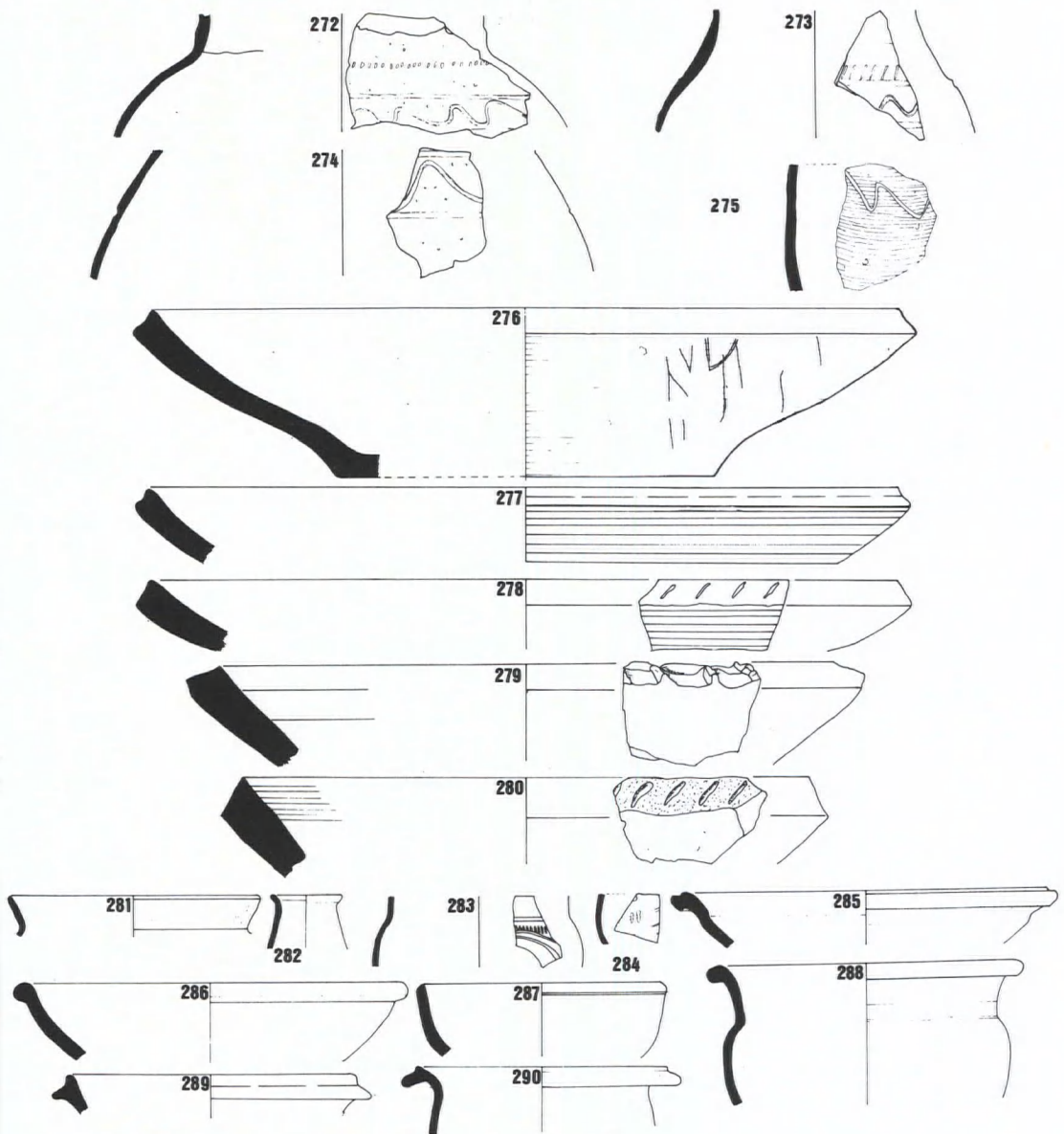


Fig 36. Nos 272-280, shell-tempered pottery; nos 281-290 are in non-Harrold fabrics. Phase 5 (1:4).

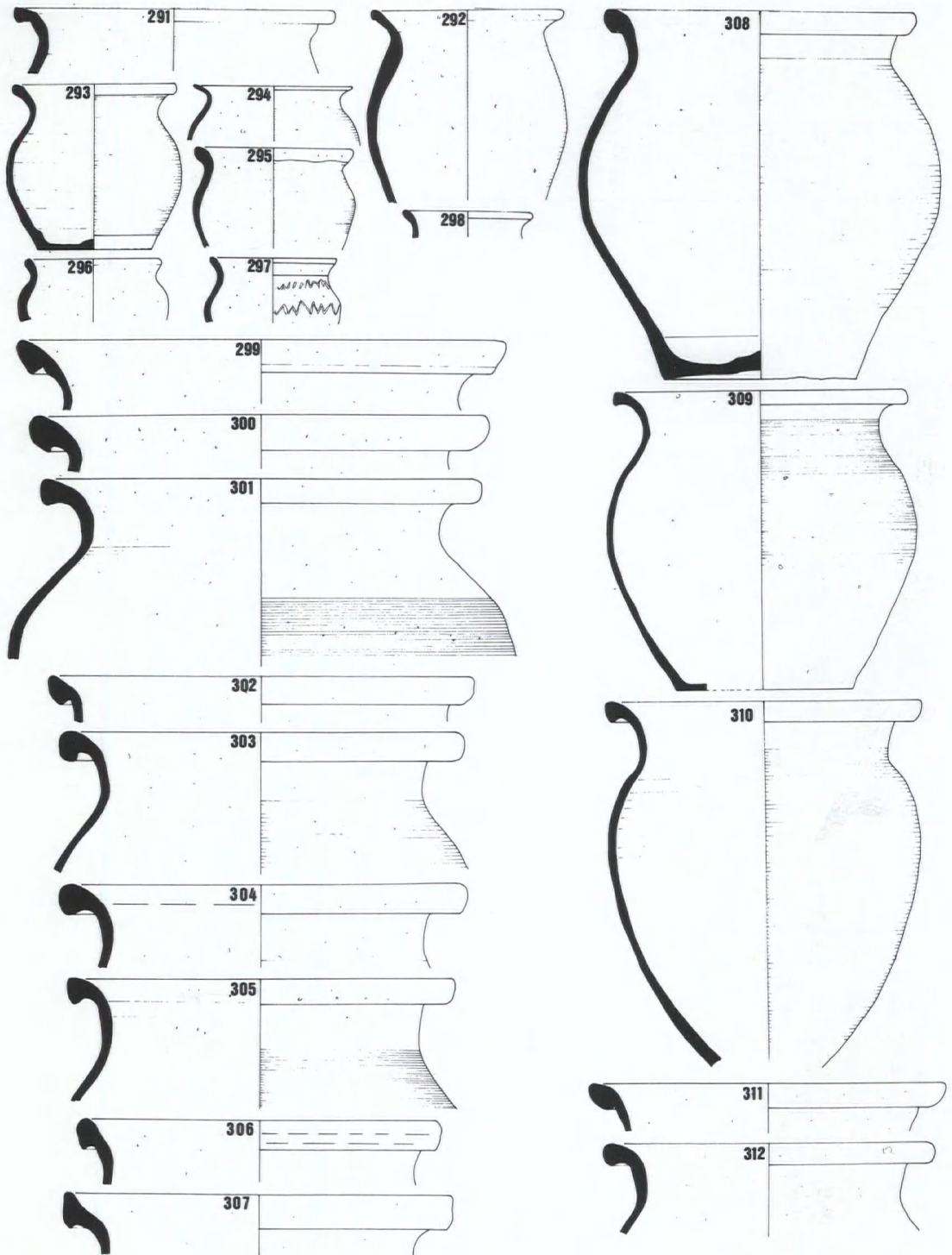


Fig 37. Shell-tempered pottery, Phase 6 (1:4).

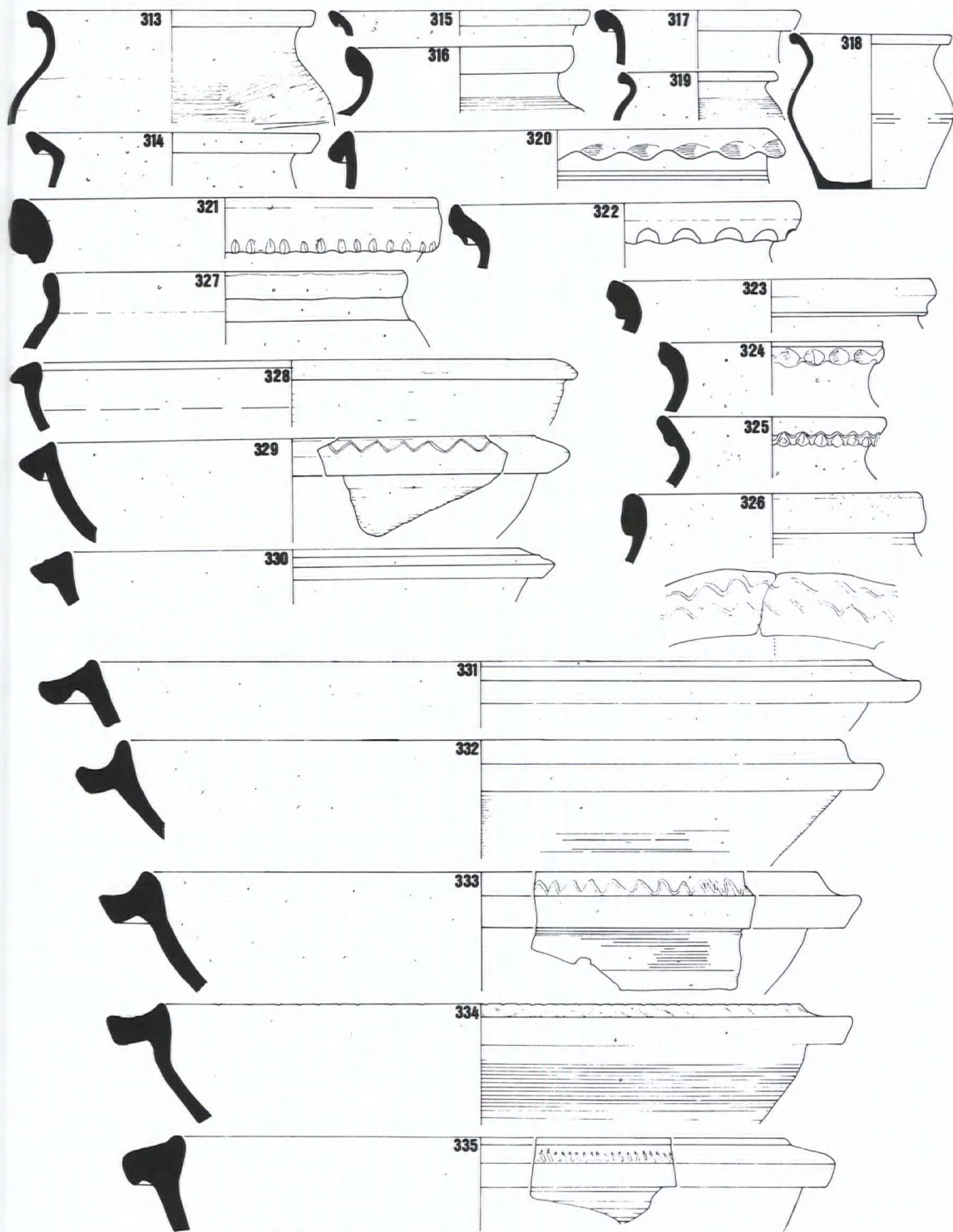


Fig 38. Shell-tempered pottery, Phase 6 (1:4).

## 2. Jars with simple everted rims

With diameters usually within the ranges 140-260 mm. Rilling is more often than not present on the body. The rims can be rounded or squared off at the end and when substantially thickened merge with the group of triangular rimmed vessels listed below. More common in this phase than the triangular rimmed pots.

**Fig 34**, 239, 240, Kiln 7, layer 2; 241, 243, Pit 2, layer 1; 242, Pit 7, layer 1; 244, 246, Pit 23, layer 3; 245, Pit 23, layer 4; 247, Pit 23, layer 2.

## 3. Jars with triangular drooping rims

**Fig 34**, 248, 249, Pit 23, layer 3; 250, Kiln 7, layer 2; 251, Pit 2, layer 1; 252, Pit 2, layer 8.

## 4. Jar with decorated rims

**Fig 34**, 253, Pit 23, layer 3.

## 5. Bowls with flat rims

**Fig 35**, No. 254, Pit 23, layer 3; No 255, Pit 7, layer 1.

## 6. Flanged bowls

The standard Romano-British flanged bowl, with a straight side and a straight flange set below a rim is rare at Harrold. Instead we find a large class of vessels which represent an amalgamation of this idea with the elaborate reeded rim bowls of Phase 4. Rims take on a variety of forms, but in the end a bowl with a curved side and a concave rim, frequently decorated with wavy lines and stabbing in a variety of combinations ousts all the others, to become practically the only bowl form made in Phase 6.

**Fig 35** 256, Pit 2, layer 2; 257, Pit 23, layer 3; 258, 260, 261, Pit 7, layer 1; 259, Pit 2, layer 1; 262, 263, 264, Pit 23, layer 2; 265, Pit 23, layer 4; 266, Pit 23, layer 1.

## 7. Necked bowl

**Fig 35**, 267, Pit 23, layer 2.

## 8. Dog dishes

**Fig 35**, 268, Pit 7, layer 1; 269, Kiln 7, layer 2.

## 9. Flask or Beaker

**Fig 35**, 270, Pit 23, layer 3.

## 10. Handle

**Fig 35**, 271, Pit 1, layer 2.

## 11. Body sherds with scored decoration, perhaps

copying East Midlands burnished grey ware

**Fig 36**, 272 and 274, Pit 23, layer 3; 273 and 275, Pit 23, layer 2.

## 12. Other, **Fig. 36**

These fragments could well be pieces of large vessels built up in sections, but which have either come apart in the firing or been fired as individual sections. An alternative view would be to see nos 276-8 as large lids, here shown upside down, to go with the flanged bowls.

276. Top carefully smoothed and finished. Pit 2, layer 1.

277. Like 276.

278. Top only roughly smoothed (unlike 276-7) and slashed at regular intervals. Pit 7, layer 1.

279. Top (or bottom?) given rough indentations, so creating ridges at regular intervals. Pit 2, layer 1.

280. Rough break showing thick grey core with depressions at regular intervals, which could have received ridges like those on 279. Kiln 7, layer 1.

## Pottery from non-Harrold sources, **Fig 36**

Lower Nene Valley colour coated ware, Fabric 26

281. Blotchy brown colour coat, grey fabric, buff margins. Pit 7, layer 3.

282. Brown colour coat, cream fabric. Pit 23, layer 1.

283 and 284. Metallic black colour coat, white paint, grey fabric, brown margins. Pit 2, layer 1.

285. Metallic brown colour coat, grey fabric, buff margins. Pit 7, layer 3.

286. Brown colour coat, buff fabric. Pit 7, layer 1.

287. Metallic brown colour coat, grey fabric. Pit 23, layer 2.

Oxfordshire colour coated ware, Fabric 27 (Young 1977)

Pit 1, layer 1, shallow bowl C45, 270-400+; layer 3, necked bowl C75, 325-400+; layer 4, C45, 270-400+; layer 5, hemispherical bowl C55, 240-400+; layer 7, straight sided bowl C94, 300-400+.

East Midlands burnished ware, Fabric 31

288. Very hard metallic, grey, burnished on exterior and top of rim. Pit 23, layer 3.

289. Pit 7, layer 1.

290. Pit 2, layer 1.

## Dating

The single coin, from Pit 7, layer 1, is a late 3rd century example of the reign of Claudius II (268-70 AD). The two mortaria fragments are an Oxfordshire piece of 240-400 AD and a probably 4th century Mancetter-Hartshill fragment. The Oxfordshire colour-coated pieces are of 3rd-4th



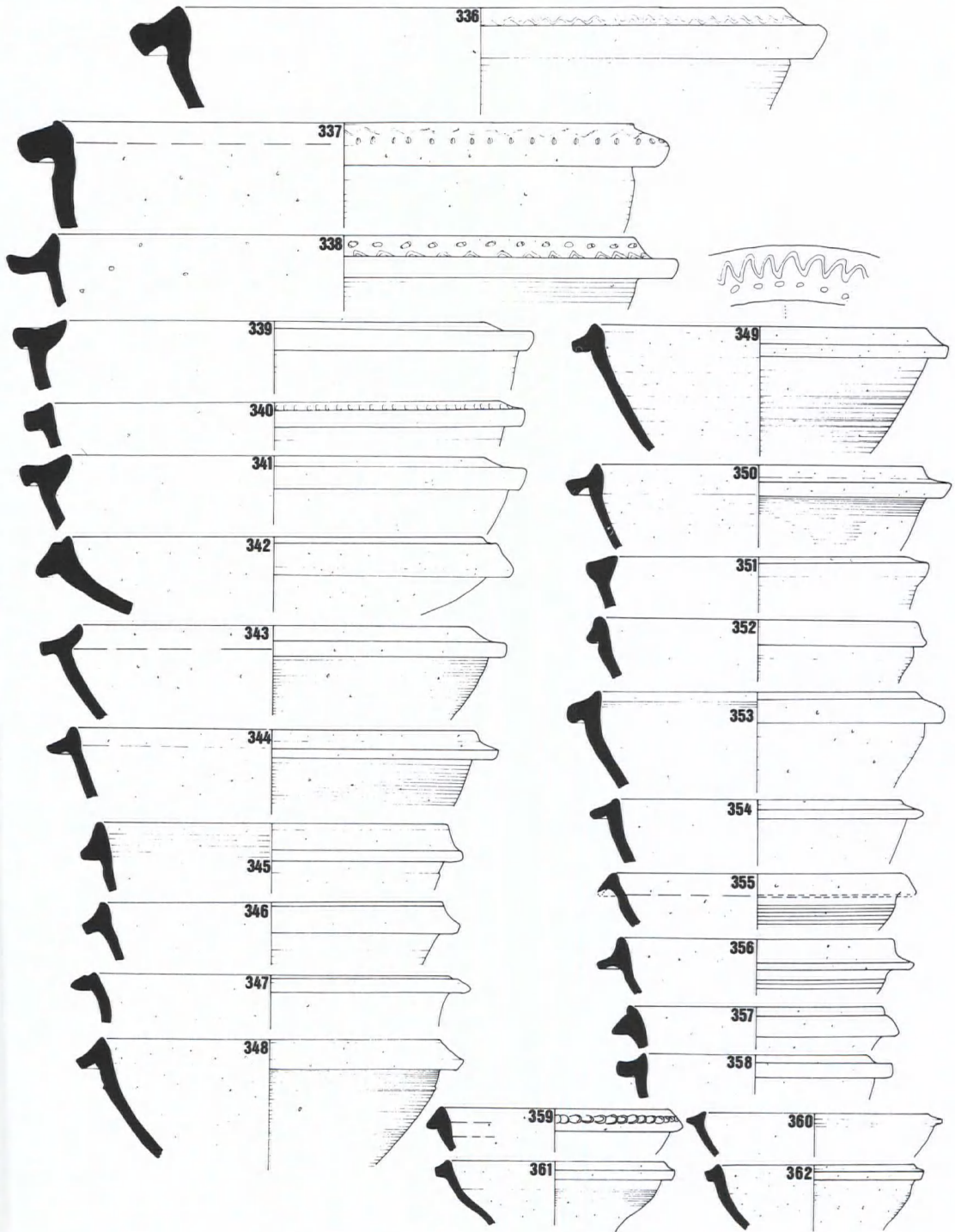


Fig 39. Shell-tempered pottery, Phase 6 (1:4).

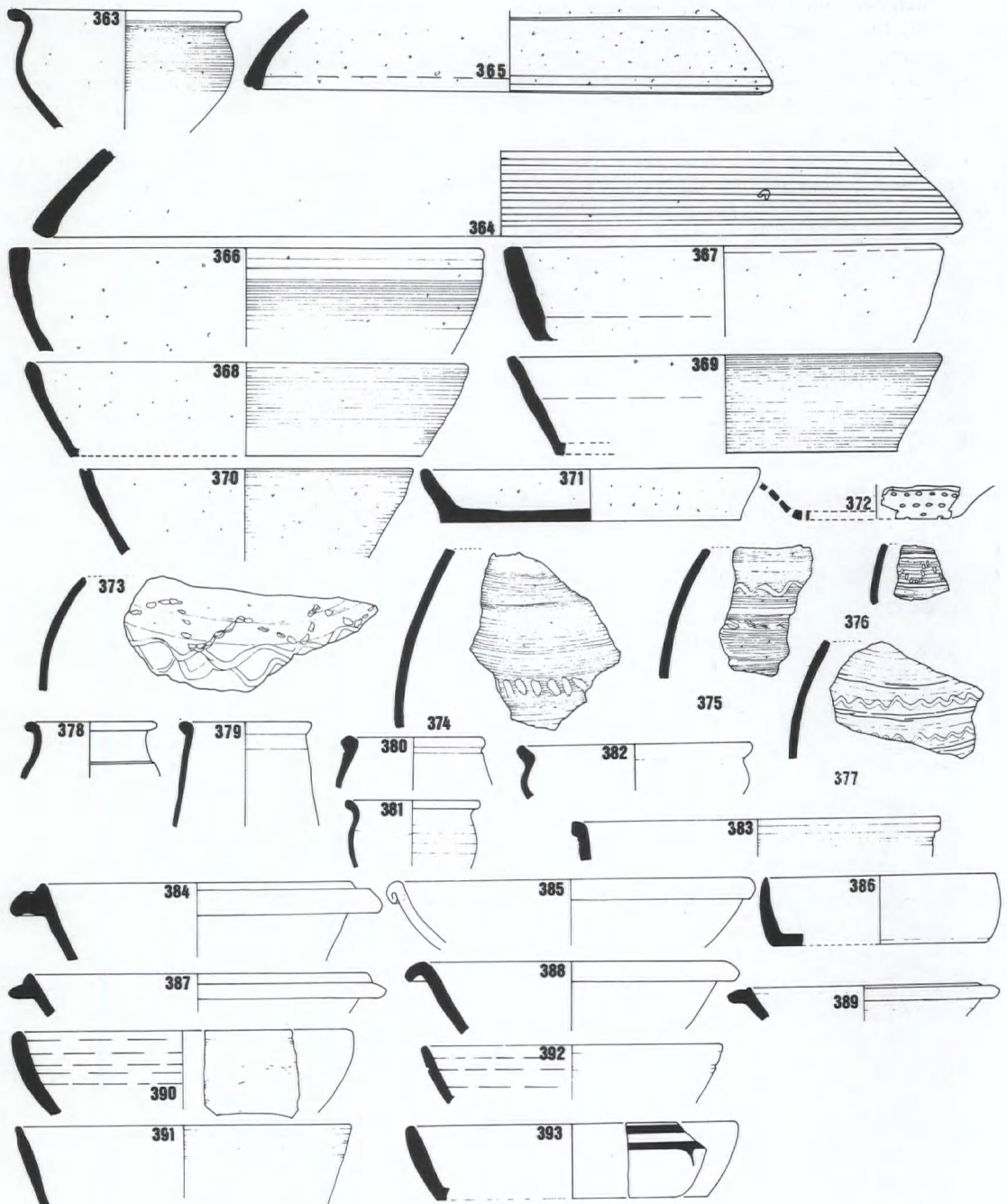


Fig 40. Nos 363-377, shell-tempered pottery; nos 378-393 are in non-Harrold fabrics. Phase 6 (1:4).

century date, with a number of fragments which belong exclusively to the 4th century, including a type which does not begin to be produced until the end of the first quarter of the century. The Lower Nene Valley colour-coated ware pieces are all types of the 4th century (eg nos 282, Howe *et al* 1980, 54-57; 289, *ibid*, 79); but with some which cease to be made around the middle of the century (eg no 285, *ibid* 81; 286, *ibid* 80; 287, *ibid* 82). As for the Harrold ware, there is little difference with the pottery of Phase 4; jars with simple outcurved rims still predominate, but the bowls have in profile further removed themselves from the carinated prototypes of the 2nd century. A date in the first half of the 4th century is put forward.

*Phase 6. Pits 3,8,10,12,14,15,16,18,19*

(later 4th - early 5th centuries: Table 6)

Surface appearance as Phases 4 and 5. Harrold shelly ware forms are as follows:

1. Jars with simple everted rims

Now with a tendency for the rims to oversail the girths; the result is to produce a vessel which greatly resembles the standard late black burnished cooking pot.

**Fig 37**, 291, Pit 8, layers 2/3; 292, Pit 8, layer 4; 293, 296, Pit 10, layer 1; 294, 295, 297, 298, Pit 8, layer 1.

2. Jars with triangular drooping rims

The commonest vessel type; outweighs the simple rimmed variety. Mostly diameters within the same range, 140-260 mm; rilling almost always present on the body; the degree of overhang of the rim very variable.

**Figs 37 and 38**: 299, Pit 19, layer 2; 300, 306, 307, 314, 319, Pit 19, layer 1; 301, 303, 304, 305, 312, 313, 316, Pit 8, layer 1; 302, 311, 315, 317, Pit 16, layer 1; 308, Pit 8, layer 4; 309, Pit 10, layer 1; 310, Pit 8, layers 2/3; 318, Pit 15, layer 1.

3. Jars with decorated rims

**Fig 38**, 320, 322, Pit 16, layer 1; 321, 325, Pit 10, layer 1; 323, 324, Pit 8, layer 1.

4. Jar with heavy rim and short neck

**Fig 38**, 326, Pit 16, layer 1.

5. Jar with upright neck

**Fig 38**, 327, Pit 10, layer 2.

**Table 6.** Phase 6 Distribution of Harrold Ware (estimated number of vessels in brackets)

	Pit 3	Pit 8	Pit 10	Pit 12	Pit 14	Pit 15	Pit 16	Pit 18	Pit 19	
Large storage jars, 1st cent type (residual)	1(1)	2(2)	6(6)							10(9)
Giant storage jars		1(1)	1(1)	1(1)		1(1)		1(1)		5(5)
Jars, outcurved rims	19(11)	63(30)	16(9)	1(1)	26(22)	27(13)	4(4)	4(4)	27(13)	187(107)
Jars, triangular rims	21(10)	77(33)	47(15)	2(1)	54(33)	55(20)	97(25)	67(13)	131(27)	551(177)
Jars, decorated rims							1(1)		3(3)	4(4)
Channel rimmed jars (residual)	1(1)		6(4)			1(1)	6(3)		2(2)	16(11)
Flanged bowls	5(5)	37(25)	10(9)		10(10)	8(7)	2(1)	1(1)	14(12)	87(70)
Bowls with flat rims	1(1)	15(14)	1(1)			3(3)	2(2)		1(1)	23(22)
Lids	1(1)		1(1)				2(2)			4(4)
Dishes	4(4)	6(6)	10(5)		1(1)	2(1)			3(3)	26(20)
Other			1(1)		1(1)	1(1)	2(2)		1(1)	6(6)
Body and base sherds	165	1201	552	53	1030	1869	1834	595	192	7491
Residual 1st cent body sherds	98		3						1	102

**Table 7.** Unphased 4th century features. Distribution of Harrold ware (estimated number of vessels in brackets)

	Pit 13	Pit 24	Pit 25	Ditch I	Stone floor
Giant storage jars				1(1)	1(1)
Jars, outcurved rims		14(6)	3(3)	14(10)	1(1) 32(20)
Jars, triangular rims	2(2)	14(4)	1(1)	3(1)	1(1) 21(9)
Jars, decorated rims				1(1)	1(1)
Channel rimmed jars				1(1)	1(1)
Flanged bowls	2(2)	2(2)	1(1)	4(4)	9(9)
Lids		2(1)			1(1) 3(2)
Body and base fragments	144	250	28	127	16 565
Residual 1st cent sherds			2	1	3

6. Bowls with simple thickened and flat topped rims **Fig 38**, 328, Pit 16, layer 4; 329, Pit 8, layer 1; 330, Pit 19, layer 2.

#### 7. Flanged bowls

A new development is the pushing inwards of the rim to give an internal overhang.

**Figs 38 and 39**, 331, 342, Pit 8, layer 4; 332, 333, 344, 348, 349, 350, 357, 360, 361, 362, Pit 8, layer 1; 334, Pit 10, layer 2; 335, 339, 343, 345, Pit 19, layer 1; 336, 340, 347, 351, 354, Pit 15, layer 2; 337, 346, Pit 19, layer 5; 338, Pit 10, layer 1; 341, Pit 19, layer 2; 352, Pit 14, layer 5; 353, 359, Pit 15, layer 1; 355, Pit 8, layers 2/3; 356, Pit 14, layer 3; 358, Pit 16, layer 2; 347 and 357 are standard Romano-British flanged bowl forms.

#### 8. Necked jar

**Fig 40**, 363, Pit 8, layer 1.

#### Dog dishes (or lids for flanged bowls)

**Fig 40**, 364, 368, Pit 10, layer 1; 365, 366, Pit 8, layer 1; 367, Pit 18, layer 2; 370, Pit 8 (grooved top suggests intended use as a lid); 371, Pit 3, layer 4.

#### 9. Colander

**Fig 40**, 372, Pit 19, layer 1.

#### 10. Body sherds with scored decoration

**Fig 40**, 373, Pit 8, layer 5; 374, Pit 8, layer 3; 375, 376, Pit 8, layer 1; 377, Pit 16, layer 1.

#### Pottery from non-Harold sources, **Fig 40**

Lower Nene Valley colour coated ware, Fabric 26  
378. Mid-brown colour coat, greyish cream fabric. Pit 8, layer 1.

379. Metallic brown colour coat, cream fabric. Pit 8, layer 1.

380. Dark brown colour coat, cream fabric. Pit 16, layer 1.

381. Burnt. Chocolate brown colour coat. Pit 8, layer 1.

382. Metallic black colour coat. Pit 8, layer 1. Another from layer 4.

383. Metallic brown colour coat, dirty grey fabric. Pit 16, layer 1.

384. Metallic brown colour coat, dirty grey fabric. Pit 15, layer 1.

385. Blotchy chocolate colour coat, buff fabric, grey core. Pit 8, layer 1.

386. Metallic bluish brown colour coat. Coarse cream fabric. Pit 8, layer 1.

#### East Midlands burnished ware, Fabric 31

387. Sandy grey, brownish tinge, Pit 19, layer 1.

388. Dark grey burnished, sandy, dark grey core, brownish grey margins. Pit 14, layer 3.

389. Hard medium grey sandy. Pit 8, layer 4.

390. Hard sandy grey. Pit 8, layer 1.

#### Black burnished ware imitations

391. Upper part of exterior and whole of interior a highly burnished and shiny black. Rest of exterior grey. Very hard. Probably from the Alice Holt area, Surrey (Millett 1979, type 7). Pit 8, layer 1.

392. As 391, but a shallower dish. Pit 10, layer 1.

#### Oxfordshire colour coated ware and parchment ware, Fabrics 27 and 28 (Young 1977)

Pit 3. Layer 1, straight sided bowl C94, 300-400+; layer 2, hemispherical bowl C60/61, 350-400+; layer 3, flanged bowl, 350-400+.

Pit 8. Layer 1, flanged bowls C51, 240-400+ (two); C52, 350-400+; shallow bowls C45, 270-400+ (two); C48, 270-400+ (two); flanged bowl C93, 350-400+; parchment ware, necked jar P8, 240-400+; bowl P24, 240-400+; layer 2, C51.

Pit 14. Layer 3, parchment ware bowl P24, 240-400+; layer 5, shallow bowl C45, 270-400+ (two).

Pit 15. Layer 1, necked bowls C75, 325-400+; C79, 340-400+; carinated bowl C84, 350-400+; layer 2, hemispherical bowl C55, 240-400+; straight sided dish C94, 300-400+.

Pit 16. Layer 1, hemispherical bowl C55, 240-400+; carinated bowl C84, 350-400+.

#### Other

393. Coarse sandy grainy surface, burnished on interior, bands of black paint on exterior. Pit 15, layer 2.

#### Dating

The abundant coins are Constantinian of the second quarter of the 4th century, but with a number of significant later issues of the house of Valentinian from Pits 16 and 19 and of the house of Theodosius from Pits 14, 19 and probably 12. The mortaria are Oxfordshire and Mancetter types of the 4th century; so are the fragments of Oxfordshire colour coated ware, with some types not current until after c 350, which go down to c 400 and beyond. The Lower Nene Valley colour coated pieces are similarly standard 4th century products. The arrival of a little Much Hadham ware is of interest.

The significant difference with the Harold ware of earlier phases is, as far as jars are concerned, the preponderance of the form with the triangular drooping rim. There are also some copies of the late black burnished cooking pot. This group belongs to the second half of the 4th century and goes on into the 5th.

## TILES AND BRICKS IN SHELLY HARROLD FABRIC

### Group 1

second half of 2nd century (for provenances, Table 8; Fig 41)

The surface colours of these brick and tile fragments lie within the following ranges: 10R 5/4 reddish brown - 10R 5/8 red, 7.5 YR 5/2 greyish-brown - 7.5 YR 7/3 dull orange, 5YR 7/8 orange- 5YR 5/2 greyish brown, 2.5 YR 7/2 light reddish grey - 2.5YR 7/4 pale reddish orange.

### *Tegulae*

Tile thicknesses (17 - 20 mm) match those from 3rd and 4th century deposits but a proportion of the flanges are different, with a triangular profile (eg nos 1 and 2).

1. Very abraded. Unstratified but from Trench 2, near Kiln 1.
2. Pit 20, layer 1.
3. Kiln 1, layer 1.
4. Unusual groove along top of flange. Kiln 9, layer 1.
5. Very big flange from presumably a large tile. Kiln 9, layer 9.

### *Imbrices*

Small fragments ranging in thickness from 12 to 21 mm. One piece (Kiln 9, layer 2) gives a near complete length of 320 mm.

### *Ridge tiles*

Two definite examples only, but some of the imbrex tiles could have belonged to this class, particularly the thicker ones.

6. An unusual piece with an angled end, designed perhaps to begin or end the ridge of a sloping roof. Kiln 9, layer 3.
7. Very well finished and smoothed off on the interior, with sharp edges, but much rougher on the inside, with finger and former marks visible. Kiln 9, layer 3.

### *Relief-patterned flue tiles*

Five abraded fragments, four joining, unstratified from south east of Kiln 1, Trench 2.

8. Much shell visible on surface; grey core. 2.5YR6/8 orange.

Mr Ernest Black of the Relief-patterned Tile Research Group writes that this is an example of Die 64 which has been noted in residual or destruction contexts at Braughing (Hertfordshire) and the Brixworth villa (Northamptonshire). Another die, 123, has a similar pattern and also occurs on tiles in a similar fabric; it has been found in a disturbed

context at the villa at Piddington (Northamptonshire).

### *Bricks*

The fragments are 27, 30 and 43 mm thick, within the range of those made in the later period.

This small group of generally small tile fragments is enough to indicate that the range of tiles made in the 2nd century was much the same as that in the 3rd and 4th centuries, for which much more evidence is available.

### Group 2

late 3rd to mid 4th century

The surface colours lie within the following ranges: 10 R 5/4 reddish brown - 10 R 5/8 red, 7.5 YR 8/3 light yellow orange - 7.5 YR 5/2 greyish brown. 5YR 7/8 orange - 5YR 8/4 pale orange, 2.5YR 7/2 - 2.5YR 6/6 orange.

The provenances and weights of the various types of tile are set out in Table 9. The contexts have been grouped and ordered according to their presumed dates as derived from the pottery evidence. This has the effect of showing not just which pits were more extensively excavated, but also how the later pits tend to produce rather less tile (and mostly abraded fragments at that); the suggestion can therefore be made that tile production at Harrold ceased somewhere in the second half of the 4th century; it did not last so long as pottery manufacture.

### *Tegulae*

#### (Figs 41-42)

Low raised zones along the bottom edges of these tiles show how they were made by pushing slabs of clay into moulds; in some cases surplus clay has oozed out (14). Low raised lines of clay on the rough and irregular undersides may show where joins in the presumably wooden slats on which the tiles were laid out to dry occurred (9); there are also instances of similar raised lines along the external sides of the flanges. The presence of raised strips of surplus clay suggests that the cutaways were formed in the mould rather than with a knife. The tiles were carefully smoothed on the upper surface and relatively few show much shell; sometimes the lower edge of the underside was roughly smoothed off also. Very occasionally a groove was made during finishing along the inside of the flange, but pieces of surplus clay left behind and blocking these grooves show that they had nothing to do with facilitating water run-off (16). Finger impressions along the sides and on top of the flanges show how

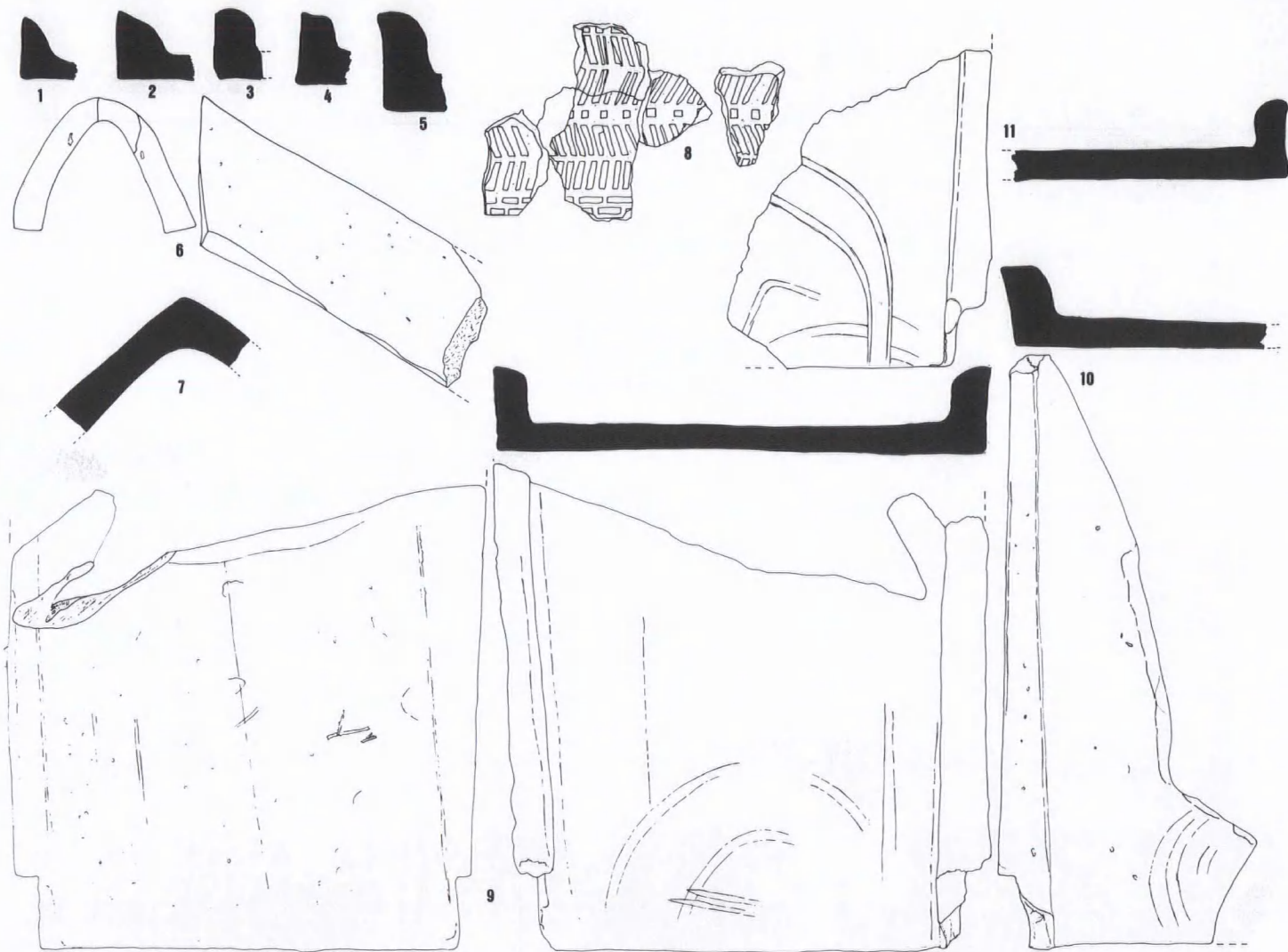


Fig 41. Tiles in shelly fabric. Nos 1-8, Phase 3; nos 9-11, Phases 4 and 5 (1:4).

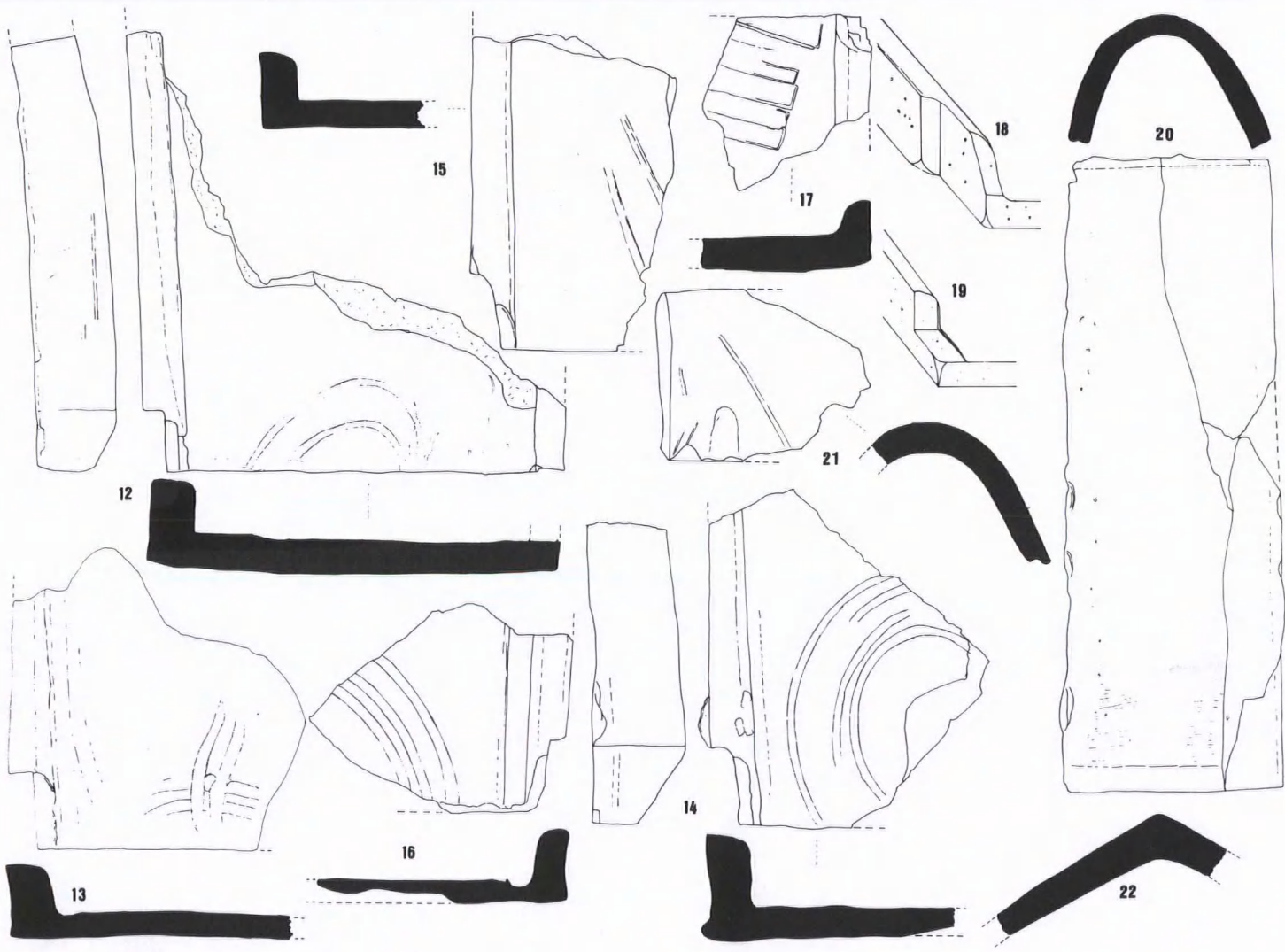


Fig 42. Tiles in shelly fabric, Phases 4 and 5 (1:4).

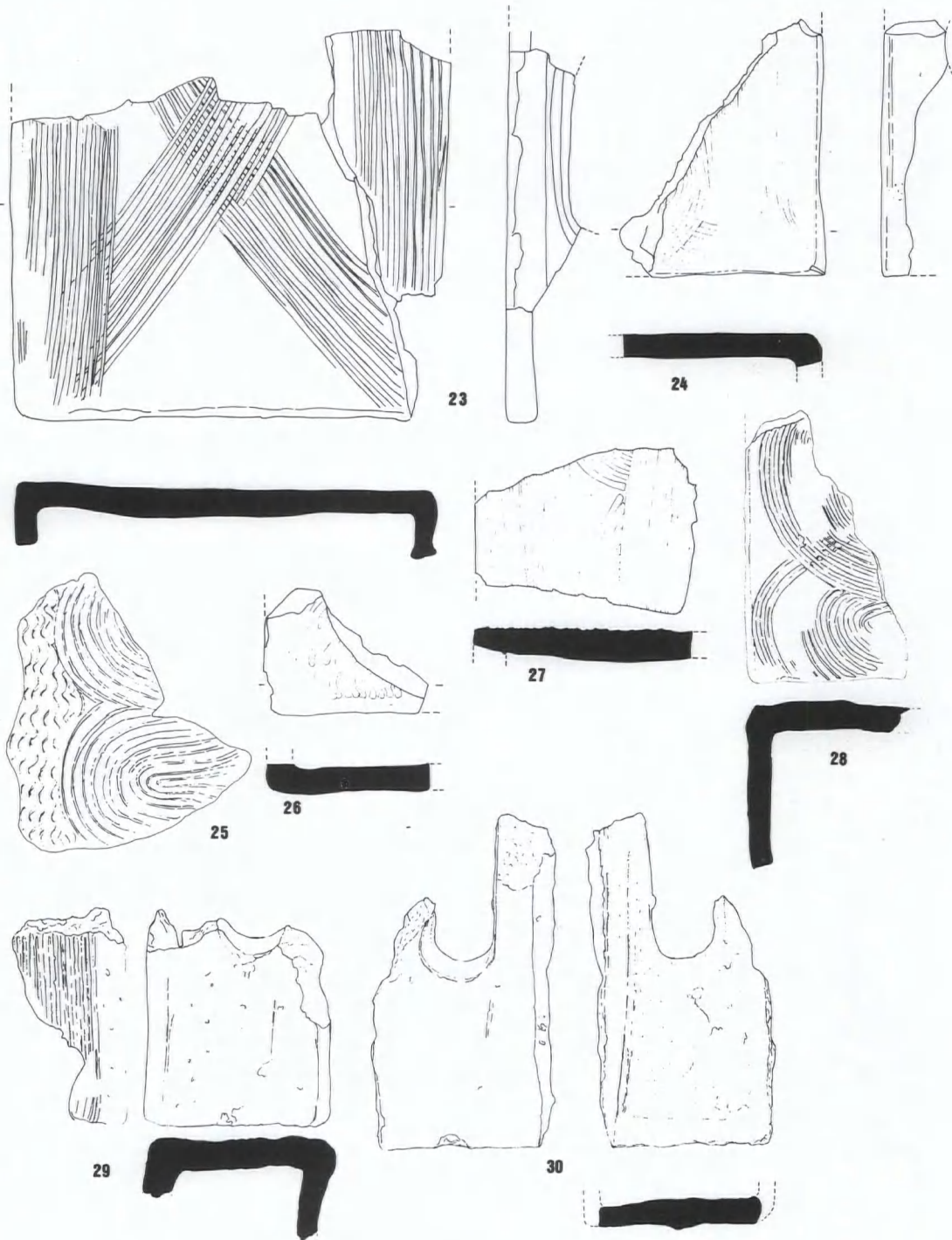


Fig 43. Tiles in shelly fabric, Phase 4 (1:4).



the tiles were removed from their moulds.

These tiles range in thickness from 15 to 20 mm; the external height of the flanges from 38 to 61 mm, but mostly around 50 mm. The one complete specimen from the furnace of Kiln 5 is 290/300 mm wide by 360 mm long by 20 mm thick and weighs 3.289 kg, a fairly small tile (Brodribb, 1987, 142). Tegulae with comparable dimensions one way come from Kiln 5, layer 1, 365 mm long; Kiln 6, layer 1, 350 mm long; Kiln 5, layer 1, 310 mm wide. But larger tegulae were made; one from Pit 9, layer 1, is 385 mm long and another from Kiln 5, layer 1, 370 mm wide, a very substantial tile. These measurements do not agree particularly well with those given by Zeepvat (1987, 120) for shelly tegulae from the Milton Keynes excavations.

Out of the grand total of 1815 tegula fragments of all kinds found, only 24 exhibit smeared finger signatures (9 - 16).

**Figs 41 and 42**, 9, Kiln 5, layer 1; 10, Kiln 5, layer 1; 11, Kiln 7, layer 7; 12, Pit 9, layer 6; 13, Kiln 5, layer 1; 14, Kiln 5, layer 1; 15, Kiln 6, layer 2; 16, strip of clay blocks groove along inside of flange: Kiln 7, layer 2; 17, tool marks on upper surface: Pit 7, layer 1; 18, example of lower cutaway; 19, example of upper cutaway.

#### *Imbrices* (Fig 42)

After forming, the sides of these tiles were trimmed downwards, resulting in the creation of a roll of clay along each bottom edge. Finger impressions on the rough interior, particularly along the edge and at the end, show where the tiles were held while the smoothing of the exterior took place. Only one piece (21) had smear marks at the end comparable with those found on tegulae, but these may have been accidental.

The complete length as determined by examples from Kiln 5, layer 1, and Kiln 6, layer 3, was 390 mm and thicknesses ranged from 12 to 14 mm

giving a weight of 2.495 kg. The latter figure agrees with the imbrex thicknesses given by Zeepvat (1987) but the length figures are not in agreement.

20. Kiln 6, layer 3..

21. Kiln 5, layer 1.

#### *Ridge tiles* (Fig 42)

Few examples of these thick (20 mm) and heavy tiles were identified and none could be reconstructed; undifferentiated side fragments would appear in the totals for bricks of thickness 24 - 40 mm.

22. A line on the underside shows where two slabs of clay have been lapped together. Kiln 5, layer 1.

#### *Box tiles* (Figs 43 and 44)

No complete example could be reconstructed, but these tiles were at least 250 mm high and the one complete width was 270 mm. The sides were 115 mm across and without scoring.

23. Twelve shallow grooves. Kiln 5, layer 1.

24. Twelve grooves, finely executed, sharp. Kiln 5, layer 1.

25. Ten shallow grooves; surface only survives. Kiln 5, layer 1.

26. Broad shallow grooves; surface only survives. Kiln 5, layer 3.

27. Eleven grooves. Kiln 5, layer 3.

28. Fifteen grooves. Kiln 5, layer 1.

29. Shallow grooves. Kiln 5, layer 1.

30. Kiln 5, layer 1.

31. Twenty three sharply executed grooves. Pit 9, layer 1.

32. Nine grooves. Kiln 7, layer 1.

33. Ten broad grooves. Pit 2, layer 1.

34. Ten broad grooves. Pit 8, layer 7.

**Table 8.** Tiles and bricks, Phase 3 (no. of fragments)

	Tegulae	Imbrices	Ridge tiles	Box flue tiles	Bricks 24-40mm thick	Bricks over 40mm thick	Misc. flat frags up to 24mm thick	Totals	Weight Kg
Kiln 1	5	1		2			21	29	3.01
Kiln 9	5	9	2	1	1	1	4	23	4.83
Pit 6							1	1	0.028
Pit 20	1	1					1	3	1.05
Pit 21		1			1		4	6	0.94
Pit 22	1	2			2			5	0.71
	12	14	2	3	4	1	31	67	10.568

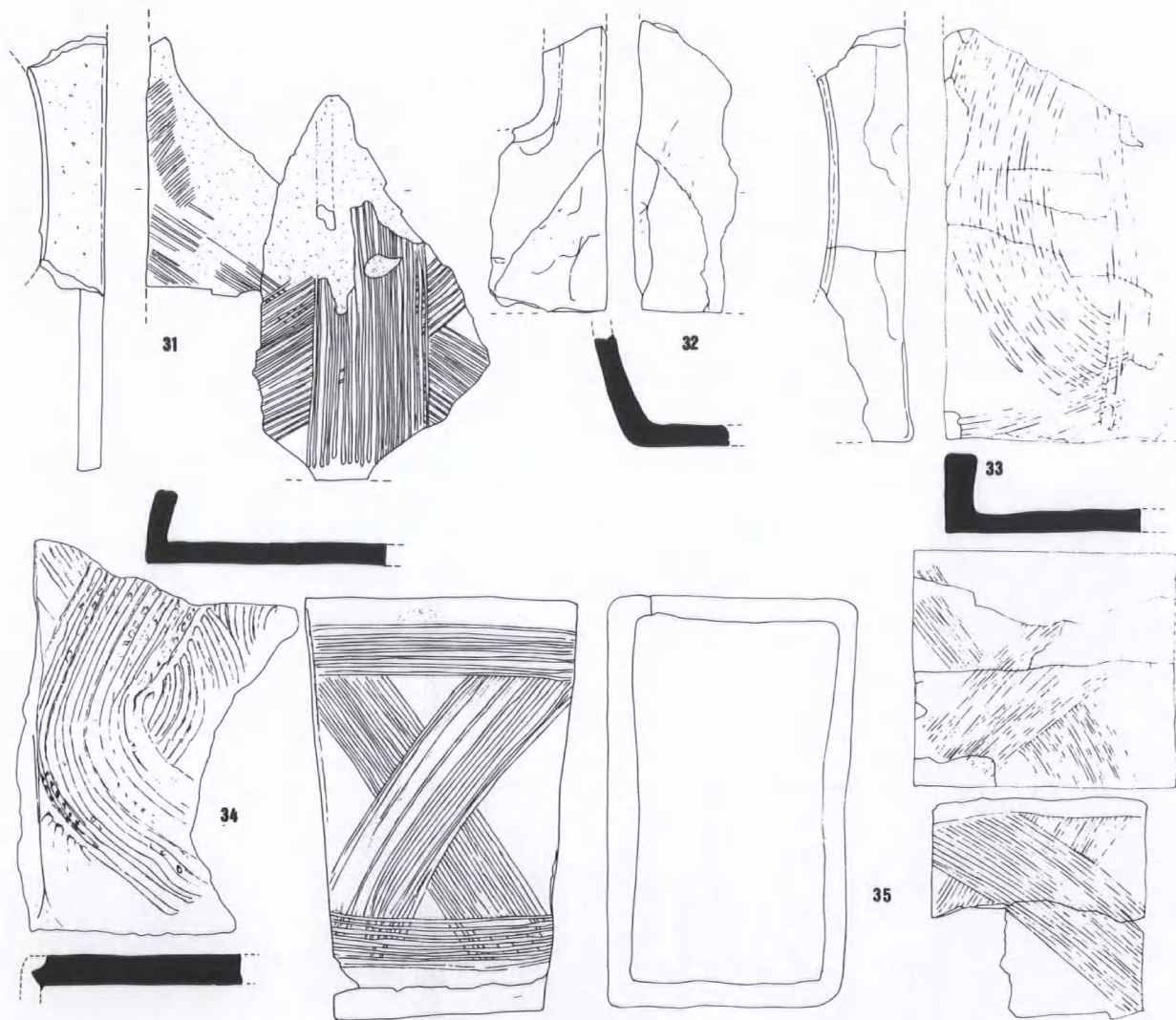


Fig 44. Tiles in shelly fabric, Phases 4 and 5 (1:4).



Fig 45. Tiles and bricks in shelly fabric, Phases 4 and 6 (1:4).

### *Hollow voussoirs*

#### (Figs 44 and 45)

These occurred in two groups: from Kiln 5 and Pit 9 came a group of tiles about 220 - 240 mm high, 120 - 140 mm wide at the bottom, 160 - 180 mm across the top and 140 - 150 mm deep; the tiles ranged in thickness from 12 to 18 mm. The weight of the tile was 2.72 kg. They are well made with finely executed scoring. Enough pieces survived to show the joint which enabled the tiles to be completed around their former. The second, smaller, group came from Kiln 7, and consisted of smaller tiles; the height is not ascertainable but over 142 mm; the basal width is about 100 - 120 mm, the width of the top *c* 150 mm and the depth of the tile is *c* 120 mm. They were very crudely made.

35. Over nineteen grooves, very finely executed. Kiln 5, layer 1.

36. Fourteen grooves. Kiln 5, layer 1.

37. Side similar to 35. Nine grooves. Kiln 5, layer 1.

38. Six broad grooves. Kiln 5, furnace re-flooring

39. Fourteen narrow grooves; scarf joint visible on underside and in section. Pit 9, layer 7.

40. Side fragment. Four grooves. Kiln 7, layer 3.

41. A side fragment? Seven broad grooves. Kiln 7, layer 3.

42. Top fragment? Eight grooves. Kiln 7, layer 1.

43. Bottom fragment? Five grooves. Kiln 7, layer 3.

44. Bottom fragment? Four grooves. Kiln 7, layer 2.

45. Possibly a voussoir fragment; very crudely made. Four grooves. Pit 23, layer 2.

### *Bricks*

#### (Figs 45-47)

A range of bricks existed varying in thickness from 24 to 60 mm. Greater thicknesses of clay around the edge and some oozing around the bottoms showed how they had been made in wooden moulds. In all cases the undersides were very irregular and sometimes not even flat. Some (eg 46) exhibited the kind of slight ridges to be found on *tegulae*. Out of the 224 fragments of brick found, 8 (eg 47) had hobnail impressions on the underside, none forming a coherent pattern; 47 had holes in the underside penetrating to within a millimetre or so of the upper surface (47,51); 7 had smear marks on the upper surface comparable to those found on *tegulae* (eg 47, 49, 50, 52, 53).

A complete example from Pit 9, layer 6, of one of the thinner pieces (within the thickness range 24 to 40 mm) is 195 x 192 mm ie a *bessalis* (46) (terms from Brodrigg 1987; these dimensions match those for *pilae* from Milton Keynes (Zeepvat, 1987)); another 200 x 180 mm comes from Kiln 5, layer 1.

Other examples of bricks within this thickness range with a complete measurement one way close to these come from Kiln 5, layer 1 (200 x 180+ mm) and Pit 2, layer 1 (230 x 230+ mm). From Pit 8, layer 8, and Kiln 5, layer 1, are examples 280 x 150+ mm and 287 x 220+ mm, and so possibly *pedales*. Another from Kiln 7, layer 7, measured 395 x 245+ mm and could have been a *lydion*.

Of the thicker tiles (40 - 60 mm), few had complete dimensions, but one (53) from the furnace re-flooring of Kiln 5 measured 590 x 290+ mm and could have been a *bipedalis*. Zeepvat (1987) quotes examples of shelly sub-floor tiles 600 x 600 mm at the Bancroft villa, Milton Keynes. Another from Kiln 7, layer 2, was 310 x 290+ mm and could have been a *pedalis*, although, as with some of the other tiles mentioned above, other interpretations could have been possible.

46. Pit 9, layer 6.

47. Kiln 5, layer 1.

48. Heavily scored in the finishing off process. Kiln 7, layer 3.

49. Pit 8, layer 4.

50. Small holes on underside. Pit 8, layer 4.

51. Tool and finger marks on upper surface. Kiln 5, layer 2.

52. Kiln 7, layer 3.

53. Kiln 5, furnace re-flooring.

### *Other tiles*

#### (Fig 48)

54. Part of an armchair tile, for the heating of a barrel vault, smoothed on one face, irregular on the other. Pit 8, layer 4.

55. Oblong brick. 213+mm long, 100 mm broad, 50 mm thick. Carefully finished top and sides, rough underside. Kiln 5, layer 1.

56. Another 120 mm broad, 50 mm thick, length uncertain. Carefully finished all over. Kiln 5, layer 1.

57. Chip of upper surface of a tile with paw mark of dog. Pit 9, layer 7.

### KILN FURNITURE AND OTHER CLAY

#### OBJECTS (Figs 49 - 51)

##### Phase 1

Several very small bits of burnt clay, buff, one or two with smoothed upper surfaces. Pit 11, layer 2.

##### Phase 2

##### *Firebars*

Pieces of firebars occurred in the following contexts; Gullies 1/2, layer 1 (1 fragment); Gully 2 (1 fragment); Kiln 2, layers 2 and 3 (26 fragments and 12 complete ones); Kiln 3, layers 2 and 3 (255

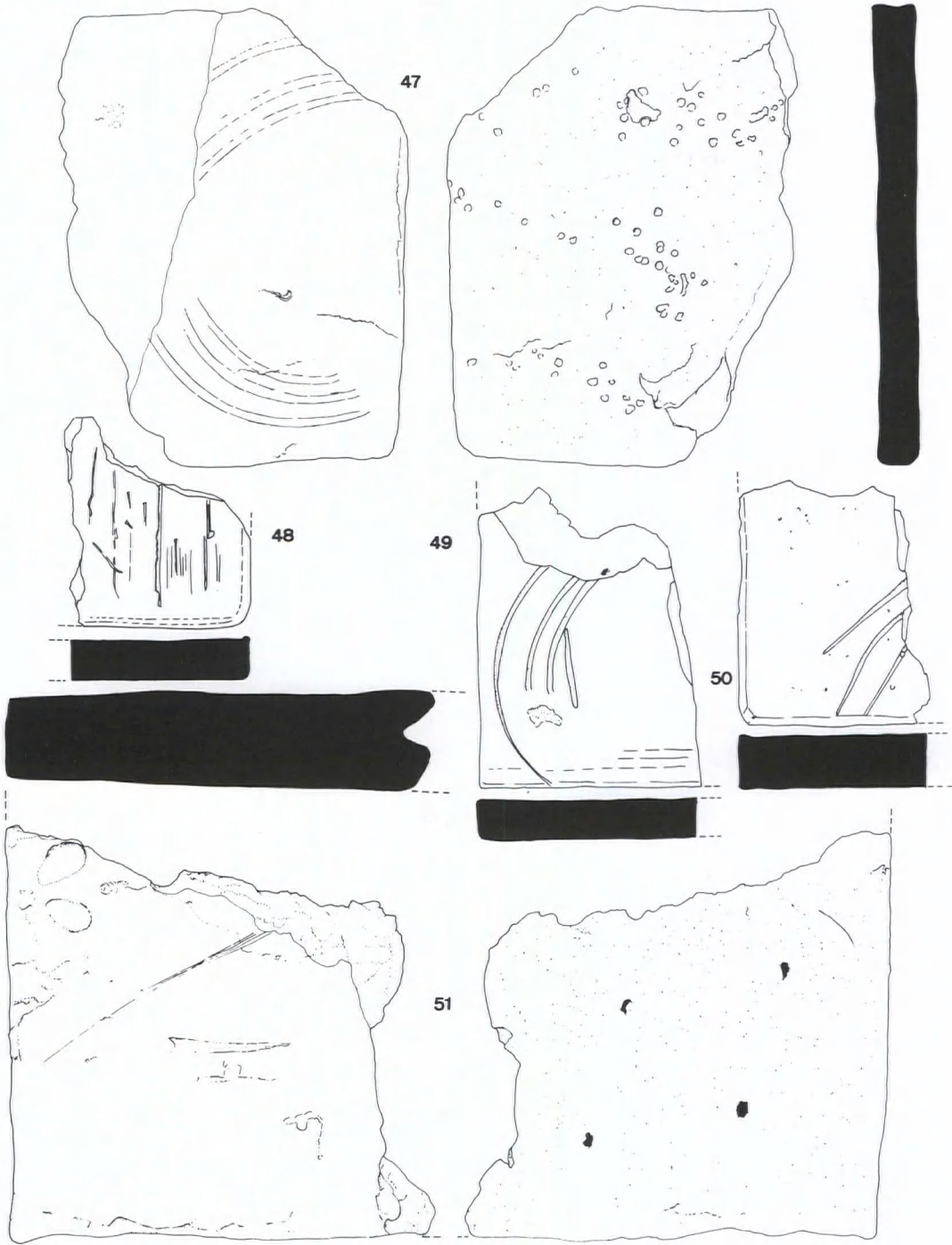


Fig 46. Bricks in shelly fabric, Phases 4, 5 and 6 (1:4).

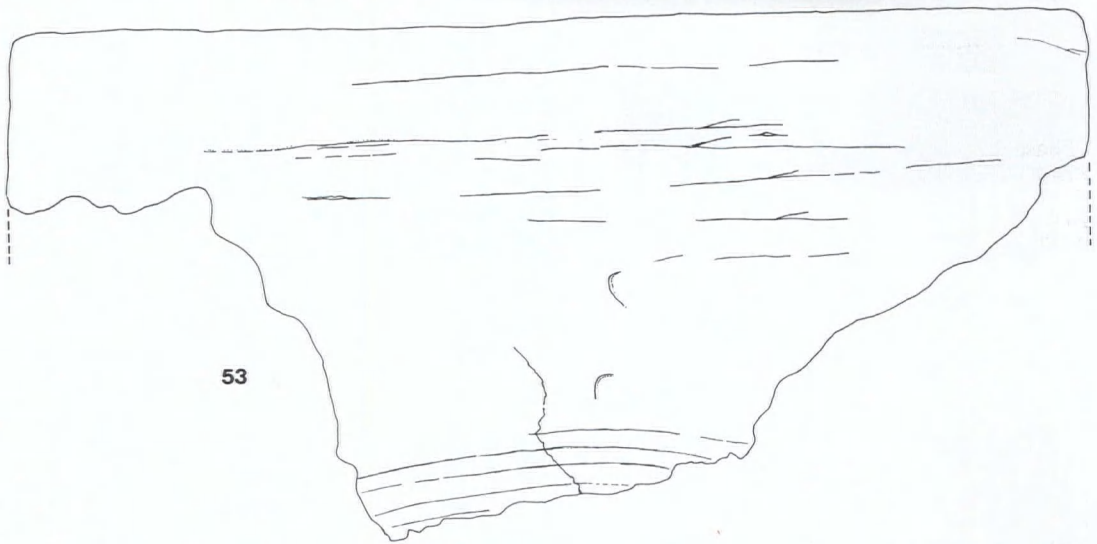
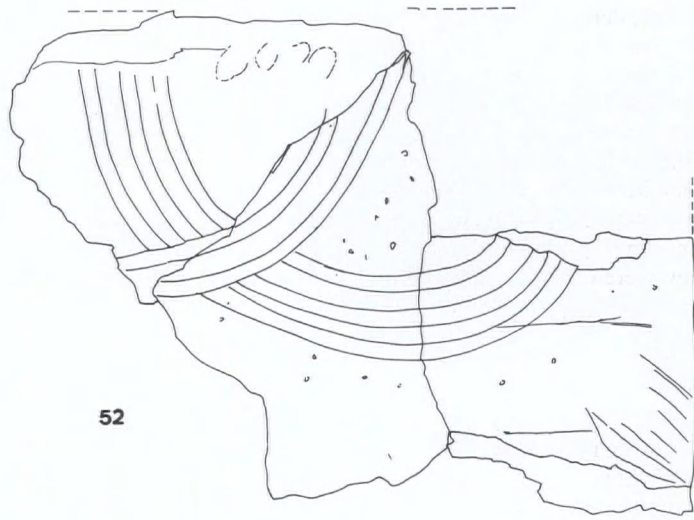


Fig 47. Bricks in shelly fabric, Phase 4 (1:4).

fragments); Kiln 4 (2 fragments). These firebars have distinctive characteristics and residual pieces were also found in Pit 3, layer 1 (2 pieces), Pit 8, layer 1 (2 pieces), all of Phase 6.

Generally speaking, these early bars were squarish in section, from c 350 mm to 470 mm across at the point of maximum size, cigar shaped, varying in length from c 640 mm to 480 mm, with the upper side flat or slightly concave and the remainder convex. They were carefully made in a light brownish buff shelly fabric similar to that of the contemporary pottery, with a consistently regular shape, sharply defined corner angles and with ends neatly squared off. Broken pieces frequently show a line of junction running diagonally through the bar (eg no 1) and breakages occur frequently along this line, suggesting perhaps manufacture in some kind of mould, with one slab of clay having been pushed in on top of another. The bars from Kiln 2 are not a homogenous group and bars were probably moved from kiln to kiln, and new ones were made, as circumstances

required. These neatly-made bars are typical of the La Tène III derived kilns of this period (Elstow, Swan, 1984, 60, 63; Weekley, Jackson and Dix, 1986-7, 58; Camp Hill, Northampton, Shaw 1979, 23 (with references to other sites)).

#### Illustrated

All from Kiln 2, layer 3.

1. Edges pushed up in a number of places before firing. 7.5YR 4/1 reddish grey. 1871 gm.
2. Different from the others in that there are shallow holes at both ends 200-130 mm deep. One half is 2.5YR 6/4 dull orange and the other 2.5YR 5/2 greyish red, the two halves having received different treatment since breakage. 1871 gm.
3. Unlike the others, not square in section. Little shell visible on surface. 5YR 7/4 dull orange, 2155 gm.
4. 2.5YR 6/4 dull orange, 1021 gm. There are three other firebars like this, all with a great deal of shell temper present, suggesting a group made at the same time.

**Table 9.** Tiles and Bricks, Phases 4 - 6 (no. of fragments)

	Tegulae	Imbrices	Ridge Tiles	Box flue tiles	Hollow voussoirs	Bricks 24-40mm thick	Over 40mm thick	Misc and flat fragments up to 24mm thick
<b>Phase 4</b>								
Kiln 5	1005	332	2	153	29	97	79	454
Kiln 6	97	68		35	2	21	34	243
Pit 9	97	126		60	4	49	23	369
Pit 17	5	4		10				11
<b>Phase 5</b>								
Kiln 7	131	98		137	5	39	30	190
Pit 1	28	2	1	9		20	5	36
Pit 2	21	19		93	1	35	9	168
Pit 7	8	7		15		11	4	99
Pit 23	16	56	1	21	6	7	5	82
<b>Phase 6</b>								
Pit 3								9
Pit 8	93	60		53	1	15	1	332
Pit 10	21	5		8	1	6		65
Pit 12						1		3
Pit 14	13	13		3	1	1		46
Pit 15	9	3		14				46
Pit 16	17	19		1				105
Pit 18	4							
Pit 19	22	61		7				82
<b>Undifferentiated 4th century</b>								
Pit 13				4		2		8
Pit 24	11	12		11	1		1	55
Pit 25	7	5		3		1		16
Ditch 1	25	20		22		6		58

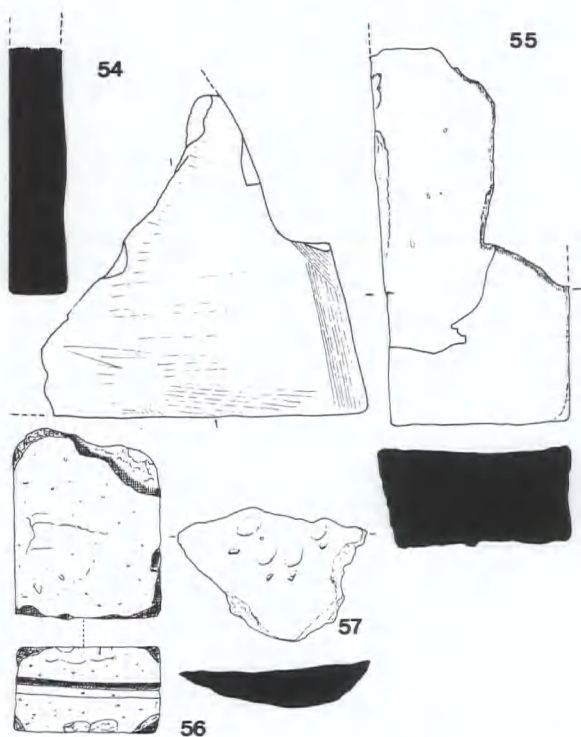


Fig 48. Tiles in shelly fabric (1:4).

#### *Other bar-like kiln furniture*

All from Kiln 2, layer 3.

5. Smoothed surfaces, well defined edges. Hole at widest end, 170 mm deep. 5YR 8/3 pale orange. 0.79 kg.
6. Roughly made, edges not sharp and sides not smooth. 5YR8/3 pale orange. 0.9 kg
7. Perhaps a broken version of 6, or the end of a much thicker firebar than 1-4. Roughly made like 6. 5YR 8/3 pale orange.

#### *Clay Plates*

8. Flat, irregular but still smoothed over upper surface, roughly rounded off edge. Underside very rough and irregular, many bits of chalk visible. ? rectangular or square, 255 mm one way. 5YR 8/3 pale orange. Four other similar fragments. For similar slabs, possibly used as liners, from Camp Hill, Northampton and elsewhere see Shaw 1979, 24. Kiln 2, layer 3.
9. Similar but thinner plate with curved edge. Carefully smoothed on one side, rough on other. 2.5YR 7/6 orange, 2.5YR light reddish grey blotch. Kiln 3, layer 3.
10. Perhaps a fragment of a thick plate pierced with holes. Smooth one side, rough the other. Examples also from Camp Hill, Northampton (Shaw 1979, 24). 2.5YR 6/4 dull orange. Gully 1.

From Kiln 2, layer 3, two pieces of clay, 600 x 500 mm and 300 x 230 mm, fired grey, smoothed and curved on one side, very irregular on

the other, as if pushed into crevices to fill them up and then smoothed over.

#### **Phase 3**

##### *Clay lumps*

11. Semi circular piece of clay, smooth underside, finger impressions on outside. Pit 20, layer 1.

##### *Firebars or similar*

12. Fragment of bar, rectangular in section, 650 x 360 mm, very abraded. 5YR 7/1 light brownish grey. Pit 6, layer 2.
13. Fragment of small bar, rectangular section, 200 x 140 mm, 5YR 7/6 orange, blotch 5YR 5/1 brownish grey. Pit 6, layer 1.
14. Short bar, 117 mm long, very crudely made. 5YR 7/4 dull orange. Kiln 9, layer 8.
15. Similar bar-like object, angled in middle. Crudely made. 2.5YR 6/1 reddish grey. Kiln 9, layer 8.

##### *Clay plates*

16. Fragment of plate pierced by holes, similar to 10. Ridges have formed where the clay has been pushed through. Abraded. 5YR6/1 brownish grey. Kiln 9, layer 3.
17. ? semi-circular clay plate, neatly made and smoothed off on upper surface, rough on underside. Flange along underside of curved edge. 2.5YR 7/6 orange. Kiln 9, layer 3.
18. Similar plate, 2.5YR 7/6 orange with blotch 2.5YR 6/2 greyish red. Area of Kiln 1.

19. Similar, but straight flanged edge. 2.5YR 7/2 light reddish grey. Kiln 1, layer 2. Nine similar flanged fragments from layer 2; two flat plate fragments from layer 1 and seven from layer 3. All are irregular but smoother one side than the other.
20. Plate with hole 2.5YR 7/2 light reddish grey. Kiln 1, layer 1.
21. Similar, Kiln 1, layer 3. Another from layer 2 plus two more from the area of Kiln 1.

#### *Other*

22. Flat, with lightly scored lines and straight, smoothed off edge. 5YR 7/4 dull orange, grey core; not abraded as other kiln furniture fragments are and therefore some other interpretation may be required. Kiln 9, layer 2.
23. Very thick, more so than any other pot found on the site. Carefully finished off on top and bottom, lightly scored on outside. Thick grey core, 5YR 6/4 dull orange. Not abraded. Pit 6, layer 3.

#### **Phase 4**

24. Complete, wheel thrown piece of kiln furniture in non-Harrold fabric 180 mm high, 115 mm internal diameter at top. 7.5YR6/1 brownish grey, three holes pierced through body just above base; one hole has partial plug of Harrold potting clay with shell, fired, 5YR 8/4 pale orange. Weight 1701 gm. Kiln 5, layer 2.
25. Similar, but only one hole near base. Height 190 mm, internal



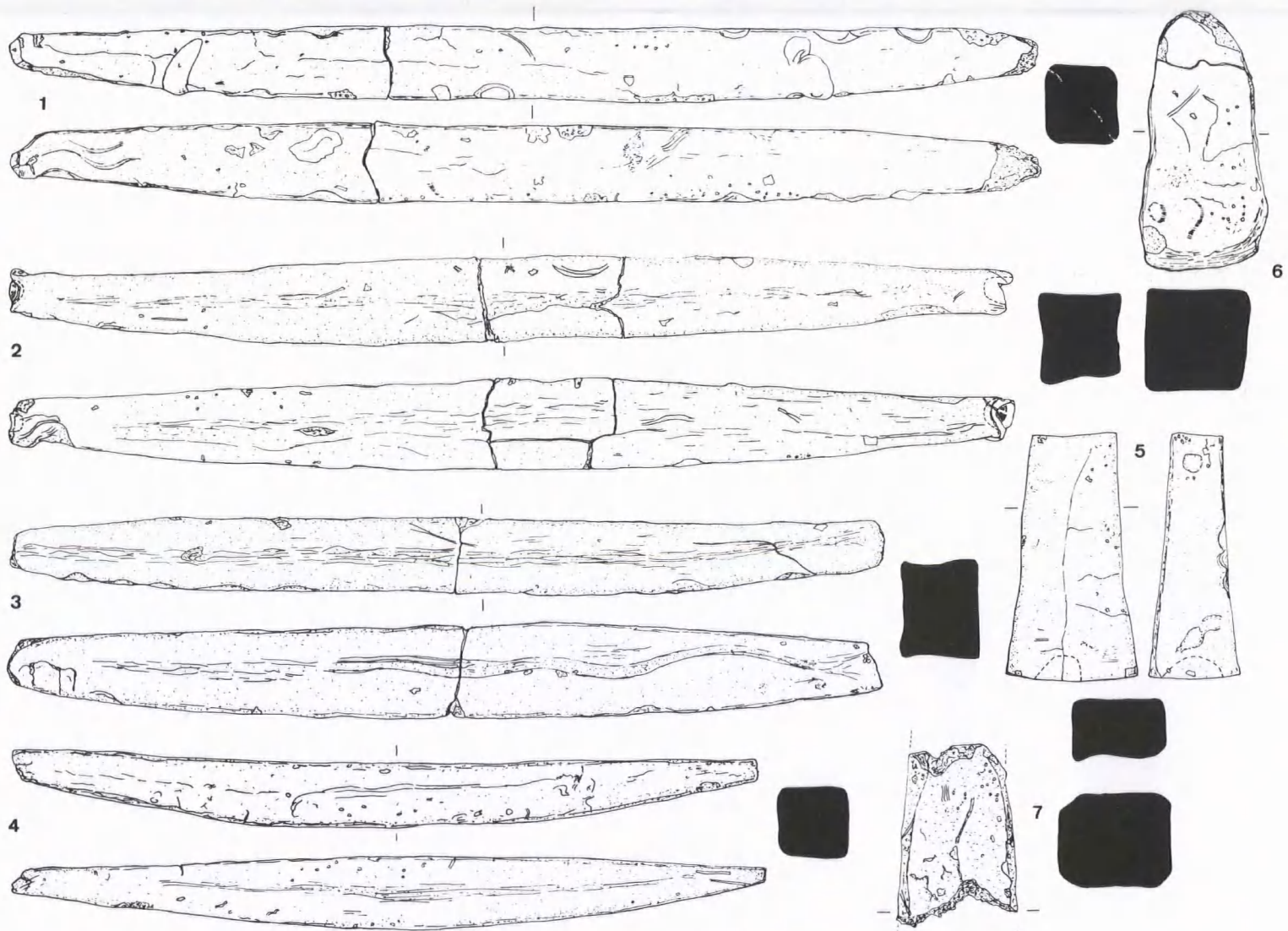


Fig 49. Kiln furniture, Phase 2 (1:4).



Fig 50. Kiln furniture and other clay objects (1:4).

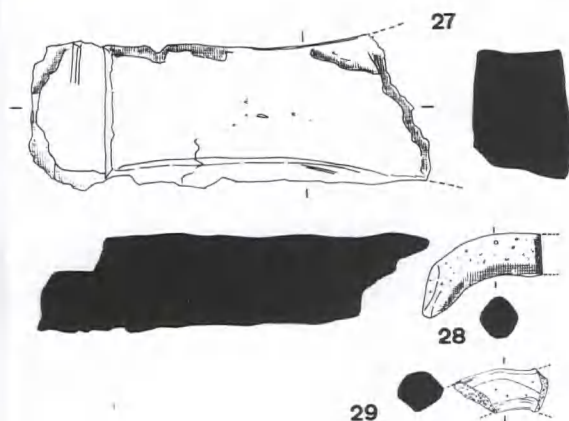


Fig 51. Clay objects (no 27, 1:2; nos 28, 29, 1:4)

diameter at top 112 mm. Weight 1814 gm. Kiln 5, layer 2.

Similar to kiln-props (which probably sat on the floor of the kiln and in this case supported saggars) found in 15th-16th century Cistercian ware kilns at Wrenthorpe, West Yorkshire (information from Ms Anna Slowikowski, Bedfordshire Archaeology Service). Despite the considerable difference in period these objects, which were presumably brought into the site from elsewhere, could well have fulfilled much the same function as supports at Harrold.

### Phase 5

26. Fragment of portable pedestal, 900 mm base radius. 5YR 7/4 dull orange. Pit 23, layer 6, probably residual. Again like Camp Hill, Northampton, Shaw 1979, 23; also Kettering, Foster 1986, 173, and Wellingborough, Foster *et al* 1977, 64.

Also a few shapeless lumps of burnt clay from Pit 2, layers 1 and 3, Pit 23, layers 1,3 and 4, Kiln 7, layer 2.

### Phase 6

27. Bar like object, stepped at the narrow end, sides curving away from this. Rough, assymetrical, abraded. 10R 6/6 reddish orange. Pit 10, layer 2.

### Surface finds

28. Small roll of clay, crudely fashioned. 10R 4/1 dark reddish grey/2.5YR 7/6 orange. Surface find, 1971.

29. Perhaps another, or a fragment of a handle. Roughly made, 2.5YR 6/6 orange, grey core. Trench 1.

### THE COINS

(identifications by Mr R A G Carson, Department

of Coins and Medals, British Museum).

### Stratified

#### Phase 5

1. Claudius II probably, 268-70 AD. Radiate coin, holed. Pit 7, layer 1.

#### Phase 6

2. Constantine I, 315-6 AD. Rev: Soli Invicto Comiti. Arles 62, RIC VII. Pit 10, layer 2.

3. Uncertain emperor, but late 4th century. Pit 12, layer 1.

4. Constantius II or Constans, 341-46 AD. Rev: two Victories. Mint uncertain, cf LRBC PI I, 140. Pit 14, layer 1.

5. Helena, 337-41 AD. Rev: Pax Publica. TRP, LRBC I, 119. Pit 14, layer 1

6. Uncertain emperor but c 390 AD. Rev: probably Victoria Auggg. Pit 14, layer 4.

7. Uncertain emperor but probably Theodosian, late 4th century. Pit 14, layer 5.

8. Constantius II, 330-35 AD. Rev: Gloria Exercitus, two standards. Mint uncertain, cf LRBC PI I, 60. Pit 15, layer 2.

9. Allectus, 293-96 AD. Rev: Virtus Aug, galley. QL(London). RIC 55. Pit 16, layer 1.

10. Valentinian I or Valens, 364-75 AD. Rev: Securitas Reipublicae. Mint uncertain, cf LRBC PI III, 527. Pit 16, layer 1.

11. Constantius II, 337-41 AD. Rev: Gloria Exercitus, one standard. TRP, LRBC I, 100. Pit 16, layer 4.

12. Constantius II, 337-41 AD. Rev: Gloria Exercitus, one standard. Mint uncertain, cf LRBC pl I, 1028. Pit 19, layer 1.

13. Valentinian I, 364-67 AD. Rev: Securitas Reipublicae. Constantinople, LRBC II, 481. Pit 19, layer 1.

14. Valens, 364-67 AD. Rev: Securitas Reipublicae. Constantinople, LRBC II, 480. Pit 19, layer 1.

15. Valens, 375-8 AD. Rev: Securitas Reipublicae. Constantinople, LRBC II, 535. Pit 19, layer 1.

16. Valentinian I or Valens, fragment, 364-75 AD. Rev: Gloria Romanorum. Mint uncertain, cf LRBC PI III, 338. Pit 19, layer 1.

17. Gratian, 367-75 AD. Rev: Gloria Novi Saeculi. Arles mint. Pit 19, layer 1.

18. Gratian, 367-75 AD. Rev probably: Gloria Novi Saeculi. Pit 19, layer 1.

19. Gratian, 367-75 AD. Rev: Gloria Novi Saeculi. Constantinople, LRBC II, 503. Pit 19, layer 1.

20. Arcadius probably, c 390 AD. Rev: Victoria Auggg. Mint uncertain, cf LRBC pl IV, 389. Pit 19, layer 1.

21. Uncertain emperor, but probably Theodosian, later 4th century. Pit 19, layer 1.

### From the topsoil (brief identifications only)

Trench 1 Constantius or Constans (two), 341-46 AD; Valentinian I or Valens, 364-75 AD; Theodosius I, c 390 AD; uncertain late 4th century.

Trench 6 Constantinian, uncertain emperor, 337-41 AD.

Trench 7 Tetricus 1, 270-73 AD; ? Constantine 1, 320-24 AD; Constantine II as Caesar, 330-35 AD; Constantius as Caesar, 335-37 AD; Valentinian 1, 364-75 AD; Valentinian 1 or Valens, 364-75 AD; Theodosius 1, c 390 AD; uncertain late 4th century (two); irregular Ae minim, uncertain prototype, late 4th century.

Trench 9 Irregular, Constantius II, c 355 AD; irregular Ae minim, imitation Fel Temp Reparatio type, 350-60 AD.

## General coin list

During the excavations various people brought in coins from the surface of the field for identification. The following list represents a summary of all coins known to have been found at this site up to December 1971. The dates indicate the dates of the coin issues represented.

Elagabalus	220	1
Postumus	260-68	1
Claudius II	268-270	1
Divus Claudius II	268-270	1
Tetricus 1	270-273	1
Tetricus II	270-273	2
Late 3rd century radiate imitations	c 275	5
Allectus	293-296	1
Constantine 1 as Augustus	315-335	5
Urbs Roma	330-335	2
Constantinopolis	324-30	2
Constantinopolis copies	330-340	2
Crispus	322-323	2
Constantine II as Caesar	330-335	7
Constans as Augustus	341-346	1
Constantius II as Caesar	330-337	6
Constantius II as Augustus	337-360	5
Helena	337-341	1
Copies, Fel Temp Reparatio	350-360	5
Uncertain Constantinian (a)	320-1	2
(b)	330-41	7
Valentinian 1	364-375	4
Valens	364-375	5
Valentinian 1 or Valens	364-375	10
Gratian	367-375	7
Theodosius 1	390-395	3
Arcadius	c 390-395	3
Honorius	395-402	1
Theodosian	c 390	13
'Late 4th century'		5
'4th century'		11
'3rd - 4th century'		7

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## SMALL FINDS (Figs 52 - 54)

### Copper Alloy

1. Tiny brooch, crudely repaired by having had a small iron pin fixed through the top of the bow. Surface find.
2. Brooch pin. Topsoil. Trench 9.
3. Possibly a thin brooch bow. Topsoil. Trench 7.
4. Bracelet. Pit 8, layer 1, Phase 6.

5. Snake head bracelet. Pit 17, layer 1, Phase 4.

6. Bracelet. Pit 15, layer 1, Phase 6.

7. Toilet implement. Kiln 9, layer 6, Phase 3.

8. Suspension device for a bowl? Pit 19, layer 5, Phase 6.

9. Stud. Surface find.

10. Possibly part of a mirror. One straight edge, polished surface, metal 2mm thick. Kiln 9, layer 3, Phase 3.

### Unillustrated

(a) Fragments of twisted wire, probably bits of bracelets; from Pit 9, layer 1, Phase 4; and Trench 7, topsoil.

(b) Small piece of sheet metal. Trench 7, topsoil.

(c) Small fragments of strip. Pit 16, layer 4, Phase 6.

(d) Small pieces of ring. Trench 6, topsoil.

(e) Rod, 8mm long. Trench 4, topsoil.

### Iron

11. Spearhead. Pit 16, layer 1, Phase 6.

12. Potter's tool. Trench 9, topsoil.

13. As 12. Trench 7, topsoil.

14. Another potter's tool? Trench 4, topsoil.

15. Wedge. Pit 16, layer 1, Phase 6.

16. Bit. Pit 9, layer 4, Phase 4.

17. Stylus. Pit 8, layer 4, Phase 6.

18. Uncertain. Trench 7, topsoil.

19. Bar with loop at end. Pit 2, layer 1, Phase 5.

20. Another. Pit 16, layer 1, Phase 6.

21. Heavy nail, rectangular head and shank. Trench 8, topsoil. Similar from Pit 14, layer 3, Phase 6 and Trench 1, topsoil.

22. Heavy nail, rectangular head, square shank. Pit 8, layer 1, Phase 6 (two more from layer 1). A common type. Similar from Phase 3 (Kiln 9, layer 2; Pit 6, layer 2; Pit 21, layer 2; Pit 22, layer 3); from Phase 4, Pit 9, layer 1; from Phase 5, Kiln 7, layer 1, Pit 2, layer 1 (two), Pit 7, layers 1 and 2; from Phase 6, Pit 19, layer 5, Pit 14, layer 3. Also Ditch 1, layer 1 (4th century) and topsoil, Trenches 1 and 8.

23. Medium nail, round head, square shank. Pit 17, layer 1, Phase 4 (also another from this layer). Another common type: from Phase 4, Kiln 6, layer 1; from Phase 5, Pit 7, layers 1 and 2; from Phase 6, Pit 8, layer 1 (two), Pit 14, layer 5, Pit 16, layer 3; also topsoil, Trenches 1 and 4.

24. Medium nail, rectangular head and shank. Trench 8, topsoil. Another from Pit 15, layer 2, Phase 6.

25. Nail, large round head. Pit 9, layer 1, Phase 4.

26. Short nail, round head, square shank. Pit 8, layer 4, Phase 6.

27. Short nail, rectangular head, square shank. Trench 9, topsoil. Also from Pit 21, layer 2, Phase 3; and Kiln 6, layer 1, and Pit 17, layer 1, Phase 4; and Trench 8, topsoil.

28. Short nail, round head, square shank. Trench 1, topsoil.

29. Hob nail. Trench 6, topsoil.

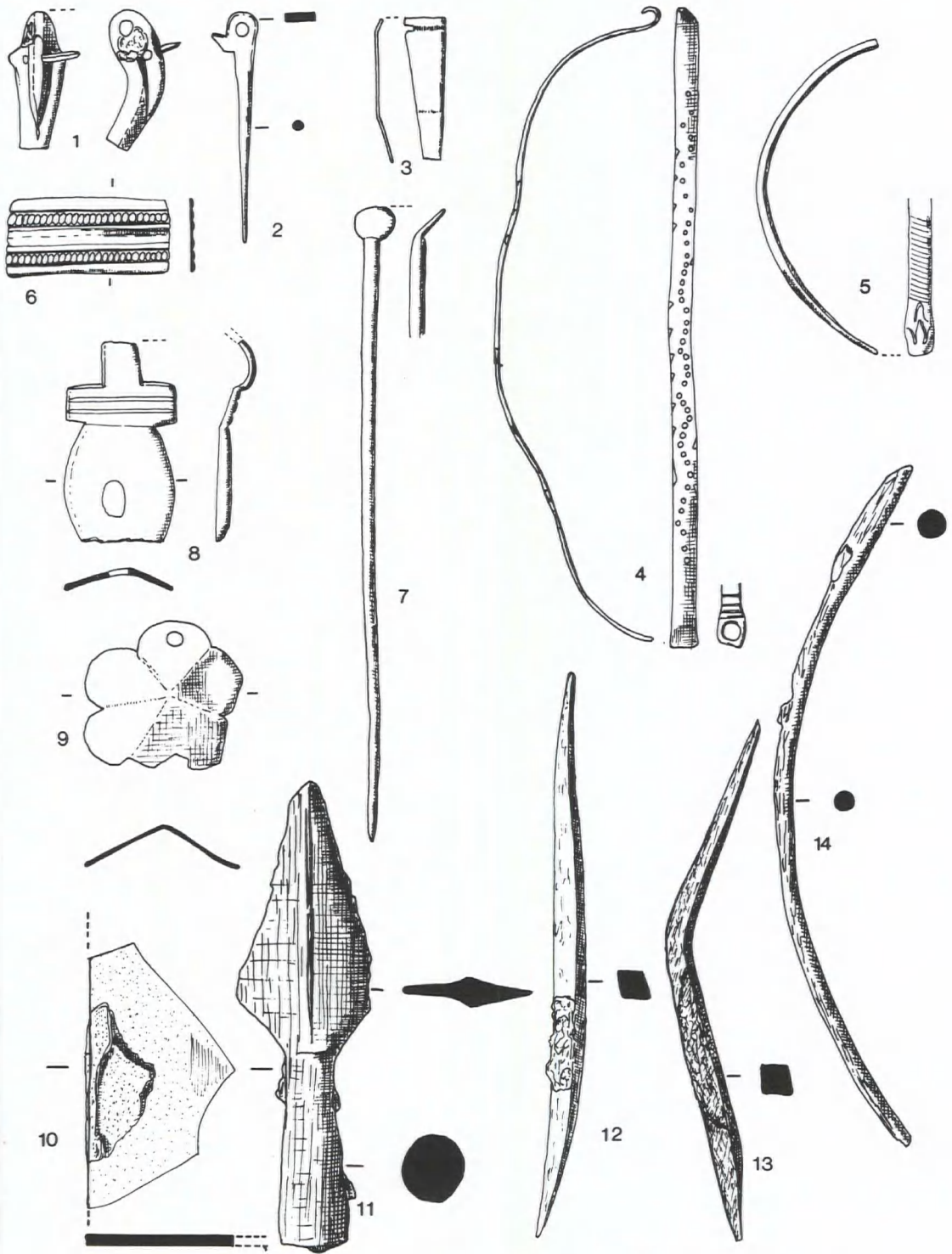


Fig 52. Small finds. Nos 1-10, copper alloy; nos 11-14, iron. All 1:1 except no 11, which is 1:2.



Fig 53. Small finds. Nos 15-29, iron; 30-33, glass; 34, bone; 35-36, tile; 37, chalk. Nos 17, 19, 21-24, 27, 30-32, 35-36, 1:2; remainder, 1:1.

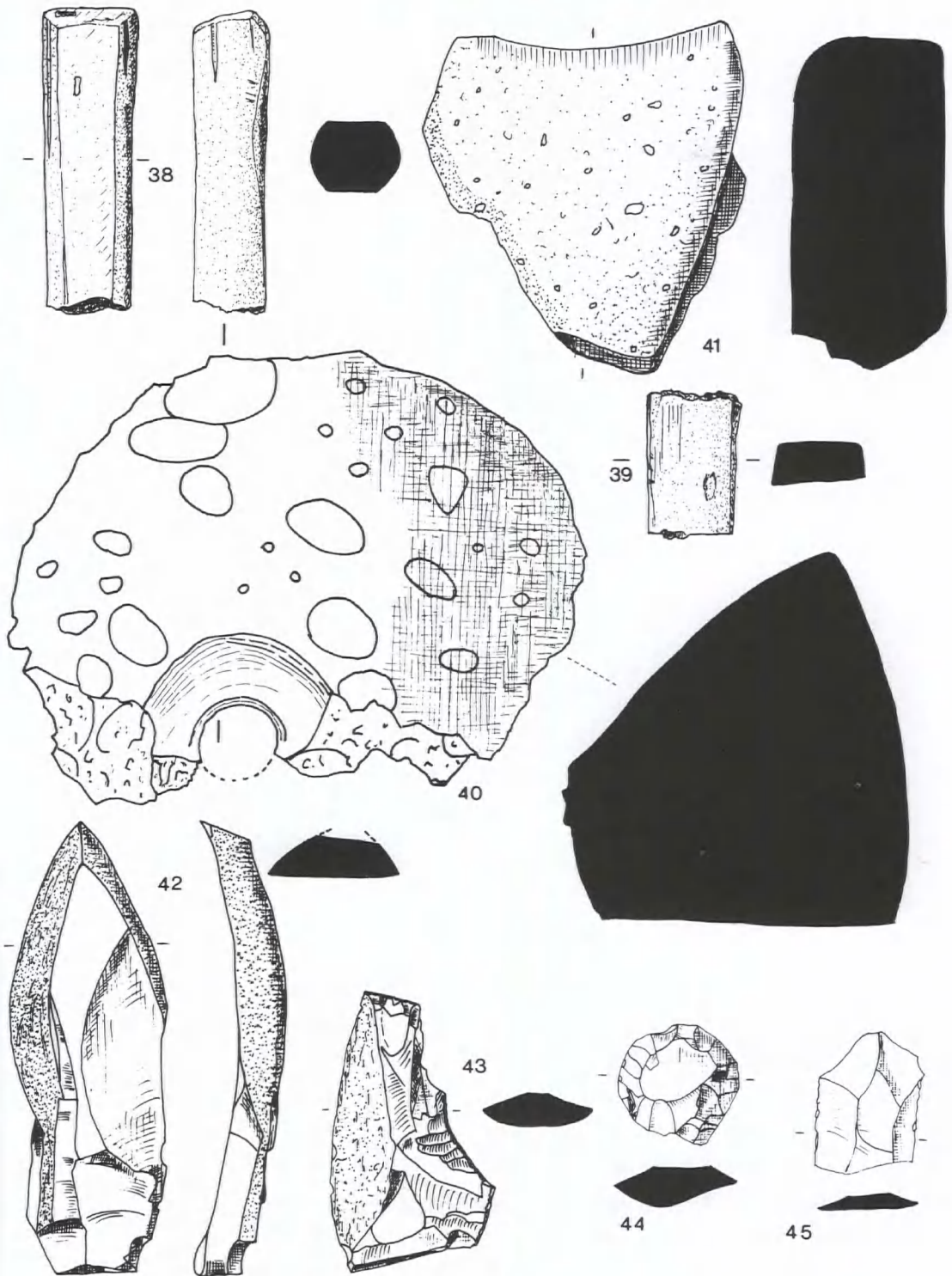


Fig 54. Small finds. Nos 38-41, stone (1:2); nos 42-45, flint (1:1).

## Glass

30. Upper part of square bottle, blue green glass. Pit 17, layer 1, Phase 4.
31. Handle, from possibly the same bottle. Pit 17, layer 1, Phase 4.
32. Rim, pale green glass. Trench 4, topsoil.
33. Bead, green glass. Trench 7, topsoil.

## Unillustrated

- (a) Pale green glass fragment. Pit 22, layer 3, Phase 3.
- (b) Greenish glass fragment. Pit 9, layer 9, Phase 4.
- (c) Flaky greenish glass fragment. Pit 16, layer 1, Phase 6.
- (d) Pale green glass fragment. Pit 19, layer 1, Phase 6.

## Bone

34. Pin. Trench 8, topsoil.

## Clay

35. Large quoit cut from tile. Kiln 5, layer 1.
36. Smaller quoit, also from a tile. Ditch 1, layer 3 (4th century). Another of similar size from this context has scoring on one side and has been cut from a flue tile.

## Stone

37. Spindle whorl of chalk. Trench 9, topsoil.
38. Hone. Pit 7, layer 1, Phase 5. Mr S E Ellis of the British Museum (Natural History) writes: Fine-grained buff-grey sandy or silty limestone with visible shell fragments, showing lustre-mottling (due to large plates of calcite including smaller quartz-grains). It contains abundant organic remains, mainly echinoderm plates and also some ostracod tests. It is probably from the 'Kentish Rag' (sandy limestone of the Hythe Beds) of East Kent. This is known to have been worked and exported from Kent in Roman times.
39. Hone. Pit 2, layer 1, Phase 5. Mr Ellis writes: Laminated buff sandy limestone. This resembles the last excepting in being of slightly coarser grain and in not showing lustre mottling because the calcite is about as fine-grained as the quartz. It also is probably from the Kentish Rag.
40. Quern, puddingstone. Pit 7, layer 1, Phase 5.
41. Quern, fragment, millstone grit. Pit 2, layer 4, Phase 5.

## Flint

42. Core rejuvenation flake. Pit 10, layer 2, Phase 6.
43. Scraper. Pit 15, layer 2, Phase 6.
44. Circular scraper. Surface find.
45. Flake. Kiln 5, layer 1, Phase 4.

Other flint flakes came from: Phase 1, Pit 11, 4; Phase 3, Pit 6, layer 4, 1; Pit 20, layer 1, 1; Phase 4, Pit 9, layer 9, 1; Phase 5, Pit 2, layer 6, 1; Phase 6, Pit 10, layer 1, 1; layer 2, 2; Pit 15, layer 2, 1. Also from the topsoil, Trench 1, 3; Trench 6, 1; Trench 9, 1; and surface finds from the area of the site

generally, 8.

## ANIMAL BONES

Cristine Orr

Most of the features contained animal bones; 945 fragments were identified. They were mostly of cow and sheep/goat (more of cow) and all were very fragmentary. There were a few bones of pig, horse, deer, dog, hare and chicken. Some of the bones were chopped, chewed or burnt. A list of the identifications has been deposited with the finds.

## GEOLOGY

R G Clements

Specimens of shell-gritted pottery from the site were submitted to Dr R G Clements of the Department of Geology, University of Leicester, together with some of the yellow sandy marl and grey mudstone which seemed to have been the objective of the large pits so commonly encountered on the site.

The aim was to establish whether the material from which the pottery was made was indeed the material from the pits; and the geological identification of the material. Dr Clements report is as follows.

### 1. The Sherds

Three specimens were provided:-

**Specimen 1** (from Pit 25, layer 1) contained quite abundant indeterminate bivalve(?) shell fragments; scattered terebratulid shell fragments; quartz sand grains (common); fine-grained structureless limestone fragments; small nodular ferruginous (brown, limonitic) lumps - after pyrite(?).

**Specimen 2** (from Pit 25, layer 1) contained regular echinoid spines (few), with open stereom; ophiuroid (?) ossicle (one), with open stereom; shell fragments, bivalve with foliate (?) structure - oysters (?) (abundant); shell fragments, ribbed bivalve (?) (few); terebratulid brachiopod shell fragments (few), punctae open; limestone fragments, fine-grained, with irregular cavities; scattered quartz sand grains.

**Specimen 3** (from Pit 25, Layer 4) contained abundant indeterminate bivalve shell fragments; fine-grained limestone lumps/fragments (common); terebratulid brachiopod shell fragments (few); quartz sand grains (common); ophiuroid (?) ossicle



(one), with open stereom; ribbed shell fragment, indeterminate (one).

The three sherds are not identical (differing in colour, proportions of components, etc.) but the mostly calcareous, fragmentary, components in each are sufficiently similar to all have come from the same single or multiple geological source.

## 2. The Samples

(a) A single sample of yellow sandy marl was provided, from Pit 1, collected from immediately above the grey mudstone, and beneath a limestone unit. The material consisted of a creamy buff shelly marl with small limestone fragments. The sample was prepared using hydrogen peroxide and sodium carbonate and wet sieved to greater than or equal to 850 microns, and between 850 and 125 microns. The resulting residues were dried and examined under a binocular microscope. The following components were found:

**Rock fragments:** fine-grained (micritic) limestone clasts/fragments; fine-grained secondary (?) granular limestone lumps, with irregular cavities; brownish, essentially non-calcareous fragments, sideritic (?), of uncertain nature.

**Fossils:** ostracods (common); Foraminifera (common); Bivalvia, shell fragments including: oysters, most abundant, *Nanogyra* (?) sp.; various ornamented (ribbed) pteriomorphs, most abundant of which are *Meleagrinnella* cf. *echinata* (Smith); Echinodermata - all show good stereom structure, with spaces unfilled: echinoids - regular, spines and plates (common); ophiuroids (cf. *Ophiomusium* sp.) - mostly lateral shields, some vertebrae (very common); stellaroid, one *Metopaster*-like marginal; holothurian - one sclerite; Brachiopoda: terebratulid shell fragments, with open punctae (common); Vertebrata: scattered fish scales and a vertebral centrum; serpulid worm tubes (few).

The nature of the limestone clasts, and of the main fragmentary fossils, is consistent with this being the source of the material in the sherds; note in particular the abundant oyster fragments, and the occurrence of echinoderm and terebratulid fragments (both the latter being distinctly well-preserved).

**Geological age of this sample** (and of the material used in the sherds)

The material is certainly not from the Upper Estuarine Series. The occurrence of terebratulids,

ophiuroids, and serpulids (and probably the Foraminifera) precludes this, as does the nature of the oysters (*Nanogyra* (?) sp. rather than *Praeexogyra* sp.)

With such fragmentary material (and the accompanying uncertainty of the identifications), it is difficult to be certain as to the geological age of the material. (Identification of the Foraminifera and of the Ostracoda *might* provide further information). However, if the identification of *Meleagrinnella echinata* (Smith) is correct, then this would almost certainly make the material Cornbrash (Upper Bathonian/Lower Callovian, Middle Jurassic) (and thus the reportedly underlying grey mudstone, the Blisworth Clay). The rest of the fauna fits with this. If this material had been from the basal Great Oolite (= Blisworth) Limestone, resting on what would then have been topmost Upper Estuarine Series mudstone, I would have expected *Praeexogyra* not *Nanogyra* (?), and rhynchonellid brachiopods, not terebratulids. Douglas and Arkell (1932, *Quarterly Journal of the Geological Society of London*, vol. 88, p 112-170) record Cornbrash in two pits three-quarters of a mile north of Harrold.

In short, the material most likely (but *not* certainly) came from the Cornbrash.

(b) A sample of mudstone, medium dark greyish brown, resinous and mottled, from the same Pit. It has a blocky but very fractured appearance, and contains much fusain (charcoal) in blocks up to 20mm in maximum dimension scattered throughout. There are many pale, creamy, irregular veins and stringers (one or two millimetres wide) cutting the rock. It has a distinctly greasy feel, and is non-calcareous. No shelly or other fossils were seen.

The colour, greasy feel, and other characters of the rock are consistent with it being Blisworth Clay, and not with it being from the Upper Estuarine Series. This adds independent support to the conclusion reached on the basis of the study of the sample of sandy marl described above.

## PETROLOGICAL REPORT ON CERAMICS FROM HARROLD

Ann Woods

Twelve sherds were submitted for examination in thin section. Also two clay samples from the site were made into briquettes, fired to 750° C examined in thin section.



Plate 13. Photomicrograph of Pottery Sample 4, a typical example of Group 1 fabric. The two rounded lumps on the left are clay pellets similar to Group 5. x20, XPL.

The sherds and clay samples were:

- Sample 1: sherd from Kiln 2, layer 3, Phase 2
- Sample 2: sherd from Kiln 2, layer 3, Phase 2
- Sample 3: sherd from Kiln 2, layer 3, Phase 2
- Sample 4: sherd from Pit 23, layer 3, Phase 5
- Sample 5: sherd from Kiln 5, layer 1, Phase 4
- Sample 6: tile fragment from Kiln 5, layer 1, Phase 4
- Sample 7: sherd from Kiln 5, layer 1, Phase 4
- Sample 8: sherd from Pit 20, layer 1, Phase 3
- Sample 9: sherd from Kiln 5, layer 1, Phase 4
- Sample 10: yellow marl, Pit 1; Clay Sample 1
- Sample 11: sherd from Pit 23, layer 3, Phase 5
- Sample 12: sherd from Gully 1, Phase 2
- Sample 13: sherd from Pit 11, layer 2, Phase 1
- Sample 14: blue mudstone, Pit 1; Clay Sample 2

Examination of the thin sections under a polarizing microscope enabled the fabrics to be divided into 5 main groups:

**GROUP 1 : FOSSIL MATERIAL:**

Samples 2-10

This fabric contains *c* 25-30% fossil material (shell, echinoderm and ostracod fragments etc., see geological report above) up to 5 mm in size in an optically active matrix. Scattered angular quartz grains and very occasional rounded micritized

limestone fragments, up to 3 mm in size, are also present. Rounded clay pellets, identical in composition to Group 5 (No 14, Clay Sample 2, blue mudstone) are also a feature of the fabric (see PI 13).

Clay Sample 1 (No 10, yellow marl) is virtually identical to the other members of this group, but its inclusion content is at the top of the range (30%), making it slightly coarser than most members of the group.

**GROUP 1a: FOSSIL MATERIAL AND CRYSTALLINE CALCITE:**

Sample 11 (PI 14)

This fabric differs only from Group 1 in that it contains *c* 1-2% crystalline calcite.

**GROUP 2: FOSSIL MATERIAL AND GROG:**

Sample 1 (PI 15)

The matrix of this fabric is similar to that of the Group 1 samples but contains more small quartz grains. Fossil fragments and shelly grog (max. 2 mm in size) constitute *c* 15% of the fabric.

**GROUP 3: GROG:**

Sample 12 (PI 16)

This fabric contains grog and quartz in an optically active, micaceous matrix which also exhibits abundant small (0.1 mm) quartz. The grog, which is similar in composition to the surrounding matrix,



Plate 14. Photomicrograph of Pottery Sample 11. x20, XPL. C denotes calcitic inclusions.

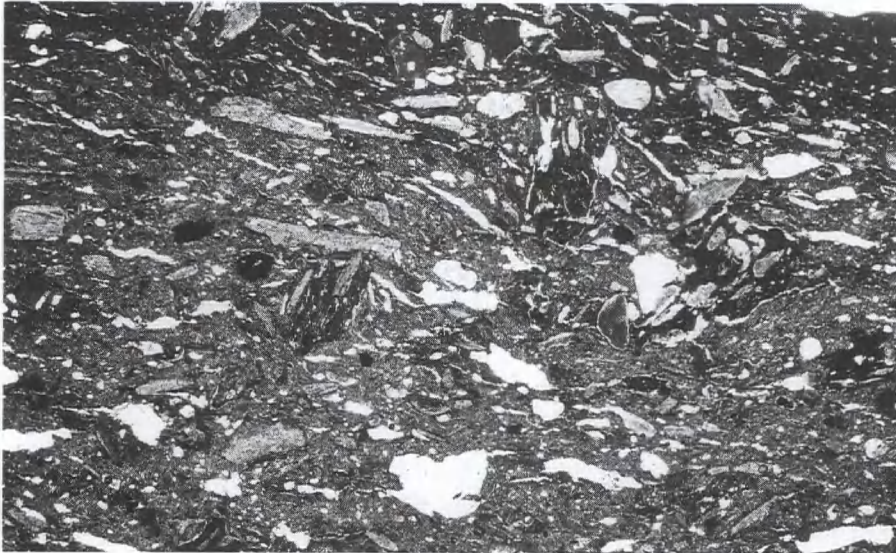


Plate 15. Photomicrograph of Pottery Sample 1. Group 2. x20, PPL. Three examples of shelly grog can be seen in the centre and to the right of the centre.

occurs up to 1.5 mm in length and constitutes *c* 10% of the fabric. The quartz grains are predominantly subrounded and rounded and range between 0.4 and 0.8 mm. A few limestone fragments and feldspars, in the same size range, are also present. These quartz etc. inclusions give the fabric a bimodal appearance and, although not plentiful (*c* 7%), are likely to have been added along with the grog. A few lumps of fine clay, similar to 14 (Clay Sample 2), are also present. A number of voids, some containing traces of carbonized organic matter, are also present, indicating the addition of vegetal material.

#### GROUP 4: CALCAREOUS INCLUSIONS AND GROG

##### Sample 13 (PI 17)

This fabric contains limestone and fossil fragments and some grog in an optically active, slightly micaceous matrix which also exhibits some small (0.5mm) quartz and (?) glauconite fragments. The usual range of fossil fragments is found, constituting *c* 7% of the fabric; the grog, most of which contains shell fragments, makes up a further 5%. Several larger quartz grains, some of which are polycrystalline, are also present, as are some large ferruginous clay pellets. The largest inclusion is

1.25 mm in length but most are smaller (mean: 0.6 mm) as is consistent with a relatively thin-walled, wheel-thrown vessel.

#### GROUP 5: NO INCLUSIONS:

##### Sample 14 (PI 18)

This clay sample was dark black in colour owing to a high organic content which took a lengthy period to burn out at 750° C; several large lumps of carbonized material were also present. The sample fired to a buff/pale yellow colour with occasional ferruginous streaks and concretions and looks 'fibrous' when viewed in thin section under crossed polars. There are almost no inclusions, though very occasional small (0.1 mm) quartz grains can be seen (*c* 1/cm<sup>2</sup>). The sample is identical with the rounded clay lumps found in some of the sherds (eg No. 4) and illustrated in PI 13.

#### TECHNOLOGY OF THE ASSEMBLAGE

Tangential thin sections were made of Samples 2 and 3 (both large jars of Phase 2) in order to attempt to determine if the vessels were hand-made or wheel-thrown. Unfortunately, no positive evidence was forthcoming for either vessel as the high inclusion content probably prevented the potentially

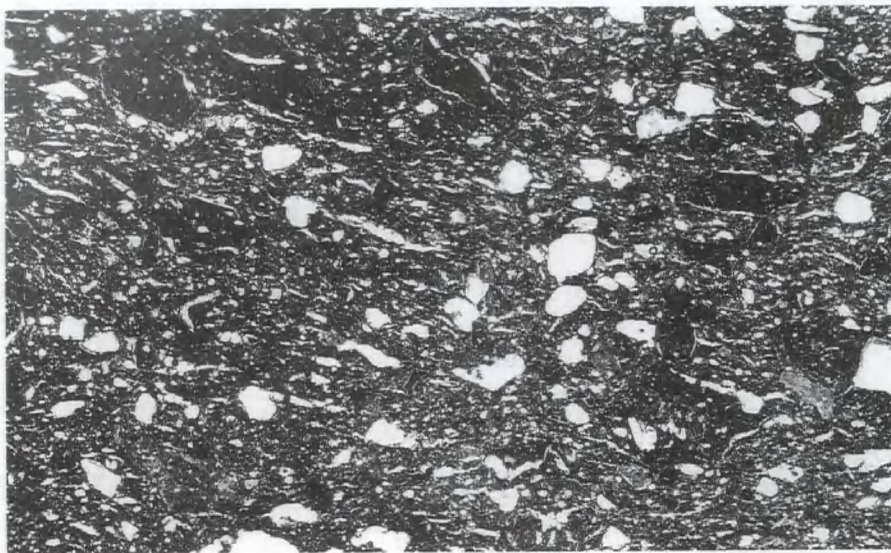


Plate 16. Photomicrograph of Pottery Sample 12. Group 3. x20, PPL. Many of the grog fragments present are darker than the matrix and are surrounded by shrinkage voids.

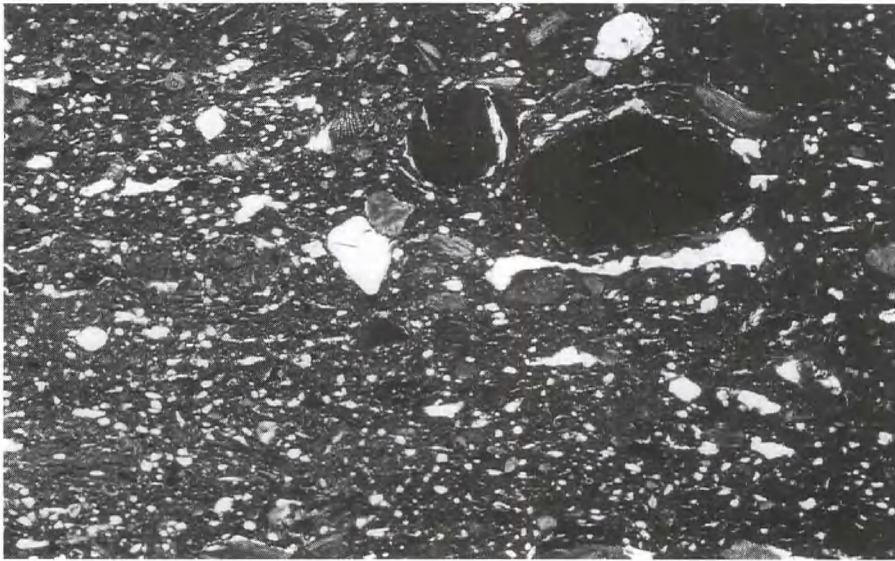


Plate 17. Photomicrograph of Pottery Sample 13. Group 4. x20, PPL. The finest fabric. Two ferruginous clay pellets are illustrated.

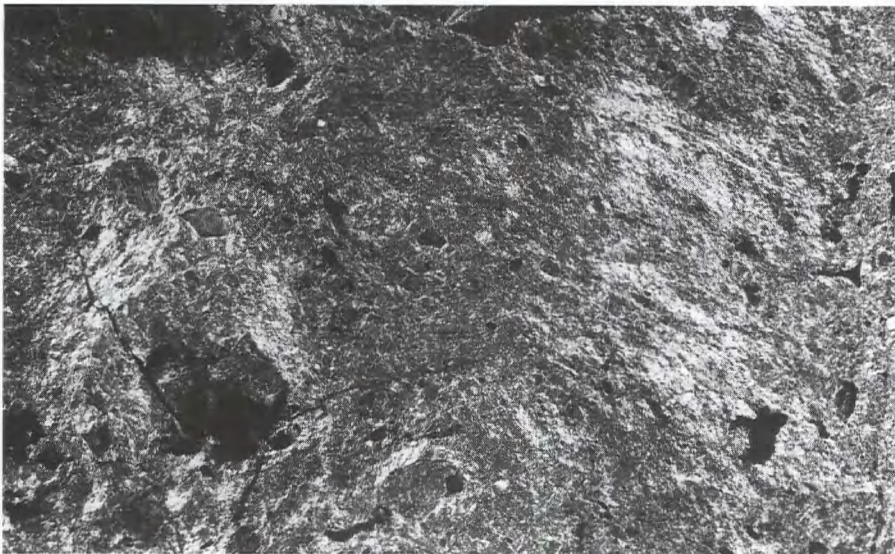


Plate 18. Photomicrograph of Pottery Clay Sample 2, blue mudstone. x20, PPL.

useful shell and other elongated inclusions from taking up a diagnostic alignment.

In the dry state, Clay Sample 1 (10) was a yellow colour with grey streaks and turned to an orangey red, similar to Samples 8 and 9, when fired to 750°. The high calcareous content resulted in post-firing disintegration of the briquettes as a result of lime blowing; as there is no trace of salt in any of the sherds examined, the use of a low firing temperature is indicated. When wet, the clay was extremely plastic and sticky: no attempt was made to throw a vessel on the wheel but the clay was virtually unworkable by hand, suggesting that some other method rather than the usual way of reducing plasticity (ie addition of non-clay opening materials or temper) must have been employed. The presence of lumps similar to Clay Sample 2 (14) may suggest that, if Clay Sample 1 were being used for the vessels, it may have been 'diluted' by mixing with the naturally extremely clean Clay Sample 2. The lighter fired colour of some of the vessels (eg Nos 4, 6, 11) may be a result of such mixing. Element analysis may be more useful than thin sections in solving this problem.

## DISCUSSION

Pottery in the Belgic style was current in the Ouse valley during the first half of the first century AD and there is evidence for its manufacture there (Simco 1973; for early pottery manufacture at Bromham, Tilson 1973; possibly at Elstow, Dring 1971). Whether the earliest pottery at Harrold was pre- or post-Conquest in date is impossible to say.

The earliest pottery kilns at Harrold, however, come after the Roman conquest. These kilns take their place among the increasing number of kilns of La Tène III type making Belgic pottery now known in the Nene and Ouse valleys in the mid- to late 1st century. No doubt the advance of the Roman army and its requirements for good quality kitchen wares had something to do with the inception of these kiln sites and for the developing technology they represented (Swan, 1984, 57), but expanding opportunities for trade within an increasingly monetized economy, in an area known now to have carried a substantial population, is likely to have been an important factor also.

Most of the kiln sites which began now did not outlast the turn of the 1st and 2nd centuries, but Harrold survived to become a significant regional manufacturing centre for coarse kitchen wares during the 2nd century, establishing a definite place for itself in the valley of the Ouse and its

tributaries. The reason for the success of the Harrold industry would appear to reside in its location at a place where excellent raw material could be easily obtained, linked with its position in the Ouse valley close to the river, with its possibilities for water transport (and also relatively easy transport by land along the line of the river valley). The Roman road running northwards to Ircchester enabled its products to find a market there, although in general the penetration of Harrold wares in the Upper Nene valley was restricted by the presence there of a thriving coarse pottery industry based on sandy wares (Marney, 1989, 59). Also the proximity of the Harrold site to the ridge separating the valleys of the Ouse and Nene, which is covered with Oxford clay and carries substantial areas of woodland now (Fig 1), is known to have done so in the Middle Ages (Morris, 1977, 53.13, 32.4 for woodland at Harrold and Odell at Domesday), and can reasonably be presumed to have been wooded during the Roman period, would also have been a significant factor, in that fuel for the kilns would have been readily available.

The middle years of the 3rd century saw the collapse of the Upper Nene valley coarse ware industries. Yet once more Harrold survived. A continuing demand for its particular products, good serviceable kitchen ware, is not enough to account for this. Its advantages of location in relation to the communication pattern, raw material and fuel remained; but it is possible to suggest a further reason, namely, the technological adaptability of the potters. It may well be that in the last quarter of the 2nd century the Harrold potters discovered that it was possible to fire their pottery in very simple single-chambered kilns of the sort which had been widely used to the south and east of them for over a century. Once the process had been mastered, then it may well have been possible to fire large numbers of pots relatively quickly, with consequent savings in costs. A general context for this changeover in technology may be sought in the behaviour of the pottery market in this region towards the end of the second century. Studies of the relative frequency with which different pottery fabrics occur in selected groups of various dates in the Milton Keynes area show that in the later 2nd century shelly pottery is the predominant fabric (eg Marney, 1989, Pie charts 6 and 7). But around the turn of the century the proportions of soft pink grogged and sandy wares start to encroach on the lead hitherto held by the shell-tempered wares (*ibid*, Pie charts 8, 9, 10). Maybe therefore the pressures of the

market forced the Harrold potters to turn to new methods in order to survive.

If this was indeed the case then they were successful and production went on into the 5th century, on the evidence of stratified coins in clay pits, dateable pottery traded into the site, and parallels in form between Harrold wares and shelly wares from well-known pottery groups of late 4th - early 5th century date (Perrin 1981 for references to such). It is highly likely that it was in the second half of the 4th century that Harrold saw its most successful phase as a pottery production centre - note for example the large number of clay pits of period 6, which appeared in almost all the trenches opened. Many sites of this period, in a zone which runs from East Anglia to the Severn estuary, and which extends in the south not much beyond the latitude of London and in the north roughly along the latitude of the Wash (see the preliminary distribution maps in Sanders, 1973), show a significantly increased proportion of shelly pottery in a restricted range of forms, mainly rilled cooking pots and flanged bowls; an unknown but probably quite significant proportion of these vessels would have come from Harrold. There would seem to have been a link between the increased success enjoyed by the shelly pottery at this time and the decline in the export of black-burnished cooking pottery from the Dorset factories in the late 4th century, which led to the growth of potteries turning out copies of BB1 locally (Williams, 1977, 206), on perhaps too small a scale to entirely meet demand.

Harrold did not stand alone as a producer of shelly wares, but since so little is known about other varieties of shelly pottery and other kiln sites it is as yet impossible to say very much about the share of the market it had throughout the Roman period. There were certainly other production centres making the same range of forms as Harrold in the 2nd century; at Towcester in Northamptonshire a curious rather crude shelly fabric with a prickly surface supplied cooking pots in the 2nd century (Brown and Woodfield, 1983, 79); in the Lower Nene valley jars in a dark grey-buff fabric with large plate-like pieces of shell visible on the surface, quite unlike Harrold, appear in the early 2nd century (for a kiln site, Howe *et al* 1980, 10; and for other shell-gritted manufacturing sites in this general area, Perrin and Webster, 1990). A preliminary spectrographic analysis of fragments of this fabric by Dr F A Hart of Queen Mary College, University of London, using plasma emission techniques, shows that they had a totally different elemental

composition from those similarly analysed from the Harrold site. In the late Roman period also there were other centres at work. At Towcester once more there were plenty of fragments of rilled bowls and cooking pots in a grey-black fabric with abundant large pieces of shell visible (Brown and Woodfield 1983, 79), unlike Harrold ware and again shown by spectrographic analysis to have come from a different source. There may well be parallels to be drawn between this Roman shell-gritted pottery industry and the manufacture of the late Saxon and medieval St Neots ware, which also appears to have been made in a number of different places in a relatively restricted number of forms, in much the same general area and from the same raw materials as the Roman pottery.

As with the products of the black-burnished industries, several of the vessel forms produced at Harrold show how a process of continuous typological evolution can be traced from an early period to the end of the industry. The rilled triangular-rimmed cooking pot of the early 5th century can be seen to have evolved from the pot with a simple outcurved rim of the late 3rd and early 4th centuries; this had antecedents in the later 2nd century and the type ultimately derived from the smaller jars of the 1st century. Similarly the shell-gritted version of the flanged bowl of late Roman times owed much in its development to the carinated reeded-rim bowl of the 2nd century. Rilling was a feature of pottery making at Harrold for 350 years. But as with technology, the Harrold potters were quite quick to take up new ideas. The reeded rim bowl is an example - Fig 28, 131 is a perfect example of the type. Similarly the late Roman form of the black-burnished cooking pot with a cavetto rim had its influence on the form of the late shell-gritted cooking pot, and a few direct copies can be found (Fig 37, 292). Other examples of pot types taken into the Harrold repertoire from other traditions would be the wide-mouthed bowl (Fig 28, 145), the dog dish (eg Fig 33, 231), lids (Fig 28, 137-141), and the copying of the scroll-like decoration on East Midlands Burnished ware (Fig 36, 272-5).

Harrold is relatively unusual in that pottery and tiles were made side by side on the same site. The overall thread of tradition and consistency of design which runs right through the Harrold pottery suggests the continuity of pottery manufacture there. The same cannot really be said of the manufacture of tiles. The present excavations suggest two phases of tile manufacture, the 2nd

century and the late 3rd - early 4th centuries (this may, however, merely reflect the small proportion of the site actually dug). Shelly tiles are common in the Ouse and Nene valleys (Zeepvat, 1987) but the present state of knowledge does not as yet allow a refined chronology for the use of this fabric in relation to periods of capital investment in buildings, or whether other production centres were involved. The tiles themselves perhaps hint at a degree of disjointedness in the history of tile manufacture at Harrold - the variety of scoring patterns on the flue tiles for example, or the contrast between the crisply made voussoir tiles found in Kiln 5 compared with the smaller but also much cruder ones from Kiln 7 (Figs 44-45); a reflection maybe of the manufacture of particular types of tile for particular jobs at various times. Whether or not the tiles were made by itinerant tilers, or by possibly the same people who were responsible for the pottery, is uncertain, but if Kiln 7 was indeed a tile kiln, then the fact that it worked on the same principle as the pottery kilns would favour the latter view for the 4th century - evidence once more for the adaptability and enterprise of the Harrold potters.

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