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THE ALICE HOLT/ FARNHAM ROMAN POTTERY INDUSTRY

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Introduction

The Alice Holt/Farnham potters produced coarse, grey, kitchen wares on the Hampshire–Surrey border along the upper reaches of the headwater streams of the river Wey. The production centres so far known were at Farnham on the northern Wey, at Malthouse Farm, Kingsley, at Alice Holt and Baigents Bridge, Headley on the southern Wey, and at Tilford at the confluence of the two streams. Large-scale production took place from about AD 60 to the 5th century, but this may have been preceded by works on a smaller scale in the Iron Age and Claudian periods. Production reached its peak during the mid-late 4th century when this industry dominated the London market and others in the south-east.

The first group of kilns to be recognized was that at the southern end of Alice Holt. A Farnham antiquary, W L Long, writing in 1839 described them thus:

> 'It seems that, all along this part of the forest, certain knolls exist, easily distinguished by the black colour of the earth of which they are composed, resulting from the charcoal and ashes, among which such an immense quantity of broken terra-cotta is to be found that waggons might be easily laden with it' (Long 1839).

The turnpike from Farnham to Petersfield, constructed in 1823 (now the A325) had cut a swathe through the centre of this kiln group as Long commented:

> 'The ditches and banks of the turnpike road on each side, for four hundred yards together, beginning a little below Mr Lemming's house (Forest Lodge), display the black burnt earth and fragments of pottery in profusion.'

In this communication to the Society of Antiquaries there was a discussion as to whether the sherds were Saxon, Roman, or 'British', but after this brief episode Alice Holt slid back into obscurity.

If a brief note on a somewhat doubtful Roman kiln floored with tile, discovered and destroyed at a house called Whitmead near Tilford in 1893 (Lasham 1895) is excluded, archaeological activities associated with this industry during the earlier part of this century were almost entirely associated with the Farnham group of kilns and brought about by house building and intensive gravel and sand removal operations on the south side of that town.

In 1905 Harold Falkner, a local architect, excavated a kiln at a house called Great Mavins, producing a brief but very good report for the time with excellent sections (Falkner 1907). This kiln was of the double-flued updraught type, as are all those that have been published subsequently.

Gravel digging was responsible for the destruction of several kilns between the wars at Farnham. Major Wade excavated one at Snailslynch in 1926 and in the same year worked on 'Mr Langham's' kiln of the 4th century and discovered nearby in the garden of a house, Over Compton, associated with an earlier 1st–2nd century occupation site (Wade 1928). The excavation of the mesolithic site 507 at Farnham Sewage Farm in 1930 also uncovered a robbed-out Roman kiln and waster-filled drainage ditch, and in 1936 the badly damaged Stoneyfield kiln was found.

In 1939 the Surrey Archaeological Society published *A Survey of the Prehistory of the Farnham District* as a special volume, incorporating in its Roman section accounts of all kilns previously discovered, with drawings of associated pot-forms (Lowther 1939). As the first serious attempt to produce a detailed account of the potteries it is still an invaluable work today, but inevitably it lays emphasis on the Farnham kilns; Alice Holt is reduced to two paragraphs without drawings.

At this stage the kilns were being interpreted by most archaeologists, with the exception of Falkner (1907), as of the horizontal-draught type with one flue serving as a vent. This viewpoint was encouraged by Wade's schematic section of the Snailslynch kiln showing one flue tilted upwards as a chimney. Current excavations in Alice Holt on waste dump AH 52 suggest that this older interpretation may not be entirely erroneous (see p 18).

During these inter-war years other groups of kilns were found. In 1926 Rankine, while searching for Mesolithic sites at Kingsley south of Alice Holt, discovered pottery waste at Malthouse Farm (Lowther 1939), and in 1942 Canadian soldiers, trenching across the farmyard, found another waste heap which was examined by Wade.

In the war years Wade took an interest in the Alice Holt kilns and in 1945 he excavated the largest pottery waste heap (AH 33) in Goose Green Inclosure. This excavation was never adequately published, although some of the material found is now in the British Museum. It would appear that two kilns were found, of which rough sketches survive. One of them was of indeterminate form but the other was of peculiar type with multiple flues, a 'mixing chamber', and a main kiln chamber. The last-named could, however, be interpreted as a single-flued updraught kiln of Sloden type in reverse. In 1949 a little booklet was published called *Alice Holt Forest: Its history and its Romano-British potteries* (Wade and Lowther 1949). The text includes a section on the pottery by Lowther, including some good drawings of pottery.

Before the war Wade had carried out a trial excavation at Overwey Tilford and located pottery waste and an oven. In 1947–48 A J Clark resumed the excavation, locating three double-flued updraught kilns. His report (Clark 1950) provided the first detailed account of this kiln type and assisted re-interpretation of the method of operation suggested earlier. During this period Lowther was excavating the Six Bells site at Farnham, in advance of housing development, where he discovered much pottery waste, an aqueduct, and two stone buildings (Lowther 1955).

In the late 1950s the newly formed Alice Holt Pottery Research Group excavated waster dump AH 55 in the Alice Holt. Two kilns were located, one of which was shown to be yet another double-flued updraught example (Bennett *et al.* 1963). This kiln, although somewhat damaged, bore a close resemblance, in its constricted flues, to the Great Mavins kiln at Farnham.

Considering the sheer size of this pottery industry it is strange how little has been well published. The late Sir Ian Richmond summed up the situation as it stood in the 1960s thus:

> 'When it is considered how large a market must have attracted manufactories to the London area, it is remarkable how little exploration has been devoted to the huge production area of Alice Holt, 4½ miles south-west of Farnham (Surrey), where many acres are covered by waste heaps and kilns' (Collingwood and Richmond 1971, 271).

In an endeavour to rectify this situation, the Alice Holt Survey Group was set up by the authors in 1971 with the initial intention of systematically surveying the area of the potteries in the Alice Holt forest on a grid of 10m squares and recording waster dumps, the density of pottery scatter on the forest floor, and any other visible features. It soon became clear that the survey should not be restricted to the present Alice Holt forest if a true picture of the contemporary environment of these kilns was to be gained. Fieldwork was therefore extended to the parishes of Kingsley, Binsted, and East Worldham.

As part of the survey, samples of pottery were extracted from all accessible waste dumps to form a corpus of vessel types. Many dumps proved to contain contemporary pot-form assemblages, enabling a relative dated sequence to be established. A programme of visits to museums and archaeological organizations over a large part of England and Wales was also carried out to determine the distribution of Alice Holt/Farnham pottery types at different periods of production. In the process of doing this, well dated groups were found which helped to refine the dated sequence.

This report sets out to reappraise previous work as well as give an account of these more recent activities in an attempt to produce a comprehensive survey of the Alice Holt/Farnham Roman potteries. It is divided into five sections dealing with the kiln groups, technology, and exploitation of raw materials, and a corpus of pottery types and their distribution at different periods of manufacture.

The pottery-manufacturing kiln groups

The Alice Holt Group
Location (Fig 1)

This large group of kilns lies about 8 km south-west of Farnham, immediately within the Hampshire county boundary, at the southern end of the Alice Holt forest. It consists of a group of at least 79 waster dumps extending along the east side of the Blacknest tributary of the River Slea for about 2km, with an outlying cluster of three dumps on the northern side of Straits Inclosure a short distance to the west.

The area's solid geology is stiff Gault clay near the southern end of a broad outcrop of that formation, largely occupied by the present forest. In the area of the potteries this clay produces a thin, poorly drained gley soil unfit for agricultural use. The ground rises on the north and east sides to a ridge capped by thick gravels. Draining the spring line at the junction of these gravels and the underlying Gault, three rivulets run south and west through the potteries to join the Blacknest stream. To the south of these kilns there is a narrow band of cultivated land running east–west straddling the Gault–Lower Greensand boundary. This is due to the Folkestone beds of

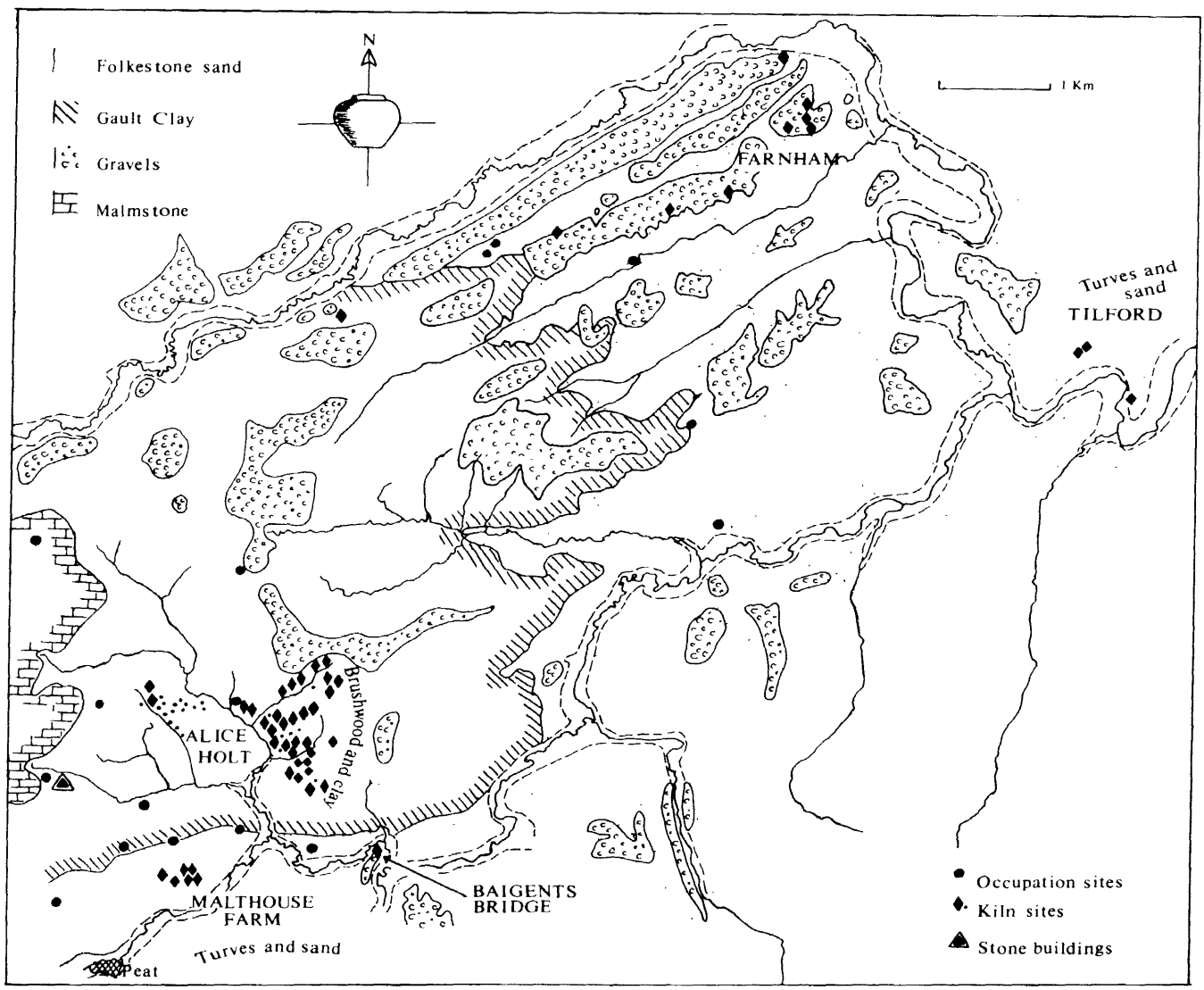


Fig 1 *Geological map showing the distribution of raw materials used by the Alice Holt/Farnham pottery industry*

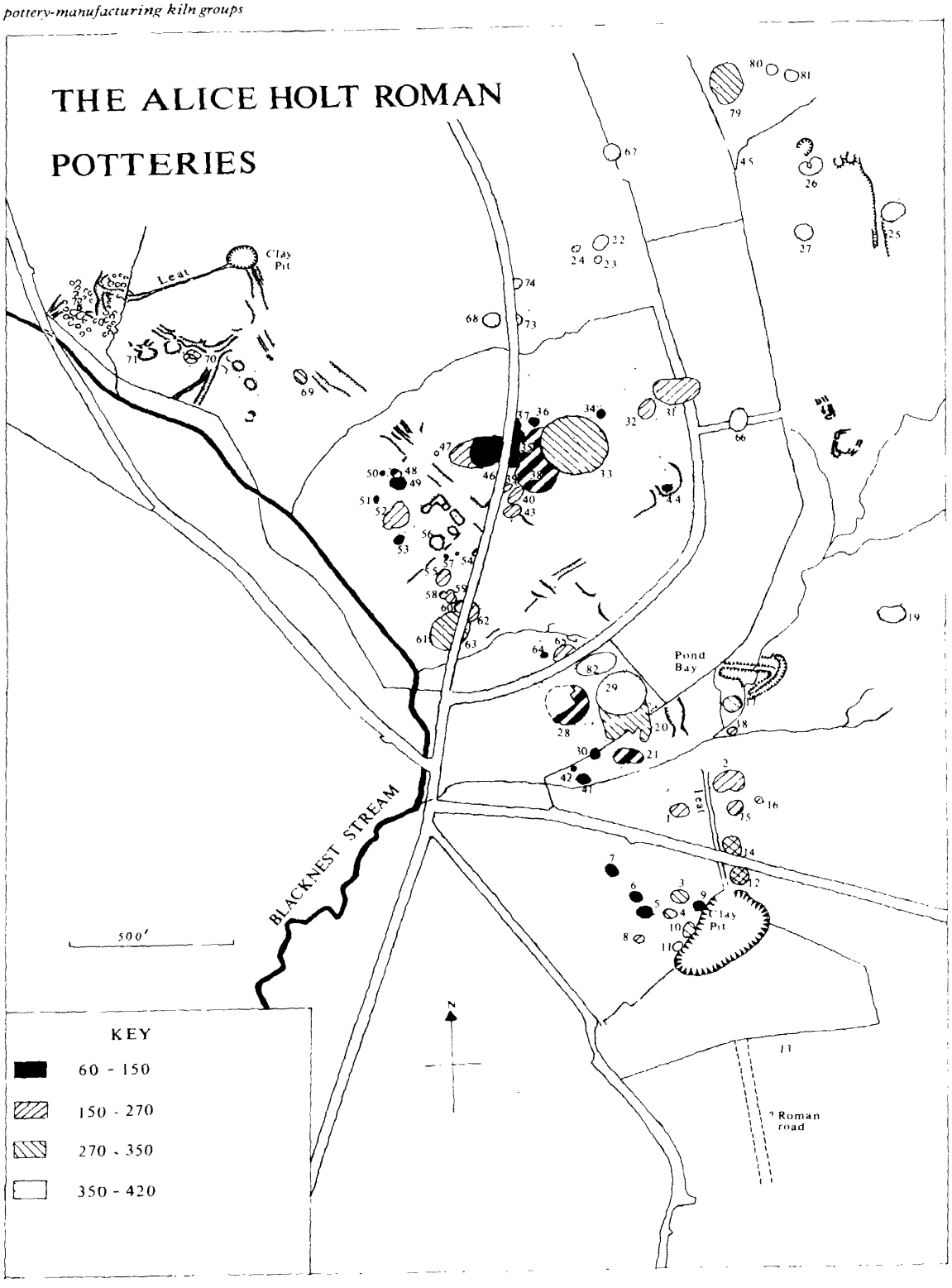


Fig 2 *The Alice Holt pottery production centre*

the Lower Greensand which, although they are in themselves sterile ferruginous sand, creating the barren heathlands of Kingsley, Broxhead, and Frensham Commons, at their junction with the Gault clay, combine as blown sand with the intractable stiff soil of the latter formation to produce a strip of land having both the fertility of the Gault and the lightness of a sandy soil. That this land was cultivated in the Roman period is clear from the many occupation sites and a thin overall scatter of abraded potsherds from marling. This will be considered in greater detail later, but it may be noted here that the cultivated area in Roman times extended to the edge of the Alice Holt potteries, separating them from the Malthouse Farm and Baigents Bridge centres which lay along the edge of the sandy heathland to the south.

Schedule of waster-dumps in the Alice Holt kiln group

In using this site schedule and that for Baigent's Bridge the following points should be considered:

1 In calculating the dimensions of the waster dumps 0.5m has been allowed for forest and plough soil thickness. The true average soil thickness has been shown to be *c* 0.3m but the larger dimension has been used to take account of any pits, ditches, or other features beneath the dumps, back-filled with debris. Excavation of AH 5 and the current one of AH 52 have located such features.

2 Where possible, pottery samples have been taken from waster dumps, the size of sample being dictated by the accessibility of the site. In the case of large dumps several samples have been taken from different points. Since the sites are scheduled Ancient Monuments these samples have been taken from the surface. The excavations of the two dumps have indicated, however, little or no stratification, as might be expected from an industry using large quantities of turf and thus producing masses of waste rapidly. Owing to uprooted trees, excavation, etc, certain dumps have produced larger assemblages than others (eg AH 2, 5, 12, 17, 25, 33, 46, 52, 55, 61/63, 79).

Dump No (See Fig 2)	Dimensions (m)	Estimated volume (m^3)	Corpus types from sampling	Date (approx)	Notes	Sample
AH 1	15×15×1	88	1A.A, 3B.8, 3B.9, 3C.2, 3C.3, 5B.1, 6A.1, 6A.3	200-270	Obscured by forest ride	0.5%
AH 2	30×20×1	256	1.30, 1.31, 1A.9, 1A.11, 1A.A, 3A.16, 2.2, 3B.9, 3C.2, 4.36, 4.40, 5B 2, 5B.3, 7.12	200-270		0.5% Includes large ($1m^3$) sample beneath fallen tree
AH 3	20×15×½	61	1.12, 1.20, 1 31, 1A.11, 1A.13, 1B.3, 3A.18, 3C.2, 3B.9, 4 36, 4 43, 4.40, 5B.2, 7.6, 7 9	200-270	Ploughed and contaminated	0.5% from plough soil
AH 4	10×10×½	20	3C.2, 3C.4, 5B.3, 5B.8, 5E.2, 6A.2, 6A.3	270-300	Ploughed	1 0% from plough soil
AH 5	20×15×½	61	See corpus	60-150	Excavated by authors 1974	49.0% from excavation
AH 6	10×10×½	20	1.12, 1.13, 1.20, 3A.10, 4 1, 4 11, 4.21, 5.8	60-150	Ploughed	1.0% from plough soil
AH 7	15×15×½	44	1.12, 4.1, 4.9	60-150	Ploughed	0.5% from plough soil
AH 8	10×10×½	20	1.30, 1A.11, 3B.9	200-270	Ploughed	0.5% from plough soil
AH 9	10×10×½	20	1 12, 1 20, 1.33 1A.1, 4.5, 4.11, 4.14, 4 15, 5.5, 6.7, 9 6	60-150	Ploughed and contaminated	0.5% from plough soil
AH 10	10×20×½	49	1 33, 1A 15, 1C.2, 1C.3, 1C.6, 3A.17, 3C.2, 3B Slipped rims, 5B.4, 8 12	270-350	Ploughed	1.0% from plough soil
AH 11	10×10×½	20	Indet. body sherds	?	Ploughed	0.5% from plough soil
AH 12	Uncertain	?	1.30, 1A.9, 1C.6, 3A.20, 3B.9, 3B.10, 3B.8, 4.36, 4.42, 5B.6, 6A.4, 6A.9, 6A 12, 6C.1, 7.7	150-420	Obscured by bungalow lawn. Large sample from drain trench	?20.0% from drain
AH 13	Uncertain	?	1A.11, 1A.A slipped	?	Heavily ploughed south of area covered by Fig 2	?0.5% from plough soil
AH 14	20×20×1	157	1.33, 5B 1, 6B 2, 6A.10 + Cl.3C horizontally rilled body sherds	150-420	Cut by Dockenfield road on its south side. May link up with AH 12 on other side of road and similarly has a confused assemblage	0.5%

Dump No (See Fig 2)	Dimensions (m)	Estimated volume (m^3)	Corpus types from sampling	Date (approx)	Notes	Sample
AH 15	15×15×½	44	3B.9, 3C.2, 6A.2	200-270		1.0%
AH 16	5×5×½	5	3B.9, 5B.1, 6A.2, 6B.3	200-270		5.0%
AH 17	20×20×1	157	1.30, 1.31, 1.32, 1.34, 1A.A, 1A.15, 1C.4, 2.3, 3B.9, 3B slipped rims, 3B.12, 3C.3, 3C.5, 3C.17, 4.42, 5B.4, 5B.5, 5C.2, 5E.1, 6A.1, 6A.2, 6A.4, 6A.5, 6A.8, 6A.13, 8.14	270-330	Eroded by stream meander on east. Tile waste as well as pottery. Large pot sample from looters' hole	3.0% from eroded stream bank and looters' hole
AH 18	15×15×½	44	1.26, 1A.6, 3B.8, 5A.2	150-200		1.0%
AH 19	20×20×1	157	1C.6, 1C.A, 3B.10, 3C.2, 3C.11, 4.42, 5B.6, 5B.8, 5B.9, 6A.10, 6A.13, 7.12, 8.14	350-420	Has central hollow	1 0%
AH 20	40×30×1½	738	1.20, 1.32, 1.34, 3B.10, 3C.12, 5B.4	270-350	Large and irregular Part under pasture of Goose Green farm	0.25%
AH 21	30×20×1	256	1.9, 1.14, 1.20, 1B.1, 3A.14, 3B.8, 3B.9, 5.6, 5A.2, 6A.2	60-200	On steep slope overlooking stream valley	0.5%
AH 22	15×15×½	44	1A.16, 1C.A	350-420	In paddock Exposed when cultivated in 1972	0.5% from plough soil
AH 23	5×5×½	5	White slipped body sherds	350-420	As AH 22	0.25% from plough soil
AH 24	10×10×½	20	White slipped body sherds	350-420	As AH 22	0.25% from plough soil
AH 25	25×20×1½	304	1A.16, 1A.17, 1B.6, 1C.A, 3B slipped rims, 3C.2, 3C.6, 3C.7, 3C.8, 3C.9, 3C.16, 5B.6, 5B.8, 5B.9, 5C.2, 6A.8, 6A.10, 6A.12, 6A.13, 6C.1, 6C.2	350-420	On south facing slope with scarp on that side Fluxgate gradiometer survey shows one central kiln Large sample	1.0%
AH 26	25×20×1½	304	1A.16, 3B slipped rims, 3C.2, 3C.7, 3C.11, 3C 12, 5B.6	350-420	Horseshoe-shaped with central hollow opening through north side of dump. Two kilns located by gradiometer survey to east and west of central hollow	0.5%
AH 26A +B	10×7×1		1A.17, 3B.10, 3C.11, 5B.9	350-420	Two mounds of brown earth with wasters on east side of AH 26	0.5%
AH 26C			White slipped body sherds	350-420	Brown earth mound with wasters largely flattened by forest ride south of AH 26	0.25%
AH 27	20×15×1	123	1 32, 1.33, 1C.A, 3B.9, 3B slipped rims, 3C.2, 3C.11, 5B.4, 5B.8, 5B.10, 6A.10, 6C.1, 8.14	350-420	Two kilns located by gradiometer survey	1.0%
AH 28	40×40×1	600	1.12, 1 20, 1.25, 3A.16, 3A.17, 3B.8, 4.1, 4.5, 5 2, 5A.1	60-200	Beneath Goose Green farmhouse and orchard	0.01%
AH 29	50×40×2	1500	1.33, 1A.16, 1C.6, 3B slipped rims, 3C.11, 3C.14, 5B.10, 6A.8, 8.14	350-420	Under grass but churned up by cattle	0.001% heavily obscured
AH 30	15×15×1	89	1.25, 4.11, 5A.2, 5C.2, 9.6	60-150		1.0%
AH 31	40×25×1½	539	1.20, 1.30, 1A 8, 1A.9, 1A.11, 3A.18, 3B.8, 4.17, 4.27, 5A.3, 5A.4, 5D 3, 6B 3, 9.2, 9.6	150-220	Cut by 16th century pale of Goose Green deer park	0.5%
AH 32	20×15×1	123	1.25, 1B.1, 1C.1, 3A.18, 3C.2, 4.36, 4.40, 6A.1, 10.1	150-220		1 0%

Dump No (See Fig 2)	Dimensions (m)	Estimated volume (m^3)	Corpus types from sampling	Date (approx)	Notes	Sample
AH 33	60×60×2	2831	1.32, 1.33, 1A.A, 1B.1, 1C.5, 1C.6, 1C.A, 2.3, 3B.10, 3B.12, 3B.13, 3C.2, 3C.7, 3C.7, 3C.11, 3C.12, 4.42, 4.45, 5B.4, 5B.5, 5B.6, 5B.7, 5B.8, 5B.9, 6A.4, 6A.8, 6A.10, 6A.13, 6C.1	270-420	Scene of series of excavations by Wade in 1940s and since looted repeatedly by vandals	0.2% and selected material from Wade's excavation in British Museum
AH 34	5×5×½	5	Early body sherds	60-150		5.0%
AH 35	25×20×1	202	1.12, 1.20, 1A.5, 3A.1, 3A.8, 3A.20, 4.15, 4.34, 5.2, 5C.1, 6.1	60-150	Bordon road cuts it on west side	2.0%
AH 36	5×5×½	5	1.20, coarse early body sherds	60-150		5.0%
AH 37	10×10×1	40	Coarse early body sherds	60-150		1.0%
AH 38	40×40×1½	944	1.25, 1.28, 3A.1, 3B.8, 3B.9, 3C.2, 7.9	60-270	Very much obscured by grass. Only post AD 270 material is lacking	0.01%
AH 39	5×5×½	5	1A.12, 1.31	200-270	Bordon road cuts it on west side	5.0%
AH 40	20×5×1	20	1.30, 3C.1, 3C.3, 6A.2, 6B.3	150-220		1.0%
AH 41	10×10×1	35	1.12, 1.20, 4.11, 6.1, 7.12	60-150		1.0%
AH 42	5×5×½	5	1.12, 1.20	60-150		5.0%
AH 43	20×15×1	123	1.25, 3A.18, 3B.8, 3C.1, 3C.4, 6A 2	150-220		1.0%
AH 44	5×5×½	5	1.20	60-150		5.0%
AH 45	—	—	3B.9, 8.10	270-350	Area of intense sherd scatter. Waster dump probably under grass to west	—
AH 46	50×30×1½	1003	West: 1.12, 1.30, 1.31, 1A.9, 1A.10, 1A.11, 1A.B 1B.2, 1C 7, 3B.8, 3B.9, 3C.1, 3C.2, 4.39, 4.40, 4.41, 5A.1, 5B.1, 6A.3, 7.8 Centre: 1 3, 1.6, 1.8, 1.9, 1.12, 3B.9, 4.4, 4 15, 4.17, 4.1, 4.11, 5.1, 5.4, 5B.1, 5B.6	60-270	Has earlier material at centre and east end and later west end. Material tipped from north side producing steep scarp along southern edge Fluxgate gradiometer survey shows at least four kilns running east-west along spine of dump.	0.5% Large samples from both centre and west end
AH 47	5×5×½	5	Early body sherds	60-150	Very small and ill defined	0.5%
AH 48	10×10×1	40	1.8, 1.20, 1A.9, 3C.3, 4.10, 5B.2, 6.4	60-270		2.0%
AH 49	20×20×1	157	1.6, 1.20, 3C.2, 4.5, 4.6, 4.10, 5A 1	60-150		3.0%
AH 50	5×5×½	5	Early body sherds	60-150	Very small and ill defined	0.5%
AH 51	5×5×½	5	1.20	60-150		0.5%
AH 52	25×25×1½	370	1.12, 1.25, 1.26, 1.28, 1.30, 1.31, 1A.8, 1A 9, 1A.A unslipped, 1A.B, 1B.1, 1C.4, 3A.11, 3A.16, 3A.18, 3B.8, 3B.9, 3C.1, 3C.2, 3C.3, 3C.4, 3C.5, 4.39, 4.41, 5A.1, 5A.2, 5B 1, 5B.2, 5B.3, 5C.1, 6A.2, 6A.3, 6B.3, 7.6	150-270	Fluxgate gradiometer survey indicates five kilns. One at present being excavated	10.0% from excavation as well as surface samples
AH 52A			3B.8		L-shaped mound of earth with potsherds to east of AH 52. It has a distinctive cover of Buckler fern and may be the site of a building	—

Dump No (See Fig 2)	Dimensions (m)	Estimated volume (m^3)	Corpus types from sampling	Date (approx)	Notes	Sample
AH 53	10×10×1	40	1.12, 1.15, 1.20, 1A.3, 4.1, 4.5, 4.15, 4.18, 4.24, 5.2, C1.9 body sherds	60-150		5.0%
AH 54	5×5×½	5	1.12, 1.19, 1.20, 3A.7, 3C.3, 4.5, 5A.1, 7.3	60-200	Cut by Bordon road on east	10.0% Large sample from road ditch
AH 55	15×10×1	64	1.25, 1.28, 1.30, 1A.6, 1A.7, 3A.17, 3A.18, 3B.8, 4.37, 4.39, 5A.1, 5A.2, 5B.3, 5C.1, 6A.1, 6A.3, 6B.1, 6B.3, 7.6, 7.7, 7.9, 8.8, 8.9, 10.1	150-200	Excavated by AHPRG in 1959-60 (Bennett *et al.* 1963). Two kilns found	3.0% as well as selected material from excavation in Farnham Museum
AH 56			1.12, 3B.8, 4.10, 4.18, 7.4	60-200	Earth mound east of AH 53. May be the site of a building	—
AH 57			1.9, 1.10, 1.26, 3B.8, 3B.9, 4.11, 5A.1, 6.7, 7.7, 9.3	60-150	Ill defined area of sooty patches and pottery scatter	—
AH 58	10×10×1	40	1.9, 1.25, 1.28, 3B.8, 4.36, 5A.2, 6B.1, 6B.3, 7.9	150-200		1.0%
AH 59	10×20×1	99	3B.8, 7.3	150-200		1.0%
AH 60/62	30×15×1	221	1.26, 1.30, 3B.9, 3C.2, 5B.4, 5B.6, 5B.8	200-270	Split by Bordon road	0.5%
AH 61/63	50×30×1½	1003	1.32, 1A.14, 1A.15, 1A.16, 1C.3, 1C.5, 1C.6, 3A.20, 3B.10, 3B.12, 3C.2, 3C.7, 3C.11, 3C.14, 3C.17, 4.42, 4.45, 5B.4, 5B.5, 5B.6, 5B.7, 5B.8, 5B.10, 5C.2, 5C.3, 6A.4, 6A.6, 6A.10, 6A.12, 6A.13, 6C.1, 7.12, 8.13, 8.14, 10.2, 10.3	270-420	Split by Bordon road	0.25% Large sample from beneath fallen tree included
AH 64	5×5×½	5	Early body sherds	60-150		5.0%
AH 65	20×20×1	157	1.25, 1.30, 4.5, 4.6, 4.14, 5B.4, 5B.8, 6B.3, 7.8	270-350 (early material also present)		1.0%
AH 66	20×15×½	61	1A.16, 1A.A, 3B.10, 3B.12, 3C.11, 5B.5, 5B.8, 6A.4, 6A.9, 6A.10	350-420	In field strip and cut by trackway side ditches. Quantities of Roman tile and also some flint-tempered EIA pottery to the east	2.0%
AH 67	15×15×½	44	1C.6	350-420		2.0%
AH 68	15×15×1	89	1.34, 1C.A, 3B.10, 3C.2, 3C.5, 3C.12, 5B.6, 6A.10, 6C.1	350-420		2.0%
AH 69	10×10×1	40	1.30, 1.32, 1A.15, 3A.18, 3B.9, 3B.10, 3C.3, 5B.4, 5D.1, 6A.2, 7.8	200-270	Central hollow	4.0%
AH 69A	—	—	1.30, 1A.6, 3B.9, 3C.7, 5A.1, 5B.1, 5B.2, 5B.3, 6A.2	200-270	Area of intense pottery scatter west of AH 69	—
AH 69B	—	—	1.32, 3B.9	200-270	Earth mound with pottery scatter south-east of AH 69A	—
AH 69C	—	—	1.32, 3A.18, 3B.8, 3B.9, 3C.3, 5D.1, 6A.2, 7.8	200-270	Earth mound with pottery scatter east of AH 69A	—
AH 69D	—	—	1.26, 3C.2	200-270	Circular terraced platform with pot scatter south of AH 69B	—
AH 70	15×15×1	89	1.26, 1.27, 1.28, 1A.7, 1A.8, 3A.18, 3B.9, 3C.1, 3C.3, 5B.1, 5B.2, 5E.1, 6A.3, 6B.3	200-270	Two kidney-shaped waste banks divided by central hollow	2.0%

Dump No (See Fig 2)	Dimensions (m)	Estimated volume (m^3)	Corpus types from sampling	Date (approx)	Notes	Sample
AH 71			3B.10, 3C 2, 3C.11, 3C.16, 5B.8, 6A.10, Oxford Dr. 38	350-420	Terraced platform 15×15m. Site of building	—
AH 72	—	—	1A.16, 1A.17, 3B.9, 3B.10, 3C.2, 3C.5, 3C.6, 3C.7, 3C.11, 5B.6, 5B.8, 6A.8, 6A.10, 6C.1, 6C.2. Oxford Dr. 38	270-420	Area 80×50m pocked with hollows associated with pottery scatter. ? Settlement. Hollow-ways lead from area	—
AH 73	10×10×1	40	3C.11, 6A.10	350-420		0.5%
AH 74	10×10×½ (approx.)	20	6A.12, 5B.8	350-420	Badly mutilated by activities associated with Forest Lodge	0.5%
AH 75	30×20×1	256	1.32, 1A.18, 1C.6, 3B.10, 3B.12, 3C.2, 3C.11, 5B.6, 5B.10, 10.2	350-420	Large waster dump in Straits Inclosure on east side of stream. An ill defined scatter of pottery extends east along the north edge of the inclosure towards AH 72 in Goose Green Inclosure	0.5%
AH 76	5×5×½	5	3B.10, 5B.8	350-420	South east of AH 75 and adjoining	1.0%
AH 77	25×25×1	246	6A.10 (adequate sample impossible owing to grass cover)	350-420	In corner of field just north of Straits Inclosure and separated from it and AH 75 by two small clay pits in an area of waste ground. An air photograph (Fig. 3) shows a horseshoe shape for this dump	0.1%
AH 78			Deleted			—
AH 79	30×30×1	711	1.32, 1A.15, 1C.A, 2.3, 3B.10, 3C.2, 3C.3, 3C.7, 3C.9, 3C.11, 5B 5, 5B.8, 6A.10, 6A.13, 6C.1	350-420	In dense fir plantation and difficult of access	0.5%
AH 80	15×15×½	40	6C.1	350-420	As AH 79	0.5%
AH 81	15×15×½	40	3B.10, 3C.11, 6A.10	350-420	As AH 79	0.5%
AH 82	?	?	3B.8	?	North-west of AH 29 and under grass. May link up with AH 65 but impossible to define or sample adequately	—

The Malthouse Farm group
Location (Fig 4)

This group of kilns, 1½km south-west of the Alice Holt centre, is situated on the crest and slopes of a long low sand-ridge running east west from the River Slea to Kingsley Common. Much is obscured by two groups of farm buildings, Malthouse and Osborne's farms, which are at the junction of four roads. That from the west along the crest of the ridge is suspected to be a minor Roman road linking with the Chichester–Silchester one; the road to the south to Sleaford may have a similar origin, and air photographs show that the latter was originally much straighter and more angular at its junction with the first road.

The lane separating Osborne's farm buildings from Malthouse gives striking evidence for its antiquity. At its southern end it is sunken between two hedge banks which have a shrub and tree species count of fourteen in 100 yards. At 125 years per species this gives a possible age of 1,750 years and furthermore the eastern hedge bank is revetted with ruinous and part-obscured drystone walling showing frequent patching. One of these patchings incorporates a re-used fragment of Roman floor tile and a little Roman pottery.

The lane extends north in this form for a short distance to a pond or clay pit which has now been filled in and had the lane taken across it. Beyond the pond it has a different character and the accompanying hedgerows have no more than seven species.

Although the Malthouse Farm kilns are on the Folkestone sands, the Gault outcrops only 100m to the north and there are good supplies of thick peat nearby in the King's Mead and turves on Broxhead and Kingsley Commons. A major reason for the siting of the kiln group may be its

position on an intersection of minor roads and trackways, useful for distribution. It is an almost entirely late 4th century production centre and the small sizes of measurable dumps suggests that, like the Straits Inclosure and Abbott's Wood dump clusters, it was either an occasional centre for coping with excessive Alice Holt production requirements, or a very late establishment during the industry's decline. There is, however, a site (MF2) in the north-west angle of the trackway intersection which has produced earlier 1st and 2nd century pottery.

Schedule of sites in the Malthouse Farm kiln group

No	*N G R (SU)*	*Corpus types from sampling*	*Date (approx.)*	*Notes*
MF 1	80003857	1.34, 1A.16, 1C.6, 3B.10, 5B.9, 5C.2, 6A.13, 6C.1, 8.13, 8.14	350-420	(Lowther 1939) No kiln found. Area of soot and wasters 15×15m in field spreading south into bungalow garden
MF 2	80053870	1.3, 3B.9, 3C.12, 4.9, 5B.2	60-420	Large vague area of potsherds and kiln debris. Material very comminuted and abraded
MF 3	79953865	5B.6, 5B.8, 8.15	350-420	Area of light pottery scatter extending south under Malthouse Farm. May be northern edge of MF 5
MF 4	80123870	1C.5, 3B.10, 5B.6, 8.10	350-420	Pottery scatter north and east of Osborne's farm on ridge. Most intense behind barn
MF 5	79703872		350-420	(OS record cards) Waste dump found by Canadian soldiers in Malthouse farm yard when digging a waterpipe trench in 1942.
MF 6	80103858	1.35, 3B 10, 5B.9, 5C.2	350-420	Heavily ploughed waste dump 15×15m in field south of Osborne's farm
MF 7	80153858	3B.10, 6A.10, 6C.2	350-420	As MF 6

The Baigent's Bridge kiln group *(Fig 1)*

This is represented by one small waster dump, at the northern end of a field on the south-east side of the bridge (SU 81753890). It was excavated in 1971 or thereabouts by a master and boys from Weydon School, Farnham, and the kiln, reportedly a double-flued updraught example, was lifted.

It is probable that there are other waster dumps, but most of the surrounding area is permanent grassland. Although the kiln group is sited on the Folkestone beds of the Lower Greensand, it is beside the river Slea, on the opposite bank of which a tongue of Gault clay extends down from the main outcrop to the north. The kiln group is thus well positioned to take advantage of clay, water, sand, and heath turf, all within a few yards of it.

Dump No	*Dimensions (m)*	*Estimated volume (m^3)*	*Corpus types from sampling*	*Date (approx.)*	*Sample*
BB 1	15×15×½	35	1A.17, 1A.20, 1A.A, 3B.10, 3C.11, 5B.8, 6C.1	350-420	0.5% in plough soil

The Tilford group (Fig 1)

This group of kilns is situated on sand at the junction of the northern and southern Wey streams. It has been suggested (Clark 1950) that alluvial clay from the river valley was used and there are large turf, peat, and sand deposits nearby at Crooksbury Common.

An alleged kiln was found in the 1890s at a house called Whitmead (SU 88454350). It is described as being floored with tiles (Lasham 1895) and in the absence of any pottery there is a strong element of doubt attached to the identification.

Dump No	*N G R (SU)*	*Corpus types from excavation*	*Date (approx.)*	*Notes*
T 1	87994398	1.32, 1.35, 1.37, 1A.16, 1A.19, 1C.6, 3B.10, 3B.13, 3C.11, 3C.12, 3C.13, 3C.15, 3C.16, 3C.18, 4.45, 5B.10, 5C.2, 5C.3, 6A.9, 6A.10, 6A.11, 6C.2, 8.11, 8.12, 8.13	350-420	Overwey (Clark 1950; Lowther 1939). Three double-flued updraught kilns. Material now in Guildford Museum

The Farnham group
Location (Fig 1)

Unlike the kiln groups so far described, there are here no extant waster dumps or kilns, owing to the heavily built-up nature of the area and the wholesale destruction of the natural land surface by gravel digging. Evidence is only available from small surviving samples of material, and contemporary, often deficient, eye-witness accounts. From this it is certain that this factory was the largest of all, although much more scattered, and with a possible nucleus in the Over Compton area.

With the exception of the Six Bells site, none of the kilns are on clay, most being on terrace gravels or sand, and it seems likely that the reason for the siting of the Farnham kilns lay in the turf and Reading beds clay deposits in the area and also in the river communications.

Schedule of sites in the Farnham kiln group

Dump No	*N G R (SU)*	*Corpus types from excavations*	*Date (approx.)*	*Notes*
F 1	853482	1A.11, 3B.10, 4.42, 5B.4, 5C.2, 5E.2, 6A.4	270-350	Site 507 (Lowther 1939)
F 2	85284690	1.32, 1.33, 1.34, 1A.13, 1A.14, 1C.4, 3B 10, 3B.12, 5B.5, 6A.4	270-350	Snailslynch (Lowther 1939; Wade 1928) Double-flued updraught kiln containing remains of last load
F 3	85524639	3C.13, 5B.10	350-420	Langham's kiln (Lowther 1939; Wade 1928; Anon 1927). Double-flued updraught kiln with possible permanent dome
F 4	85524639		60-150	Over Compton (Wade 1928). Ashpits and tiled floor of a building
F 5	—	1.25, 3A.18, 3B.8, 7.10	150-200	Stoneyfield (Lowther 1939)
F 6	85524622		*c* 300	(Lowther). Found in 1956 during roadworks. Now beneath pavement outside house called 'Potter's Kiln' (OS record card)
F 7	85494628		—	Found in 1957 during road widening operations (OS record cards)
F 8	843454		—	Large quantity of Roman sherds on charcoal found in gravel pit near Averley Towers by Wade
F 9	83304517		—	Kilns reported by Wade as having been found 'during former gravel digging at Green Lane' (Lowther 1939)
F 10	85124777			Two 3rd–4th century buildings with earlier 1st–2nd century ditch. Much pottery waste in ditch and beneath the buildings (Lowther 1955)
F 11	84854550	1.26, 1.30, 1 31, 1A.8, 3A.18, 3A.19, 3A.20, 3B.9, 3C.1, 5D.2, 5D.3, 6A.2, 7.9	200-270	Great Mavins (Falkner 1907; Lowther 1939). Double-flued updraught kiln
F 12	81354424		—	Holt Pound Lane (OS record cards). Soot and wasters found when house building in 1956

Raw materials and the evidence for their exploitation (Fig 1)

Clay

The Gault supplied the Alice Holt centre with clay for potting and so far four clay pits have been located (Fig 4), although evidence from the excavation of dump AH 5 indicates numerous smaller clay diggings, later back-filled with waste leaving no surface traces. Of these pits the largest, situated on farmland south of the Alice Holt, measured at least 100m × 45m with its long axis south-west–north-east. Until recently the site of this pit was a small oval paddock, now thrown into a larger field to the west. It is still identifiable, however, as a waterlogged area of deep, dark soil in an otherwise relatively well drained field where clay comes close to the surface. A ditch linking it with a stream to the north was probably dug for drainage. The second pit situated in the northern part of the Alice Holt centre east of site AH 72 measures 25m × 20m × 1m and, like the first example, had a drainage ditch linking it with a stream to the west.

Perhaps the two best preserved clay pits are those associated with the three waster dumps of the outlying Straits Inclosure group. These pits are still very well defined in an area of waste ground on the northern edge of Straits Inclosure (Fig 3) with dump AH 77 immediately to the north and dumps AH 75 and 76 to the south. They measure 9m × 6m × 1m, and 15m × 6m × 1m, representing the removal of *c* 72m³ of material.

As with the Alice Holt, the Gault was also the clay source for the Malthouse Farm and Baigent's Bridge centres. The former would appear to have derived its clay as described above (p 9) from a pit centred at SU 801390 measuring roughly 30m × 20m. This pit was dug very close to the junction of the Gault and Lower Greensand, as near to the Malthouse Farm kilns as was feasible.

The Baigent's Bridge centre lies on the south bank of the river Slea opposite a point where a narrow tongue of Gault clay has overridden the Folkestone sands of the Lower Greensand as far as the opposite bank of that stream. Any clay diggings were probably in the river valley and have now been obliterated.

At Farnham the Six Bells production site was also on the Gault clay and the nucleus of kilns around Over Compton, just across the Wey, probably drew their clay from that source.

There were two important late Roman potteries, New Forest and Alice Holt, using white slip on grey wares and both their production centres were situated near outcrops of the Woolwich and Reading beds of the Eocene formation. These beds contain limited horizons of fairly iron-free clay which were extensively worked at Farnham and elsewhere in Surrey during the later medieval and post-medieval periods for the manufacture of white-bodied wares. These wares appear to have been made during the late 4th century in very small quantities somewhere in northern Hampshire, but it would appear that the main application of this clay during the Roman period was in slipped decoration, although this slip source has yet to be proved for certain.

Sand

The heathlands of Frensham, Broxhead, and Kingsley Commons were the source of two important raw materials needed by the potters, sand and turf. There are considerable blown deposits of quartz sand which were evidently used by the Alice Holt potters as a source of tempering material. Such deposits had several advantages over quarried sand, the most obvious being its accessibility and the removal of ferrous compounds by weathering to a depth of at least 0.30m. The Alice Holt potters seem to have related coarseness of sand used to the size and nature of vessels, and another advantage of the surface material was that it had already been graded by natural means. The bulk of the material on Kingsley Common lies in the grain size range 0.25–1.00mm, with aeolian gradation leaving the coarser sand on the higher ground and the finer in hollows. Just west of Sleaford deposits of 2.00mm grain sand come in and extend south on to Broxhead Common.

Another use for sand (and one which would require considerable quantities) is for kiln smothering during the cooling stage. There is arguable evidence for the widespread use of this technique during the Roman period: eg Amberwood (Fulford 1973), Mavins (Falkner 1907), Rushden (Woods 1975), and Overwey (Clark 1950). At all these sites sand was either found round the kiln oven as at Amberwood, in the kiln as at Overwey, or in the flues as at Mavins. The sand may, however, be derived from heath turves used for kiln superstructures in some cases.

Turves

The use of turves for kiln construction has been recognized at Rushden (Woods 1975), where early Roman kilns were built entirely of this material except for internal furniture. As a building material for kilns it has the advantage over clay of not cracking, thus making a reducing atmosphere easier to arrive at. An optical examination of 'soot' from waster dumps in the Alice Holt indicates a high percentage of sub-0.25mm sand present, and it is difficult to see whence it was derived unless it came from heath turves being used for kiln superstructure building or sand for kiln smothering. The turf source is supported by the structureless appearance of excavated 'soot'. Identifiable sticks of charcoal are very sparse, although when present they are in good condition. Under the microscope the 'soot' is seen to consist of small flecks of charcoal, such as would be obtained from light vegetation, mixed with sand and earthy material.

The great expanses of sandy Lower Greensand heathland to the east and south of Alice Holt, today represented in part by Broxhead, Frensham, and Hankley Commons, yield almost limitless supplies of suitable, black podsolic turf as well as considerable local peat deposits.

Of all the reasons for placing the Alice Holt/Farnham factory in this area, the availability of these materials in such great quantities was perhaps the strongest.

Fuel

The areas of woodland which had not been cleared from the heavy clays of the Gault outcrop may have furnished

the fuel used by the Alice Holt/Farnham potters. Of the thirteen identifiable sticks of charcoal from the excavation of waste dump AH 5, eight were oak, two hazel, and two possibly of willow; all except one oak sample were from very young timber, suggesting the use of underwood.

Recent experimental kiln firings have indicated that in burning wood in the long and somewhat constricted flues associated with known Alice Holt kilns, long straight poles about 2ft (0.6m) long and 1in (20mm) dia work best for the main part of the firing, with finer, fiercer burning brushwood for the higher temperatures. The best way of obtaining a reliable supply of such poles for an industrial complex the size of the Alice Holt potteries would be by encoppicing. In medieval and later times the part of Alice Holt associated with such activity was Straits Inclosure, which is flanked on the north and east by the Alice Holt kilns, with the Malthouse Farm ones a short distance to the south. In the reign of Edward III 30 acres (*c* 12ha) were encoppiced and in 1613 John Norden made a survey of Straits with a view to encoppicing all of it. The name Straits, which is older than the first reference to encoppicing, may be derived from association with the production of straight coppice poles from early times.

The recent experimental kiln firings all resulting in massive formation of charcoal in the kiln flues, yet the excavation of dump AH 5 could produce only thirteen sticks. It is possible that bellows of some description were used to burn it in the flues but it may be that the charcoal was collected and sold off as a by-product. As cooking pots were the most numerous single product fired in the kilns and were probably intended to be used on charcoal ovens, it is possible that the potters were also trading in fuel.

Internal organization and levels of production

Dr M J Fulford has pointed out that the kilns of the New Forest industry tend to occur in clusters, usually about 1km apart, and suggested that this could represent the cyclic reoccupation of potting sites on regeneration of underwood fuel supplies (Fulford 1975). Within the Alice Holt area there is a great concentration of potting sites, covering about 2km × 1km, but this apparent contrast may be illusory in that the life of the New Forest industry was only 130 years compared with the 360 years of the Alice Holt. Had the New Forest kilns continued for a similar period, the individual centres would probably have expanded and eventually coalesced.

Excluding the possibility of encoppicing, in other respects the cyclic reoccupation theory does not make complete sense with the Alice Holt centre. If the waster dumps belonging to the final 4th century phase are separated out, a curious arrangement becomes apparent. Two good peripheral groups are present, one in the northern part of Abbott's Wood Inclosure consisting of dumps AH 22, 23, 24, 25, 26, 27, 67, 68, 79, 80, and 81 and the other in Straits Inclosure consisting of AH 75, 76, and 77. In addition to these clusters of dumps, however, there are also single giant waster dumps such as AH 33 and AH 61, the material in which could have taken a number of years to accumulate.

These 4th century waster dumps show far less disturbance and contamination than do ones from earlier phases since there was no subsequent potting activity. It was noted that a number of them have slight central hollows, often with a breach in the surrounding bank giving a horseshoe configuration. Where such dumps have been examined with a fluxgate gradiometer the kilns appear to be under these central hollows, suggesting that the dumps were formed round them by raking back waste during a sequence of kiln firings.[1]

The homogeneous appearance of the pottery assemblage from the great dump AH 33, coupled with its neat symmetry and slight hollow surviving in the top, despite recent mutilation, suggests that its formation also took place in one sequence of firings, albeit a rather long, intense one, instead of by a series of reoccupation of the same site on regeneration of underwood. One explanation could be that this variation in waster dump size and distribution is due to a relationship to pressures of production.

As shown below, the Alice Holt pottery industry achieved its greatest production during the mid–late 4th century, with the capture of the London market, and the large dumps AH 33 and 61 may represent two kilns working, full-time, over a period of several years, to satisfy the demand. A normally seasonal industry in full-time production would have been seriously disrupted by the resiting of a kiln, regardless of the fuel situation. The peripheral clusters of smaller dumps in Abbotts Wood and Straits Inclosure could be regarded as either short-term ventures supplementing the production from AH 33 and 61 at times of excessive demand, or even later production centres when the industry was going into decline and was once more seasonal. There is some support for the latter supposition in the apparent absence of earlier 4th century forms from all these peripheral dumps except AH 79, whereas early and late 4th century forms are present on AH 33 and AH 61.

In view of the abnormally good state of preservation of most of the Alice Holt waster dumps an attempt has been made to calculate volumes of waste in relation to the changing scale of production. This can never be more than a very rough calculation since large quantities of waste must have also filled abandoned clay pits, drainage ditches, etc and left no surface traces. Greater accuracy may be possible with the later deposits, as there would have been less of a tendency towards ground clearance.

The following table gives the volumes of waste in dumps (see p 5-11) attributed to various phases in production identified by means of the pottery forms present. In this calculation the formulae

$$\text{volume} = \pi\left(\frac{\text{dia}^2}{8} + \frac{\text{ht}^2}{6}\right) \times \text{height [for round heaps]}$$

$$\text{volume} = \pi\left(\frac{\text{dia}\,1^2}{16} + \frac{\text{dia}\,2^2}{16} + \frac{\text{ht}^2}{6}\right) \times \text{height [for oval heaps]}$$

are used. In the case of dumps spanning more than one period the volume of waste is simply divided by the number of years—not a particularly accurate method, but the only practical one in the circumstances.

	Date	*Volume* (m^3)	Yearly volume (m^3)
Period 1	60-150	2252	25.0
Period 2	150-220	2633	37.6
Period 3	220-270	1126	22.5
Period 4	270-350	3529	44.1
Period 5	350-420	5428	77.5
Uncertain		20	

Given these yearly volumes of waste, the next step is to determine the number of waster vessels represented. The bulk of production at all periods is represented by vessels in the 6–7in (*c* 150–175mm) rim diameter range, before AD 150 of Class 1 and afterwards of Classes 3B and 3C.

These pots each average 2lb (*c* 900g) in weight with very few larger and heavier vessels, mainly of Classes 1A, 1C, 4, 9, and 10 making up only 3½% of total production in the 4th century. Dishes and other smaller vessels tend to be thick-walled and heavy for their size, approximating closely to the average weight. Some of the very large storage jars do, however, weigh up to 75lb (34.2kg) each and would have a measurable effect on average vessel weight, bringing it up to around 6lb (2.72kg).

In 1974 a tree growing on dump AH 61 was blown over, presenting an opportunity to excavate 0.25m³ of waste and extract all the sherds from it, weighing 30lb (13.6kg). This suggests a figure of 120lb (54.43kg) of potsherds per cubic metre or roughly twenty vessels. Working from these admittedly crude data the results can be tabulated:

Period	*Date*	*Yearly volume (m³)*	*No of Wasters annually*
1	60-150	25.0	500
2	150-220	37.6	752
3	220-270	22.5	450
4	270-350	44.1	882
5	350-420	77.5	1550

Unless there was an abnormally low wastage rate, these figures suggest unexpectedly low levels of production, with waste bulk largely due to burnt turf debris.[2]

These calculations also enable an estimate to be made of the time taken to form a waster dump. Many of the smaller heaps have a waste volume which could have accumulated in one season and the majority represent less than five years' activity each. Even the giant AH 33 need represent only 45 years' pottery production in the mid-4th century.[3] This in turn suggests a small labour force with perhaps a handful of potters actually engaged in making the vessels. Examination of variation in the range of profiles within particular classes of vessel may support this idea.

Apart from the immense range of early Class 1 and 4 forms (Figs. 7, 8, 13), the vast bulk of production is restricted to a few basic forms, such as 1.12, 1.20, 4.10, and 4.11, with only a small number of vessels with many variations.

From the mid-2nd century a curious dichotomy begins to develop in that with the continuing local native types of vessel (Classes 1, 1A, 1C, and 4) the amount of internal form variation lessens, whereas with the new types now introduced it is much greater.

Class 1C is particularly interesting, with very little variation in form. Production of large storage jars may have been a specialized craft and 1C.5 and 1C.6 could have been the work of two or three craftsmen supplying the entire industry with such vessels.

What was the social status of these people? The best evidence comes from the Six Bells site at Farnham (Lowther 1955). With the revival of the industry around 270 a bath-block was constructed by a 2nd century aqueduct which supplied that centre with water from the source of the Bourne stream. This bath-block was a long, narrow, flint-built, structure 55ft (16.75m) long and presumably for the labour force of the potteries. About 300 a compact building 50×25ft (15.24×7.62m) was constructed to the north, which could be interpreted as a bailiff's or overseer's house.

An overall impression emerges of the industrial equivalent of agricultural labourers, probably *coloni**, working under a supervisor as part of the economy of a large estate. When not making pottery they may have been involved in agricultural activities.

Such an arrangement was probably repeated at Alice Holt and here it is interesting that two waster dumps AH 17 and 69 have considerable quantities of tile waste mixed up with the pottery. Both of these dumps are of mid or late 3rd century date, the same period as the construction of the Six Bells bath-block and the revival of the industry, and the tile may have been spare building material used in kilns.

The contemporary landscape (Fig 4)

Of the various hamlets and villages making up the great royal manor of Neatham (Neteham) in 1087, later that of Alton Westbrook, all save one were associated with open field systems. A scatter of abraded potsherds from marling, of both Roman and medieval date, has been recovered from them, suggesting continuous cultivation since Roman or earlier times. All of these settlements, originally associated with such field systems, with the exception of Isington in the Wey valley, are situated on the Upper Greensand malmstone outcrop, east of Alton and south of the River Wey. This formation provides a light, easily cultivated, and extremely fertile soil and forms a desiccated plateau cut up by stream ravines and rimmed by discontinuous, vertical hangers to south and east.

Kingsley, which lies south of this escarpment on the Gault clay–Folkestone sands boundary, differed in being divided by ancient enclosure into a number of freeholdings during the medieval period. Between it and the uplands to the north lay a swampy strip of ill drained solifluxed Gault and malmstone scree fed by springs at the geological boundary which, during the early middle ages, was occupied by a narrow belt of forest isolating Kingsley from the rest of the manor. As with the open field systems, there is no reason to think that the areas of ancient enclosure in this parish have not been under continuous cultivation since Roman times, a view supported by the close coincidence of Roman occupation sites and medieval farms associated with the remnants of a rectilinear system of land division going back to at least the 13th century and probably much further.

Celtic (Welsh) land tenure took two basic forms, *tir cyfrif* and *tir gwelyog*, corresponding roughly with open field strip cultivation and enclosed freeholdings in the English system. According to Applebaum (Finberg 1972) nucleated settlements of unprivileged *taeogs* cultivated common fields *(tir cyfrif)* on a manor subordinated to the king or a noble and supervised by a steward or *maer*. This *tir cyfrif* system with its large pool of unfree labour, if practised in Britain during Roman times, would have led to an association with, and encouraged the growth of, wealthy villas. If the open field systems of East Worldham, Wyck, South Hay, Binsted, and Wheatley descended from a Roman *tir cyfrif* arrangement this is certainly the case, with substantial villas at East Worldham (A), Wyck (B), South Hay (C), and Wheatley (D). In the first two cases there is also striking evidence of continuity in the siting of the villas. The East Worldham building is situated under the churchyard, the

*See A H M Jones, The Roman colonate, ch 13 of *Studies in Ancient Society* (ed M I Finley), 1974

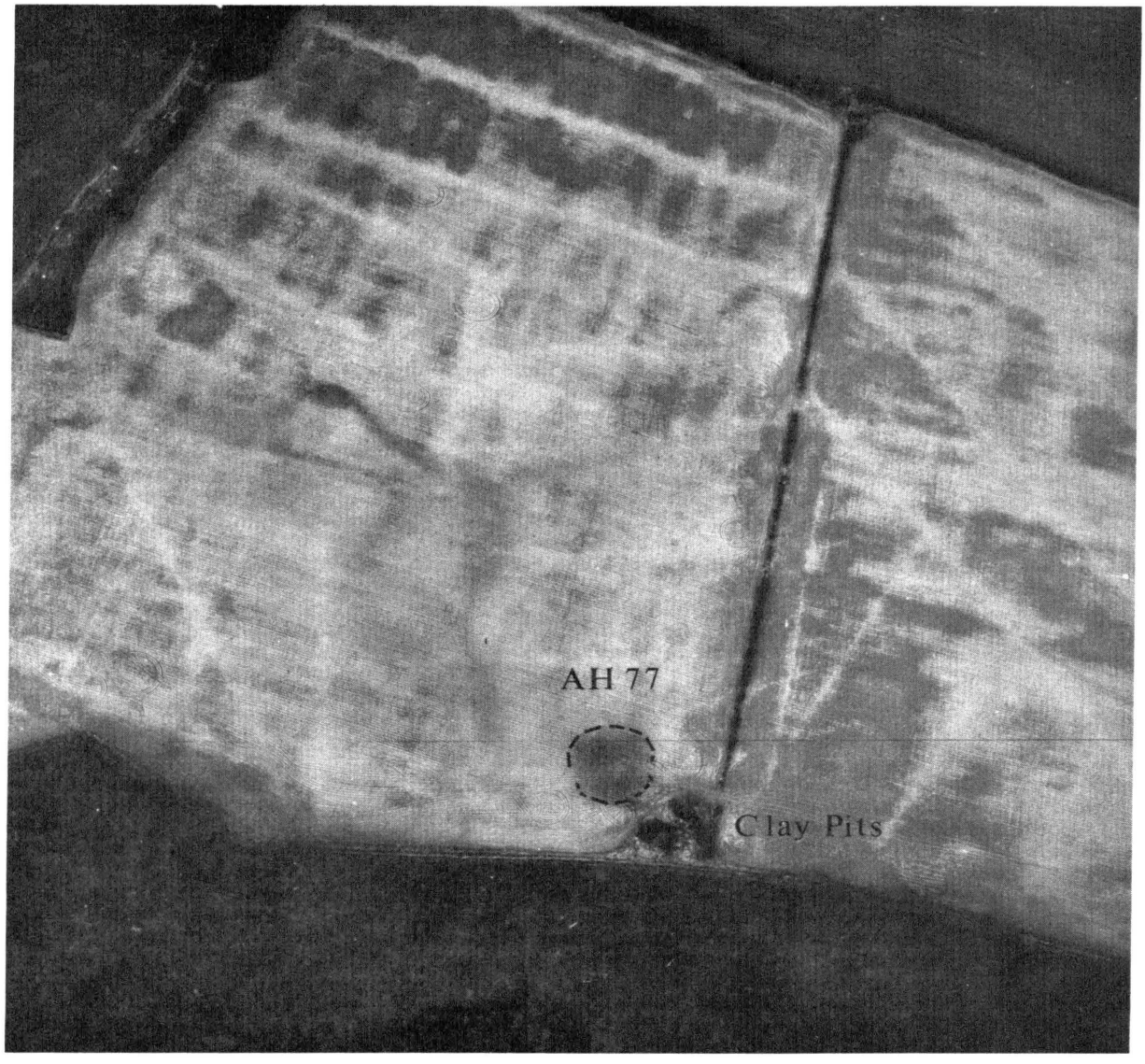


Fig 3 *Air photograph showing waster dump AH 77 and associated clay pits north of Straits Inclosure*

(National Monuments Record: Crown Copyright reserved)

church being a very early 7th century foundation, and the Wyck example is against the middle of the south-east side of the Upper Green. This Upper Green is roughly rectangular, measuring 300 × 200m and could represent the infield of the villa. If this is the case, the Saxon settlement of Wyck developed on the infield/outfield boundary, the outfield being worked as Wyck common field.

The Wheatley buildings cover a considerable acreage below the malmstone escarpment in an area that is full of springs and ill drained. There was earlier Iron Age occupation, and a series of lynchets and 'celtic fields' to the north and west may have their origin at this period. The main building, in a rectangular enclosure, was approached from the top of the escarpment to the north by means of a deep descending V-section cutting. The map (Fig 4) shows the very clear rectilinear division of Kingsley parish south of this Wheatley villa; the distinctive north-west–south-east alignment of the block of fields in the centre of it seems to relate to the building, and may perhaps represent its estate. If so, the presence of small occupation sites in the fields might suggest that the estate was leased out to freeholders.

The Alice Holt potteries lay on uncultivated heavy clay land to the north-east of this area along the banks of the Blacknest stream. The name Alice Holt, derived from 'Aelfsige's wood', is a Saxon one, but an area of woodland cleared in the medieval period and containing dump AH 77 was known as Bullinghurst, rendered phonetically in one 14th century document as 'Bolyngers'. This would suggest

Fig 4 *Surviving elements of the contemporary Roman landscape west of the Alice Holt (information derived from fieldwork, aerial photographic reconnaissance, and documentary research)*

that the original Saxon version was 'Bollinghyrst', which could be translated as 'the pot people's wood'.

Linking the Alice Holt kilns with Neatham was a minor Roman road traced in part, although its slight construction has resulted in its almost complete obliteration in the areas of open field on the malmstone plateau. Descending from the escarpment north of Wheatley it is traceable first as a gravel strip across fields, where such material is alien, and then as an embanked hedgerow on the heavy claylands to a point just north-west of dump AH 77 in the Straits Inclosure outlier: It seems likely that east of this point the road became an unmetalled trackway, perhaps linking up with that surveyed running north-west -south-east between waster dumps AH 46 and 52 (Fig 3).

Another short length of road extended south from the potteries to the north bank of the river Slea, being detected by air photographs and hedgerows on the line. Just as the road to Neatham linked the Alice Holt production centre with the road serving markets to north, west, and south, that to the river Slea linked it with the cheaper river route up the Slea, Wey, and Thames to the main eastern and London markets.

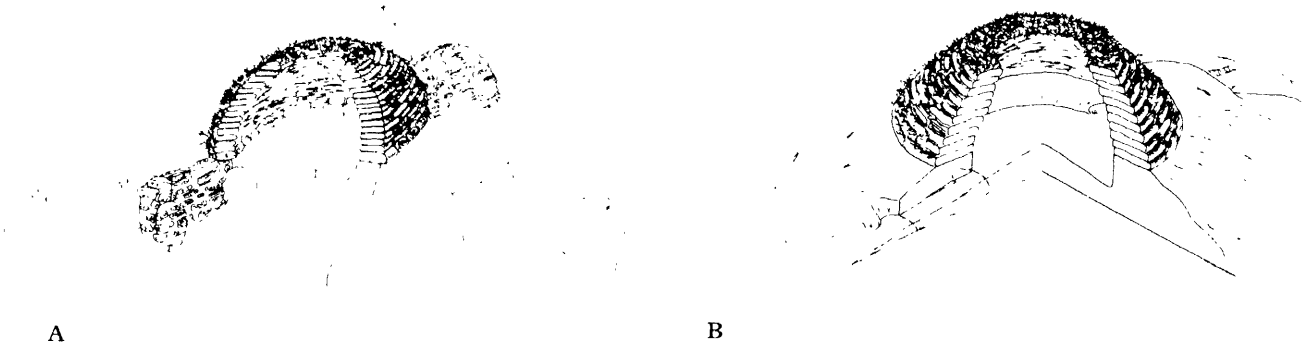
The Malthouse Farm potteries, on the southern boundary of the cultivated area with the heathland, were, as already mentioned, linked with the Chichester–Silchester road by Kingsley Street. This road seems to have formed the southern boundary of the area of rectilinear land division and was sighted on the top of Ranks Hill, a conical sand eminence, to the east, and its alignment, if projected sufficiently westwards, appears to be directed towards Winchester.

A close examination of the social and administrative organization of the area in medieval times shows a correlation with what is known of the Roman layout. Nearly all of it came under the great royal manor of Neatham, with Binsted and Kingsley being directly controlled and large subsidiary manors in Wyck, South Hay, and Wheatley. In Roman times the rectilinear system of land division is largely restricted to Binsted and Kingsley, with substantial villas where there were later sub-manors. This, coupled with the examples of continuity at East Worldham and Wyck, poses a question: did a Saxon royal manor evolve from a large Roman estate administered on similar lines?

Technology

No well preserved 1st or early 2nd century kilns have so far been found. The Stoneyfield kiln, which is of mid-2nd century date, was almost entirely destroyed (Lowther 1939), and the 1974 excavation of AH 5 by the authors did not produce any coherent structures apart from a hollow containing a number of complete and semi-complete pots overlaid by a concentration of burnt turves. It is tempting to regard this as the remains of a turf clamp with some of its last load, but there is no burnt clay lining to the hollow nor any loose fragments of more substantial kiln fabric. Nevertheless, one is reminded here of the late Harold Falkner's remarks on local 19th century clamp firing: 'I am informed by a potter that rude kilns were in use on a larger scale in this part of the country until recent times, and that the dome was demolished between each baking. That is to say, that the pottery was placed on the floor of the kiln, charcoal built up round and between it, and the whole covered with heather and clay and burnt, more fuel being fired in the flues.' (Falkner 1907). If for heather one reads turves, this closely resembles the 1st century turf kilns at Hardingstone and Rushden, Northants (Woods 1975). Prefabricated kiln furniture is a phenomenon of early Alice Holt waster dumps, with coil-built clay rings and perforated clay sheeting, reminiscent of similar examples from Wood Burcote near Towcester. If such was the nature of the early Alice Holt kilns, by the late 2nd century they had developed into more substantial structures.

The earlier kiln under waster dump AH 55 (Fig 5) was originally constructed on the surface of the natural clay, with two later rebuilds above. Like all adequately published examples from the Alice Holt/Farnham complex they were of the double-flue updraught variety. The final and best preserved example consisted of a roughly circular oven 1.30m in diameter sunk into the clay about 0.30m. Its walls were vertical and the floor was slightly convex. Opening into the oven were two opposing flues on east and west, which were probably little more than shallow scoops, with flue arches 0.40m wide but only 0.16m high. The walls and floor of the oven bore evidence of a strong reducing atmosphere, being baked grey to a depth of 0.04m, whereas the flues only showed traces of oxidation. It is probable that the constriction of the flue arches served the dual purpose of improving the draught to the fires, thus increasing the oven temperature. It would also



A B

Fig 5 *Reconstruction of A. the Overwey kiln 1 and B. the waster dump AH 55 kiln*

facilitate blocking of the flues when the kiln was cooling, for the purpose of reduction.

The excavated kilns belonging to the period after 270 were all fairly substantial constructions. All three Overwey examples were of similar design, dug in below ground level, with kiln 1 the best preserved and most interesting (Clark 1950). It was constructed in a clay-filled trench in the natural sand about 0.75m deep and 4.75m long with two opposing flues constructed of sandstone blocks set in clay opening into a central oven 2.05m long and 1.30m wide constructed entirely of clay. The sides of the oven were topped by a course of loose sandstone and clay blocks tilting inwards at an angle of about 10°, which seems to indicate that the top of the chamber was not a solid clay construction. On the other hand, it is equally difficult to believe that the superstructure was entirely of blocks. Apart from the difficulty of making such a construction gas-tight, use of such heavy material without bonding could easily lead to unfortunate accidents with a loaded kiln. It seems more likely that the stonework was restricted to one or two courses with turves above (Fig 5).

All three kilns contained quantities of blackened sand, which had also been backfilled into the stoke-pits and pits flanking the kiln chambers. These latter pits were probably quarries for sand to smother the kiln load on cooling, to ensure good reduction and minimum wastage. Indeed, the sand may have been thrown into the top of the chamber. Recent experimental kiln firings have shown that pottery could have been fired with an open-top oven, reduction being achieved by covering over the pots when they were hard enough to take the weight (Detsicas 1973).

The Snailslynch and 'Mr Langham's' kilns were of similar construction, although the latter may have had a permanent dome since there is reference to 'curved tiles for the inner lining and the whole covered on the outside with some 6ins of burnt mortar and clay' (Anon 1927).

[Since the above was written, excavations of a series of successive 3rd century kilns in dump AH 52 have suggested that, on occasion, one of the two flues, apparently the more uphill one, had its outer end blocked off with kiln waste so that the flue was deflected upwards into the base of a pit thus created and looked more like a chimney. This may indicate that these double-flued updraught kilns could also be fired in a single-flued horizontal draught manner when necessary. One flue survives completely intact and has a capacious exterior end funnelling into the interior with floor and roof converging in a short distance to a 'letter-box' section.]

In an endeavour to determine the original firing temperatures of Alice Holt pot fabrics, a series of experiments were carried out at the University of Surrey on eight sherds (Appendix 2). With the exception of one sample of black-burnished fabric, they all fell within a range of 890±50°C with no obvious difference in the firing temperatures of samples of different date. Accepting the limitations in using such small quantities, it seems that there was no major change in firing temperature throughout the period of production in the Alice Holt.

Before the mid-3rd century the Alice Holt pottery assemblages are characterized by a considerable variety of fabrics, differing in the coarseness of sand filler used. These fabric types, listed below, are based on physical composition only, since it was felt that colour and surface appearance are an unreliable guide when dealing with wasters.

Fabric A: Clay with sub-0.25mm grain quartz sand and the occasional pellet of grog
B: Clay with most added quartz sand of sub-0.25mm grain size but some 1.00mm grain material also
C: Clay with *c* 1.00mm grain quartz sand
D: Clay with 0.25–2.00mm grain quartz sand
E: Clay with quartz sand ranging up to 3.50mm grain size
F: Clay with sand and small pebbles up to 7.00mm across
G: Clay with sub-0.25mm grain quartz sand and much grog tempering.

The variety of fabric seems related not only to vessel size but also to form and from that presumably function. (see pp 20-31). The addition of the coarse sand filler of fabrics C, D, E, and F could be for several reasons. First, it reduces shrinkage, enabling greater size control to be maintained. Secondly, the addition of such filler opens up the fabric of the vessel, thereby speeding up the firing process and cutting down fuel consumption and time. Thirdly, a heavily sanded vessel has a better chance of surviving temperature fluctuation in a kiln because of the strength imparted to it by the same, and will also last longer if exposed to variable heat during usage.

The decline of coarse tempering at Alice Holt during the early 3rd century, in particular for large storage jars, was probably due to improved clay preparation and kiln temperature control. Poorly wedged clay contains more cavities in which gas pressure can build up during firing, causing fabric rupture, although this is partly counteracted by the coarse sand strengthening. This fabric improvement thus removed one of the chief reasons for having coarse tempering.

Coinciding with the introduction of large Class 1C storage jars in fabric A during the 3rd century, all other fabric types (except E used for Class 10 beehives), largely disappeared. With the exception of the later use of fabrics C and D for Class 3C vessels in the 4th century, this continued until the end of the industry.

The appearance of an applied neutral slip after about 270 resulted in a curious phenomenon, in that this slip could be made to fire either black or white on reduced grey fabric. The black-burnished refired sherd referred to earlier had been fired originally to the lower temperature of 700°C, whereas a white slipped fragment had been fired to 950°C. It is likely that the black-burnished self and later applied slip was due to carbon which, although it had been burnt out of the relatively porous body of the vessel, could not be liberated from the burnished fine-grained slip so readily at a low temperature, but was finally expelled on a higher temperature being reached.

The whiteness of the basic slip could be due to its being of comparatively iron-free clay such as that from the Reading beds which outcrop in Farnham Park. Support for this comes from the account of 'pipe clay' being found in the excavation of Mr Langham's kiln (Anon. 1927).

The Leeds experiment showed that a considerable temperature variation could exist in different parts of a kiln chamber, and it seems possible that a skilled potter could place vessels in different parts of the chamber or stack depending on whether he wanted black or white slip.

Most of the potters' equipment was of a kind not likely to survive. Fragments of a rotary quernstone have been found on dump AH 65 and they may have been used as flywheels on potters' wheels. A curious fired-clay slab decorated with impressed circles from AH 55 (Bennett *et al.* 1963) was clearly part of a larger object, perhaps a clay flywheel with the circles for grip. Combs and templates used by the potters were probably of wood, leaving no trace, but area burnishing was evidently carried out with rounded pebbles such as can be picked up easily in the locality. One example from AH 16 has had its cortex removed from two patches by its use in burnishing sandy clay, and the black flint beneath was polished to a fine gloss.

The corpus of pottery types: the origins of the industry

The corpus is divided into two parts, the first dealing with the late 1st–early 2nd century forms and based on the material from the excavation of AH 5, and the second part dealing with the remainder of the sequence. Because the first part is both a corpus and a stratified assemblage from AH 5, it covers minor variation in form to a greater extent than the second part.

The late material in the corpus is largely drawn from Alice Holt, Great Mavins, Six Bells, and Overwey material, most of it previously unpublished.

There is no evidence for large-scale pottery production at Alice Holt before AD 60 but there are indications, particularly from the excavation of waste dump AH 5 in 1974, of small-scale local production supplying adjacent areas. Pottery manufacture may indeed have commenced during the years preceding the Roman conquest, as the ground surface beneath AH 5 was littered with a mixture of romanized grey ware sherds and coarse, crushed burnt flint-tempered Iron Age fabric. No Iron Age type rims have so far been found, but it would appear that this earliest material had nothing in common with the later Roman products and could easily be occupation debris.

The amount of Roman material from the scatter beneath dump AH 5 was too small for any meaningful statistics to be worked out on relative percentages of different vessel types present, but pre-Flavian deposits at Ructstalls Hill, Basingstoke, containing quantities of Alice Holt material have been so examined. Here the earliest Alice Holt pottery made up 67% of the assemblage with one feature immediately obvious, the lack of form range. Class 1 cordoned jars made up 47%, Class 4 bead-rimmed jars 49%, and Class 9 rough storage jars 4% of the material. These three vessel types are derived from local Iron Age ones, so that the early industry was based, almost entirely, on native cultural traditions with advances limited to technological improvements.

The period following on the Boudican revolt in AD 60 saw the establishment of a sizeable pottery industry at Alice Holt with the introduction of vessel types alien to Britain including flagons, bowls, and Gallo-Belgic platter imitations alongside the preponderant local forms. The growth of the industry was clearly not due to military contracts as, with the exception of four stray vessels from Usk and one from Gloucester, no military installation of this period has yielded any Alice Holt pottery. Much of the impetus probably derived from the better economic climate following the Roman efforts in improving administration under a series of capable governors during the early Flavian period. Londinium became a greater administrative and commercial centre after the Boudican sack, growing rapidly in importance as a port and trading centre, as the capital city of the Province. The population and its material needs also expanded during the Flavian period and, until local pottery production centres could be established, Alice Holt supplied it with nearly a quarter of its wares.

It is difficult to detect any major changes in pottery types between AD 60 and the mid-2nd century other than the appearance of Class 3A flat-rimmed jars and Class 7 lids around AD 90 and, as can be seen from the analysis of three later 1st century deposits from the excavation of AH 5, set out in Table I, the original local derived pottery types remained overwhelmingly predominant.

TABLE 1 Analysis of late 1st century deposits in AH 5

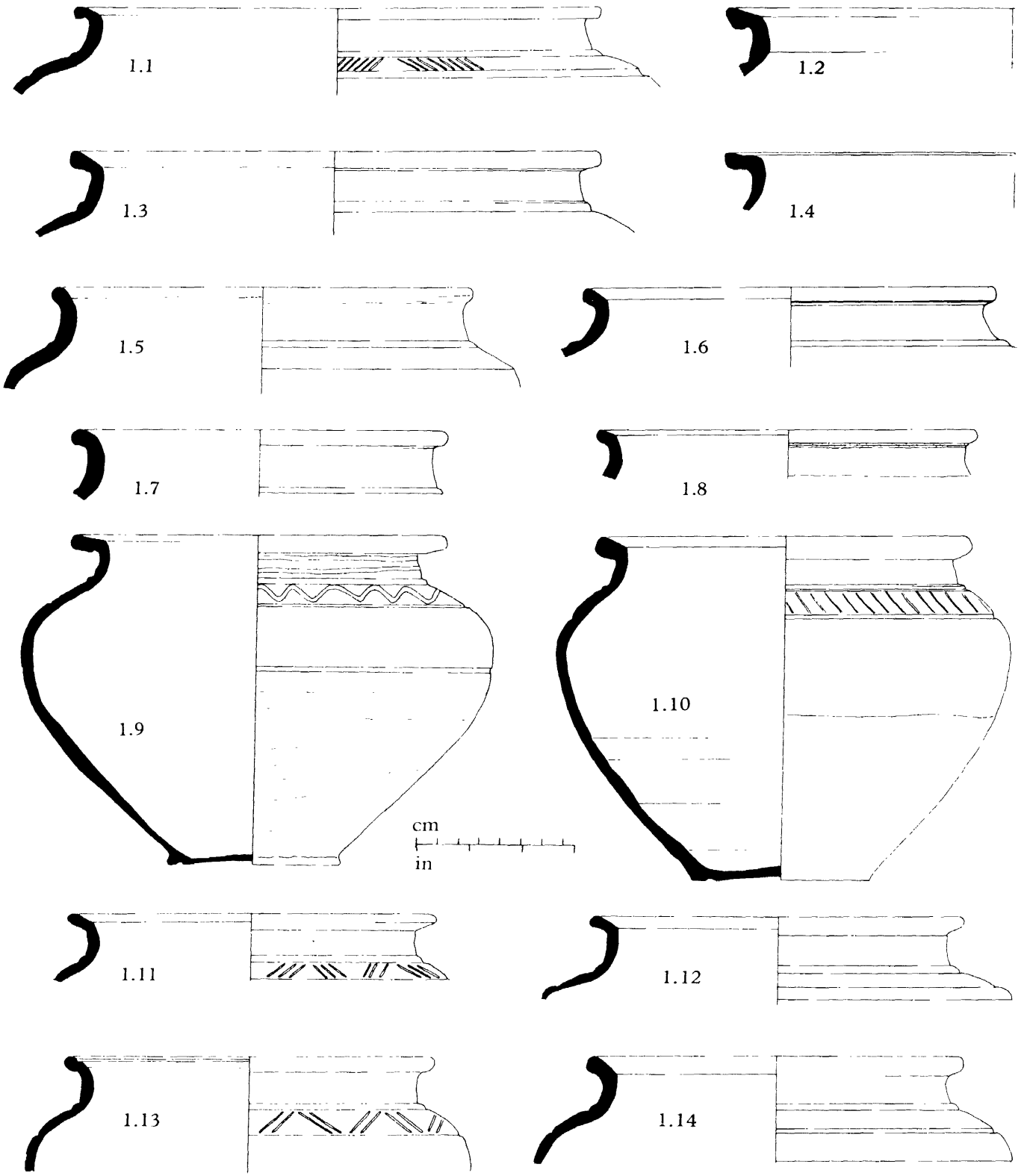
Class		Pits B1	B2	B15	Total	%
1	cordoned jars	50	200	44	294	46
1a	cordoned and necked jars	6	13	2	21	3 5
2	jars with pedestals	—	—	-	—	—
3	devolved butt beakers	—	—	—	—	—
3a	flat-rimmed jars	16	62	—	78	12
3b	everted-rim jars	1	1	1	3	0 5
4	bead-rimme l jars	29	98	41	168	27
5	bowls	9	8	2	19	3
6	imitation Gallo-Belgic platters	—	5	2	7	1
7	lids	2	10	2	14	2
8	single- and double-handled flagons	4	12	3	19	3
9	hand-made storage jars	2	6	2	10	2
	Totals	119	415	99	633	

Class 1: Cordoned jars (Figs 6 and 7)

This class of vessel was predominant, forming about 46% of the later output of AH 5. Of the total 294 different rim fragments listed in Table I, 251 are sufficiently large to give external rim diameters of vessels. The fabrics were also examined and their physical compositions noted, and the results incorporated in the histogram (Fig 8).

1.1 Rough-surfaced medium-grey Fabric A with burnished multiple chevrons on shoulder. Phase 1
1.2 Dirty buff-grey Fabric A with harder dirty grey surfaces. Phase 2
1.3 Biscuity-brown Fabric G. Phase 2
1.4 Soft buff-grey Fabric G. Phase 2
1.5 Hard medium-grey Fabric A with incipient surface oxidation on interior and orange streaks over rim top and exterior. Phase 1
1.6 Rough-surfaced medium-grey Fabric A. Phase 1
1.7 Hard rough-surfaced medium-grey Fabric A. Phase 1
1.8 Coarse pinkish-buff Fabric G with pale grey rough smoothed band around neck of vessel. Phase 1
1.9 Hard grey Fabric A oxidized orange with medium-grey exterior surface. Phase 2
1.10 Hard medium-grey Fabric B. Burnished decoration on shoulder. Phase 2
1.11 Hard rough medium-grey Fabric A. Burnished decoration on shoulder. Phase 2
1.12 Hard medium-grey Fabric A Phase 2
1.13 Hard orange Fabric A with dark grey surfacing and smoothed rim top Phase 2
1.14 Buff-grey Fabric A Phase 2

Fig 6 Pottery Class 1 (facing page)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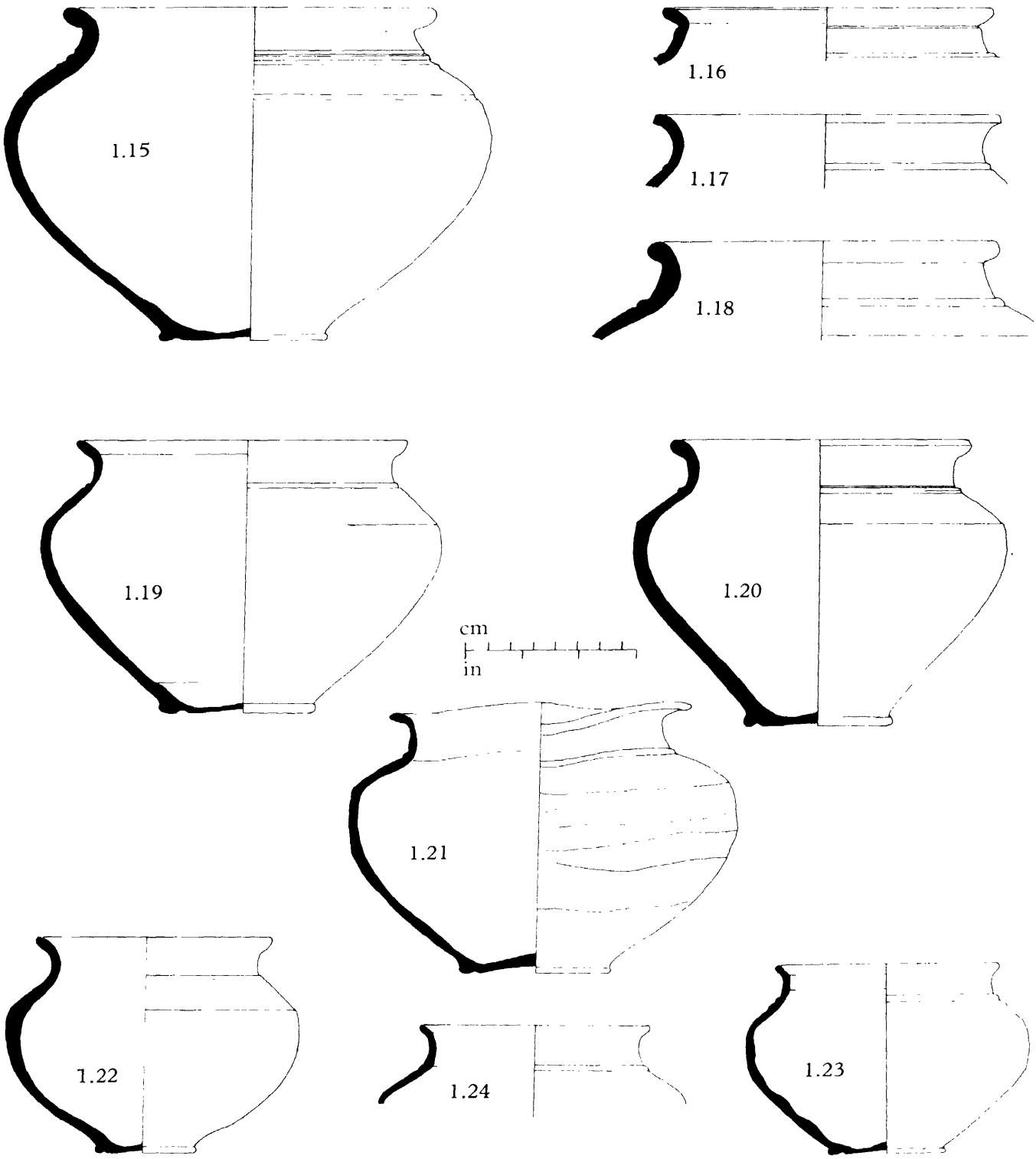
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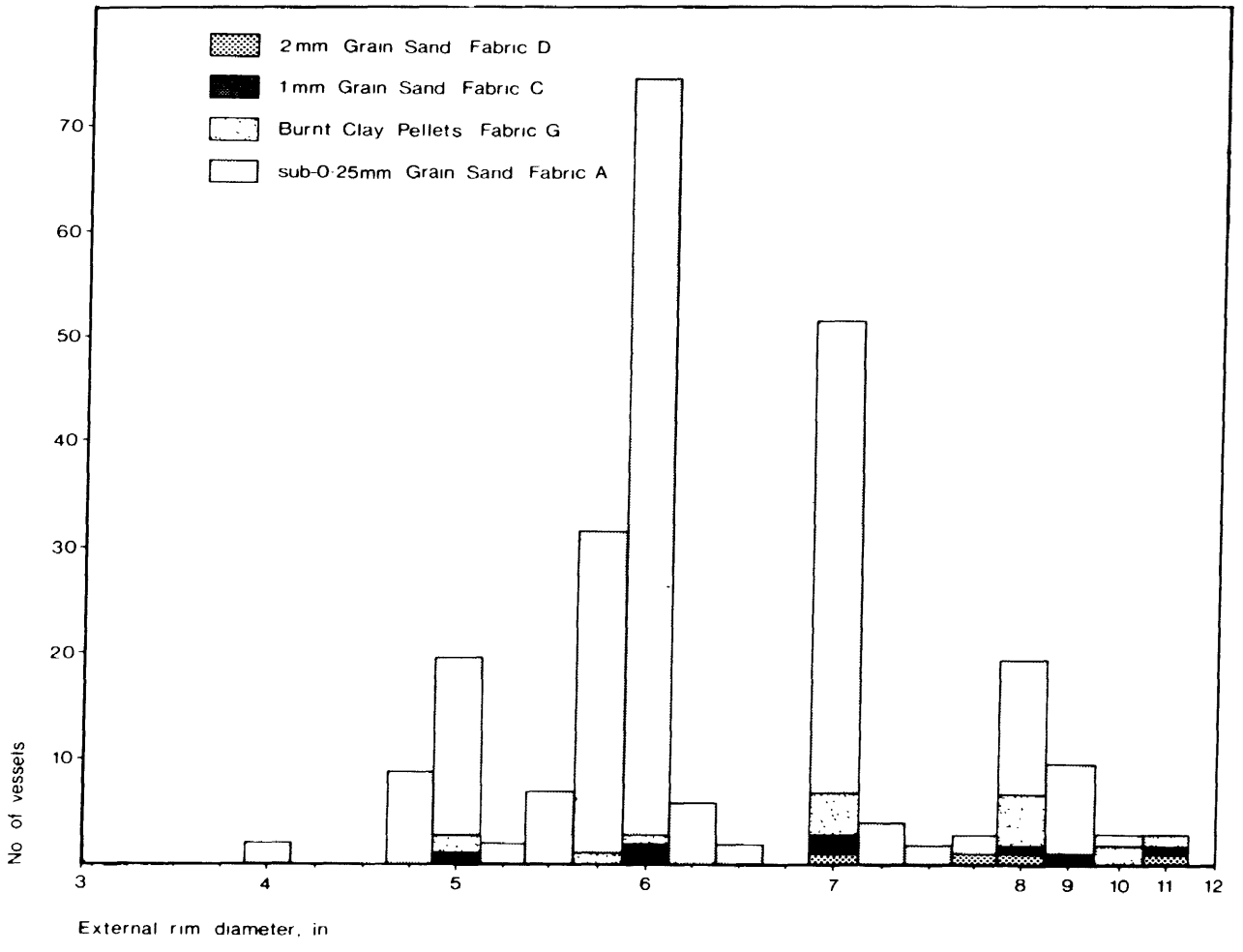


Fig 8 *Class 1 products from dump AH 5*

Because of increasing difficulty in determining accurate rim diameters with larger vessels, diameters are shown at ¼in intervals in all histograms up to 8in external rim diameter, and above that at 1in intervals. (Whereas measurements in this paper are generally metric, because of the close relationship of Imperial feet and inches to the Roman system, the former are used in histograms.)

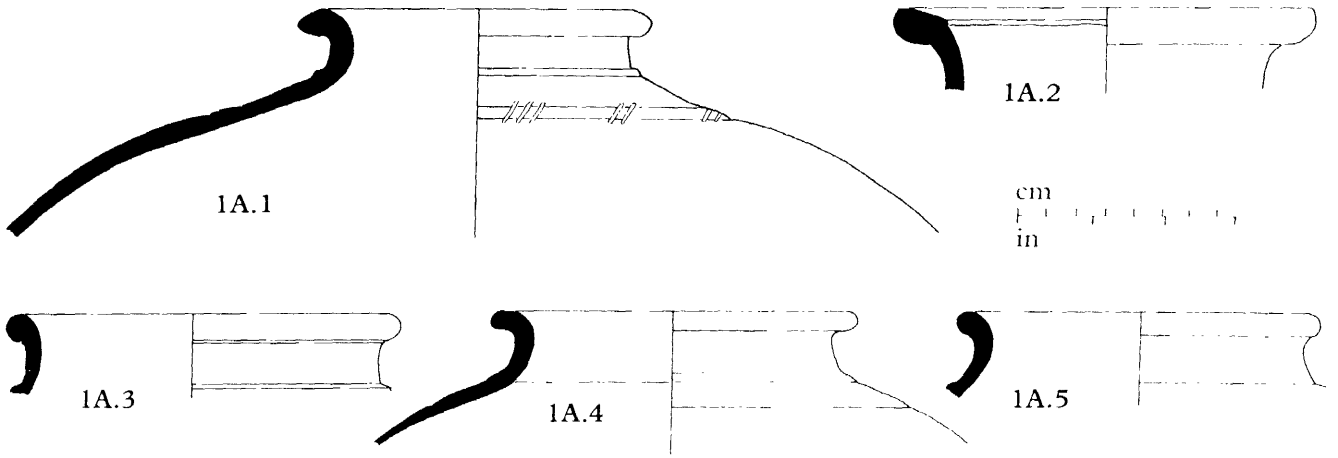
1.15 Orange Fabric A with grey-buff surfaces. Phase 2
1.16 Soft light-grey Fabric A with darker, harder surfaces. Polished zone on rim top. Phase 2
1.17 Soft medium-grey Fabric A with darker, harder surfaces. Phase 2
1.18 Orange-brown Fabric A with grey patches. Phase 2
1.19 Hard medium-grey Fabric A with smoothed rim top. Phase 2
1.20 Hard medium-grey Fabric A. Phase 2
1.21 Hard blue-grey Fabric A with carbon flecks. Knife-trimmed round body by hand. Badly wasted. Phase 2
1.22 Sooty-brown Fabric A with blackened surfaces. Phase 2
1.23 Hard medium-grey Fabric A with rough orange surfaces. Phase 2
1.24 Soft brown-grey Fabric A. Phase 2

Fig 7 *Pottery Class 1 (contd) (facing page)*

These jars were manufactured in a series of sizes from 4in to at least 11in external rim diameter, and rim sizes cluster at approximately 1in intervals. There are two peaks in the histogram at 5½–6in with 106 vessels, and 6¾–7in with 52 vessels. Vessels smaller than and up to 6½in tend to be undecorated and have angular shoulder profiles with simple rims, although one example has a burnished wavy line around the girth.

The larger vessels from 6¾in upwards differ in that the shoulder is usually rounded with a decorated band between the neck cordon and a shoulder groove. Decoration when present takes the form of burnished chevrons, zigzags, or oblique lines. These larger vessels also tend to have more complicated rims with flattening of the top or rarely, as with 1.13, a groove.

A circular foot groove is universal with both smaller and larger size groups and, as regards tempering, this class is fairly uniform, with most jars in Fabric A. Fabric G does, however, increase in frequency with larger vessels, and from 7in diameter upwards a few vessels are in light-tempered Fabric D.



1A.1 Soft light-grey Fabric A with harder medium-grey surfaces. Good quality. Phase 2
1A.2 Light-grey Fabric G with harder medium-grey surfaces. Phase 2
1A.3 Soft orange Fabric B with harder medium-grey surfaces. Phase 2
1A.4 Soft brown-grey Fabric D. Phase 2
1A.5 Soft light-grey Fabric A with harder medium-grey surfaces. Phase 2

Fig 9 Pottery Class 1A

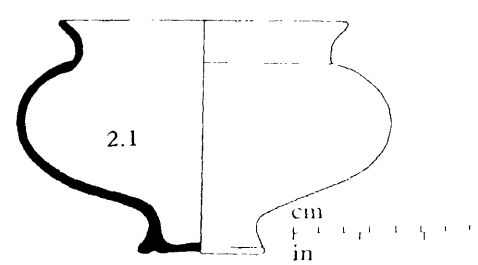
It would seem that most vessels in the 5–8in range were intended to be in hard-fired grey ware although, as size increases, the number of vessels in grey-surfaced oxidized fabric increases also. Above 8in the vessels seem to be more indifferently fired, in buff-grey and brown fabrics; below the 5in range the same is true, but with a tendency towards deliberate blackening of the exterior surface.

Class 1a: Cordoned and necked jars (Fig 9)

In the analysed sample (Table I) this class made up just over 3% of the assemblage, although some rims included under Class 1 may possibly belong here. There are not enough rims for histograms of sizes and fabrics to be prepared. Most rims are in the diameter range 4.75–5.75in and differ from Class 1 in their thicker section and heavier beading. Form 1A.3 is of note in having a slight undercut to the bead, a technique associated with later forms in this class.

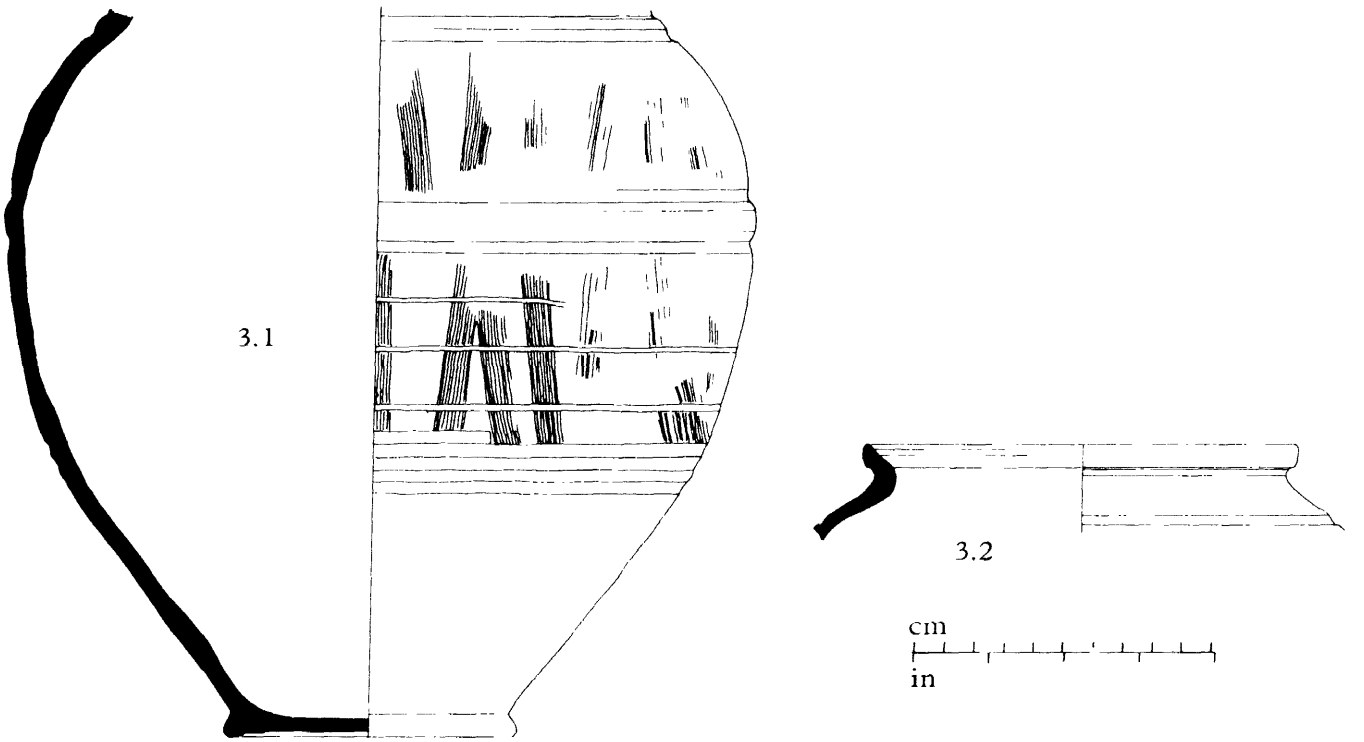
No complete profiles survived in the excavated material, and several large bases could equally well belong to pitchers. Decoration when present is similar to that on the larger examples of Class 1, consisting of bands of burnished chevrons or vertical lines edged by concentric grooves on the shoulders of vessels. As with some larger cordoned jars, most examples of this class are in Fabric G, although a few examples are in other fabrics. A superior finished soft light-grey ware with smooth, hard medium-grey surfaces is associated with the former, although sometimes the core is oxidized. The similarity in rim form, decoration, and fabric of Classes 1 and 1a suggests allied function for these vessels. Class 1 is derived from similar native forms which are a major component in Belgic pottery assemblages, whereas Class 1A only appears after the Roman invasion.

Accepting for the moment that Classes 1 and 1A by virtue of design and fabric have a similar function, the size of Class 1A is quite clearly for storage, and the narrow neck and dense fine fabric suggests liquid. It may be said that the superior smooth-finished grey ware mentioned above is only found with frequency elsewhere in connection with pitchers, which were undoubtedly liquid containers, and the later history of the type would suggest that it is the native equivalent of the large, two-handled *lagena*. The Class 1 cordoned jars may perhaps be regarded as two problems in one. The larger vessels are of a capacity approaching that of vessels of Class 1A but, being wide-mouthed and lid-seated, were also probably used for some kind of storage. It may be that these larger Class 1 vessels were used for wine fermentation, the Class 1A ones for wine storage, and the smaller Class 1 pots as wine cups. This, of course, is only one interpretation out of many alternatives, but what does seem clear is that Classes 1 and 1A should be considered together because of their similarity.



2.1 Soft grey Fabric C with buff-brown surfaces blackened on one side. Phase 2

Fig 10 Pottery Class 2



3.1 Hard blue-grey Fabric G decorated with vertical combing. Phase 1
3.2 Hard medium-grey Fabric G. Phase 1

Fig 11 Pottery Class 3

Class 2: Jars with pedestals (Fig 10)

This is a class of vessel which could be derived from a glass original. There is a type of globular glass vessel with oblique mouldings on the sides, probably manufactured in northern Gaul and exported in quantity to Britain during the late 1st century (Bushe-Fox 1932, pl XV—57). The Alice Holt Class 2 pottery type has a similar profile but this in itself is no proof of relationship as there is a pre-Roman Belgic form in pottery. What seems to indicate derivation from the glass form is the frequent skeuomorphic application of vertical or oblique paint and later fired slip bands on the exterior of the body in imitation of the mouldings. The superior finish to these vessels resulting from the use of all-over mirror burnish on very thin, fine fabric is also significant. Throughout the long history of this type it remains a rarity, probably owing to the skill needed in manufacture.

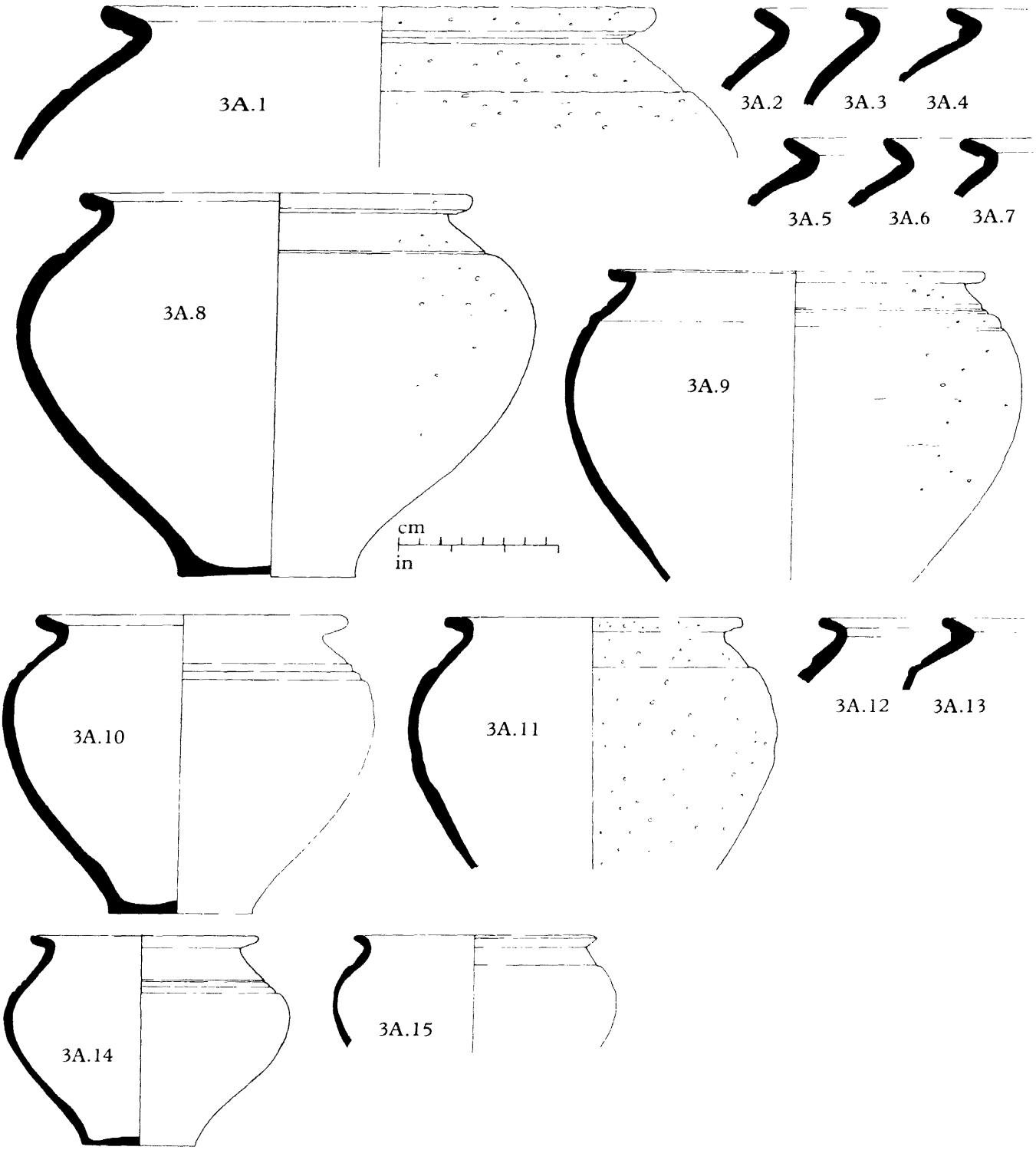
Class 3: Devolved butt-beakers (Fig 11)

Unlike the preceding classes, which form reasonably well defined groups of vessels, Classes 3, 3A, and 3B pose a problem in that there are forms which combine features of more than one of these classes. Class 3 is the rarest of the three and is represented at dump AH 5 by no more than the two illustrated examples. These (3.1 and 3.2) are from phase 1 deposits, suggesting that Class 3 is more a phase 1 type.

Class 3A: Flat-rimmed jars (Fig 12)

This was the third most common type of vessel, making up nearly 12% of the analysed sample. The marked absence of Class 3A vessels and Class 7 lids from early and pre-Flavian Alice Holt assemblages at Ructstalls Hill, Basingstoke, at Charterhouse, Godalming, and at London (Walbrook) in particular suggests that they appear about AD 90. The jars are of non-British tradition and the presence of similar forms in the Rhineland and at Trier during the late 1st and 2nd century may indicate their origin (Gose 1950, types 535 and 537).

Of the total of 78 rims in the sample shown in Table I, 61 were large enough to have their rim diameters and physical compositions worked into the histogram (Fig 13).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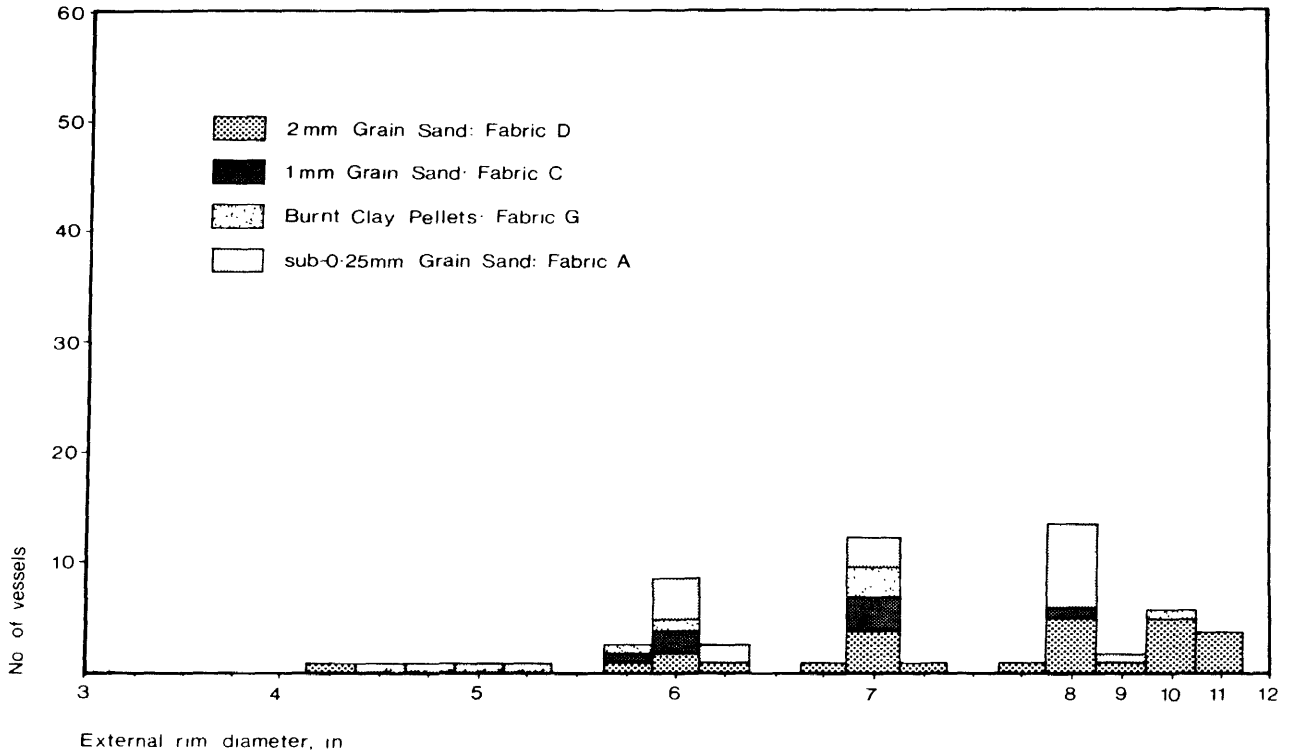


Fig 13 Class 3A products from dump AH 5

This histogram gives a very different picture from that for Class 1. The range of rim sizes is similar but here the resemblance ends. There are three rim size peaks at 6in, 7in, and 8in with 15, 15, and 16 vessels respectively and three basic schools of vessel decoration applied to the shoulder:

A Offset
B Multiple cordon
C Single decorated or undecorated cordon.

The only form of cordon decoration from AH 5 was one of oblique fingernail impressions. Unlike Class 1 there are no changes in design related to vessel size, all forms of decoration being associated with all sizes. The decoration of the cordon proper distinguishes these vessels when dealing with small rimless sherds from early cordoned jars, where the cordon is never decorated. Another major difference lies in a predominance of heavy-tempered C and D fabrics in vessels down to 6in external rim diameter, the vessels tending to be indifferently fired, regardless of size, with soft, underfired oxidized fabrics and frequent surface blackening.

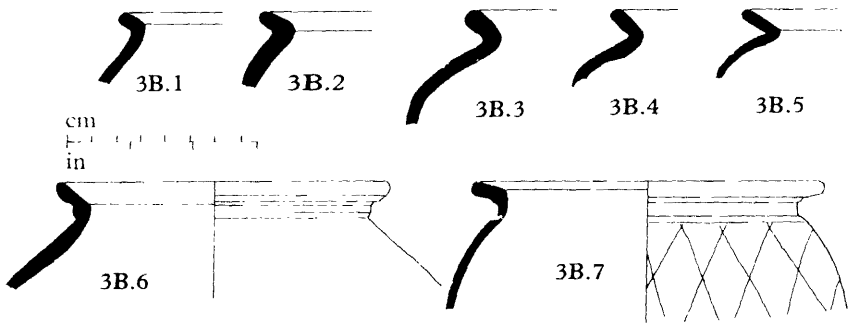
3A 1 Biscuity-brown Fabric D with rough blackened surfaces. Phase 2
3A 2 Soft orange Fabric D with buff-grey surfaces. Phase 2
3A 3 Soft orange-brown Fabric D with blackened surfaces. Phase 2
3A 4 Soft orange-brown Fabric A with blackened surfaces. Phase 2
3A.5 Hard medium-grey Fabric D. Phase 2
3A.6 Rough orange Fabric D with brown surfaces. Phase 2
3A.7 Soft orange Fabric D with hard rough, light-grey surfaces. Phase 2
3A.8 Soft grey Fabric D. Phase 2
3A.9 Rough, sooty grey-buff Fabric D with blackened surface. Phase 2
3A 10 Hard medium-grey Fabric C. Phase 2
3A.11 Rough hard medium-grey Fabric D. Phase 2
3A.12 Orange Fabric A with buff-grey surfaces. Phase 2
3A 13 Soft buff-orange Fabric A with rough light-grey harder surfaces. Phase 2
3A 14 Soft grey Fabric C with harder brown grey coating and patchily greyed surface. Phase 2
3A 15 Light grey Fabric A with orange surfaces. Phase 2

Fig 12 Pottery Class 3A (facing page)

Class 3B: Everted rim jars (Fig 14)

This is another rare class of vessel, at this stage not easily distinguished from Class 3A when dealing with small rim sherds. Once again there is so little material available as to make conclusions about fabrics and sizes difficult, but it would appear that coarse sand tempering was less important than in Class 3A and that a number of vessels had surfaces deliberately polished as well as blackened.

Type 3B.7 is so far unique in the dump AH 5 assemblage in having burnished lattice decoration. These rare 1st century examples of Class 3B may be the first imitations of Dorset black-burnished ware cooking pots appearing alongside Class 3A cooking vessels.



3B.1 Soft grey Fabric A with red coating and dirty grey surfaces. Phase 2
3B.2 Soft medium-grey Fabric A. Phase 2
3B.3 Soft pinkish-red Fabric C with darker, harder buff-brown surfaces. Phase 2
3B.4 Very coarse grey Fabric D with smooth black surfaces. Phase 2
3B.5 Buff Fabric G. Phase 2
3B.6 Sooty grey Fabric A with polished black exterior surfaces. Phase 2
3B.7 Light-grey Fabric A with burnished lattice decoration. Phase 2

Fig 14 Pottery Class 3B

Class 4: Bead-rimmed jars (Fig 15)

This is the second most common class of vessel, forming 27% of the analysed sample (Table I). Material from Phase 1 at AH 5 is represented in the corpus by 4.4, 4.5, 4.9, 4.10, 4.22, and 4.26, and although there is relatively little material from this phase there is a tendency towards simple undeveloped beads without undercutting and considerable use of rough, patchy brown-grey fabric, often with rather soapy finish, although good hard grey wares are also present. Of the total of 168 bead-rim fragments analysed from the phase 2 material, 18 were large enough to determine rim diameter and, together with analysis of fabric, are incorporated in the histogram (Fig 16).

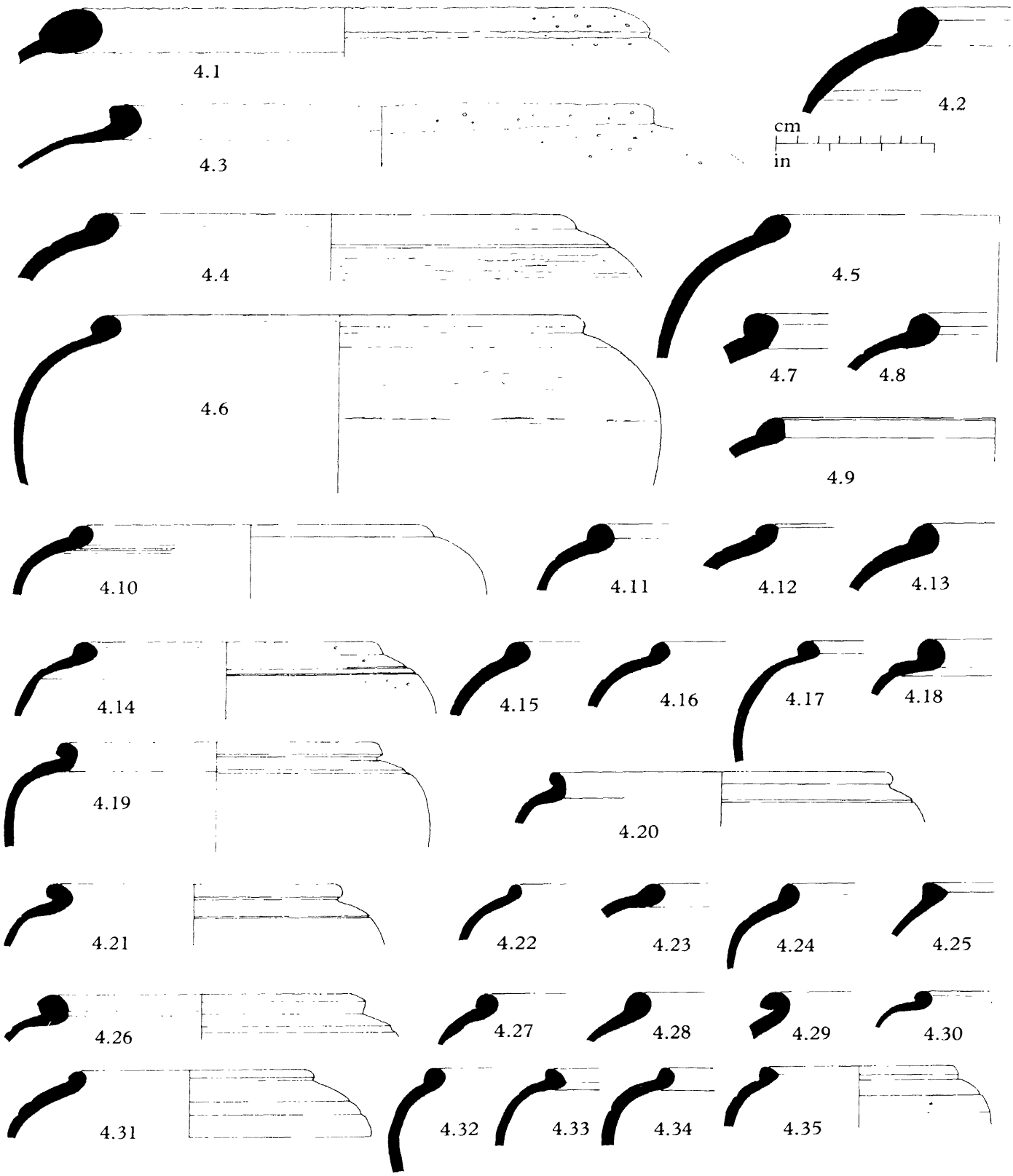
The pattern of external rim diameters for this group is not unlike that for Class 1, with the main peak at 5½–6in with 65 vessels, and a secondary peak at 6¾–7in with 25 vessels. Vessels are usually undecorated, apart from a shoulder groove on about 50% demarcating a smoother zone extending over the bead; the bases tend to be plain. There are a few exceptional examples like 4.31, where the body of the vessel is decorated with horizontal grooves, and 4.19, which has an incipient shoulder cordon. The design of the Phase 2 rims shows great variety, ranging from undeveloped beads like 4.23 to developed vertical beads like 4.18 with or without undercutting, and also triangular aberrations like 4.25. The complete profiles from AH 5 are lacking but examples from elsewhere show that most vessels had the high-shouldered pear-shaped body as met with in Classes 1 and 3A, although a few vessels like 4.25 had a more barrel-shaped profile.

The pattern of tempering differs from that found in both Classes 1 and 3A in that the largest vessels, of 10–12in external rim diameter, are nearly always in heavily tempered Fabric D, although the bulk of smaller vessels are in Fabric A.

As with Class 1, vessels up to 9in rim diameter are mostly fired hard grey but the larger ones are usually oxidized orange-brown, sometimes with a soft grey core and frequently with blackened exterior surfaces as with Class 3A. Some examples have a band of shoulder decoration, incised or burnished, similar in design to that on larger Class 1 and Class 1A vessels and similarly bordered by grooves.

4.1 Coarse orange-brown Fabric D with rough harder grey surface Phase 2
4.2 Coarse orange-buff, patchy rough surfaced Fabric D with grey-brown interior surface. Phase 2
4.3 Coarse soft grey Fabric D with orange patches. Hand-made. Phase 2
4.4 Hard rough brown-grey Fabric C with one large angular 5.00mm grit. Smoothed-over rim. Phase 1
4.5 Reddish brown Fabric C with rough grey brown surfaces and darker charcoal grey patches. Phase 1
4.6 Hard rough grey-brown Fabric C with dark-grey surfaces. Phase 2
4.7 Dirty brown Fabric D with blackened, rough smoothed surfaces Phase 2
4.8 Orange-brown Fabric D with grey-brown surfaces smoothed over rim. Phase 2
4.9 Hard rough medium-grey Fabric D. Phase 1
4.10 Hard rough medium-grey Fabric G. Phase 1
4.11 Hard medium-grey Fabric A smoothed over rim. Phase 2
4.12 Soft medium-grey Fabric A. Phase 2
4.13 Rough brown-grey Fabric A with rough brown surfaces. Phase 2
4.14 Hard medium-grey Fabric C. Phase 2
4.15 Rough grey Fabric A. Phase 2
4.16 Soft brown Fabric A with grey interior surface. Phase 2
4.17 Hard medium-grey Fabric A. Phase 2
4.18 Hard medium-grey Fabric A with light grey core. Phase 2
4.19 Hard medium-grey Fabric A. Phase 2
4.20 Soft orange Fabric A with buff core. Phase 2
4.21 Hard medium-grey Fabric A. Phase 2
4.22 Soft light-grey Fabric G with brown coating and blackened surface. Phase 1
4.23 Hard medium-grey Fabric A. Phase 2
4.24 Hard medium-grey Fabric A. Phase 2
4.25 Rough medium-grey Fabric C with lighter grey external surface. Phase 2
4.26 Hard rough medium-grey Fabric A. Phase 1
4.27 Soft orange Fabric A with hard brown-grey surfaces. Phase 2
4.28 Soft medium-grey Fabric A. Phase 2
4.29 Hard medium-grey Fabric A. Phase 2
4.30 Hard medium-grey Fabric A. Phase 2
4.31 Buff-grey rough Fabric A. Phase 2
4.32 Hard medium-grey Fabric A. Phase 2
4.33 Rough buff Fabric A. Phase 2
4.34 Rough medium-grey Fabric A. Phase 2
4.35 Hard medium-grey Fabric A smoothed all over exterior. Phase 2

Fig 15 Pottery Class 4 (facing page)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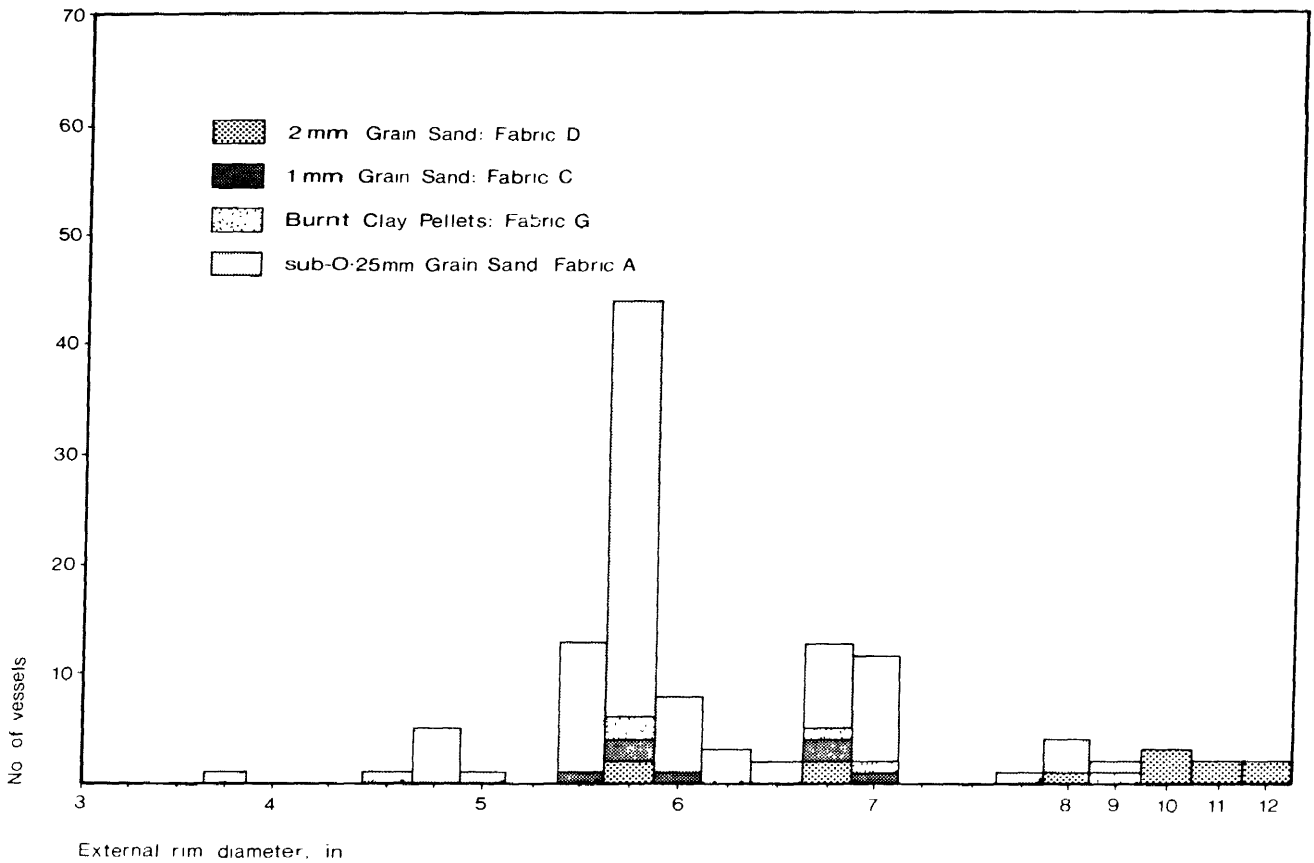
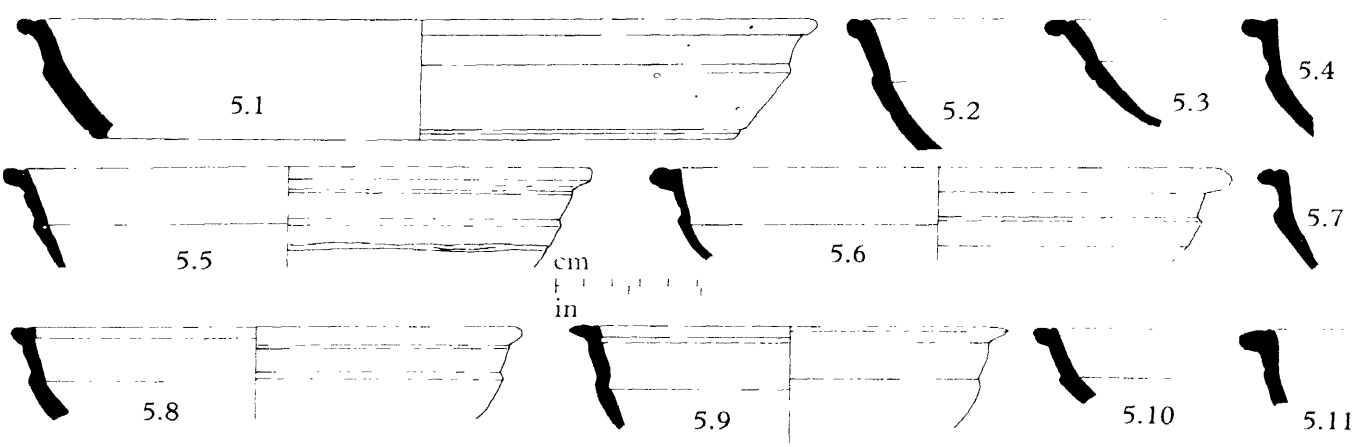


Fig 16 *Class 4 products from dump AH 5*



5.1 Very rough patchy sooty grey-buff Fabric D. Phase 2
5.2 Rough soft brown Fabric A with external charcoal-grey surface Phase 2
5.3 Rough grey-brown Fabric A with external charcoal-grey surface. Phase 2
5.4 Rough soft brown Fabric D. Phase 2
5.5 Sooty grey Fabric A with light-grey interior surface and blackened exterior Phase 2
5.6 Biscuity charcoal-grey Fabric C with pinkish-red coating and blackened surfaces, rough smoothed. Phase 2
5.7 Grey-brown Fabric A with patchy pinkish-red and black interior surface. Phase 2
5.8 Brown Fabric G with interior surface smoothed Phase 2
5.9 Orange-brown Fabric A. Phase 2
5.10 Charcoal-grey Fabric A with lighter grey coating and charcoal-grey surfaces. Phase 2
5.11 Sooty rough grey Fabric C with brown exterior surface and rim top Phase 2

Fig 17 *Pottery Class 5*

In the light of later developments of vessels of this type, it would seem that the function was dry storage, although it is possible that, at this stage, it is a multi-purpose vessel, which could also be used for cooking. Class 3A seems to have taken over this latter function after AD 90, setting off a decline in importance of Class 4.

Class 5: Bowls (Fig 17)

These vessels, known by some as Atrebatic bowls, form less than 3% of the analysed material (Table I), but nevertheless certain observations can be made. As with Classes 1, 3A, and 4, these vessels range in external rim diameter from at least 11in down to 6in or less, and the form is that of a bowl with divided rim and an offset about halfway down the exterior of the vessel. Bases have a burnished ring groove around the periphery of the underside, and there is sometimes a crease round the interior surface at the same height as the exterior offset.

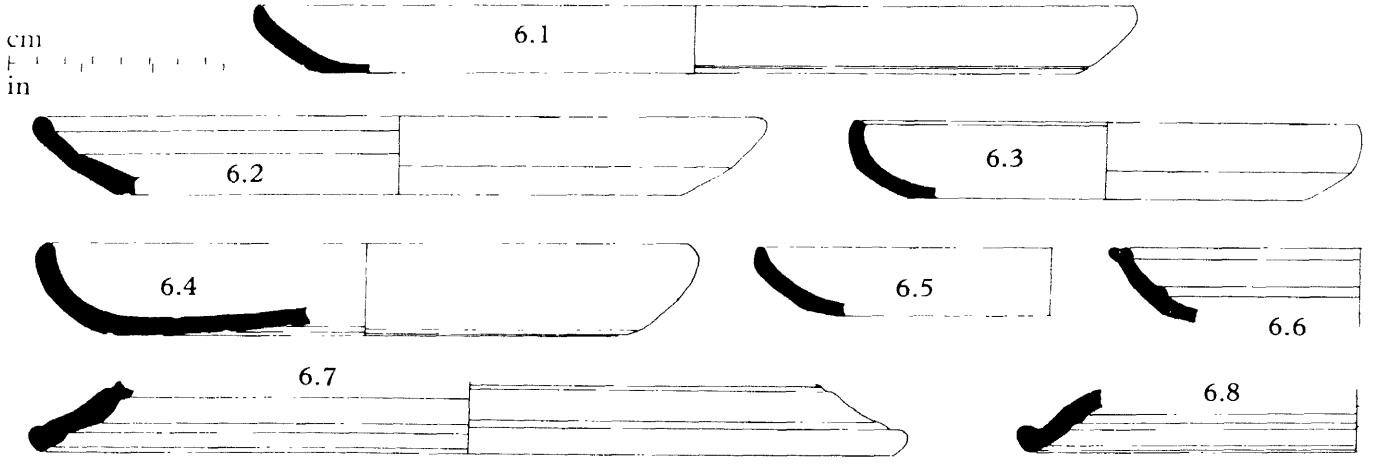
The tempering is sand as in other classes, but distribution of grain size seems to bear no clear relationship to vessel size. The fabric can be reduced, oxidized, or oxidized with a soft grey core; one quite common characteristic is a deliberate blackening of the exterior surface, sometimes accompanied by rough smoothing. A similar type was manufactured in the Staines area and can be distinguished, with difficulty, from the Alice Holt examples by its relatively sand-free fabric and heavier rim forms.

Class 6: Dish/lids imitating Gallo-Belgic forms (Fig 18)

The mass importation of Gallo-Belgic pottery into the province during and before the Conquest period and the establishment of romanized potteries inside the Atrebatic area made it almost inevitable that copies of *terra nigra* and *terra rubra* forms should be attempted, particularly in classes of pottery where there were no native equivalents. Class 6 is such a category. This class could doubtless be subdivided, since even in a small group such as this, forming less than 1% of the analysed sample, forms are derived from a number of Gallo-Belgic prototypes.

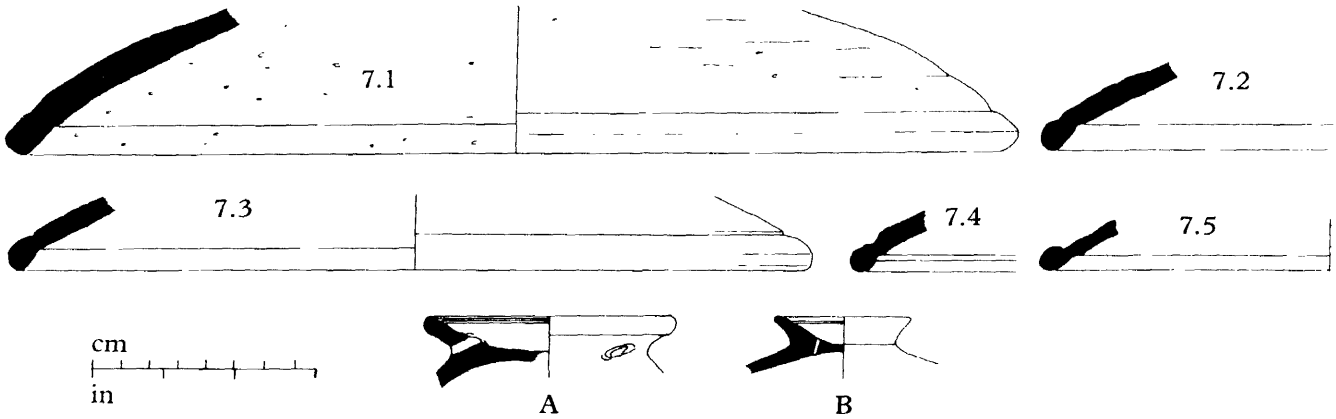
Sand filler is variable in grain size but never used heavily. The fabric treatment is variable like that of Class 5 and vessels are also often deliberately blackened on the surfaces, imitating the *terra nigra* originals.

Forms 6.1 to 6.5 probably acted as lids for the Class 5 bowls, suggesting a type of cooking function, perhaps bread-making, for the latter.



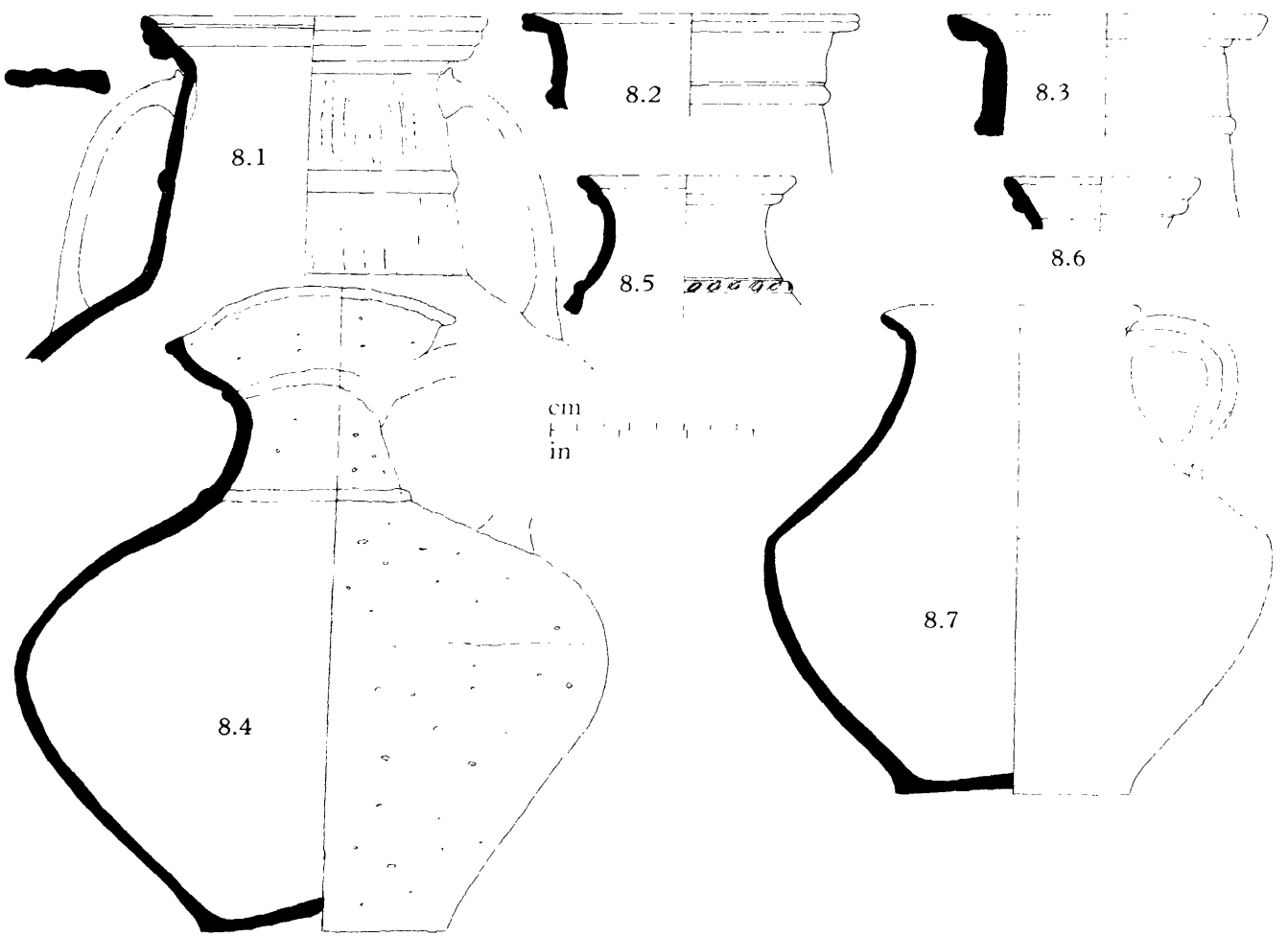
6.1 Light-grey Fabric C with reddish coating and medium-grey surfaces. Phase 2
6.2 Light-grey biscuity Fabric C with brown coating and dark-grey surfaces. Phase 2
6.3 Orange Fabric C with grey-brown surfaces. Phase 2
6.4 Soft light-grey Fabric A with reddish coating and buff surfaces. Burnished circles on underside and above. Phase 2
6.5 Soft light-grey Fabric G. Phase 2
6.6 Soft rough light-grey Fabric C. Phase 2
6.7 Sooty-grey Fabric A with charcoal-grey surfaces and rough smoothing on upper surface Phase 2
6.8 Coarse grey-brown Fabric D with charcoal-grey surfaces Phase 1

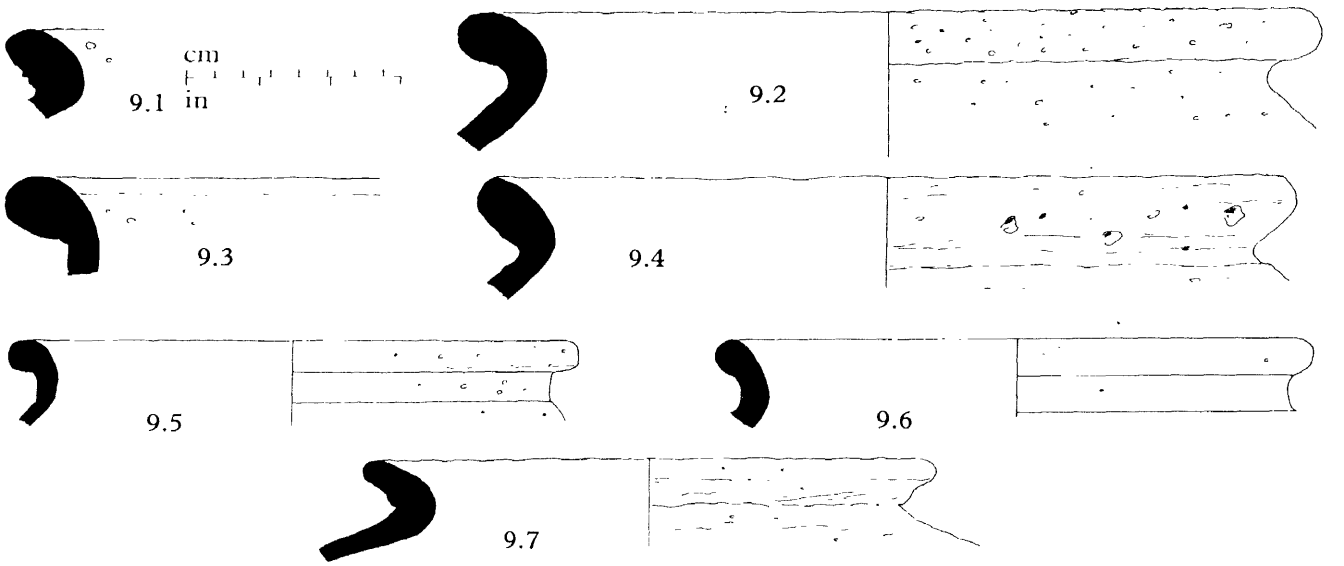
Fig 18 Pottery Class 6



7.1 Soft brown Fabric D with blackened surfaces. Rough smoothing on upper surface. Phase 2
7.2 Soft buff-grey Fabric A with hard dark grey surfaces. Phase 2
7.3 Grey-brown biscuity Fabric C with blackened surfaces. Phase 2
7.4 Hard charcoal-grey Fabric A. Phase 2
7.5 Hard grey-brown Fabric A. Phase 2
7.A Lid boss. Sooty-brown Fabric A with grey surfaces and external perforation
7.B Lid boss. Grey-brown Fabric A with 5 perforations into interior. Phase 2

Fig 19 *Pottery Class 7*





9.1 Coarse dirty-grey Fabric E with rough brown coating and blackened exterior surface. Made on a turntable? Phase 2
9.2 Coarse patchy orange-grey soft Fabric E with numerous grits Phase 2
9.3 Coarse charcoal-grey Fabric E Made on a turntable with smoothing over top of rim Phase 1
9.4 Coarse soft orange Fabric F with slightly browner surfaces. Hand-made Phase 2
9.5 Coarse soft orange Fabric D. Phase 2
9.6 Coarse sandy sooty-grey Fabric D with smoothed surfaces fired grey-brown with purplish tinge. Unusual fabric. Phase 1
9.7 Coarse soft orange Fabric D with rough brown-grey surfaces. Phase 2

Fig 21 Pottery Class 9

Class 7: Lids (Fig 19)

The appearance of lids around the same time as Class 3A flat-rimmed jars suggests that the two were used together, as does the coarse sand-tempering of many examples of Class 7. They show very little variety during the late 1st century, all being variants of a domed shape, with edge-beading outlined by grooves, and with perforated central bosses. It has been thought that the perforations in the knobs were to allow steam to escape from the vessel beneath during cooking. This is a logical explanation for types like B but not for A, where the perforations do not pass through the lid proper. Although this class is another minority group, it seems that the range of sizes lies between 6in and 14in, with a peak around 10–12in. As with Classes 5 and 6, sand-tempering is variable as is the fabric firing. The surface treatment is also similar, with deliberate blackening in some cases.

8.1 Orange Fabric G with light-grey core and buff-grey surfaces, smoothed on interior and top of rim. Phase 2
8.2 Light-grey Fabric A with harder medium grey surface and smoothed exterior and rim top. Phase 2
8.3 Soft orange Fabric G with greyed surfaces. Phase 2
8.4 Pinched neck flagon in very coarse soft buff-grey Fabric D. Phase 2
8.5 Hard medium-grey Fabric G with smoothed exterior and rim. Cordon with finger nail incision round base of neck. Phase 2
8.6 Hard medium-grey Fabric A. Phase 2
8.7 Hard dirty buff-grey Fabric C. Phase 2

Fig 20 Pottery Class 8 (facing page)

Class 8: Single- and double-handled flagons (Fig 20)

This, like Class 6, is not part of the native Atrebatic tradition and, like the former class, although it is in a minority group, has a great variety of forms. It seems likely that in both cases this is due to copying imports from a variety of sources. Only in the case of 8.7 was a vessel found with its handle still attached, in this case a double-ribbed one. Handles found loose are of two basic types, the double-ribbed form and a loose are of two basic types, the double-ribbed form and a much larger four-ribbed type, which at Camulodunum was frequently associated with large two-handled *lagenae*, forms 8.1, 8.2, and 8.3 being of the latter type. Double-handled flagons did not survive the early 3rd century, being replaced by Class 1A cordoned storage jars, usurping and adapting their elaborate rim profiles—a victory of the native tradition.

Class 9: Hand-made storage jars (Fig 21)

This class of vessel is almost always in a very coarse oxidized fabric with patchy blackening of the exterior surface. The bodies tend to be hand-made but the rims may often have been finished on a turntable. Tempering can be exceedingly coarse with Fabrics D, E, and F, grits protruding from the fabric of the vessel. Such vessels must surely have been used for dry storage, probably of grain, and may have been set in the ground.

The corpus of pottery types: the later industry

During the mid-2nd century new forms were added to the Alice Holt range which owed nothing to local tradition, and at the same time older types either disappeared or declined in output. Class 5 bowls were replaced by Class 6B and 5A flat- and triangular-rimmed dishes and bowls, some of which absorbed elements of the older design in the form of rim grooving and undercutting, to produce a high offset. This event took place between 150 and 180; somewhat earlier (*c* 120) the Gallo-Belgic platter imitations ceased and were replaced after an interval by Class 6A straight-sided dishes (around 180). This latter class was initially not very common, probably owing to the use of the old Class 6 Gallo-Belgic platter as a lid for the Atrebatic bowl. Most of the Class 6B dishes did not have the latter's lid-seated rim and presumably demand for straight-sided dishes would be less.

Also, during the mid-2nd century, mass production began in the Alice Holt of Class 3B vessels imitating BB1 and BB2 originals, sometimes decorated with burnished acute lattice but more often without.

During the 1st century the Alice Holt potters had gained nearly a quarter of both the Silchester and Winchester urban pottery markets, but at the beginning of the 2nd century quantities of hand-made Dorset black-burnished ware began appearing in both these towns.

Whatever the cause of the BB1 success, it posed problems for the Alice Holt potters in the loss of their two most important urban markets. The three main BB1 products were everted-rimmed cooking pots and flat-rimmed and straight-sided dishes; the Alice Holt potters countered their threat by introducing Classes 5A, 6B, 3B, and 6A as wheel-made imitations. The triangular bead on many Class 6B vessels is not, however, derived from BB1 forms, but from a form of BB2 made somewhere in north-west Kent, in an industry making inroads into the London and Ewell markets during the mid 2nd century, competing for part of the latter market with Alice Holt.

Table II shows comparative percentages of Alice Holt vessel classes taken at different periods of production and serves to underline the rapid growth in importance of the new classes of vessel in the overall production during the 2nd century.

From about AD 200 onwards the everted or 'cavetto' rimmed cooking pot underwent a change in design, with the rim becoming more developed and the acute lattice design disappearing. Instead there were several new varieties of burnished girth band decoration used concurrently, namely 90°, obtuse, and multiple burnished lattice and burnished horizontal lines or strips. The fabric was usually a fine blue-grey Fabric A fired darker where burnished, although vessels were sometimes black-burnished. At the same time Class 6A dishes became more common, as did Classes 5A and 6B bowl and dish variants with reeded rims.

The origin of the beaded and flanged bowl is a much debated problem. The presence of such vessels in several deposits at Carpow in Scotland has led to a date range 180–210 being quoted for their origin. At Alice Holt it seems likely that types like 5B.1, where the flange was produced by gouging out a deep and wide groove in a triangular bowl rim, were in production before 220 and perhaps as early as 200.

Although the beaded and flanged bowl replaces Classes 5A and 6B, its proportions were somewhat different. Some reeded-rimmed examples of Class 6B are very large indeed, being as much as 18in dia, whereas the true flanged bowls were seldom more than 12in, although relatively deeper. Early and mid-3rd century examples of Class 5B have a wide range of rim forms produced in a variety of ways. Apart from the method described above, the flange was sometimes added in an appliqué manner or by an elaborate technique of turning over the rim edge of a flowerpot-

TABLE II: Comparative percentages of Alice Holt wares

	Dump AH 5 (AD 90-100)	Dump AH 55 (AD 150-180)	Ewell, King William site, Well 2 (AD 180-220)	Dump AH 61 (AD 270-420)
Non-indigenous classes				
3B	0 5	45	56.5	30.5
3C	—	—	5	18
5A	—	12 5	7	—
5B	—	—	1	12
6	1	—	—	—
6A	—	6	11	15
6B	—	—+	—+	—
6C	—	—	—	1.5
8	3	1	—*	3
10				0.5
Totals	4.5	64.5	80.5	80.5 + 1.0 Indeterminate
Indigenous classes (+ 3A and 7)				
1	46	21	8	8
1A	3 5	5	—*	3
1B	—	—	—	—*
1C	—	—	5	1.5
2	—*	—*	2.5	—*
3A	12	3	6	—
4	27	3	.5	1.5
5	3	—	—	—
5C	—	—*	—*	2
5D	—	—*	—*	—
5E	—	—	—	0 5
7	2	3.5	2	2
9	2	—*	—*	—
Totals	95 5	35.5	19.5	18.5

*Indicates that a class is known to have been manufactured but is not present in the analysed group.
+ Class 6B is combined in the Class 5A total.

shaped vessel against its body and pinching it out. The fabric was usually a grey A type with overall smoothing, although external burnishing in bands was sometimes employed.

One of the most important assemblages containing early examples of Alice Holt beaded and flanged bowls is that from well 2 with associated pit groups at the unpublished King William public house site in Ewell, with 2nd century samian as well as coins of Marcus Aurelius and Septimius Severus.

Of the old native classes of vessel, Class 1 cordoned jars changed considerably in appearance during the late 2nd–early 3rd century. The smaller type with carinated shoulder lost this feature and developed a three-quarter-round rim profile as well as partial or all-over external burnishing. The larger type with burnished shoulder decoration lost this and also developed overall external burnish. Its rim became flat and horizontal during the late 2nd century and then during the early 3rd developed an outwards, downwards tilt, which remained with it until the end of the 4th century and the cessation of production. Both types of cordoned jar also developed girth cordoning but this was by no means universal.

In the mid-3rd century the Roman world was troubled with civil wars and external invasion. Gaul suffered particularly from barbarian incursions and internal revolution, which wrought great damage on the Gallic economy; during this period the importation of East Gaulish samian into Britain, having been on the decline for some time, finally ceased.

The demand for such fine wares remained and the British potteries attempted to meet it. The Oxford kilns began producing red colour-coat copies of the later samian forms and the New Forest industry, which produced both colour-coated fine wares and neutral slipped grey wares evolved. Refugee craftsmen from Gaul and the Rhineland may have contributed their expertise to both these fine-ware industries and to others, in particular Alice Holt. There was a sudden advance in technology when a neutral slip similar to that used on New Forest grey wares came into use. This slip, which is the subject of various forms of physical and chemical analysis at the time of writing, could be made to fire white or black on a grey reduced body with a rather attractive slate-coloured intermediate variety. Once again, the King William IV site at Ewell has provided dating evidence for its introduction. Well 3 produced a very large pottery deposit consisting mainly of unslipped 3rd century Alice Holt products with just a handful of later black/white slipped pieces. This material was accompanied by 3rd century samian and a large number of coins, the latest regular issue being of Tetricus II (273), although barbarous radiates were present in quantity. A similarly large Alice Holt assemblage from the Wiggonholt bath-house in Sussex, which has a coin sequence commencing in 269, contained hardly any unslipped vessels, the chief being a massive storage jar which is nevertheless later than 270.

Although the coinage in Well 3 stops at 273, the presence of barbarous radiates in quantity, and in particular in a hoard at the very bottom of the well, suggests that the fill may include sherds of up to 300 or later, although the bulk of the material is probably of mid-3rd century date. The introduction of the use of this slip may therefore be placed at about 270, a view supported by the Blackmoor coin-hoard, which runs up to 296, found in two slipped Alice Holt Class 1A storage jars, and by the Carausian Linchmere hoard found in a white slipped Class 1B vessel. The introduction of the black/white slip did not lead to its immediate universal usage, and in particular the odd large unslipped Class 1C or 4 storage jar occur well into the 4th century alongside slipped examples.

Production of small Class 1A storage jars with squared, undercut rims and multiple combed lattice decoration was already in progress in the Alice Holt by the early 3rd century, but after 220 they were joined by large Class 1C vessels of similar design and in a similar high-quality fabric. As stated earlier, large two-handled *lagenae* of Class 8 continued to be made in very small quantities throughout the 2nd and early 3rd centuries, tending to overlap the function of Class 1A cordoned storage jars in that both were used for liquid storage. This eventually led to their total replacement by the latter. These Class 1A jars may be regarded as belgicized, handle-less *lagenae* and their larger Class 1C relatives as belgicized amphorae. The old Class 8 *lagena* rim decoration variants were transferred to the new vessels, with the double external rim grooving of 8.1 now on 1A.20 and the single groove of 8.2 on 1A.16–1A.19.

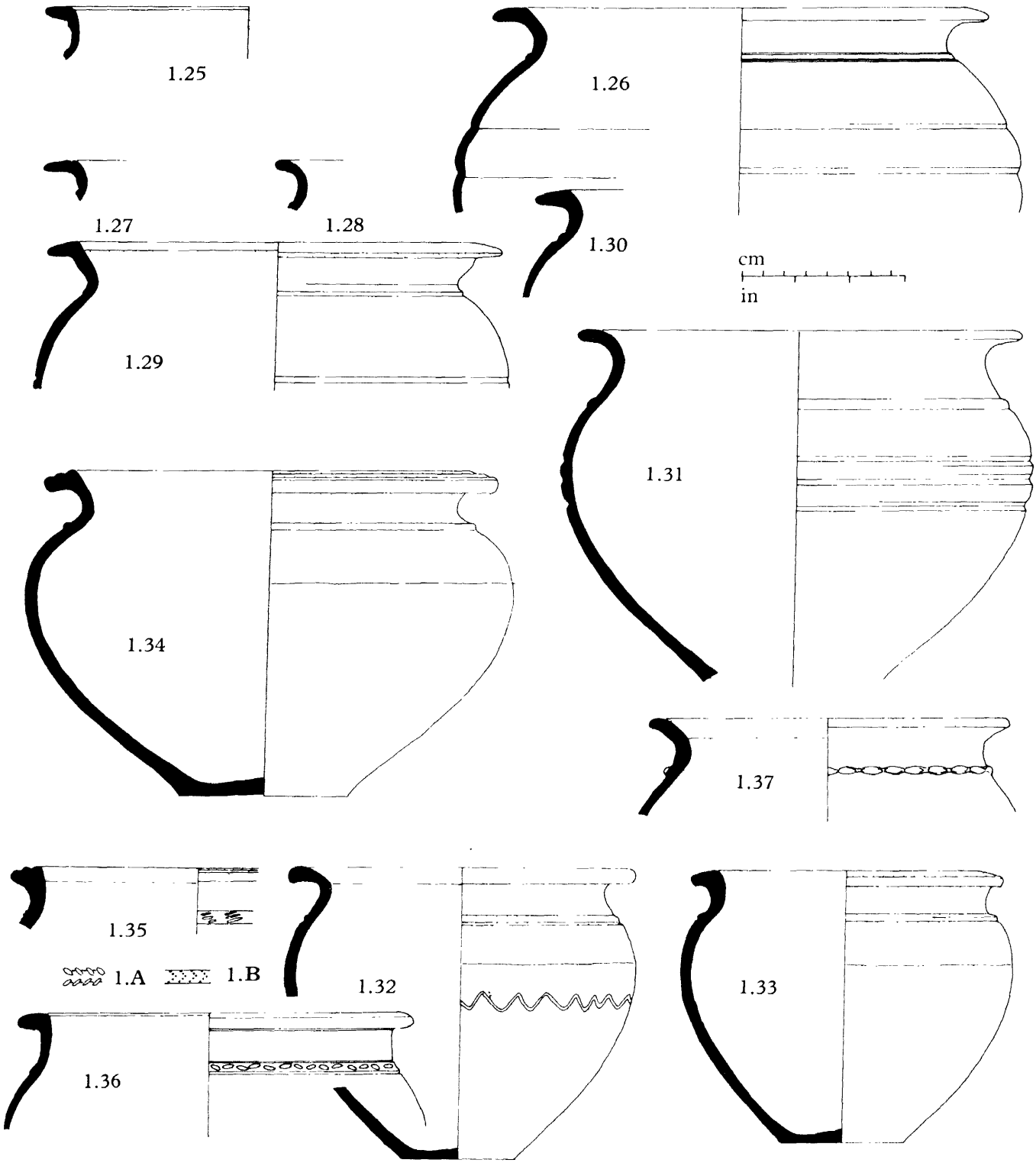
After 220 hooked or triangular-rimmed vessel type Class 3C made its appearance in the Alice Holt assemblage. It was different to all other pottery classes in that, apart from some early examples, there was no surface treatment. In the 3rd century it appears in a rough grey Fabric A, but during the early 4th century the use of very coarse Fabrics C and D became a feature associated with the vessel type. At the same time all-over horizontal body rilling appeared and bases ceased to be finished off, retaining the cheese-wiring whorls.

For much of the 4th century most of these horizontally rilled jars were in very coarse blue grey fabric, but from about 330 the same vessel forms appear with buff or yellow fired surfaces. This is of major significance in the evolution of the Alice Holt industry in that every previous change had involved a basic reduced grey fabric. Now for the first time a deliberate attempt was made to arrive at an oxidized finish. This fabric treatment was almost entirely restricted to Class 3C vessels, but convex-sided dishes, strainers, and flanged bowls are also found in it.

The change was not unique to Alice Holt, for at the same time or earlier a number of other small centres attempting similar results on sandy rilled jars commenced production south of the Thames. One such centre was in mid-Surrey, the 'Surrey Buff ware' industry,[4] and yet another in south-east Hampshire, supplying the Portchester fort.

The reason for the sudden popularity of buff and yellow sandy fabrics south of the Thames may lie with the Harrold shell-tempered ware industry of Bedfordshire, where the vessel type probably originated. With this latter industry rilled brown or yellow fired fabrics were associated. The buff-yellow finish of the southern sandy wares may well represent an attempt to imitate colour as well as form.

The next problem lies with the function of Class 3C vessels. Alice Holt kiln technology had long passed the stage where heavy sand tempering was needed to guard against the stresses of uneven firing temperature and its addition to the fabric of Class 3C vessels virtually alone among all contemporary vessel types suggests that it was connected with usage. If so, it must surely mean that these vessels were subjected to considerable heat variation during use and that the sand was refractory. This and the rough finish indicates that this was probably some kind of cooking vessel.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1.33
1.36

At the same time as these rough sandy Class 3C vessels were being made, the same kilns were producing somewhat larger quantities of everted and 'cavetto' rimmed slipped grey-ware cooking pots in a very superior fabric. This can be interpreted in at least three ways. First, the production of two radically different cooking pot types could indicate that different cultural groups were being supplied; secondly, it may imply two different types of cooking; or thirdly, the explanation lies in a combination of both. It is interesting to note that the earliest Alice Holt cooking pot type Class 3A is associated with a heavily tempered Fabric C or D and is replaced by the Fabric A Class 3B everted rimmed cooking pot during the 2nd century. Then during the 4th century heavily sanded Class 3C vessels, again in Fabric C or D, reverse the process in part. Perhaps the difference is between open fire and charcoal oven cooking, the coarser fabrics being needed for the variable heat of the former.

This increase in popularity of heavily sanded Class 3C vessels may thus mirror a change in eating habits, perhaps linked with a decline in material culture. Closer examination of these superficially rougher vessels does, however, also suggest a vessel type designed for convenience rather than according to cultural considerations. The vertical outer edge of the hook rim would enable a Class 6A 'dog dish' to fit snugly as a lid and the body rilling would facilitate grip, not to mention the greater durability of the fabric.

Whether the expansion of this tradition south of the Thames has wider cultural connotations is debatable. The convex sided 6A.8 or 6A.11 dish appears in British pottery assemblages after 270, whereas similar forms are found in the Rhine provinces before that date. It is perhaps significant that such a dish was being manufactured by the 'Surrey buff ware' industry alongside its horizontally rilled jars from the start and, like the latter, may have found its way into the Alice Holt assemblage through that industry. It must also not be forgotten that, although the rilled jar of these industries is probably derived from the Bedfordshire form, there was a tradition of similar hook-rimmed and horizontally rilled jars in the Black Forest region of Germany (Filtzinger 1974; Nierhaus 1959), and this may be considered as evidence for settlement by alien groups.

Be that as it may, the Class 3C jar in rilled coarsely sanded fabric became of increasing importance in Alice Holt production during the 4th century, although the buff version remained very subordinate to the grey. At Overwey, however, buff ware was far more common and the production of rilled Class 3C jars totalled 60% of the entire output. From the presence of types such as 6C.2 and the general appearance of the assemblage it seems likely that the Overwey kilns could date to very late in the 4th century, a view in keeping with the evidence from the Inner Ward, Tower of London, excavations, where post-390 deposits have large quantities of Alice Holt/Overwey buff rilled fabric.

A noticeable feature of later 4th century Alice Holt/Farnham products in general is a marked increase in decoration on all classes of vessel. Classes 1, 1A, and 1B, hitherto with plain neck cordons, now have them decorated with a variety of pricked, stabbed, and combed designs and the rather stilted, combed lattice of Classes 1A and 1C becomes a variety of flowing scrolls and waves in a manner reminiscent of 'Celtic' art. It is almost as if a native artistic revival was taking place and, although the old Belgic classes of vessel are most affected, even the non-indigenous types are involved. Flanged bowls and Class 6A convex-sided dishes are found with elaborate burnished internal spirals and lattices, and Class 3B everted and 'cavetto' rimmed cooking pots sometimes have a wavy combed girth band. Even the rough and ready Class 3C vessels occasionally have decoration applied to the vertical outer rim face and burnished wavy lines superimposed on the body rilling. Alongside this increase in decoration it is also possible to see a deterioration in finish. Rim forms become more blurred and at Overwey it is difficult to separate some examples of Class 1 from Class 3B. Here also the late flanged dish had its rim form reduced to no more than a triangular bead (6C.2).

Gone are the fine, thin, silky burnished, simple forms of the 3rd century, to be replaced by these over-decorated, poorer-finished, more native-looking, later 4th century types. The end of the industry is shrouded in uncertainty, but it appears from the deposits in the Billingsgate bath-house that production of standard grey wares was maintained until at least 402, although the superimposed 5th century rubbish tips seem to contain residual material only.

It seems possible that there was a final 5th century phase of pottery production when only buff sandy Class 3C, 5B, and 6A vessels were being made. If so, it is unlikely to have taken place in Alice Holt itself, as no dumps have produced very large quantities of buff ware. The proportion of buff sandy fabric is much higher at Overwey, and if such a 5th century production centre does exist for the industry it is probably another, as yet undiscovered, outlying group of kilns.

The history of the Alice Holt/Farnham industry is one

1.25 Flat rimmed type without shoulder decoration and usually with girth groove evolved from 1.9. Body externally smoothed (from AH 46)
Date 150 - 200

1.26 Type with slightly downturned rim and body ribbing derived from 1.25. The exterior surface is usually either black or grey burnished. (Six Bells pre-building 2, Period 1)
Date 180 - 250

1.27 Variant of 1.26 with grooved rim top (Great Mavins)
Date 200 - 250

1.28 Form derived from 1.20 with loss of shoulder carination and appearance of burnishing over upper exterior of vessel. (from AH 3)
Date 150 - 180

1.29, 1.30 Two variants of form derived from 1.26. They frequently have double girth cordon and rim top burnishing (Great Mavins)
Date 200 - 300

1.31 Another distinctive 3rd century type derived from 1.28 with girth cordoning similar to 1.29 and 1.30 (Great Mavins)
Date 180 - 270

1.32 A form derived from 1.31 with applied black/white slip over upper half of body and with or without girth cordoning. The rim is often hooked more than the example illustrated (Snailslynch)
Date 270 - 420

1.33 A form derived from 1.30 with slip applied in similar manner to 1.32. The downturned rim is often less well formed than 1.30 (Snailslynch)
Date 270 - 350

1.34 Variant of 1.33 with a reeded rim. This type is usually larger than its contemporaries 1.32 and 1.33 (Snailslynch)
Date 270 - 350

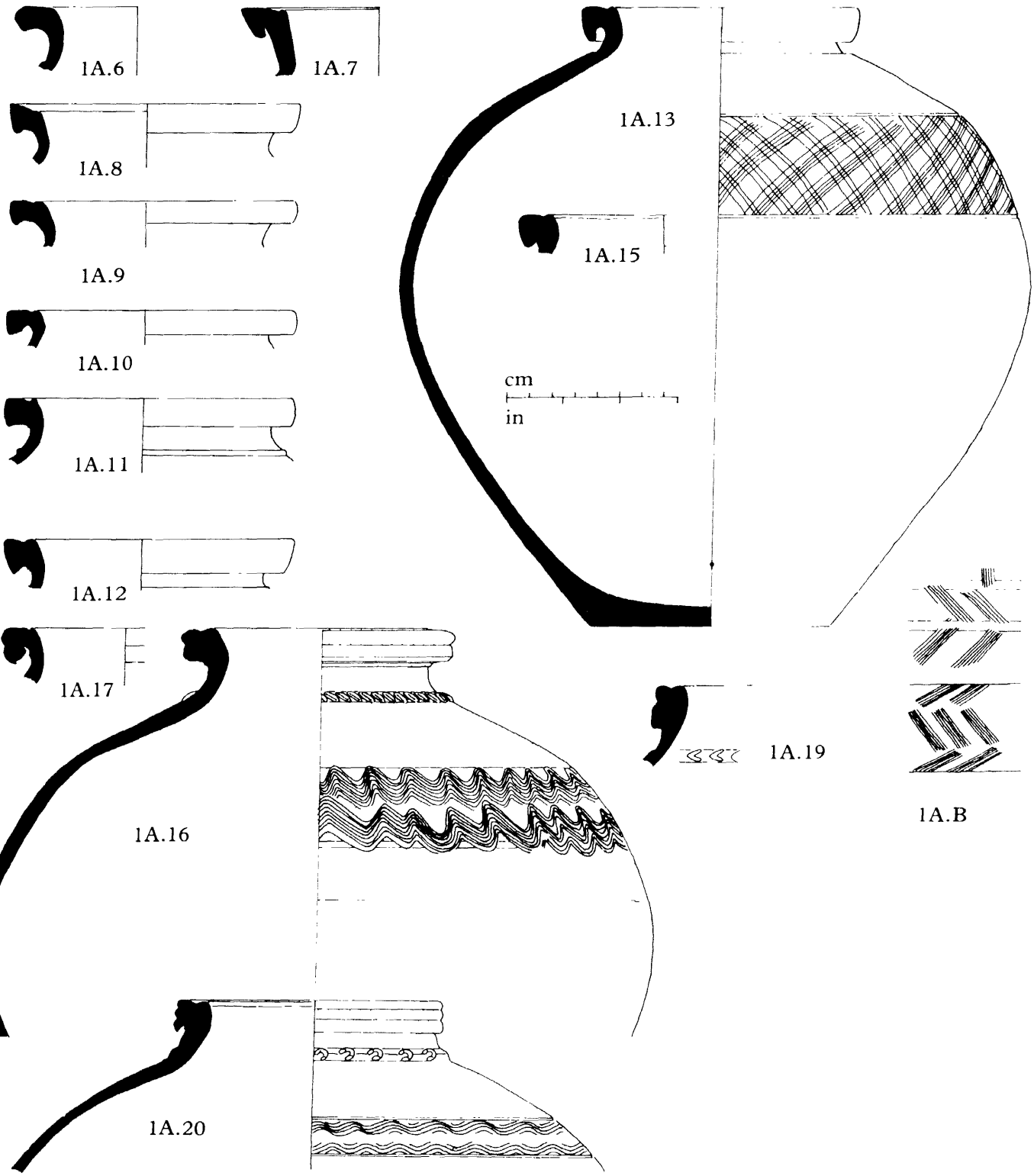
1.35 A form derived from 1.34 with deterioration in rim finish and appearance of cordon decoration (Overwey)
Date 330 - 420

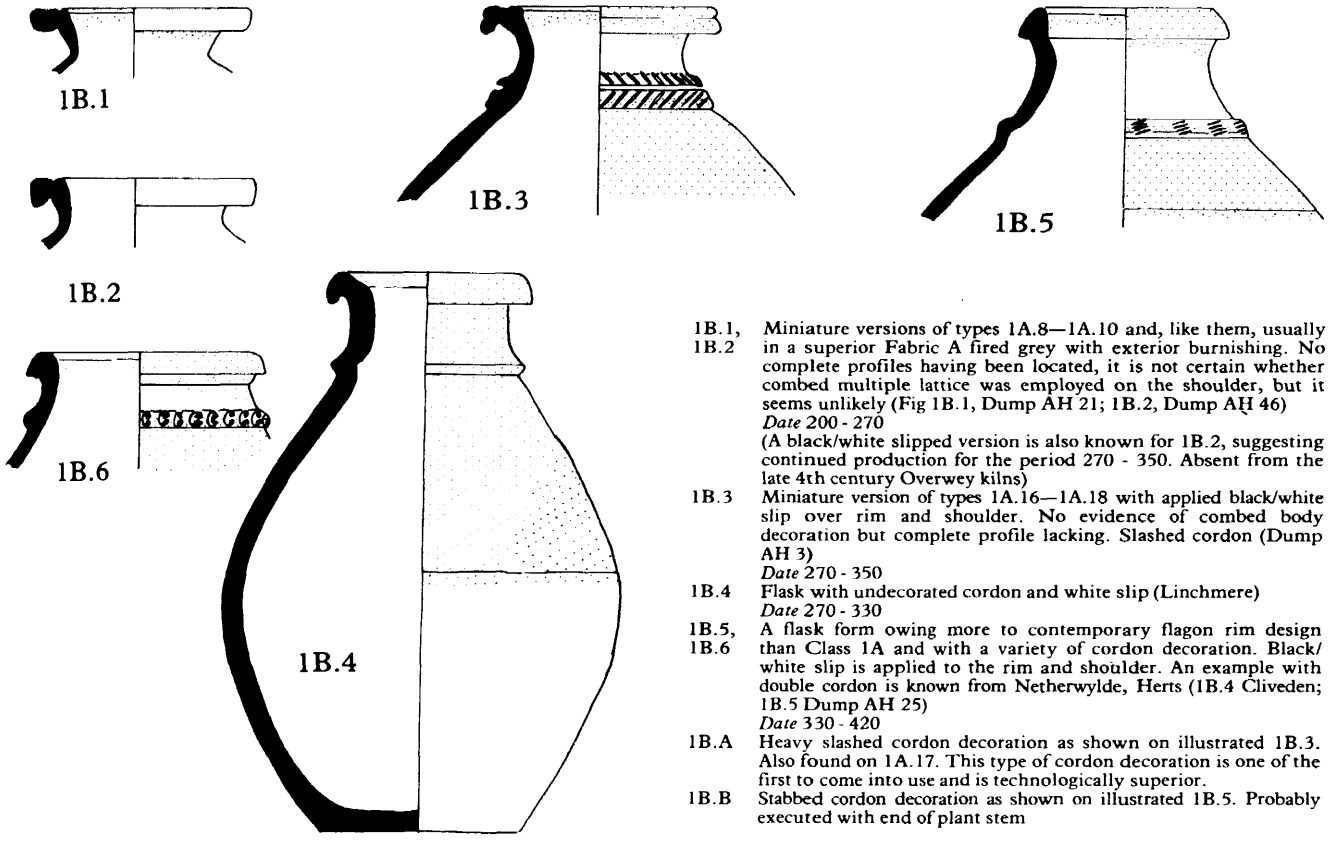
1.36 A form derived from 1.33 with appearance of cordon decoration (Old Malden)
Date 330 - 420

1.37 A form derived from 1.32 with appearance of cordon decoration (Overwey)
Date 330 - 420

1A Stabbed cordon decoration associated with types 1.35, 1.36, 1.37. These cordon decoration variants also occur on contemporary types in Classes 1A, 1B, and 5E

Fig 22 *Pottery Class 1 (cordoned jars) (facing page)*


1A.6
1A.7
1A.8
1A.9
1A.10
1A.11
1A.12
1A.13
1A.15
cm
in
1A.17
1A.16
1A.19
1A.B
1A.20



1B.1, 1B.2 Miniature versions of types 1A.8—1A.10 and, like them, usually in a superior Fabric A fired grey with exterior burnishing. No complete profiles having been located, it is not certain whether combed multiple lattice was employed on the shoulder, but it seems unlikely (Fig 1B.1, Dump AH 21; 1B.2, Dump AH 46)
Date 200 - 270
(A black/white slipped version is also known for 1B.2, suggesting continued production for the period 270 - 350. Absent from the late 4th century Overwey kilns)

1B.3 Miniature version of types 1A.16—1A.18 with applied black/white slip over rim and shoulder. No evidence of combed body decoration but complete profile lacking. Slashed cordon (Dump AH 3)
Date 270 - 350

1B.4 Flask with undecorated cordon and white slip (Linchmere)
Date 270 - 330

1B.5, 1B.6 A flask form owing more to contemporary flagon rim design than Class 1A and with a variety of cordon decoration. Black/white slip is applied to the rim and shoulder. An example with double cordon is known from Netherwylde, Herts (1B.4 Cliveden; 1B.5 Dump AH 25)
Date 330 - 420

1B.A Heavy slashed cordon decoration as shown on illustrated 1B.3. Also found on 1A.17. This type of cordon decoration is one of the first to come into use and is technologically superior.

1B.B Stabbed cordon decoration as shown on illustrated 1B.5. Probably executed with end of plant stem

Fig 24 *Pottery Class 1B (flasks)*

of continuous adaptation and borrowing of the forms of other industries, a natural action for a centre based on one cultural tradition supplying a society which was becoming more and more mixed with its tribal roots more and more eroded. As can be seen from Table II, these derived classes of vessel eventually amounted to at least 80% of the entire output, but the old Atrebatic forms remained in evidence up to the end of the 4th century.

1A.18 rim. The body decoration varies with wavy combing on the later examples and black/white slipped band and decorated cordons throughout (1A.16 Overwey)
Date 300 - 420

1A.17 Similar to 1A.18 but with grey burnished bands instead of applied slip (Ewell)
Date 270 - 300

1A.19 Variant of 1A.16 (Overwey)
Date 300 - 420

1A.20 Triple-lobed variant of 1A.16—1A.19 (Franks Hall, Farningham)
Date 300 - 420

1A.A Multiple-combed lattice decoration formed in a single band on the shoulder of forms 1A.8, 1A.9, 1A.10, 1A.11, 1A.12, 1A.13, 1A.14, 1A.15, and in a double band on forms 1C.2, 1C.3, 1C.4, 1C.5. May also have occurred on 3rd and early 4th century large examples of Class 4 but this is unproven

1A.B Combed zig-zag and herringbone decoration associated with 3rd and early 4th century examples of Class 1A, but rarer than the previous type.

1A.C Combed wavy decoration of 4th century type associated with forms 1A.16, 1A.18, 1A.19, 1A.20.

1A.6 Form derived from 1A.2 with flat rim top which is often burnished. Burnished shoulder decoration appears to die out (AH 55)
Date 180 - 200

1A.7 Form with undercutting of rim and rim top groove derived from 1A.3 (AH 55)
Date 180 - 200

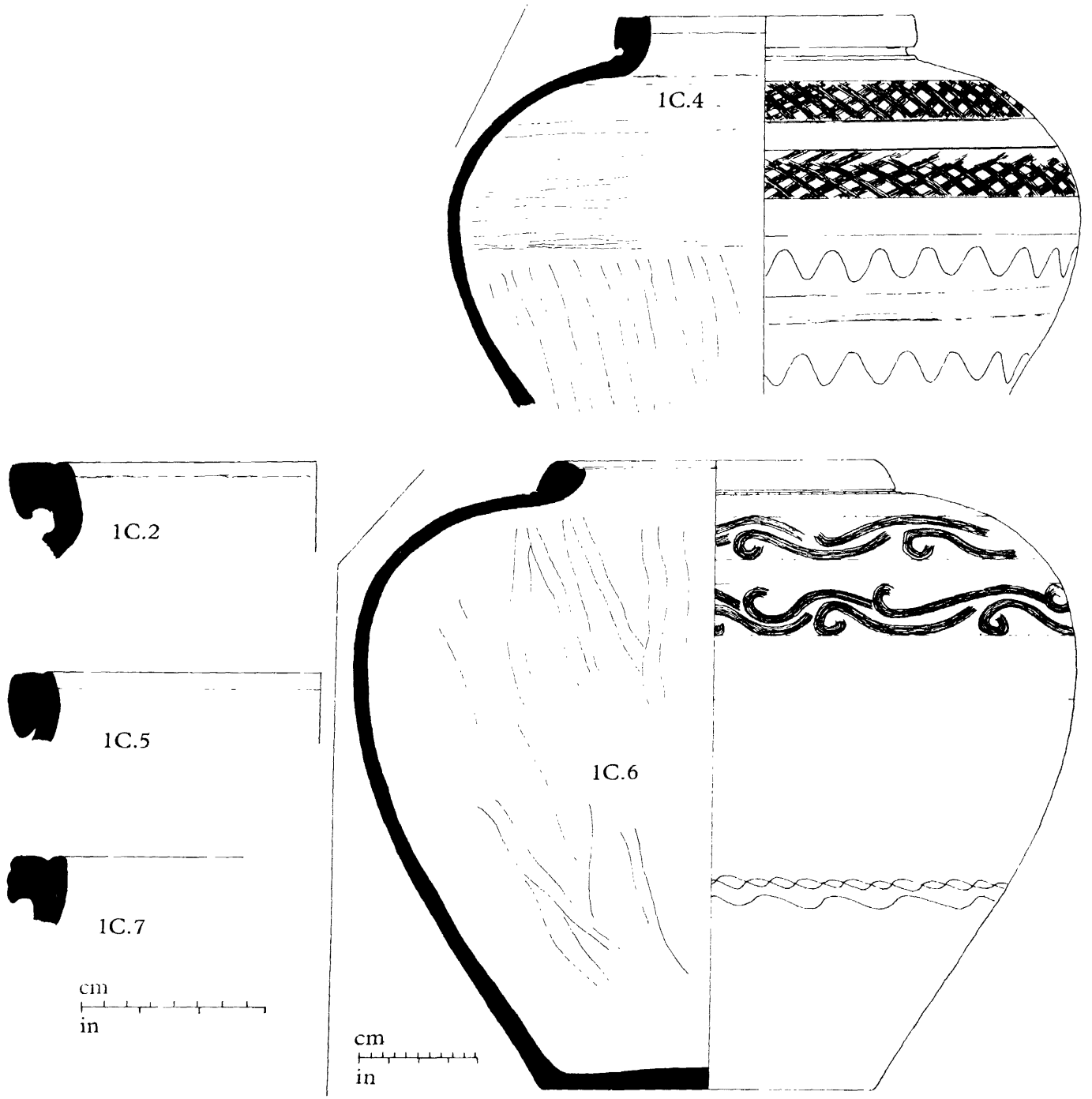
1A.8, 1A.9 Forms derived from 1A.7 with rim top burnishing and multiple combed lattice band on shoulder (1A.8 Great Mavins; 1A.9 AH 52)
Date 180 - 270

1A.10, 1A.11, 1A.12, 1A.13 Forms derived from 1A.8 and 1A.9 with rim top burnishing and multiple combed lattice band on shoulder (1A.10 AH 46; 1A.11 AH 2; 1A.12 AH 2; 1A.13 Snailslynch)
Date 220 - 270

1A14, 1A.15 Forms derived from 1A.10—1A.13 with application of black/white slips instead of burnishing but retaining combed lattice band on shoulder (1A.15 AH 69). Form 1A.14 identical to 1A.13 but with applied slip
Date 270 - 350

1A.16, Form with lobed rim, the unillustrated 1A.18 having undercut

Fig 23 *Pottery Class 1A (cordoned and necked jars) (facing page)*



1C.1 (Not illustrated). A massive version of Class 1A.6 with rim top burnishing. No evidence for body decoration. The fabric is usually a heavily sanded and grogged Fabric G
Date 180 - 220

1C.2, 1C.4 Massive versions of Class 1A.11 and 1A.12 in a grey Fabric G with burnishing over the rim and in bands round the upper half of the body separated by multiple lattice combing (1C.2 Dump AH 10; 1C.4 Wiggonholt Site C)
Date 220 - 300

1C.3 (Not illustrated). Similar to 1C.2 with applied black/white slip instead of burnishing
Date 270 - 300

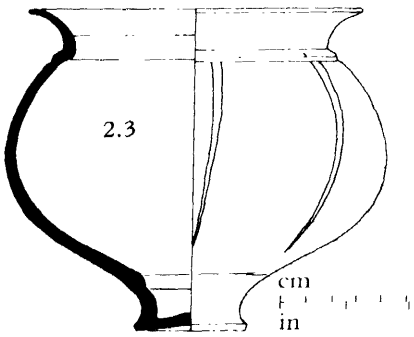
1C.5 Massive version of 1A.15 in a grey/buff Fabric G with applied black/white slip and multiple combed lattice (AH 10)
Date 300 - 350

1C.6 Development of 1C.5 with rim more inward-tilted. Black/white slipped bands over the upper half of the body now alternate with combed scrolls and figure-8 motifs, the combed designs being altogether more flowing and 'celtic' (Andover)
Date 350 - 420

1C.7 Large version of 1A.20 with decorated cordon and applied black/white slip (AH 46)
Date 330 - 420

1C.A Combed scroll decoration found in two bands on shoulder of 1C.6

Fig 25 *Pottery Class 1C (large cordoned storage jars)*



2.2 (Not illustrated). Evolved from 2.1 with the addition of a neck cordon and overall fine silky burnish on the exterior and rim.
Date 150 - 270
2.3 Similar to the above but with vertical black/white paint dribbles down the exterior (Old Malden)
Date 270 - 350

Fig 26 *Pottery Class 2 (jars with pedestals)*

Class 1: Cordoned jars (Fig 22)

This class is represented in the New Forest industry by type 30.4 (Fulford 1975).

Class 1A: Cordoned and necked jars (Fig 23)

This class is represented in the New Forest industry by types 31-35 (Fulford 1975).

Class 1B: Flasks (Fig 24)

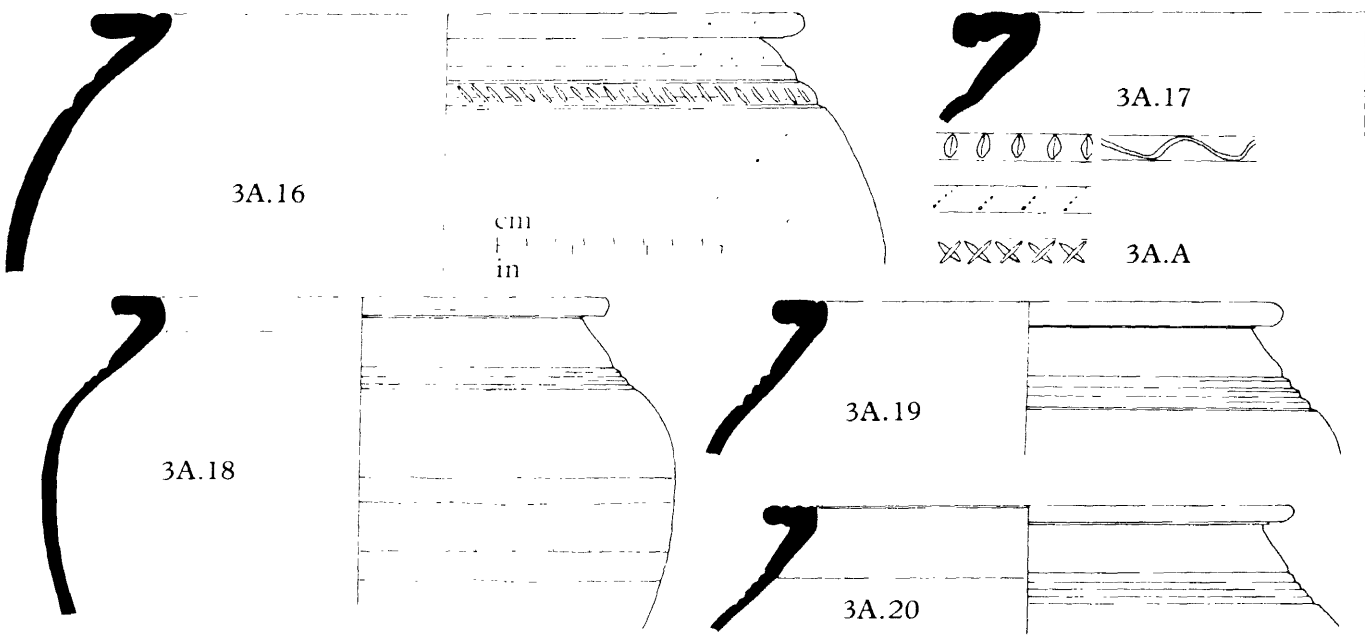
This class is represented in the New Forest industry by type 24 (Fulford 1975).

Class 1C: Large cordoned storage jars (Fig 25)

This class is represented in the New Forest industry by types 40.1 and 40.2 (Fulford 1975).

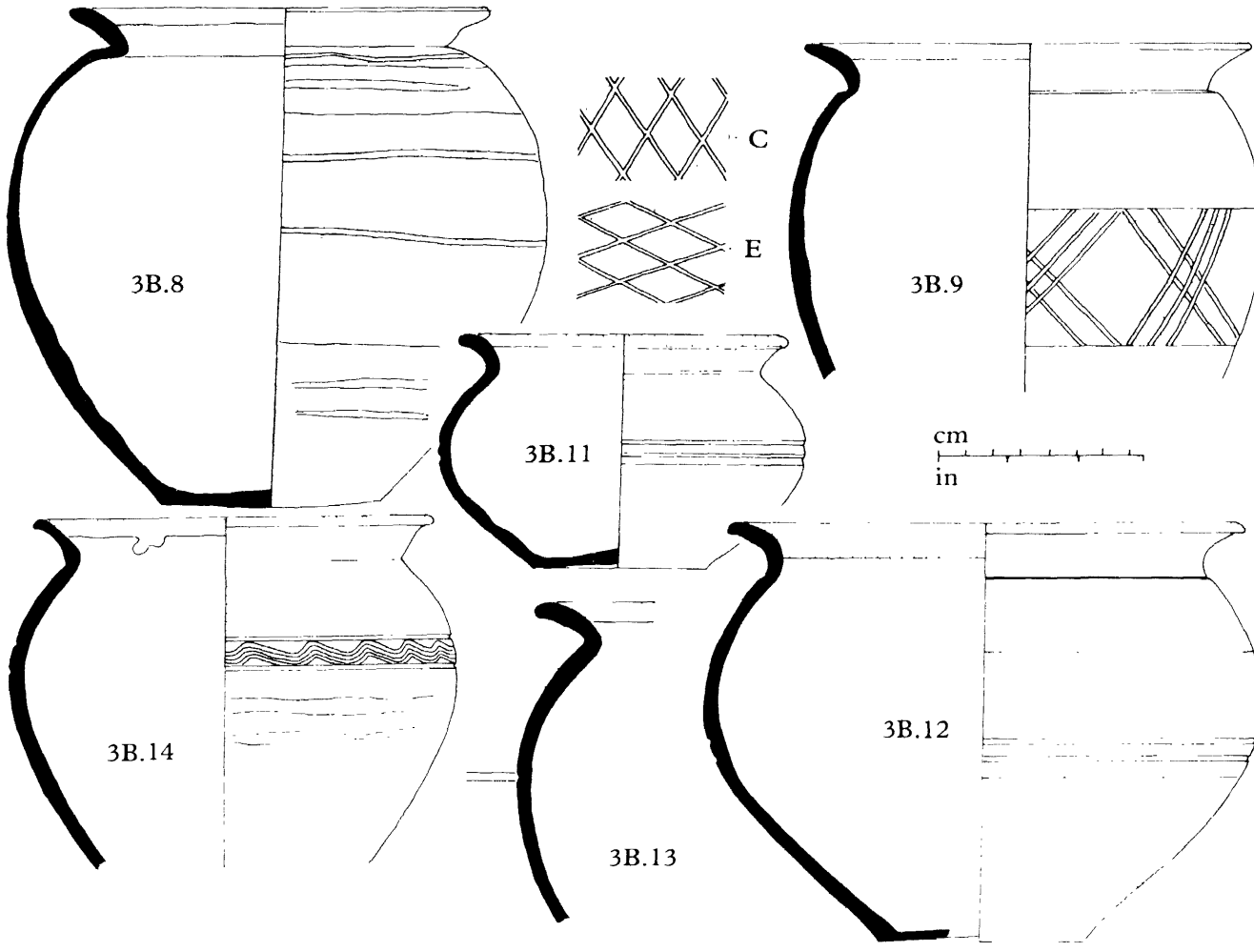
Class 2: Jars with pedestals (Fig 26)

The class is probably represented in the New Forest industry by the fine ware type 57.1 (Fulford 1975).



3A.16 Derived from types like 3A.9 but with horizontal rim and addition of rim top groove. The fabric is usually indifferently fired and in heavily sanded rough surfaced C or D type. The shoulder cordon is usually decorated with slashed motifs (Chiddingfold)
Date 150 - 250
3A.17 Similar to 3A.16 but with double reeding on rim top (Dump AH 55)
Date 150 - 250
3A.18, 3A.19, 3A.20. Smaller versions of 3A.16 and 3A.17 in a finer grey Fabric A, B, or C and with horizontal combing round the shoulder (Great Mavins)
Date 150 - 270
3A.A Shoulder cordon decoration variants associated

Fig 27 *Pottery Class 3A (flat-rimmed jars)*



3B.8 Derived from 3B.7 and imitating contemporary BB1 and BB2 types. The fabric is either grey or black burnished Fabric A, sometimes with acute lattice 3B C decoration, but far more often with burnished horizontal lines 3B D as illustrated (Staines)
Date 150 - 200

3B 9 Derived from 3B 8 in similar fabrics. It is found both with rim edge beading and without, as shown. There are four main types of body decoration associated: 3B.B, 90° lattice; 3B E, obtuse lattice; 3B.A, multiple burnished lattice; 3B D, burnished horizontal bands or lines (Six Bells)
Date 200 - 300
(*Note*: The burnished areas tends to fire darker than the rest of the fabric, but this is not to be confused with the later applied burnished black/white slip.)

3B 10 (Not illustrated). Similar in form to 3B.9 but with applied black/white burnished slip where previously with burnished self slip. The lattice decoration is now restricted to 3B E where used. Type 3B D burnished horizontal lines are now the most frequent girth decoration
Date 270 - 420

3B 11, 3B.12 A distinctive late variant of this class with girth cordon. The smaller version 3B 11 has black/white slip above this girth cordon only and the larger has it above and below (3B 11 Staines, 3B.12 Six Bells)
Date 270 - 420

3B.13 Variant of 3B 11 and 3B 12, with a single girth groove and applied black/white slip (Dump AH 33)
Date 270 - 420

3B 14 Variant of 3B.12 with broad girth cordon decorated with wavy combing (Malthouse Farm)
Date 350 - 420

3B.A - 3B.E See above. 3B C is also found on 5D 1. 3B A, 3B B, and 3B D are found on 5D.2 and 5D.3

Fig 28 *Pottery Class 3B (everted- and cavetto-rimmed jars)*

Class 3A: Flat-rimmed jars (Fig 27)

Class 3B: Everted and 'cavetto' rimmed jars (Fig 28)

This class is represented in the New Forest industry by types 30.5, 30.6, 30.7, 30.9, 30.10, and 30.11 (Fulford 1975).

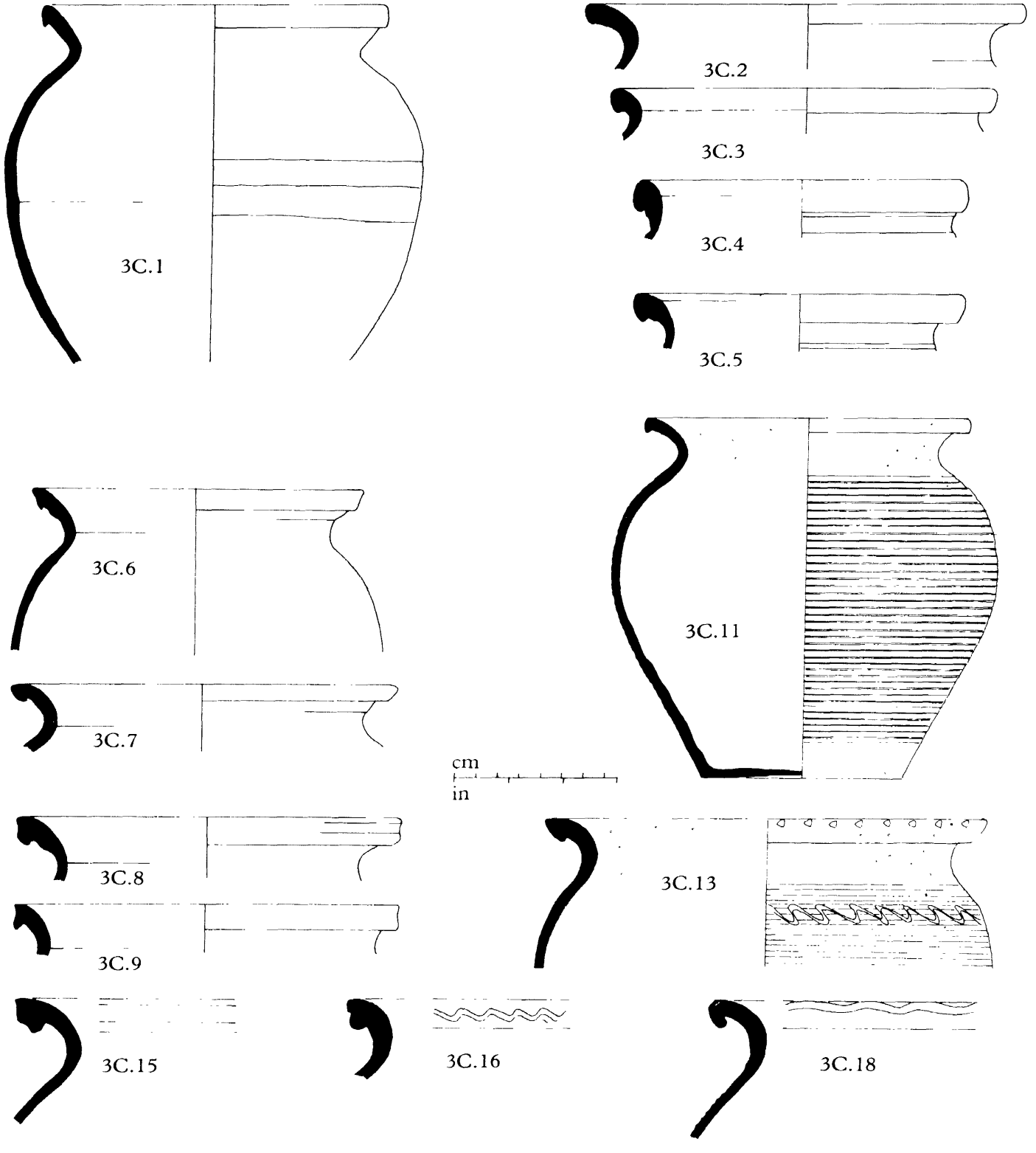
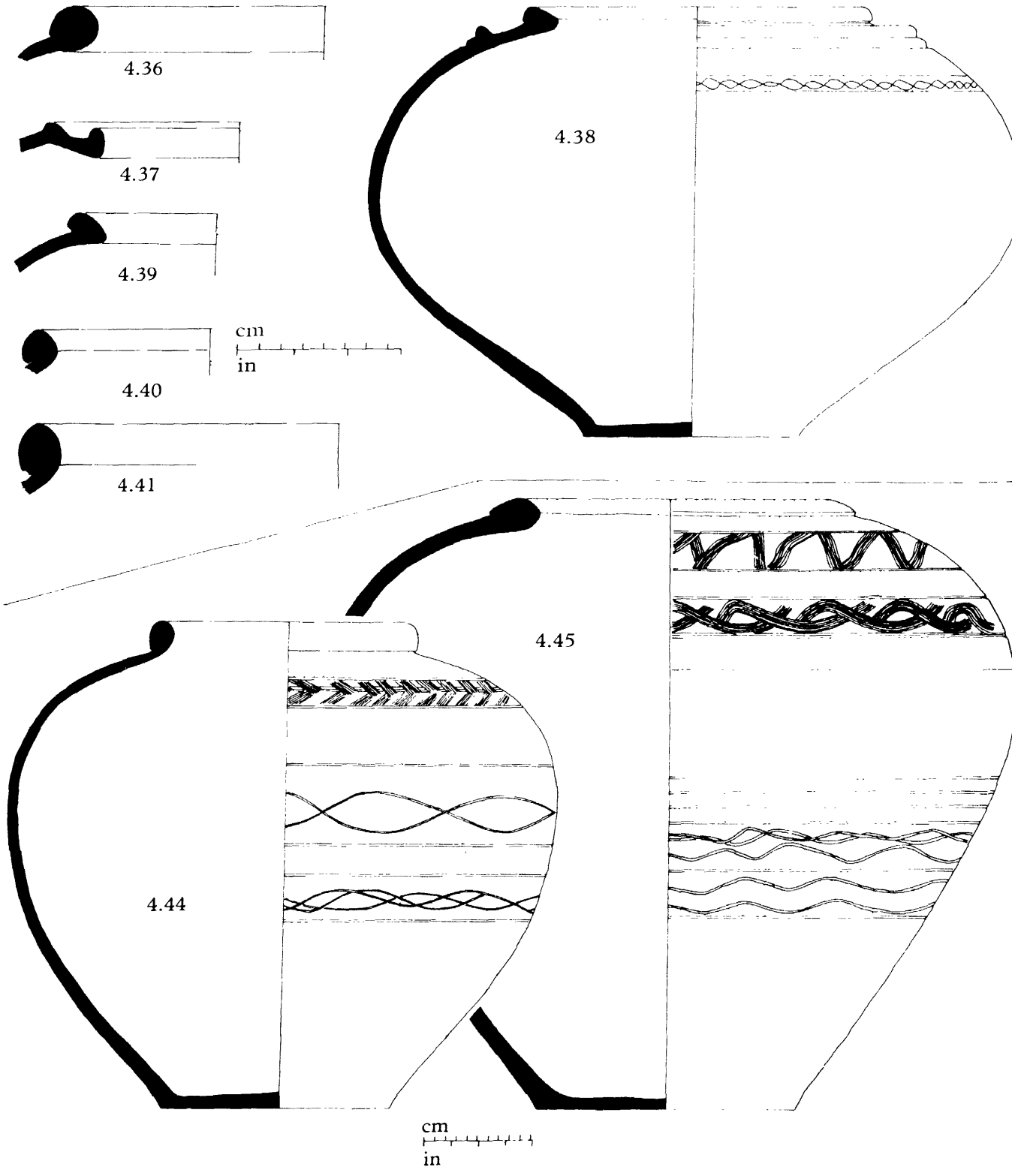
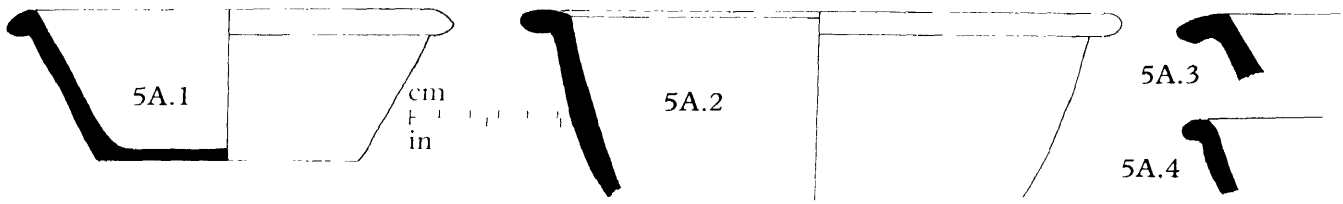


Fig 29 *Pottery Class 3C (triangular- and hooked-rimmed jars) — for key see p 45*


4.36
4.37
4.39
4.40
4.41
cm
in
4.38
4.45
4.44
cm
in



5A.1 Triangular rimmed bowl usually in a sandy Fabric A or C (Dump AH 55)
Date 150 - 220

5A.2 Large flat-rimmed bowl, usually in similar fabrics to above. External burnished acute lattice or wavy lines are known but not common These vessels can be very large (Six Bells)
Date 150 - 220

5A.3 Variant of 5A.2 with down-turned rim (Dump AH 52)
Date 150 - 220

5A.4 Variant of 5A.1 with weak rim
Date 150 - 220

Fig 31 *Pottery Class 5A (flat- and triangular-rimmed bowls)*

Class 3C: Triangular- and hook-rimmed jars (Fig 29)

This class is represented in the New Forest industry by types 30.1 and 30.3 (Fulford 1975).

Class 4: Bead-rimmed jars (Fig 30)

Bead-rimmed jars are far less important after the mid-2nd century, and are divided into those with stop ridges and those without. The type with vertical pointed bead (represented by 4.40, 4.41, and 4.42) has a wide size range but there is far greater emphasis on the larger storage vessels than earlier. During the 4th century the smaller examples disappear, and after 350 the entire class is represented by the large storage jar 4.45. This class is represented in the New Forest industry by types 25–28 (Fulford 1975).

Class 5A: Flat- and triangular-rimmed bowls (Fig 31)

3C.1, 3C.3 Two early variants of this class of vessel, the former having burnished bands on the body of 3B E and the latter a burnished rim top Burnished decoration is rare with this class of vessel and appears only in an early context (3C.1 Ewell; 3C.3 Dump AH 46)
Date 220 - 270

3C.2, 3C.4, 3C.5 Group of rim form variants representative of a great variety of forms, none of which appear to have any close dating significance The fabric is invariably a rough surfaced fabric A (3C.2 Dump AH 52, 3C.4 Dump AH 52; 3C.5 Dump AH 52)
Date 220 - 330

3C.6, 3C.7, 3C.8 Later, more complicated rim types also representative of a wide range of forms. The fabric is a rough surfaced A type (3C.6 Dump AH 25; 3C.7 Dump AH 25; 3C.8 Dump AH 25)
Date 270 - 330

3C.9, 3C.11 Distinctive late forms in a heavily sanded grey Fabric C or D with all-over horizontal body rilling and unfinished bases showing the whorls from wire cutting (3C.9 Dump AH 25; 3C.11 Overwey)
Date 300 - 420

3C.10, 3C.12, 3C.19 Late forms in heavily sanded medium grey Fabrics C or D fired buff or yellow. Form 3C.10 (not illustrated) is similar to 3C.9, 3C.12 similar to 3C.11, 3C.14 similar to 3C.13 but not decorated, 3C.17 to 3C.16 but not decorated, and 3C.19 to 3C.18 but not decorated. Horizontal rilling and basal whorls are universal and rim decoration only infrequent (3C.13 Mr Langham's kiln, 3C.15 Overwey; 3C.16 Overwey; 3C.18 Overwey)
Date 330 - 420

Fig 29 *Pottery Class 3C (triangular- and hooked-rimmed jars)* *(see p 43)*

4.36 A large bead-rimmed jar variant with a well formed circular bead. It is usually in heavily sanded Fabric C or D with rough surface smoothing and blackening (Dump AH 3)
Date 100 - 150

4.37, 4.38 Two variants of stop-ridged bead-rimmed jars usually in grey Fabric A (4.37 Dump AH 55; 4.38 Aylesfield)
Date 150 - 270

4.39 Bead-rimmed jar variant with internal rim flattening (Dump AH 55)
Date 180 - 270

4.40, 4.41 Two variants of jar with vertical pointed bead with internal burnishing. Usually in grey Fabric A (4.40 Dump AH 46; 4.41 Dump AH 70)
Date 220 - 270

4.43 Variant of 4.41 with a less pointed bead and in Fabrics A, B or C. Usually associated with larger vessels (not illustrated).
Date 220 - 270

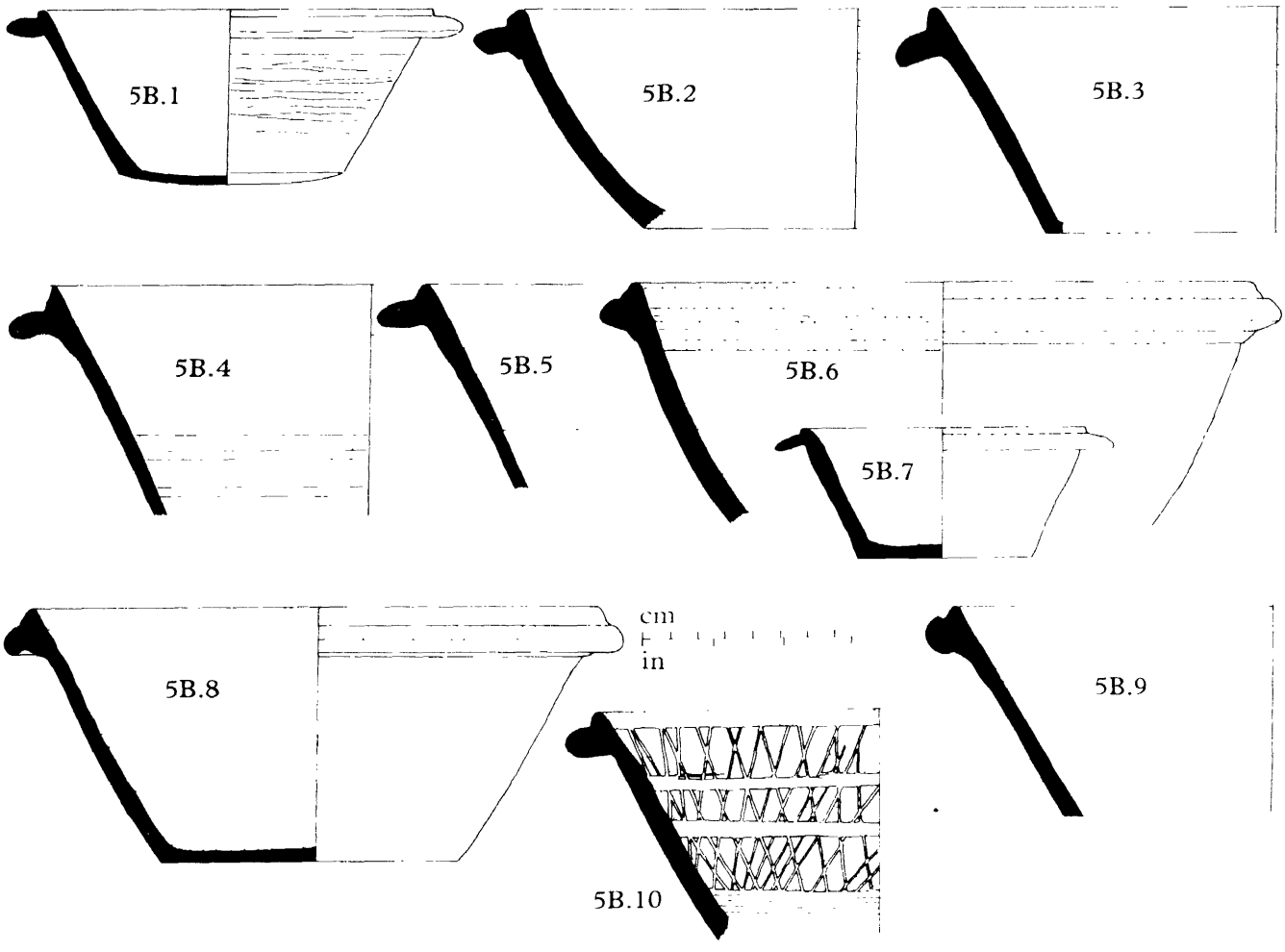
4.42 Similar to 4.41 but with applied black/white slip instead of self-burnishing. This type has a very wide size range from about 2in external rim dia to 12in (not illustrated)
Date 270 - 350

4.44 Similar to 4.43 but with applied black/white slip and in Fabric G. The upper part of the body has alternate slipped and combed bands in the manner of Classes 1A and 1C (Lullingstone)
Date 270 - 350

4.45 A large storage vessel derived from 4.44 and showing a similar evolution as that from 1C.5 to 1C.6 in that the rim is more inturned and the combing is more curvilinear (Netherwylde)
Date 350 - 420

4 A Herringbone combed decoration as shown on illustrated 4.44; also found on 1C.5

Fig 30 *Pottery Class 4 (bead-rimmed jars)* *(facing page)*



5B.1 A distinctive form of early flanged bowl with the bead formed by scoring a broad groove in the upper surface of a 5A 3 bowl. The interior is usually smoothed and the exterior smoothed in bands in style 3B.E. A grey Fabric A or B is usually employed. (Chiddingfold)
Date 200 - 250

5B.2, 5B.3 Two types of 3rd century flanged bowl showing both convex-sided and straight-sided profiles. The fabric is usually grey with all-over smoothing (Dump AH 2)
Date 220 - 270
(*Note:* These two are representative of a great range of rim forms, mostly with elongated flanges. The primitive technique of gouging out the bead from a thick triangular rim, as 5B 1, still survives alongside more sophisticated applique techniques. One common factor at this period is a ratio of 3:1 between external rim diameter and height)

5B.4, 5B.5, 5B.7 Three types of flanged bowl with elongated flanges and black/white slip over the flange and rim extending half-way down the interior. The fabric is invariably a grey or buff-grey Fabric A (AH 33)
Date 270 - 350

5B.6, 5B.8, 10 Four types of short flanged bowl, usually with overall interior black/white slip extending over the flange. A minority of vessels have an internal burnished lattice with ragged horizontal burnished or slipped bands superimposed (5B.6, 5B 8, 5B.9 Dump AH 33; 5B.10 (Overwey)
Date 270 - 420

Fig 32 Pottery Class 5B (beaded and flanged bowls)

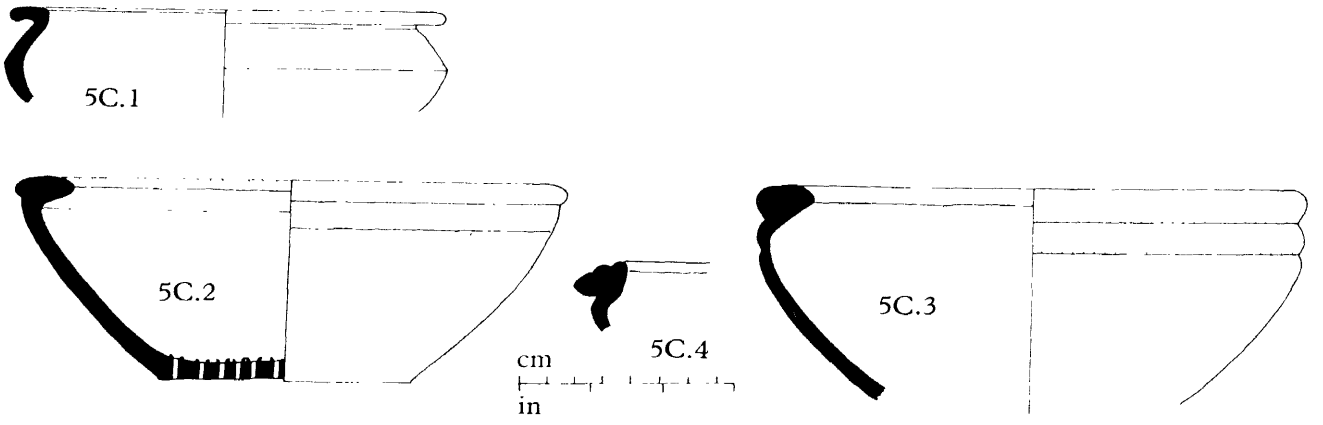
Class 5B: Beaded and flanged bowls (Fig 32)

This class is represented in the New Forest industry by type 6 (Fulford 1975).

This type of vessel, and Classes 5A and 6B, may have been bread or cake moulds. The partial internal slip extending over the top portion of the interior of many 4th century examples does not make much sense as decoration, but seems more logical as a marker for quantities of ingredients to be mixed in the vessel before cooking. The various Class 6A dish types may well have acted as lids for flanged bowls, a view supported by the fact that of the three coarsely sanded types produced by the 'Surrey buff ware' industry in the 4th century, one is the rilled cooking pot and the other two are the flanged bowl and convex-sided dish, both with refractory sanding.

Class 5C: Strainers (Fig 33)

This class of vessel becomes more important after 270, with the two very distinctive forms 5C.2 and 5C.3, but it never represented an important percentage of the



5C.1 Squat carinated strainer with flat rim usually in fabric A fired grey with exterior burnishing (Dump AH 55)
Date 150 - 270

5C.2 Development of 5C.1 with shoulder pushed up so high as to merge with the horizontal rim. Many examples are not quite as extreme as that illustrated. Black/white slip is restricted to the upper part of the vessel (Overwey)
Date 270 - 420

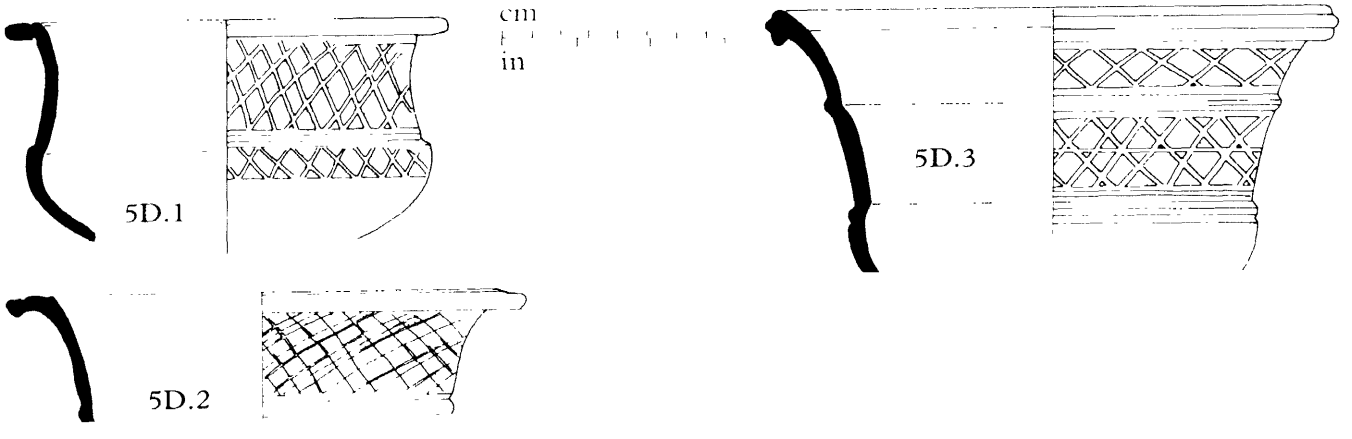
5C.3 Variant of 5C.2 with girth groove (Mildenhall)
Date 270 - 420

5C.4 Variant of 5C.2 with reeded rim (Chichester Eastgate)
Date 270 - 420

Fig 33 *Pottery Class 5C (strainers)*

production. Nevertheless, Alice Holt strainers seem to have been very popular and have a wide distribution, with a strong emphasis in Sussex. The presence of a reeded-rimmed example indicates a possible relationship with Classes 1, 1A, 1C and 5E. These may be wine strainers.

Class 5D: Deep decorated bowls (Fig 34)



5D.1 Deep bowl with external offset and probably originally with pedestal foot. Single rim top groove and band of burnished acute lattice decoration 3B.C. The type may be in a grey burnished or black burnished Fabric A (Chiddingfold)
Date 150 - 180

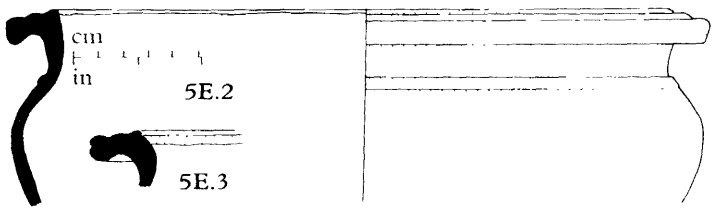
5D.2 Similar to 5D.1 but with reeded rim and obtuse lattice burnishing 3B.E. It is also known with burnished multiple lattice 3B.A (Great Mavins)
Date 180 - 270

5D.3 Elaborate version with triple-lobed rim and body cordon. Decorated with 90° burnished lattice 3B.B (Great Mavins)
Date 180 - 270

Fig 34 *Pottery Class 5D (deep decorated bowls)*

Class 5E: Large reeded-rimmed bowls (Fig 35)

This class is represented in the New Forest industry by types 9 and 10 (Fulford 1975).



5E.1 (Not illustrated). Large open bowl with burnished reeding
Date 220 - 270

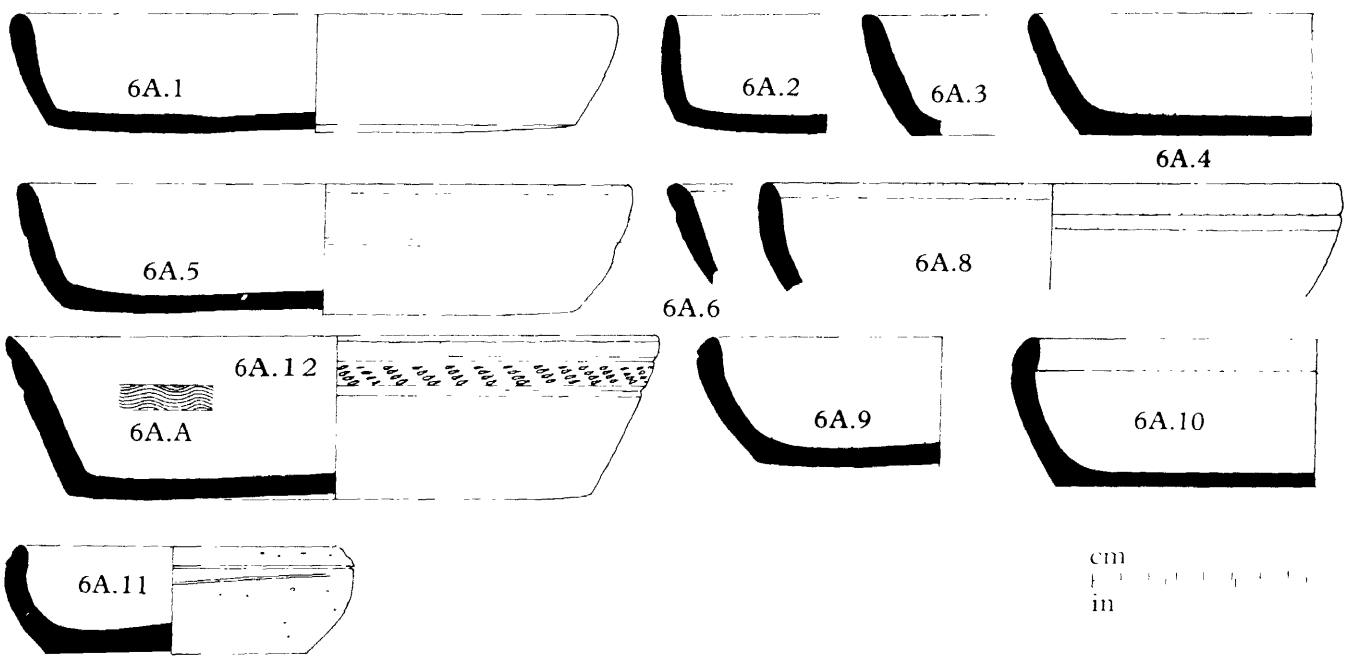
5E.2 Similar to 5E.1 with applied black/white slip over rim top and body of vessel (Thatcham)
Date 270 - 350

5E.3 Variant of 5E.2 with applied black/white slip (Franks Hall, Farningham)
Date 270 - 350

Fig 35 *Pottery Class 5E (large reeded-rimmed bowls)*

Class 6A: Straight- and convex-sided dishes (Fig 36)

There is very little significant development of this class of vessel until the 4th century, apart from the appearance of the neutral slip around 270. The base can be either flat or slightly convex, but this appears to have little dating significance: it more likely represents different degrees of quality. There is a sporadic appearance of convex-sided type 6A.8 during the late 3rd century alongside the grooved straight-sided types 6A.12 and 6A.13, but they are a small minority. During the later 4th century, however, these two types completely replace the simple 'dog dish'. Types



6A.1, 6A.2, 6A.3 Three types in grey Fabric A often with black surfacing and internal burnishing. The base is either flat or slightly convex and in the latter case sometimes decorated with burnished looping on the underside. Similar burnished decoration is also sometimes found on the external surface of the vessel wall (6A.1 Dump AH 55; 6A.2 Six Bells; 6A.3 Dump AH 2)
Date 180 - 270

6A.4 Plain straight-sided dish with interior all-over black/white burnished slip extending over rim. Invariably in medium grey Fabric A (Dump AH 33)
Date 270 - 350

6A.5, 6A.6 Two types of straight-sided dish with internal black/white slip and external waisting (6A.5 Dump AH 33; 6A.6 Dump AH 2)
Date 270 - 300

6A.7 Slightly convex-sided dish with external groove below rim. In grey Fabric A fired black with internal burnishing. A rare form
Date 200 - 270

6A.8, 6A.9, 6A.10 Convex-sided dishes, usually with overall internal black/white slip on a medium grey Fabric A. A minority of vessels have burnished internal lattice or scrolling (6A.8 Dump AH 61; 6A.9 Overwey; 6A.10 Dump AH 25)
Date 270 - 420 (6A.9, 6A.10 330 - 420)

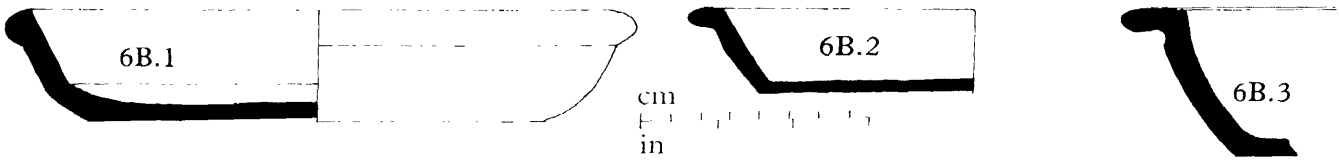
6A.11 Convex-sided dish in coarse grey Fabric C or D fired buff or yellow. No surface smoothing. The base is frequently very thick (Overwey)
Date 330 - 420

6A.12 Straight-sided dish with multiple grooving on exterior below rim and internal black/white slip over interior. Rarely, as shown, there is a band of stabbed 1.A or combed 6A.A decoration between grooves (Overwey)
Date 270 - 420

6A.13 Straight-sided dish with single groove on exterior below rim but otherwise similar to 6A.12. No external decorative band. (Not illustrated)
Date 270 - 420

6A.A Wavy combed band found on exterior of 6A.12, although rarely

Fig 36 *Pottery Class 6A (straight- and convex-sided dishes)*

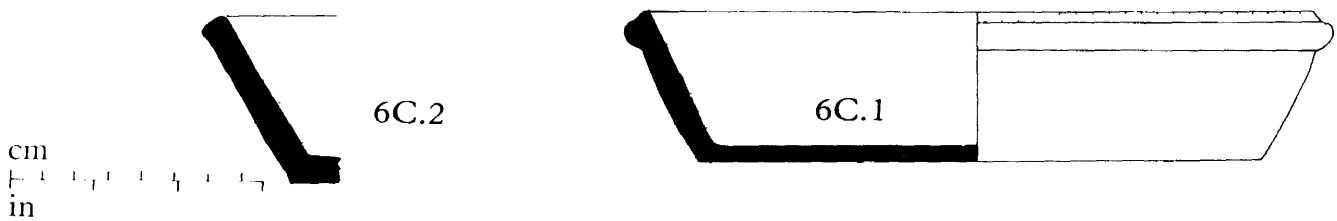


6B.1 Dish with massive D-shaped rim. Usually in grey Fabric A or C (Dump AH 55)
Date 150 - 220

6B 2 Flat-rimmed dish with pushed-up base (Dump AH 55)
Date 150 - 220

6B 3 Large flat-rimmed dish with rim top groove and undercutting of rim. Burnished interior (Dump AH 55)
Date 150 - 220

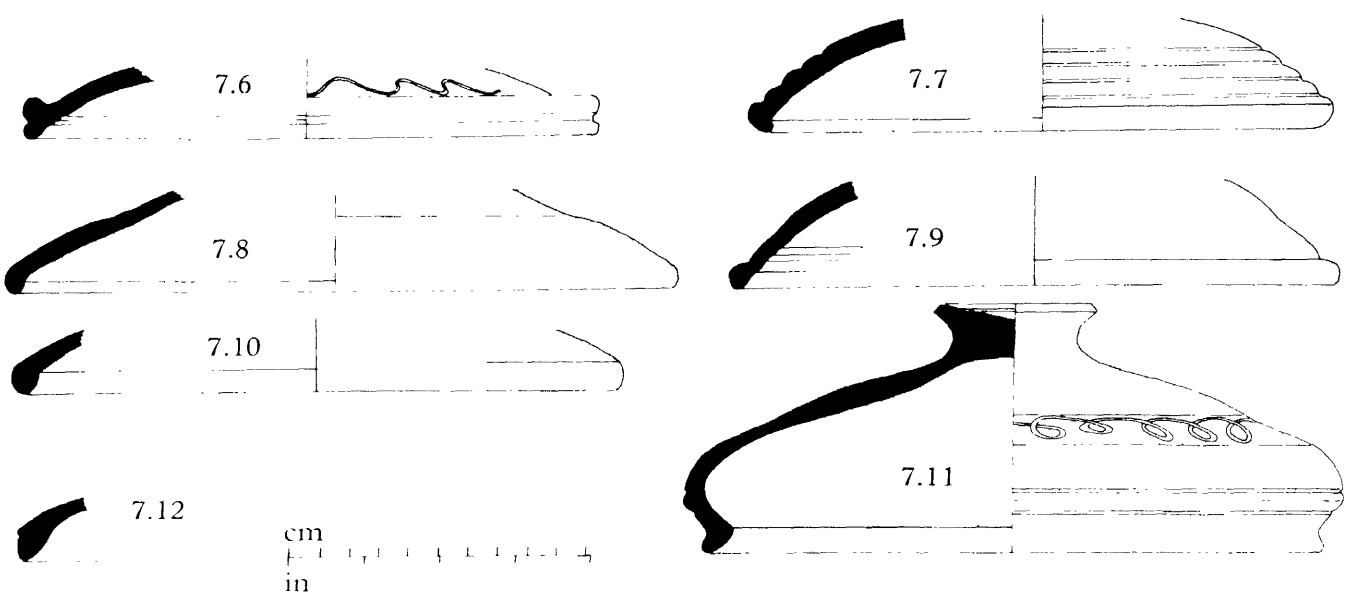
Fig 37 *Pottery Class 6B (flat and triangular-rimmed dishes)*



6C 2 Variant with blurred flange and internal black/white slip (Overwey)
Date 350 - 420

6C.1 Usually in a grey Fabric A with internal black/white slip extending over the flange (Dump AH 25)
Date 330 - 420

Fig 38 *Pottery Class 6C (beaded and flanged dishes)*



7 6 Lid with flanged rim, usually in grey or indifferently fired Fabric C or D Usually burnished wavy line decoration on top or underside (Dump AH 55)
Date 100 - 200

7.7 Lid with corrugated upper surface which can be either grey or black burnished. Fabric A, B, or C (Dump AH 55)
Date 100 - 200

7 8 Plain lid, usually in Fabric C, with blackened upper surface (Dump AH 46)
Date 100 - 150

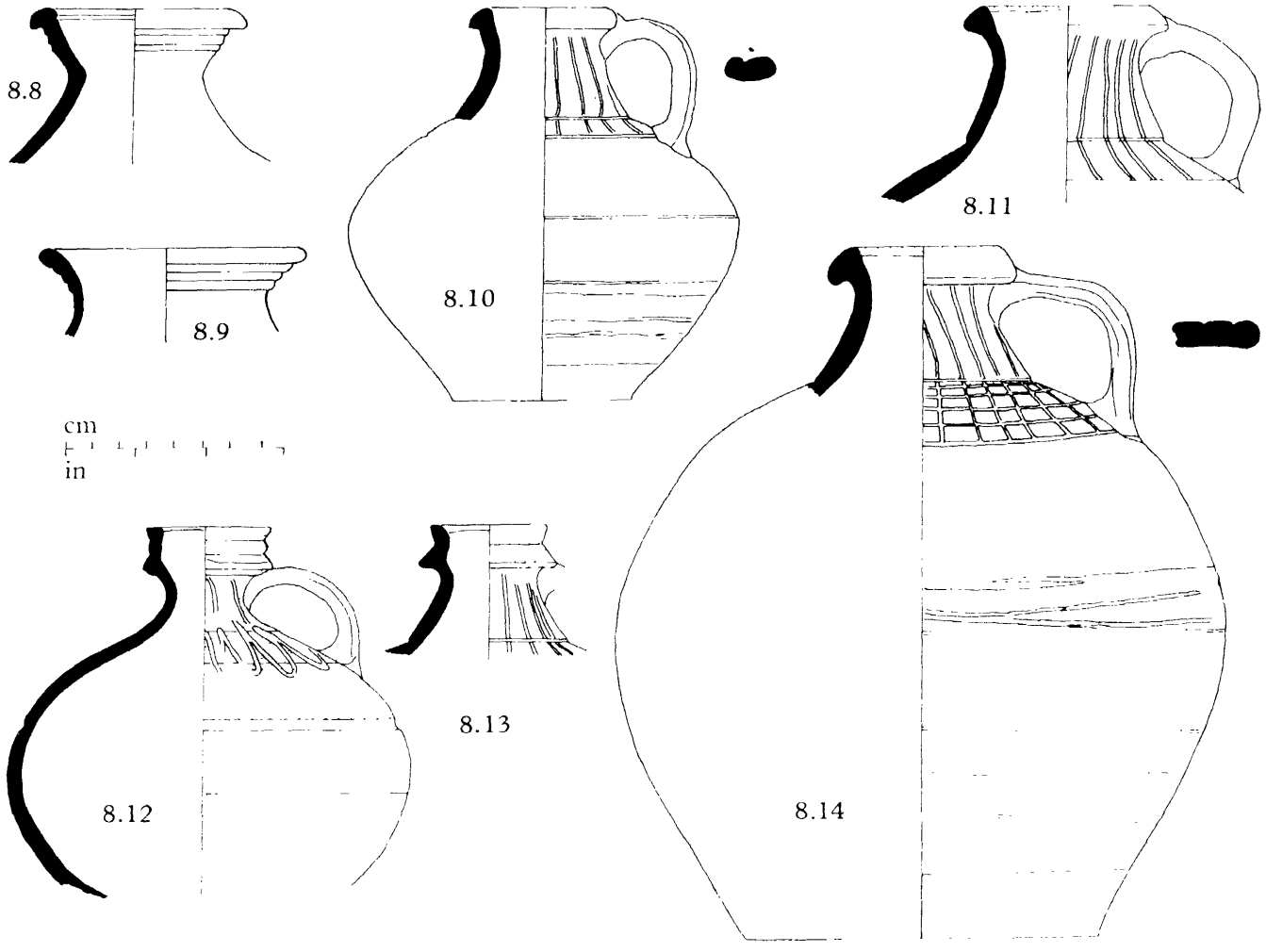
7.9 Lid with beaded rim, usually in similar fabric to 7.8 (Dump AH 3)
Date 100 - 150

7.10 Lid with vertical rim, usually in grey Fabric A, with black or grey burnished upper surface (Dump AH 70)
Date 200 - 270

7.11 Very ornate deep lid in grey Fabric A, either black-burnished or grey-burnished on the upper surface Its form suggests that it may have been used on stop-ridged bead-rimmed jars (Six Bells)
Date Uncertain, but *c* 200

7 12 Similar to 7.10 but with groove on vertical face of rim (Dump AH 2)
Date 200 - 270

Fig 39 *Pottery Class 7 (lids)*



8.8, Both in Fabric A, (Dump AH 55)
8.9 *Date* 100 - 200
8.10 Flagon with burnished rim and upper half of body. Vertical burnished lines on neck. Grey fabric A (Silchester).
Date 200 - 270
8.11, Similar to 8.10 but with black/white slip in place of burnished
8.14 zones (8.11 Overwey; 8.14 Silchester)
Date 270 - 420

8.12 Derived from 8.9 with neck vertical. In grey Fabric A with black/white slip on rim and upper half of body. Girth groove above matt band with slip over lower part of body (Overwey)
Date 270 - 420
8.13 Form ultimately derived from 8.6 with neck more vertical and slipped bands as 8.12 (Overwey)
Date 270 - 420

Fig 40 Pottery Class 8 (flagons)

6A.5 and 6A.6 are significant, as they appear to be restricted to the later 3rd century, but they are fairly rare.

This class is represented in the New Forest industry by types 19.1 and 19.2 (Fulford 1975).

Class 6B: Flat- and triangular-rimmed dishes (Fig 37)

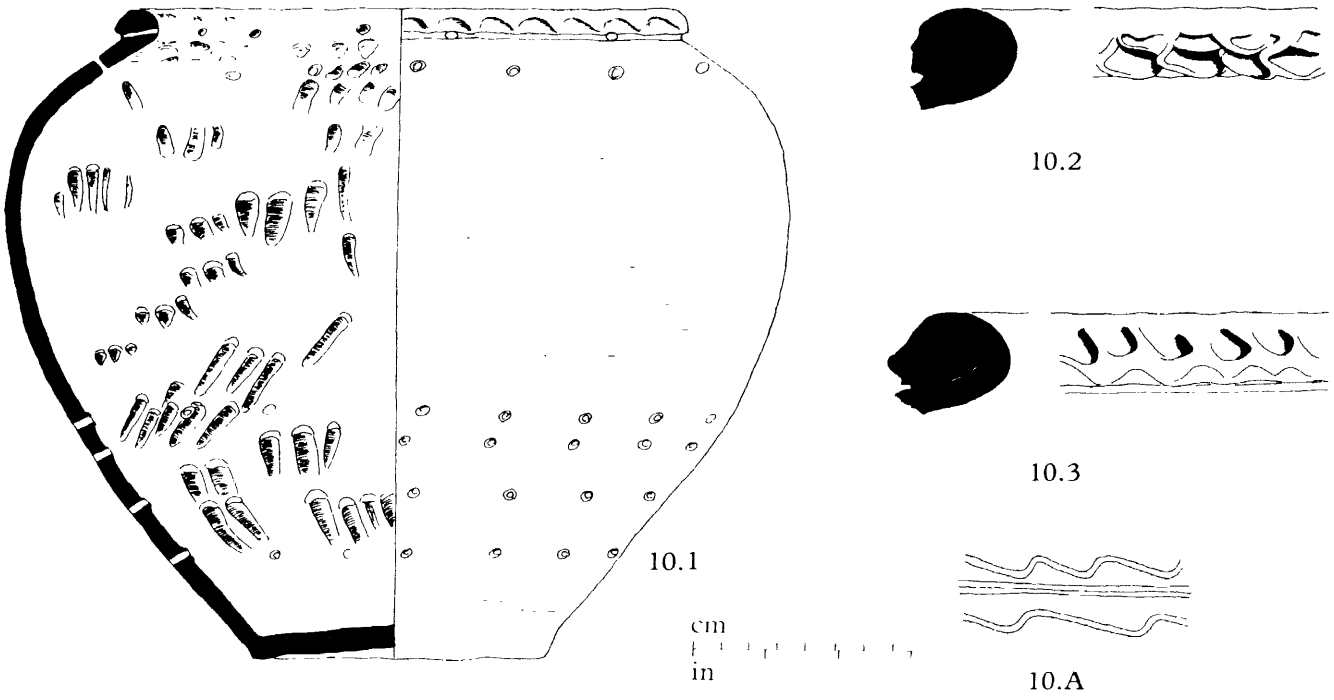
Class 6C: Beaded and flanged dishes (Fig 38)

This class partially replaces the Class 6A straight-sided dish during the 4th century. There is some evidence that a very limited production was taking place by the end of the 3rd century, but the type only becomes common after 330 and shows very little variation in form. The internal decoration associated with 4th century examples of Classes 6A and 5B has so far not been detected on this type.

The class is represented in the New Forest industry by type 5 (Fulford 1975).

Class 7: Lids (Fig 39)

The heyday of lid production was in the 2nd century, when they were probably used with Class 3A, 5A, and 6B vessels. Support for their use with Class 3A vessels lies in the comparable use of very rough Fabrics C and D with many examples of both Classes 3A and 7 at a time when the use



10.1 Large vessel with finger clawing on interior surface and perforations through the rim and body (Ewell,Frere 1942, fig 6, redrawn)
Date 180 - 270

10.2 Soft medium-grey Fabric A with rim fingering taking the form of overlapping scales (Dump AH 61)
Date 270 - 420

10.3 Hard medium-grey Fabric A with rim cabling (Dump AH 75)
Date 270 - 420

10.A Form of scribed decoration carried out below rim of vessel on shoulder. Executed with a stick and found with little variation at all periods

Fig 41 *Pottery Class 10 (large cable-rimmed vessels)*

of coarse fabric was becoming much more restricted overall. The rapid decline of the class during the 3rd century coincides with the disappearance of these three classes.

This class is represented in the New Forest industry by types 23.1 and 23.2 (Fulford 1975).

Class 8: Flagons (Fig 40)

The corpus for this class of vessel is perhaps the least complete of all, particularly for the period between 100 and 270. This is due to the insignificance of the class in terms of production until about 270, although after that date flagons became considerably more important, with a very wide market. It can be seen that rim design of Alice Holt flagons changed little during the entire period of production, except that during the 3rd century necks became less flaring and more vertical, with the angle of the various designs changed accordingly.

This class is represented in the New Forest industry by type 20 (Fulford 1975).

Class 10: Large cable-rimmed vessels (Fig 41)

These vessels make their appearance in the Alice Holt assemblage after 180 and, once developed, change very little over 250 years. Some of the earlier examples make use of rather indifferently fired Fabric B and have a slight neck between rim and body, but all examples feature some kind of finger moulding on the rim and have multiple clawed fingering or broad grooves made with a stick on the interior surface. Rows of small perforations skewered through the body of the pot and sometimes the rim are also common, as in type 10.1, and vessels are hand-made with a minimum of surface finish.

The drawn example 10.3 is interesting in that the fingered cabling on the upper surface of the rim is also found on the underside, where it would be invisible, pressed against the body of the pot. Rims of this type would seem to have been manufactured separately in the form of fingered 'sausages' of clay which were then pressed against the top of the coil-built body with the underside decoration acting as keying.

The size of these vessels might indicate storage as their function but the perforations rule out liquid. It has been suggested that these vessels were ceramic beehives (Clark and Nichols 1960), with the cable rim being a skeuomorphic rendering of basketry and the internal fingering acting as anchorage for the combs. The pots would presumably have been placed on blocks in an inverted position with the bees entering from beneath and the perforations being for ventilation. This suggestion seems to explain all the basic features of this class better than any other.

The late 1st and early 2nd century (Figs 42–44)

During the early years of production the industry rapidly extended its market over a considerable area. Its products are found in north Hampshire as far west as the headwaters of the river Ann and its tributaries beneath the great natural rampart of the eastern edge of Salisbury Plain. To the south, the wares were marketed in the Hampshire basin at Winchester and across western Sussex to the channel coast at Chichester and Fishbourne. In Surrey, Stane Street formed an approximate eastern boundary, while to the north the pottery salesmen penetrated eastern Berkshire and up the Thames as far east as London.

Over much of this area the pottery was in a minority, competing with various other production centres, the zone where it was predominant being restricted to north-east Hampshire, north-west Sussex, and south-west Surrey. At the two large urban markets of Winchester and Silchester only a quarter of the outlet was controlled, although at the local small town of Neatham Alice Holt/Farnham ware was overwhelmingly predominant. The urban market at Staines had 18% Alice Holt pottery at this period, whereas Ewell had rather more at 24%. Somewhat surprisingly, deposits from Walbrook at London dated between AD 70 and AD 85 give a remarkably high reading of 17% Alice Holt ware, considering that the potteries were 40 miles away to the south-west. This phenomenon may be due to the fact that London was a new foundation and until craftsmen could be attracted to it to satisfy its very large market the goods had to be brought in from much further afield; the Alice Holt industry was at an advantage in view of its direct river link.

For Alice Holt a change came about AD 90, when many new pottery concerns, particularly in the London area, took over part of its sales territory. At London Alice Holt wares simply vanish and at Ewell the evidence would suggest that the proportion of that market declined. This period after AD 90 coincides with the appearance of the Class 3A cooking pot (Fig 44) in the Alice Holt repertoire as well as the Class 7 lid to go with it. Previously there had been no specific cooking vessel, just the multi-purpose bead rim jar. The Class 3A type is alien to local tradition and the closest parallels are found in the Rhineland (Gose 1950) in late 1st and 2nd century deposits.

The shrinkage of the Alice Holt/Farnham ware sales area, after the introduction of the flat-rimmed jar, may not, however, indicate any decline in production levels but rather the increasing use of pottery in general, resulting in the potters being able to sell their wares over a smaller but more demanding zone. Another factor in the loss of the London market may be that the Brockley Hill potteries, one of the new arrivals, also manufactured mortaria whereas Alice Holt did not.

If the demand for coarse pottery exceeded the ability of potters to supply during this early period, one might expect a lack of incentive in developing sophisticated marketing

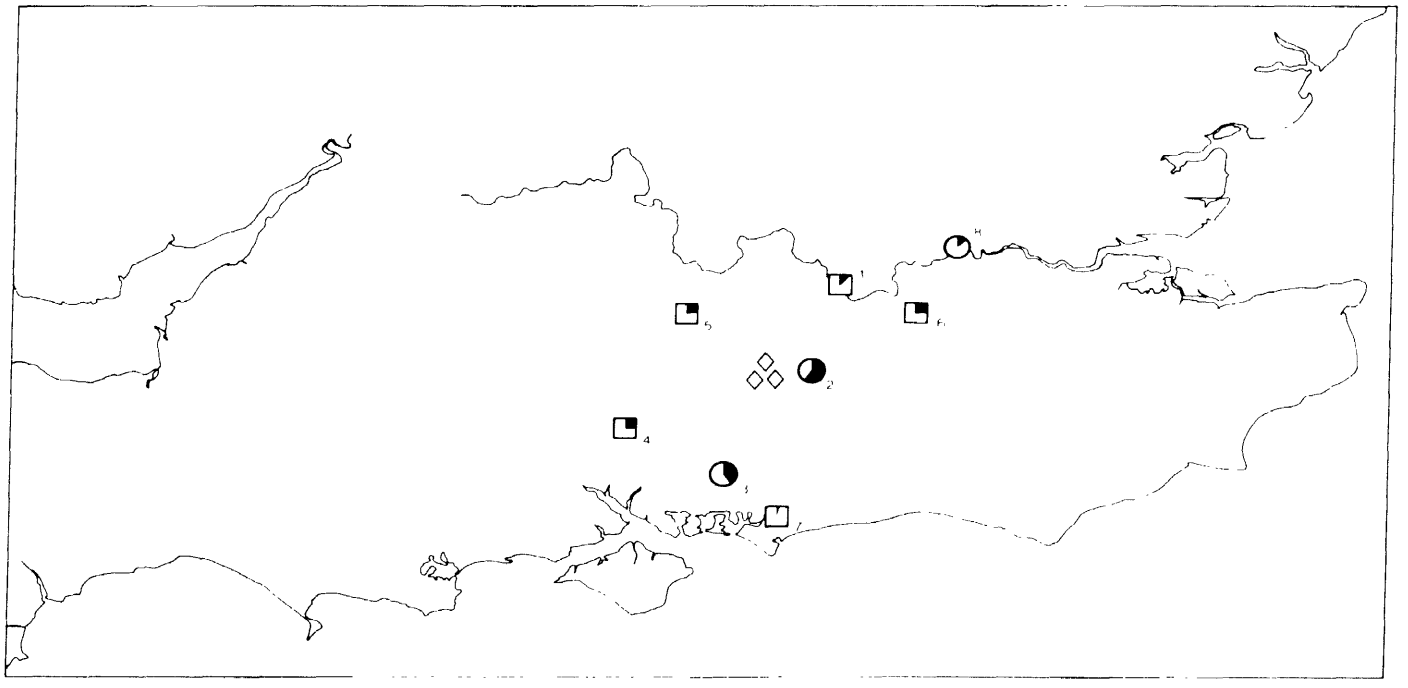


Fig 42 Percentage patterns of trade, 60 - 150 (see Appendix 3)

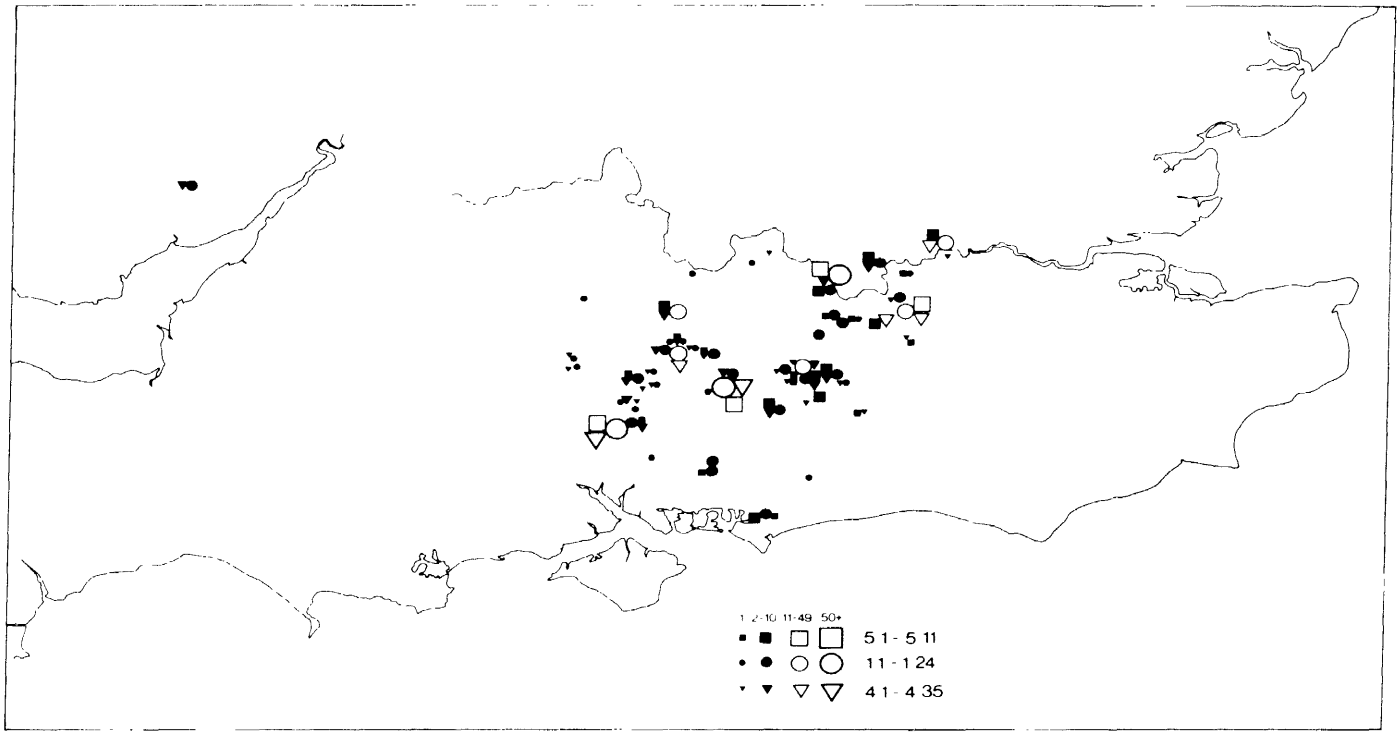


Fig 43 *Distribution of forms dated 60 - 150*

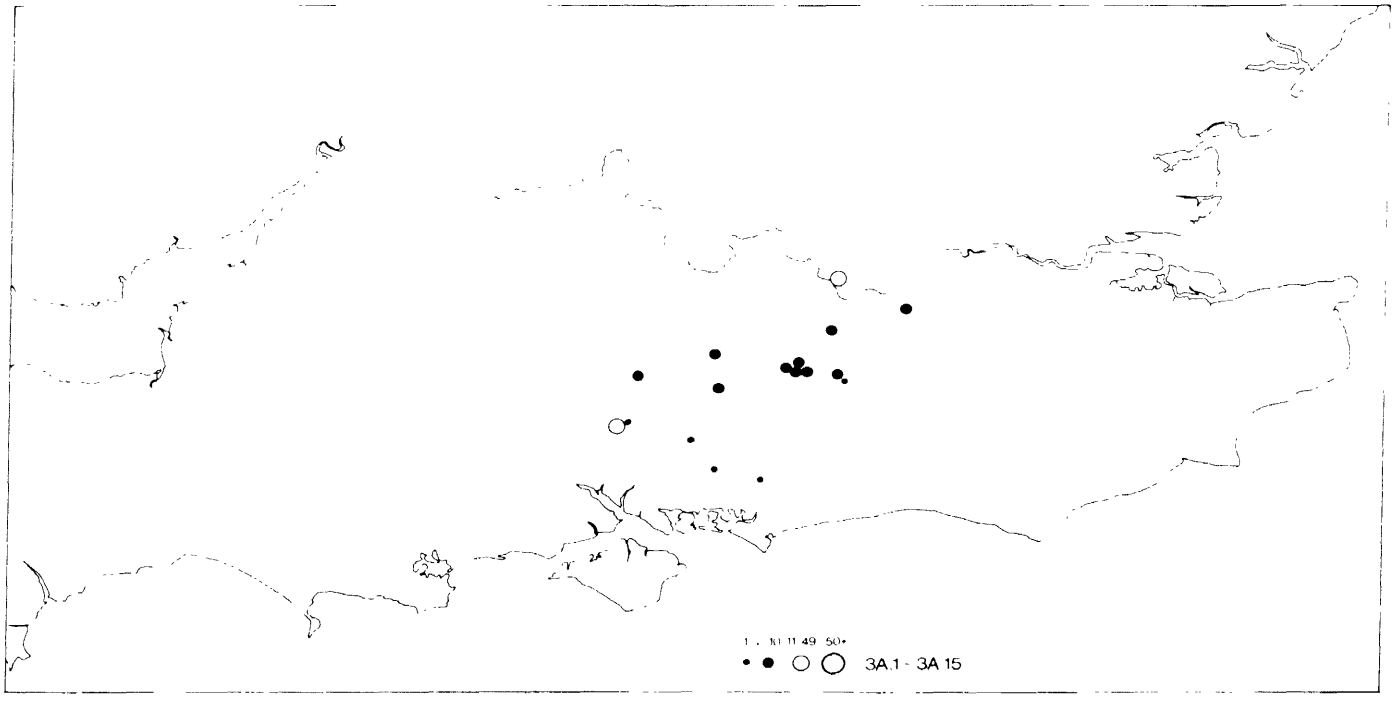


Fig 44 *Distribution of forms dated 90 - 150*

techniques and a corresponding conservatism in forms produced. This latter is certainly the case, with most forms scarcely changing during the first 80 years or so of production at Alice Holt. Evidence for marketing techniques is difficult to assess, particularly in the central area of distribution. The importance or otherwise of the Roman road system in local marketing cannot be judged, since the road network is very poorly known over north-east Hampshire and west Surrey. It has been thought that the settlement at Neatham, situated a short distance west of Alice Holt at the intersection of the Chichester/Silchester road and an imperfectly understood route running north-east from Winchester, may have owed its existence in part to being the main distribution centre for the potteries (Millett 1975). This belief presupposes a certain knowledge of the marketing techniques employed by the Alice Holt potters: some of the strongest evidence comes from the pottery distribution pattern of this period, with important markets at both Silchester and Winchester. The probable significance of water traffic as a much cheaper alternative to road transport has been pointed out (Fulford 1975; Webster 1977, 325-7), and indeed most large centres of pottery production are either on the coast or on rivers. The Alice Holt/Farnham complex is no exception, with the Alice Holt centre only a short distance north of the river Slea (Fig 1). Air photography and fieldwork have revealed short lengths of road running south from both the Alice Holt and the Malthouse Farm centres to the north bank of the river Slea (Fig 4), and it may be that pottery was loaded on barges at these points, as the river is navigable. The north European flat-bottomed, shallow-draught, open-ended dug-out (De Weerd 1978) would be admirably suited for this kind of traffic, quite small craft being capable of carrying extremely heavy loads.

The Slea flowing eastwards runs first into the southern Wey and then unites with the northern Wey at Tilford, where later there was another important centre of production. The main concentration of Farnham kilns is also significantly situated on the northern Wey.

The late 2nd and early 3rd centuries (Figs 45 and 46)

As described earlier, there was one British pottery industry at least which had developed a very large marketing area by the Hadrianic period. This was the black-burnished ware industry of Dorset based on Poole Harbour, and the reasons for its success were various. Even in pre-Roman times this was an industrialized area, with its Kimmeridge shale industry and possible salt production. During the Roman period marble quarrying and large-scale pottery manufacture were added.

It may be that all these industries were under a single control and, in view of the fact that Purbeck was in hostile Durotrigian territory during the first year of the Roman occupation, this control may have been exercised by an imperial procurator. This industry had supplied the auxiliary units in the south-west and was well placed for the military market during the later occupation of Wales. Under Hadrian large contracts were secured for supplying the northern garrison. The military trade was soon followed by capture of civil markets in the midlands and south-west. Towards the end of the 1st century this already large industry turned its marketing attentions eastwards towards an area shared by numerous Belgic and non-Belgic derived pottery industries including Alice Holt, and the result of this intrusion on the urban markets of that industry at Winchester and Silchester, with its innovatory effect on it, has already been described (p 34 above). During the later 2nd century the Alice Holt industry's marketing area did in fact contract in the west, reducing its share of the Winchester market. In the east, however, after 180 much of the Ewell market was taken from the BB2 industries

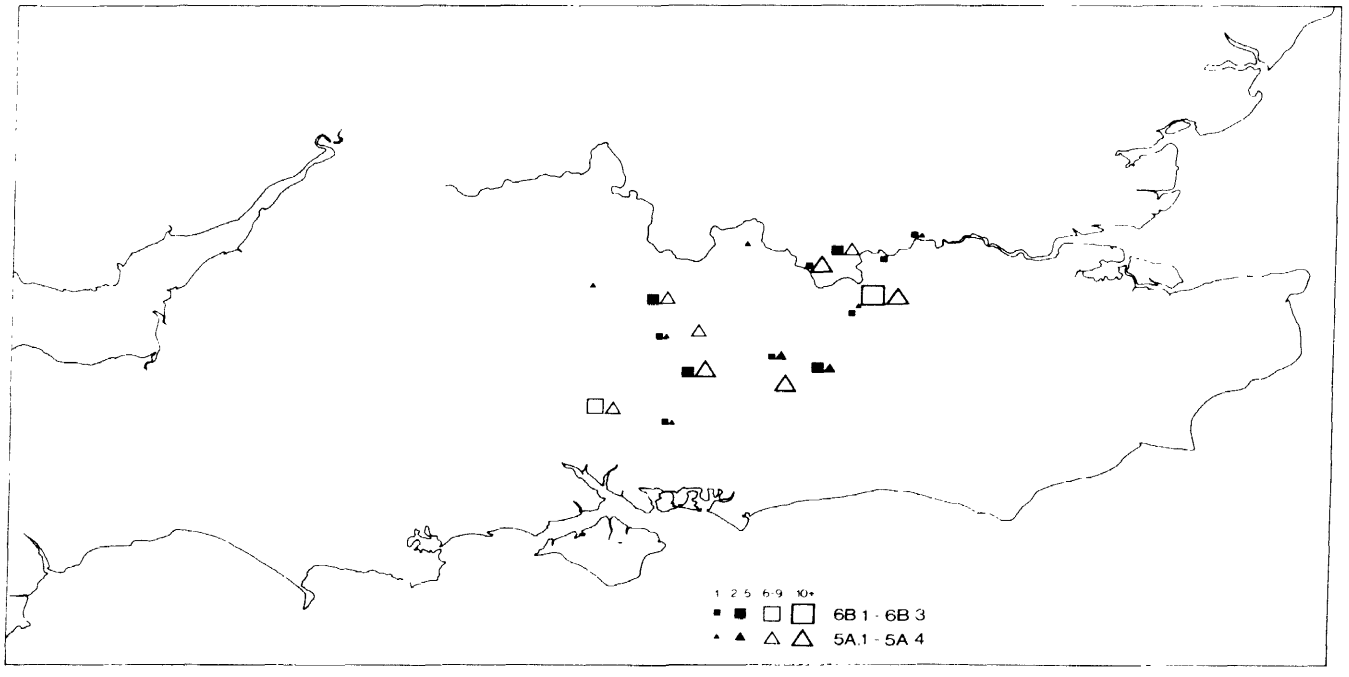


Fig 45 Distribution of forms dated 150 - 220

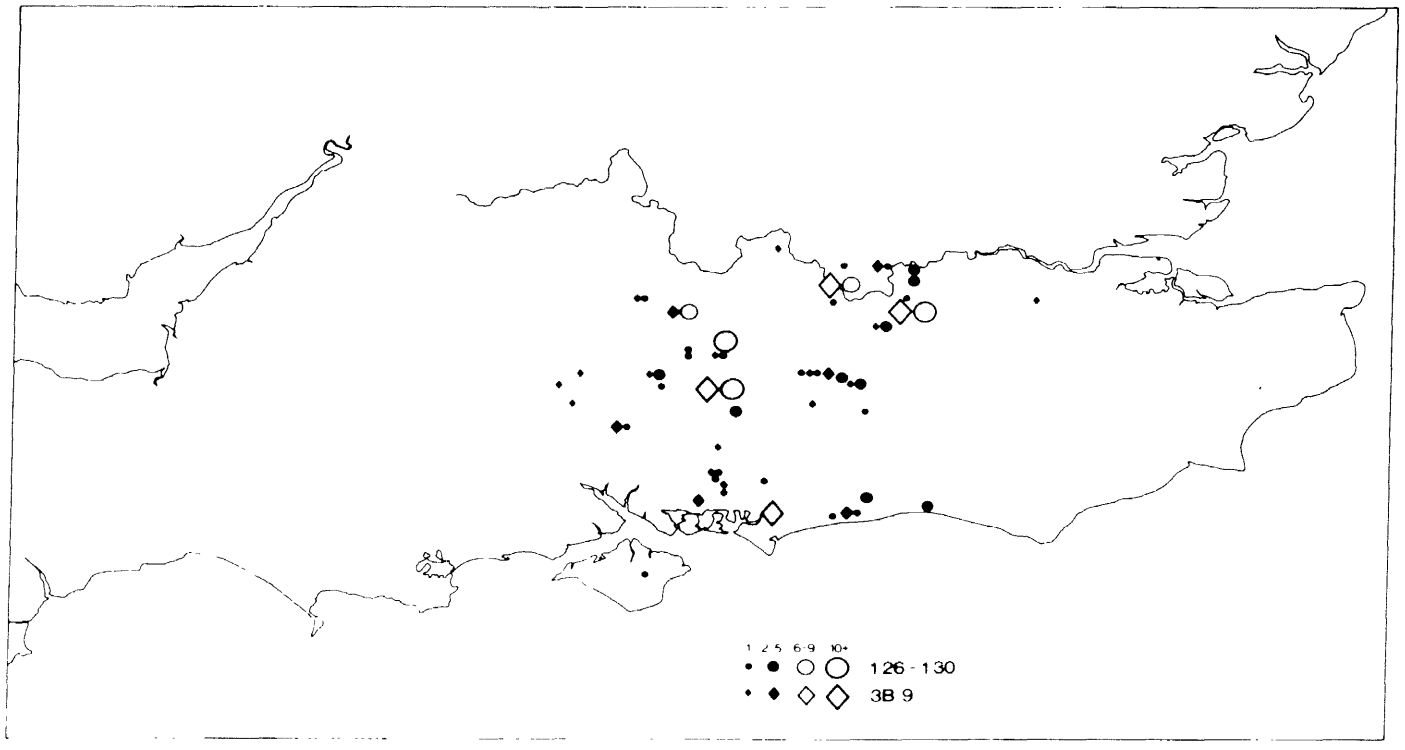


Fig 46 *Distribution of forms dated 220 - 270*

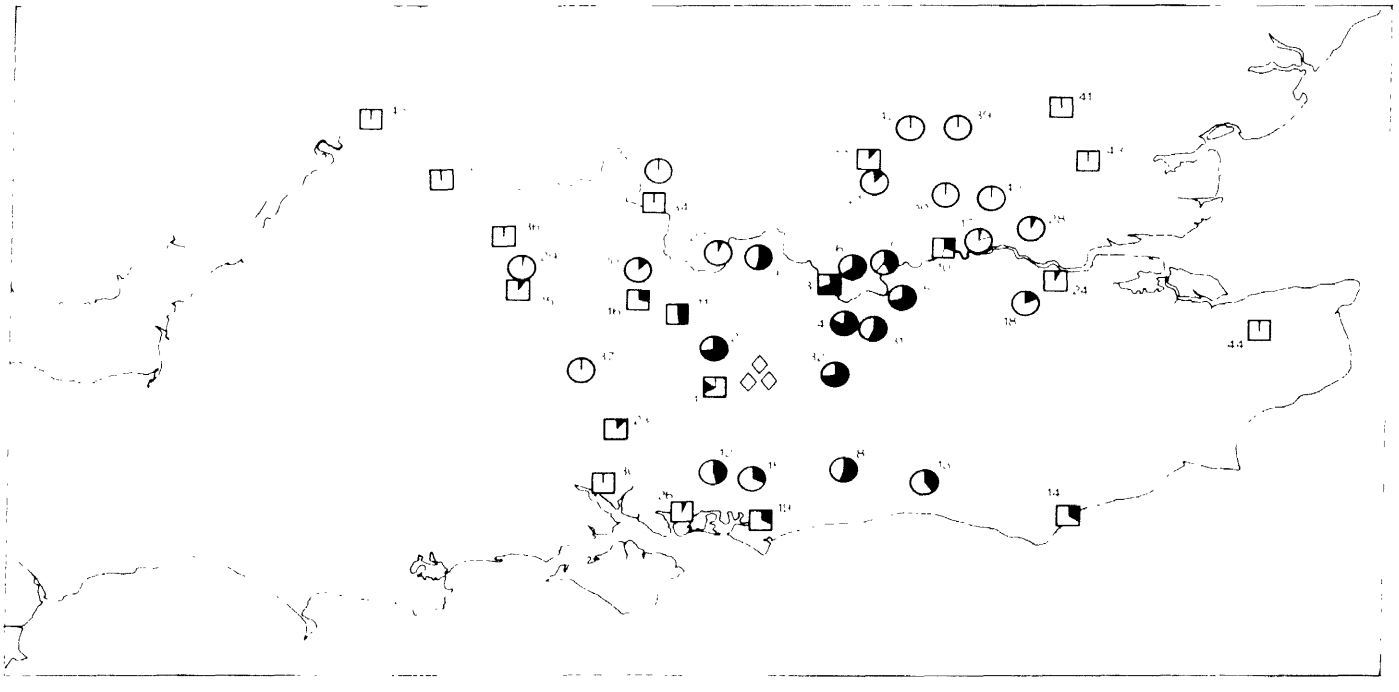


Fig 47 *Percentage patterns of trade 270 - 420 (see Appendix 3)*

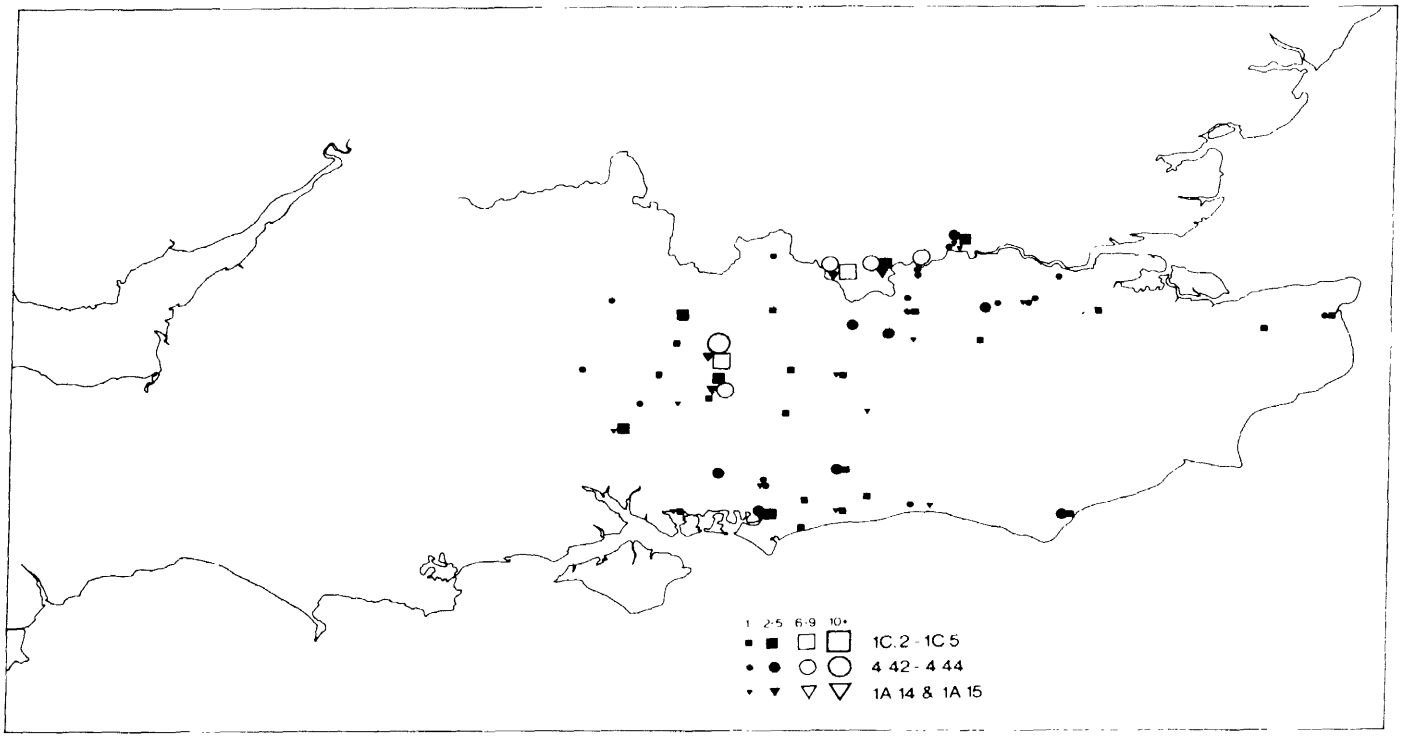


Fig 48 Distribution of forms dated 270 - 350

of the Thames estuary. In the early 3rd century many pottery industries including Wiggonholt, Staines, and Brockley Hill declined as potters moved towards the larger markets of the north and midlands.

The Alice Holt/Farnham industry seems to have survived the troubles of the late 2nd and early 3rd centuries, even expanding its peripheral marketing area across Sussex and into south-east Hampshire, although in none of these new areas was Alice Holt pottery particularly significant. It would seem possible that the Class 5B flanged bowl had its origins in the Alice Holt/Farnham potteries, the only other serious candidate being the Dorset black-burnished ware industry. The earliest Alice Holt examples show immense variety of form and can perhaps be regarded as one stage in a tradition represented firstly by Class 5 lid-seated rims and then by reeded-rim examples of Class 5A.

The late 3rd to early 4th century (Figs 47–49)

After *c* 270 Alice Holt was revitalized. In all the earlier marketing areas, except south Hampshire, its share of the total pottery market considerably increased. In southern Hampshire there was no real change because the New Forest industry had taken most of the Winchester market and made inroads as far north as Silchester.

The plan of the Alice Holt potteries (Fig 2) shows this vastly increased scale of production in the sheer volume of waste postdating 270. The revival at this time is only one aspect of a general growth of the pottery industry in Britain. The cessation of samian and other imports in the mid-3rd century was not enough in itself to promote this rapid growth of British potteries, particularly those producing coarse kitchen wares. The state of serious economic and political anarchy which reigned between the death of Severus Alexander in 235 and the death of Quintillus in 270 was gradually brought to an end by Aurelian. He stopped the debasement of coinage and proceeded to put down the plundering of the provinces by the military. His restoration of a comparatively stable administration between 270 and 275 coincided sufficiently closely with the date deduced for the revival of the British pottery industries to suggest a connection.

A great boost for the Alice Holt/Farnham industry took place around the end of the 3rd century with a second major penetration of the London market. At Staines the earlier 3rd century deposits have given the potters a share of the market of 19%, but after 270 there was a dramatic increase to 66%. At London the situation was similar. Phase VIII of the Mithraeum (between 240 and 290) had only 7% Alice Holt pottery, but Phase IX (between 290 and 330) had 31%. It seems likely that Alice Holt pottery was now getting to London not only via the River Thames in much larger amounts, but along the road from Staines and up Stane Street from the south-west. To the north of the Thames, Alice Holt pottery penetrated east beyond London at least as far as the Lea valley, where the 1976 excavations at Bow had 3% belonging to this period.

The much greater level of pottery production by the large industries after 270 and the maximum exploitation of the potential markets led to much fiercer competition, which in turn led to greater sophistication in marketing techniques and more innovation. For the first time there is

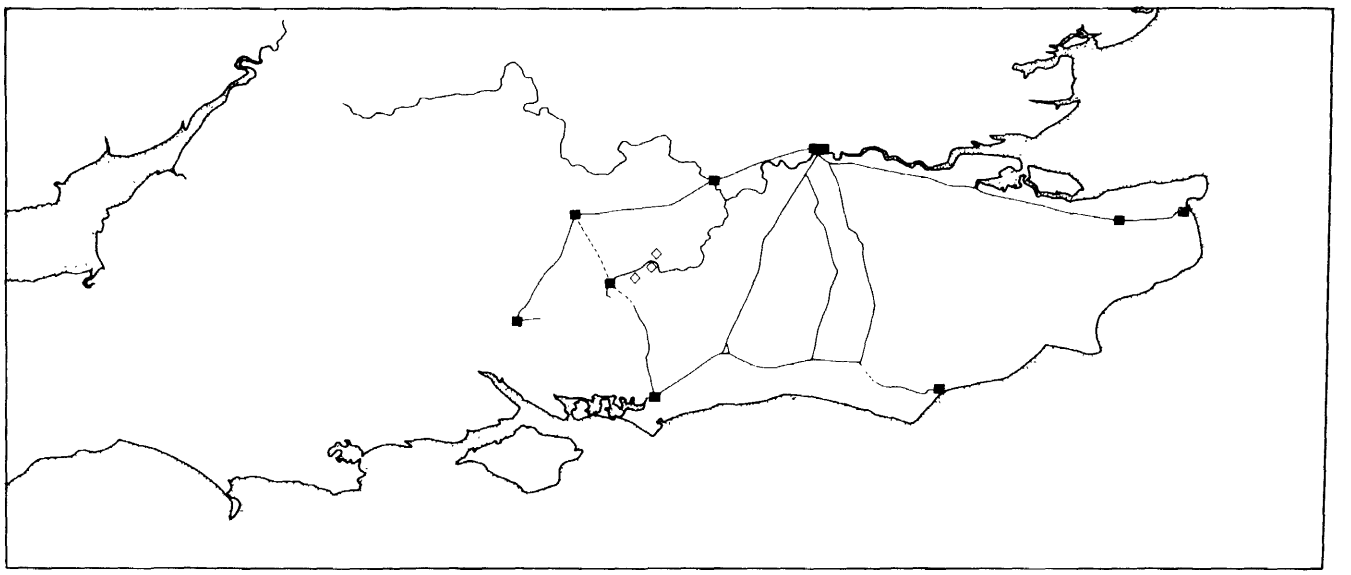


Fig 49 *Trade routes used during the period 270 - 350*

a significant manufacture of Classes 1A, 1C, and 4 storage jars at Alice Holt, vessel types which were to become even more important during the late 4th century. These vessels, together with Class 8 flagons, were the most successful Alice Holt form at this time and travelled farthest. This factor introduces an important aspect of the Alice Holt/Farnham industry after 270 which might make it different from most of its contemporaries. There is evidence for the linear marketing of these vessel types along Roman roads beyond the main Alice Holt distribution area particularly, as will be seen in the later 4th century, suggesting that they may have been sold as containers for local produce. Otherwise, unless the potters were charging very high prices, it is difficult to see how such distant road marketing of coarse-ware vessels could be economical. The evidence of the probable wax mould lid from AH 58 (Lyne and Jefferies 1974), the large heathland areas to the east and south of the potteries which are ideal beekeeping country, plus the rope-rimmed Class 10 vessels with internal fingering, which have been thought to be beehives (Clark and Nichols 1960) suggest a trade in some honey-derived beverage of the mead variety and also perhaps in the transport of honey itself. If this was a large-scale industry it may imply a change of ownership, with new ideas and the injection of capital.

Two large Class 1C storage jars from late 3rd century levels at Winchester have *graffiti* on the shoulder. One of these is fragmentary and unintelligible, but the other could be read as 'Nicerius m(ensuravit) VIII (urnae)'. Eight *urnae* come to 6592in^3 (108 litres), the estimated volume of the jar to within 1%.

The volume of the Snailslynch Class 1A storage jar (1A.13) of similar date has been calculated at 686in^3 (11.24 litres), which is fairly close to one-tenth of that of the Winchester Class 1C example, and it is quite noticeable that vessels of these two classes show very little size variation, suggesting standardization. Class 1B vessels of types 1B.3–1B.6 also seem to belong on stylistic grounds to this group of storage jars and indicate an even smaller unit of volume. An example (1B.4) from Linchmere was calculated to have a capacity of 69.15in^3 (1.13 litres), which corresponds very closely to 2 *sextarii* (68.66in^3; 1.10 litres) or almost a one-hundredth part of the Winchester Class 1C vessel.

Eight *urnae* are equal to 192 *sextarii* and, allowing for an inevitable slight error margin, this gives the following standards:

Class 1B = 2 *sextarii*
1A = 20 *sextarii*
1C = 192 *sextarii* = 8 *urnae* (200 *sextarii* approx.)

These are units of liquid measurement and it seems rather unlikely, from the wording, that the Winchester *graffito* could be a personal ownership marking. It appears to be either a shopkeeper's record of the volume of contained produce in a vessel or perhaps connected with excise control.

There is evidence that whoever controlled the potteries also controlled the goods that were put in the products, rather than the vessels being supplied on contract to a middleman some distance away. This evidence takes the form of odd Alice Holt vessels, not of the storage variety, being found along the routes associated with the storage jars and flagons. If some corroboration of this local wine production hypothesis may be given by the probable name of Neatham in Roman times, VINDOMIS, which might be translated as '(The *mansio*) of the wine country' (although this may equally be a celtic name, with the prefix VINDO—'white').

This then may be the major difference between the Alice Holt/Farnham industry and others such as the New Forest and Oxfordshire. The latter industries were selling their wares purely as pottery products and thus endeavoured to make them as attractive as possible by use of colour-coat and painted decoration. The Alice Holt industry, however, although it did concern itself with mass production of kitchen wares, distributed its best and most distinctive products as commodity packaging. As such the cost of production and transport was no problem, being easily covered by the value of the contents, which may well

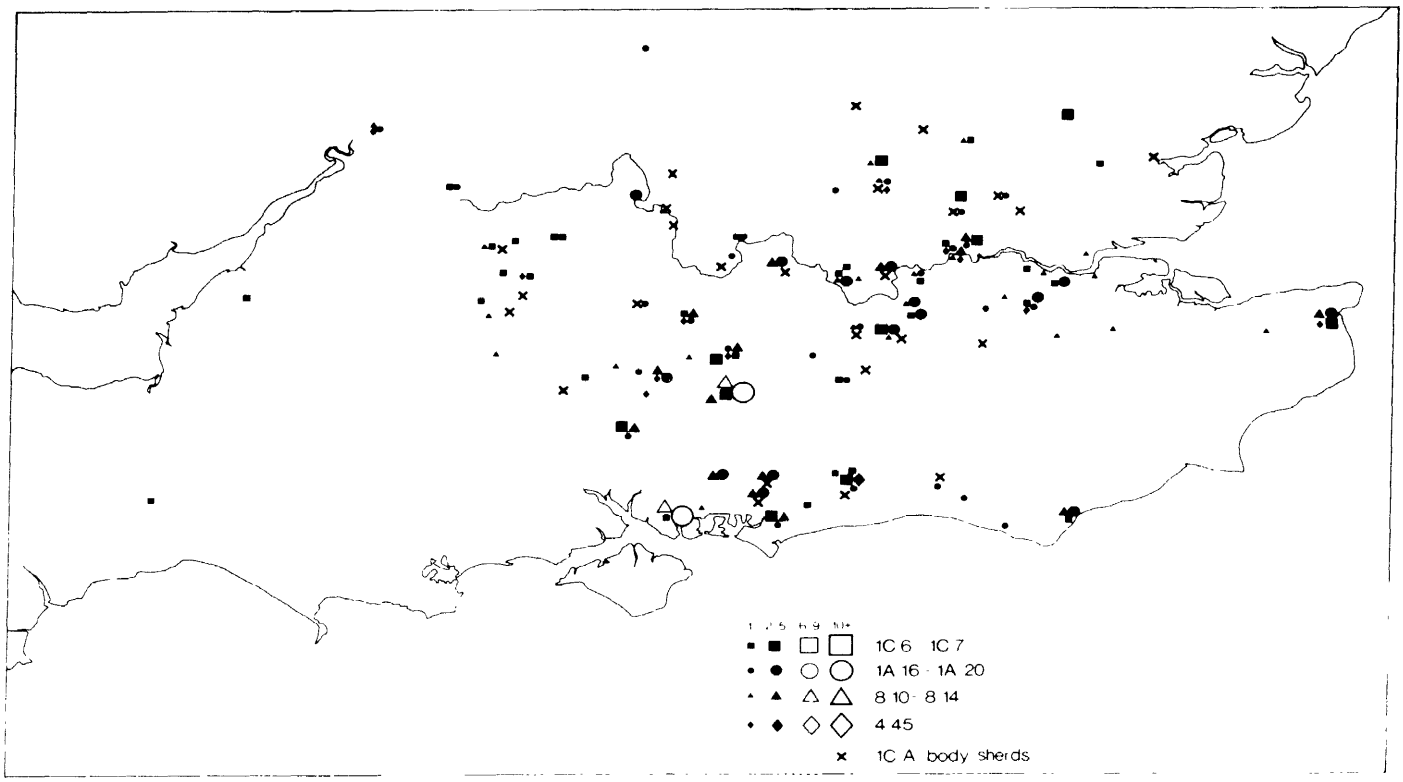


Fig 50 Distribution of forms dated 350 - 420

have been enough to cover part or all of the transport costs of cooking pots etc placed on the same cart or in the same boat.

The arguments for Neatham being the pottery marketing centre after 150 are progressively weakened, although as *Vindomis* it may well have been the administrative centre of a large estate associated with the potteries. Winchester and Silchester, the nearest large urban markets to Neatham and with direct road connection, have 11% and 48% Alice Holt pottery respectively during the 4th century, yet Staines and London, somewhat further away and without an obvious direct road link with Neatham but with a direct river link with the potteries, have 66% and 51% respectively. Clearly, river trade from the potteries themselves up the Wey to the Thames was the most important for the bulk of the pottery production, sold purely as pottery. Neatham, situated west of the potteries, is rather badly placed for this trade, although admittedly it is on the northern Wey.

Undoubtedly Neatham must have been a pottery marketing centre for its own population and the lesser distribution zone north and west of the watershed of the river Wey and its tributaries, which could only be supplied by road. If other reasons for its apparent prosperity in Roman times are sought, according to Domesday 600 years later, it was the most valuable market in Hampshire, without the aid of pottery sales. The answer may simply lie in the meaning of the Saxon *Neteham*—'cattle market'.

The late 4th century (Figs 50 and 51)

After 350 there was a further great expansion in the Alice Holt/Farnham potteries' marketing area associated with the appearance of storage jar types 1C.6 and 4.45. In London late 4th century deposits at the Billingsgate bath-house yielded 51% Alice Holt pottery and now, at last, this industry dominated the London pottery market. North and east of London a new marketing zone was established, apparently related to roads leading out of London and largely restricted to sites on or near them, and although other forms are present, the main types being marketed were 1C.6 and 1A.16.

At Bow late 4th century deposits from the 1971 Appian Road excavations showed a rise from 3% to 20% Alice Holt pottery and continuing further up the road to Colchester there is 3% at Havering Park and type 1C.6 storage jars at Chelmsford and Heybridge near Maldon. Further limited storage jar traffic took place up the road to Great Dunmow via Little London and along Ermine Street as far as Ware.

The percentage of Alice Holt material at Verulamium is quite high, considering its distance from source; the theatre fill contains up to 10%, with a slightly higher figure of 11% at Netherwylde villa a short distance to the south. It is probable that in the case of Verulamium the pottery was not being marketed along Watling Street from London but more directly along the imperfectly understood road link with Staines. Beyond St Albans minute quantities of Alice Holt pottery found their way up Watling Street as far as Dunstable and also west to the Latimer villa.

Further west new routes were being exploited out of Silchester. Trade was now being carried out with storage jars along the Silchester–Alchester road at least as far as Cuddesdon in Oxfordshire, and a number of pots dredged by the Thames Conservancy Board from the river between Staines and Goring suggest possible river trade supplying

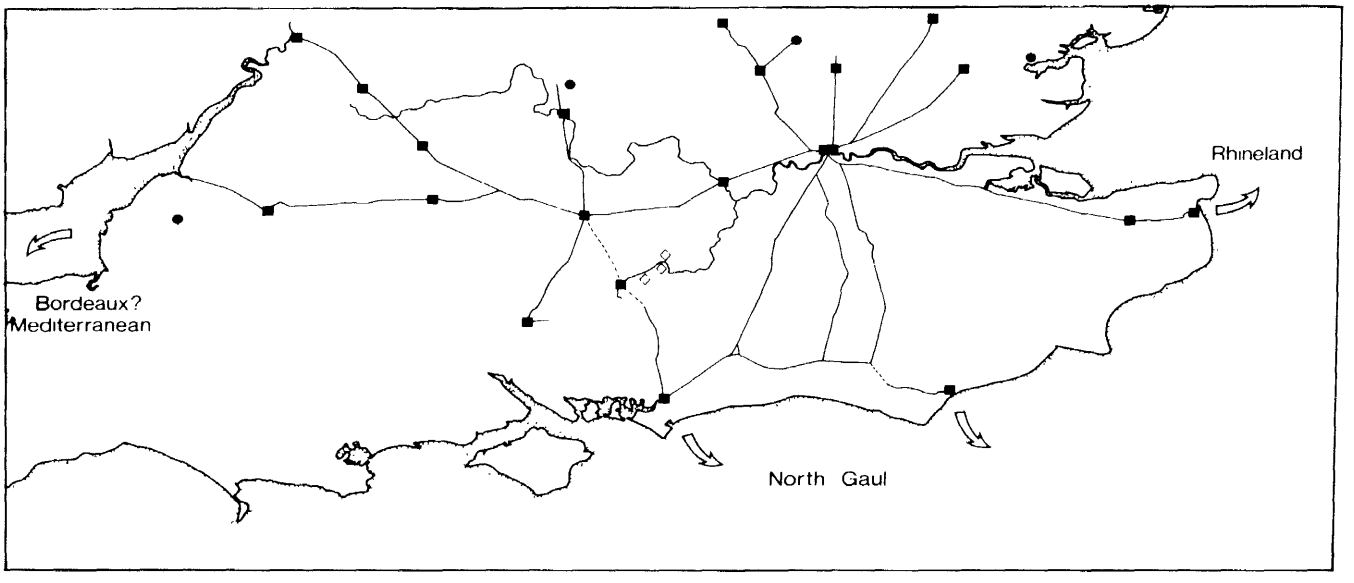


Fig 51 *Trade routes used during the period 350 - 420*

villa sites like Harpsden and Hambledon on the north bank. At Thatcham New Town, on the road from Silchester west gate, material from a small urban settlement excavated in the 1920s produced 27% Alice Holt ware, but to the north of the road this pottery is represented by only a scatter of vessels extending to the northern excarpment of the Berkshire downs.

To the west of Thatcham the Roman road to the west forks and Alice Holt vessels, chiefly storage jars, appear to have been traded along both routes. Along the Sea Mills road, Cunetio has given a reading of 9% Alice Holt pottery from the 1912 excavation, and other sherds are known from Marlborough, Pewsey, Silbury, Bromham, Bath, and Gatcombe. Slightly larger quantities of pottery were traded

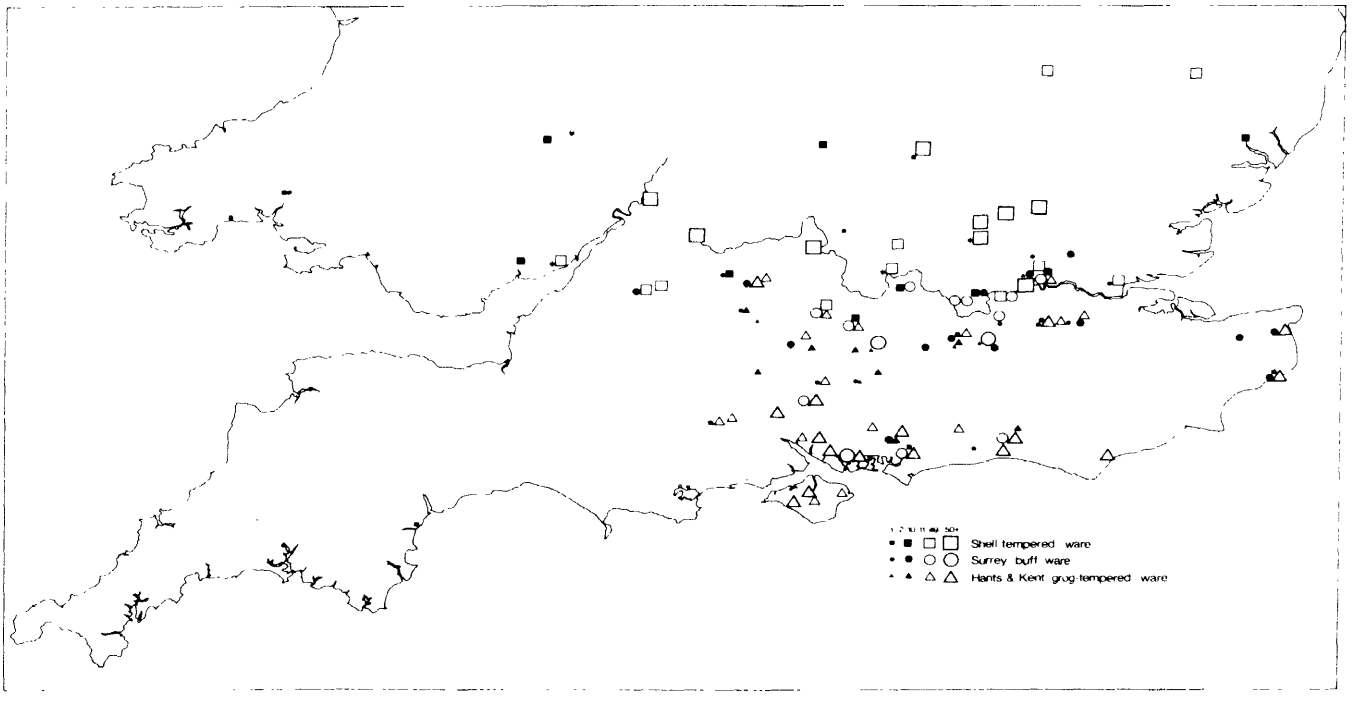


Fig 52 *Distribution patterns of chief sub-Roman pottery industries in southern Britain*

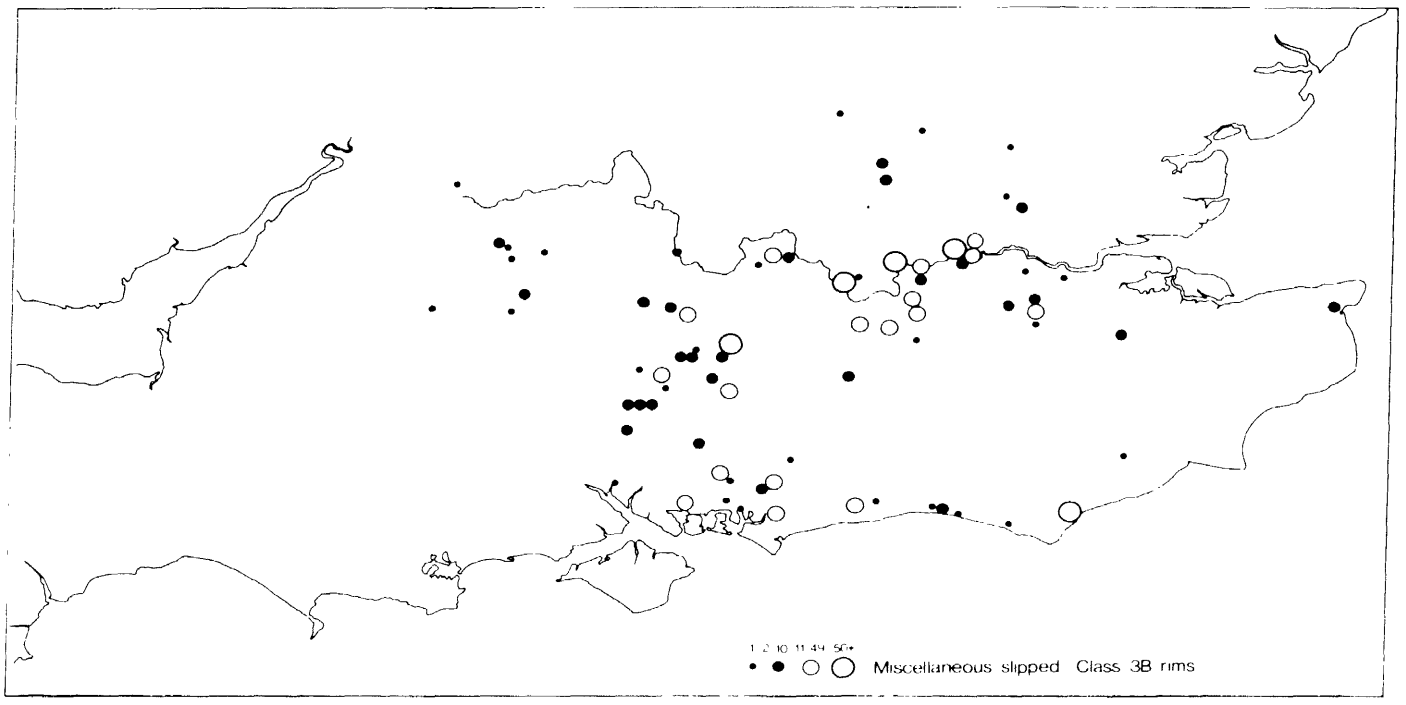


Fig 53 Distribution of slipped Class 3B cooking pots dated 270 - 420

along the Gloucester road, and material, mainly storage jars, has been found at Wanborough, Swindon, Cirencester, and Gloucester.

A number of these peripheral storage-jar road trading routes end in known or suspected seaports, suggesting some kind of export trade. So far as is known no Alice Holt storage jars have been found on the Continent, which would indicate that whatever was in the vessels was transferred to barrels or other containers at the ports of transshipment. The next problem lies in the lack of large deposits of storage jars at these ports. It is possible that after the contents had been removed the carrier sold off the used empties on the return trip. The road distribution of these jars could thus represent reverse trading. The exploitation of these routes to various ports is very illuminating (Figs 49 and 51) and may in part support Dr Fulford's hypothesis of increased south Gaulish trade in the late 4th century (Fulford 1978). In the period 270–350 there are storage-jar trade routes to London, Dover, Richborough, Pevensey, and Chichester, all ports admirably suited for trade with north-east Gaul and the Rhineland. After 350 another easterly route to the coast at Heybridge, near Maldon, is added, but more important, the westerly routes to the two ports of Gloucester and Sea Mills on the Bristol Channel, thus exploiting the Atlantic sea lanes for the first time. A recognized trade route from southern Gaul and the Mediterranean via Bordeaux to the west of Britain is indicated by pottery and amphorae distribution, and it may be that British merchants were using this route in reverse during the late 4th century carrying the contents of the Alice Holt storage jars. Although the expansion of the Alice Holt industry after 270 was in these loaded storage jars, some other contemporary products found their way in very small quantities to the very limits of the distribution range.

The evidence from the more peripheral sites producing Alice Holt/Farnham ware would indicate that the establishment of some of the trade routes was very late indeed. At Verulamium, for example, the evidence from Kenyon's theatre excavation and those of Frere would indicate the appearance of Alice Holt pottery after 370. At Dorchester on Thames the few storage jar sherds belong to a deposit later than 388, and possibly post-400,[6] a pattern similar to Cirencester, where the only fragments known are from the Beeches site and from the latest deposit there—Theodosian or early 5th century.

The early 5th century and the 'Surrey buff ware' industry (Fig 52)

By the second decade of the 5th century most organized pottery manufacture had come to an end, but there are a few notable exceptions in the midlands and south of Britain. If the profit behind the Alice Holt/Farnham industry lay in the contents of loaded vessels and the export of such goods, a disruption of bulk trade in the early 5th century may have been caused by the breakdown of the currency system.

All the sub-Roman industries had one thing in common: sub-Roman pottery displays a very limited repertoire, consisting of a jar, flanged bowl, and a rather deep straight- or convex-sided dish. Most of these industries had their origin in the 4th or even late 3rd century but only achieved prominence in the late 4th and early 5th century. Two basic cultural traditions seem to be present. The first was hand-made grog-tempered, everted-rimmed cooking pots, flanged bowls, and convex-sided dishes, as represented by a number of very similar industries, one base in south-east Hampshire, probably sited near Botley, and others supplying

east Sussex and Kent. The fabric is usually brown or black, with the appearance of bonfire firing. The second cultural tradition, which, as already described, had exerted increasing influence on the Alice Holt/Farnham potteries during the 4th century, favoured wheel-made, horizontally rilled, hook-rimmed jars, flanged bowls, and convex-sided dishes in two main fabrics. To the north of the Thames the shell-tempered wares were probably manufactured in the Lea valley, whilst to the south there was a buff sand tempered ware, previously referred to as the 'Surrey buff ware' industry.

As a percentage of any pottery assemblage, the 'Surrey buff ware' fabric is usually insignificant, but it extends its range across south-east England south of the Thames with, like the true Alice Holt buff ware, no penetration north of that river except in the London area (Fig 52). The few sites which have produced large amounts are in mid-Surrey, particularly Leatherhead (Woodlands Park), which may have been near the source. As can be seen from Fig 52, westwards distribution is greater than that of the Alice Holt/Farnham industry, extending across South Wales to Caerwent and Carmarthen, although in most places quantities are restricted to the odd sherd, and always in the latest deposits.

During the 4th century, when this industry still had the large and well organized Alice Holt potteries to contend with, its very limited range of coarse and unattractive vessels seems to have sold very successfully, making considerable local inroads into the Alice Holt market in Surrey and, as mentioned, even progressively influencing the larger concern's form range.

A parallel situation apparently prevailed during the late 4th century with the New Forest industry. Dr Fulford has made a good case for a decline in its pottery production during the late 4th century with a related decrease in the number of types and deterioration in quality (Fulford 1975). This decline was seemingly due, in the case of its coarse wares, to its being unable to stand up to the advances of the rapidly growing, crude, grog-tempered ware industry of south-east Hampshire.

The Alice Holt industry does not seem to have suffered as much as the New Forest, and this may have been due to its other products requiring containers, but, quite clearly, these crude, limited forms from the new potteries succeeded when the larger, more organized industries failed. There appear to be two possible explanations for the phenomenon. The first may lie with the restricted range of vessels, involving easier marketing and the choice of a few simple forms, which helped in mass-production, as with the Dorset industry.

From the mid-4th century base-metal currency became chaotic, making retailing very difficult. Add to this the growing system of payments in kind rather than money and the diminishing purchasing power of the masses, and it is hardly surprising that the large, centrally organized industries found it increasingly difficult to operate efficiently and at a profit.

The second explanation may be that these industries were changing to meet the demands of alien cultural groups being settled in eastern areas of Britain. There are several references to settlement of such groups during the late 3rd and 4th centuries, particularly Alamanni by Constantine in 306 under their chief Crocus. There is also reference to Alamannic *numeri* serving in Britain in 372. Such movements of barbarian people must surely have had their effect on local potteries in the areas where they were settled.

In relation to this, recent excavations at Fareham (Holmes 1975) have suggested strongly that much of the Portchester rilled buff ware was manufactured there, specifically supplying the garrison in the later 4th century.[7] The *Notitia Dignitatum* records Portus Adurni as being garrisoned by the *Numerus Exploratorum*, a barbarian unit, during the mid-4th century, and such units of *exploratores* are recorded along the Rhine frontier earlier.

Whatever the reason, it led to the survival of these industries after the collapse of the large more sophisticated potteries and their survival into the mid-5th century.

Sub-Roman pottery trading had its own peculiar phenomena, the first such being that of very few industries with no real competition apart from the occasional import. In the case of the 'Surrey buff ware' industry the level of production probably declined, but products were distributed more thinly over a wider area. A major drawback to any increase in production to take advantage of the pottery vacuum was the second phenomenon, a non-monetary economy probably based on barter, which would have been a major factor in the collapse of most of the 4th century large industries. At Shakenoak it has been claimed (Brodribb *et al.* 1972) that a calcite-tempered horizontally rilled jar variant was circulating at least as late as 450. Shell-tempered ware seems one of the last, if not the last sub-Roman industry to die out, but whether 'Surrey buff ware' and other industries lasted as long is an unanswered question. It is probable that no sub-Roman pottery manufacture continued much after 450, and by this date Saxon wares are being found in deposits with shell-tempered pottery as in the *Grubenhäuser* at Barton Court, Abingdon, and at Mucking, and in the ditch deposits at Shakenoak.

The date of the end of sub-Roman pottery production is bedevilled by the lack of closely dateable objects such as coins, during the 5th century. At Wroxeter the highest stratified level of occupation above the demolished basilica and bath-house produced fragments of two buff Alice Holt rilled vessels and five Surrey buff ware examples, and it would be difficult, on present evidence, to date this level before the early 5th century.

Alice Holt pottery from continental sites

Information supplied by Dr M G Fulford

Although more investigation is needed, there appears to be a scatter of isolated vessels along the north French and Belgian littoral associated with Gallic Shore forts. The number of vessels is so small as to make regular trade unlikely, and could be interpreted as evidence for transference of individuals with their baggage from Saxon Shore forts to their Gallic counterparts.

Schedule

Belgium	5B.10: Oudenbourg	1		
France	3B slipped rims: Alet	1	6A.4: Kervennenec	1
	3B.13: Boulogne	1	6A.12: Boulogne or Etaples	1

Acknowledgements

It would have been impossible to undertake this report without the help of numerous institutions and individuals, and to thank them all adequately would, in the space available, be impracticable. We should nevertheless like to thank all the organizations and individuals listed in Appendix 5 for allowing us to rummage through their pottery, and in particular Katherine Barclay, Joanna Bird, Alison Laws, Beth Richardson, Iain Mortimer, Kevin Crouch, Felix Holling, and Alan Burchard for letting us look through their respective collections several times, and also supplying additional information on dating and other matters.

We are further indebted to Rosamund Hanworth and R A H Farrar for their great help in preparing this manuscript and giving their opinions, to John Hampton for carrying out air photography, to A J Clark for his fluxgate gradiometer and proton magnetometer survey, and to Dr Crocker and Dr J G Rider of the University of Surrey for organizing a series of experiments to determine the origin firing temperatures of pottery sherds. We are grateful to the staff of the Forestry Commission for permission to carry out the survey in the Alice Holt and to the Royal Commission on Historical Monuments and the Department of the Environment for their aid and advice.

We are grateful for Robert Downey for drawing Figs 4 and 42–52, the Royal Commission for permitting reproduction of Fig 3, Max Dacre for allowing us to draw the vessel 1C.6, Dartford Museum for 1A.20 and 5E.3, Guildford Museum for 1.26, 1.27, 1.29, 1.30, 1.31, 3A.16, 3A.17, 3A.18, 3A.19, 3A.20, 3B.9, 3B.12, 5B.1, 5D.1, 5D.2, 5D.3, and 7.11, Kingston Museum for 1.36 and 2.3, Worthing Museum for 1C.4, Reading Museum for 3B.11, 8.10, and 8.14, Newbury Museum for 5E.2, and Nonsuch and Ewell Antiquarian Society for 3C.1. We should further like to thank Verulamium Museum for supplying the original drawing for 4.45 and Iain Mortimer for the original drawings for 3B.8 and 7.13.

Appendix 1

Charcoal samples from Dump AH 5, Pit B.1

J E Pratt

Thirteen charcoal samples were examined, mostly fragmented, with a maximum size of 20×10×7mm. They could be divided into two groups: ring- and diffuse-porous:

A Ring-porous
- 1 Oak 20×10×5mm: Fragment from larger piece, 10 annual rings in 10mm radius
- 2 Oak 20×5×5mm: 2 rings in 5mm radius
- 3 Oak 10×5×15mm: Branchwood, half-section, complete to bark (original approx 10mm dia.)
- 4 Oak: Small fragment of pith + 1 annual ring
- 5 Oak 10×5×5mm: 2 rings in 5mm radius
- 6, 7, 8 Oak: Small fragments of pith.

B Diffuse-porous
- 9 20×5mm dia.:—Branchwood—hazel
- 10 20×5mm radius: Original size unknown—willow?
- 11 20×5mm radius: Half-section through complete twig—willow?
- 12 10×4mm radius: Pith, 4 annual rings—probably hazel

C Unidentified
- 13 Small (5×5mm) compressed, distorted fragments.

Summary

The sample contained eight small fragments of oak, two of hazel, two of another ring-porous wood (possibly willow), and one unidentifiable. Most samples appeared to come from small-sized material, but the slow girth exhibited in one piece of oak suggests it came from a tree probably at least 20 years old.

Appendix 2

Determination of the firing temperature of sherds from the Alice Holt Romano-British potteries using the thermal expansion method

*J G Rider and M Roberts**

Introduction

The use of the thermal expansion method to determine the firing temperature of ancient pottery has been described by Roberts (1963) and by Tite (1969; 1970; 1972). The method is best applied to sherds which have been fired at a temperature high enough to be in the vitrification range of the clay (in practice, above about 700°C), the assumption being that vitrification occurred during the original firing with a resultant shrinkage as the clay particles sintered together. If the sherd is now reheated by the investigator, at a certain temperature the usual thermal expansion is exceeded by shrinkage as sintering is resumed, so that the sherd begins to contract. This shrinkage temperature, which is measured and will be denoted as T_{S1}, gives a rough idea of what the original firing temperature must have been.

Roberts and Tite *(loc cit)* point out that in reality the pot from which the sherd came would have been subject to a programme of heating and cooling over a range of temperatures throughout which sintering occurred, and indeed most of the sintering may have occurred during cooling, so that the term 'the firing temperature' is hardly appropriate. They therefore define a term 'equivalent firing temperature' and discuss how this may be measured by refiring the sherd in the measuring apparatus at a temperature T_{RF}, which is above the shrinkage temperature T_{S1}, for a standard time of 1hr. The sherd is then cooled, heated for a second time, and the shrinkage temperature again measured (T_{S2}). If the conditions of the underlying theory have been obeyed (Tite 1970), the equivalent firing temperature T_F is given by

$$T_F = T_{S1} + T_{RF} - T_{S2} \qquad (1)$$

In this context the term 'equivalent firing temperature' has the following meaning: if a sample of the unfired clay from which the pot was made were fired at a constant temperature equal to the equivalent firing temperature for the standard time of 1h (ie the refiring time), its percentage shrinkage would be the same as that of the actual pot in the actual firing process.

This method has been applied to sherds from the Romano-British Alice Holt pottery supplied by Mr M A B Lyne as described in the following sections.

Experimental procedure

Details of the sherds are given in Table III. One test-piece was cut from each of the sherds. Sherds 3.1 and 3.2 were similar, as were 6.1 and 6.2. In addition, one test-piece was formed from each of two samples of clay which had apparently been prepared for firing at the time the pottery was active but had not been fired. These samples are also included in Table III.

Each test-piece was cut to the shape of a bar with flat parallel end faces. The length of the bar between the end faces was in the range 14–25mm. The end faces were either rectangular or irregular in shape, depending on the sherd from which taken; the minimum and maximum dimensions across the end faces were in the range 4–25mm.

The dilatometer used to measure the expansion and contraction of the test pieces was constructed mainly of fused silica, and was similar to that described and illustrated by Tite (1972). The test-piece stood on one of its flat end faces on the horizontal platform of the dilatometer with the other end face in contact with a fused-silica pushrod. Any contraction or expansion of the test-piece caused the pushrod to fall or rise relative to the platform. This movement was converted to an electrical signal which moved the pen of an X–Y recorder in the Y direction. The temperature of the test piece was registered as an electrical signal by means of a chromel/alumel thermocouple placed a few millimetres from it, and this signal moved the pen of the recorder in the X direction. The thermocouple signal was registered in millivolts and was subsequently converted to temperature in degrees Celsius using standard tables.

The dilatometer, with test-piece in position, was placed in an electrically heated furnace, the temperature of which was then raised at a controlled rate of 3Cdeg/min. The changes of length and temperature were plotted as a graph

TABLE III Description of clay and pottery samples from the Alice Holt Romano-British potteries

Sherd No	Description	Date (Century AD)
1	Dry sample of prepared clay with grog and a little sand already added, as found in the 1974 excavation: Dump AH 5, layer B34.	
2	As 1, but with 4ml of sand from the Upper Folkestone Beds derived from blown deposits on Gold Hill, Kingsley, added: Dump AH 5.	
3	Heavily sanded, rough surfaced, hard blue charcoal grey fabric: Dump AH 25.	Late 4th
4	Fine hard grey fabric with white slip (from cordoned jar): Dump AH 33.	Mid-4th
5	Heavily sanded, rough-surfaced, hard dirty grey fabric with brownish tinge: Dump AH 20.	3rd
6	Finely sanded medium-grey ware with smoothed black surfaces: Dump AH 20	3rd
7	Finely sanded medium-grey ware: Dump AH 5	Late 1st
8	Very coarse sand-tempered early storage jar fabric: Dump AH 5	Late 1st
9	Soft coarse-sanded light-grey fabric with harder sooty-grey surface: Dump AH 5.	Late 1st

*Department of Physics, University of Surrey. Revised text May 1977.

automatically by the *X–Y* recorder. The test-piece was in ordinary atmospheric air at all times: there was no control over the atmosphere in the furnace.

All test-pieces were subjected to the two heatings of the Roberts–Tite method described in the introduction section, and the temperatures T_{S1}, T_{RF}, and T_{S2} were measured. The two test-pieces made from the prepared but unfired clay, 1 and 2, were preheated in an oven to 200°C and cooled to room temperature before being placed in the dilatometer and tested.

The measured values of T_{S1}, T_{RF}, and T_{S2} are given in Table IV.

Experimental errors

The chromel/alumel thermocouple was placed about 10–15mm from the test-piece. The measured emf of the thermocouple was converted to temperature using the data in Kaye and Laby's *Tables of Physical Constants*. Two sources of error are differences in temperature between test-piece and thermocouple, and departures of thermocouple calibration from Kaye and Laby's data. Some check on the size of the temperature measurement error was provided by the characteristic change in the thermal expansion coefficient at the $\alpha-\beta$ transition of quartz, which was clearly apparent on the thermal expansion plots and is known to take place at a temperature of 573°C in the pure crystal. The conclusion drawn from this check is that at this temperature the thermocouple gave the test-piece temperature with an error of not more than 5Cdeg.

Thus T_{RF} in Table IV should be accurate to ±5Cdeg, whilst simple addition of these errors gives an estimated error of ±15Cdeg in the individual values of T_{S1} and T_{S2}. With these errors in mind the values in Table IV have been rounded to the nearest 10°C. There are two cases where two test-pieces were taken from similar sherds: 6.1 and 6.2 gave values of T_{S1} which were in very good agreement; however, 3.1 and 3.2 differed by 5Cdeg, which is a much bigger difference than could be accounted for by the estimated errors and gives an indication of the variation which can occur between similar pots or perhaps similar parts of the same pot.

Results

The measured values of T_{S1}, T_{RF}, and T_{S2} are given in Table IV. Also listed are the values of the 1h equivalent firing temperature T_F, calculated from equation (1), for all samples except 1, 2, 6.1, and 6.2, which are excluded for reasons which will become apparent.

TABLE IV Experimental results (°C)

Sherd No	T_{S1}	T_{RF}	T_{S2}	T_F
1	830	920	920	—
2	710	850	850	—
3.1	840	980	970	850
3.2	920	1080	1080	920
4	960	1010	1020	950
5	890	940	940	890
6.1	700	—	—	—
6.2	700	—	—	—
7	910	990	970	930
8	880	970	970	880
9	800	820	820	800

Samples 1 and 2 had not previously been fired, so that for them T_{S1} represents the vitrification temperature, that is, the temperature at which previously unfired clay begins to sinter together. The lower vitrification temperature of 2 may perhaps be associated with the added sand, which may have contained fluxing impurities, but as these were the only two unfired clay samples tested no firm conclusion as to the reason for the difference can be drawn.

Of the previously fired samples, 6.1 and 6.2 each has a value of T_{S1} (700°C) low enough to suggest that the vitrification temperature was not achieved in its original firing, as comparison with 1 and 2 shows; furthermore, in the light of his measurements Tite (1969) suggests 700°C as the lower limit of the vitrification range. This suggestion is supported by two further observations. Firstly, 6.1 and 6.2 underwent very considerable shrinking during the first heating run in the range 100° to about 400°C to the extent that although expansion occurred from 400° to 700°C, the original length of the test-piece was not regained in either case. Secondly, both samples were found to have a higher coefficient of expansion in heating from 450° to 550°C during the first test run than in the same temperature range in subsequent measurements. It is therefore concluded that 6.1 and 6.2 were fired below their vitrification temperature of 700°C; this being so, equation (1) cannot be applied and it is not possible to estimate from the thermal expansion measurements how much below 700°C firing originally took place.

It seems reasonable to suppose that all sherds tested other than 6 were fired above the vitrification temperature. If a vitrification temperature of 700°C (2 and 6) is accepted, all other sherds had a shrinkage temperature T_{S1} at least 100Cdeg above this. If the higher vitrification temperature of 1 (830°C) is considered, there is one sherd, 9, with a T_{S1} value (800°C) that is below this. However, taking into account the possibility of lack of reproducibility of the shrinkage temperature and the variation of shrinkage temperature with clay composition, this evidence is not strong enough to indicate that 9 was fired below its vitrification temperature: on the contrary, the absence of significant contraction at temperatures below T_{S1} and the equality of thermal expansion coefficient on first heating and cooling in the 450–550°C temperature range, which were found in 9 and all other samples except 6, lead to the conclusion that all sherds except 6 had been fired above their vitrification temperature. Thus it is appropriate to calculate for them their 1h equivalent firing temperature T_F, with the results shown in Table IV.

Using the estimates given above, the measurement error in these values of T_F could be up to ±35Cdeg. There is another possible source of error, not previously considered. According to Tite (1970), equation (1) will only be valid, even when the original firing has been above the vitrification temperature, provided that the quantity $(T_{S2}-T_{S1})$ is about 20–30Cdeg. But for all but one of the samples in Table 2 $(T_{S2}-T_{S1})$ is greater than 30Cdeg, the likely effect in these cases being, according to Tite's theory, that T_F has been overestimated and should really be lower, the overestimate increasing with increasing $(T_{S2}-T_{S1})$. Counter to this, however, is the small difference between T_{S2} and T_{RF} for the previously unfired samples 1 and 2, which suggest that T_{S1} for the other samples is a good approximation to T_F.

Bearing these factors in mind, it is concluded that these measurements provide no evidence for a dependence of equivalent firing temperature with the date of the sherd, and the values of T_F shown in Table III can be averaged to

give a value of T_1 equal to 890±50°C. This mean, of course, excludes 6, which was fired below its vitrification temperature of 700°C.

T_1 is the 1h equivalent firing temperature; if most of the sintering action took place during cooling but for a time much longer than 1h, T_1 could perhaps more usefully be regarded as the maximum temperature reached in the Alice Holt pottery kilns.

The value of 890°C for Alice Holt ware may be compared with Roberts's (1963) value of 900±10°C for six sherds and over 1000°C for one sherd of Nene Valley Romano-British colour-coated ware and a series of results given by Tite (1969) for Roman ware ranging from amphorae and black-burnished ware at 600±100°C through grey ware at 930±30°C to Samian ware at 1080±60°C. It is interesting to notice that 6, the Alice Holt sample which was the only one tested to have a firing temperature below 700°C, was also the only Alice Holt sample with smooth black surfaces, while Tite found a firing temperature of 600±100°C for his Roman black-burnished ware. The remaining Alice Holt samples tested were grey ware with T_1 = 890±50°C; this temperature does not differ significantly from those given by Roberts for his six sherds and by Tite for his grey ware.

Acknowledgements

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Appendix 3

Percentages of Alice Holt/Farnham ware from various occupation sites

Site	Date	No of rims	Alice Holt	Others	% AH	Fig No
AD 60-150 (Fig 42)						
Staines	70-150	2060	374	1686	18	1
Binscombe 1	70-200	104	61	43	59	2
Chalton Down	70-150	180	72	108	40	3
Winchester (K W.III)	70-150	115	27	88	25	4
Silchester (1933 Ph.II)	100-120	46	10	36	22	5
Ewell (Purberry Shot)	70-150	354	86	268	24	6
Chichester (Eastgate)	70-150	146	3	143	2	7
London (Walbrook)	70-90	258	43	215	17	8
AD 270-420 (Fig 47)						
Neatham (Ditch L.4)	270-300	86	72	14	84	1
,, (,, L.3)	300-420	425	291	134	69	1
North Warnborough	270-420	1018	733	285	72	2
Staines (Quakers)	270-330	47	31	16	66	3
,, (Elmsley)	270-420	613	446	167	72	3
Cobham (Chatley Fm)	270-360	165	133	32	80	4
Old Malden	270-420	78	54	24	70	5
Bedfont	270-420	148	89	59	65	6
Brentford Z 2	270-330	297	140	157	43	7
,, Z 1	330-350	272	155	117	57	7
Wiggonholt (Site C)	270-420	172	95	77	54	8
Cox Green	270-420	346	181	165	52	9
London (Walbrook Ph.IX)	290-330	243	76	167	31	10
London (Billingsgate)	Late 4th	547	279	268	51	10
Silchester	270-400	105	54	51	48	11
Holt Down	270-400	178	82	96	46	12
Wolstonbury	4th	104	40	64	39	13
Pevensey	270-400	717	241	476	34	14
Chilgrove 11	4th	288	94	194	33	15
Thatcham	270-400	302	82	220	27	16
Bow (Usher Rd. 1975)	270-335	306	8	298	3	17
,, (Lefevre Rd. 1969)	270-400	188	37	151	20	,,
Lullingstone	4th	125	24	101	19	18
Chichester (Eastgate)	4th	49	16	33	33	19
Hampstead Norris	4th	113	15	98	13	20
Netherwylde	330-375	1959	209	1750	11	21
St Albans (Theatre)	270-400	392	38	354	10	22
Winchester (K W VII)	4th	125	14	111	11	23
Springhead	4th	198	17	181	9	24
Mildenhall	4th	235	21	214	9	25
Portchester	4th	210	13	197	6	26
Harpsden	4th	49	3	46	6	27
Havering Park	4th	259	14	245	6	28
Aldbourne Chase 2	4th	214	7	207	3	29
Bitterne	4th	184	1	183	0.5	30
Leatherhead (Woodlands Park)	270-400	172	91	81	53	31
Farley Heath	4th	122	89	33	73	32
Cuddesden	4th				<0.5	33
Dorchester on Thames	388+				<0.5	34
Cirencester	388+				<0.5	35
Wanborough	4th				<0.5	36
Andover	4th				<0.5	37
Enfield	4th				<0.5	38
Ware Lock	4th				<0.5	39
Abridge	4th				<0.5	40
Great Dunmow	4th				<0.5	41
Dickets Mead	4th				<0.5	42
Chelmsford	4th				<0.5	43
Canterbury	4th				<0.5	44
Gloucester	4th				<0.5	45

Appendix 4

Gazetteer of sites with Alice Holt/Farnham ware of corpus types[8] covered by the distribution maps in the text

	Deposit Date	No	NGR	Provenance or Published Source*
1.1-1.18				
Berks				
Weycock Hill		1	SU 822778	Reading M
Hampstead Marshall		1	SU 392671	Newbury M
Hants				
Alton (Westbrook House)		1	SU 714392	HCMS
Basing (House)		1	SU 663527	Combley *et al.* 1969
Bentley		1	SU 779458	HCMS
Chalton Down		1	SU 734150	Portsmouth M
Cholsley Farm		1	SU 725500	HCMS
Corhampton Down		1	SU 575200	Winchester City M
Dummer (Wheatsheaf)		1	SU 570455	HCMS
Holt Down		1	SU 721167	Portsmouth M
Kings Enham		1	SU 368490	M Dacre
Micheldever (Larkwhistle Farm)		1	SU 524435	MARC 3
Micheldever (Borough Farm)		1	SU 505374	,, ,,
Neatham		50+	SU 743408	HCMS
Oakridge (Site 7)		1	SU 641535	,,
Ructstalls Hill	43-70	20	SU 651516	,,
Silchester		7	SU 640625	Reading M
Stanchester		1	SU 580411	HCMS
Winchester (City Sites)	60-150	32	SU 480295	WRU
Winchester (Colebrook St)	43-150	1	SU 480295	Cunliffe 1962
Winchester (Chilcomb)		2	SU 499304	MARC 3
London				
City (Walbrook)	70-85	10	TQ 325810	SLAEC
,, (Artillery Lane)		4	TQ 325810	ILAU
Middlesex				
Brentford		2	TQ 178773	WLAFG
Staines (Elmsley)	70-120	156	TQ 040715	SSAS
Surrey				
Byfleet (Rectory)	-110	1	TQ 060602	Lowther 1938
Byfleet (Pumping Station)		5	TQ 0660	Weybridge M
Binscombe I		13	SU 972456	C Smith
Cobham (Sewage Works)	50-100	1	TQ 102608	Lowther 1934 a
Ewell	-96+	17	TQ 220629	ENAS
Farley Heath		6	TQ 051449	Guildford M
Godalming (Charterhouse)		3	SU 966448	Harrison 1961
Hillbury		4	SU 915469	Clark & Nichols 1960
Haslemere (Beech Road)	70-100	3	SU 908336	Haslemere M
Old Malden		3	TQ 212663	Kingston M
Rapsley	-120	1	TQ 080415	Guildford M
Thorpe (Mixnam's Pit)		2	TQ 040692	Guildford M
Mayford		1	TQ 000560	Nancy Cox
Sussex				
Bignor		1	SU 988147	S S Frere
Chichester (Eastgate, 1976)		1	SU 860050	CEC
1.19-1.24				
Berks				
Tilehurst		1	SU 673730	Reading M
Hants				
Basingstoke (South Ham Fm)		9	SU 615511	HCMS
Bentley		1	SU 779458	,,
Chalton Down		3	SU 734150	Portsmouth M
Cholsley Farm		1	SU 725500	HCMS
East Anton		1	SU 371475	M Dacre
Itchen Valley		1	SU 528344	MARC 3
Micheldever (Larkwhistle Farm)		1	SU 524435	,, ,,
Neatham		50+	SU 743408	HCMS
Ructstalls Hill	43-70	20	SU 651516	,,
Silchester		19	SU 640625	Reading M
Winchester (City Sites)	60-150	24	SU 480295	WRU
,, (Chilcomb)		2	SU 499304	MARK 3
Wotton St Lawrence		1	SU 610536	HCMS
London				
City (Artillery Lane)		10	TQ 325810	ILAU
,, (Walbrook)	70-85	15	TQ 325810	SLAEC
Putney		1	TQ 237737	N Farrant
Middlesex				
Brentford	60-150	4	TQ 178773	WLAFG
Staines	70-120	93	TQ 040715	SSAS
Monmouth				
Usk	65-75	2	SO 380005	Univ of Wales
Surrey				
Binscombe I		9	SU 972456	C Smith
Byfleet (Rectory)	-100	1	TQ 060602	Lowther 1938
Ewell		11	TQ 220629	NEAS
,, (Purberry Shot)	-96+	8	TQ 219621	Lowther 1946
Godalming (Charterhouse)		5	SU 966448	Harrison 1961
Haslemere (Beech Road)	70-100	6	SU 908336	Haslemere M
Old Malden		2	TQ 212663	Kingston M
Mayford		4	TQ 000560	Nancy Cox
Sussex				
Chichester (Eastgate 1976)		2	SU 860050	CEC
1.26, 1.27, 1.29, 1.30				
Berks				
Thatcham New Town		1	SU 520673	Newbury M
Hants				
Chalton Down		1	SU 734150	Portsmouth M
Cholsley Farm		1	SU 725500	HCMS
Dummer (Wheatsheaf)	270-375	4	SU 570455	,,
Holt Down		1	SU 721167	Portsmouth M
Neatham		13	SU 743408	HCMS
North Warnborough		15	SU 736526	,,
Oaken Plantation		1	SU 657516	,,
Oakhanger		2	SU 772340	Portsmouth M
Ructstalls Hill		1	SU 651516	HCMS
Silchester		8	SU 640625	Reading M
Stanchester		1	SU 580411	HCMS
Winchester (City Sites)		1	SU 480295	WRU
IoW				
Combley		1	SZ 539879	Carisbroke M
Middlesex				
Brentford	-270+	1	TQ 179770	WLAFG
Fulham (Palace)		5	TQ 237767	P Arthur
Heathrow		1	TQ 057765	WLAFG
Staines	250-300	8	TQ 032715	SSAS
London				
Putney		3	TQ 237737	N Farrant

	Deposit Date	No	NGR	Provenance or Published Source*
Surrey				
Binscombe I		1	SU 972456	C Smith
,, II	120-200+	1	SU 969459	,,
Ewell (West St School)	-200+	1	TQ 220629	Guildford M
,, (KWPH)	180-270	12	TQ 220629	NEAS
Farley Heath		4	TQ 051449	Guildford M
Leatherhead		5	TQ 151587	,,
Old Malden		1	TQ 212663	Kingston M
Rapsley	220-270	2	TQ 080415	Guildford M
Thorpe		1	TQ 026685	Weybridge M
Sussex				
Alfoldean		1	TQ 118330	Winbolt 1924
Chilgrove II		1	SU 841136	CEC
Highdown		1	TQ 093044	Lewes M
Muntham Court		3	TQ 110095	,,
West Blatchington	-273+	2	TQ 275062	,,
Worthing (Museum Site)		1	TQ 029148	Worthing M

1A.14, 1A.15

Hants				
Neatham	270-400+	2	SU 743408	HCMS
Old Alresford (Lanham Down)		1	SU 623364	HCMS
Portchester	286-410	1	SU 625045	Portsmouth M
Winchester		1	SU 480295	Winchester City M
North Warnborough	330-375	2	SU 736526	HCMS
Kent				
Lullingstone	-385	1	TQ 530650	G W Meates
London				
Bow (Appian Road, 1971)		1	TQ 365830	SEC
Shadwell	-300	1	TQ 349807	A Johnston
Middlesex				
Brentford	259-350	3	TQ 179770	WLAFG
Staines		5	TQ 032715	SSAS
Surrey				
Farley Heath		1	TQ 051449	Guildford M
Walton-on-the-Hill		1	TQ 224557	Lowther 1949
Sussex				
Alfoldean		1	TQ 118330	Winbolt 1924
Angmering		1	TQ 053045	Worthing M
Chichester (Saddlers Garden 1963)		1	SU 860050	Chichester M
Chilgrove I		1	SU 835122	CEC
West Blatchington	-273	1	TQ 275062	Lewes M

1A.16-1A.19

Berks				
Cox Green	270-375	2	SU 865797	Reading M
Abingdon (Barton Court)	400+	2	SU 505973	OAU
Thatcham New Town		1	SU 520673	Newbury M
Bucks				
Hambledon		1	SU 7885	Aylesbury M
Essex				
Little London		1	TQ 460970	Passmore Edwards M
Glos				
Cirencester (Beeches)		1	SP 0201	Cirencester Unit
Gloucester (Bon Marché)	300-400+	1	SO 8318	Gloucester M
Hants				
Dummer (Wheatsheaf)	270-375	4	SU 570455	HCMS
Holt Down		2	SU 721167	Portsmouth M
Overton (Whitehill)		1	SU 517479	HCMS
Neatham	270-400+	11	SU 743408	,,
Portchester	345-410+	10	SU 625045	Portsmouth M
Silchester		1	SU 640625	Reading M
North Warnborough	330-378	1	SU 736526	HCMS
Herts				
Edmonton		1	TQ 330940	J Ivens
Isle of Wight				
Rock		1	SZ 423841	Carisbroke M
Kent				
Farningham (Franks Hall)		1	TQ 554674	Dartford M
Richborough	286-410+	2	TQ 324603	Dover Castle
Springhead	350-400	2	TQ 618725	S Harker
Keston (Warbank)		1	TQ 415634	WKBAG
London				
Bow (LeFevre Road 1969)	273-408+	1	TQ 365830	SEC
City (Mithraeum)	330-350	1	TQ 320811	SEC
Fulham (Palace)		1	TQ 237767	P Arthur
Middlesex				
Brentford	326-341+	3	TQ 179770	WLAFG
Staines		3	TQ 032715	SSAS
Oxon				
Harpsden		1	SU 757805	Ashmolean M
Surrey				
Cobham (Charley Farm)	259-350	1	TQ 088596	Weybridge M
Ewell (KWPH)	220-273+	1	TQ 220629	NEAS
,,		2	TQ 220629	Pemberton 1973
Farley Heath		1	TQ 052449	Guildford M
Leatherhead		1	TQ 151587	Guildford M
Old Malden		2	TQ 212663	Kingston M
Worplesdon		1	SU 964511	Clark & Stuart 1944
Sussex				
Chichester		1	SU 860050	Chichester M
Chilgrove II		3	SU 841136	CEC
Falmer (Old Forge Barn)		1	TQ 355092	Brighton M
Pevensey	330-410+	4	TQ 645038	Hastings M
Seaford (Bishopstone)	350-410+	1	TQ 470010	C Green
Wiggonholt	268-375	1	TQ 064175	Worthing M
Wolstonbury		1	TQ 285138	Lewes M

1A.20

Bucks				
Latimer (1906)		1	TQ 020992	Aylesbury M
Hants				
Winchester (Brook St)	270-400	1	SU 480295	WRU
Herts				
Netherwylde	330-375	1	TL 1401	T Rawlins
Kent				
Farningham (Franks Hall)		1	TQ 548677	Dartford M
Lullingstone		1	TQ 530650	G W Meates
Middlesex				
Staines		1	TQ 032715	SSAS
Surrey				
Leatherhead		1	TQ 151587	Guildford M
Sussex				
Chilgrove I		2	SU 835122	CEC

1C.2, 1C.4

Berks				
Wickham Bushes		1	SU 865649	Reading M

	Deposit Date	No	NGR	Provenance or Published Source*
Hants				
Alton (Will Hall)		1	SU 704389	HCMS
Silchester		1	SU 640625	Reading M
Winchester		1	SU 480295	WRU
Middlesex				
Brentford		1	TQ 179770	WLAFG
Staines (Quakers)	-340+	1	TQ 032715	SSAS
Surrey				
Ewell	220-273+	1	TQ 220629	NEAS
Farley Heath		1	TQ 051449	Lowther 1934b
Hillbury		1	SU 915469	Clark & Nichols 1960
Titsey		1	TQ 407546	Leveson Gower 1869
Sussex				
Chichester		1	SU 860050	Chichester M
Muntham Court		1	TQ 110095	Lewes M
Wiggonholt	268-375+	1	TQ 064175	Worthing M

1C.3, 1C.5

Hants				
Dummer (Wheatsheaf)	270-375	1	SU 570455	HCMS
Neatham	270-400+	5	SU 743408	,,
Portchester	286-410+	1	SU 625045	Portsmouth M
Silchester (1975)		1	SU 640625	Reading Univ
Winchester (City Sites)		1	SU 480295	WRU
Wotton St Lawrence		1	SU 610536	HCMS
North Warnborough		4	SU 736526	,,
Kent				
Snodland		1	TQ 715625	Maidstone M
Canterbury		1	TR 150578	S S Frere
Richborough	286-410+	1	TR 324603	Dover Castle
London				
Bow (LeFevre Road 1969)	273-408	1	TQ 365830	SLAEC
,, (Appian Road 1971)		1	TQ 365830	,,
Middlesex				
Brentford	326-350	1	TQ 179770	WLAFG
Staines (Quakers)	270-	6	TQ 032715	SSAS
Surrey				
Haslemere		1	SU 908336	Haslemere M
Sussex				
Angmering		1	TQ 053045	Worthing M
Chichester (County Hall)		2	SU 860050	Chichester M
Pevensey	330-410	1	TQ 645038	Hastings M
Slindon Park (No 5 Site)		1	SU 958080	Chichester M
Bersted		1	SU 9201	Chichester M

1C.6

Berks				
Rams Hill		1	SU 315865	Newbury M
Bucks				
Hambleden		1	SU 7885	Aylesbury M
Essex				
Chelmsford		1	TL 710065	P J Drury
Great Dunmow	330-	2	TL 6221	,,
Glos				
Cirencester (Beeches)	367-400+	1	SP 0201	Cirencester Unit
Hants				
Andover		1	SU 370475	M Dacre
Greywell		3	SU 714502	HCMS
Neatham	270-400	2	SU 743408	,,
North Warnborough	330-375	1	SU 736526	,,
Portchester	345-402	1	SU 625045	Portsmouth M
Silchester		1	SU 640625	Reading M
Winchester		1	SU 480295	WRU
,, (Middle Brook St)	367-408	1	SU 480295	Bennet-Clark 1954
Herts				
Enfield (Lincoln Road)		2	TQ 343970	J Ivens
St Albans (Theatre)	361-408+	2	TL 130075	Verulamium M
Ware (Lock)	350-400+	1	TL 352142	Hertford M
Kent				
Slades Green		1	TQ 525765	Dartford M
Lullingstone	361-408+	1	TQ 530650	G W Meates
Richborough	286-410	3	TR 324603	Dover Castle
London				
Bow (Old Ford 1975)	335-402+	1	TQ 365830	SLAEC
,, (LeFevre Road 1969)	273-408+	1	TQ 365830	,,
City (Billingsgate)	402-	1	TQ 320811	DUA
Putney		1	TQ 237737	N Farrant
Middlesex				
Staines (Elmsley)		2	TQ 032715	SSAS
Heathrow		1	TQ 057765	WLAFG
Somerset				
Gatcombe (1954)	337-408+	1	ST 526699	Solley 1967
Whitestaunton		1	ST 290105	Taunton M
Surrey				
Ewell		1	TQ 220629	NEAS
Farley Heath		1	TQ 052449	Lowther 1934b
Leatherhead		4	TQ 151587	Guildford M
Sussex				
Chichester (County Hall)		4	SU 860050	Chichester M
Hardham		1	TQ 028173	Winbolt 1927
Pevensey	330-410+	1	TQ 645038	Hastings M
Pulborough		1	TQ 065175	Worthing M
Slindon Park (No 5 Site)		1	SU 958080	Chichester M
Wiggonholt	268-375+	2	TQ 064175	Worthing M
Wilts				
Aldbourne Chase 2		1	SU 229754	B Phillips
Chiseldon (Burderop Down)		1	SU 160765	,,
Silbury Hill		1	SU 100685	Farley 1971
Swindon (Old Town Hill)		1	SU 150840	Swindon M
Wanborough (Lot Mead)		1	SU 195853	Devizes M

Curvilinear (C) and herringbone (H) combed Class 1C + 4 body sherds

Beds			
Luton (Runfold Avenue) (H)	TL 078248	Luton M	
Berks			
Bray	SU 395785	C Stanley	
Thatcham New Town (C)	SU 520673	Newbury M	
Essex			
Heybridge (C)	TL 850082	P J Drury	
Havering Park	TQ 500930	Passmore Edwards M	
Little London (C)	TQ 460970	,,	,,
Hants			
Abbotts Ann (C)	SU 3141	HCMS	

	Deposit Date	No	NGR	Provenance or Published Source*
Herts				
Edmonton (C)			TQ 330940	
Netherwylde (H)	330-375		TL 1401	T Rawlins
Welwyn (Dickets Mead)			TL 2316	Lockleys AS
Middlesex				
Brentford (H)	270-360		TQ 179770	WLAFG
,, (C)	326-341		TQ 179770	,,
Oxon				
Crowmarsh (C)			SU 618892	Reading M
Cuddesdon (H)			SP 606045	Ashmolean M
Dorchester (1962) (C)	388+-		SU 579943	Ashmolean M
Emmer Green (C)			SU 720770	Reading M
Surrey				
Abinger (H)			TQ 106475	Guildford M
Ashtead Down (C)			TQ 194577	Lowther 1930
Cobham (Chatley Farm)	259-350		TQ 088596	Guildford M
Titsey (C)			TQ 407546	,,
Sussex				
Burpham (H)			TQ 042100	Worthing M
Chilgrove I (C & H)			SU 835122	CEC
,, II (C)			SU 841136	,,
Hassocks (H)			TQ 296155	Brighton M
Wilts				
Broom Manor Lane (C)			SU 165823	Swindon M
Pewsey (Broomsgrove) (C)			SU 1863	Devizes M
Mildenhall (1912) (C)	267-375+		SU 216695	,,

3A.1-3A.15

Hants				
Chalton Down		1	SU 721177	Portsmouth M
Cholsley		2	SU 725500	HCMS
East Meon		1	SU 679250	MARC3
Milcheldever (Larkwhistle Farm)		2	SU 524435	,,
Neatham		2	SU 743408	HCMS
Winchester (City Sites)	100-180	11	SU 480295	WRU
,, (Chilcomb)		1	SU 499304	HCMS
Middlesex				
Staines		12	TQ 032715	SSAS
Surrey				
Binscombe I		2	SU 972456	C Smith
,, II	120-200+	2	SU 969459	,,
Compton (By-Pass)		4	SU 950474	Guildford M
Ewell	150-220	5	TQ 220629	ENAS
Farley Heath		3	TQ 051449	Lowther 1934c
Old Woking		6	TQ 0357	
Hillbury	80-200	5	SU 915469	Clark & Nichols 1960
Rapsley	150-200	1	TQ 080415	Guildford M
Sussex				
Chilgrove II		1	SU 841136	CEC

3B.9

Berks				
Maidenhead		1	SU 9082	Reading M
Thatcham New Town		1	SU 520673	Newbury M
Hants				
Abbotts Inn		1	SU3141	HCMS
Andover (Spine Road)		1	SU3646	M Dacre
Bitterne		1	SU 435134	Southampton M
Chalton Down		1	SU 721177	Portsmouth M
Cholsley		1	SU 725500	HCMS
Dummer (Wheatsheaf)		1	SU570455	,,
Longstock		1	SU 3436	,,
Neatham		27	SU 743408	,,
Purbrook		2	SU 6808	SHARG
Rowlands Castle (Gt. Wellsworth)		1	SU 734115	,,
,, ,, (Little Leigh Farm)		1	SU 7312	Portsmouth M
Silchester		4	SU 640625	Reading M
Stroud		2	SU 725236	Winchester City M
Winchester		4	SU 480295	WRU
Kent				
Farningham (Sewage Works)		1	TQ 554675	Maidstone M
Middlesex				
Brentford		2	TQ 179770	WLAFG
Staines (Quakers)	180-200	20	TQ 032715	SSAS
Surrey				
Abinger		2	TQ 1047	Guildford M
Binscombe I		1	SU 972456	C Smith
Chiddingfold		1	SU 978361	Guildford M
Ewell		235	TQ 220629	NEAS
Leatherhead		1	TQ 151587	Guildford M
Rapsley	150-200	1	TQ 080415	,,
Sussex				
Chichester (Eastgate 1976)	150-250	14	SU 860050	CEC
Highdown		4	TQ 093044	Lewes M
Muntham Court		2	TQ 110095	,,
West Blatchington		1	TQ 275062	,,
Worthing (Sea Mill)		1	TQ 169033	Worthing M
Wilts				
Aldbourne Chase II		1	SU 229754	B Phillips

3B.10

Hants				
Ructstalls Hill	293-340	1	SU 651516	HCMS
Silchester		3	SU 640625	Reading M
London				
Shadwell	-388+	1	TQ 349807	A Johnston
Oxon				
Goring		1	SU 600815	Reading M
Sussex				
Chilgrove I		1	SU 835122	CEC
Hassocks		1	TQ 296155	Lewes M
Pevensey	330-410	1	TQ 645038	,,

3B.11, 3B.12, 3B.13

Berks				
Hurley		1	SU 846808	Reading M
Thatcham New Town		1	SU 520673	Newbury M
Hants				
Neatham		1	SU 743408	HCMS
Ructstalls Hill	293-340	1	SU 651516	,,
Herts				
Welwyn (Dickets Mead)		1	TL 2316	Lockleys AS
Kent				
Crayford (Maxim Road)		1	TQ 5275	Dartford M
Lullingstone	c 385	1	TQ 530650	G W Meates
Maidstone (Tovil)		1	TQ 754542	Maidstone M
,, (Sandling)		1	TQ 755585	,,
Richborough	286-410	1	TR 324603	Dover Castle
Middlesex				
Bedfont		1	TQ 080737	ILAU
Brentford		1	TQ 179770	WLAFG
Staines (Thames)		1	TQ 032715	Reading M

	Deposit Date	No	NGR	Provenance or Published Source*
Surrey				
Cobham (Chatley Farm)	259-360	1	TQ 088596	Guildford M
Old Malden		2	TQ 212663	Kingston M
Sussex				
Chilgrove I		1	SU 835122	CEC
East Dean (Lamb Lea)		1	SU 9020	Brighton M
Kemp Town		1	TQ 3304	,,
Pevensey	330-410	1	TQ 645038	Hastings M
Sedlescombe		1	TQ 7720	Brighton M

Misc. black/white slipped Class 3B rims

Beds				
Dunstable		1	TL 020218	Manshead AS
Berks				
Aldermaston (1976)		4	SU 590652	Reading Univ
Bray		2	SU 895785	C Stanley
Cox Green	270-375	11	SU 865797	Reading M
Thatcham New Town		3	SU 520673	Newbury M
Weycock Hill		1	SU 822778	Reading M
Essex				
Abridge (Little London)		1	TQ 460970	Passmore Edwards M
Harlow (Temple)		1	TL 468123	,, ,,
Havering Park		5	TQ 500930	,, ,,
Glos				
Cirencester		1	SP 0201	Cirencester M
Hants				
Basing House	330-360	1	SU 663527	Combley *et al* 1969
Bitterne		1	SU 435134	Southampton M
Cholsley		2	SU 725500	HCMS
Dummer (Wheatsheaf)		31	SU 570455	,,
East Meon (Old Down Farm)		3	SU 679250	MARC3
Holt Down		11	SU 721167	Portsmouth M
Huckswood Quarry		1	SU 744146	Collins 1955
Micheldever		7	SU 525371	MARC3
,, (Wood)		2	SU 531377	,,
,, (Borough Farm)		2	SU 505374	,,
Neatham		40	SU 743408	HCMS
North Warnborough		188	SU 736526	,,
Oaken Plantation		7	SU 657516	,,
Overton (White Hill)		1	SU 517479	,,
Portchester		20+	SU 625045	Portsmouth M
Silchester		26	SU 640625	Reading M
Stanchester		1	SU 580411	HCMS
Upton Grey		2	SU 708440	,,
Winchester (City Sites)		3	SU 480295	WRU
Herts				
Netherwylde	330-375	10	TL 1401	T Rawlins
St Albans	361-408	2	TL 130075	Verulamium M
Kent				
Farningham (Franks Hall)		5	TQ 554674	Dartford M
Lullingstone		18	TQ 530650	G W Meates
Maidstone (Sandling Road)		1	TQ 755585	Maidstone M
Otford (No 1 Site)		1	TQ 535592	Dartford M
Orpington (Poverest Road)	-390+	3	TQ 4565	Orpington M
Richborough	286-320	9	TR 324603	Dover Castle
Springhead		1	TQ 618725	S Harker
London				
Bow (Old Ford 1975)	367-402+	23	TQ 365830	SLAEC
City (Billingsgate)	-402+	15	TQ 320811	DUA
,, (Bush Lane)		15	TQ 320811	,,
,, (Mithraeum)	240-350+	45	TQ 320811	SLAEC
Fulham (Palace)		27	TQ 237767	P Arthur
Putney		3	TQ 237737	N Farrant
Southwark (Borough High St)		4	TQ 325800	SLAEC
Shadwell	270-388+	29	TQ 349807	A Johnston
Middlesex				
Brentford	-350	95	TQ 179770	WLAFG
Staines		126	TQ 032715	SSAS
Surrey				
Cobham (Chatley Farm)	259-350	46	TQ 088596	Guildford M
Ewell		26	TQ 220629	NEAS
Farley Heath		3	TQ 052449	Lowther 1934b
Leatherhead		22	TQ 151587	Guildford M
Old Malden		10	TQ 212663	Kingston M
Walton-on-the-Hill		1	TQ 224557	Lowther 1949
Sussex				
Chichester		45	SU 860050	Chichester M
Chilgrove I		6	SU 835122	CEC
,, II		12	SU 841136	,,
Findon (Canada Bottom)		1	TQ 144089	Lewes M
Hassocks		1	TQ 296155	Brighton M
Pevensey	330-410	60	TQ 645038	Lewes M & Hastings M
Prinsted		1	SU 7705	Chichester M
Seaford (Bishopstone)	350-410+	1	TQ 470010	C Green
West Blatchington		1	TQ 275062	Norris & Burstow 1952
Wiggonholt	268-375	11	TQ 064175	Worthing M
Wilts				
Bishopstone		1	SU 260815	B Phillips
Chiseldon (North Buff Barn)		1	SU 180789	,,
Bromham		1	ST 972659	Devizes M
Pewsey (Broomsgrove)		1	SU 1863	,,
Mildenhall (1912)		2	SU 216695	,,
Swindon (Old Town Hill)		2	SU 150840	Swindon M
,, (Coate Water)		1	SU 175820	B Phillips

3B.14

Herts				
Netherwylde	330-375	1	TL 1401	T Rawlins
Wilts				
Mildenhall (1912)		1	SU 216695	Devizes M

4.1-4.36

Berks				
Cox Green	100-150	1	SU 865797	Reading M
Hants				
Basingstoke (South Ham Farm)		4	SU 615511	HCMS
Bentley		2	SU 779458	,,
Basing House		1	SU 663527	Combley *et al.* 1969
Cholsley		1	SU 725500	HCMS
Dummer (Wheatsheaf)		1	SU 570455	,,
East Stratton		1	SU 556426	,,
Kings Enham		1	SU 365500	M Dacre
Micheldever (Borough Farm)		2	SU 505374	MARC3
,, (Wood)		1	SU 527370	,,
,, (Chilcomb)		2	SU 499304	,,
,, (Larkwhistle Farm)		2	SU 524435	,,
Neatham		50+	SU 743408	HCMS
Oakridge (Site 7)		1	SU 641535	HCMS
Portway		1	SU 355465	M Dacre
Ructstalls Hill		38	SU 651516	HCMS
Silchester (1938)	-120	8	SU 640625	Reading M
Stanchester		1	SU 580411	HCMS

	Deposit Date	No	NGR	Provenance or Published Source*
Winchester (City Sites)		32	SU 480295	WRU
Winchester (KW 56)	-140	3	SU 480295	Winchester City M
London				
City (Artillery Lane)		2	TQ 320811	ILAU
City (Walbrook)	70-85	20	TQ 320811	SLAEC
Southwark (Swan St)		1	TQ 325800	SLAEC
Middlesex				
Brentford	81-150	8	TQ 179770	WLAFG
Staines (Quakers)	70-150	125	TQ 032715	SSAS
Monmouth				
Usk	65-70	2	SO 380005	University of Wales
Surrey				
Ashtead	43-96	16	TQ 178601	Lowther, 1930a
Binscombe I		8	SU 972456	C Smith
Binscombe II		1	SU 969459	C Smith
Chiddingfold		1	SU 978361	Guildford M
Compton (Starcross)		1	SU 9547	Guildford M
Ewell	70-220	5	TQ 220629	Nonsuch & Ewell AS
Ewell (Purberry Shot)	-96	45	TQ 220629	Lowther 1946
Farley Heath		7	TQ 051449	Lowther 1934c
Godalming (Charterhouse)		6	SU 966448	Harrison 1961
Haslemere (Beech Road)		8	SU 908336	Haslemere M
Lascombe		1	SU 919473	Clark & Nichols 1960
Old Malden		1	TQ 212663	Kingston M
Rapsley	120-160	1	TQ 080415	Guildford M
Walton-on-the-Hill	120-200	1	TQ 224557	Lowther 1949
Sussex				
Alfoldean		1	TQ 118330	Winbolt 1924

4.42-4.44

Berks				
Cox Green	270-354	1	SU 865797	Reading M
Thatcham New Town		1	SU 457675	Newbury M
Hants				
East Anton		1	SU 371475	D W Startin
Holt Down		2	SU 721167	Portsmouth M
Micheldever (Wood)		1	SU 527370	MARC3
Neatham		6	SU 743408	HCMS
North Warnborough		11	SU 736526	,,
Kent				
Farningham (Franks Hall)		1	TQ 548677	Dartford M
Lullingstone	341-350	1	TQ 529651	G W Meates
Orpington (Poverest Road)		1	TQ 454658	Orpington M
Richborough	286-410	1	TR 324603	Dover Castle
Springhead		1	TQ 618725	S Harker
Keston (Warbank)		2	TQ 415634	WKBAG
London				
Bow (Appian Road, 1971)		2	TQ 365830	SLAEC
City (Mithraeum)	290-330	1	TQ 320811	,,
Fulham (Palace)		6	TQ 237767	P Arthur
Putney (Gay St)		1	TQ 237737	M Farrant
Wandsworth		1	TQ 238757	Celoria 1965
Middlesex				
Brentford	259-326 326-341 -340 250-392	8	TQ 179770	WLAFG
Staines	332-346	7	TQ 032715	SSAS
Surrey				
Cobham (Chatley Farm)	259-350	2	TQ 088596	Guildford M
Ewell		1	TQ 218621	NEAS
Leatherhead		2	TQ 151587	Guildford M
Old Malden		1	TQ 213663	Kingston M
Sussex				
Chichester (Tower St, 1974)		2	SU 860050	CEC
,, (Eastgate, 1976)		1	SU 860050	,,
Chilgrove I		1	SU 835122	,,
,, II		1	SU 841136	,,
Pevensey	330-410	3	TQ 645038	Hastings M
Shoreham (Slonk Hill)		1	TQ 220070	Lewes M
Wiggonholt	268-375	2	TQ 064175	Worthing M

4.45

Glos				
Gloucester (New Market Hall)		1	SO 8318	Gloucester M
Hants				
Dummer (Wheatsheaf)		1	SU 570455	HCMS
East Stratton (Dunley Hill)		1	SU 556426	,,
Silchester		1	SU 640625	Reading M
North Warnborough		1	SU 736526	HCMS
Kent				
Lullingstone	361-408+	1	TQ 529651	G W Meates
Richborough	286-410	1	TR 324603	Dover Castle
Herts				
Netherwylde	330-375	1	TL 1401	T Rawlins
London				
Shadwell	-388	1	TQ 349807	A Johnston
Surrey				
Leatherhead		2	TQ 151587	Guildford M
Sussex				
Wiggonholt	268-375	2	TQ 064175	Worthing M
Wilts				
Aldbourne Chase 2		1	SU 229754	B Phillips

5.1-5.11

Hants				
Chalton Down		1	SU 721177	Portsmouth M
Cholsley		1	SU 725500	HCMS
Micheldever (Larkwhistle Farm)		1	SU 524435	MARC3
Neatham		10+	SU 743408	HCMS
Oakridge (Site 7)		1	SU 641535	,,
Silchester		8	SU 640625	Reading M
Winchester (KW 56)	-140	4	SU 480295	Winchester City M
,, (City sites)		21	SU 480295	WRU
,, (North Wall)	150	1	SU 480295	Cunliffe 1962
,, (Chilcomb)		1	SU 499304	MARC3
London				
City (Artillery Lane)		1	TQ 320811	ILAU
,, (Walbrook)	70-85	3	TQ 320811	SLAEC
Putney (Gay St)		1	TQ 237737	N Farrant
Middlesex				
Brentford	60-150	8	TQ 178773	WLAFG
Staines (Quakers)	70-161	33	TQ 040715	SSAS
Surrey				
Ashtead	96-161+	7	TQ 178601	Lowther 1927
Byfleet (Pumping Station)		1	TQ 0660	Weybridge M
Cobham (Sewage Works)	50-110	1	TQ 102608	Lowther 1934b
Compton (Starcross)		1	SU 9547	Guildford M
,, (Bypass)		1	SU 950474	,,
Ewell (KWPH)	70-150	2	TQ 220629	NEAS
,, (Purberry Shot)	96+	12	TQ 220629	Lowther 1946
Farley Heath		4	TQ 052449	Lowther 1934b
Godalming (Charterhouse)		2	SU 966448	Harrison 1961
Haslemere (Beech Road)		5	SU 908336	Haslemere M

	Deposit Date	No	NGR	Provenance or Published Source*
Thorpe (Mixnam's Pit)		2	TQ 040692	Guildford M
Walton Heath		1	TQ 232537	Prest & Parrish 1949
Old Woking		2	TQ 0357	Nancy Cox
Sussex				
Chichester (Eastgate 1976)		1	SU 860050	CEC
Alfoldean		1	TQ 118330	Winbolt 1924
Fishbourne		2	SU 8404	Cunliffe 1971

5A.1-5A.4

Berks				
Cox Green	150-270	1	SU 865797	Reading M
Thatcham New Town		1	SU 457675	Newbury M
Hants				
East Meon (Old Down Farm)		1	SU 679250	MARC3
Neatham		34	SU 743408	HCMS
Oaken Plantation		1	SU 657516	,,
Silchester		8	SU 640625	Reading M
Winchester (City Sites)		7	SU 480295	WRU
North Warnborough		6	SU 736526	HCMS
London				
City (Mithraeum)	-240	1	TQ 320811	SLAEC
Middlesex				
Brentford	150-200 200-270	7	TQ 178773	WLAFG
Staines (Quakers)	150-250	39	TQ 040715	SSAS
Surrey				
Ashtead Down		1	TQ 194577	Lowther 1930
Binscombe II		4	SU 969459	C Smith
Chiddingfold		10	SU 978361	Guildford M
Ewell (KWPH)	180-230	23	TQ 220629	NEAS
Rapsley	150-200	4	TQ 080415	Guildford M

6B.1-6B.3

Hants				
East Meon (Old Down Farm)		1	SU 679250	MARC3
Neatham		4	SU 743408	HCMS
Oaken Plantation		1	SU 657516	,,
Silchester (1938)		2	SU 640625	Reading M
Winchester (City Sites)		7	SU 480295	WRU
London				
City (Mithraeum)	-240	1	TQ 320811	SLAEC
Putney		1	TQ 760755	N Farrant
Middlesex				
Brentford	150-200	3	TQ 178773	WLAFG
Staines	-150 +	1	TQ 040715	SSAS
Surrey				
Binscombe II	120-180	1	SU 969459	C Smith
Ewell (KWPH)	180-220	10	TQ 220629	NEAS
Leatherhead		1	TQ 151587	Guildford M
Rapsley		3	TQ 080415	,,

8.9

Hants				
Cholsley		1	SU 725500	HCMS
Neatham		1	SU 743408	,,
Middlesex				
Staines		1	TQ 040715	SSAS
Sussex				
Highdown (Bath House)		1	TQ 093044	Lewes M

8.10

Hants				
Bentworth (Wivelrod)		1	SU 6640	HCMS
Greywell		1	SU 714502	,,
Silchester		1	SU 640625	Reading M
Surrey				
Titsey		1	TQ 407546	Guildford M
Sussex				
Muntham Court		1	TQ 110095	Lewes M
West Blatchington		1	TQ 275062	,,

8.11-8.14

Berks				
Cox Green	270-375	1	SU 865797	Reading M
Glos				
Gloucester (New Market Hall)		1	SO 8318	Gloucester M
Hants				
Dummer (Wheatsheaf)		1	SU 570455	HCMS
Holt Down		1	SU 721167	Portsmouth M
Neatham		4	SU 743408	HCMS
Portchester	345-410	6	SU 625045	Portsmouth M
Silchester		12	SU 640625	Reading M
Whitchurch		1	SU 457483	MARC3
Winchester (Brook St, 1971)		1	SU 480295	WRU
,, (Lankhills)	390+-	1	SU 480295	,,
Herts				
Netherwylde	330-375	1	TL 1401	T Rawlins
Kent				
Richborough	286-410	2	TR 324603	Dover Castle
St Pauls Cray		1	TQ 479690	Maidstone M
Stone		1	TQ 575750	Dartford M
London				
Bow (LeFevre Rd, 1969)		2	TQ 365830	SLAEC
City (Bush Lane)		1	TQ 325810	DUA
Shadwell	-388	1	TQ 349807	A Johnston
Middlesex				
Brentford	270-360	2	TQ 178773	WLAFG
Sussex				
Chichester (Eastgate, 1976)		4	SU 860050	CEC
Chilgrove II		1	SU 841136	,,
Pevensey	330-410	1	TQ 645038	Hastings M
Wilts				
Alton (Knap Hill)		1	SU 120636	Devizes M
Enford		1	SU 1452	,,
Swindon (Old Town Hill)		1	SU 155840	Swindon M

8.12

Berks				
Cox Green	270-375	1	SU 865797	Reading M
Essex				
Mucking		1	TQ 670800	M U Jones
Hants				
Alton (Westbrook House)		1	SU 714392	HCMS
Dummer (Wheatsheaf)		1	SU 570455	,,
Holt Down		1	SU 721167	Portsmouth M
Portchester		1	SU 625045	,,
North Warnborough		1	SU 736526	HCMS

	Deposit Date	No	NGR	Provenance or Published Source*
Herts				
St Albans		1	TL 130075	Verulamium M
Ware	350-400	1	TL 352142	Hertford M
Kent				
Borough Green		1	TQ 605568	Maidstone M
Canterbury		1	TR 150578	S S Frere
Richborough	286-410	1	TR 324603	Dover Castle
London				
Hammersmith		1	TQ 243760	P Arthur
Shadwell	-388	2	TQ 349807	T Johnston
Southwark (St Thomas St)		1	TQ 325800	SLAEC
Middlesex				
Bedfont		1	TQ 080733	ILAU
Staines		1	TQ 032715	SSAS
Surrey				
Cobham (Chatley Farm)		1	TQ 088596	Weybridge M
Leatherhead		1	TQ 151587	Guildford M
Old Malden		1	TQ 212663	Kingston M
Sussex				
Chilgrove I		2	SU 835122	CEC
,, II		1	SU 841136	,,
Pevensey	330-410	1	TQ 645038	Lewes M

8.13

Hants				
Alton (Westbrook House)		1	SU 714392	HCMS
Crookhorne	Late 4C	1	SU 686074	SHARG
Neatham		2	SU 743408	HCMS
Ructstalls Hill	293-377	1	SU 651516	,,
Kent				
Lower Shorne		1	TQ 700736	Rochester M
Maidstone (Sandling)		1	TQ 755580	Maidstone M

A full gazetteer covering all the corpus types is lodged in the library of the Royal Commission on Historical Monuments (England) for the benefit of those who wish to study the distribution of other Alice Holt forms.

* CEC Chichester Excavations Committee
DUA Museum of London, Department of Urban Archaeology
ENAS Ewell and Nonsuch Archaeological Society
HCMS Hampshire County Museums Service
ILAU Inner London Archaeological Unit
MARC3 M3 Archaeological Research Committee
OAU Oxfordshire Archaeological Unit
SHARG South Hampshire Archaeological Research Group
SLAEC Southwark and Lambeth Archaeological Excavation Committee
SSAS Spelthorne and Staines Archaeological Society
WKBAG West Kent Border Archaeological Group
WLAFG West London Archaeological Field Group
WRU Winchester Research Unit

Appendix 5

List of museums, units, societies, and individuals holding collections of material examined

P Arthur (Fulham Palace; Kingscote)
Aylesbury: Buckinghamshire County Museum
P Barker (Wroxeter)
Basingstoke Archaeological Society
Brading Museum, Isle of Wight
Brighton Museum
Bristol: City Museum
Cambridge Museum
Canterbury City Museum
Carisbrooke Castle Museum (Newport, Isle of Wight)
Chichester Excavations Committee
Chichester District Museum
Cirencester Archaeological Unit
Cirencester: Corinium Museum
Colchester and Essex Museum
M Dacre (Andover)
Dartford Borough Museum
Department of the Environment (Richborough)
Devizes: Museum of the Wiltshire Archaeological Society
P J Drury (Chelmsford; Braintree)
Dyfed Archaeological Trust
Essex County Planning Department (Orsett)
Ewell and Nonsuch Antiquarian Society
Exeter Archaeological Unit
Exeter: Royal Albert Memorial Museum
N Farrant (Putney)
S S Frere (Bignor; Canterbury)
Gloucester: City Museum
Grays: Thurrock Local History Museum
C Green (Bishopstone)
Guildford Museum
S Hammerton (Bray)
Hampshire County Museum Service
Haslemere: The Educational Museum
Hastings Museum
Hereford Museum
Hertford City Museum
Inner London Archaeological Unit
Ipswich Museum
A Johnston (Shadwell)
Kent Archaeological Research Unit
Kingston-upon-Thames Museum
Letchworth Museum
Lewes: Museum of Sussex Archaeology
Lockleys Archaeological Society
Luton Museum
M3 Archaeological Rescue Committee
Maidstone Museum
Manshead Archaeological Society
Mayford Archaeological Society
Milton Keynes Development Corporation
Lt-Col G W Meates (Lullingstone)
Museum of London (Department of Urban Archaeology)
National Museum of Wales
Newbury District Museum
Newport Museum, Gwent
Northampton Museum
Orpington Museum (London Borough of Bromley)
Oxford Archaeological Unit
Oxford: Ashmolean Museum
Passmore Edwards Museum (London Borough of Newham)
B Phillips (Wiltshire material)
Portsmouth City Museum
Reading Museum
Reading University
Rochester Museum
I F Sanders (Thenford)
Salisbury and South Wiltshire Museum
Sheffield University (Owslebury)
C Smith (Binscombe)
T J W Solley (Gatcombe)
Southampton City Museum
South Hampshire Archaeological Rescue Group
Southwark and Lambeth Archaeological Excavations Committee
Spelthorne and Staines Archaeological Group
M Stone (Wiltshire material)
Swindon Museum
Taunton: Somerset County Museum
S Taylor (Bannaventa)
University College, Cardiff (Usk)
Verulamium Museum
B Walters (Wiltshire material)
Watford and South-West Hertfordshire Archaeological Society
W Wedlake (Nettleton Shrub)
West Kent Border Archaeological Group
West London Archeological Field Group
Weybridge Museum
Winchester City Museum
Winchester Research Unit
Worthing Museum

All this material was examined in the period between March 1976 and August 1977. In most cases the entire museum or unit collection of Roman pottery was examined, the most notable exception being Gloucester, where only the city material was looked at.

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Notes

1 Dump AH 70 is so far unique in having a central hollow with two opposing breaches in the surrounding waste, giving a double kidney plan. Many other dumps with central hollows may have had a similar appearance originally. The air photograph (Fig 3) of dump AH 77 shows the more normal horseshoe-shaped dump plan clearly.

2 If a high 20% wastage rate is accepted, it would imply even lower and more unlikely production figures.

3 Dump AH 52, dated AD 150–220, was recently examined with a fluxgate gradiometer and shown to contain four kilns. This dump contains an estimated 370m³ of waste, which, by our calculations, represents 12 years' activity, or three years' average life per kiln, if only one was in use at any one time.

4 As far as is known, there is no literature on this industry and the name 'Surrey buff ware' is here used for the first time as an appropriate title.

5 Information supplied by Katherine Barclay of the Winchester Research Unit.

6 Since this was written, a well-stratified sequence of Alice Holt vessels has been seen from Thenford villa in the extreme south-west of Northamptonshire. Phase 4, dated 325–350, has one vessel, Phase 5, dated 350–375, has two, Phase 6, dated 375–388, has seven, and Phase 7, dated 388–400+, has four. This suggests that most of the trading activity took place after 375, a pattern similar to that at Verulamium, and may have taken place via an extension of the Dorchester-on-Thames–Cuddesdon trade route.

7 The close similarity of Fareham and Surrey buff ware rilled jars, coupled with the very wide but thinly scattered range of the vessels, suggests another possible aspect of this tradition. It may be that the potters were itinerant, taking with them quantities of clay from their main potting base to where there was a good potential market and spending a short time making vessels before moving on. Although there are general (and sometimes quite close) similarities between coarse ware forms from various potteries, rarely if ever is the resemblance as close as this.

8 Throughout this paper statements are made without reference to the bibliography. This is because they are the result of examination of the numerous collections of pottery held by the units, museums, and individuals listed in this gazetteer. Although very large amounts of material have already been looked at, the work is continuing and additions to the list may be published at a future date. Where a published source is given, the actual material has not been seen owing to inaccessibility or other reasons.