

# EXCAVATIONS BY R A RUTLAND ON AN IRON AGE SITE AT WITTENHAM CLUMPS

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## INTRODUCTION

Excavations by P. P. Rhodes in 1947 indicated the existence of an extensive Iron Age settlement outside the ramparts of the hill fort at Wittenham Clumps (otherwise known as Sinodun Hills; Rhodes, 1948). Further excavations in 1970, by R A Rutland on behalf of Reading Museum, produced more evidence on the nature and extent of the site. Rutland's excavations were carried out in advance of the construction of a car park.

Two factors concerning the site seem of prime importance; firstly the locations of the settlement in relation to the hill fort is notable; secondly the preservation of an occupation deposit over a part of the site is of interest. These matters are discussed in detail in the summary (see p 52).

The report is divided into four main sections. Section 1 concerns Structural data including pits, gullies and other features, section two is a discussion of artefactual information and section three contains a discussion of the animal bones from the excavations; section four is a summary. Structural data (with the exception of the occupation layer) are of minor importance, and a synthesis of Rutland's notes is provided. Details concerning "features" on the site are kept to a minimum, a table is included which gives the dimensions of pits and post holes (Table 1) and section diagrams are provided for all the features that were drawn during excavation (Figure 7). Finds, during the excavation, were abundant, and detailed work on the Iron Age pottery and on the

animal bones is reviewed at some length. More detailed information on both structural and artefactual aspects of the excavation are available in the excavation records (in Reading Museum).

## 1) STRUCTURAL DATA

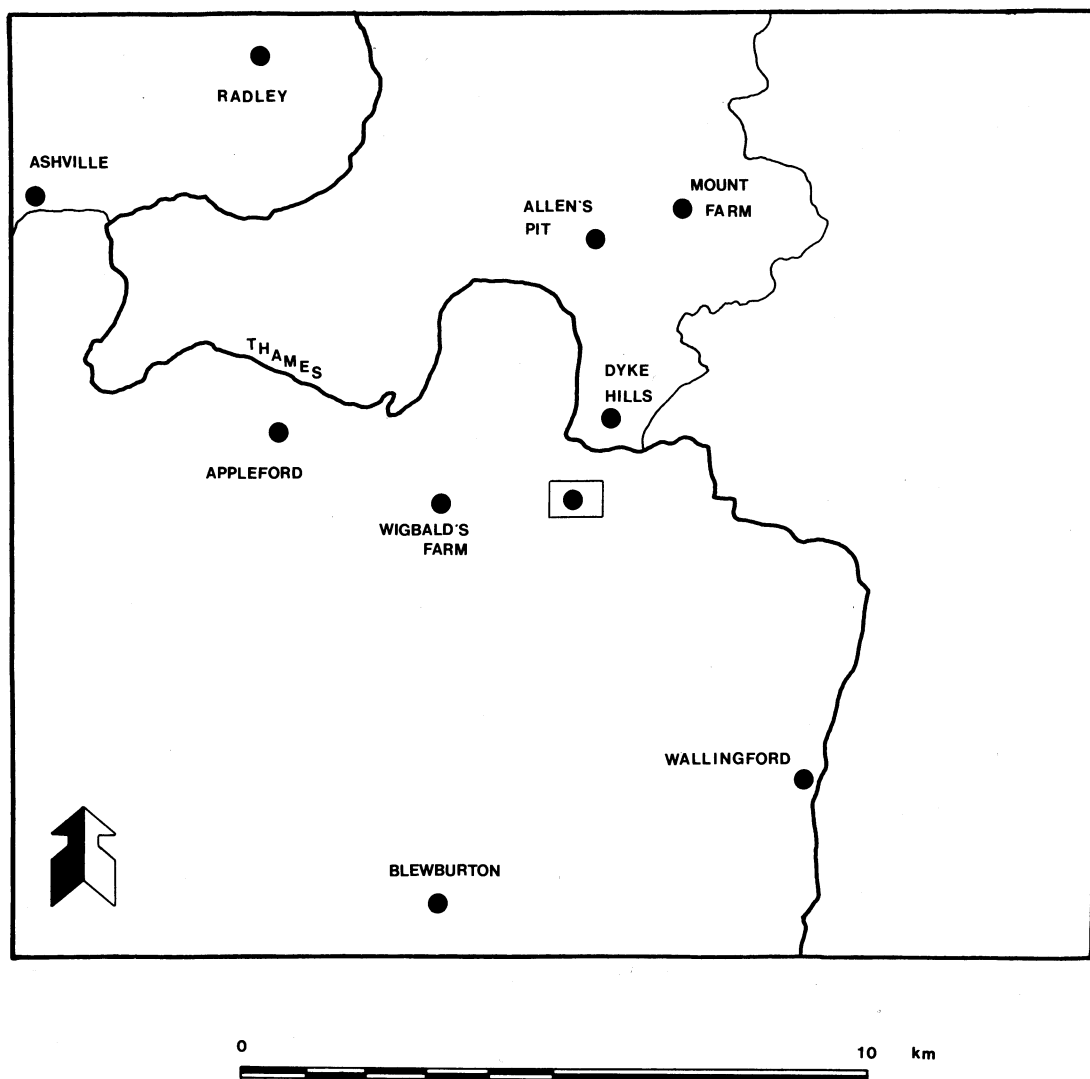
(R Hingley, from notes by R A Rutland)

One aim of the Excavator was to investigate an occupation layer discovered by Rhodes in a pit dug for a fence post (Rhodes, 1948, "pit A", see Figure 3). Six 1.5 m<sup>2</sup> "sondages" (Trenches G,H,J,K,Q and L; see Figure 3) were excavated with this intention in mind. In addition a gradiometer survey was conducted to the east and six 1.5 m<sup>2</sup> trenches (Trenches A to F; see Figure 3) were excavated to examine readings that were considered to be anomalous. The gradiometer survey was carried out by R A Rutland and J Greenaway with the Reading Museum machine. The most promising feature located in Trenches A to F was a gully in Trench B; this was investigated by a series of trenches which were opened into an area excavation (see Figure 3). The area excavation revealed a curving gully enclosing post holes and pits.

## *Trenches Excavated to Examine the Occupation Layer*

Trenches G,H,J and K were excavated alongside a north east to south west running fence line in order to investigate a black occupation layer rich in pottery and animal bones (see Figure 3). Later Trench L was laid

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*Fig. 1. The Location of the site at Wittenham Clumps (the box shows the location of Figure 2, in addition Late Bronze Age and Iron Age sites are shown).*

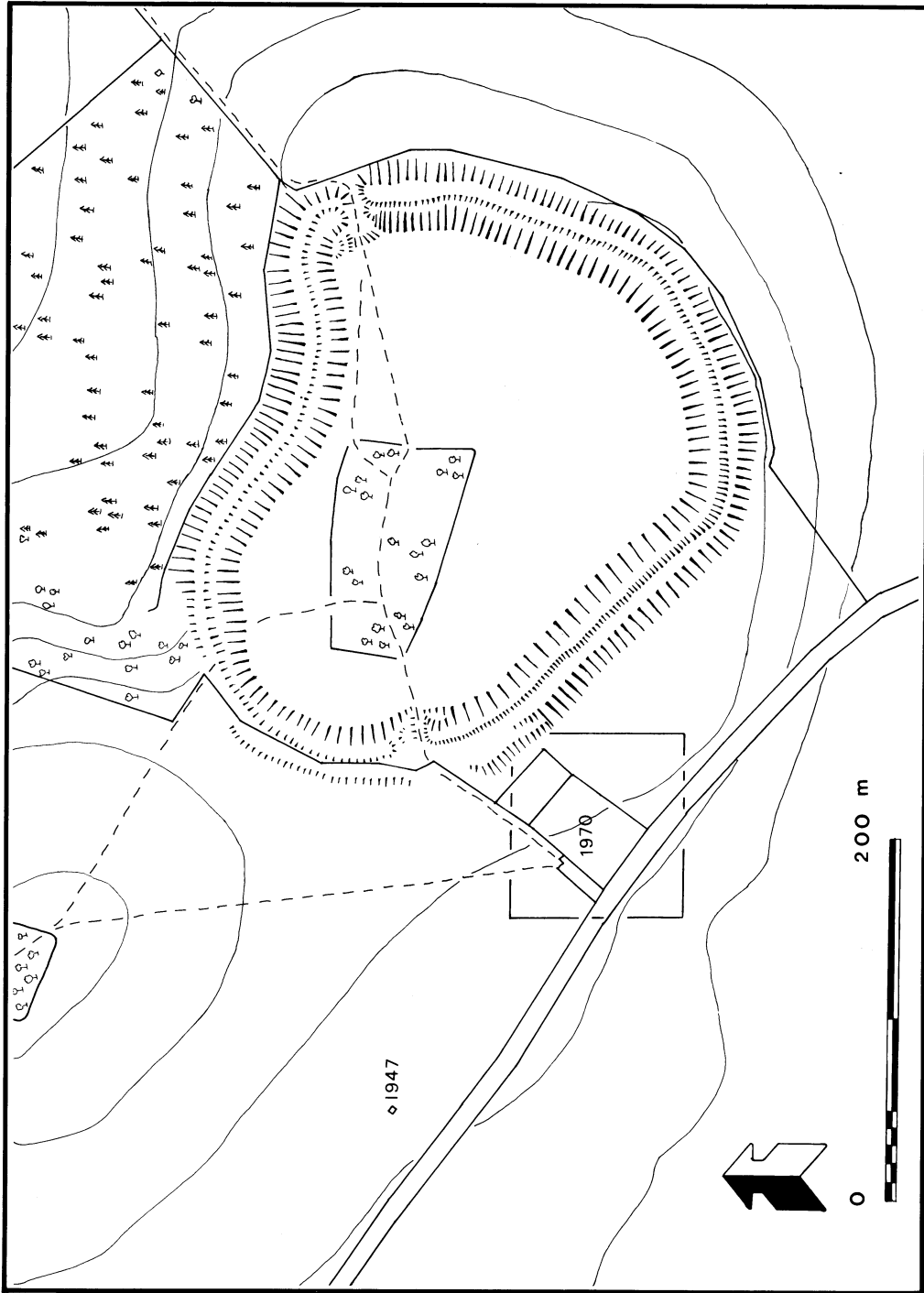
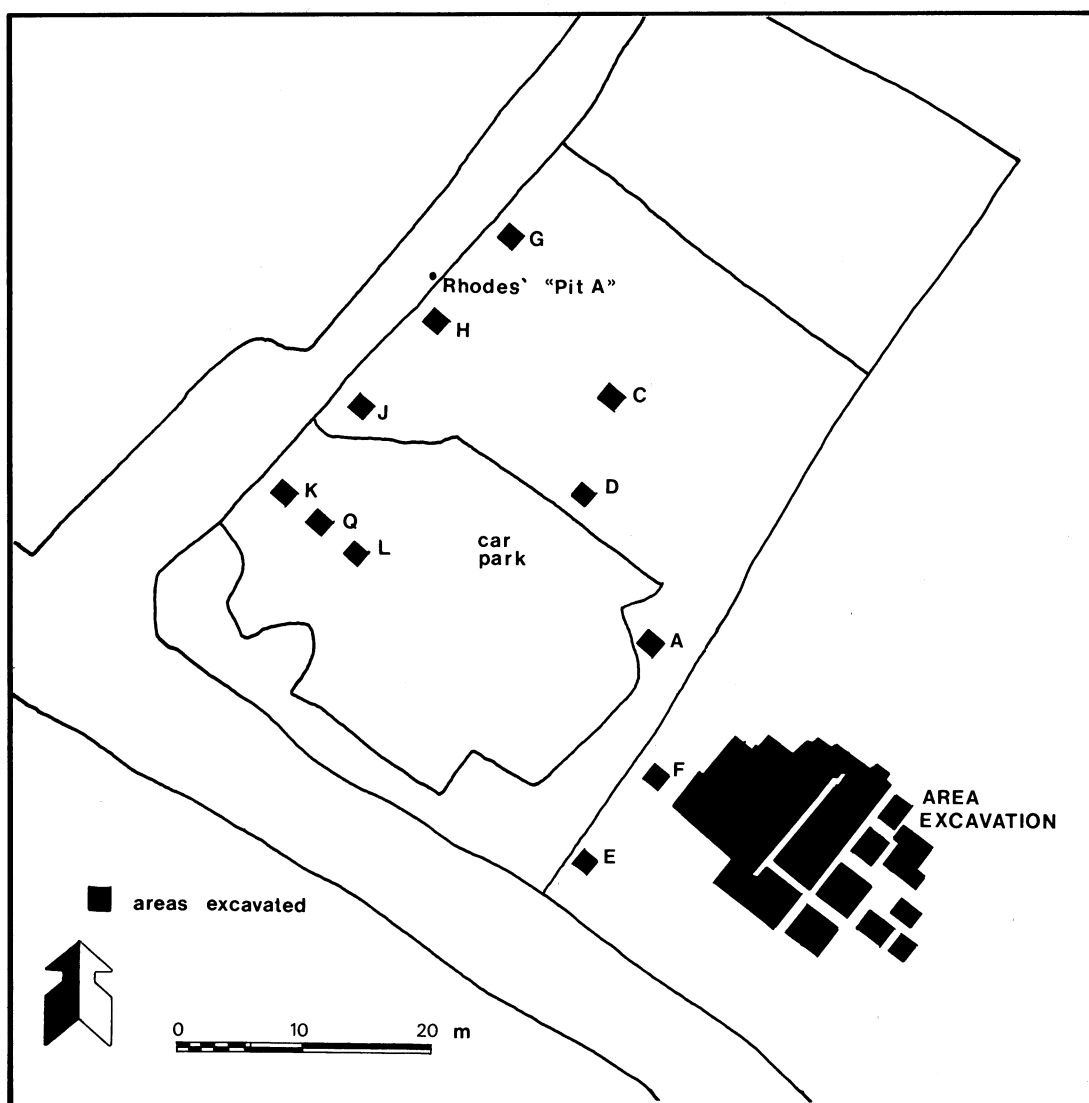


Fig. 2. Wittenham Clumps showing the hill fort and the position of the 1947 and 1970 excavations on the external settlement (the box shows the location of Figure 3; contours are shown at 25 ft intervals).



*Fig. 3. The Area Excavated in 1970 in relation to modern field boundaries, the road and Rhode's 'Pit A'.*

out 4.5 m east of K, and Trench Q between K and L (see Figure 3), in an attempt to delimit the eastern margin of the occupation layer.

Trenches G to K produced the same sequence of layers. The eastern face of Trench G is illustrated in Figure 4 and the sequence of layers was as follows.

Layer 1	c 30 cm	"dark top soil"
Layer 2	c 60 cm	"lighter soil"
Layer 3	c 20 to 30 cm	"darker occupation layer".
Layer 4	c 6 to 10 cm	"lighter occupation layer".
Layer 5	—	"brown clay" (natural).

Layer 2 was of comparatively recent origin since it produced mostly post-Roman finds (see p 48). By contrast material from layer 3 was all of Iron Age date. Layer 4 was recorded as distinct from layer 3 in Trenches G, J and K but was not distinguished in Trench H.

Several features were recorded in these four trenches. All post holes (see Figure 5 and 7 and Table 1) had been excavated through the lighter occupation layer as well as into natural. Grooves in the top of the dark occupation layer (layer 3) in Trenches H and K (Table 1, Features 35 and 37), which the excavator suspected to be post-Iron Age, may have been plough marks.

Trench L was intended to explore the occupation layer to the east of the field boundary (see Figure 3). No such layer was found, and the depth from the top of the cutting to natural was found to be c 65 cm as contrasted to about 120 cm in Trenches G, H, J and K. Four features were revealed in Trench L (see Figures 5, 7 and Table 1).

Trench Q, which was placed between Trenches K and L, revealed the occupation layer with a depth of 7.5 to 15 cm. This Trench also produced evidence for a feature (table 1).

Excavation thus proved the existence of

Rhodes' occupation layer, (in trenches G to K) and demonstrated its existence below a modern field boundary, although the occupation layer appeared to peter out a few m to the east of the boundary (between trenches Q and L).

#### *The Trenches excavated on the East of the site to Examine Gradiometer Survey Readings.*

Six Trenches (A to F) were excavated to examine anomalous readings (Figure 3); most anomalies were explained by the presence of lumps of iron in the modern plough soil. Excavation was continued down to natural in all trenches, and only one (Trench A) failed to produce any structural evidence. In none of these cases was an occupation layer located.

In Trench F a roughly laid pavement of small stones was excavated (see Table 1 Feature 39), features were located in several of the other Trenches (see Table 1 and Figure 5). In Trench B a small gully was located, this gully was investigated by means of an area excavation.

#### *The Area Excavation*

The gully formed roughly two fifths of a circle about 16 m in diameter (Figure 6). A clear butt-end was found on the eastern side of the gully, but the western end petered out. The width and depth of the gully varied, although it was generally deeper to the east (Figure 7; sections A to E). The gully had a dark fill and contained much pottery and bone.

Several pits and post holes were excavated inside and outside the gully (For details see Table 1 and Figure 7). Thirteen features were probably post holes of which one (Feature 26) probably predated the gully; three features, although rather small by Upper Thames standards, were probably pits (Features 31, 32 and 33) as they produced prolific finds. Features 28, 29 and 30 were very shallow and may have been merely undulations in the natural.

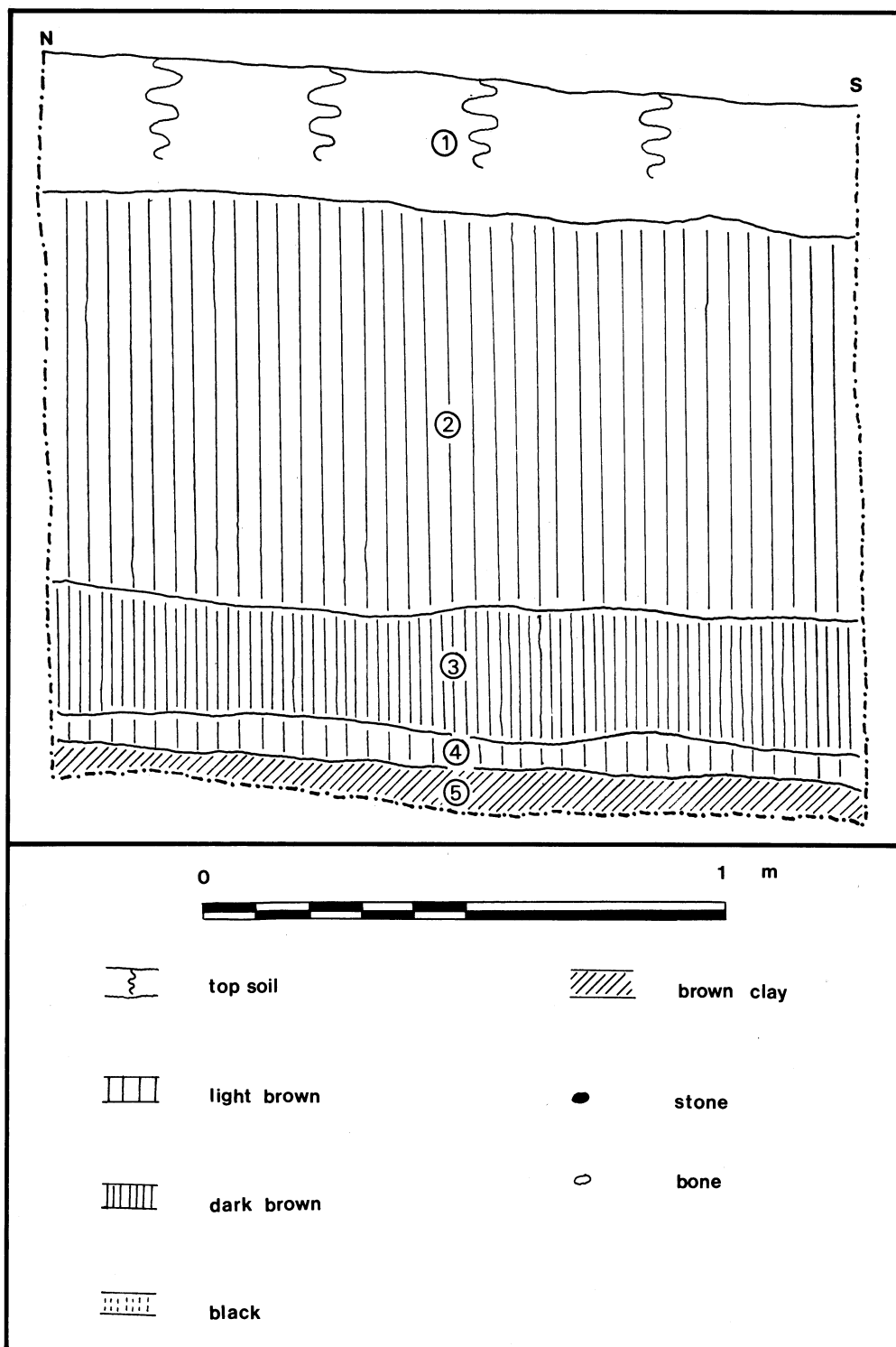


Fig. 4. A Section Drawing of the east face of Trench G.

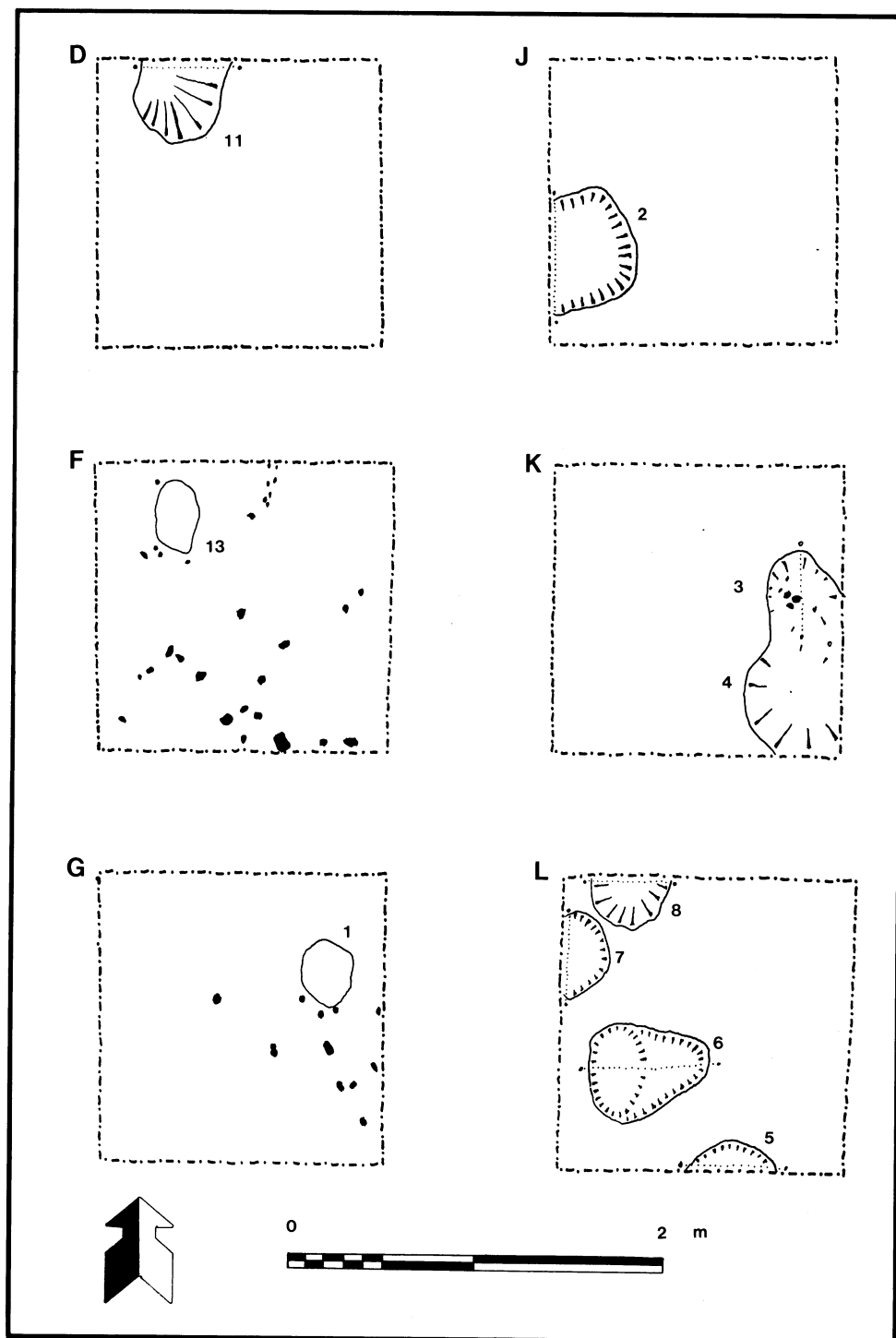


Fig. 5. Plans of Selected Trenches (letters refer to the trenches, numbers to features see Table 1).

TABLE 1: FEATURES

Feature Number	Trench	Illustrated?	Diam (cm)	Depth (cm)	Interpretation
<i>Pits/Post Holes</i>					
1	G	X	30	25	Post Hole
2	J		61	30	Post Hole
3	K	X	32	30	Post Hole
4	K	X	38	45	Post Hole
5	L		41	23	Post Hole
6	L		51	37	Post Hole
7	L		37	18	Post Hole
8	L		26	34	Post Hole
9	Q	X	60	50	?Post Hole
10	C	X	19	14	Post Hole
11	D		48	46	Post Hole
12	E	X	not recorded		Post Hole
13	F	X	31	17	Post Hole
14	F	X	not recorded		Post Hole
15	Area		30	41	Post Hole
16	Area		20/27	12	Post Hole
17	Area		18	15	Post Hole
18	Area		30	13	Post Hole
19	Area	X	35	40	Post Hole
20	Area		19	9	Post Hole
21	Area		23	13	Post Hole
22	Area		18	10	Post Hole
23	Area	X	not recorded		Post Hole
24	Area	X	30	13	Post Hole
25	Area	X	not recorded		Post Hole
26	Area	X	15/13	5	Post Hole
27	Area	X	76/46	24	Post Hole
28	Area		98/86	8	?shallow pit
29	Area	X	106	8	?shallow pit
30	Area	X	183	25	?shallow pit
31	Area		183	85	Pit
32	Area		158	23	Pit
33	Area		168	23	Pit
<i>Additional Features</i>					
34	G		Thin scatter of stones above layer 4		
35	H	X	Groove running east-west in surface of Layer 3, ?plough mark.		
36	H	X	Three stones in a group in stoneless Layer 3. ?Post Hole		
37	K	X	Series of faint marks running west to east in surface of Layer 3, ?plough marks.		
38	K	X	A scatter of small stones in Layer 3, ?Paved Area.		
39	F		Stone Scatter above natural, ?Paved Area.		

Note: Under caption "Illustrated" X means that the feature is not illustrated on Figures 5 or 7.



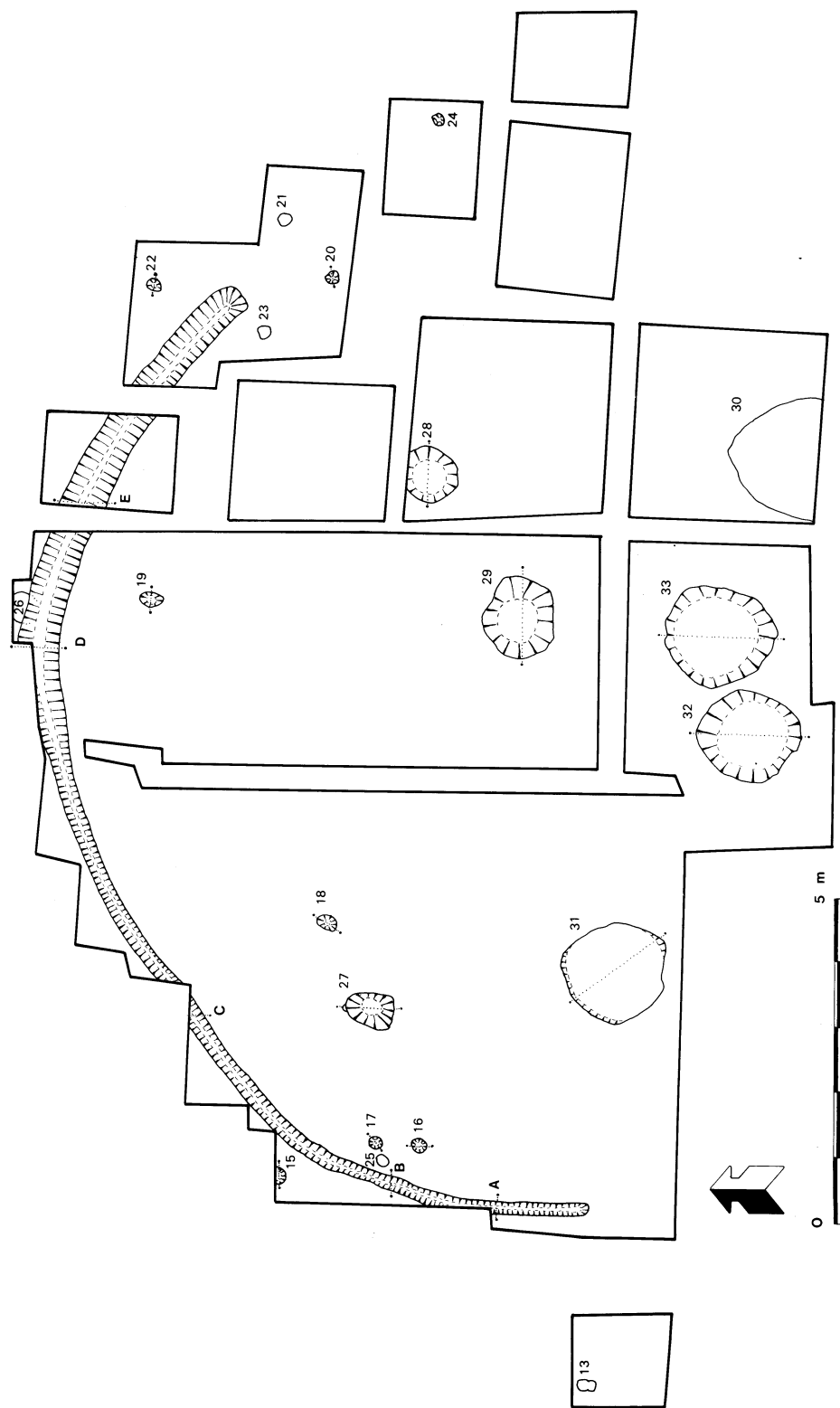


Fig. 6. Plan of the Area Excavation (numbers refer to Features; the location of Features 14 and 25 do not appear to have been recorded).

*Discussion of the Structural Data*

It seems probable that the occupation layer in trenches G, H, J, K and Q has been preserved by the build up of a layer of plough soil forming a lynchet at the modern field boundary. Pocock has suggested that the cleaning of mud from a plough at the edge of a field leads, over a period of years, to the formation of such a lynchet (1968, 86).

Rhodes located another area of occupation deposit, also rich in bone and pottery, on his "rectangular hut" site, excavated in 1947 (Rhodes, 1948, 20; for the location of this excavation see Figure 2). Why the layer survived in Rhodes' part of the site is unclear. The occupation layer may have been preserved by a spread of Roman building material that sealed the deposit (*op cit*, 20), or by the build up of a second lynchet along an old field boundary which is shown running close to this area of Rhodes' site on the Tithe Award map for Little Wittenham. Alternatively it is possible that the occupation deposit survives as a continuous layer between Rhodes' rectangular hut site and the area of the site examined by Rutland (see Figure 2). If the deposit is continuous the area of the site in the field to the west of the car park is of outstanding importance (see Summary, p 52).

It seems probable that the deposit was not a deliberate dump of occupation material, or midden, but a general layer of disturbed refuse which built up during usage of the site. Average sherd weight from the occupation layer was about 5.7 gm as contrasted to the 10.6 gm average weight for sherds from the pits and the gully investigated during the area excavation. Bradley and Fulford (1980, 85) have argued that sherd size for primary refuse (as in these pits) should be larger than for secondary or disturbed refuse (as in this occupation layer).

Occupation deposits are often found on urban and other intensively occupied sites; however such deposits have only rarely been found on Iron Age sites in this country. One

site where such a deposit was excavated was All Cannings Cross (Wilts), where a dark layer of soil overlying features contained much of the artefactual material from the site. In this case the excavator suggested that the deposit had been preserved from the plough by the build up of a layer of plough wash (Cunnington, 1923). At Glastonbury an occupation layer was a prolific source of artefactual and structural data (Bulleid and Gray, 1911). Occupation deposits have been preserved on a handful of other Iron Age sites in Britain; for instance behind the ramparts at Danebury (Cunliffe, 1976, 200) and on an unploughed Iron Age site at Hardwick (Allen and Robinson, 1979).

Information from the Wittenham Clumps occupation layer would suggest that data loss on ploughed sites is both structural and artefactual; in other words that ploughing leads to the loss of features dug into archaeological deposits above the level of the natural and to the loss of artefactual data incorporated in these contexts and features. The small area of the occupation deposit excavated at Wittenham Clumps produced 565 sherds which is almost 25% of the total of 2240 sherds from Rutland's excavations. The area excavation covered approximately fourteen times the area of ground and produced 1372 sherds (61% of the total from Rutland's excavations). Thus per square meter of ground the occupation deposit produced 3.5 times as many sherds as the area excavation (although only about twice as much pottery by weight).

Structural information also occurred within the occupation deposit (Table 1). A stony spread in Trench K could indicate the presence of a paved area. Rhodes' rectangular hut had a stone paved floor (1948). Many of the post holes in Trenches G, H, J and K were excavated through the light occupation layer; it is possible that the excavator failed to recognise post holes excavated into the dark occupation layer and backfilled with dark occupation layer soil. If so the three stones in a group discovered in Trench

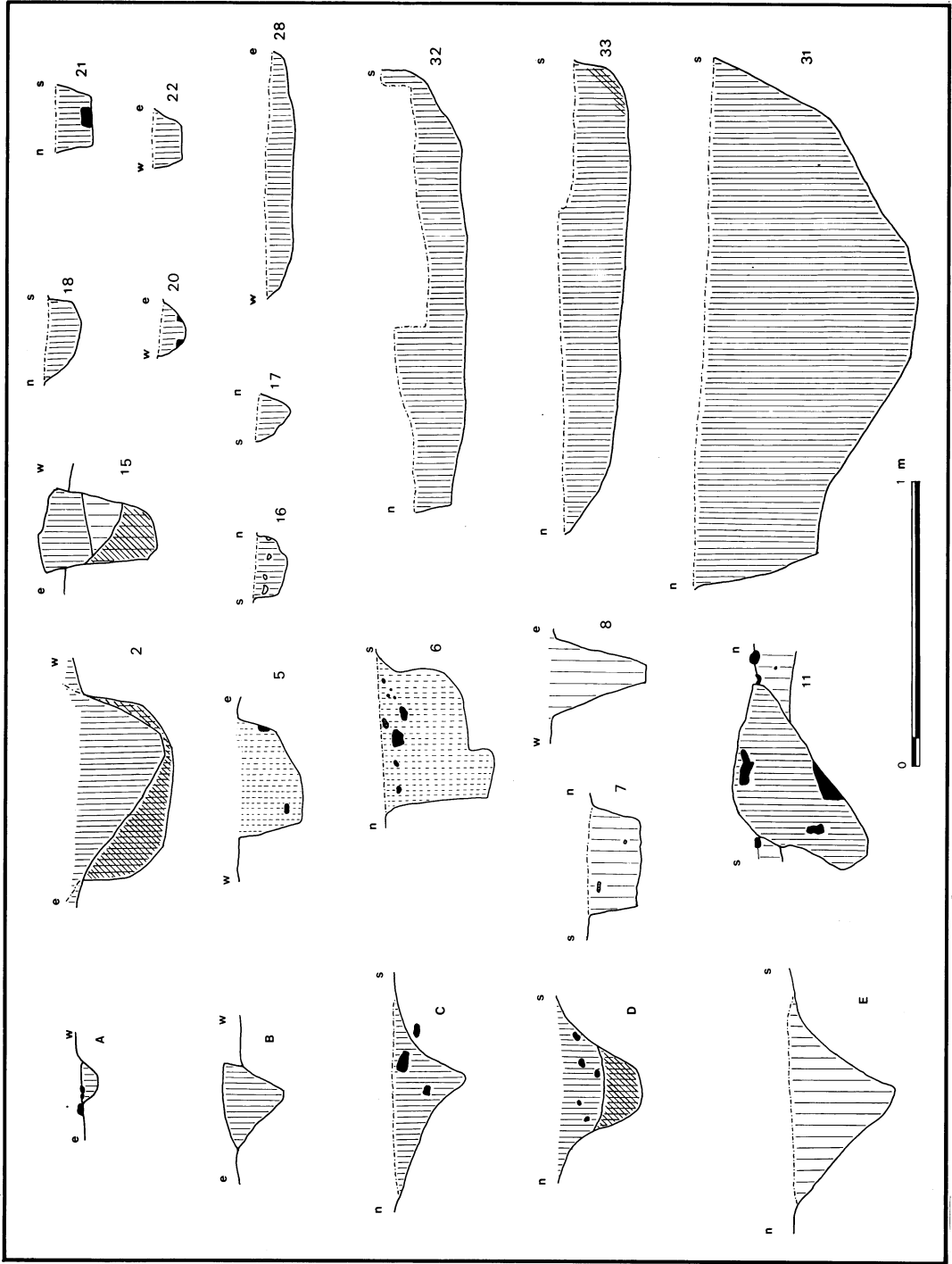


Fig. 7. Section Diagrams of Selected Features.

H (see Table 1, Feature 36) may represent the stone packing for a post hole excavated into the dark occupation layer but not noticed during excavation.

As well as providing information concerning data-loss on heavily ploughed sites, the study of such occupation deposits tells us much about the intensity of occupation on the sites of some Iron Age settlements.

However even the area of the occupation deposit at Wittenham Clumps may have produced an incomplete record of settlement on the site. Trenches H and K produced possible evidence of ploughing in the top of the occupation deposit (see Table 1, Features 35 and 37), and we have no idea of the depth of occupation deposit lost before the build up of the Medieval/Modern lynchet (layer 2).

Trenching on the west of Rutland's area has not provided much evidence concerning the structure of Iron Age settlement on the site. It would seem however, that quite a density of features existed in this area of the site. Eight possible post holes were located in the six trenches laid down to examine the occupation deposit. In addition five of the six trenches excavated to examine anomalous gradiometer readings produced evidence of similar densities of features.

As a test of the density of features at the Wittenham Clumps site experiments were made with the plan of an intensively occupied Iron Age site at the Ashville Trading Estate, Abingdon (Parrington, 1978, Figure 3). Over the eastern side of the Ashville excavations features were dense; a simulated grid of 346 1.5 m<sup>2</sup> units laid down over the site plan produced 427 part or whole features, a density of 1.28 features per square (when a feature occurred in two or more squares the feature was counted for each square in which it occurred). Over the central southern part of the site the density from 214 squares dropped to 0.91 features per 1.5 m<sup>2</sup> unit.

At Wittenham Clumps eight features were located in six trenches excavated to examine the occupation layer, this is a density of 1.33 features per square. The other six 1.5 m<sup>2</sup>

trenches, excavated to examine anomalous gradiometer readings, produced a density of 1.16 features each. This would appear to indicate quite a density of features over the whole of the area sampled by Rutland (although Rutland's trenches were not randomly situated as ideally they should be for this type of analysis, their distribution was not based on any factor that should cause gross bias in the results of the analysis).

Several buildings/structures are presumably indicated by the features in Trenches G,H,J,L and Q. The quantity of daub from Feature 6, Trench L (see p 48) may indicate backfilling of the feature with rubbish from a demolished structure of which the post hole formed part. Daub also came from the occupation layer in Trenches H and J (see p 48).

Features in Trenches C and D were probably post holes and may represent parts of other buildings/structures. The stony patches in Trenches G,K and F could represent paving of some sort.

The curving gully investigated in the area excavation is probably the external drip trench for a round hut. Trenching based on the theory that the deep eastern terminal of this gully formed the northern part of the eastern entrance to a hut failed to locate the southern entrance over an area 6 m south of the gully's eastern terminal (Figure 6). If the gully was a hut gully an alternative to the improbable theory that erosion has caused destruction of the downhill part of the enclosure is that the gully was only constructed on the uphill part of the hut. This may suggest that the threat of saturation of the daub walls of the hut only existed where rain water could not drain off down hill from the hut.

It is possible that the gully was not a round hut enclosure. Curving gullies on some Upper Thames Valley Iron Age sites (eg Farmoor and Mount Farm; Lambrick, Personal communication) do not appear to represent elements in round hut construction and their function is sometimes uncertain.

## 2) ARTEFACTUAL DATA

*A) Iron Age Pottery* (R Hingley)

2240 Iron Age sherds were recovered from stratified and unstratified contexts during the excavations. 200 of these sherds have been drawn and 121 selected sherds are illustrated in this report. In addition eight sherds from unstratified contexts within the hill fort are illustrated. Fabric analysis was carried out on all sherds from stratified contexts.

*Fabric Analysis: Method.*

Fabric analysis followed the method of CD DeRoche (1978, and Unpublished Thesis; Lambrick and Robinson, 1979; Lambrick, 1980).

Seven fabrics were identified, only four occurred in any quantity and appear of value in this analysis.

Fabric 1. Shell Gritted (DeRoche, 1978, 41).

Fabric 2. Sandy (DeRoche, 1978, 41).

Fabric 3. Flint Gritted (Lambrick, 1980).

Fabric 4. "Conglomerate" Inclusions (Lambrick, Forthcoming).

Notes on the characteristics of Fabrics 1 to 3 can be found in the publications referred to. Fabric 4 has conglomerate inclusions of a pebbly type; these inclusions look like gravel

but do not react with dilute HCl and their exact source is uncertain. Some of the inclusions are very large; in the case of sherd 95 (Figure 14) large inclusions probably led to the breakage of the pot soon after, if not during, firing. Sherds with "conglomerate" inclusions have been noted from Wigbald's Farm (Long Wittenham) and Mount Farm (Berinsfield; Lambrick, Personal communication).

Fabric analysis was possible for seven features or contexts on this site (see Table 2). These contexts all produced more than 30 sherds (which is considered by DeRoche to be the minimum viable sample size; Unpublished Thesis, 28). In this report assessment of the proportion of sherds per feature is based on the number and on the weight of the sherds.

*Fabric Analysis: Application.*

Fabric 1 was relatively consistent in quantity from all seven features (see Table 2). The occurrence of Fabric 2 is also quite consistent. Fabrics 3 and 4 show far more variation, Fabric 3 (flint) varying from 0 to 48% and Fabric 4 (conglomerate) from 1 to 60%. These latter two fabrics are probably chronologically indicative; Fabric 3 is common where 4 is rare, and vice versa.

TABLE 2: POTTERY FABRIC CLASSIFICATION

CONTEXT	SIZE OF SAMPLE (number of sherds/weight in gm)	FABRIC TYPES (% for number of sherds/weight in gm)			
		1 (shell)	2 (sand)	3 (flint)	4 (conglomerate)
1) Light Occupation Layer	40/250	7/6	42/36	42/48	2/1
2) Dark Occupation Layer	573/3198	15/17	58/54	11/11	11/16
3) Feature 12	31/186	6/10	42/38	6/2	29/51
4) Feature 31	246/2976	6/10	52/34	2/2	26/45
5) Feature 32	62/745	7/5	57/34	2/1	33/60
6) Feature 33	139/1060	10/15	60/46	0/0	30/37
7) Gully	264/2738	11/11	54/48	4/7	21/22

Fabric 3 was common at a Bronze Age site in the river bank at Wallingford (BAJ, 1960, 55-8; this site was dated as Iron Age in the original publication and the dating of the site has subsequently been reconsidered). A high percentage of flinty ware has also been used to distinguish Bronze Age from Iron Age features at Appleford (Lambrick, 1980, 56-7). The light occupation layer at Wittenham Clumps actually produced a higher proportion of flinty ware than the supposed late Bronze Age features at Appleford, thus it would appear probable that the light occupation layer is late Bronze Age in date.

The dark occupation layer produced a higher proportion of fabric 3 than the remaining contexts (see Table 2) although it produced less than the light occupation layer. The dark occupation layer also produced about six times as much of Fabric 4 (conglomerate) as the light occupation layer. The other five contexts produced a higher percentage of Fabric 4 than either of the two layers within the occupation deposit (see Table 2). Fabric 4 has been recorded on Early Iron Age sites at Wigbald's Farm and Mount Farm, in the vicinity of Wittenham Clumps (see Figure 1). Fabric 4 seems to be Early Iron Age in date and as a fabric type seems to take the place in this area of the contemporary Fabric 1 (shelly) which is very common on early Iron Age sites to the west (eg Ashville, Radley).

Thus stratigraphy within the occupation layer at Wittenham Clumps supports the pottery chronology for the Upper Thames valley in showing that Fabric 4 became popular as Fabric 3 disappeared.

The remaining five features (see Table 2) produced quite consistent proportions of each of the four fabrics, with Fabric 3 being rare and Fabric 4 prolific.

### *Form Analysis*

Discussion of the chronology of vessel forms is based on the framework established by Harding (1972) and developed by DeRoche (1978). Some additional informa-

tion on late Bronze Age vessel types is derived from the study of possible late Bronze Age material from Chastleton (Leeds, 1931), Rams Hill (Bradley and Ellison, 1975), Wallingford (BAJ, 1960, 55-8), Water Oakley, Bray (BAJ, 1960, 55-9), Appleford (DeRoche and Lambrick, 1980), Ivinghoe Beacon (Cotton and Frere, 1970, Figure 16), Aldermaston Wharf (Bradley et al, 1980) and Knights Farm (Bradley et al, 1980).

121 sherds from the excavations are illustrated. Descriptions of each sherd are given but these descriptions are shortened by the use of descriptive codes (given below). The entries underlined after each sherd refer to features of that sherd. Colours are given first, this is followed by a fabric type notation (see Table 2 for fabric types), and then by notes on any decoration on the sherd.

### *Notations for Pottery Catalogue*

*C* (colour). *E*: Exterior of pot/sherd

*I*: Interior of pot/sherd

*Bk*: Break/section of sherd

Included in the notes on colour are some other details;

*Hae*: Haematite wash

*Bur*: Highly Burnished

*Veg*: Vegetable impressions on a surface of the sherd

*F* (fabric).

*1*: Fabric 1

*2*: Fabric 2

*3*: Fabric 3

*4*: Fabric 4 (see Table 2)

*D* (decoration).

*I*: Incised Lines, pre-firing

*If*: Incised Lines, post-firing

*IW*: Incised Lines, pre-firing, with white paste inlay

*T*: Tooled Lines

*S*: Stabbed Dot

*Di*: Impressed Dimple

*FT*: Finger Tip Impression

*FN*: Finger Nail Impression

*Sl*: Slash

*To*: Tool (?bone tool) mark

*IC*: Impressed Circle

*R*: Raised Cordon

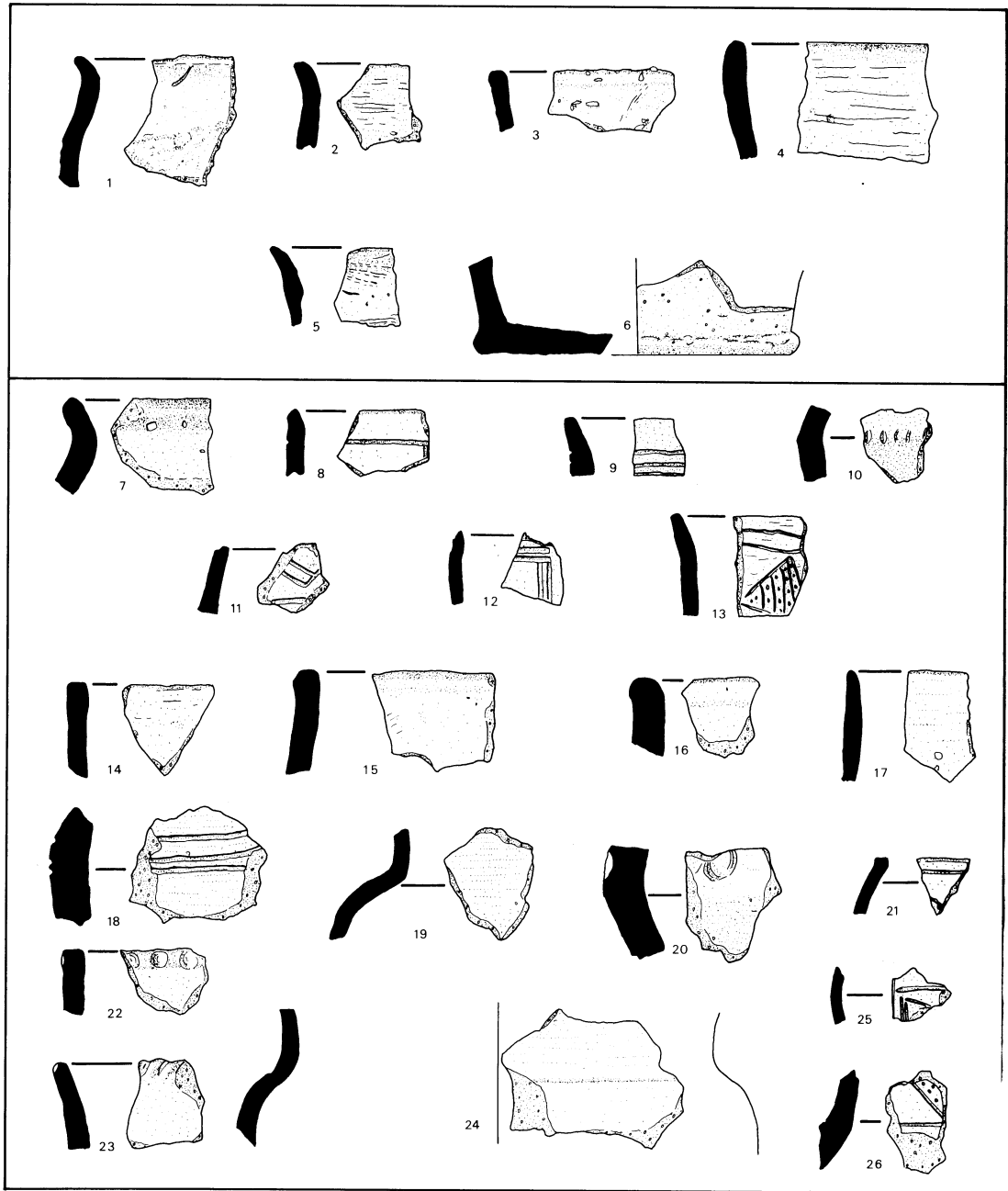


Fig. 8 Pottery (1-26)

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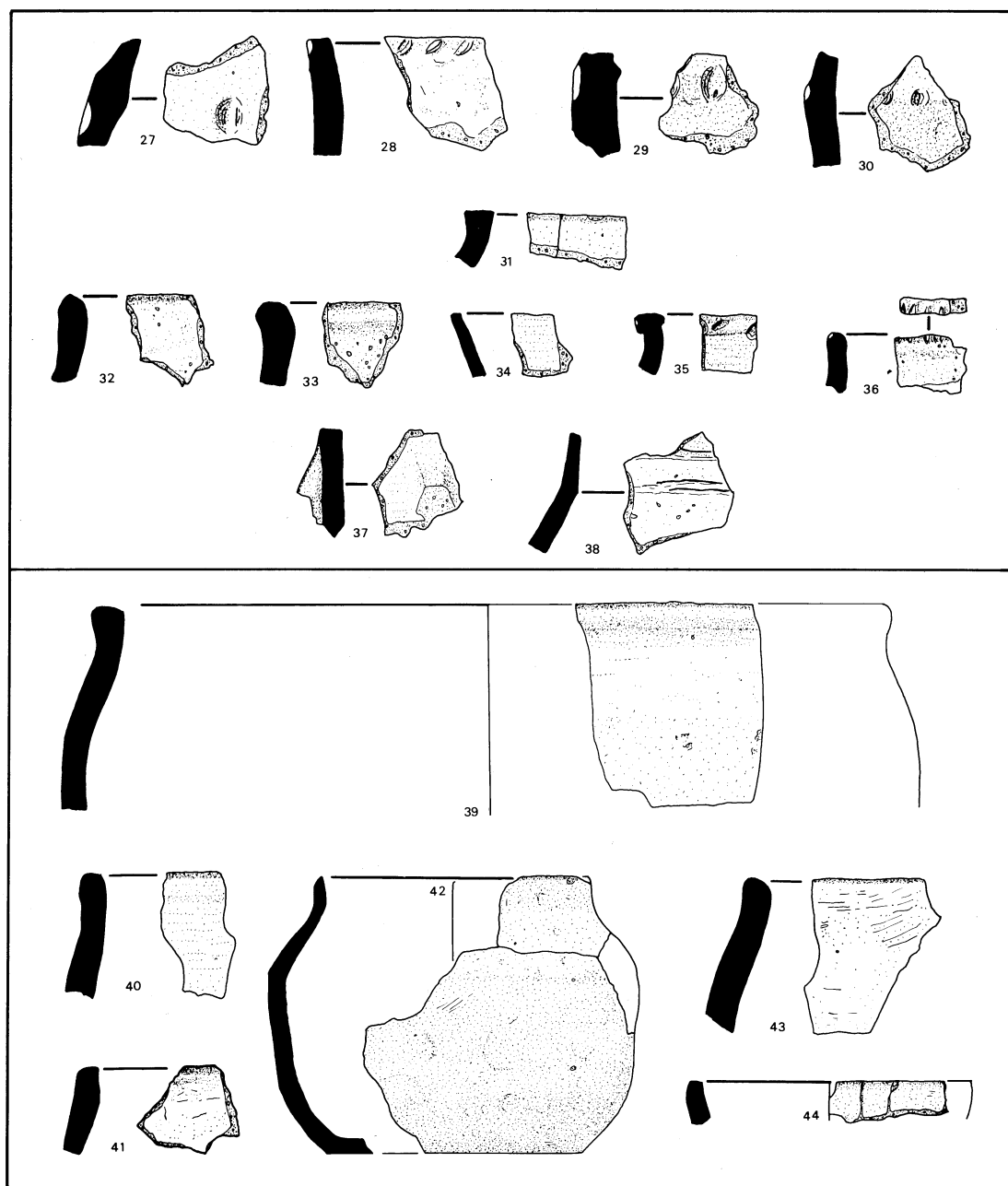
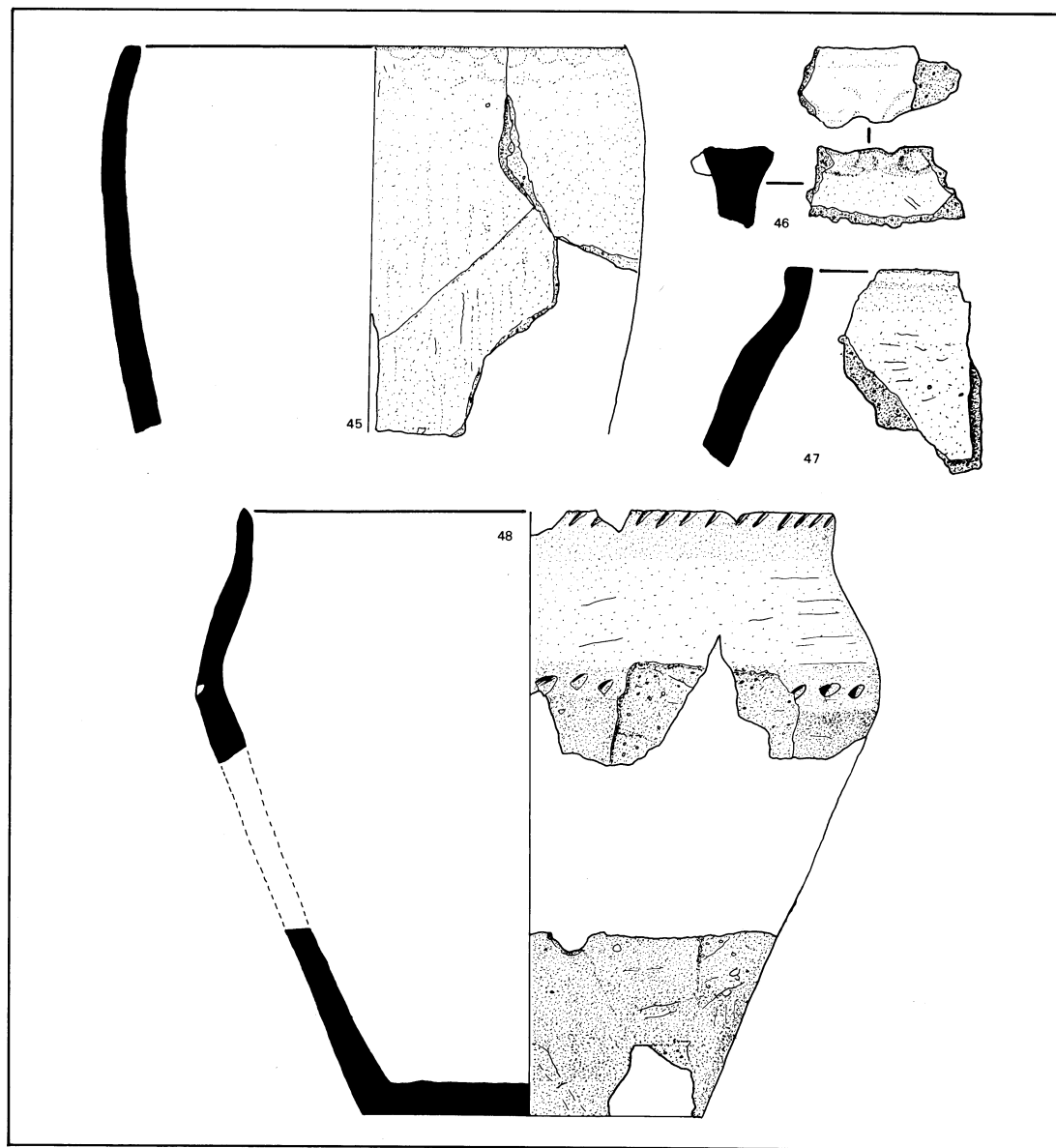
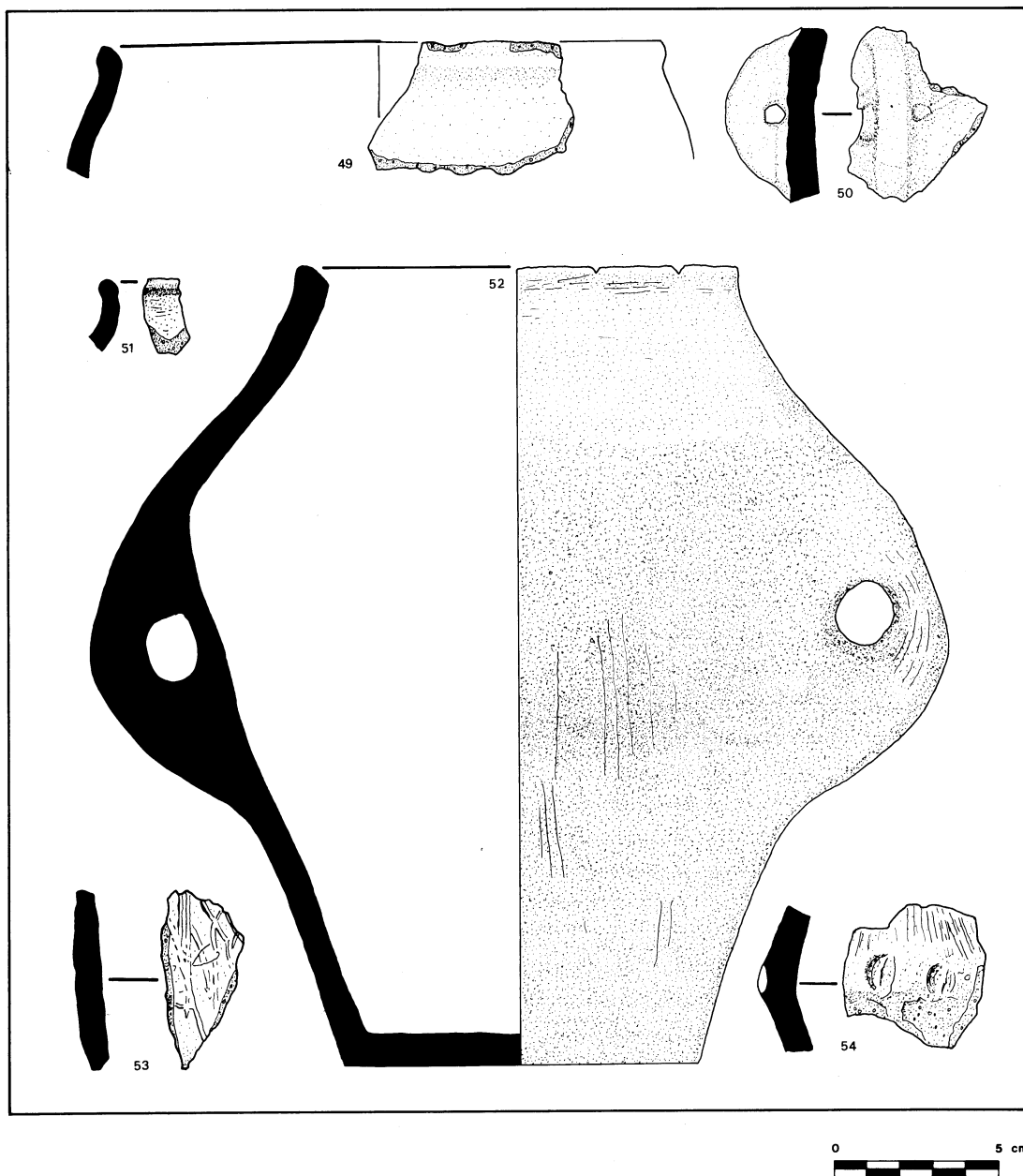


Fig. 9. Pottery (27-44)





*Fig. 10. Pottery (45-48)*



*Fig. 11. Pottery (49-54)*

POTTERY CATALOGUE

*Light Occupation Layer*

1. C, E v dark grey, I dark grey, Bk as E. F 3.
2. C, E dark grey, I v dark grey, Bk as E. F 3.
3. C, E dark grey, I as E, Bk as E. F 3.
4. C, E light brown, I v dark grey, Bk as I. F 3.
5. C, E v dark grey, I as E, Bk as E. F 2.
6. C, E light red, I grey, Bk as I. F 3.

*Dark Occupation layer*

7. C, E dark grey, I as E, Bk as E. F 4.
8. C, E pink, I as E, Bk black. F 2. D I.
9. C, E yellowish red, I as E, Bk as E. F 2. D IW.
10. C, E light brown, I black, Bk as I. F 1. D FN.
11. C, E v dark grey, I as E, Bk light grey. F 2. D I.
12. C, E v pale brown, I as E, Bk light grey. F 2. D I.
13. C, E v dark grey, I dark grey, Bk grey. F 2. D ISW
14. C, E dark grey, I v dark grey, Bk light grey. F 2.
15. C, E light grey, I dark grey, Bk light grey. F 3.
16. C, E reddish yellow, I as E, Bk light brown. F 2.
17. C, E pink, I dark grey, Bk as I. F 2.
18. C, E red, I dark grey, Bk grey. F 2.
19. C, E greyish brown, I dark grey, Bk grey. F 4.
20. C, E pink, I grey, Bk as I. F 2. D FN.
21. C, E reddish yellow, I as E, Bk pinkish grey. F 2. D IS
22. C, E greyish brown, I dark grey, Bk as E. F 2. D FN.
23. C, E light reddish brown, I dark grey, Bk strong brown. F 2. D S1.
24. C, E dark greyish brown, I strong brown, Bk grey. F 2.
25. C, E dark grey, I as E, Bk light grey. F 2. D I.
26. C, E grey, I dark grey, Bk grey. F 2. D IS.

27. C, E dark grey, I grey, Bk grey. F 4. D FT.
28. C, E v dark grey, I dark greyish brown, Bk dark grey. F 3. D S1.
29. C, E brown, I brown, Bk grey. F 4. D FT.
30. C, E light brown, I light grey, Bk dark grey. F 1. D FN.
31. C, E v dark grey, I reddish brown, Bk grey. F 2.
32. C, E brown, I grey, Bk v dark grey. F 1.
33. C, E brown, I dark brown, Bk grey. F 1.
34. C, E dark grey, I dark grey, Bk grey. F 4.
35. C, E light reddish brown, I dark grey, Bk grey. F 1. D To
36. C, E v dark grey, I as E, Bk grey. F 1. D S1.
37. C, E v dark grey, I dark grey, Bk grey. F 4.
38. C, E bright red Hae, I grey, Bk as I, F 1. D T.

*Area Excavation: Gully.*

39. C, E reddish yellow, I as E, Bk as E. F 2.
40. C, E grey, I reddish yellow, Bk as I. F 2.
41. C, E reddish grey, I weak red, Bk as I. F 2.
42. C, E v dark grey, I black, Bk as I. F 6.
43. C, E v dark grey, I strong brown, Bk grey. F 2.
44. C, E grey, I dark grey, Bk as E. F 2.
45. C, E light grey to v dark grey, I grey, Bk grey. F 2.
46. C, E light reddish brown, light grey, Bk grey. F 1. D FT.
47. C, E v dark grey, I dark grey, Bk v dark grey. F 2.
48. C, E strong brown, I grey, Bk v dark grey. F 1. D S1, To.
49. C, E reddish yellow, I as E, Bk as E. F 2.
50. C, E v dark grey, I dark grey, Bk grey. F 2.
51. C, E dark grey, I v dark grey, Bk grey. F 2.

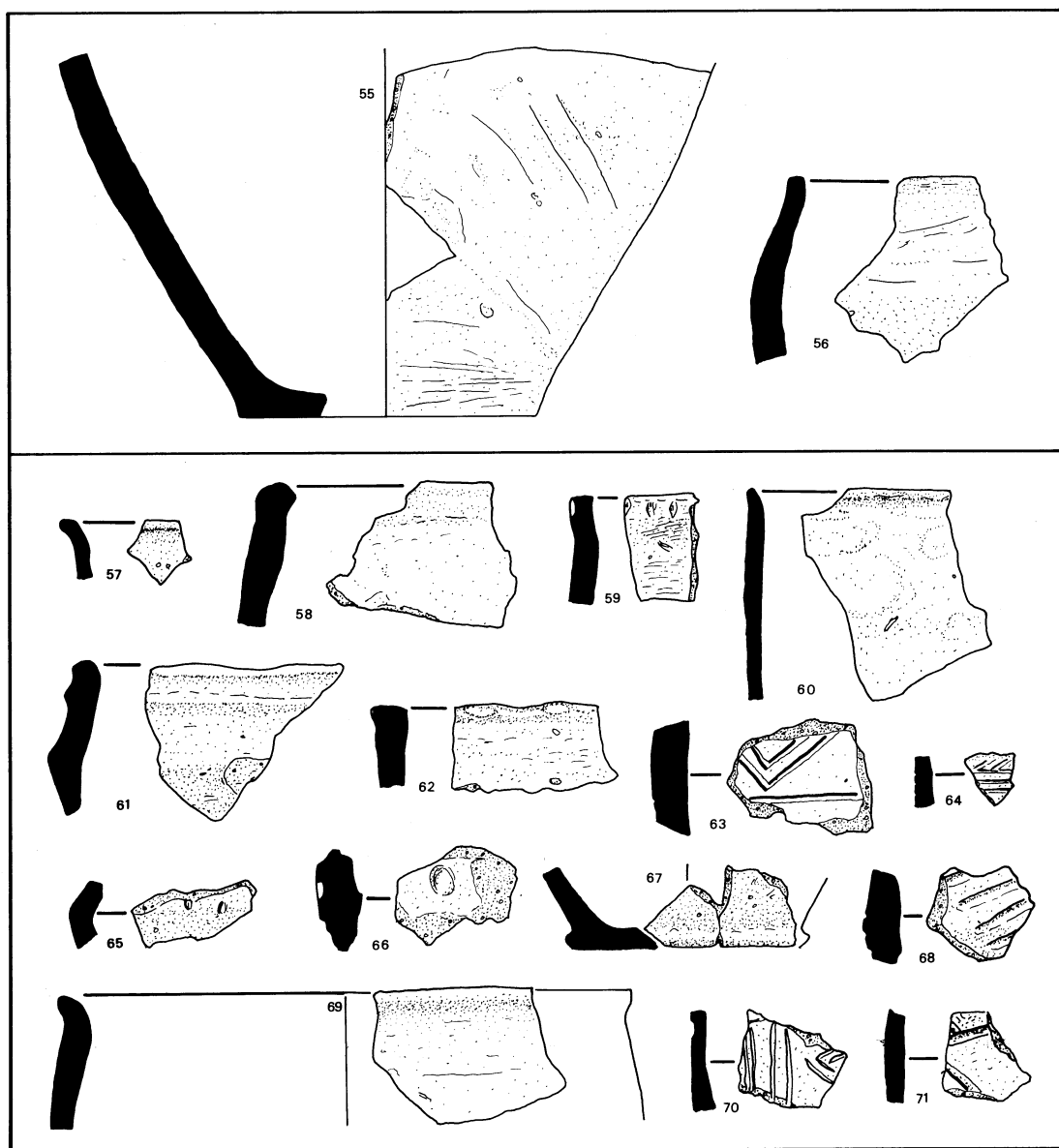


Fig. 12. Pottery (55-71)

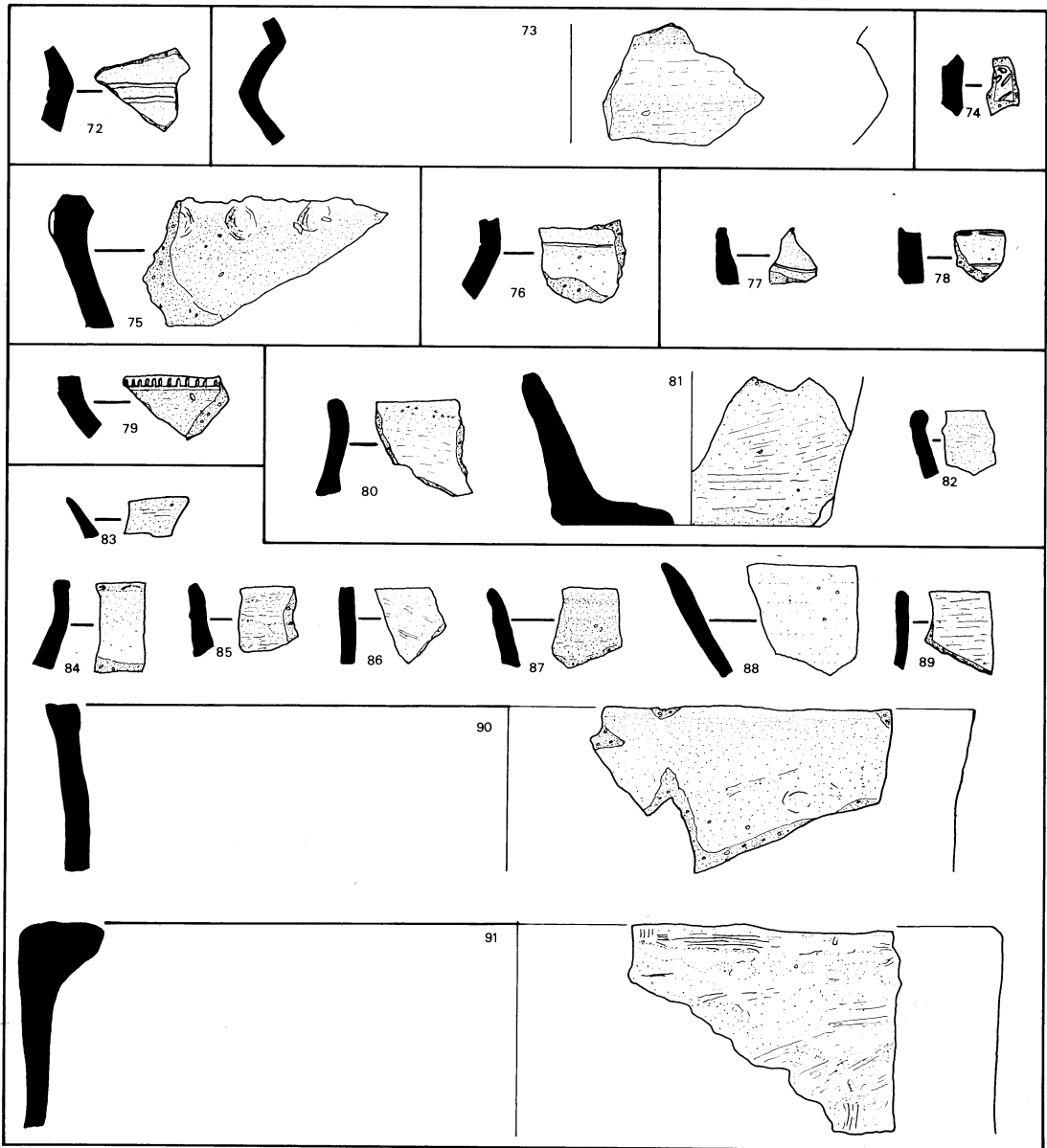
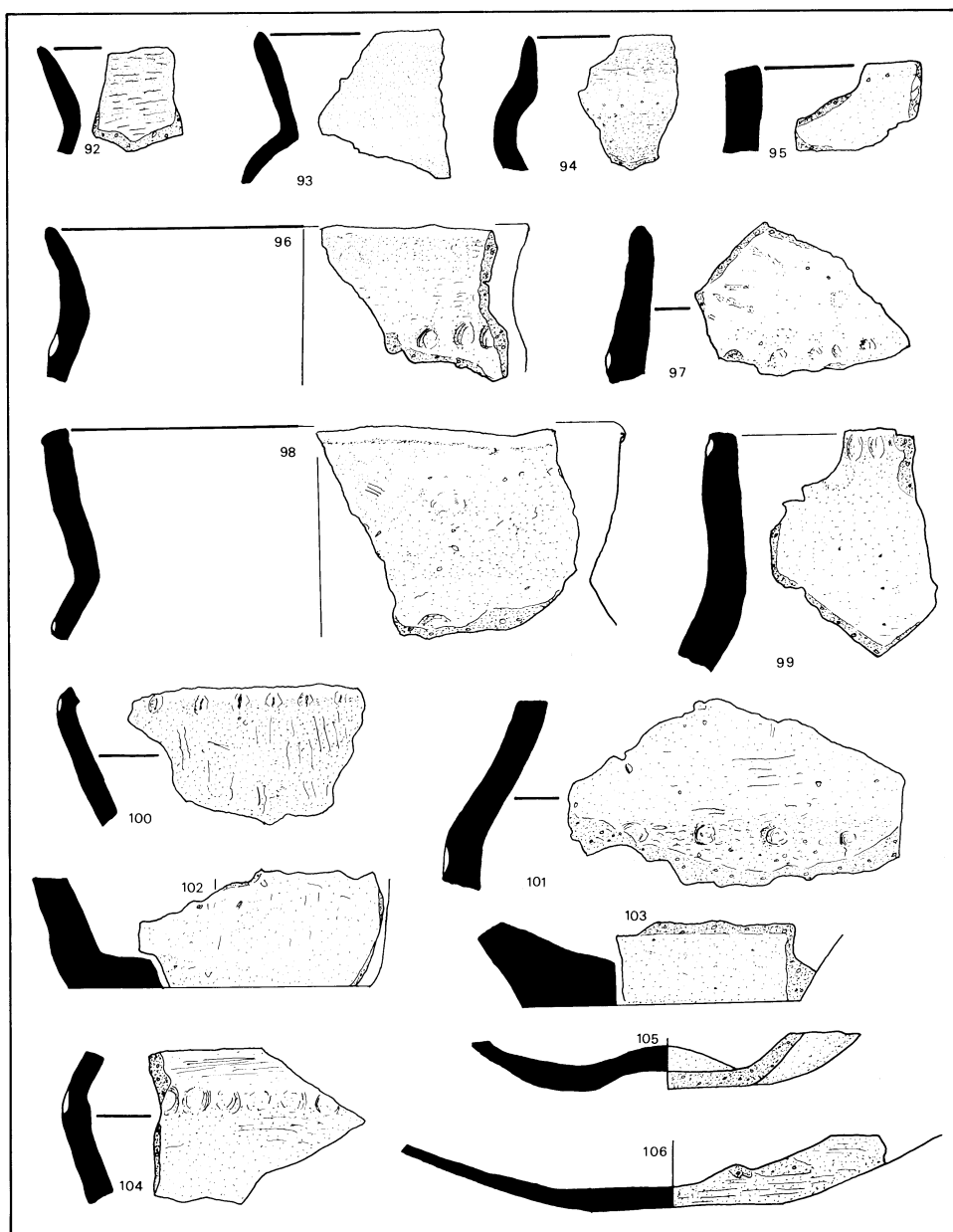


Fig. 13. Pottery (72-91)



*Fig. 14. Pottery (92-106)*

- 52. C, E red, blackened on base, I dark grey, Bk light grey. *F 2.*
- 53. C, E dark grey, I red, Bk light grey. *F 2. D If.*
- 54. C, E v dark grey, I as E, Bk as E. *F4. D F T.*
- 55. C, E strong brown, I dark grey, Bk as I. *F 2.*
- 56. C, E v dark grey, I grey, Bk light grey. *F 1.*

*Area Excavation: Top Soil.*

- 57. C, E dark grey, I as E, Bk grey. *F 2.*
- 58. C, E reddish yellow, I v dark grey, Bk as I. *F 4.*
- 59. C, E reddish brown, I v dark grey, Bk grey. *F 2. D FN.*
- 60. C, E dark grey, I as E, Bk as E. *F 2.*
- 61. C, E v dark grey to brown, I v dark grey, Bk grey. *F 2.*
- 62. C, E yellowish brown, I red, Bk grey. *F 2. D FT.*
- 63. C, E pink, I dark grey, Bk as I. *F 2. D I.*
- 64. C, E grey, I v dark grey, Bk as E. *F 2. D I.*
- 65. C, E grey, I brown, Bk as E. *F 2. D FT.*
- 66. C, E grey, I dark grey, Bk as I. *F 4. D FT.*
- 67. C, E v dark grey, I as E, Bk as E. *F 2.*
- 68. C, E red, I light red, Bk v dark grey. *F 2. D T.*
- 69. C, E brown, I as E, Bk dark brown. *F 2.*
- 70. C, E dark grey, I grey, Bk as E. *F 2. D I.*
- 71. C, E reddish yellow Bur, I dark grey, Bk light grey. *F 2. D To.*

*Feature 11*

- 72. C, E dark grey, I dark grey, Bk light grey. *F 2. D I.*

*Feature 28.*

- 73. C, E red Hae, I dark grey, Bk as I. *F 2.*

*Feature 16.*

- 74. C, E. lightish brown, I light brown, Bk dark grey. *F 2. D I.*

*Feature 13.*

- 75. C, E light brown, I as E, Bk dark grey. *F 2. D FT.*

*Feature 17.*

- 76. C, E reddish brown, I dark grey, Bk grey. *F 2. D I.*

*Feature 12.*

- 77. C, E dark grey, I light brown, Bk as E. *F 2. D I.*
- 78. C, E brown, I dark grey, Bk as I. *F 3. D I.*

*Feature 19.*

- 79. C, E dark grey Bur, I dark grey, Bk grey. *F 2. D I.*

*Feature 32.*

- 80. C, E greyish brown, I v dark grey, Bk as I. *F 2.*
- 81. C, E grey, I dark grey, Bk as I. *F 1.*
- 82. C, E grey, I v dark grey, Bk as I. *F 2.*

*Feature 31.*

- 83. C, E yellow, I as E, Bk light grey. *F 3.*
- 84. C, E light grey, I v dark grey, Bk as E. *F 2. D FN.*
- 85. C, E dark grey, I as E, Bk grey. *F 2.*
- 86. C, E grey, I as E, Bk light grey. *F 2.*
- 87. C, E yellow, I as E, Bk light grey. *F 2.*
- 88. C, E red Hae, I pinkish grey, Bk light grey. *F 2.*
- 89. C, E v dark grey, I as E, Bk light grey. *F 2.*
- 90. C, E dark grey, I grey, Bk as I. *F 4.*
- 91. C, E light red to v dark grey, I reddish yellow, Bk grey. *F 1.*
- 92. C, E yellow, I v pale brown, Bk light grey. *F 2.*
- 93. C, E v dark grey, I as E, Bk dark reddish brown. *F 2.*
- 94. C, E v dark grey, I as E, Bk as E. *F 2.*
- 95. C, E brown, I dark brown, Bk as E. *F 4.*
- 96. C, E weak red to dark grey, I v dark grey, Bk grey. *F 1. D FN.*

EXCAVATIONS BY R.A. RUTLAND AT WITTENHAM CLUMPS

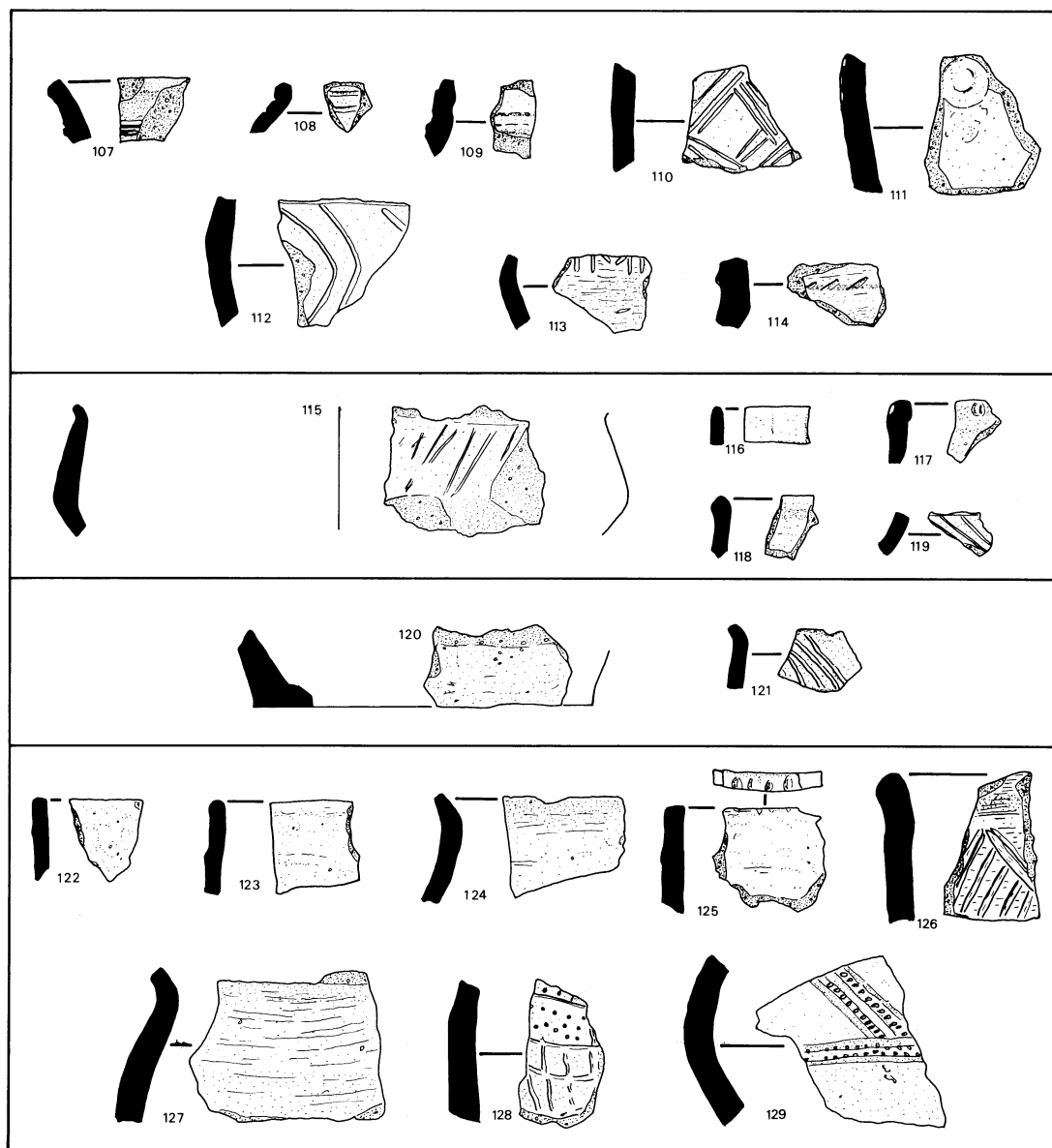


Fig. 15. Pottery (107-129)



97. C, E light yellowish brown, I grey, Bk as I. *F 4. D FT.*
98. C, E black, I dark grey, Bk light grey. *F 2. D FT.*
99. C, E v dark grey, I dark grey, Bk grey. *F 4. D FT.*
100. C, E grey, I black, Bk as I. *F 2. D FT.*
101. C, E light brown, I black, Bk grey. *F 4. D FT.*
102. C, E reddish yellow, I v dark grey, Bk as I. *F 2.*
103. C, E dark grey, I grey, Bk as I. *F 2.*
104. C, E light grey, I as E, Bk as E. *F 2. D FT.*
105. C, E grey, I as E, Bk as E. *F 2.*
106. C, E light red Hae, I v dark grey, Bk as I. *F 2.*
107. C, E black, I as E, Bk as E. *F 2. D R.*
108. C, E v dark grey, I dark grey, Bk light grey. *F 2. D I.*
109. C, E grey, I dark grey, Bk as I. *F 1. D I.*
110. C, E grey, I dark grey, Bk as I. *F 2. D I.*
111. C, E dark grey, I as E, Bk light grey. *F 2. D IC.*
112. C, E dark grey, I brown, Bk light grey. *F 2. D I.*
113. C, E black, I v dark grey, Bk grey. *F 1. D IW.*
114. C, E v dark grey, I grey, Bk grey. *F 3. DIR.*

*Feature 33.*

115. C, E v dark grey Bur, I grey, Bk grey. *F 2. D T.*
116. C, E grey, I as E, Bk v dark grey. *F 2.*
117. C, E red, I as E, Bk grey. *F 2. D FT.*
118. C, E red Hae, I dark brown, Bk light grey. *F 2.*
119. C, E v dark grey, I grey, Bk grey. *F 2. D I.*

*Unstratified*

120. C, E light brown, I v dark grey, Bk dark grey. *F 3.*
121. C, E reddish yellow, I light grey, Bk as I. *F 2. D I.*

*Sherds from the Hill Fort.*

122. C, E dark grey, I grey, Bk as I. *F 3.*
123. C, E brown, I as E, Bk dark grey. *F 3.*
124. C, E grey, I dark grey, Bk as E. *F 2.*
125. C, E light grey, I orange, Bk light grey. *F 3. D FN.*
126. C, E grey, I grey, Bk as E. *F 3. D T.*
127. C, E dark grey, I light grey, Bk dark grey. *F 2.*
128. C, E v dark grey, I grey, Bk as I. *F 2. D If.*
129. C, E brown, I light brown, I as E. *F 2. D TS.*

*Sherds from the Light Occupation Layer*

Several of the vessels represented have outcurving rims (1, 2 and 5). 1 has a roughly S shaped profile with a close parallel at the Bronze Age site near Bray (see above). 5 has a near parallel at the Bronze Age riverside site at Wallingford. 1, 2 and 5, as well as vessels from the other Upper Thames sites mentioned above could all be from vessels of the type illustrated on Figure 16 of the Ivinghoe Beacon report.

*Sherds from the Dark Occupation Layer*

Various Late Bronze Age and Early Iron Age forms occurred in the Dark occupation layer. Sherd 30 is from a weak shouldered vessel with parallels at the Late Bronze Age sites of Wallingford, Chastleton and Rams Hill. Three further sherds showing finger tip decoration (20, 27 and 29) have better defined shoulders which suggest an Early Iron Age date; parallels for these are from Allen's Pit, Wigbald's Farm and Radley (see Harding, 1972). The only sherd with a heavily expanded rim (characteristic of an early Iron Age date) was 35 which is slightly unusual in being in fine ware as contrasted to Harding's coarse ware examples (1972, Plates 44-5).

Other fine ware vessels from the light occupation layer include a furrowed bowl (38) which should be relatively early, and possible angular bowls with incised decoration (8, 9, 12, 13, 21, 25, 26, and 38). Sherds 21 and 26 have horizontal incised lines com-

bined with dot filled triangles; these are best although not very closely paralleled at Chinor (Harding, 1972, Plate 56). 13 is probably the almost upright rim of an angular bowl, its decorative motif appears to be unparalleled in the Upper Thames Valley.

19 and 24 appear to be round bodied bowls, these occur throughout the Early Iron Age (Harding, 1972, 78-9).

The dark occupation layer would thus appear to be of early Iron Age date, although late Bronze Age pottery may also have occurred in the deposit. The discovery of a ring headed pin in the occupation deposit (see p 48) confirms the early Iron Age dating of this deposit.

#### *The Gully*

Material from the gully appears quite mixed in chronological terms. 48 could be Late Bronze Age or Early Iron Age; its slight shoulder is more marked than examples from Chastleton (Harding, 1972, Plate 43), but no more marked than supposed late Bronze Age pottery from Kirtlington (op. cit., Plate 48) or Ivinghoe Beacon (Cotton and Frere, 1970, Figure 20, no 108). 52 also appears to be an early form and is similar to a vessel from an early context at Appleford. 46 is an expanded rim with close parallels at Mount Farm (Harding, 1972, Plate 44b); 45 and 54 are probably of early Iron Age date. 42 is unparalleled in form in the Upper Thames valley, but its slight shoulder and up-right rim are similar to coarse ware angular jars illustrated by Harding (op. cit., Plate 53 D and E).

Therefore material from the gully appears to be fairly mixed with late Bronze Age and early Iron Age types present. One wonders whether the gully was backfilled with a deposit such as the occupation layer as that might explain the mixture of forms in this context.

#### *The Topsoil over the Gully Area*

This unstratified material also appears to represent a mixture. Much appears to be

early Iron Age. 61 has close parallels in late Bronze/early Iron Age contexts in Wiltshire (Cunliffe, 1978, Figure A:2, no 13 and 14). By contrast 69 could be middle Iron Age in date.

#### *Features 11, 17, 19 and 28*

Four postholes produced fragments of early Iron Age angular bowls.

#### *Feature 31*

This pit produced sherds from several coarse ware angular vessels with finger tip decoration (96-104). The pit also produced a heavily internally expanded rim (91) and fine wares including several angular vessels (83, 87, 88, 92, 93, 105, 106). This material is consistent with an early Iron Age date for the pit.

#### *Feature 32*

This pit produced little that is distinctive in terms of forms.

#### *Feature 33*

This pit produced a finely burnished angular bowl (115) and a rim with a finger tip impression on its outer edge (117). These sherds are consistent with an early Iron Age date for this pit.

#### *A Discussion of Decoration on the Pottery*

Many of the fine ware sherds from the site have decorative motifs formed from incised lines. In all but three cases these lines were incised prior to the firing of the vessel. Four sherds show traces of white paste infill in these incised lines. Two sherds from the site have tooled lines.

Four sherds have stab decoration; in all but one case this stabbing is associated with linear incised lines. Only two sherds have moulded decoration. 107 has a couple of impressed or incised lines on either side of a raised band of clay, 114 has a raised cordon with finger nail impressions on its base.

Quite a number of vessels have finger nail or finger tip decoration on shoulders and/or

rims. A few sherds have slash marks on the outsides of rims, while decoration on two vessels appears to have been produced by a bone tool rather than a finger.

Sherds with haematite coats form 1.2% of the total number of sherds (0.6% by weight). In no context does the proportion of haematite coated sherds rise above 2.5% of the assemblage; thus nowhere does the total approach the 9% recorded by Rhodes for his area of the site (1948).

#### *A Discussion of the Form and Fabric Data*

The light occupation layer produced the earliest stratified pottery from the site; form and fabric analysis indicated that this deposit is Late Bronze Age in date. In addition some unstratified sherds, and one or two sherds from stratified contexts which are probably residual, hint at domestic occupation of which all traces have been lost over the east of the area excavated by Rutland.

The dark occupation layer produced a few sherds of possible late Bronze Age date although these may have been residual; this layer is clearly in the main an early Iron Age deposit. There is no evidence for the continued build up of this layer after the early Iron Age.

The gully produced a mixture of fabrics and forms. Some of the material from the gully may be contemporary with the light occupation layer, but the gully appears to contain material from the whole of the period of occupation on this site, and some of the pottery is presumably residual in this context.

Post holes and pits which produced finds are of early Iron Age date. The proportions of fabrics from the three pits (Features 31, 32 and 33) are generally fairly similar to the proportions from the gully and these features may be roughly contemporary.

#### *A Comparison of the Pottery from the 1948 and 1978 Excavations*

Rhodes published 3.3% of the pottery from his excavation; most of the rest of his pottery appears to have been thrown away.

This is a great pity as Rhodes excavated a larger area of the occupation layer and was able to recover more stratigraphy within the occupation layer on his area of the site than did Rutland. The material which was published by Rhodes was far from a random sample of the total. Five of the 31 sherds illustrated have expanded rims with finger tipping on their external surfaces; this represents 27% of the total of sherds illustrated by Rhodes. Rhodes' statistical table (1948) makes it clear that such rims formed only just over 1% of the total assemblage. The other sherds that Rhodes published are mostly angular and round bodied fine ware vessels. Despite some clear differences in vessel type and vessel decoration, Rhodes' area and much of Rutland's area of the site fall within an early Iron Age date bracket.

It is also now clear that occupation did not continue down to the Roman conquest on this site, as Rhodes supposed (1948, 20). None of the sherds illustrated by Rhodes are middle, let alone late Iron Age and no evidence of middle or late Iron Age occupation was found on Rutland's site either.

#### *A Comparison of the Pottery from the Hill Fort and the External Settlement.*

About thirty sherds of probable prehistoric date are in the Reading Museum store; these sherds apparently come from the interior of the hill fort. In addition some probable Iron Age sherds from the hill fort are in the Ashmolean and the author has collected sherds on the rampart of the hill fort. Eight of these sherds seem worthy of illustration (see Figure 15).

124 is of hard fabric and resembles sherds from the base of the occupation layer in form. 122, 123 and 125 are of Fabric 3 and may thus be of late Bronze Age date. 128 has decoration which is vaguely similar to that on sherds from the external settlement. These sherds and 127 could suggest occupation of the hill fort at a time when the external settlement was also in existence. 126 and

129 are probably of middle Iron Age date; 129 is a decorated sherd from a globular bowl and has a close parallel at Blewburton (Harding, 1972, Plate 68, H).

In addition to the sherds examined by the writer, EM Jope wrote a note on sherds from the south western side of the hill fort rampart (1949). These sherds included finger pressed rims and burnished wares, including part of a sharply carinated bowl in highly burnished ware. Jope's pottery may add weight to the suggestion that the hill fort and external settlement are in part contemporary with one another (although unstratified sherds cannot be used with any confidence to date hill fort rampart construction).

#### *B) Other Finds (R Hingley)*

*Metal.* A ring headed pin (Figure 16, 1) with the lower part of the pin broken off. Parallels for this exact type come from Swallowcliffe Down (Clay, 1925, Plate XI, C2) and Park Brow (Wolseley et al, 1927, 12 and Figure K). In the Upper Thames Valley such pins appear to be early Iron Age in date (Harding, 1972, 90-1). The pin came from the top of the dark occupation layer (Layer 3) in Trench J.

A small Iron blade (Figure 16, 2) with its wider end perhaps once set in a haft. This blade came from the dark occupation layer (Layer 3) in Trench J.

*Chalk.* A semi-perforated chalk block (Figure 16, 3) with close parallels at All Cannings Cross (Cunnington, 1923, 28, 139, Plates 23-4) and Maiden Castle (Wheeler, 1943, Plate XXXIII, 3). This chalk item came from Feature 33.

*Worked Bone.* A bone point produced from a sheep/goat tibia (Figure 16, 6). This bone point came from Feature 32.

A perforated sheep/goat tibia (Figure 16, 4). This find came from the dark occupation layer (Layer 3) in Trench K.

A broken sheep metacarpal, grooved on either side (Figure 16, 5). This find came from Feature 29.

*Daub.* Daub was of the usual crumbly

orange variety; some pieces show wattle marks. Inclusions are far less common than in the pottery, but most of the same constituents were recorded. Daub was recovered from the following contexts.

Trench H, Layer 3. 1 piece (5 gm).

Trench J, Layer 3. 5 pieces (24 gm).

Trench L, Layer 2. 24 pieces (135 gm).

Trench L, Feature 6. 40 pieces (591 gm).

Trench Q, 1 piece (5 gm).

Trench E, Feature 12. 1 piece (3 gm).

Area Excavation, top soil. 6 pieces (140 gm).

Area Excavation, Feature 20. 3 pieces (720 gm).

Area Excavation, Feature 21. 2 pieces (23 gm).

For discussion of the daub see p 32.

*Slag.* Pieces of glassy and metallic slag came from a number of contexts on this excavation. Some slag was found in the occupation layer. In addition slag was found in the gully and in the top soil over the area excavation. A fragment of crucible with a glassy slag deposit came from Trench L. A fuller report on the slag is available in the site notes.

*Flint.* 38 struck flakes were found during the excavation; some of these flakes are very dubious. No finished implements were found. None of the flakes came from the late Bronze Age levels of the occupation layer; and all flints from contexts are likely to represent rubbish survival.

#### *Post Iron Age finds from the Layer (Layer 2) Sealing Dark Occupation Layer (Layer 3).*

Layer 2 (the lighter soil) which sealed Layer 3 (the dark occupation layer) in Trenches G,H,J and K produced the following finds.

9 tile fragments.

1 iron chain link.

2 nails.

1 modern brick.

1 piece of glass.

11 sherds, 6 of which are post Iron Age.

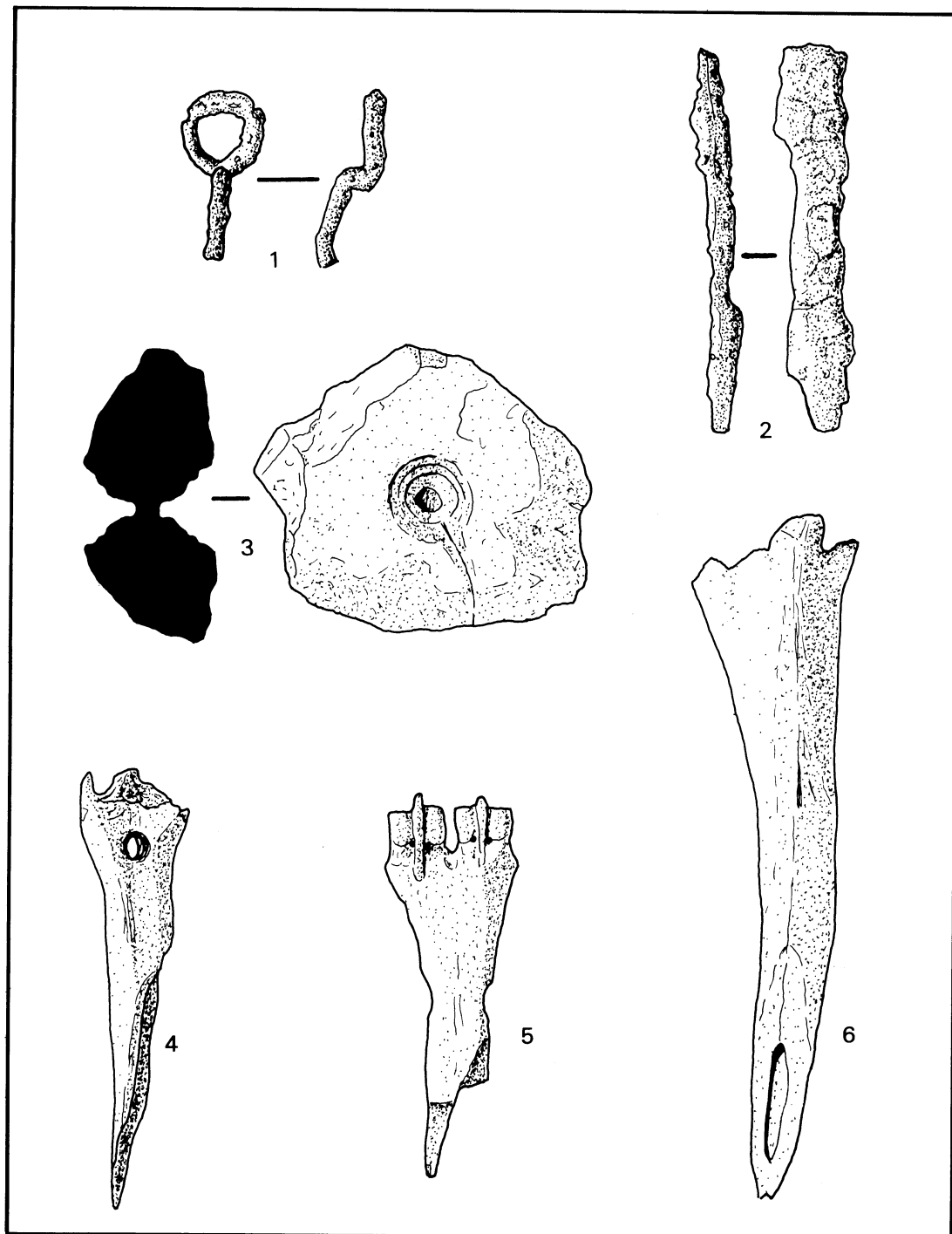


Fig. 16. Other Finds.

## EXCAVATIONS BY R.A. RUTLAND AT WITTENHAM CLUMPS

This material enables the dating of the build up of the lynchet represented by Layer 2 (for discussion see p 25).

### 3) ANIMAL BONES

(H H Carter)

As a preface to this report it must be remarked that it is unlikely that the limited excavation work at Wittenham Clumps has produced a fully representative sample of all bone from the entire site. It must also be recorded that 302 out of 1113 fragments of bone from the site (or almost 33% of the total assemblage) were recovered from unstratified contexts, mainly the top soil (R Hingley).

A more detailed report on the animal bones from Wittenham Clumps is available in the site notes.

As may be expected from an accumulation of food refuse the bone from this site is extensively shattered. Over one third of the material recovered has been reduced to unrecognisable fragments; as is clear from Table 3, "The Body Parts Analysis", an even larger proportion, certainly the majority of bone originally deposited in those contexts that were excavated, was not recovered at all.

From the teeth it has been possible to calculate a minimum number of individuals (MNI) for each species, but under these conditions the MNI has no absolute significance and serves only as a guide to the relative abundance of the different species and to the extent to which the more susceptible bones have been eliminated.

*The Body Part Analysis* (see Tables 3 and 4).

The body part analysis revealed a considerable deficit of the parts of the skeleton from which the best meat is to be obtained. This becomes even more marked if unidentifiable fragments (mostly long bones which are considered under "edible") are taken into consideration. The scarcity of long bones of the pig seems to be a common characteristic of this animal, as is that of cattle

maxillae which are so less durable than the dense thick-walled mandibles of the same species. The presence of many of the more durable "inedible" parts is sufficient to indicate that whole carcasses were butchered on the site.

### *Sex Ratios.*

	Male	Female
cattle	6	8 + ?4
sheep	?2	1 + ?2
goat	—	1
pig	3	7
horse	1	—

The sexual dimorphism in cattle is such that fragments can be sexed, with some confidence, on size alone, at least in extreme cases. In pigs the form of the canines is distinctive. In these two species the proportion of males to females is usually high.

### *Notes on the Morphology of the Species.*

*Cattle.* Few measurable bones of cattle were recovered, but those that were recovered were informative enough to show that both males and females were towards the lower end of the size range for Iron Age cattle of their respective sexes. No evidence for or against the practice of castration could be found. The almost total absence of horn cores is probably attributable to preferential decay of these very porous bones, and need not be taken as evidence of a polled breed or of industrial horn working on some un-explored part of the site.

*Sheep and Goats.* As in the case of cattle no horn cores of either species were recovered, nor were there any skull fragments which could be definitely assigned to hornless individuals of either species. At Blewburton, of 733 sheep/goat fragments only 9 were horn cores (Carter, Unpublished), so their absence at Wittenham Clumps is

# R. HINGLEY

## BODY PART ANALYSIS

TABLE 3

	unidentified	ungual phalanx	inter. phalanx	prox. phalanx	metatarsal	sesamoid	naviculo-cuboid	astragalus	calcaneum	fibula	tibia	patella	femur	pelvis	metacarpal	unciform	lunate	scaphoid	ulna	radius	humerus	scapula	rib	vertebra	teeth	mandible	maxilla	skull
Cattle	106	1	1	7	8	1	2	1	1		7	3	7	4	7	2	3	1	4	6	9	4	8	39	79	18	1	5
Sheep/Goat	233	3	4	4	8		1	7	5		32		13	9	18			1	5	18	11	10	13*	23	135	14	12	5
Pig	74	1		3	1			2	3	1	1			3	2		1		1	1	3	4*	7	61	14	12	3	

TABLE 4

	Cranial		Edible		Vertebrae		Ribs		Podial		Edible + proportion of unidentified	
Cattle	103	20%	83	33%	28	8%	10	2%	41	7%	189	75%
Sheep/Goat	166	16%	115	23%	23	3%	13*	2%	55	5%	348*	78%
Pig	90	20%	10	3%	5	2%	4*	2%	14	2%	84	52%

\* Ribs and unidentifiable bone fragments of less than Cattle size are arbitrarily divided in proportion to the M.N.I. of sheep, goats and pigs.

In Table 4 bone fragments are subdivided as follows:

Cranial — skulls including horn cores, mandibles and teeth

Edible — scapulae, pelvis and long bones, excluding metapodials but including patellae

Vertebrae — excluding sacrum which is reckoned as part of the pelvis

Ribs — sternebrae and costal cartilages included

Podial — carpals, metacarpals, tarsals, metatarsals, sesamoids (excluding patella) and phalanges

In each category the actual number of fragments is also expressed as a percentage of the number of bones which would be present if complete skeletons of the M.N.I. were recovered. Certain very small or friable bones are omitted from the calculation because of the infrequency with which they are preserved.

in no way surprising. No data for estimating the body weights of sheep or goats are available, but the measurements of long bones lies within the range of Iron Age material from Blewburton and All Cannings Cross. The material that could be measured was too scanty to say much more than this, but although the smallest items coincide with the bottom of the range from the other sites, the largest do not reach the top of the range.

The ratio of positively identified goat to sheep at 7 to 21 is higher than at Blewburton, but not significantly so.

*Red Deer.* This species was identified solely from teeth. No antler fragments were found.

*Pig.* No measurable long bones were recovered, and nothing of note can be said about the remains of this species; none of the pigs can be positively identified as wild.

*Horse.* The only measurable bone is a fore proximal phalanx from a small but robust animal. All the remains that can be aged are those of mature or elderly horses, from 4½ to about 20 years.

*Dog.* A first lower molar of length 21 mm corresponds to an overall skull length of about 170 mm. A fragment of pelvis corresponds in length with a complete pelvic bone from an Irish collie of skull length 195 mm, but is far more robust. Both dogs fall within the range of size of dogs at All Cannings Cross.

*Human.* Three fragments from the heads of three individuals and a tooth were found during excavation. These fit into the picture of the general scatter of odd human remains often found on Iron Age sites in southern England.

#### 4) SUMMARY

(R Hingley).

The major points of interest concerning the site at Wittenham Clumps include the sites relationship to a hill fort; and the survival of an occupation layer which contains a stratified sequence from the late Bronze Age to the early Iron Age.

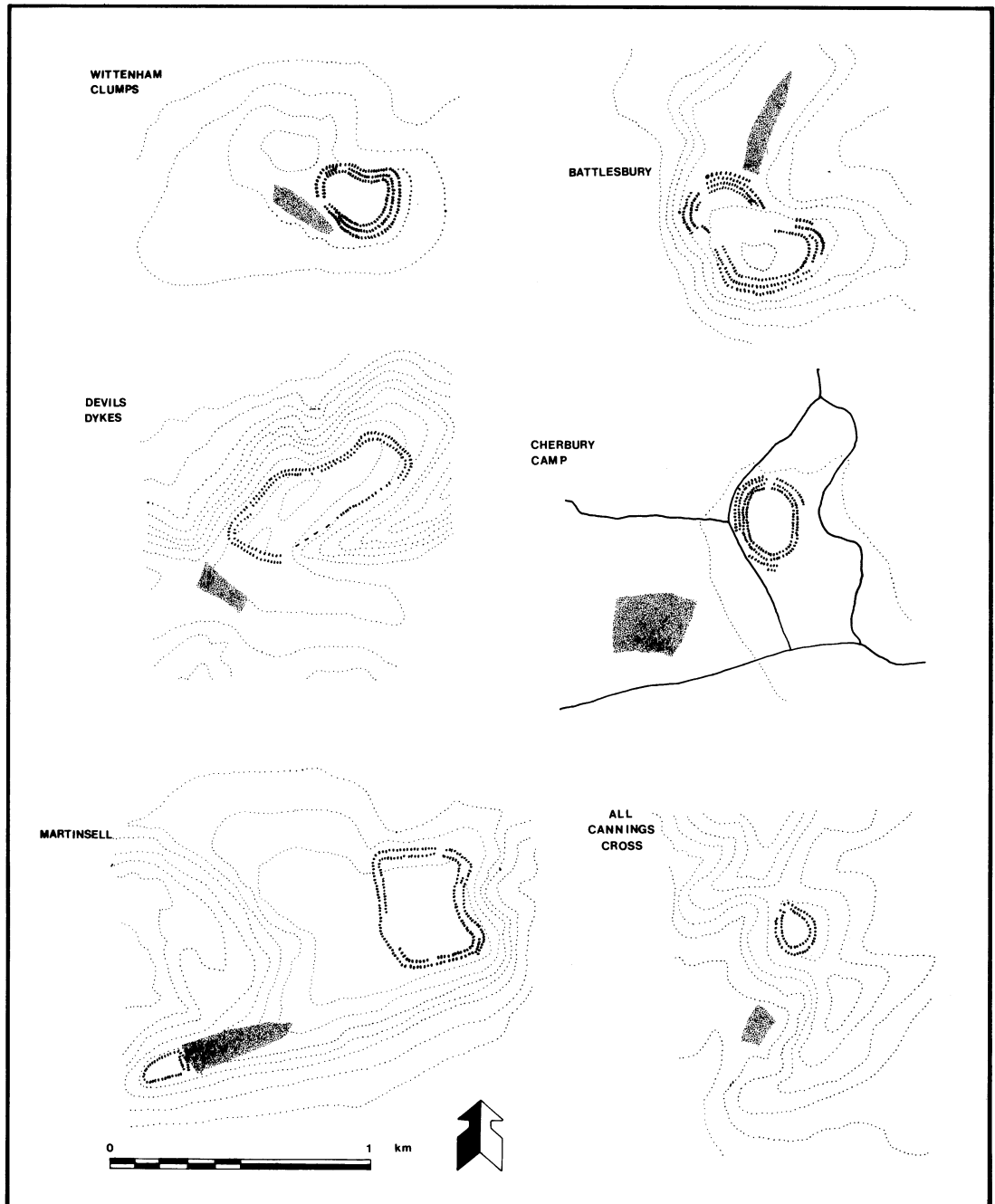
#### *The Occupation Layer.*

Clearly much of the occupation layer survives and it is important that the occupation layer is preserved from further damage. The layer has clearly been lost on the east of the site, over the area examined by Rutland in Trenches A,C,D, E and F and the Area Excavation. That Rhodes located an occupation layer on his rectangular hut site could suggest that the deposit covers an area of up to 1 ha on the west of the site. If the deposit is this extensive it represents a rare and valuable archaeological resource of which about 0.2% has been excavated. The artefactual and structural productivity of sites with extensive occupation deposits (Glastonbury, All Cannings Cross) should alert archaeologists to the value of such deposits.

That the deposit at Wittenham Clumps appears to contain a stratified sequence of late Bronze Age to early Iron Age occupation is important for two reasons. Firstly late Bronze Age sites are rare in the Upper Thames Valley and secondly the site is the first to have produced stratigraphic evidence to support the framework being developed for ceramic form and fabric type variation between the later Bronze Age and early Iron Age in the Upper Thames Valley.

Many problems remain to be examined on this site; is the apparent abandonment of the site towards the end of the early Iron Age genuine? Only a very few sherds of possible middle Iron Age date were found during excavation, and none of the features excavated can be dated to the middle Iron Age. However taking into consideration the possible evidence for ploughing in the top of the occupation layer (p 30) and the fact that the layer had been completely lost on the east of the site, it seems quite possible that middle Iron Age occupation consisting of shallow features excavated into the top of a thick layer of domestic refuse could have been totally removed by later ploughing. Evidently this point concerning "disappearing sites" is relevant to the examination of other





*Fig. 17. Hill Forts in Southern Britain with External Occupation (Stippled areas represent external occupation; contours are at 50 m intervals).*

heavily ploughed settlement sites of any date.

*The Relationship of the Hill Fort and Settlement.*

The position of the settlement outside and on the lee side of a hill fort of possible contemporary date is worthy of consideration. Pottery from Rhodes' and Rutland's sites would seem to indicate broad contemporaneity and this probably indicates that the excavated areas are part of one large site on the southern slope below the hill fort. The settlement probably covered at least 200 m from north west to south east. Rutland's trenches were relatively randomly located (p 32); Rhodes' trench was based on the density of Roman finds on the surface, the discovery of dense occupation evidence by both excavators may suggest that the site was fairly intensively occupied.

The edges of the settlement cannot be defined as only one trench failed to produce any features (and with a 1.5 m<sup>2</sup> trench such a failure may be due to chance). It seems quite possible that occupation was continuous between Rhodes' and Rutland's sites and it is also possible that the edges of the site have not been located at all.

A review of unstratified pottery from the hill fort indicates that the hill fort and settlement may be, at least in part, contemporary with one another (p 47). The hill fort may thus have been the citadel and acropolis of an extensive undefended settlement. If so the hill fort may or may not have contained settlement of a permanent nature. Alternatively external occupation may indicate spill over of occupation as the area enclosed by the hill fort defences became inadequate for the population centred on the hill fort. The early date indicated for primary occupation of the external settlement may seem to make this possibility unlikely, but without more knowledge of the chronology of the hill fort we cannot be certain.

Whatever the truth of the relationship between hill fort and external settlement

several parallels to the Wittenham Clumps situation are known. Hill forts with external settlements occur on the continent; the Heuneburg on the Danube with a probable external settlement at Talhau 400 m north west (cf Harke, 1979, 96) is of Halstatt date, while the Magdalenenberg (St Veit, Austria) has an extensive external settlement of La Tene date (Collis, 1975, 80-3).

In addition five possible cases of the occurrence of external occupation in relation to a hill fort are known to me in southern Britain (Figure 17). These are as follows:

All Cannings Cross (Cunnington, 1923).

Battlesbury Camp (Chadwick and Thompson, 1956).

Cherbury Camp (Hingley, work in progress).

Devils Dykes (Burstow, 1936).

Martinsell (Meyrick, 1945; Wilts Archaeological Register, 1973).

That six cases of hill forts associated with external settlements have been recovered without a unified research strategy (excavations are seldom designed to examine the area directly outside and on the hill slope below the hill fort) could suggest that such associations are fairly common. This may indicate that some hill forts were the centres of settlements of a great size, and this point is clearly of relevance to any discussion of the position of hill forts in settlement hierarchies.

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