EXCAVATIONS AT HAM HILL, MONTACUTE, SOMERSET 1994 and 1998

BY JACQUELINE I. MCKINLEY

with contributions by
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INTRODUCTION AND ARCHAEOLOGICAL BACKGROUND

Hamdon Hill (ST 484 164), more popularly known as Ham Hill, is the site of one of the largest Iron Age hillforts in Britain, with 85.2 hectares enclosed within its defences. The hillfort is sited on a prominent outcrop of Upper Liassic Ham Hill Stone and Yeovil Sands at around 120 m OD and commands extensive views to the north and west across the Somerset Levels.

The hillfort, which is a Scheduled Monument (Somerset No. 100), covers a roughly rectangular area with a 'fan-tail' spur projecting from the north-west corner. The defences around the projecting spur comprise two major banks and ditches fronted by a counterscarp bank. The defences of the remaining sections of the monument are less complex, comprising a bank, ditch and counterscarp bank.

Most of the interior of the projecting spur, as well as the western portion of the monument, have been removed by quarrying for Ham Hill Stone from at least the Roman period onwards, and the Ham Hill Stone Quarry continues to extract stone in the south-west of the monument (Fig. 1). This quarrying activity, particularly during the 19th century, has resulted in many archaeological discoveries of material from Neolithic to medieval date. The discoveries are summarised by St. George Gray (1924), Seaby (1950) and more recently by Burrow (1981), and most of the material is now held by the County Museum, Taunton.

The earliest phase of systematic archaeological excavation at Ham Hill was undertaken by St. George Gray between 1923 and 1930, on and outside the defences of the projecting spur (Gray 1924; 1925; 1926), although some limited excavation was undertaken earlier by Walter (1907) in the east of the hillfort and on the projecting spur. The results of these excavations remain unpublished, although summary accounts of some discoveries and selected artefacts were reported on and references are summarised by Gray (1924) and Burrow (1981). The later prehistoric pottery from these collections was the subject of a recent study (Morris 1987). More recent work on Ham Hill has comprised a watching brief on the projecting spur in 1975 (Ellison and Pearson 1977).

In the south-west of the interior of the hillfort there have been two previous episodes of investigation (Fig. 2). Excavations in 1983 were undertaken by the Central Excavation Unit

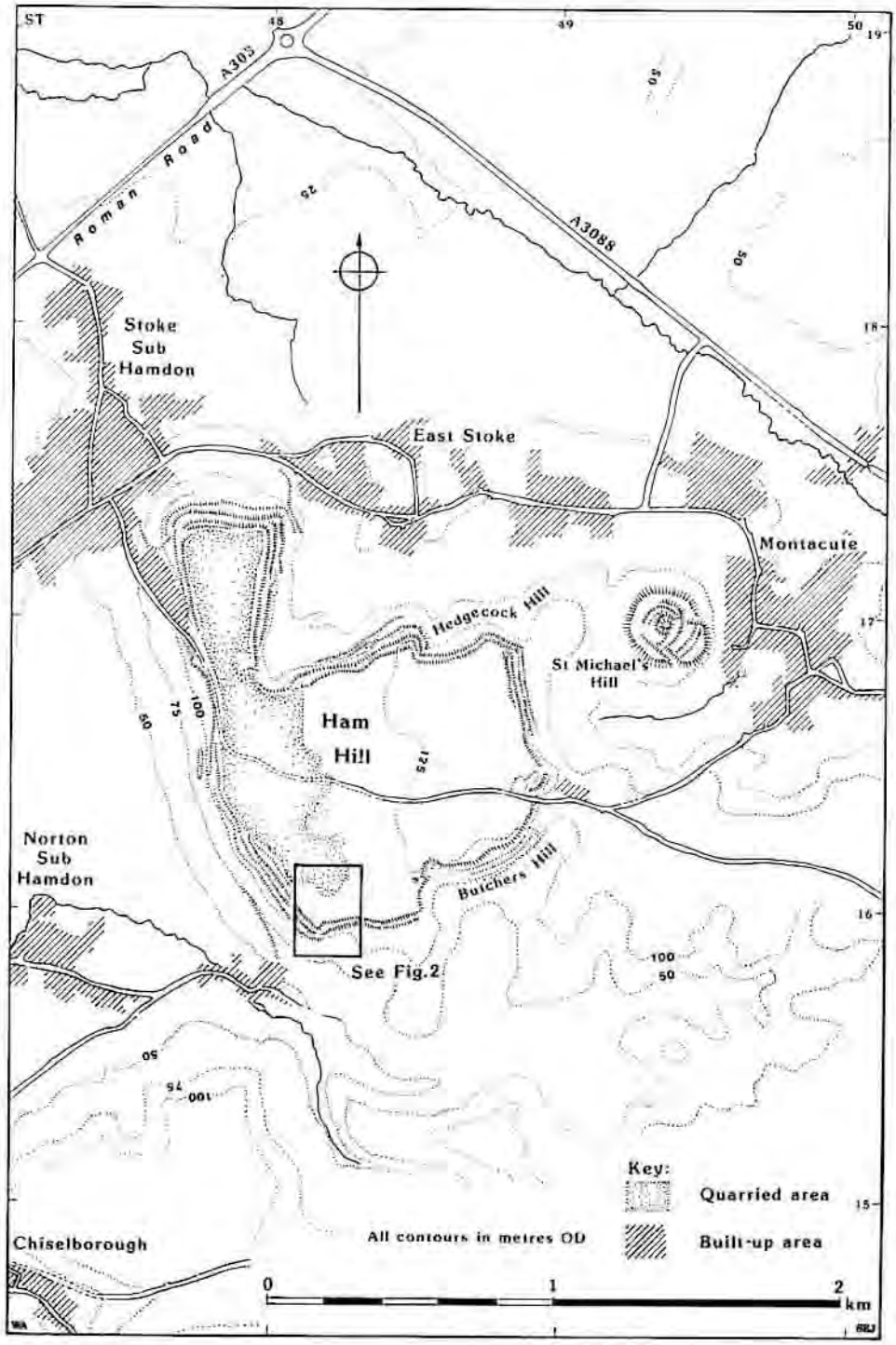

Fig. 1 Site location

in advance of quarrying (Smith 1990), and assessment excavations, comprising the machine-excavation of three trenches, were undertaken in 1991 (Adkins and Adkins 1992). The results of the assessment excavations were complemented by a programme of geophysical survey commissioned by the Royal Commission on the Historical Monuments of England, including parts of the 1994 and 1998 excavation areas and more extensive areas in the east of the hillfort (Geophysical Surveys of Bradford 1992).

The collective excavation and finds evidence from Ham Hill indicates activity and occupation of the hilltop from the Neolithic period onwards. The most intensive occupation was during the 1st century BC, with the most dense concentration of activity on the projecting north spur. Sporadic early Roman occupation has been suggested, including a possible fort (Manning 1976) and, in the 2nd century AD, a Roman villa was constructed in the east of the interior. The excavation evidence in the south-west of the hillfort indicates scattered Mesolithic, Neolithic, and Bronze Age activity and a low intensity of Iron Age occupation in this part of the interior.

The 1994 and 1998 Excavations

The existing Ham Hill Stone Quarry lies in the south-west of the hillfort. In 1992 a proposal to extend the quarry southwards was granted Scheduled Monument Consent and planning permission subject to the implementation of an approved programme of archaeological work. Wessex Archaeology carried out two excavations in advance of the extension of the quarry; the first was in June and July 1994, and the results form the main body of this report. The second excavation was undertaken in September 1998, the results being presented in Appendix A. Both excavations were undertaken in accordance with an approved specification, a copy of which is in the project archive.

The 0.13 hectare of the quarry extension (0.15% by area of the interior of the hillfort) is centred on ST 4820 1605. Prior to the excavation, the site consisted of rough pasture adjacent to the existing quarry to the north. A new earthen bund, resting on topsoil, defined the south and west limits of the quarry extension and the excavation area. The excavation area comprised level ground around the 125 m OD contour.

Methods

The excavation area was stripped of topsoil in successive spits to the top of the archaeological level by a JCB excavator with a toothless bucket and under constant archaeological supervision. A depth of between 0.4 m and 0.7 m of topsoil was removed by machine.

All further excavation was undertaken by hand. The overall disposition of archaeological features recorded within the excavation area is presented in Figure 3. Archaeological deposits consisted entirely of discrete features cut into the subsoil, which consisted predominantly of Yeovil Sands, a mottled yellowish brown, slightly silty sand. A number of north-south aligned bands of shattered Ham Hill Stone, capped by a thin layer of red-brown clay, occurred within the Yeovil Sands and especially towards the west of the site. The Yeovil Sands sealed solid Ham Hill Stone at a depth of between 0.5 m in the west and 1.6 m in the east of the excavation.

All pits and post-holes that lay entirely within the excavation area were 100% excavated after half-sectioning, and a minimum 10% sample of all ditches was excavated. The soil texture and coarse components comprising the fills of features reflected the variations in the subsoil described above.

The project archive (Wessex Archaeology site codes: W709, 1994 excavation; W7604, 1998 excavation), including the finds, have been deposited in the County Museum, Taunton (Acc. Nos. TTNCM 104/1994 and TTCNM 82/1998). The iron neckrings have also been acquired by the Museum (Acc. No. TTNCM 54/1996).

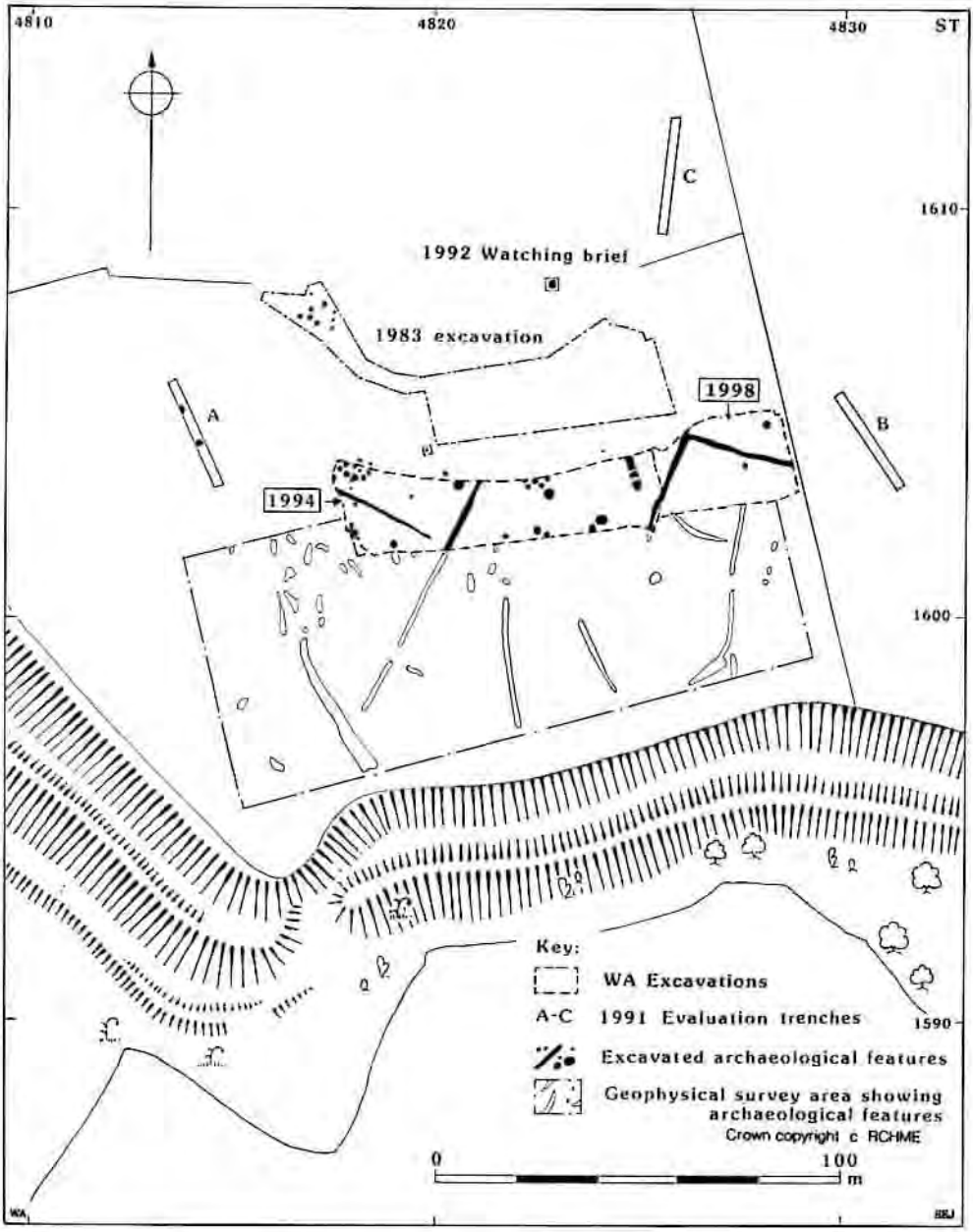

Fig. 2 Excavation location and previous archaeological works in the south-west of the hillfort.

Plate 1 Aerial view of the excavation looking north

Plate 1 Aerial view of the excavation looking north

THE SITE

The location of all recorded features is presented in Figure 3. A summary of the excavated features, including dimensions and presence or absence of archaeological components, is presented by phase in Table 1. Full details of all contexts are held in the project archive.

Earlier Prehistoric Activity

Human activity in the area was indicated by the presence of worked flint and chert recovered during the stripping of topsoil and ploughed subsoil. Possibly as early as the Mesolithic, but probably mostly of Early Neolithic to Early Bronze Age date, pieces of redeposited worked flint and chert were found in various later prehistoric features (Table 10).

In situ evidence was limited to an Early Bronze Age pit 14 (Figure 3), which appeared to have been substantially truncated. The single charcoal-rich fill incorporated other burnt archaeological inclusions, sherds of Beaker pottery (Figure 6: 1, 2), and unworn worked flint.

Iron Age Activity

The principal evidence for Iron Age activity comprised 38 pits, which occurred either singly or in small groups across the site (Figure 3). Thirty-four pits were identified within the area of excavation, and a further four, 183, 184, 185, 186, were noted during removal of the baulk between the northern trench-edge and the quarry face. It was not possible to excavate the latter for reasons of safety, and two pits on the extreme western margins of the trench adjacent to the bund, 180 and 181, also remained unexcavated. With the exception of pits 97 and 107, intercutting between pits was limited and slight; two sets of pits in the north-western group showed a slight overlap. Only one other feature, probable post-hole 28, could be firmly attributed to the Iron Age by stratigraphic relationship.

Analysis of the pottery indicates a date range for the Iron Age features of between the 7th and 1st centuries BC. Using the pottery, it has been possible to assign 11 of the pits to three phases within this period; the remaining Iron Age features fall within the overall date range. The features are described by phase.

Phase 1 (*c.* 7th–5th Centuries BC)

Pits 97 and 107 are assigned to this phase. The form of both pits was affected and their interpretation complicated by their location over a natural fissure in the underlying Ham Hill Stone bedrock, which resulted in substantial slumping of the fills into an underlying void. The void was encountered at 1.6 m below the level of the excavated surface and was c. 0.5 m wide. The line of the fissure was evident on the surface of the excavation trench as a linear feature or gully, 37, in the Yeovil Sands (Figure 3). This feature probably represented the slumping of the ground surface over and into the fissure.

Pit 107 was oval in plan. The fills had been affected by slumping into the void at the base of the pit, with the result that they were steeply angled towards the centre (Figure 4). Three of the lower fills, 103, 106 and 111, were devoid of any archaeological components and probably represent slumps of natural sand from the sides of the pit. Layer 102 contained a quantity of Ham Hill Stone rubble and the majority of the archaeological components.

Table 1: summary of features by phase, basic characterisation and archaeological components. (NB. Charcoal and carbonised seed incorporated only where specialist identification of samples undertaken.

Feature	Phase	Type	Dimensions (m)	No. Fills	Cu	Fe	Fl	WSt	SS	Pot	SW	Daub	WB	HuB	AnB	Ch	WW	S	Co
14	EBA	pit	0.85 x 0.23	1			X			X					X	X		X	
97	IA 1	pit	2..3 x 1.4 x 1.12	7			X			X									
107	IA 1	pit ?type 2	2.4 x 1.9 x 1.12	10	X			X		X	X				X				
9	IA 2	pit type 2	1.04 x 0.61	1	X		X			X					X				X
16	IA 2	pit type 1	2.0 x 1.05	4		X	X	X	X	X		X	X	X	X	X		X	
39	IA 2	pit type 2	1.4 x 0.85	2			X			X	X				X				
133	IA 2	pit type 2	1.59 x 0.55	2				X		X					X				
147	IA 2	pit type 2	1.77 x 1.07	4	X		X			X					X				
126	IA 2?	pit type 2	1.07 x 0.47	3			X	X	X	X		X			X			X	
47	IA 3	pit type 3	1.95 x 1.07	5			X	X	X	X		X			X			X	
72	IA 3	pit type 3	1.7 x 1.27	4	X		X	X	X	X			X		X			X	
73	IA 3	pit type 1	3.0 x 2.12 x 1.39	6		X	X	X	X	X		X			X	X	X	X	
75	IA 3	pit type 3	1.8 x 1.1 x 1.38	5			X		X	X		X	X		X	X		X	
7	IA	pit type 2	1.23 x 1.14 x 0.49	5			X			X									
26	IA	pit ?type 2	0.82 x 1.1	1			X			X								X	
28	IA	?post hole	0.26 x 0.52	1															
31	IA	pit type 2	1.2 x 1.5 x 0.22	1						X									
38	IA	pit ?type 2	0.43 x 0.4	1/?2								X							
64	IA	pit type 2	1.3 x 0.35	1						X									
70	IA	pit type 2	1.36 x 0.49	1			X	X	X	X					X	X			
79	IA	pit type 2	1.15 x 0.14	1						X					X				
115	IA	pit type 3	1.45 x 0.45	3					X	X					X				

Table 1: *continued.*

Feature	Phase	Type	Dimensions (m)	No. Fills	Cu	Fe	Fl	WSt	SS	Pot	SW	Daub	WB	HuB	AnB	Ch	WW	S	Co
121	IA	pit type 2	1.4 x 0.3	1															
124	IA	pit type 2	1.18 x 0.2	1			X			X					X				
130	IA	pit type 2	0.9 x 0.34	2				X		X					X			X	
136	IA	pit type 2	1.0 x 0.38	1			X			X	X								
141	IA	pit type 2	1.15 x 0.4	1						X									
146	IA	pit type 2	1.17 x 0.41	2						X									
151	IA	pit type 2	1.8 x 0.6	2			X	X		X					X				
161	IA	pit type 2	1.47 x 0.8	4						X					X				
163	IA	pit type 2	1.4 x 0.43	1			X			X					X				
169	IA	pit type 2	1.25 x 0.68	3			X			X					X				
174	IA	pit type 2	1.1 x 0.48	3			X			X					X				
176	IA	pit type 2	1.25 x 0.58	1			X			X					X				
180	IA	pit u/x	-	-															
181	IA	pit u/x	-	-															
183	IA	pit u/x	*c.* 0.6	-															
184	IA	pit u/x	*c.* 1.8	-															
185	IA	pit u/x	*c.* 1.2	-															
186	IA	pit u/x	*c.* 1.4	-															
40	u/d	gully	0.61 x 0.24	1			X												
80	u/d	gully	1.0 x 0.3	1															
85	u/d	post hole	0.36 x 0.22	1															
178	u/d	post hole	0.27 x 0.16	1															
11	-	natural	-	-			X			X		X							
37	-	natural	-	-						X					X				
62	-	natural	-	-											X			X	
154	-	natural	-	-			X			X									

KEY: EBA Early Bronze Age; IA Iron Age; u/d undated; u/x unexcavated; Dimensions - diameter/length x width x depth; Cu. copper alloy; Fe. iron; Fl. flint; W.St. worked stone; S.S. slingstone; S.W. spindle whorl; W.B. worked bone; Hu.B. human bone; An.B. animal bone; Ch. charcoal; W.W. worked wood; S. carbonised seeds; Co. coprilite.

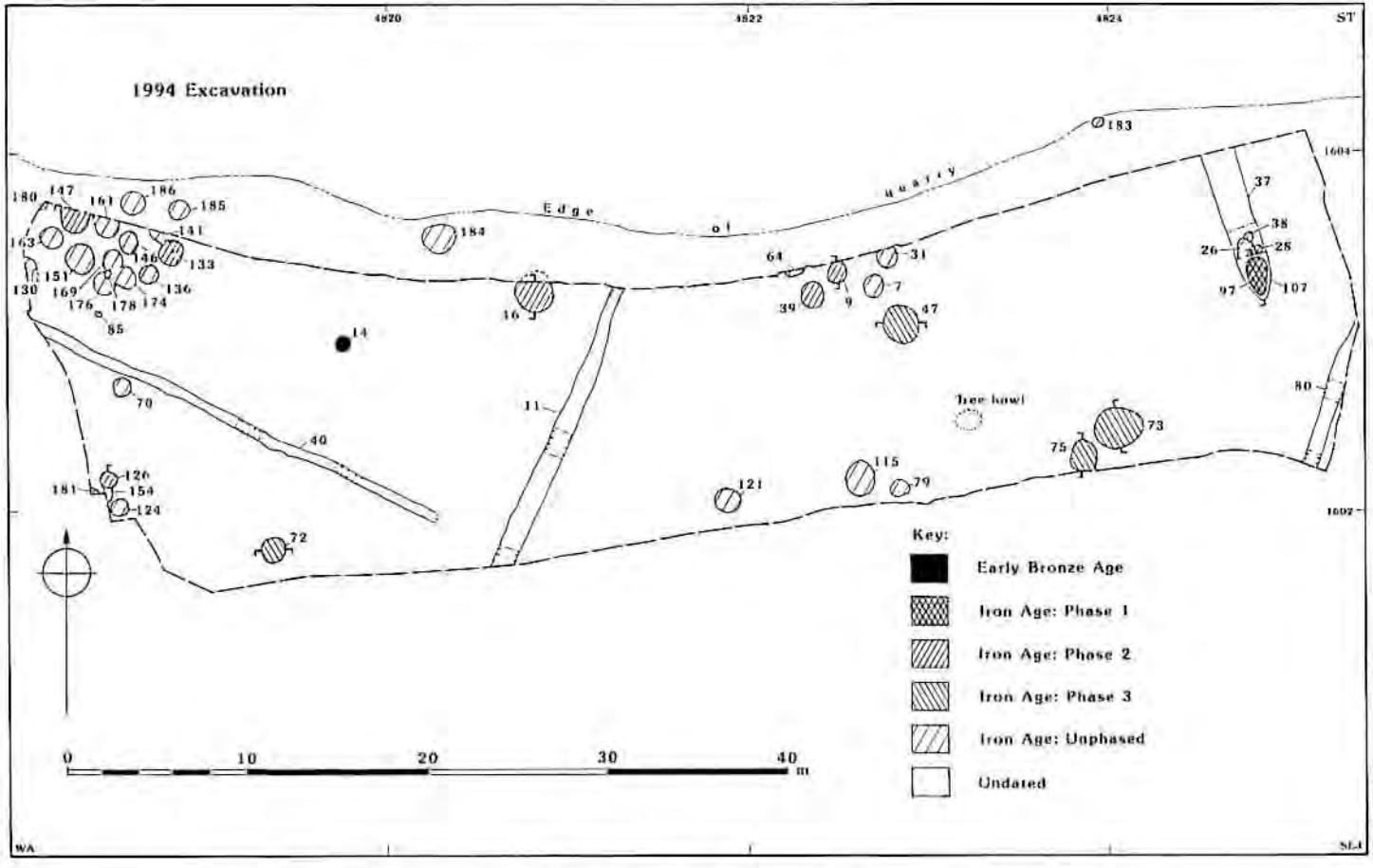

Fig. 3 Phase plan—all archaeological features.

Two further slumps from the sides of the pit had occurred prior to the deposition of fill 98, which included a variety of burnt archaeological components. One of these slumps, 101, contained sherds which joined with those from fill 102. The remaining upper fills contained few archaeological components.

Pit 97 was almost identical in plan to 107 and was cut through its centre, though not to the depth of the void (Figure 4). The lower fills appeared very similar to those of 107, with major slumping from the south side, before apparent stabilisation in the upper fills, which were angled only slightly from the north. Sherds of pottery from the earlier pit were redeposited in pit 97, which had fewer archaeological components than its predecessor.

PHASE 2 (*c.* 4th–3rd CENTURIES BC)

Six pits are attributed to this phase, within which it was possible to recognise two types of pit characterised by the form and nature of the fills. These types, together with one other (see Phase 3), were attributable to all the Iron Age pits excavated, with the exception of those from phase 1.

Type 1 pits

These represent the largest of the pits. Comprising four to six fills, they were characterised by a thick layer of dense, rich burnt material, on or a few centimetres above the base of the pit, which contained a variety of archaeological components. The layer of burnt material was sealed by a homogeneous layer, comprising occasional charcoal flecks and other archaeological components, representing a single deposit in-filling the rest of the pit. Other fills represented slumps of sand from the side of the pit over the primary deposit, but there was no evidence of extensive silting or gradual back-filling.

Pit 16 (Figure 4) contained two layers of burning: a primary layer of charcoal with a few fragments of burnt animal bone, 58, directly below a more mixed burnt layer, 42, comprising charcoal, carbonised grain, burnt Ham Hill Stone and burnt flint, burnt animal and burnt human bone, and a broken iron spearhead (Figure 9; 3). Most of a human skull and a few fragments of axial, upper and lower limb bone (68) were deposited on top of the layer of burning against the east side of the pit, sealed by the main deposit (17). The pit extended beyond the trench edge to the north and was not fully excavated.

Type 2 pits

These form the most numerous category of pits, 22 in all, five of which were attributed to phase 2. Three pits, 107, 126, and 147, showed minor variations from the main characteristics of the type.

Shallow-medium in depth and small-medium in diameter, these pits had between one and five fills, most commonly one or two (82%). The fills formed horizontal layers, with occasional charcoal flecking and scattered, relatively sparse archaeological inclusions in comparison with pits of types 1 and 3. Additional layers usually represented slumps of sand from the sides of the pits. As with pit types 1 and 3, there appeared to be little or no evidence for silting or gradual infilling. However, in contrast with types 1 and 3 there was no layer of dense burning; the burnt components, which included charcoal, carbonised seeds (rare), fragments of burnt Ham Hill Stone and burnt animal bone, were mostly occasional and occurred throughout the fills (Figure 4, pits 9, 126 and 147).

Pit 126 differed slightly from the standard characterisation (Figure 4). The pit was small and shallow, with three horizontal layers similar in form and composition to the other

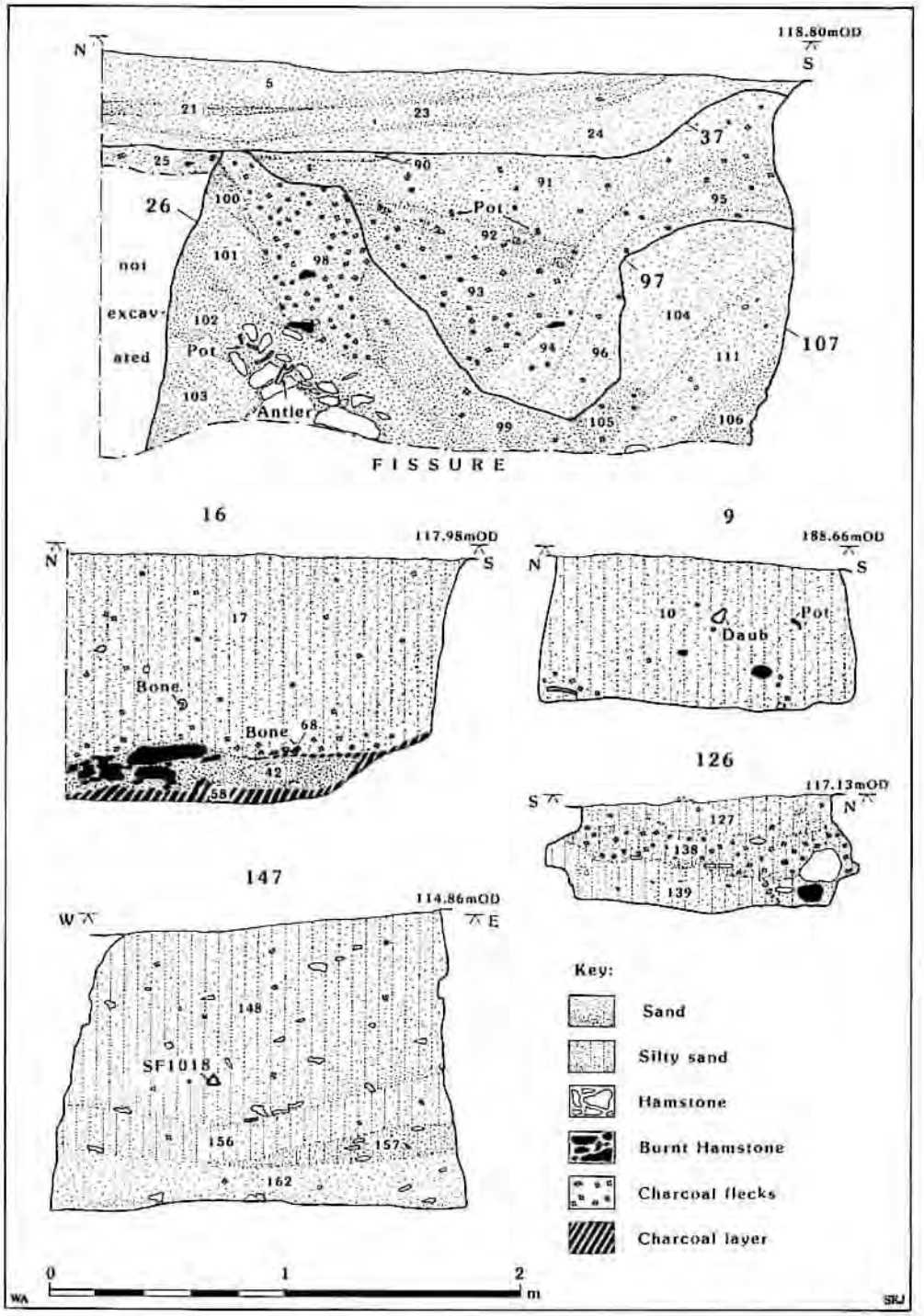

Fig. 4 Iron Age: phase 1 and 2 pit sections.

type 2 pits except that the central layer contained frequent, rather than occasional, charcoal inclusions, although these were not as dense as those noted in the type 1 and 3 pits.

Pit 147 was noticeably larger than the other type 2 pits (Figure 4), and, unusually, contained horse bone which was otherwise limited to type 1 and type 3 pits.

Phase 3 (*c.* 2nd–1st Centuries BC)

Four pits are attributed to phase 3, one type 1 and three type 3.

Type 1 pit

Pit 73 (Figure 5) was almost identical in form to pit 16, the most significant difference being in some of the archaeological components. The thin primary layer of slightly clayey sand, 122, was spread evenly across the base of the pit, increasing in depth against the northern side. An iron nave hoop was found (Figure 9; 2, Plate 2), *c.* 0.5 m from the northern side of the pit. Above this layer of silting was 0.07 m of dense burning across the whole of the pit, 119, comprising charcoal, burnt worked wood, a mass of carbonised wheat grain, the heads of which were clearly visible, and burnt Ham Hill Stone, burnt animal bone, and pot sherds. Analysis of the carbonised grain shows it to have been burnt *in situ*. A second iron nave hoop (Figure 9; 1) was recovered in the north-west quadrant of the pit, c. 0.50 m from the first, and an iron currency bar (Figure 9; 4) had been placed against the northern edge of the pit, to the west of the rings. A second, slightly thicker layer of burnt material, 112, with reddish mottles sealed 119. The burnt archaeological components of 112 were similar to those of 119, though there was variation in the animal species identified and, unlike 119, this layer was thicker at the sides of the pit, particularly at the northern edge. Slumps of sand from the north and south sides of the pit had in part sealed fill 112 prior to the deposition of the main and final layer, 74. A homogeneous layer with occasional charcoal flecks, burnt Ham Hill Stone and burnt flint, this layer contained the majority of animal bone from the feature, including horse, most of the pot sherds, and fragments of quern.

Type 3 pits

Three of the four pits designated as type 3 occur in this phase; the fourth is unphased Iron Age. The type is characterised by medium-large circular pits, mostly medium-deep, with three to five fills, one of which comprised a dense burnt component. The latter layer formed the primary fill in most cases, with the exception of pit 75 where it occurred as the fourth of five fills (Figure 5). As with the other pit types, the layers were generally horizontal with occasional slumps from the sides, though a more gradual process of backfilling may be suggested by the layering in pit 47 (Figure 5).

Unphased Iron Age Features

Twenty pits, all except one of which were type 2, and one post-hole are included in this category.

Type 2 pits

The general characterisation of these pits is presented above (Phase 2). Fifteen type 2 pits are designated within this category, with four showing minor variations. Pit 174 was similar to pit 126, and pit 26 showed the same variation as pit 147 (see Phase 2 above). Two other pits, 141 and 151, differed slightly in that there was a total absence of any burnt component within their fills.

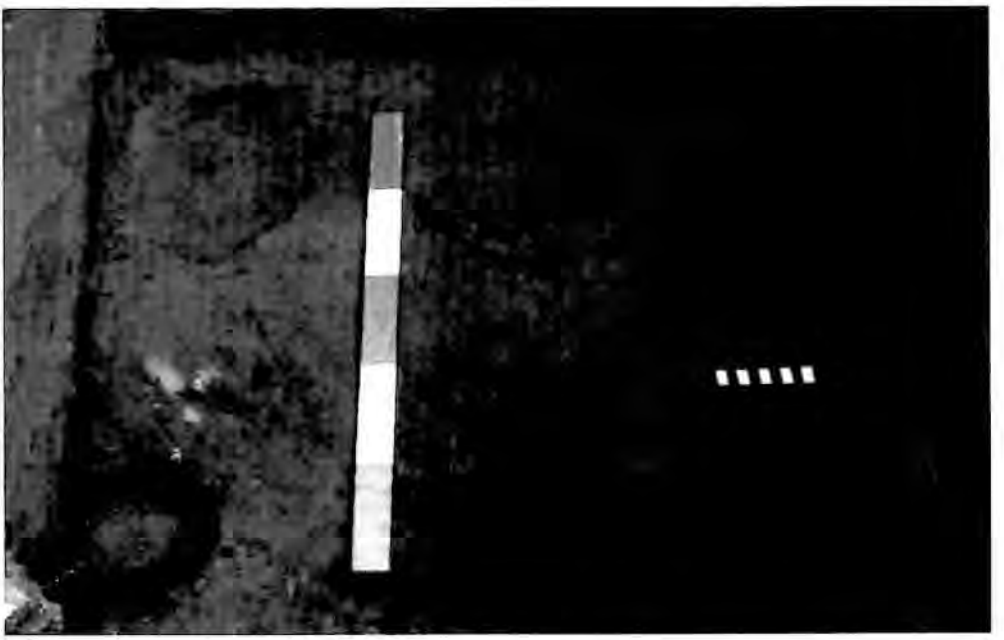

Plate 2 Iron objects 1 and 2 on the floor of pit 73 during excavation

Two major groupings of type 2 pits were evident. In the north-west corner of the trench, 15 pits were concentrated in a 60 m^2 area. There was a second, smaller group of four pits near the centre of the northern baulk. There was little and only slight intercutting of pits within these groups. In both cases, features extended beyond the bounds of the excavation.

Type 3 pits

Pit 115 was the shallowest of the pits in this group; it also contained fewer and a much more restricted range of archaeological components, rendering it similar to the type 2 pits. It did, however, contain a primary deposit of dense burnt material, including a high percentage of carbonised seeds in which, unlike elsewhere, barley predominated over wheat.

Post hole

Post hole 28 was part of the complex of features over natural fissure 37 at the east end of the site; its stratigraphic position suggested that it was of Iron Age date. It contained a single fill with a few charcoal flecks.

Post-Iron Age Activity

Evidence for post-Iron Age activity was sparse. There was no indication of a latest pre-Roman Iron Age (Durotrigian) or early Romano-British presence in the area to confirm the continuity of use in the Late Iron Age suggested by the pottery (1st century BC).

A very small intrusive fragment (3 g) of Romano-British Oxford colour coated ware,

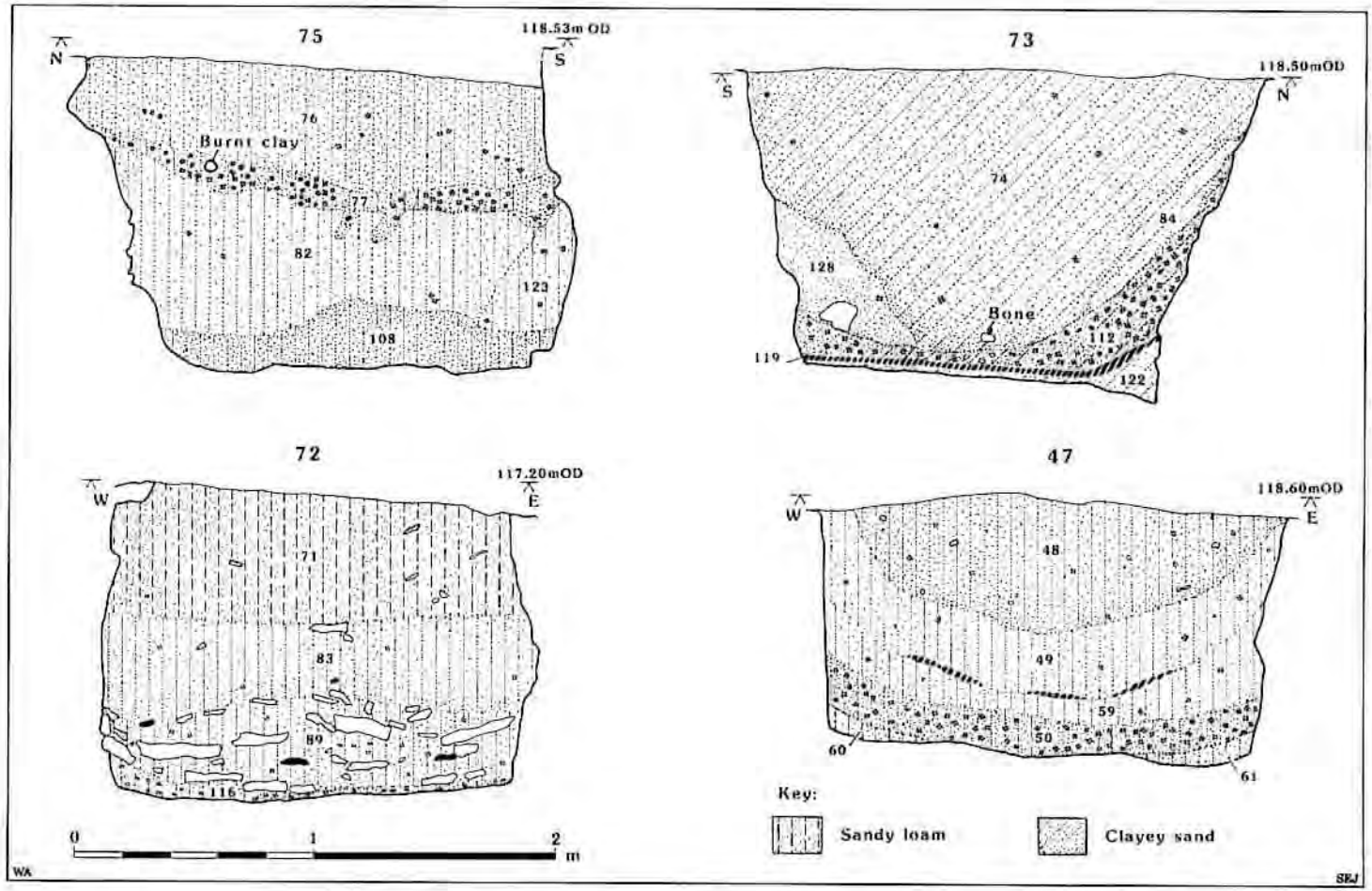

Fig. 5 Iron Age: phase 3 pit sections

giving a date of 3rd-4th century AD, was recovered from fill 49 of pit 47 (Figure 5). A similarly small intrusive fragment of Romano-British greyware (2 g) was recovered from the single fill of pit 163.

A fragment of post-medieval tile was recovered from the topsoil but the predominant archaeological elements within the topsoil and ploughed subsoil were of early prehistoric and Iron Age date. The area was subject to deep ploughing in the recent past to a depth of *c.* 0.2–0.7 m.

Undated Features

The only other archaeological features comprised two post-holes, 85 and 178, and two narrow, shallow gullies, 40 and 80, (Figure 3). All had single fills, none of which produced datable finds (Table 1). With the exception of post-hole 178, which cut and clearly post-dated the trefoil group of pits in the north-west corner of the site, none of these features cut or were cut by any other feature. Their date and function remain unclear.

Natural Features

The gully-like feature, 37, at the east-end of the site has been discussed above and interpreted as a natural slump over a fissure in the Ham Hill Stone bedrock. Feature 11 appeared to be of a similar nature (but was on a similar alignment to 80). Several fissures running through the bedrock were noted in the quarry face. A tree bowl and an animal burrow, 154, were also recorded.

THE FINDS

PREHISTORIC POTTERY by Elaine L. Morris

A total of 953 sherds (6,867 g) of prehistoric pottery was recovered and consists of Beaker and Iron Age material. The condition of the pottery varies considerably from parts of whole vessels to abraded and eroded fragments. The major limitation of the collection is the identification of fabric inclusions made from calcareous materials due to the considerable post-depositional loss of what are believed to be fossil shell and calcite inclusions. As a result, all proportions of fabric types are based on the number of sherds, not the weight of sherds as tends to be the norm, since the loss of inclusions would disproportionately increase the apparent presence of non-calcareous-gritted fabrics. Similarly, the use of mean sherd size by weight is not presented as an aid in the discussion of deposition.

The collection has been examined and recorded in detail using the current guidelines for later prehistoric pottery assemblages (PCRG 1992), and the archive is available as 288 records in both hard copy and computerised form. All featured sherds have been sketched (1:1) as part of this archive.

Earlier Prehistoric: Beaker

Sherds from at least two, and possibly three, Beaker vessels were identified (12 sherds; 46 g). Two vessels, one thin-walled base decorated with horizontal lines of toothed-comb impressions (Figure 6: 1) and two thicker-walled body sherds from a finger-pinched or finger-rusticated vessel (Figure 6: 2), were recovered from pit 14, while a small fragment from a similar, if not identical, base sherd was found during subsoil removal.

All of the Beaker sherds were made from the same fabric which is tempered with a

common amount (20–25% concentration) of well-sorted, crushed grog measuring ≤ 3 mm across, with the majority of grog pieces less than 2 mm. The definition of a grog-tempered fabric in previous work clearly stated that the grog had been added to a sandy clay matrix, and that at least one diagnostic later prehistoric form was produced from this fabric (Morris 1987, 34–5). Therefore, the absence of macroscopically obvious quartz sand in this Beaker fabric allows the small base sherd to be included in the Beaker collection. The firing of all these sherds is similar, with an oxidised exterior surface and unoxidised core and interior surface.

The presence of both toothed comb and fingertip rusticated Beaker vessels in the same feature is not surprising since the former is a common type and the latter is believed to be a later development of Beaker styles (Gibson 1986, 31–4). A toothed comb and twisted cord decorated sherd was recovered in 1983, made from a coarsely flint-gritted fabric (Smith 1990, fig. 6, 1). This combination of decorations may be more typical of earlier Beaker styles. The recovery of several Beaker vessels, possibly spanning the full period of activity, on this hilltop is of particular interest in the current absence of any early metalwork (Colquhoun 1978) and further emphasizes the Early Bronze Age presence in the south of Somerset on high ground (Ellison 1982a, 44, fig. 6.1).

Later Prehistoric: Iron Age.

A total of 941 sherds (6,821 g) of later prehistoric pottery was recovered. All of these sherds have been identified as Iron Age in date due to their similarity both in form and fabric to the range already published from Ham Hill, South Cadbury (Alcock 1980), Norton Fitzwarren (Williams 1989; Woodward 1989), and Brean Down (Williams and Woodward 1990, 122).

Fabrics

Each sherd was examined using a ×10 power binocular microscope and assigned to one of the following groups according to the most frequent or most obvious inclusion. As mentioned above, the sherds have been affected by the acidic post-depositional conditions found on the site. There is variation in that condition, however, within a small quantity of sherds (*c.* 5%) which are believed to have been made from calcareous-bearing fabrics actually still containing fossil shell fragments. This allows the assignment of shell and calcite classifications to these otherwise vesicular fabrics based on the shapes of the vesicles and the occasional impressions of the shell forms in the clay matrix. The published reports presenting calcareous fabrics as the most common types in previous collections from the site make this an acceptable method of analysis.

The description of fabrics below includes reference to the main publication of fabric types from Ham Hill (Morris 1987) where appropriate, but is presented as fabric codes for ease of computerisation. It is recognised here that there are differences amongst the various densities of inclusions between the current and previous descriptions of similar fabrics due to the use of standardised visual charts for this analysis (PCRG 1992, app. 3), as well as the difference between seeing calcareous inclusions as opposed to observing irregular vesicles. The fabric descriptions provided here are brief summaries of the full decriptions presented in the archive, while the quantity by number and weight of sherds is presented in Table 2.

Two fabrics were sampled for petrological examination, R1 and R3 (Williams p. 105).

Calcite Fabric

C2 a common to very common amount (20–30%) of well-sorted calcite-shaped vesicles; equivalent of Calcite Fabric B in the 1987 report; source Mendip Hills

Table 2: Frequency of fabric types by number (no.) and weight (wt., grammes)

Fabric type	No. of sherds	Wt. of sherds
C2	16	51
F1	8	58
I1	25	182
P1	6	22
P2	4	25
Q1	2	3
Q2	8	39
Q3	1	1
Q5	15	117
Q6	14	208
Q7	68	1939
Q8	1	1
R1	58	255
R2	9	55
R3	61	647
R4	11	72
S1	451	2639
S2	182	483
V1	1	24
Total	941	6821

Flint Fabric

F1 a moderate to common amount (10–20%) of generally well-sorted, crushed, angular calcined flint, usually ≤ 3 mm across, with rare larger pieces of flint up to 5 mm, in a very fine sand or micaceous clay matrix similar to fabric Q2 desribed below; 1987 Flint Fabric

Iron Ore Fabric

I1 a moderate to very common amount (15–30%) of poorly-sorted iron oxides measuring ≤10 mm across and usually ≤ 4mm; 1987 Iron Ore Fabric

Clay Pellet Group

P1 fine, clay pellet-bearing fabric; a moderate to common amount (15–20%) of well-sorted, subrounded to rounded clay pellets measuring ≤ 0.5 mm across in a micaceous clay matrix

P2 coarse clay pellet-bearing fabric; a moderate to common amount of clay pellets measuring ≤ 4 mm across, with rare, subangular to angular flint, ≤ 2mm across, and sparse to moderate amounts (5–10%) of carbonaceous matter measuring ≤10 mm

Quartz Sand Group

Q1 1987 Fine Sand Fabric A

Q2 1987 Fine Sand Fabric B

Q3 1987 Sandy Fabric B

Q4 reserved for 1987 Sandy Fabric C, but not identified in this assemblage

Q5 a common to abundant amount (25–40%) of very coarse, subrounded to rounded quartz sand, measuring ≤ 2 mm with the majority of grains ≤ 1 mm in a clay matrix; this fabric is an early, coarse Durotrigian ware which is similar to fabric Q3 at Wytch Farm (Lancley and Morris 1991, 123), dated from the Mid to Late Iron Age; source Wareham-Poole Harbour

Q6 a common amount (20–25%) of extremely coarse quartz and possibly quartzite sand, measuring ≤ 7 mm with the majority ≤ 2 mm across, and rare (1%) either calcined or cortex-bearing flint detritus

Q7 a common amount of medium to coarse-grained quartz sand, measuring < 1 mm with the majority of grains ≤ 0.5 mm, and rare to sparse (1–3%) flint and possibly quartzite detritus

Q8 the common Durotrigian and Black Burnished Ware fabric; the equivalent of fabric Q1 at

Wytch Farm (Lanclcy and Morris 1991, 123) and Fabric A at Maiden Castle (Brown 1991, 185–6); source Wareham-Poole Harbour

Igneous and Sedimentary Rock Group

R1 a common amount of crushed, angular, weathered igneous rock fragments, identified as felspathic tuff (Williams p. 106), which measure ≤ 7 mm across, but are usually ≤ 4 mm; likely source in the region of Beacon Hill near Shepton Mallet in the Mendip Hills; may be 1987 Igneous Rock Fabric

R2 a moderate amount (10–15%) of an indeterminant type of crushed angular possibly igneous rock, measuring up to 18 mm across but usually 10 mm or less, in a sandy clay matrix containing a sparse to moderate amount (7–10%) of subrounded quartz, < 0.3 mm; the fabric is extremely coarse and poorly made with visible layers in the cracked clay

R3 South Western Group 5 fabric containing sanidine (Peacock 1969, 50–1; Williams p. 105); likely source in the Permian deposits in the region around Exeter

R4 South Western Group 2 fabric containing sandstone (Peacock 1969, 46–7); likely source in the Beacon Hill area near Shepton Mallet, Mendip Hills

Fossil Shell Group

S1 a common to abundant amount (20–40%) of crushed fossil shell fragments, or the vesicles of former fossil shell, measuring ≤10 mm across with the majority ≤ 6 mm; 1987 Shelly Fabrics A and B

S2 a moderate amount (10–15%) of crushed fossil shell and limestone fragments, or the equivalent vesicles, in a slightly sandy clay matrix with a sparse to moderate amount (3–10%) of quartz grains ≤ 0.5 mm across but usually ≤ 0.2 mm; it is not always easy to determine, in the vesicular state, whether a sherd is S1 or S2 fabric

Organic-Tempered Fabric

V1 a common to very common amount (20–30%) of organic matter added as temper to a very fine clay matrix similar to Q2 above; the temper, now burnt out, has left linear vesicles measuring ≤ 8 mm long but usually ≤ 5 mm; probably similar to grass/straw fabric identified by Ellison and Pearson (1977, 98)

As discussed previously (Morris 1987), the fossil shell-bearing fabrics (S1; S2) are most likely to be of local origin as are several of the quartz fabrics (Q1; Q2; Q3), the flint fabric (F1), and the iron oxide fabric (I1). Other fabrics of local origin may include the clay pellet fabrics (P1; P2), two coarse quartz fabrics (Q6; Q7) and the organic-tempered fabric (V1) since all of these could have been made from resources found within 10 km of Ham Hill. Non-local fabrics made with inclusions which do not exist in the local area include the complete range of rock-gritted wares (R1; R2; R3; R4), the calcite fabric (C2), and two of the sandy fabrics, those of Wareham-Poole Harbour origin (Q5; Q8).

Forms

Each featured sherd was assigned to a form type and, where possible, these forms have been compared to published material from both the site and elsewhere in the wider region, as follows: Ham Hill 1 (Ellison and Pearson 1977), Ham Hill 2 (Morris 1987), Ham Hill 3 (Smith 1990), Ham Hill 4 (Adkins and Adkins 1992), South Cadbury (Alcock 1980; phases indicated), Ilchester (Ellison 1982b), Meare Village West (Orme, *et al.* 1981), and Maiden Castle (Brown 1991). It is interesting that several of the forms cannot be paralleled to types previously defined from the analysis of *c.* 3,000 sherds recovered from earlier excavations (Morris 1987) and, therefore, this typology was not applied to the new material but has been referred to where appropriate.

The correlation of fabric types to form types is presented in Table 3. This confirms many of the observations made from the earlier publication of Ham Hill pottery (Morris 1987), in particular that the fine sand fabric (Q2) is found with Early Iron Age forms (R1; R8), the

Table 3: Correlation of fabric types to form by number of records (vessels)

Form	Fabric type												
Type	C2	I1	P2	Q2	Q5	Q6	Q7	R1	R2	R3	R4	S1	S2
R1				2				3				2	1
R2												4 (3)	1
R3	1											1	
R4													1
R5												2	
R6												2 (1)	
R7		3 (2)										1	5 (3)
R8				1									
R9										3 (2)			
R10											1		
R11							2 (1)						
R12			1									1	
R13												1	
R14												1	
R15								1			1	3	1
R16												1	
B1		1			1		6 (3)			1		2	3
B2								1	1			2	1
B3					1							2	
A1												1	
A2				1								1	
D1						1			1	1	2 (1)	2	1

iron oxide fabric is found with at least one later Iron Age form (R7), the felspathic tuff fabric (R1) is found with Early and Middle Iron Age forms (R1; R15) and the fossil shell fabrics were used throughout the Iron Age.

Rims

R1 thin-walled, simple, vertical or slightly flaring, rim; probably from a jar; top edge of rim may be rounded or flat-topped; related to R12 but not enough present to be confidently identified; Ham Hill 2 (J1A/J1B), Ilchester (fig. 61a, 12, 61b, 72).

R2 simple, vertical rim from a slack-shouldered, necked jar; Cadbury 6 (fig. 14, D522, 1) and 7 (fig. 11, KX059, 2; 15, K926, 4, 12–14).

R3 short, rounded, vertical rim on necked, ovoid or barrel-shaped jar; similar to pulled, beaded rim types; Cadbury 7 (fig. 15, K927, 4) and 8 (fig. 10, KX031, 10).

R4 rounded rim with external lip on short-necked, sharply shouldered jar.

R5 ovoid jar with flat-topped, bevel-edged rim; Meare Village West (fig. 38, 4304).

R6 flat-topped, beaded rim, ovoid jar; Ham Hill 1 (fig. 2, 19) and 2 (B1A and B1B).

R7 rounded, beaded rim on high-shouldered ovoid jar; Cadbury 8 (fig. 10, KX031, 8 and 15, KX032, 4; fig. 16, 9) and 9A (fig. 9, 7 and 8).

R8 curled-over, rounded rim on unknown profile vessel; similar to R4; Ilchester (fig. 61b, 55).

R9 vertical, rounded rim on medium to long-necked, round-bodied bowl; South Western-type; Ham Hill 2 (B6) and 4 (fig. 3), Cadbury 8 (fig. 10, KX031, 6; fig. 16, 3) and 9 (fig. 10, KX029, 7).

R10 slightly lid-seated, flared rim with incurved inner edge on round-bodied bowl; South Western-type; Meare Village West (fig. 37, 2313, 2661).

R11 well-sprung, ovoid jar with flat and incurved rim; a developed version of R5; Cadbury 8 (fig. 16, 8).

R12 vertical or flared, flat-topped rim with medium to long neck probably from a jar; Ham Hill 2 (J1B/J1C), Ilchester (fig. 61b, 60).
R13 neck cordon, round-bodied jar with slightly flared, rounded rim; Cadbury 5 (fig. 14, D631, 5). (Alcock 1975, fig. 17).
R14 flared, long-necked rim on a shouldered jar; similar to R12; Ham Hill 2 (J2), Ilchester (fig. 61a, 4; 61b, 60).
R15 thick, everted rim from a large apparently slack-shouldered jar; Ham Hill 2 (J3), 3 (fig. 6, 2), Gussage (phase 2; fig. 60, 288).
R16 simple ovoid jar; Ham Hill 2 (J7), Cadbury 7 (fig. 15, K926, 16).

Bases

B1 simple, flat base
B2 flared, flat base
B3 low angle (c. 30 degrees), flat base from an open vessel, ie. Bowl

Angled

A1 sharply shouldered sherd, ≤ 90 degrees
A2 gently shouldered sherd, > 90 degrees

Decorated

D1 decorated sherd with no discernible form

Decoration and Surface Treatment

Only a few types of decoration were found in this collection which is in contrast to the broad range presented for the larger, curated collection (Morris 1987, figs. 3–5). These include finger-tip impressions, both on the rim, neck, and shoulder and on cordons and pellets (Figure 6; 7, 12, 15 and Figure 7; 27, 34), dimples (Figure 7; 24), tooled complex linear and curvilinear designs (Figure 7; 23, 28), and incised cross hatching (Figure 7; 29). The last two types are common forms of South Western or Glastonbury styles (Peacock 1969; Orme, *et al.*, 1981, fig. 37, 2661; Orme, *et al.* 1983, fig. 65, 1405; Rouillard 1987, figs. 5.21–24). The finger-tip impressions on rims and shoulders of vessels is typical of Early Iron Age decoration, while finger-tip impressions on cordons is a characteristic of phase 5 at South Cadbury (Alcock 1980, 691, fig. 14, D631, 5). Thumb-like impressions on pellets are considered to be Early-Middle Iron Age in date elsewhere (Saville and Ellison 1983, fig. 9, 1). Dimples are generally a later Iron Age motif and associated with bead rim vessels (Alcock 1980, fig. 9, KX024, 8), and this motif has been dated to the early-middle first century BC at Maiden Castle (Brown 1991, 196, fig. 158, 1, 4, 11).

The occurrence of one or more surface treatments was observed on only 11% of the records. The most common type was burnishing and this was due mainly to the presence of three South Western bowls in non-local fabrics but burnishing also occurred on vessels in calcareous fabrics (C2; S1). A few examples of smoothed surfaces and wiped surfaces were also observed.

Vessel Capacity and Use

Attempts to measure the capacity of later prehistoric vessels is hampered by the fragmentary condition of pottery from settlement sites in southern Britain. Recent analysis of the pottery from South Cadbury, however, has revealed that there is an apparent correlation between rim diameter and vessel capacity for selected common Iron Age forms such as the South Western types (A. Woodward, pers. comm.). Therefore, although there are very few measureable rims in this assemblage, the data was recorded by form type for use in future research (in Archive).

Evidence for use of vessels, such as the presence of sooting, limescale and burnt residues,

Table 4: Correlation for the evidence of use by fabric and form by record (number of vessels in brackets)

Fabric type	Burnt residue	Limescale	Pitting on interior only	Soot
C2				1
F1	1			
I1				4 (1)
Q2				2
Q6	2 (1)			
Q7	6 (2)	4 (1)		1
R1	1			1
R3				3 (2)
S1	13 (8)	1	2	15 (11)
S2	4			7 (3)
Form Type				2
R1				
R2	1		1	4 (3)
R5				1
R7				4 (3)
R9				3 (2)
R15				2
B1	4 (2)	2 (1)		
B3	1			
A2				1
D1				2

is quantified by fabric type and form type in Table 4. Sooting was recorded on 13 diagnostic vessels, in particular simple jars (Figure 6; 4, 13, 14) of Early to Middle Iron Age date, the later Iron Age high-shouldered, bead rim (Figure 7; 24, 32) and thick-walled, slack-shouldered jars (Figure 6; 17), as well as both of the non-local, highly decorated Group 5 South Western bowls (Figure 7; 23, 28). The other highly decorated bowl did not bear any visible evidence for use. It is noticeable that vessels in nearly all of the major and several of the minor fabric types were used as cookpots with the presence of both soot and burnt residues. Due to the fragmentary nature of this assemblage and the location of burnt residues, ie. usually found on the lower interior of vessels, only one rim type (R2) displayed this particular evidence. Limescale only occurred on one identifiable vessel form, the large inturned rim storage jar (Figure 7; 33) in a sandy fabric (Q7).

Ceramic Phasing

As for a number of sites in southern Britain (Shennan 1981; Morris 1983, 1988, 1991), the investigation of reliable ceramic phasing for this assemblage is based on a feature containing an established minimum of material, in this case at least 25 sherds. Features with this minimum are presented in Table 5. Broad phasing of the pottery is established by the presence and absence of dated form and decoration characteristics, as well as the presence and absence of associated fabric types. Only 11 of 31 excavated features containing pottery can be phased (class A). Details of the other 19 features (class B) are available in Table 6.

Phase 1 pottery is characterised by long-necked, shouldered jars, ovoid jars and round-bodied, neck cordoned jars, with finger-tip decoration on the neck and cordon (Figure 6; 3–

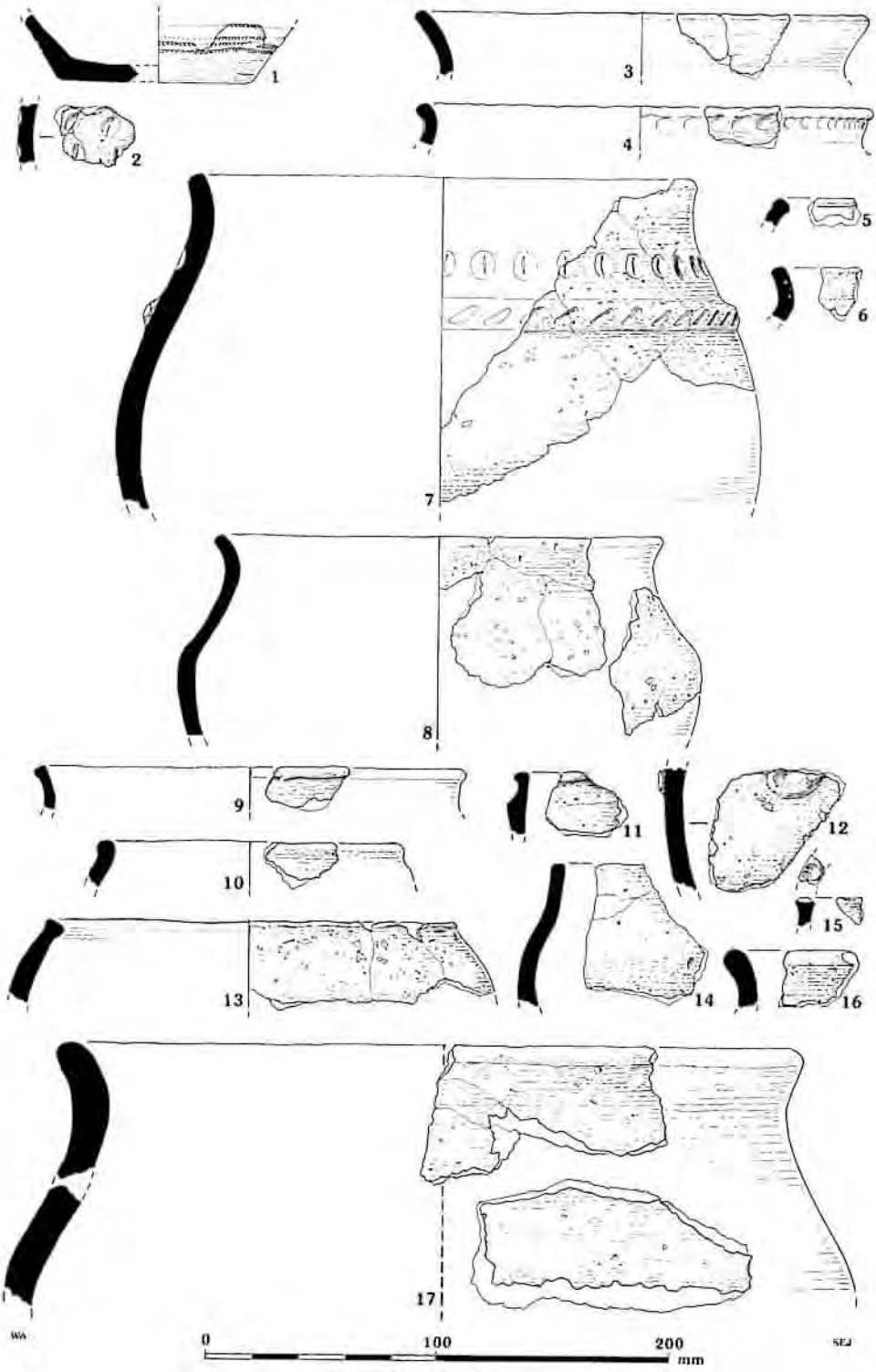

Fig. 6 Beaker (1 and 2) and Iron Age (3–17) pottery

Table 5: Frequency of fabrics in selected features—Class A: number of sherds in brackets

Feature	No. of sherds	Wt. of sherds	Fabric group									Ceramic phase
			C	F	I	P	Q (local)	Q (Wareham/ Poole Harb.)	R (felspathic tuff)	R (sanidine; sandstone)	S	
pit 97	30	93	(-)	(-)	(-)	(2) 6.7	(3) 10.0	(-)	(-)	(-)	(25) 83.3	1
pit 107	65	863	(-)	(2) 3.1	(-)	(3) 4.6	(-)	(-)	(1) 1.5	(-)	(59) 90.8	1
pit 9	72	184	(1) 1.4	(1) 1.4	(-)	(-)	(-)	(-)	(11) 15.3	(-)	(59) 81.9	2
pit 16	101	855	(-)	(-)	(-)	(-)	(14) 13.9	(-)	(7) 6.9	(-)	(80) 79.2	2
pit 39	54	190	(-)	(-)	(-)	(-)	(-)	(-)	(15) 27.8	(-)	(39) 72.2	2
pit 133	20	374	(2) 10.0	(-)	(4) 20.0	(-)	(-)	(-)	(5) 25.0	(-)	(9) 45.0	2
pit 147	25	201	(-)	(-)	(-)	(-)	(-)	(-)	(3) 12.0	(-)	(22) 88.0	2
pit 47	235	917	(12) 5.1	(-)	(-)	(-)	(4) 1.7	(-)	(12) 5.1	(37) 15.8	(170) 72.3	3
pit 72	48	349	(-)	(-)	(-)	(1) 2.1	(1) 2.1	(-)	(-)	(35) 72.9	(11) 22.9	3
pit 73	62	243	(-)	(1) 1.6	(20) 32.3	(-)	(-)	(11) 17.7	(-)	(-)	(30) 48.4	3
pit 75	80	1984	(-)	(-)	(1) 1.3	(-)	(63) 78.8	(-)	(-)	(-)	(16) 20.0	3

Table 6: Presence of fabrics for Class B Features (sani.—sanidine, sand.—sandstone)

Context/ Feature	No. of Sherds	Wt. of Sherds	Fabric types/Groups										Ceramic Phase or later
			C	F	I	P	Q local	Q (non-local)	R (tuff)	R (sani.:sand.)	S	V	
topsoil	5	16						*(Q5)			*		3
subsoil	4	48						*(Q5)					3
pit 7	7	55	*				*(Q2)		*		*		2
linear 37	15	59							*		*		1 or 2
pit 26	3	7					*(Q7)				*		3
pit 31	7	19							*		*		1 or 2
pit 64	4	23					*(Q7)				*		3
pit 70	10	32					*(Q7)						Iron Age
pit 115	4	31		*							*		Iron Age
pit 124	7	6									*		Iron Age
pit 126	5	24					(Q1)		*		*		1 or 2
pit 130	4	8									*		Iron Age
pit 136	14	39							*		*		2
gully 11	2	2				*	*(Q3)						-
pit 146	1	1									*		Iron Age
pit 151	23	103		*					*		*	*	1 or 2
pit 154	3	7							*		*		1 or 2
pit 161	8	24									*		Iron Age
pit 163	14	27				*	*(Q2)	*(Q*)	*		*		3
pit 174	5	17									*		Iron Age
pit 176	4	19				*					*		1

9), and on the rim and shoulder zone of redeposited examples (Figure 6; 15 and 7; 27). The fabrics are dominated by local wares, in particular fossil shell, clay pellet, flint, and coarse quartz sand, with less than 2% non-local pottery. This non-local material is the felspathic tuff fabric (R1) used to make early vessel forms, such as the finger-tip decorated example (Figure 7; 34). This phase corresponds to Early Iron Age Cadbury 5–6 (Alcock 1980, 689–94, fig. 14), broadly dated to the 7th to 5th century BC. Actually, only two features can be assigned to this phase, pits 97 and 107; however, the former cuts the latter. Nevertheless, pit 97 has several vessels distinct to it while sharing re-deposited material with pit 107.

Phase 2 activity is characterised by the absence of decoration, the continued use of ovoid jars, the presence of slack-shouldered, sloping shouldered and S-shaped profile, everted rim jars, and the increased use of non-local fabric plain vessels (Figure 6; 10–11, 13, 16–17), with redeposited material of Phase 1 type also present (Figure 6; 12, 14–15). Local wares still predominate but up to 30% of the pottery in a feature may have been made from the non-local rock fabrics (R1; R2). This phase is similar to Middle Iron Age Cadbury 7 (Alcock 1980, 694–6, fig. 15), which may be dated to the 4th-3rd centuries BC.

Phase 3 is characterised by the presence of South Western or Glastonbury-style vessels in non-local sedimentary and igneous rock fabrics (R3; R4), bead rim jars, and Wareham-Poole Harbour fabrics, and the continued use of slack and sloping shouldered jars (Figure 7; 18 20, 22–26, 28–29, 31–33). This range of material is contemporaneous with Cadbury 8 and 9A (Alcock 1980, 696–9, figs. 9, 10, and 16), which can be dated from the 2nd to 1st century BC. Although radiocarbon dated deposits from Meare Village West with South Western vessles indicate an earlier date of later third century BC (Orme *et al.* 1981, 68). Non-local wares may well represent the majority of a feature in this ceramic phase. The South Western bowls are found either together (pit 72) or with bead rim jars (pit 47). The paucity of the Dorset wares (early fabric—15 sherds; later fabric—1 sherd) indicates that it is unlikely that this area of the hill witnessed any first century AD activity contemporary with Cadbury 9B and 9C (Alcock 1980, 699–705; figs. 8 and 17–19) when these wares are known to have dominated assemblages.

This division into three ceramic phases may be ambitious for such a small collection of material, and should be viewed with some caution.

The occupation in this area of the hillfort appears to have occurred primarily during the Middle and Late Iron Age (Phases 2 and 3) with a small amount of earlier activity (Phase 1) but none during the latest pre-Roman Iron Age (Tables 5 and 7). The presence of quantities of highly decorated Early Iron Age jars and bowls, dated to the 7th century BC if not earlier, and identified amongst the material recovered from the western area of the hillfort (Morris 1987, fig. 3, 17; fig. 4, 8–11, 30–34; fig. 5, 14, 16–17), were not found on this part of the site, nor in any of the rescue work in the past 20 years (Ellison and Pearson 1977; Smith 1990; Adkins and Adkins 1992).

Production and Exchange

With this phasing it is possible to emphasise the changes in pottery production and exchange in the south Somerset area, a topic which has been addressed by various authors over several years. Alcock (1980) first used the presence of local calcareous fabrics to characterize his early phases at South Cadbury (Cadbury 4–6), and noted how the Durotrigian wares came to dominate the assemblage by Cadbury 8. This recognition of Early Iron Age fabrics being made from local resources was also observed in the assemblage from the settlement at Ilchester (Ellison 1982, 125), where it was concluded that pottery production in the earlier Iron Age was a local activity.

However, by 1989 it was evident that the use of a very distinctive non-local pottery was

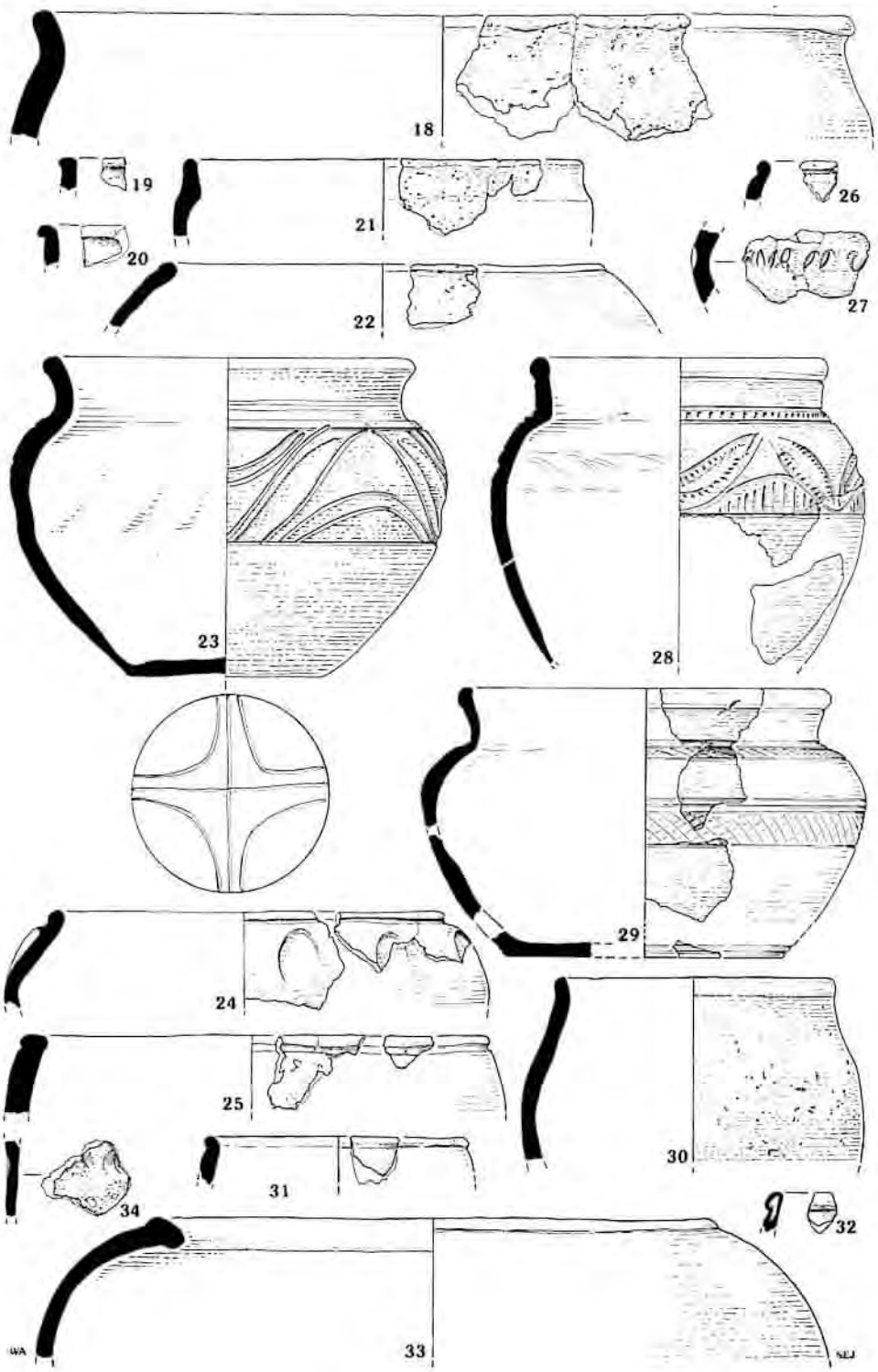

Fig. 7 Iron Age pottery (18–33)

Table 7: Frequency of diagnostic forms by number of records in selected features Class A (number of vessels in brackets).

Feature	Rim forms																Base forms			Dec.	Phase
	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	B1	B2	B3	D1	
pit 97	2	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
pit107	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	1	1
pit 9	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	-	2
pit 16	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	2
pit 39	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	-	-	2
pit 133	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	1	-	-	-	2
pit 147	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	1	-	-	-	2
pit 47	1	-	1	-	-	2 (1)	5 (3)	1	1	-	-	-	-	-	1	-	1	-	1	2	3
pit 72	-	-	-	-	-	-	-	-	2 (1)	1	-	-	-	-	-	-	3	1	-	2 (1)	3
pit 73	-	-	-	-	-	-	2 (1)	-	-	-	-	-	-	-	-	-	1	-	1	-	3
pit 75	-	2 (1)	-	-	-	-	2	-	-	-	2 (1)	-	-	-	-	-	4 (1)	-	-	-	3

Table 8: Percentage of local and non-local pottery by phase.

Phase	Local fabrics	Non-local fabrics
1	98.5–100%	0–1.5%
2	65.0–93.1%	6.9–35.0%
3	27.1–100%	0–72.9%

an apparently common occurrence during the Late Bronze and Early Iron Age. Petrological analysis has demonstrated that some of the pottery of this period recovered at Norton Fitzwarren (Williams 1989; Woodward 1989) and Brean Down (Williams and Woodward 1990, 122) had been made with a felspathic tuff fabric, which has a likely source on Beacon Hill, to the north-east of Shepton Mallet in the Mendip Hills.

The evidence from this site suggests that by the 5th century, if not earlier in Phase 1, some non-local, pre-Glastonbury style pots, either plain or decorated with finger-tip impressions (Figure 7; 34) and made from this same felspathic tuff rock fabric (R1), were being acquired for use at Ham Hill (Tables 2 and 8), 30 km from the source. This is undoubtedly a rare occurrence in Phase 1, but a considerable quantity of vessels made from this fabric were being used during the Late Bronze and Early Iron Age at Norton Fitzwarren (Woodward 1989, table 4), located *c.* 45 km from the source.

What is important to note is that by Phase 2, at least one of the features which contained these non-local, pre-Glastonbury style pots also contained a granite quern fragment (pit 133), and generally non-local pottery was becoming more common. Therefore, it appears that the trade of objects associated with both the processing (querns) and probable storage and cooking (pots) of grain was an integral part of Middle Iron Age life in Somerset prior to the appearance of the highly decorated and burnished Glastonbury-style wares.

The well-known developments in the later Iron Age, with the appearance of these South Western wares, and the adoption and eventual dominance of the Durotrigian wares accompanied by the complete disappearance of local pottery production, have been discussed already (Morris 1988, 44–5; 1994, 28–9; Brown 1991, 198–203). The sources for these wares range, once more, from Beacon Hill, Shepton Mallet (fabric R4), or from near Exeter (fabric R3) or Poole Harbour (fabrics Q5; Q8), distances of between 30 and 60 km from Ham Hill.

Deposition

Several aspects about the nature of the pottery deposited within the pits need to be addressed. Three vessels were apparently re-burnt after use, parts of four vessels were found to have been deposited throughout the fills of four large and deep pits, while only one occurrence of sherds joining between features could be identified.

Two pits contained rich burnt components, and the pottery from these layers was also apparently burnt. Context 42 in pit 16 contained two vessels in different fabrics (Q6; S1) which were oddly burnt and bore an unusual variation of surface colours due to this re-firing or burning. One (Figure 6; 12) had been used, as indicated by the presence of both soot on the exterior and charred residue on the interior of the vessel, prior to re-burning and deposition. Pit 75 contained parts of a large storage jar (Figure 7; 33) distributed throughout the layers, which was very friable and slightly bloated, but not an extreme case of distortion as may result from the burning of a structure (Morris 1992, 13–6, fig. 6).

Two of these vessels were likely to have been used for the storage and cooking of food,

Table 9: Joining sherds between contexts.

Phase	Feature	From	To	Fig. no.
1	pit 107	context 101/PRN 1395	context 102/PRN 1398	Fig. 6, 7
3	pit 47	context 48/PRN 1286	context 50/PRN 1301	Fig. 7, 23
3	pit 72	context 89/PRN 1331	context 116/PRN 1334	Fig. 7, 28
3	pit 75	context 82/PRN 1360	context 123/PRN 1371	Fig. 7, 33
		context 108/PRN 1367	context 123/PRN 1372	Fig. 7, 33
		context 108/PRN 1368	context 123/PRN 1371	Fig. 7, 33

and their association with other burnt components in these pits (Table 1) provides a link between the production, curation and processing of food and the activities surrounding the deposition of artefacts and food in deep features. Such correlations between artefacts and burnt organic deposits provide the basis for the study of the complex and highly structured patterns of human behaviour on Iron Age sites in southern Britain (Hill 1994).

The nature of deposition of material into pits can be examined further by recording the joins of sherds between layers. If this does occur, then the rapid and purposeful infilling of a feature can be interpreted or used to support other observations. Seven instances of joins between sherds from different layers within the same feature were found in four pits (Table 9). There is only one instance of pot sherds joining between features, and this is solely due to the cut of one feature (pit 97) disturbing the contents of another (pit 107), which is emphasized by several sherds from the same vessels being found in both pits. This is in contrast to two pieces of a granite quernstone which join between two features, one dated to Phase 2 (pit 133) and the other unphased Iron Age (pit 126), situated 13 metres apart. Therefore, if different materials are considered, this type of deposition is noted for at least one pit in each phase, suggesting that during the 500 years of occupation similar types of depositional activity were taking place.

PETROLOGICAL ANALYSIS OF TWO IRON AGE SHERDS by D.F. Williams

PRN 1301, fabric R3, pit 49

A rim sherd from a jar in a soft, coarse fabric, dark grey (Munsell 5Y 4/1), burnished outer surface, slightly lighter grey core and inner worn surface. There is some evidence of soot encrustation on the outer surface. Thin sectioning and study under the petrological microscope shows an unusually mixed assemblage of non-plastic inclusions. These comprise fragments of volcanic rock, sandstone, shale, siltstone, quartzite, mica, and distinctive grains of sanidine felspar. This wide range of rocks and minerals closely matches Peacock's Group 5 (sanidine) Glastonbury ware fabric (1969). The most likely raw material source for this group was suggested to be the Permian of south-western England, in particular the area north of Watcombe to Exeter and along the Crediton Valley as far as Colebrook (*ibid.*). A small amount of similar material has recently been seen by the writer from sites D and K at nearby South Cadbury Castle.

PRNs 1219–1222, fabric R1, pit 9

Plain body sherd in a soft, coarse fabric, darkish buff to reddish-yellow in colour (Munsell 7.5YR 7/4–7.5YR 6/6). In thin section, the most prominent non-plastic inclusions are made up of joined and discrete grains of plagioclase felspar, some of them showing signs of being altered to sericite, set in a reasonably fine-textured clay matrix which also includes a few

grains of quartz, flecks of mica and iron oxides. This fabric has previously been noted by Peacock in a limited number of Glastonbury ware sherds from Somerset (*ibid.*), and a source was suggested in the region of Beacon Hill near Shepton Mallet, where there is an outcrop of Silurian volcanic rocks, mainly andesitic lavas and felspathic tuffs (Green and Welch 1965). A similar origin seems likely for the Ham Hill vessel. As far as the writer is aware, all the examples yet found in this fabric come from sites in Somerset, including pottery from Brean Down (Williams 1990). This narrow distribution may indicate local copying of Glastonbury ware forms, as mentioned by Peacock (1969).

Illustrated Prehistoric Pottery

Figure 6

1. Beaker; base, 35% present, 80 mm diameter; fine, grog-tempered fabric; decorated with toothed-combed horizontal lines; wall thickness 5–7 mm; Pottery Record Numbers 1485–1486.
2. Beaker; joining decorated body sherds; same fabric as above; pinched finger impressions or rustication; wall thickness 7–9 mm; PRNs 1487–1488.

Ceramic Phase 1

3. Rim; fabric S1; form R12, 5%, 200 mm; smoothed on exterior; context 91, pit 97; PRN 1381.
4. Rim; Q2; R1, 5%, 200 mm; soot on exterior; 91, pit 97; PRN 1383.
5. Rim; S1; R5, <5%; 91, pit 97; PRN 1384.
6. Rim; S2; R1, <5%; 91, pit 97; PRN 1385.
7. Decorated neck cordoned jar; S1; R13, 5%, 220 mm; decorated with applied, finger impressed cordon and finger-tip impressions on neck; 101/102, pit 107; PRNs 1395/1398.
8. Rim of shouldered jar; S1; R14, 12%, 190 mm; 102, pit 107; PRN 1399.
9. Rim; P2; R12, 5%, 180 mm; 104, pit 107; PRN 1403.

Ceramic Phase 2

10. Rim, S1; R3, 6%, 120 mm; 42, pit 16; PRN 1242.
11. Rim; S2; R4, <5%; wiped exterior surface; 42, pit 16; PRN 1243.
12. Decorated body sherd; Q6; applied pellet impressed with finger tip; soot on exterior, burnt residue on interior; 42, pit 16; PRN 1247.
13. Rim; S1; R5, 25%, 170 mm; soot on both surfaces possibly due to pit fill deposit; 58, pit 16; PRN 1252.
14. Rim; S2; R2, <5%; soot on exterior; 4, pit 39; PRN 1265.
15. Decorated rim; S1; R1, <5%; decorated with finger-tip impression on top edge of rim; 131, pit 133; PRN 1418.
16. Rim; R1 (felspathic tuff); R15, <5%; 131, pit 133; PRN 1422.
17. Rim; S1; R15, 8%, 340 mm.; soot on exterior; 132, pit 133; PRN 1424.

Figure 7.

Ceramic Phase 3

18. Rim; S1; R15, 8%, 360 mm; 48, pit 47; PRN 1280.
19. Rim; Q2; R1, <5%; 48, pit 47; PRN 1285.
20. Rim; Q2; R8, <5%; 49, pit 47; PRN 1288.
21. Rim; C2; R3, 10%, 160 mm; smoothed on exterior; 49, pit 47; PRN 1295.
22. Rim; S2; R7, 5%, 180 mm; 49, pit 47; PRN 1296–1297.
23. Decorated bowl, South Western style; R3; R9–11%, 160 mm, B3–50%, 100 mm; vessel height *c.* 140 mm; decorated with tooled lines and elongated oval facets on vessel walls, tooled shallow cross and arcs on underside of base; burnished on exterior; soot on exterior; 48/50, pit 47; PRNs 1286/1301.
24. Decorated rim; S2; R7, 20%, 160 mm; decorated with impressed dimple; soot on exterior; 50, pit 47; PRN 1303.
25. Rim; S1; R6, 13%, 190 mm; 50, pit 47; PRN 1305.
26. Rim; S1; R7, <5%; 50, pit 47; PRN 1307–8.

27. Decorated body sherd; S2; finger-tip impressions on curved body wall; 50, pit 47; PRN 1311.
28. Decorated bowl, South Western style; R3; R9, 20%, 120 mm; tooled lines and elongated, oval facets with stabbed pointed tool ends infilling parallel tooled lines; burnished on the exterior; soot on exterior; 89/116, pit 72; PRNs 1331/1334.
29. Decorated bowl, South Western style; R4; R10–8%, 160 mm, B1–13%, 120 mm; decorated with incised lines and lattice design; burnished on exterior; 71/116, pit 72; PRNs 1323/1335–1337.
30. Rim; S1; R2, 12%, 110 mm; burnished on exterior; soot on exterior; 76/77, pit 75; PRNs 1354/1358.
31. Rim; I1; R7, 5%, 100 mm; 77, pit 75; PRN 1355.
32. Rim; S2; R7, <5%; soot on exterior; 82, pit 75; PRN 1364.
33. Rim; Q7; R11, 27%, 220 mm; limescale and charred residue on interior of vessel walls; 76/77/82/108/123, pit 75; PRNs 1353/1357/1360–1362/1367–1368/1371–1372.

Unphased

34. Decorated body sherd; R1 (felspathic tuff); finger-tip impressed decoration; 23, linear 37; PRN 1256.

THE FIRED CLAY by M. Laidlaw

Forty-four fragments of fired clay were recovered from ten pits and a natural feature (Table 1), comprising 38 featureless fragments, three spindle whorls, and one possible sling shot.

The featureless fragments, recovered in small quantities from pits 9, 16, 38, 47, 73, 75, 126 and feature 11, are probably structural in origin, from wattle and daub structures or hearth linings. Slight traces of wattle impressions are evident on a few pieces, although most fragments are rough and irregularly shaped. One large fragment from pit 47 is heavily burnt.

Two complete and one almost complete spindle whorls were recovered from pits 39, 107 and 136 respectively. All three are similar in size, all 20 mm in width and ranging from 35 mm to 40 mm in diameter. One is of a flattened spherical shape in a fine fabric with soft, non-calcareous particles (18g). The two others are of a sandy fabric with sparse, flint inclusions (*c.* 30g when complete). One is bun-shaped and the other biconical. Although not closely datable, these forms are commonly found on Iron Age sites (eg. Poole 1984, 401; 1991, 210).

One fired clay fragment found in pit 75 could be interpreted as a sling shot. It has a typical pointed ovoid shape, 29 mm in length (5g). It is, however, rather light for a slingshot and it is slightly smaller than other published examples (Poole 1984, 398; 1991, 210).

WORKED FLINT AND CHERT by P. A. Harding

The assemblage has been classified into several basic categories according to context. The results are presented in Table 10.

The raw material is predominantly flint with only a few chert pieces. The variety and colours of the flint are comparable with those described by Smith (1990, 33), and it is likely that the source can be traced to the clay loam with flints and gravel deposits which occur within 3 km to the south-west of the site. The Greensand chert probably originated from the Greensand which outcrops approximately 10 km to the south.

Only one group from pit 14, accompanied by sherds of Beaker pottery, represents a complete stratified assemblage. This group is dominated by finely retouched end scrapers made on flakes. They are all in mint condition with no perceptible wear or damage to the edges. There is also a cortical flake retouched at the distal edges to form a scraper/knife. The waste flakes of both flint and chert are undiagnostic. Groups of this type with a high

Table 10: Worked flint by context

Context	1	2	3	4	5	6	7	8	9	Total
Topsoil/Subsoil	1	1	6	2	4		1	1(P)	1	17
EBA pit		3	1	2	9	1		5(G)		21
Iron Age pits	1	14	12	5	1		5	2(G)	1	41
Modern		1	1	1						3
Natural features	1	5	7		2	1		1(P)		17
Total	3	24	27	10	16	2	6	9	2	99

Key: 1 Cores, 2 Flakes, 3 Broken flakes, 4 Burnt flakes, 5 Scrapers, 6 Other tools, 7 Retouched flakes, 8 Chert (P) = Portland (G) = Greensand, 9 Others.

retouched tool component may be taken to represent the refuse from domestic activity rather than tool manufacture.

Most of the remaining material had been redeposited in Iron Age pits across the site. Individual pieces show minor edge damage consistent with artefacts from secondary contexts. The technology of the waste material includes platform abrasion and rejuvenation/faceting, techniques which are largely unknown after the Early Bronze Age. A barbed and tanged arrowhead of Green Low type (Green 1980, fig. 46), the tip of which was damaged by a probable impact fracture, was found in the fill of the natural feature 142. An arrowhead of similar type, which is commonly associated with Beaker inhumations (*ibid.*, 140) was found by Smith (1990, 33).

The date and range of tools and waste are comparable with the assemblage examined by Smith (*ibid.*). His examination of 338 pieces described material from the Mesolithic to the Early Bronze Age. Retouched pieces, as in the recent excavations, also accounted for a high proportion of the collection. This may be due partly to the fact that natural raw material is scarce and waste products may be expected to be kept to a minimum. The presence of exhausted cores and rejuvenation tablets/faceting chips, however, which are by-products of the knapping process, indicate that knapping was taking place on the site.

It can be concluded that the flint component confirms an extensive occupation. The technology of the flaking and retouched tools suggests that activity may have begun as early as the Mesolithic period, although it is more likely that most of the flintwork dates from the Early Neolithic to Early Bronze Age periods.

THE STONE by M. Laidlaw, incorporating geological identifications by D.P. Jefferson

The stone includes both worked stone objects and unworked but potentially utilised stone. The worked stone objects comprise fragments of four rotary quern stones, five whetstones, and two worked pebbles; the latter possibly used as rubbing stones. Fifty-six pebbles were recovered which have been interpreted as possible slingstones. Most of the stone was recovered from Iron Age pits, although 16 of the slingstones were found within the topsoil and the ploughed subsoil (Table 1).

Querns

One of the quernstones, from pit 73, in a medium grained, fossiliferous sandstone, is an almost complete upper stone, similar in form to Danebury type R2 (Brown 1984, 415). It

has a slightly concave upper surface and a hand groove that terminates before reaching the central cavity. The four remaining quern fragments, comprising two joining pieces from a granitic quernstone found in pits 126 and 133, one calcareous tufa fragment from pit 70 and one unstratified sandstone fragment, also appear to be from upper stones, although due to their fragmentary nature could not be definitively assigned to type. While the quernstones are not closely datable, the contexts and associated finds would indicate an Iron Age date: they are frequent finds on other Iron Age sites, eg. Danebury (*ibid.*).

The sandstone is most likely to be from the sandstone horizon in the Abbotsbury Ironstone which outcrops near the village of Abbotsbury, Dorset, 32 km to the south. A likely provenance for the calcareous tufa fragment may be the outcrops of tufa at Maiden Hill, while the granitic stone is likely to derive from Devon or Cornwall.

Whetstones

The five whetstones are all of a fine-grained, iron-rich sandstone from Abbotsbury, Dorset, and have the overall smoothness and worn areas indicative of their function. These objects came from pits 16, 107, 133, with two from pit 130. Associated finds indicate that they are Iron Age in date.

Rubbing Stones

Two possible utilised/rubbing stones were found; both are oval in shape with smooth rounded edges and polished surfaces.

Slingstones

The 56 potential slingstone pebbles are consistent in shape and size, which may indicate that they were deliberately selected. All are oval, measuring on average 40–50 mm long and 30–40 mm wide and weighing 37–50 grammes. These measurements are very similar to those for pebbles interpreted as slingstones from previous excavations at Ham Hill (Smith 1990, 39; Adkins and Adkins 1992, 92) and also at Maiden Castle and Danebury (Wheeler 1943; Brown 1984, 425; Laws 1991, 232). The pebbles are mostly of quartzite, flint, and occasionally sandstone. Deposits along the south coast between Bridport and Weymouth Possible have been suggested as possible sources for the Ham Hill pebbles (Jefferson 1992).

COPPER ALLOY OBJECTS by Andrew J. Lawson

Five copper alloy objects were recovered during the excavation (Table 1).

1. 'Bugle shaped object' with a tubular baluster shaped body, 62 mm long and with a broad longitudinal slot, 25 mm long, with a raised rim damaged on one side. A broad loop depends from the body. Context 10, Pit 9; S.F. No 1000. (Fig. 8: 1).

This is the second example from Ham Hill, an earlier, unprovenanced and fragmentary example existing in the collections of Taunton Museum (Pearce 1983, pl. 89, 750f).

It is generally believed that these objects form parts of strap or harness unions. Similar examples are distributed throughout northern and western France as well as southern Britain (Jockenhövel 1972; O'Connor 1980, list 166, map 61), although they are more numerous in

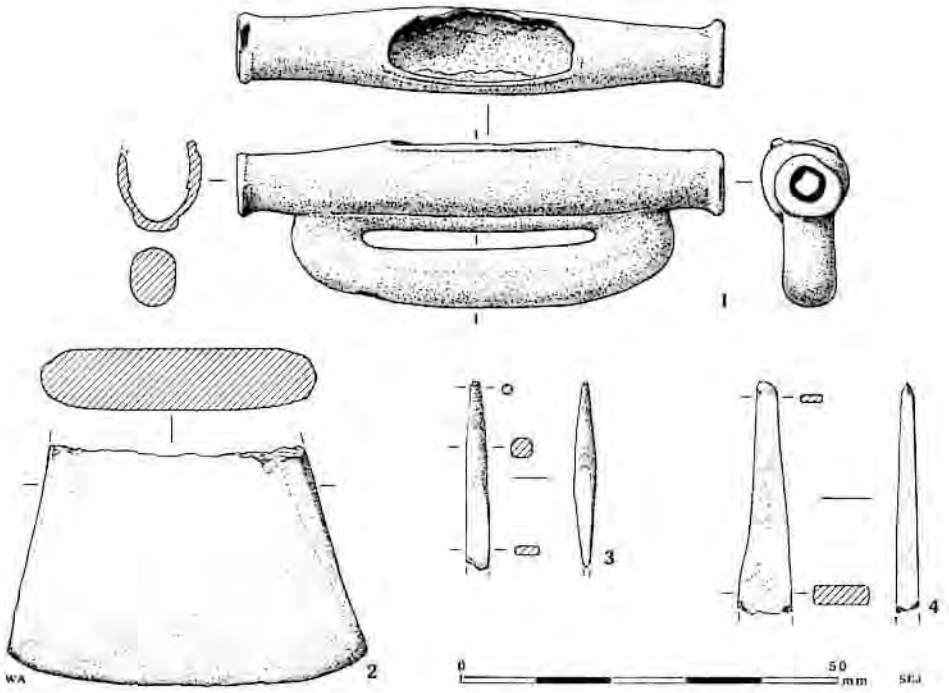

Fig. 8 Copper alloy objects (1–4)

France. In Britain, the majority of finds have been in eastern England but three find spots are recorded in Wales, while the nearest discoveries to Ham Hill have been a related (two piece) example from Wayland's Smithy, Oxon., and examples from Lulworth, Dorset, and Potterne, Wilts. Bugle shaped objects are well associated, most previous finds coming from hoards. These associations provide an indisputable date for the type at the end of the Bronze Age (Bronze Final III in France; Ha B3 in central Europe; Ewart Park or LBA3 in England) in the 9th or 8th centuries BC (Burgess 1979, 271).

2. Socketed axe fragment, 47 mm wide, being the sharp but slightly damaged cutting edge of a faceted form. Context 10; Pit 9; SF No. 1001. (Fig. 8: 2).

The vast majority of associated faceted axes come from unequivocal Ewart Park phase hoards, but recent work suggests a slightly earlier origin for the British series (Needham in O'Connell 1986, 45). A number of examples are known in the south-west, including the unusual, high-collared example from the Stogursey hoard (Pearce 1983, 33 and no. 746c), and more standard examples together with a bronze mould for the type from the Donhead St Mary hoard, Wilts. (Passmore 1932).

3. Wire or pin fragment, 22 mm long, 2 mm max. diameter, irregular in cross-section and bent. Context 89; Pit 72; SF No. 1005.

Bronze wire is known in the Late Bronze Age (for example from the Donhead St Mary hoard, Wilts), but is not unexpected in an Iron Age context (for example at Maiden Castle, Dorset; Sharples 1991, 154).

4. Small awl. 25 mm long. 3 mm max width. with circular tang and flattened end. Context 148: Pit 147; S.F. No 1018. (Fig. 8; 3)

Awls are amongst the earliest metal objects in the British Isles but bronze examples are current throughout the Bronze Age. Although it might be expected that such a simple utilitarian object would be replaced in later centuries by iron, bronze examples continue to occur in later contexts, for example at Staple House (Brewster 1963, 113) and Danebury (Cunliffe 1984, 346 and fig. 7.7).

5. Tapering fragment 30 mm long with sharply rectangular section possibly a tang. Context 98, Pit 107, S.F. 1024. (Fig. 8: 4)

Discussion

Previous collection of artefacts from Ham Hill has provided a wide range of bronzes of different dates, for example palstaves, axes, and spearheads (Colquhoun 1978, nos. 34 and 37, 80 and 82, no. 101 respectively), a socketed knife and awls (Pearce 1983, 750 l and 750 n-o respectively), as well as stone mould fragments for making socketed axes (Pearce 1983, pl. 153). Taken with other evidence from the site, this range and concentration of objects suggest that the hilltop has been a focus of activity, perhaps intermittently, from the Middle Bronze Age to the Late Iron Age. Concentrations of Bronze Age metalwork have been found at several, mainly hilltop sites (for example, Norton Fitzwarren, South Cadbury, and Mount Batten) in south-west Britain, although metalwork is not uncommon on other settlements leading to the suggestion that the production of metalwork may have been a common activity on settlement sites (Pearce 1976; 1983, 169–82). The quantities of bronzes at hilltop sites may, however, be a reflection of the frequency of use and density of inhabitation of the sites rather than a reflection of enhanced status.

The objects of unambiguous Late Bronze Age date (Nos. 1 and 2) are associated in pit 9 with Middle Iron Age pottery and, therefore, seem to be residual. The other three objects are also associated with Iron Age pottery of various dates and are likely to be contemporaneous with the ceramics. The likelihood of all of the bronzes being residual does not help with an understanding of the circumstances of their original discard: it can merely be stated that small objects and fragments appear to have been present on the site and, at a considerably later date, to have been incorporated into the backfill of the pits.

IRON OBJECTS by A.P. Fitzpatrick

Four iron objects were found during the excavation. Two other objects found subsequently derive from one of the pits next to the quarry face which was not excavated. All the finds are of types previously recorded from the site. The objects are poorly preserved with extensive corrosion, and despite careful excavation and lifting, the currency bar and nave hoops are now in many pieces. X-radiography and selective interrogative conservation to clarify the identification of the excavated pieces were undertaken by Liz Goodman at the Conservation Centre in Salisbury, and her observations are incorporated into the following comments. The neckrings were X-rayed by Stephanie Ward and since the completion of this report they have been acquired by Somerset County Museums Service.

Vehicle Fittings

Two complete iron nave hoops, which bound the ends of wheel naves, were found at the base of pit 73, contexts 119 and 122. Both hoops have the remains of iron nails which

helped fix them to the nave (Stead 1979, 40–4, fig. 11). The position of the hoops on the bottom of the pit, *c.* 0.5 m apart, suggests that they were attached to the nave when deposited. Some of the carbonised wood from the context is worked (Gale p. 124) and could be from wheel spokes. There are also extensive traces of mineralised organic materials, probably wood, on the interior and exterior of the hoops, but it is unclear which, if any, of these remains represent the wooden nave of the wheel. There is no evidence for an iron tyre or for any iron felloes which often fixed the wheel, so it is unlikely that a complete wheel was put in the pit. The hoops have very different profiles and while this may be due simply to the diversity in felloes (Stead 1979, 44), or even re-use (e.g. Kirkburn, East Yorkshire (Stead 1991, 42)), the two hoops from the Camerton, Somerset 'hoard' are also different (Jackson 1990, 63, pl. 28, 272–3). An iron ring from Ham Hill has previously been identified as a nave hoop (Fox 1946, 15, fig. 7). A 3rd/2nd century BC date for the present finds is likely.

1. Complete hoop; *c.* 140 mm in diameter, 14 mm wide with a 'D'-shaped section. Now in many fragments, one of which has evidence for an iron nail shank in it and another has what may be a nail head attached to the outside of the hoop. S.F. 1007, context 119 (Fig. 9; 1)
2. Complete hoop; *c.* 140 mm in diameter, 22 mm wide, with a rectangular section which expands at the edges, probably where it was clenched over the nave. An iron shank projects into the inside of the hoop. This hoop is quite wide but falls within the range given by Stead (1979, 40–1). S.F. 1008, context 122 (Fig. 9; 2)

Weaponry

A broken spearhead, probably of Middle Iron Age date, was found on the base of pit 16.

3. A simple spearhead, broken above the socket, now 75 mm long. The metallurgical structure of the blade is clearly visible in the fracture. There is no standard classification for British Iron Age spearheads, but in common with many finds of Middle Iron Age date the present example has only a slight thickening at the centre and would have been quite small, perhaps only 120 mm long (Stead 1991, 74–5). Iron spearheads have been found previously at Ham Hill (eg St. George Gray 1902, 42). S.F. 1003, context 42 (Fig. 9; 3).

Ironworking

A complete sword-shaped currency bar was also found placed on the base of pit 73 against the northern wall, close to the two nave hoops. When found, the bar was broken almost in two but this damage may be post-depositional. Currency bars were stock iron which had been forged. This and the shaping of the socket indicate the quality of the iron, in this case echoing the shape of a sword. The bar was not, however, a blank from which to manufacture swords, as the phosphorous level of bars of this type is much higher than those of contemporaneous swords (Tylecote 1962). The location of the find, in a pit near to the ramparts (Figs. 2 and 3), comprises another addition to the distributions identified by Hingley, where currency bars were deliberately deposited near to the boundaries of settlements, particularly hillforts, in western England (Hingley 1990, 98–103, fig. 2–3). The present find is probably a votive offering as was the large hoard of 70–80 similar bars from Ham Hill found in 1845 on Strouds Hill, to the north of the present excavations (Allen 1967, 326–7, no. A5).

The securely stratified context of the present find provides further evidence dating these ingots to the Middle Iron Age, particularly to the 3rd/2nd centuries BC (Hingley 1990, 92).

4. Complete currency bar; now 880 mm long, 32 mm wide and 2 mm thick, but corrosion loss means that these dimensions may be smaller than the original ones. As the bar is now in many

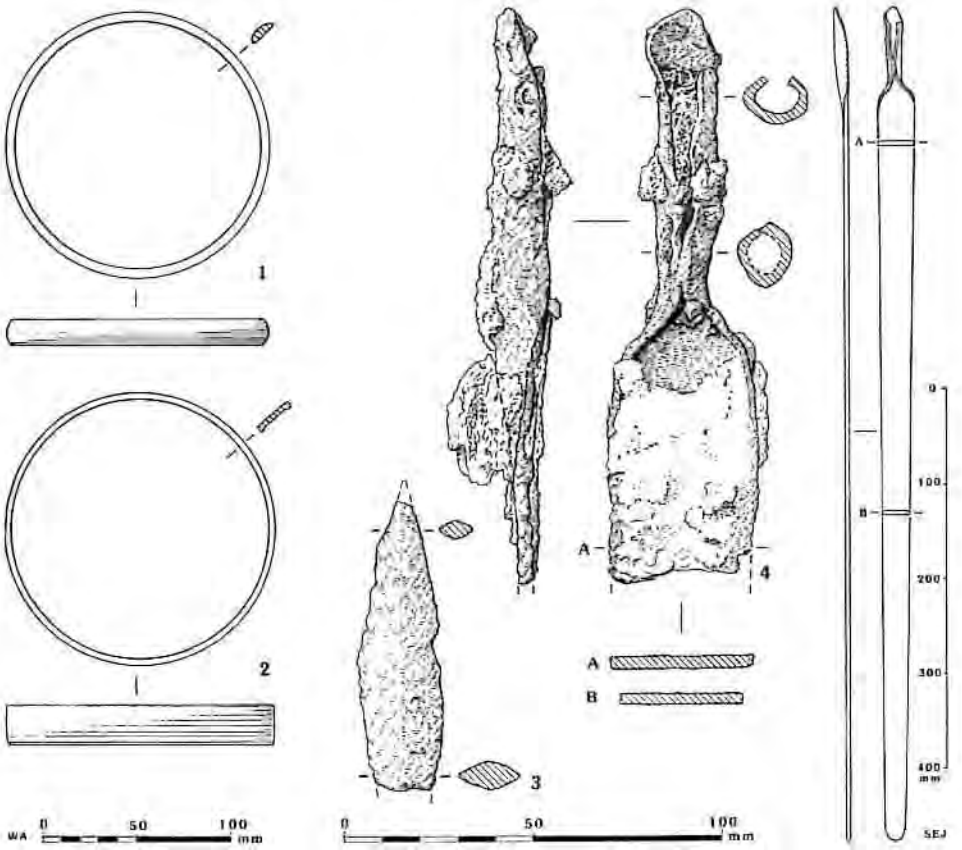

Fig. 9 Iron objects (1–4)

fragments, badly corroded, and has not been fully conserved, it has not been weighed. The rectangular-sectioned blade tapered to a point. The top of the handle is rounded which is characteristic of Allen's sword type currency bar, the most common form in southern England (1967, 308–10, fig. 1; pl.-xxix-xxx). It falls within the Hod Hill/Danebury type of Crew's recent typology (1994). Although there are traces of organic material on the blade, there is no certain evidence for a wooden handle. S.F. 1017, context 119 (Fig. 9; 4).

Personal Adornment

After the completion of the excavation two twisted iron neckrings or torques were discovered at the foot of the quarry face and were made available for study. Although now in two parts, there is a recent break which suggests that the neckrings were joined together until very recently (Plate 3). It seems certain that they derive from one of the four pits (183–6; Figure 3) near to the quarry edge which were recorded but not excavated for reasons of safety.

Both the neckrings have linking bars, and belong to a type of which only a small number are known. The X-rays suggest that the linking bars of the neckrings had been linked into

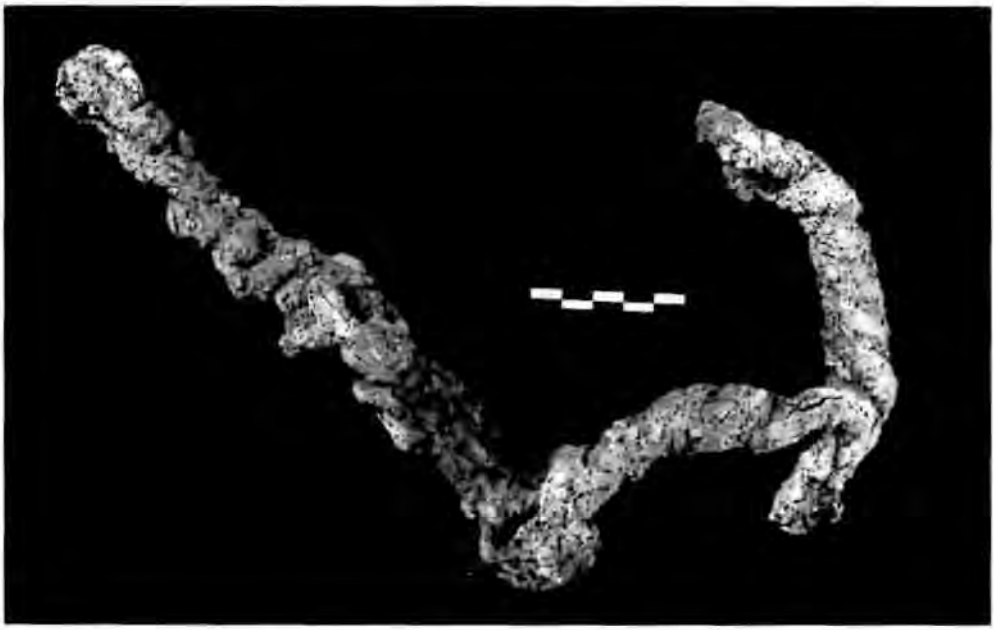

Plate 3. Iron neckrings, probably from pits 183–6: scale 50 mm

the terminals of the other piece, which would originally have formed a quatrefoil arrangement. The pieces find close parallels in pieces from the Spettisbury, Dorset 'massacre deposit' (Hawkes 1940) and, particularly, from Danebury, Hampshire (Sellwood 1984a, 371, Fig. 7.25, 2.202) the Camerton, Somerset hoard (Jackson 1990, 63–4, pl. 28, 274). There is also an earlier find from Ham Hill of what appears to be a slightly larger twisted iron torque with larger loop terminals, but without a linking bar. This piece was found in the quarry immediately to the north of the present excavations in 1930 (St George Gray 1930; Thomas 1965, pl. 270). The Spettisbury and Camerton deposits, though not necessarily all the materials incorporated in them, date to the mid-first century AD, but the Danebury find is likely to be 2nd century BC in date.

Iron torques and neckrings are not as rare as might be thought (Hawkes 1940; MacGregor 1976, 111, map 14), but attention has focused on the spectacular gold examples. The iron torques, and certainly the neckrings with linking bars, appear to have a restricted distribution which echoes that of the decorated Wraxall class copper alloy 'collars' or neck rings. These 'collars' are largely found in south-western Britain, and date to the late in the Iron Age (Megaw 1971; Beswick *et al.* 1990, 26–7).

What has been suggested to be an iron torque was allegedly found around the neck of a skeleton at Ham Hill in the 19th century (Norris 1886, 82, pl. III, 1; Hawkes 1940, 114), but the piece appears to be a simple ring while the claimed association must be viewed cautiously. On the basis of the date of the nearby pits, the new finds, and probably that made in 1930, are likely to date between the 3–1st centuries BC, and be broadly contemporary with the Danebury find. It seems likely that the neckrings were deliberately entwined before being deposited, almost certainly deliberately, on the base of a pit. The interlinking and sometimes breakage of Iron Age gold torques elsewhere in England has been argued to be deliberate (Fitzpatrick 1992, 396).

5–6. Two apparently complete and originally interlinked neck rings. Both are *c.* 140 mm in and *c.* 20 mm thick. Their combined weight (corroded and unconserved) is 709.5 g (Pl. 3).

THE WORKED BONE by M. Laidlaw

Three worked bone objects were recovered, comprising part of a possible disc of unknown function (pit 72); a fragment with an incised ring-and-dot motif, possibly from a bone comb (pit 75); and one highly polished point or gouge fragment (pit 16).

All three objects are likely to be of Iron Age date. The possible comb fragment may be compared with examples from Danebury (Sellwood 1984b, 374, fig. 7.27). The polished point appears to fall within the group of gouges defined as Class 2 at Danebury, a type cut in a longitudinal direction with long, pointed terminals, raised flanges at either side and the point and lower surface worn flat (*ibid.*, 382). Gouges were probably multi-functional tools, and have a broad date range.

ENVIRONMENTAL EVIDENCE

HUMAN BONE by Jacqueline I. McKinley.

Human remains were recovered from three contexts in pit 16 (Figure 4).

Methods

Age was assessed from the stage of tooth development and eruption (Van Beek 1983); the stage of ossification and epiphyseal bone fusion (Grey 1977, McMinn and Hutchings 1985, Webb *et al.* 1985); tooth wear patterns (Brothwell 1972); and the general degree of cranial suture fusion and degenerative changes to the bone. Sex was assessed from the sexually dimorphic traits of the skeleton (Bass 1987).

Results

The majority of the bone, comprising most of a skull, fragments of rib, innominate, ulna and femur, was recovered as a discrete, disarticulated deposit (68) resting on/in context 42, and sealed by context 17. Fragments of frontal vault from 17 were found to joint those from 68. All this bone probably represents the same individual, a young adult (18–25 yr.) female. The vault was badly smashed, especially the left side which was also worn. Pathological lesions included slight cervical and occlusal caries in mandibular molars, mild periodontal disease and calculus deposits; and slight dental hypoplasia and cribra orbitalia.

Fragments of upper and lower limb bone recovered from a sample of context 42, were mostly burnt. The great variation in colour from unburnt, charred black, blue and grey, including a combination within single fragments, indicate incomplete combustion as a result of shortcomings in the time, temperature and/or oxygen supply needed for full oxidation (Shipman *et al.* 1984, McKinley 1994). The pattern of breakage and fissuring seen in the bone did not correspond with that normally noted in cremated bone (McKinley 1994), all being very angular with little or no fissuring of the cortical surface. The observations would suggest that the bone was not the remains of a cremation but secondary burning of dry or partially dry bone. Burnt animal bone was also present in 42.

The recovery of human remains from pits within Iron Age hillforts is not uncommon

(Whimster 1981). The position and nature of the deposit, close to the base of the pit in association with a concentrated layer of burnt material and clearly re-deposited from elsewhere, would comply with the 'special deposits' discussed by Cunliffe (1992). The significance, if any, of the partial burning of the human remains is unclear. The presence or recognition of burnt human bone in contexts with burnt animal bone does not appear to have been discussed elsewhere (Hill 1993). It is possible that human bone included with the animal bone was not recognised for what it was (human) and was burnt by accident. The deposition of the skeletal elements comprising context 68 clearly post-dates the burning, though probably only very slightly since there had been no time for silting to occur. It may be significant that skeletal elements most easily recognised as human (ie the skull) were amongst the unburnt bone.

CHARRED SEEDS by Joy Ede

Introduction

Most of the features excavated in this area of the hillfort in recent years have comprised pits (Smith 1990; Adkins and Adkins 1991), thereby restricting the range of contexts available for analysis to those relating to a specialised function, eg storage and waste disposal. There was no opportunity to examine deposits relating to a variety of activities or to assess any significant spatial variation.

Methods

Eleven samples from different features were submitted with the aim of adding further information to that obtained from previous analyses (Ede 1990; Letts 1994). The samples were not, therefore, analysed as fully as for previous reports, except where specific identifications provided new information about this area of the hillfort. Larger flots were sub-sampled and the results multiplied to represent a standard sample of 10 litres. The results are presented in Table 11.

Results

The samples showed a range of preservation from extremely good (eg pit 73, sample 519) to rather bad (eg pit 72, sample 528 and tree bowl 62, sample 505).

Early Bronze Age

Evidence for the Early Bronze Age is limited to a single feature (pit 14) which contained very few carbonised remains except charcoal. Wheat and barley were represented by one grain of each cereal and there was no chaff or weed seeds. Hazel nut fragments were also recorded.

Table 11: Charred seeds by pit and context

			EBA		IRON AGE				NAT			
			Phase 2		Phase 3				unphased within Iron Age			tree hole
		Sample	502	507	510	516	519	528	513	520	542	547	505
		Context	3	42	50	77	119	116	25	114	138	129	46
		Pit	14	16	47	75	73	72	26	115	126	130	62
	Proportion of sample examined		1	1/8	1/4	1/4	1/32	1/12	1	1/8	1	1	1
		Sample size (l)	10	10	10	10	10	10	10	10	10	10	10
Taxa	Common Name												
GRAIN	emmer wheat												
Triticum dicoccum													
T. cf dicoccum	emmer/spelt wheat			1120		+200	4512		3	272	6		
Triticum dicoccum/spelta													
Triticum sp.	wheat		1		24			++				1	
cf. Triticum sp.													1
TOTAL WHEAT			1	1120	24	+200	4512	++	3	272	6	1	1
Hordeum vulgare	barley, hulled			496	28	57	3584	+	2	328	3	3	
cf. Hordeum sp.			1								1		
TOTAL BARLEY			1	496	28	57	3584	+	2	328	4	3	0
Avena sp.	oats			24		1	384			8			
cf. Avena sp.							32						
cereal indet.			+	40	+40	++	++	+	3	+	+	+7	9
Estimated total grain			3	1680	92	>250	>8512	+60	8	608	10	11	10
CHAFF	emmer wheat	glume base spikelet fork				8				8			
Triticum dicoccum													

Table 11: *continued.*

			EBA		IRON AGE				NAT				
			Phase 2		Phase 3				unphased within Iron Age				tree hole
Triticum dicoccum/spelta	emmer/spelt wheat	glume base			48	60	64	+		8	13	60	
		spikelet fork			4	32						12	
Triticum sp.	wheat	glume base		56			96	+					102
		spikelet fork					32						14
		rachis frag.		16								+	11
Avena sp.	oats	awn frag.										+	4
Gramineae	grasses, large	culm node						12		24		1	1
Estimated total chaff			0	72	52	100	192	480	0	40	13	+80	127
OTHER TAXA				8									
Papaver sp.											1		
Brassica sp./Sinapis sp.	rape/turnip/mustard			+	++	28	++			++			
cf. Cerastium sp										8	1	1	
Spergula arvensis				+		4	++				1	3	2
Caryophyllaceae indet.				+	16	+	++		1	++	3		
Chenopodium album	fat hen			+			+	+		++		18	
Chenopodiaceae indet.										24			
Vicia/Lathyrus sp.	vetch			32		16			1		2	2	
Leguminosae indet.					++		++						2
Leguminosae/Cruciferae				8								1	
cf. Alchemilla sp.				8									
cf. Aphanes sp.	parsley piert				12	+	+					5	
Rumex sp.	dock											2	
Polygonum aviculare				+	8	+	++	+		++	2	2	
Polygonum sp.									2				
Polygonaceae indet.				++	8	+	?				1		
Corylus sp.	hazel	nut frag.	+										
Euphrasia/Odontites	eyebright/bartsia												
Labiatae indet.													

Table 11: *continued.*

		EBA	IRON AGE					NAT			
		Phase 2	Phase 3				unphased within Iron Age				tree hole
Plantago major	plantain		8								
Tripleurospermum maritimum	scentless mayweed		8								
thistle									1		
Compositae indet.			16								
Bromus sp.			16	8	40	288	++				1
Bromus/Avena							64	+		25	
Gramineae indet.	grasses		++	4	+	+			8	5	1
flat Linum type					4						
?Raphanum type pod						4					
indet.				36					1	2	2
thorn										1	
Estimated total no. weed seeds		0	1600	+480	400	3200	180	2	>1600	37	+40	7
Estimated total grain		3	1680	92	>250	>8512	60	8	608	10	11	10
Estimated total chaff		0	72	52	100	192	480	0	40	13	+80	127
Estimated total no. weed seeds		0	1600	480	400	3200	180	2	>1600	37	+40	7
ESTIMATED TOTAL ITEMS		3	3352	624	750	11904	720	10	2248	60	131	144
TOTAL WHEAT		1	1120	24	+200	4512	++	3	272	6	1	1
TOTAL BARLEY		1	496	28	57	3584	+	2	328	4	3	0
Totals per litre:	grain	0.3	168	9	26	850	6	0.8	61	1	1	1
	chaff	0	7	5	10	19	48	0	4	1	8	12.7
	weeds	0	160	48	40	320	18	0.2	160	4	4	0.7
	items	0.3	335	62	75	1190	72	1	225	6	13	14.4
	wheat	0.1	112	2.4	20	450	4	0.3	27	0.6	0.1	0.1
	barley	0.1	50	2.8	6	358	2	0.2	33	0.4	0.3	0

IRON AGE

The species and families of plants represented by carbonised seeds were very similar to those found in previous analyses (Ede 1990; Letts 1994). They included hazel (*Corylus* sp.) from pit 26 which could represent food collected in the wild or nuts present on branches collected for another use, eg. firewood, hurdle making etc.

In the richest sample (pit 73), emmer type grains dominated, no chaff being clearly identifiable as spelt. In four other pits, wheat (*T. dicoccum/ spelta*) clearly dominated barley (*Hordeum vulgare*). Several other samples contained too few remains to see a trend. Barley clearly dominated wheat in one sample but elsewhere barley and wheat were more or less equal.

Of the other seeds present, some belong to families commonly recorded as being used as food plants, eg. *Chenopodium* sp. and *Atriplex* sp., *Polygonum* spp. and *Bromus* sp. (Grigson 1958; Hjelmqvist quoted in Jones 1978). It is unlikely that they were deliberately collected as a crop since the cereal remains are more prevalent, and it may be that the seeds were harvested with, but not cleaned from, the grain before consumption. However, the *Brassica/ Sinapis* sp. contains many food plants, including green plants (cabbages etc.) or seeds (*Brassica nigra*, black mustard) which can be used both as a flavouring and to ease colds and rheumatism etc. (Stuart 1987). These seeds also occur commonly as weeds of arable and disturbed land and are common in archaeological assemblages (see Letts 1994).

When found together, weed seeds and chaff represent the waste from processing grain, both usually occurring where threshing takes place. Here, however, some samples are rich in weed seeds with little chaff and *vice versa*. The lack of chaff in several samples may be explained either by differential combustion (Robinson and Straker 1991) or by the weed seeds being separated from the harvested ears/spikelets before separation of the chaff from the grain. In the glumed wheats which occur here (emmer and spelt), the chaff is quite hard to remove but is made easier by parching (applying gentle heat) before separating the chaff by rubbing or agitating. It is increasingly accepted that wheats were stored in spikelet form, as is indicated by evidence from many Iron Age sites. It is, therefore, possible that an abundance of weed seeds and little chaff are the result of sieving of the spikelets prior to storage (Hillman 1984, 5, stage 6) or prior to separation of the grain from the chaff. If cleaning was taking place before storage, then it would suggest that production and primary storage of the grain were occurring, ie that it was a producer site rather than a consumer site (though the former does not necessarily preclude the latter).

The weed seed to chaff ratio is further compounded by the recovery of whole ears of wheat (*Triticum dicoccum/spelta*) from pit 73 (Plate 4). One was cut out as a block in the pit fill and subjected to micro-excavation in the laboratory under a microscope; a sample of the grain from the context was also recovered (sample 519). Examination of the ear revealed that the chaff was extremely badly preserved and it disintegrated as it was removed from the soil block leaving clean grain. Whether the lack of chaff was due to differential combustion, or to some other factor, such as that the ears were in a state of decay before becoming carbonised, is unknown. The ear must have been burnt *in situ*, as must the others within the context. Why were ears of wheat present on the site? Storage of glume wheat has been assumed from ethnographic parallels to be in spikelet form (Hillman 1984, 8) and not as ears. Storage as ears requires the transport of a greater bulk of material as well as the necessity for a larger storage space. The ears may have ended up in the pit as debris, possibly because some grain was ruined and may have started to decay. The discarded material was obviously set alight, possibly in the interest of cleanliness and hygiene. That only ears were recovered (there was no straw preserved or culm nodes) might indicate that harvesting involved cutting the ears high on the stem.

Since analysis was restricted to material recovered only from pits, there may be a bias,

Plate 4 Ear of wheat (*Triticum dicoccum/spelta*) from pit 73

not only in the function of the features and the material within them, but also in the preservation of chaff, which should be borne in mind when interpreting the results.

Natural feature

The fill of a tree bowl (feature 62, sample 505) was rich in chaff with few grains or weed seeds. Most of the chaff was wheat glume bases, with oats represented by fragments of twisted awn. The quantity of carbonised cereal remains might indicate that this feature was of Iron Age date.

Review of the data from contemporaneous pits excavated in 1983, 1992 and 1994

A total of 17 samples from Iron Age pits (Table 12) has been analysed from excavations in this area of the hillfort (Smith 1990; Letts 1994). The methodology was similar in all cases

and the data can be compared with confidence. One significant difference was that remains from the 1983 excavations (Ede 1990) showed that wheat overwhelming predominated over barley. However, the similarities are stronger and are summarised below:

1) Emmer is the dominant wheat represented.
2) The weed seed assemblages are very similar—Polygonaceae, Chenopodiaceae, *Euphrasia/Odontites* etc. are all very common, making up the majority of weed seeds present.

Calculations of the relative ratios of grain to chaff to weed seeds (using the number of grain in each sample to equal one) enable the carbonised assemblages to be divided into five distinct groups representing different processing stages (a detailed interpretation of the groups is given in archive):

1) Cleaned grain
2) Cleaned grain + weeds from sieving prior to spikelet processing
3) i) Fine sievings
   ii) Fine sievings + cleaned grain
4) Clean grain + fine sievings + weeds from sieving prior to spikelet processing
5) Chaffy fine sievings (less weedy fields or reaping higher up stem)

When the 1994 samples corresponding to these groups are plotted in plan, they follow a trend running from east to west. Although indistinct, this pattern hints that there may have been an order in which the pits were used, or it may indicate changes in crop husbandry (low or high reaping, more or less weedy fields) and crop processing (sieving out weed seeds and chaff in separate operations, or fine sieving chaff and weed seeds from grain after parching) over time.

The most obvious difference between the sets of data is the ratio between barley and wheat. Letts' (1994) material contained more or less equal amounts of both, whereas the material examined by Ede (1990) contained rather less barley than wheat (Table 12). This is considered to be a true variation rather than a result of differing levels of identification (see archive).

There is some limited spatial variation; however, it cannot be determined which pits were in use at exactly the same time or whether there is an element of purely temporal variation. Cereal remains consisting of equal amounts of barley and wheat were disposed of in different areas to those where cereal remains consisted mainly of wheat. This variation might represent different proportions of these crops being harvested, processed or disposed of at different times.

Conclusions

The results are significant for a number of reasons. The presence of an intact length of a wheat ear implies that wheat was grown locally. It is unlikely that wheat would be traded in ear form as it is bulky, and storage of ears of wheat is uneconomical owing both to the greater bulk and to the likelihood of spoilage in storage. The ear was found in a lower layer of a pit with other charred material (Figure 5, pit 73) which would suggest that it is most unlikely that it was stored but was more probably discarded and burnt. The results from all excavations of pits in this area to date do not clearly indicate storage of grain in pits (see Letts 1994 for further discussion).

A general trend in the distribution of pits with different classes of processing waste is interesting but the reasons for it are unresolved. There is some suggestion that cereal exploitation differed either with time or that different processing methods were practised in differ-

Table 12: Comparison of cereals from Iron Age pits excavated in 1983, 1992 and 1994

	1983 excavation					1992 excavation			1994 excavation								
Sample	46	72	84	93	94	1/5	1/11	2/7	507	510	513	516	519	520	528	542	547
Pit									16	47	26	75	73	115	72	126	130
Wheat	1.4	6	6.7	132	19	45	1188	21	112	2.4	0.3	20	450	27	4	0.6	0.1
Barley	0	1	0.5	5	3	38	560	36	50	2.8	0.2	6	358	33	2	0.4	0.3
Cereal	1.1	+	0.5	82	10	231	2333	91	4	4	0.3	++	++	+	+	+	+

ent areas of the site. Barley was exploited to a far greater extent in the samples from pits analysed by Letts (1994).

The lack of preserved chaff from Ham Hill presents a problem. The residues did not contain silicified chaff which has been found on other sites and has been used to suggest differential combustion (Robinson and Straker 1991). The ear of wheat must have contained carbonised chaff which was too poorly preserved for recovery by the standard sampling and processing methods, or by painstaking micro-excavation. Whether the absence of chaff was an artefact of this particular deposit (decomposing ears?), or has wider implications for preservation, is unknown. Some samples did contain a great deal of chaff, at times associated with weed seeds.

CHARCOAL by Rowena Gale

Charcoal occurred in many of the excavated features (see archive); seven samples from five pits were selected for analysis.

Material and Methods

The charcoal was mainly well preserved. The fragments from each sample were fractured to expose a fresh transverse surface and sorted into groups based on anatomical features observed using a ×20 hand lens. Representative fragments were selected for detailed examination. These were fractured to expose the tangential and radial longitudinal surfaces and mounted in washed sand. The diagnostic features were examined using an incident-light microscope at magnifications of up to ×400 and matched to prepared reference material.

Results

The results are summarised in Table 13. The species identified included *Alnus* (alder), *Corylus* (hazel), *Fraxinus* (ash), *Prunus* (blackthorn and/or wild cherry), *Quercus* (oak) *Salix/Populus* (Salicaceae) (willow/poplar), a member of the Pomoideae (*Crataegus*) (hawthorn), *Malus* (apple), *Pyrus* (pear), *Sorbus* (rowan, whitebeam, wild service), and possibly *Betula* (birch) and *Sambucus* (elder).

In general, the charcoal was too fragmented to assess from which part of the tree it had originated (ie roundwood or heartwood, etc.); however, a number of observations were made. *Quercus* (oak) fragments from pits 14 and 75 appeared to be fairly narrow roundwood. A piece of *Alnus* (alder) roundwood (diameter 15 mm) from pit 73 tapered to a point at one end suggesting worked surfaces. Several pieces of roundwood were present in pit 73 including *Alnus* (alder), measuring up to 67 mm in diameter (bark absent), *Corylus* (hazel), diameter 7.5 mm; and *Salix/Populus* (willow/poplar), diameter 10 mm. Also in pit 73 was the base of a narrow *Corylus* (hazel) stake, diameter 15 mm, with clearly defined tool marks (cf. Fitzpatrick p. 112).

N.B. The bulk weight and dimensions of wood decrease dramatically when carbonised, and the measurements of diameters of roundwood given above would, therefore, be much reduced from those of the living stems.

Table 13: Charcoal: distribution of identified species.

Feature	Context	Phase	*Alnus*	*Betula*	*Corylus*	*Frax.*	*Pom.*	*Prunus*	*Quercus*	*Salic.*	*Samb.*
14	3	EBA			12			2	3		
16	42	IA: 2			1						?1
70	69	IA			1	1	1	3	4		
73	119	IA: 3	67		3			1	18	2	
75	77	IA: 3		?1	7	3		3	13		

Key: *Frax. Fraxinus, Pom. Pomoideae, Salic = Salicaceae, Sam = Sambucus*

Comments

A fairly wide range of species appears to have been present in the area. *Quercus* was identified in samples from four of the pits (Table 13) and probably grew close to the site. The calcareous soils overlying the limestone would have provided ideal conditions for species including *Fraxinus, Corylus, Prunus, Sambucus* and most members of the Pomoideae (excluding *S. aucuparia*, rowan). *Alnus* and *Salix* prefer damp or marshy ground and probably grew at the base of the hill or associated with springs or streams. *Populus* (anatomically indistinguishable from *Salix*) also prefers damp or seasonally wet meadows. *Betula*, only tentatively identified from one small fragment, occurs on acid soils, suggesting localised variations of soils close to the site.

ANIMAL BONE by Sheila Hamilton-Dyer

Animal bone was recovered from 25 of the excavated features (Table 1). The soils on the site are acidic and the bones are generally not well preserved except where they have been burnt; the preservation does, however, vary from feature to feature.

Methods

Identifications were made using the modern comparative collections of the writer. Many of the bones were fragmented; where possible they have been joined and counted as single bones. The few measurements were taken using a vernier calliper (millimetres) and in general follow the methods of von den Driesch (1976). Withers heights are based on factors recommended by von den Driesch and Boessneck (1974).

Results

A total of 346 bones/fragments was recorded, nearly half of which were from pit 16. In most cases, between one and 20 fragments were recovered from each feature, and the bones are reported as a single group. Species distribution by feature is given in Table 14. Details are in archive.

Table 14 : Animal bone—species distribution total fragments

Phase	Feature	Horse	Cattle	Sheep/goat	Pig	Deer	LAR	SAR	Mammal	Dog	Total
EBA	14	-	-	-	1	-	-	-	-	-	1
IA1	9	-	6	1	1	-	14	1	-	(1)	23
IA1	107	-	2	-	2	1	-	-	-	-	5
IA2	16	4	9	43	3	-	9	55	45	5	173
IA2	39	-	3	-	-	-	6	-	-	-	9
IA2	133	1	6	2	-	-	3	-	-	-	12
IA2	147	1	1	3	-	-	1	2	-	-	8
IA2?	126	-	1	4	-	-	7	1	-	-	13
IA3	47	-	4	7	1	-	1	3	-	-	16
IA3	72	3	3	9	9	-	1	4	-	-	29
IA3	73	10	-	2	-	-	3	1	1	-	17
IA3	75	2	2	3	-	-	-	-	-	1	8
IA	70	-	1	1	1	-	-	-	-	-	3
IA	79	-	1	-	-	-	-	-	-	-	1
IA	115	-	-	-	-	-	-	1	-	-	1
IA	124	-	-	-	-	-	-	1	-	-	1
IA	130	-	-	-		-	1	-	-	-	1
IA	151	-	2	3	-	-	-	2	-	-	7
IA	161	-	1	3	-	-	-	-	-	-	4
IA	163	-	-	-	-	-	1	-	-	-	1
IA	169	-	1	1	-	-	-	-	-	-	2
IA	174	-	-	-	-	-	-	1	-	-	1
IA	176	-	3	2	-	-	2	1	-	-	8
Nat	37	-	-	-	1	-	-	-	-	-	1
Nat	62	-	-	-	-	-	-	1	-	-	1
Total		21	46	84	19	1	49	74	46	6	346
%		5.5	12.9	24.6	5.5	0.3	14.3	21.6	13.4	1.7	

(1) = coprolite

Early Bronze Age

Only one bone, a fragmented pig tooth, was recovered from pit 14.

Iron Age

Sheep/goat were the most frequently identified bones, followed by cattle, then horse and pig. Dog and red deer are also present. Undiagnostic fragments have been divided into cattle/horse sized (LAR) and sheep/pig sized (SAR) with a further group identified only as mammalian. From the cattle/sheep/pig total, the proportions of the individual species are 30.9%, 56.4%, and 12.7% respectively. Similar figures have been noted at other sites including Cadbury Castle (Hamilton-Dyer and Maltby 2000): the slightly higher percentage of cattle bones is likely to be a taphonomic bias in favour of large sturdy fragments in poorly preserved material.

Sheep remains included bones from all parts of the skeleton, with a slight bias against those elements which are small or fragile. The preservation in some pits was better than in others, and the partial skeleton of a lamb (*c.* two weeks) was recovered from pit 72, which also contained nine of the 19 pig bones, some of which were so well preserved that they

had an ivoried appearance. One sheep/goat bone was sufficiently complete for the estimation of a withers height; 0.587 m from a tibia (pit 126), maximum distal width 25.3 mm. From Cadbury Castle, sheep withers heights ranged from 0.527–0.622 m for the Middle to Late Cadbury pits and 0.515–0.634 m for the Late Cadbury rubbish layers, the maximum distal width ranging from 20.9–25.0 mm and 21.4–24.4 mm respectively from 60 specimens. The present tibia is wider than these, although the withers height is within the upper limit of the range (NB. measurements from both sites were taken by the writer).

Cattle remains are represented mainly by loose teeth, head (including a short horn-core), and foot fragments. The few limb bones are much fragmented; the unidentified cattle-sized fragments include pieces of limb bone which are also likely to be of cattle. Knife marks were present on some of the bones.

Pig bones were identified from seven of the Iron Age features. Most of these were fragments of skull, feet, and loose teeth, with limb bones in pit 72.

Most of the horse remains are teeth and jaw fragments. Bones from the upper fill of pit 16 included the lower third molar of a horse aged about five or six from the crown height of the tooth (Levine 1982). The eight teeth and fragments from context 74 in pit 73 are probably all from one animal aged about 10 to 12 years, and in pit 75 were the very poorly preserved remains of the upper jaws and teeth of an animal aged about seven years. Unlike Cadbury Castle or Danebury, none of these skulls were from the bottom of the pits. The metacarpus and phalanx from pit 72 are large for Iron Age material, especially considering that these bones are from a young animal which had not finished growth. Grant (1984, 521) observed that larger bones were present in the Early and Middle Iron Age than in the Late Iron Age at Danebury. A Bone from another young horse, under 18 months, was recovered from the upper fill of pit 133.

The single occurrence of deer is of an antler from pit 107. It is much fragmented but can be identified as red deer and has a cut or sawn beam.

The remains of dog are of considerable interest. Dog remains are a minor but consistent component of Iron Age assemblages; several were recovered from Cadbury Castle (Hamilton-Dyer and Maltby 2000). Their presence is also often indicated indirectly by gnaw marks on the bones and these were noted on nine fragments from this assemblage, from pits 16, 39, 72, and 147. A coprolite, probably of dog, was recovered from pit 9. The six bones recovered include an incomplete jaw from fill 82 in pit 75. The teeth are small and closely spaced; the premolar row measures 34.9 mm and the carnassial has a length of 20.1 mm, which is slightly less than most reported for the Iron Age by Harcourt (1974). A very similar measurement of 20.6 mm was obtained from a jaw fragment in fill 42 of pit 16, which also contained two cervical vertebrae and an unusual radius and ulna pair which had been cut near the distal end. Both of these are very short and sturdy and are bent. Bones of this type are not diseased in the normal sense but are the result of a genetic variation which can often be retained in breeding; the modern Bassett Hound is an extreme example. The epiphyses and shaft of the radius have dimensions approximating a reference specimen of a golden retriever (proximal width 17.1 compared to 18.6 mm; shaft width 13.6 compared to 12.8 mm; distal width 23.5 compared to 24.7 mm), but the overall length of 94.1 mm is much shorter (modern—145.4 mm), giving a withers height of around 0.319 m compared with 0.482 m. It should be noted that these bones have been burnt and may have shrunk slightly; nevertheless they are clearly unusual. Harcourt reports a few even smaller bones but these were slim and not bent. The smallest radius at Danebury was 111 mm in length. Small dogs are often reported for Romano-British assemblages, particularly late ones, but are rare from Iron Age sites, making these bones from a *c.* 4th–3rd century BC context of great interest, particularly as burnt and unburnt human bones were also recovered from the same context.

DISCUSSION

Evidence for human activity in this south-western area of Ham Hill provided by the 1994 excavation follows the same trends noted in the earlier excavations of Smith (1990) and Adkins and Adkins (1991).

An early prehistoric presence, possibly some Mesolithic, though probably largely Early Neolithic to Early Bronze Age, was demonstrated by the worked flint and chert recovered from the ploughsoil and redeposited in later features. *In situ* evidence for early prehistoric activity was limited to a single Early Bronze Age pit which was substantially truncated. The Beaker pottery, worked flint, charred wheat and barley grain indicate the pit's probable final use for domestic rubbish disposal.

In general the flintwork from the site illustrates an extensive occupation, and that so little *in situ* evidence has been recovered may, in part, be due to the obliteration of shallow features by the extensive deep ploughing of the area over the last century. However, the majority of the Iron Age pits contained some redeposited flint which would suggest that any disturbance need not necessarily have been recent. A Late Bronze Age presence is indicated by the copper-alloy bugle shaped object and fragment of socketed axe redeposited in the upper fill of a Middle Iron Age pit. Although the number of bronze objects and a mould fragment from elsewhere on the hilltop suggest significant activity throughout the Bronze Age, no structures can be assigned to such a presence.

The period for which there is predominant evidence of activity in this part of Ham Hill is the Iron Age, and this activity has been divided into three ceramic phases covering *c.* 7th–1st centuries BC. Previous discoveries on Ham Hill have indicated that occupation elsewhere on the hill top dates from the 7th century BC. The construction of the hillfort defences probably dates from the 3rd century BC and possibly as early as the 5th century BC, although adequate evidence is lacking (Burrow 1982, 90).

With the exception of three unrelated post-holes, and two shallow, narrow gullies, the function of which remains unclear, all the excavated features comprised pits similar in form and fills to those excavated by Smith (1990), Adkins and Adkins (1991), and reported by Letts (1994). The earliest Iron Age features (Phase 1—7th–5th centuries BC) included two pits; in Phase 2 (4th–3rd centuries BC) there were six pits; in Phase 3 (2nd–1st centuries BC) there were four pits. The remaining 26 pits were unphased within the Iron Age.

The original function of such pits is generally accepted as being for grain storage (Cunliffe 1992); the final function is more open to question. There were similarities in the pit fills in that all appeared to have been backfilled fairly rapidly; many comprised a single homogeneous fill, but fragments of pottery from different layers joined in four of the pits. With two exceptions, the pits all contained some burnt component. Three types of pit were distinguishable. Type 1 pits, of which there were only two, were distinguishable by their large size and by the presence of a thick layer of burnt material on the floor of the pit; they correspond in form and fill with the 'special deposits' described by Cunliffe (1992) and Hill (1993). The layers of burning on the floor of these pits contained deposits of carbonised grain, some burnt *in situ*, an iron spearhead, two nave hoops, a currency bar (Fig. 9, 1–4), human bone, and horse and dog bone amongst other animal species.

The type 2 and 3 pits were smaller than the type 1 pits and contained varying quantities of what may be termed domestic refuse, including cooking pots and animal bone, mostly burnt, but they were not filled with this rubbish and did not have the appearance of 'rubbish pits' as such. There are no obvious patterns in the distribution of the pits by either phase or type although the size of the excavation area and the total number of features are too small to provide meaningful data.

Identification of wood species from the charcoal indicates exploitation of resources both on the hill top and from the meadows at the base. Sheep/goat were the most frequently

identified animal species, followed by cattle, then horse and pig, although almost half of the bone was recovered from one pit. Analysis of the charred plant remains demonstrated the presence of both barley and wheat, wheat being predominant, in common with findings from excavations in 1983 (Smith 1990) but at variance with those samples analysed by Letts (1994). The intact charred ears of wheat (Plate 3) at the base of pit 73 provide evidence of *in situ* burning and indicate that wheat production was probably taking place in the immediate vicinity. Their position further demonstrates that the pit cannot have been used as a grain storage pit immediately prior to backfilling. Grain processing is also indicated by the recovery of quern fragments. Textile working is suggested by the fired clay spindlewhorls and bone point or gouge.

Trade is indicated by the presence of non-local stone and pottery. The latter increased in frequency within the assemblage throughout the Iron Age phases; vessels being imported from up to 60 km distant.

There was no certain evidence for buildings, such as the 'house' excavated by Smith (1990), although three post-holes, of which only one can be certainly demonstrated to be Iron Age in date, and small quantities of fired clay were recorded. This evidence taken with the density and spread of pits suggests that any buildings or structures lay outside the excavation area, perhaps closer to and in the lee of the hillfort defences. However, structural features may have been relatively shallow and could have been obliterated by the deep ploughing, leaving only the deeper pits to survive.

Evidence for post-Iron Age activity is sparse and limited to two very small, intrusive sherds of Roman pottery and a fragment of post-medieval tile from the topsoil.

Results from the 1983 (Smith 1990) and 1991 (Adkins and Adkins 1991) excavations suggested that archaeological features in this part of Ham Hill were concentrated to the west, towards the ramparts. Whilst the absence of features in trenches B and C in 1991 would appear to demonstrate a lack of archaeological features in these areas, this may not positively be the case. Wide gaps between archaeological features were also recorded by Smith (1990), although it should be noted that test trenches of the size employed in the 1991 investigations would fit within featureless areas of the 1994 excavation. Several of the pits along the southern edge of the 1994 trench were indicated by geophysical survey (Geophysical Survey of Bradford 1992) where this overlapped the excavation trench. The survey also suggested the presence of several more pits to the south of the excavation area and of an extensive array of linear features, probably caused by fissures in the underlying rock.

The results from the 1994 excavation, together with those of Smith (1990), Adkins and Adkins (1991), and Letts (1994) show close correspondence with each other but present a view of only a small part of the occupation of the hill top. Analysis of the as yet largely unpublished results from earlier excavations elsewhere on Ham Hill and comparison with results from the more recent excavations will ultimately place the 1994 excavation results in context. The excavation of a sequence of stratified deposits and the recovery of a significant quantity and range of artefactual and environmental data have, however, made a useful contribution to the understanding of the occupation of Ham Hill and of Iron Age hill top settlement in Somerset.

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APPENDIX A: THE 1998 EXCAVATION by C. A. Butterworth

INTRODUCTION

The 1998 excavation was carried out in an area of *c.* 720m^2 lying immediately to the east of the 1994 trench (centred on ST 4827 1603; Figures 1, 2). Topsoil had been removed at the time of the earlier excavation, leaving weeds and subsoil to be removed by JCB in the same manner and to a similar depth as before. All further excavation was by hand. The work was carried out between 1st and 17th September 1998.

THE SITE

The location of all features is shown in Figure 10 and a summary of their dimensions, presence and absence of archaeological components etc. is given in Table 15. Full details are in archive.

Iron Age Activity

Pit 316, a Type 2 pit, contained three distinct but individually homogeneous layers of redeposited natural silty sand (Figure 10). There was a thin lens of burnt material, from which charcoal, charred grain and chaff, and burnt and unburnt weed seeds were recovered, on top of the primary fill. Small lumps of grey clay occurred throughout the primary fill, and patches of burnt sand and burnt Ham Hill stone were also encountered. Pottery, worked and burnt flint, fragments of fired clay and animal bone were recovered from the pit. A bulk soil sample from the lens of burnt material contained carbonised cereal grains, weed seeds and chaff.

Pit 328 was rounded in profile, with irregular but steep sides and an uneven base. It had a single fill, lightly charcoal-flecked silty sand, from which Iron Age pottery and worked flint were recovered.

Two intercut ditches 309 and 311 (Figure 10) were identified as a single feature, 80, during the 1994 excavation. The ditches crossed the western part of the trench from south-west to north-east. Both features probably continued out of the trench to the north-east, although the later one, 309, was at first thought to cross ditch 311 before turning through 90° to run to the south-east (see 323 below). Ditch 311 was steep-sided with a flat base; ditch 309 was shallow and rounded in profile. Each ditch contained a single fill. A single sherd of Iron Age pottery was found in the upper fill of the south-western section where the ditches showed as one cut with two fills. Worked flint was recovered from both ditches.

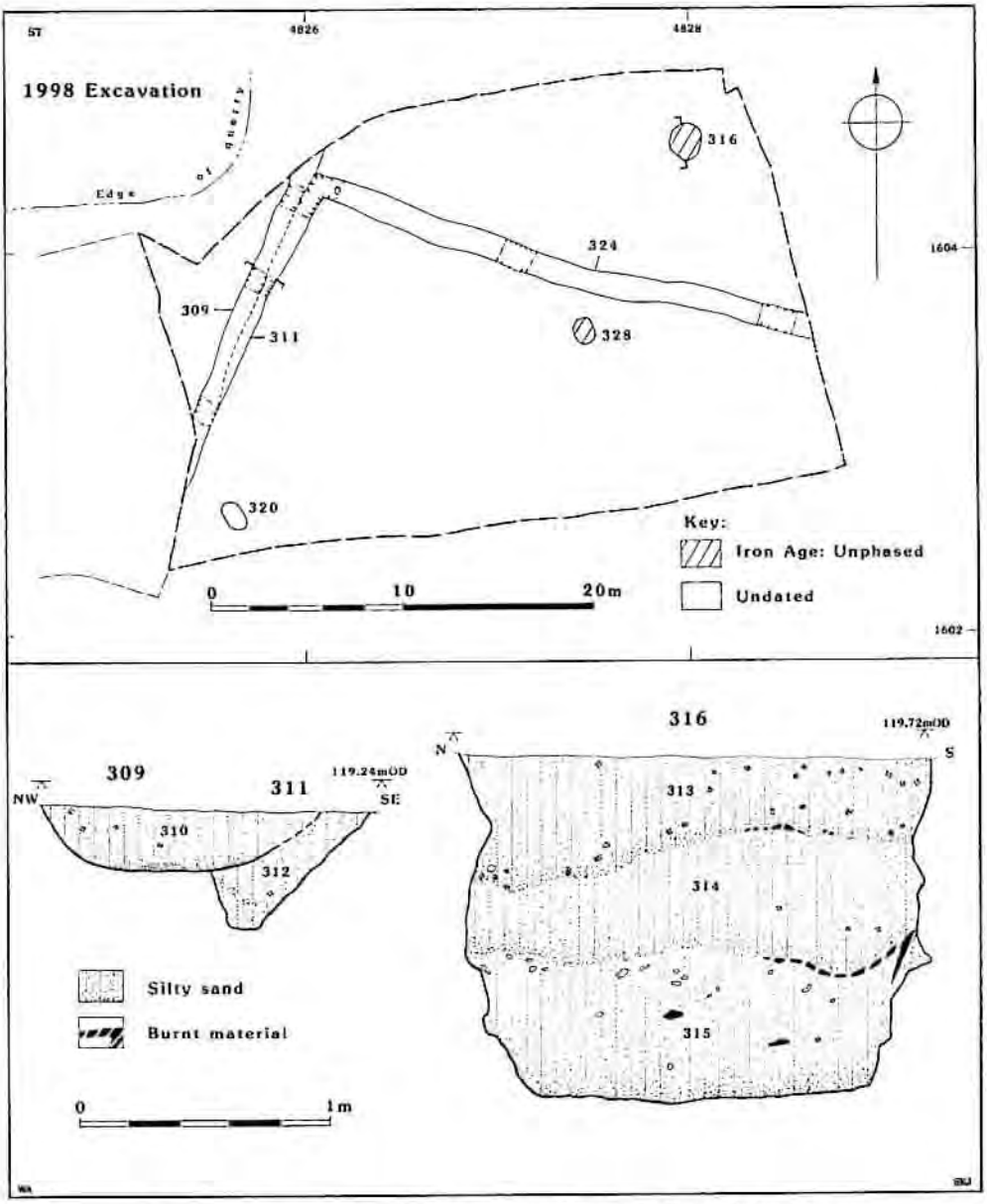

Fig. 10 1998 excavation—phase plan; unphased Iron Age pit and ditch sections

Natural Features

Although clear in plan, ditch 324, the apparent south-eastward continuation of ditch 309, was very ill-defined in excavation and in section, and was probably the result of 'dirty' soil having slumped along and into a fissure in the underlying Ham Hill stone. Worked flint was recovered from both excavated sections of the feature and three sherds of Iron Age pottery from one.

Table 15: 1998 excavation: summary of features by phase, basic characterisation and archaeological components

Feature	Phase	Type	Dimensions (m)	No. Fills	Fl	WSt	SS	Pot	Daub	AnB	Ch	S
316	IA	pit type 2	1.87 x 1.47	3	X	-	X	X	X	X	X	X
328	IA	pit	1.06 x 0.46	1	X	-	-	X	-	-	-	-
309	IA	ditch	1.11 x 0.25	1	X	-	-	X	-	-	-	-
311	IA	ditch	0.91 x 0.47	1	-	-	-	-	-	-	-	-
323	u/d	natural	1.4 x 0.6	1	X	X	-	X	-	-	-	-
320	u/d	natural	1.5 x 0.8	1	X	-	-	X	-	-	-	-

IA Iron Age. Dimensions diameter/width x depth; Fl flint; WSt worked stone; SS slingstone; AnB animal bone; Ch charcoal; S carbonised seeds

Feature 320, although well-defined at the surface, had irregular, steep and occasionally undercut sides and no clear base, dropping into a narrow central 'chimney' which was not bottomed. It contained a single fill, extensively root-invaded, from which worked flint and five sherds of Iron Age pottery were recovered.

THE FINDS by Lorraine Mepham

A small quantity of artefactual material was recovered. The presence/absence of finds in features is summarised in Table 15. Ceramic material in particular (pottery, fired clay) is in poor condition, fragmentary and abraded.

Most of the chronological information comes from the pottery (60 sherds, 191 grammes), although the poor condition and scarcity of diagnostic sherds renders close dating difficult. Four sherds (16g) of Romano-British coarsewares are present (unstratified and pit 316). The majority of the remaining sherds are in vesicular fabrics from which calcareous inclusions have leached out; sandy, flint-tempered, grog-tempered, sandstone-tempered and igneous fabrics are also present in small quantities. All these fabric types fall within the range already recorded for Iron Age pottery from Ham Hill (e.g. Morris 1987). There are three rim sherds, one calcareous, one sandstone-tempered and one igneous; none is particularly distinctive but a broad date range in the Middle to Late Iron Age can be suggested for this small collection.

The worked flint and chert recovered (32 pieces, 121g) includes two scrapers, but contains no chronologically distinctive material and can only be dated broadly to the Neolithic to Bronze Age.

Of interest amongst the worked or utilised stone are a ground axe fragment (ditch 323), a probable igneous quern fragment (pit 316), and eight small pebbles, possibly utilised as slingstones.

Other finds comprise burnt, unworked flint (undatable but probably of prehistoric date: 10 pieces, 69g), ceramic building material (three fragments possibly Romano-British, two post-medieval), fired clay (undatable but again probably prehistoric: 12 pieces, 62g), and animal bone (14 pieces, 7 of which were burnt, 29g).

SUMMARY

The 1998 excavation at Ham Hill revealed two Iron Age pits, two intercut ditches, possibly of Iron Age date, and a third possible but doubtful linear feature. The linear features correspond with geophysical anomalies recorded by Geophysical Surveys of Bradford (1992), on behalf of the Royal Commission on the Historical Monuments of England, and by Bournemouth University in 1998.

The finds assemblage included residual worked flint, Iron Age pottery and a small number of other finds categories: foreign and worked stone, ceramic building material and animal bone. A similar range of features and finds was recovered from other recent excavations in the south-west of Ham Hill (Smith 1990; Adkins and Adkins 1992). The fragment of ground stone axe is the only new object type recovered from this part of the hillfort although other examples have been recovered elsewhere on Ham Hill (Evans *et al.*, 1962).

The results of the excavation in 1998 support the principal conclusions of the 1994 excavation: the residual worked flint adds to the evidence for earlier prehistoric use of this part of the hilltop but the main phase of occupation dates to the Middle/Late Iron Age. The excavation appears to confirm the decreasing density of features, particularly pits, towards the interior of the hillfort. That more features, presumably indicative of more intensive

activity, appear to occur closer to the defences may reflect the need for additional shelter on what would have been an exposed location. The sheer size of the hillfort would, however, suggest that the whole of the interior cannot have been intensively occupied, although it may have been intensively used. Evidence for post-Iron Age activity is limited to a few, mostly unstratified, finds of Roman material.

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