

## Chapter 2: The Excavations of 1972–3 and 1988

*by Margaret Gray and George Lambrick*

The excavated features, both natural and man-made, are summarised in Table 1. Their descriptions and dimensions are to be found in the feature list which forms part of the archive.

### METHODS OF EXCAVATION

#### 1972–3

There were no surface indications in a large stubble field to give a guide to the possible location of the monument and the most recent air photographs by Baker (NMR SP 4104/1, 2, 6 and 12), taken in 1965 before the complete removal of all field boundaries, did not show the runway and W quarry edge as they were in 1972. In spite of this, the mechanical removal of the ploughsoil soon revealed the vast spread of loamy soil which constituted the bank and ditch, which stood out dramatically against the natural yellow-brown gravels and sands (Fig. 5).

The ploughsoil, which averaged 0.24 m in depth, was removed from 0.80 hectares by box scraper and deposited at the edges of the excavation. The resulting surface was then cleaned, using hoes to remove the residue of ploughsoil, and a 15 m grid was laid out on the lines of the National Grid. All features were defined and numbered before excavation and a plan was made of the soil marks.

The site datum was set up using the OS bench mark at Linch Hill cottages (SP 4154 0464) of 69.91 m OD. Two site datum posts were established: SD 1 on the concrete of the runway was 70.16 m above OD and SD 2 at the quarry edge was 71.42 m above OD. All section lines were levelled to these posts. As the only stratification which survived was within the features themselves it was felt essential to record depths in this way rather than from the arbitrary surface of the gravel. It was also felt that this information would be needed when that part of the site still under the runway became available for excavation.

The henge ditch, F1, was divided into lengths numbered clockwise from I–XI (Fig. 7). Nine of these were excavated, including a cutting at each of the four ditch terminals. Information concerning them is summarised in Table 2. Fifteen sections (S1–S15) were drawn across the ditch. Cutting I was excavated almost entirely by hand, only the turf and ploughsoil being removed by machine. The remainder were machined to varying degrees (Table 2). Cutting X was treated as an experimental box sec-

tion, with the natural gravel cut away at the sides and below the ditch to show the shape of the ditch against the contrasting sands and gravels.

After initial cleaning all the features were numbered (F2–160). Most of the features, whether geological or man-made, were sectioned and then fully excavated, unless they were obviously natural, including many of the geological anomalies. As the areas between the ditch terminals, which were the two entrances, were considered to be of special interest, the ploughsoil in them was excavated by hand and not by machine.

#### 1988

The concrete runway was removed from the remainder of the site, and the hard core taken from the farm track. The remaining ploughsoil was then removed mechanically by a tracked excavator equipped with a toothless ditching bucket down to the gravel surface and a grid was laid out at 10 m intervals. The surface was cleaned by shovel-scraping and trowelling of identified features. All features were defined before excavation, a site plan was drawn and a photographic record was made.

The 1988 temporary site datum was the cement road at the base of the peg at site grid 167/475 and was 1.02 m. In order to relate this to other areas of the site, readings were made at Quoit A on the 1972–3 site (0.07 m above TSD), an arbitrary point on the gravel (0.02 m), and on the peg at site grid 210/100 (0.04 m). In the course of excavation levels were recorded at the intersection of the two lines of each quadrant feature, on the surface of the feature. These readings were not related back to the bench mark at Linch Hill, but were tied in with the 1972–3 levels by reference to the reading taken on Quoit A. The base of peg 167/475 was thus 69.44 m above OD.

The surface levels of the stoneholes in the 1988 excavation were slightly lower than those in the 1972–3 excavation. This may be due to a lower ground surface, or to the fact that slightly more of the gravel surface may have been taken off through machining direct onto the gravel surface rather than leaving a thin skin of ploughsoil for removal by hand.

The inner edge of the S sector of the ditch was defined but not excavated except by cutting two slit trenches to define the limits of sporadic quarrying

*Table 1. Summary of features*

Features	Totals
Ice wedge casts F12, F16, F112, F113, F200	5
Geological hollows and pipes F22, F40, F47, F51, F53, F55, F57-8, F60, F63, F67, F79, F83-5, F88-9, F92-6, F102-3, F122, F127, F131-2, F135, F145, F151, F157a, F201, F211-4, F216-7, F221-2, F224, F228, F232-3, F235-6, F244-5, F247, F254, F258, F268-9, F277-8, F284-5	58
Spreads of soil in rock outcrops F106, F109, F110	3
Tree roots and treethrow holes F31, F49, F56 (tree hollow with two pits cut into it), F58, F59, F61, F68, F70, F80-2, F87, F97, F108, F130, F131, F204-6, F223, F231, F234, F239-43, F246, F248-53, F255-7, F259-67, F270-6, F279, F281-2	54
Animal runs F86, F238	2
Rock outcrop F45	1
Area of loess clay F119	1
Henge ditch F1	
Hearths F32/33, F41/41a, F43/43a, F150, F153/156, unnumbered hearths in cuttings VI and X	6
Spreads of soil in area of bank F2-11, F13, F14, F15, F24, F29, F38, F114, F115, F116, F118, F120, F121, F123, F124	24
Quarries for stones ?F30, ?F34, F64, F105, F105a, F126, F128, F142-4	8/10
Stoneholes F17, F19, F42, F48, F66, ?F98, F107, F111, F134, F138, F139, F146, F154, F157, F158, F159, F160, F202, F203, F207, F219, F220, F226, F227, F229, F230, F283	26/27
Stoneholes with stone burial pits F25, F28, F98, F215	4
Postholes F27, F37, F52, F72-78, F90, F90a-h, F90j-o, F147, F155, F208	28
Pits F46, F56a, F56b, F136, ?F137, F144	5/6
Stone burial pit F18	1
Animal burial F44	1
Furrows F20, F23, F26, F50, F62, F104/F125, F209, F210, ?F233	8/9
Modern hedge line, cable trench and machine disturbance F21, F225, F280	3
1940 and 1972 archaeological backfill F36, F39, F91, F129, F237	5





Figure 5 Aerial view of the 1972–3 excavations from the SE. Photo Mick Aston

which had occurred since 1973. The internal features, both natural and man-made, were defined and numbered (F201–285). The stoneholes were excavated in quadrants, and certain of the geological features were sectioned.

### GEOLOGICAL AND OTHER NATURAL FEATURES

These features are dealt with first, in order to explain the character of geological and recent anomalies which are generally not considered further in the account of the monument.

#### *Ice wedge casts*

There were two major ice wedge casts (Fig. 6), F112 being a continuation of F12 and F200 of F16, and

F113 crossing at right-angles to F12/112 and probably part of it. These show clearly on the air photographs, and Grimes illustrated one crossing the henge from SW to NE (1960, fig. 57). It is possible that the feature which Grimes describes as a 'medieval headland' (1960, pl. XXXIII:D) was ice wedge cast 113. Ice wedge casts have been discussed in the archaeological literature (Evans 1972, 77–86; Riley 1944, 64–102; Smith 1974/5, 1–5; Williams 1973, 19–31) and are a common feature of the Thames gravels.

They appeared directly beneath the modern soil profile as very distinct linear features, with a buff/grey silty filling with streaky mottling. Two sections cut across them, where ice wedge cast F12 was cut by pit F64 and across ice wedge cast F16, which was totally excavated. Both sections showed a wedge-shaped profile, funnelling at the base. Where there was a conglomerate outcrop, the rock



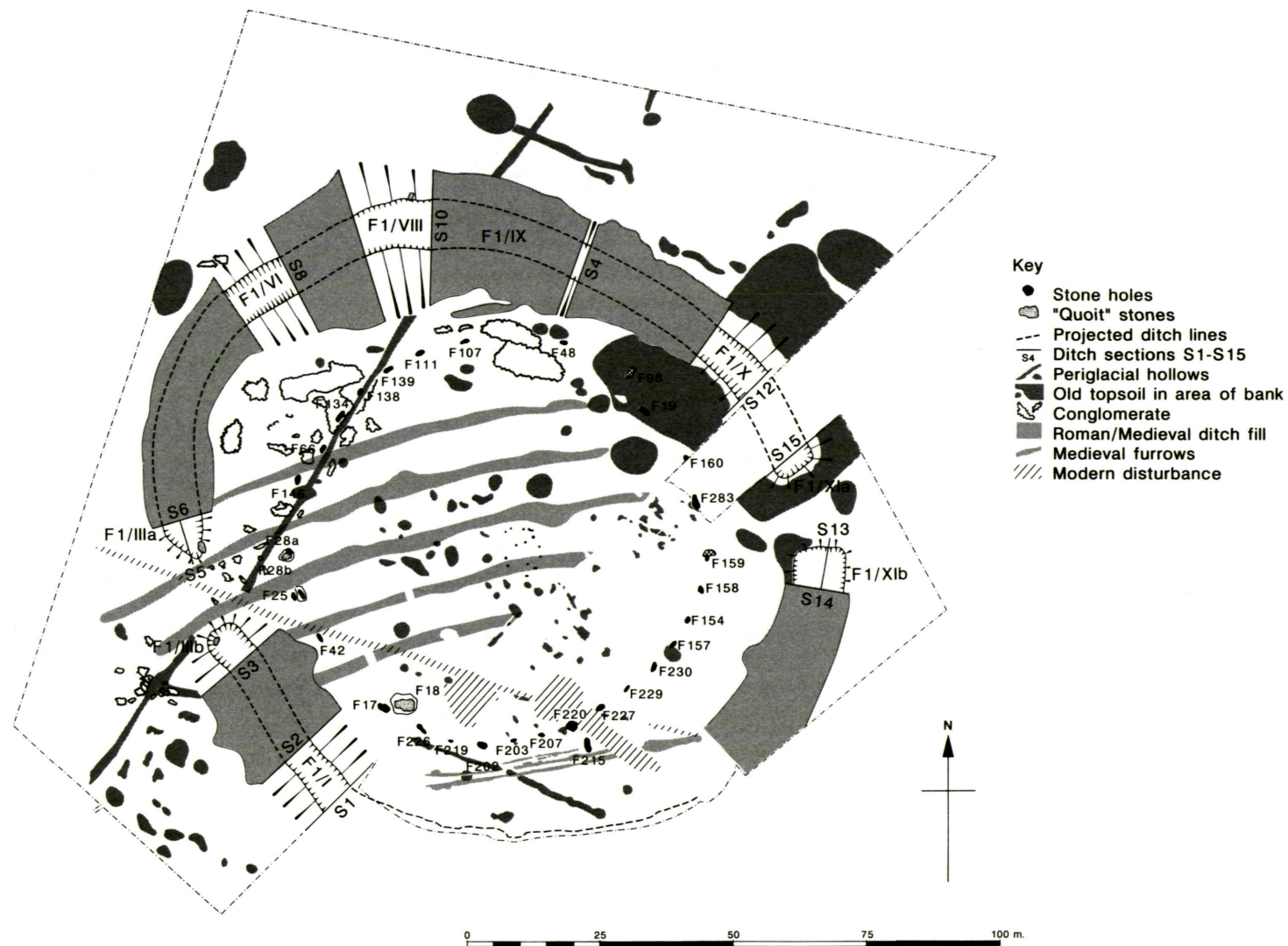


Figure 6 Modern, natural and archaeological features



sloped down at an angle rather than following the line of the surrounding horizontal bedding, and where surrounded by sand and gravel, the sides were solidified by a white concretion.

### *Solution hollows and pipes*

There were 58 pit-like features of varying sizes, their maximum dimensions ranging from 11.50 m to 0.35 m. They were round or oval in shape. Sometimes, as in the case of F216 and F217, they appeared in association with an ice wedge cast. Grimes noted these features (1960, 142, 151-2, 166-7) and describes them fully.

The possibility must not be discounted that some of the shallow 'geological' features were merely early silt deposits filling hollows in the originally uneven bedrock or gravel. Features F106, F109 and F110 were spreads of soil between rocky outcrops.

### *Tree roots and treethrow holes*

There were 54 possible tree root holes which were distinguished from the geological features by one or more of the following characteristics:-

1. A more irregular shape, with protruding root runs both on the surface and at the bottom of the pits.
2. Presence of carbonized root in the fill.
3. Two distinct layers, the top layer consisting of red-brown soil with some gravel and the lower of grey-buff sandy silt with less gravel.

In the 1972-3 excavation these features were sectioned in order to distinguish them from geological ones, but in the 1988 season some were categorised by surface indication only, mainly based on experience of treethrow holes identified by detailed excavations at Gravelly Guy (1981-5) and Drayton (1986). This resulted in unequal representation of the two categories on each sector of the site (ie 1972-3: 14 tree roots and 32 solution hollows; 1988: 40 tree root and treethrow holes and 18 solution hollows).

### *Animal runs*

Two features could definitely be attributed to animal disturbance (F86 and F238).

## **THE DITCH AND ENTRANCES**

The sides of the excavated ditch had eroded to varying extents, according to the hardness of the material through which they were cut, the firm gravel of cuttings I and XIa and the conglomerate of cuttings III and IIIa remaining rather steeper than the less stable sands and gravels of most of the circuit (Figs 9-11). Width at the top varied correspondingly, from approximately 6.00 m to 9.00 m. The ditch survived to between 2.00 m and 2.70 m

deep. It was consistently flat-bottomed, and was between 3.50 m and 5.60 m wide at the base. It enclosed a subcircular area with a maximum diameter of 120 m NW-SE and a minimum diameter of 102 m NE-SW. There were opposed entrances in the ESE and WNW (Figs 4, 6 and 7).

### *The ditch layers*

In the initial stages of the 1972 excavation, cutting I was manually excavated in order to establish the sequence of layers. These layers represent a consistent sequence of deposits throughout the investigated parts of the ditch, with the exception of layers D, J and X which were identified only intermittently. The sequence is summarised in Table 2. Dr Susan Limbrey examined the sequence in cutting X in the field (Ch. 3). The layers are described here as they appeared in the hand-excavated section (Fig. 9, cutting I, section 1):

- A. Turf and topsoil.
- B. Red-brown soil and calcareous gravel, thicker over the centre of the ditch and extending over the berm to the SW of the ditch, with a dip in level over the area of the bank, petering out over the natural gravel outside the bank. It was less gravelly on the inner edge of the ditch. Equivalent to part of Grimes' (1960, fig. 61) layer E.
- C. Red-brown soil but with less gravel than layer B, less compact and more silty. Did not extend beyond the NE lip of the ditch, but thickened over the area of the berm and terminated with a thin layer over the area of the bank. Equivalent to part of Grimes' layer E.
- D. Red-brown soil with larger stones than B or C and more gravel, denser in constituency. Did not extend right over the ditch and petered out on the slope of the berm. Generally distinguishable only in hand-dug sections. Equivalent to part of Grimes' layer E.
- E. Red-brown soil, but less red than layers B and C (Munsell 5YR 4/4 moist, 5/6 dry) and more clayey, also more gravel, especially at the bottom of the layer. Did not extend beyond the lip of the ditch on the NW side but carried on over the edge of the ditch to the SW side, and was the last layer over the natural gravel on that side. Equivalent to Grimes' layer D.
- F. Yellow-brown homogeneous silty soil (Munsell 7.5YR 4/4) moist, 5/5 dry) no gravel, fine-textured and non-calcareous, clayey. Extended over the centre of the ditch only, but with a slightly redder colour at the edges of the layer, with traces of charcoal flecking. Equivalent to part of Grimes' layer C.
- Fa. Subsidiary layer between F and G of fairly dense gravel with red-brown to dark brown (Munsell 7.5YR 4/4 moist, 5/5 dry) mottled sandy loam, with less clay than layer F. The upper



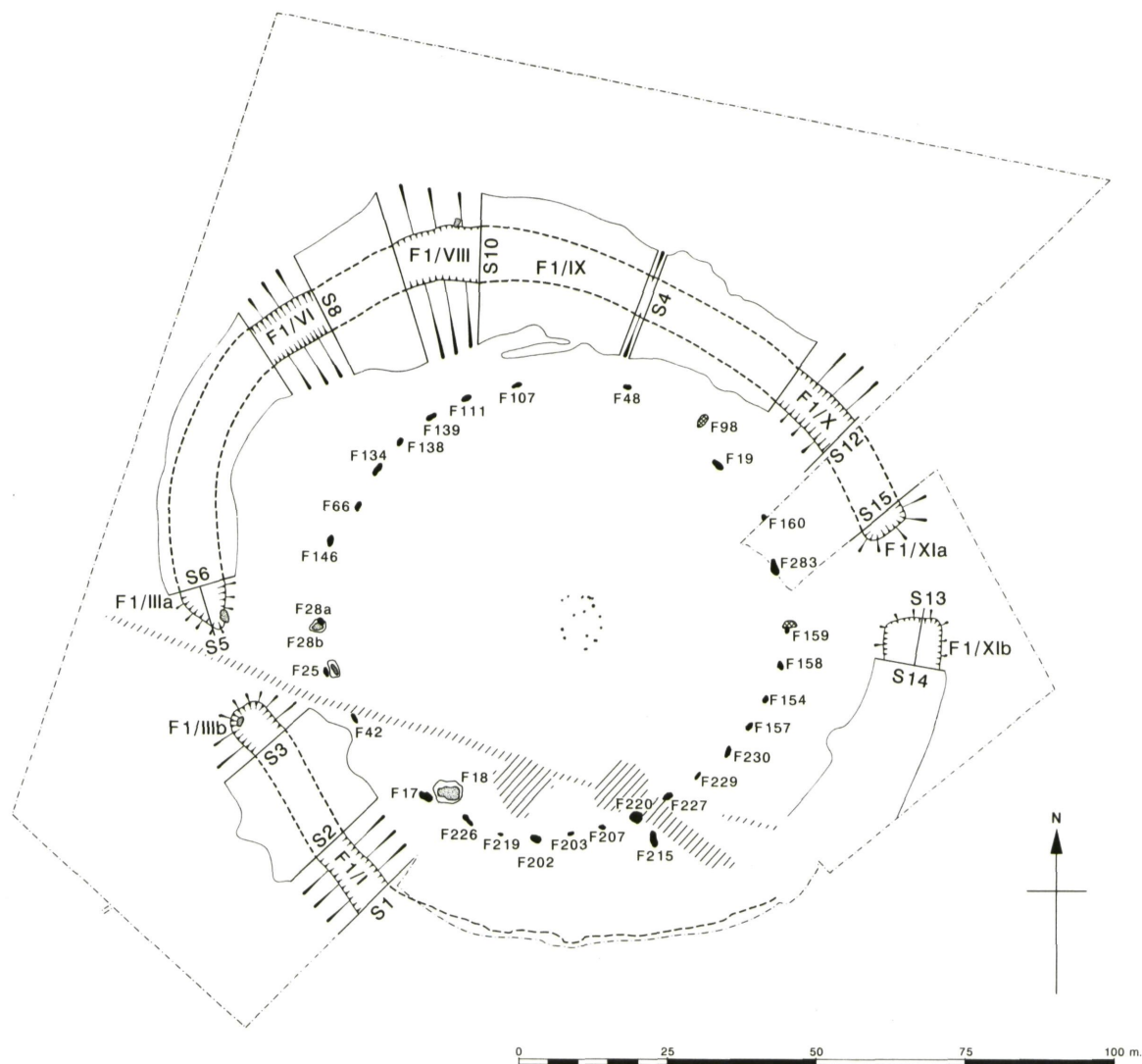


Figure 7 Location of ditch cuttings and stoneholes

part of the layer was non-calcareous and browner. Extended further up the sides of the ditch than layer F above it. Equivalent to part of Grimes' layer C.

Fb. Area of burnt soil at interface of F and G near centre of ditch. Present only in cutting I.

G. Strongly mottled purple-brown to red-brown and dark grey-brown (Munsell varies from 7.5YR 4/3–6, and 10YR 5.3) sandy clay. Heavy deposits of calcium carbonate leached down from layers above forming a white 'cob-webby' residue. The layer was greyer and more sandy at the top, with less carbonate deposition. Spreads of ash and black-brown greasy soil and charcoal were present. There was more gravel on the NW (bank) side of the layer, but generally less gravel than in layer Fa above it.

H. There was a sharp boundary between layers G and H. Mottled yellow-brown (Munsell 10YR 5/3 to 4/3 and 7.5YR 5/6 moist, 10YR 6/4 and

7.5YR 5/6 dry) dark, charcoal-flecked greasy clay with less gravel than layer G; it was compact and peeled cleanly off the layer beneath it. Equivalent to part of Grimes' layer C.

J. A thin layer of yellow-brown greasy mottled clay soil with only a little gravel (Munsell varying 10YR 4/3 moist, 5/3 dry to 7.5YR 5/6 and 5YR 3/4 moist, 7.5YR 5/8 dry). It was very calcareous and became more gravelly in the top of the layer. It filled the angles between layer L and the bottom of the ditch, with most of the layer on the inner side of the ditch.

K. A thin layer of sticky buff grey charcoal-flecked clay (Munsell 10YR 4/3 moist, 5/3 dry) lay at the bottom of the ditch, with rounded pebbles in it. It was a very compact 'trodden' surface which peeled cleanly off the natural gravel beneath it. It did not occur up the sides of the ditch, and was covered at the sides of it with primary silting.



Table 2. Summary of ditch cuttings

Cutting	I	IIIa	IIIb	VI	VIII	IX	X	XIa	XIb
Layer	A B C D E F - Fa G H - K L	A B C D E F - Fa G H - K L	A B C - E F - Fa G H J K L	A B C - E F - Fa G H - K L	A B C D E F - Fa G H - K L	A B C - E F - Fa G H - K L	A B C - E F - Fa G H - K L	A B C - E F - Fa G - J K L	A B C - E F X Fa G H J K L
Excavation method	Machined to B	Machined to C	Machined to F	Machined to F	Machined to K	Machined	Machined	Machined to G	Outer half machined to F, inner to H
Section no.	S1+S2	S5+S6	S3	S7+S8	S9+S10	S4	S11+S12	S15	S13+S14
Width at base (m)	S1: 3.5 S2: 3.6	S5: - S6: 4.2	S3: 4.2	S7: 4.5 S8: 3.5	S9: 5.2 S10: 8.3	S4: 5.2	S11: 3.5 S12: 4.4	S15/5.0	S13: - S14: 5.6
Level at base (m)	S1: 67.53 S2: 67.39	S5: - S6: 67.30	S3: 67.59	S7: 68.16 S8: 67.37	S9: 67.56 S10: 67.85	S4: 68.06	S11: 68.19 S12: 67.77	S15/67.77	S13: - S14: 67.21
Depth at section (m)	S1: 2.72 S2: 2.46	S5: - S6: 2.27	S3: 2.44	S7: 1.94 S8: -	S9: 2.25 S10: 1.96	S4: 1.94	S11: 1.79 S12: 2.40	S15: 2.36	S13: - S14: 2.12
Associated features	Areas of burning in G/H and G	Hearths 32/33 and 43/43a in G/H	Hearth 41/41a in K/L	Hearth in G/H  Spread of ashy material cut through by machine at unspecified level	Pit F46 in base  'Burnt layer' on base	Patches of burnt material in G	Hearth in J/K  Hearth or spread of ash in G	Hearth 150 in J/K	Hearth 153/156 in J/K/L, postpits 147 and 155 in ditch terminal

Key to sections















	Topsoil		Gravel
	Loam		'Quoit stones'
	Black brown soil		Stones
	Burnt soil		Burnt stones
	Clay		Charcoal
	Silt		Charcoal flecks
	Sand		Bone

Figure 8 Section conventions

L. Steeply-angled lenses of weathered gravels and sands filled the angles at the bottom of the ditch, but did not extend across the centre of the bottom. Equivalent to Grimes' layer A.

Layer D was not always distinguished from layer E, being most readily identified in the hand-excavated cuttings. Layer J seems also to have been sporadic (Table 2). An additional layer, X, was only found in cutting XIb at the SE ditch terminal (Fig. 11, sections 13, 14). It was a thick gravelly layer running through the centre of layer F and may have been connected with two postpits at the extremities of this terminal (F147 and F155). This possibility is discussed below. The gravel was mixed with brown soil and looked like a redeposited layer. Towards the butt end of the ditch terminal it merged with layer Fa and was distinguished from the yellow of that layer by its redder colour.

### Primary fills (layers J, K and L)

Layer K may have resulted from the trampling of dirt into the natural gravel of the ditch base. Primary silting was represented by layer L. This material had slumped down the sides of the ditch; the first silting of thick layers of gravel from the upper edges of the ditch probably happened very soon after the ditch had been dug, to be followed quite rapidly by further slips of sand, soil and gravel. The angles of the ditch bottoms were filled with larger pebbles of gravel, to be followed by later slips of finer materials.

The precise relationship of layers K and L varied between sections (Figs 9–11). In some sections, most markedly 3, 6, 7, 10 and 15, layer K rose in a broadly elevated profile with layer L on each side of it, although underlying L at the edges of the ditch in sections 1, 8 and 12. Layer K did not underlie layer L in sections 4, 10 and 13/14, and was at the same level as L in sections 7 and 11. In sections 2, 3, 9 and 15 the

inner edge of K clearly lay under L while the outer edge, nearest the bank, lay under it less or not at all.

This suggests that the processes leading to the formation of K continued after gravel had begun to slump from the ditch sides. It is possible that in those parts of the ditch where K was not present under L, the angles of the ditch had been cleaned out, destroying layer K, followed once again by rapid silting. Section 6 (Fig. 9) shows this dramatically, with the two angles of the ditch bottom at a lower level than the hump of natural between them. Layer L subsequently seems to have been allowed to accumulate unimpeded. In cutting VI, section 8 very substantial slumping took place, perhaps bringing with it a large lump of conglomerate, St 13, (Fig. 10).

Layer J, intermittently present over the rapid silts of layer L and with a higher clay content, is thought by Limbrey (Ch. 3) probably to have accumulated by continuing collapse of the soil at the edges of the ditch. Most of it may have derived from the bank and/or the interior, before vegetation was established there.

Molluscan evidence indicates that during the accumulation of these deposits there was standing water, possibly a reed bed, in the ditch bottom in winter months (Evans, Ch. 3).

Finds are confined to a single flint flake from layer K in cutting XIb, a small quantity of animal bone (most of it unidentifiable) from layers K and J (Table 12), and 12 finds of red deer antler, one from layer K and 11 from layer J. These include some modified to form picks and it is likely, given their concentration in these layers, that all of them were tools used in the original excavation of the ditch. The bone and antler which formed the samples for HAR-1887 and -1888 in the 1970s (Table 6) could not be included in the subsequently written animal bone report (Levitan, Ch. 3). The identifications recorded in Table 6 were made by Barbara Noddle. This material included three pig scapulae from layer L in cutting XIa and four further finds of red deer antler, one of them probably a pick. Two of the pig scapulae formed part of a concentration of animal bone in the N terminal of the E entrance in layers K/L. Also present were a cattle humerus, the scapula of an unidentified large mammal and '2 ribs, photographed and drawn but not substantial enough to excavate'.

Hearths were found on the ditch floor and stratified within the primary fills. They were distinguished from redeposited spreads of ashy material which were also encountered by having a definite edge to them and the likelihood of the burning having been *in situ*.

Hearths F32/33 and F43/43a formed a complicated sequence in the N terminal of the W entrance (Figs 12–13). The top layers of this complex were spreads of ash F32 and F43 which appeared at the interface of layers H and K. Both were layers of ash and burnt material where the burning appeared to be spread and not concentrated into a constructed hearth.



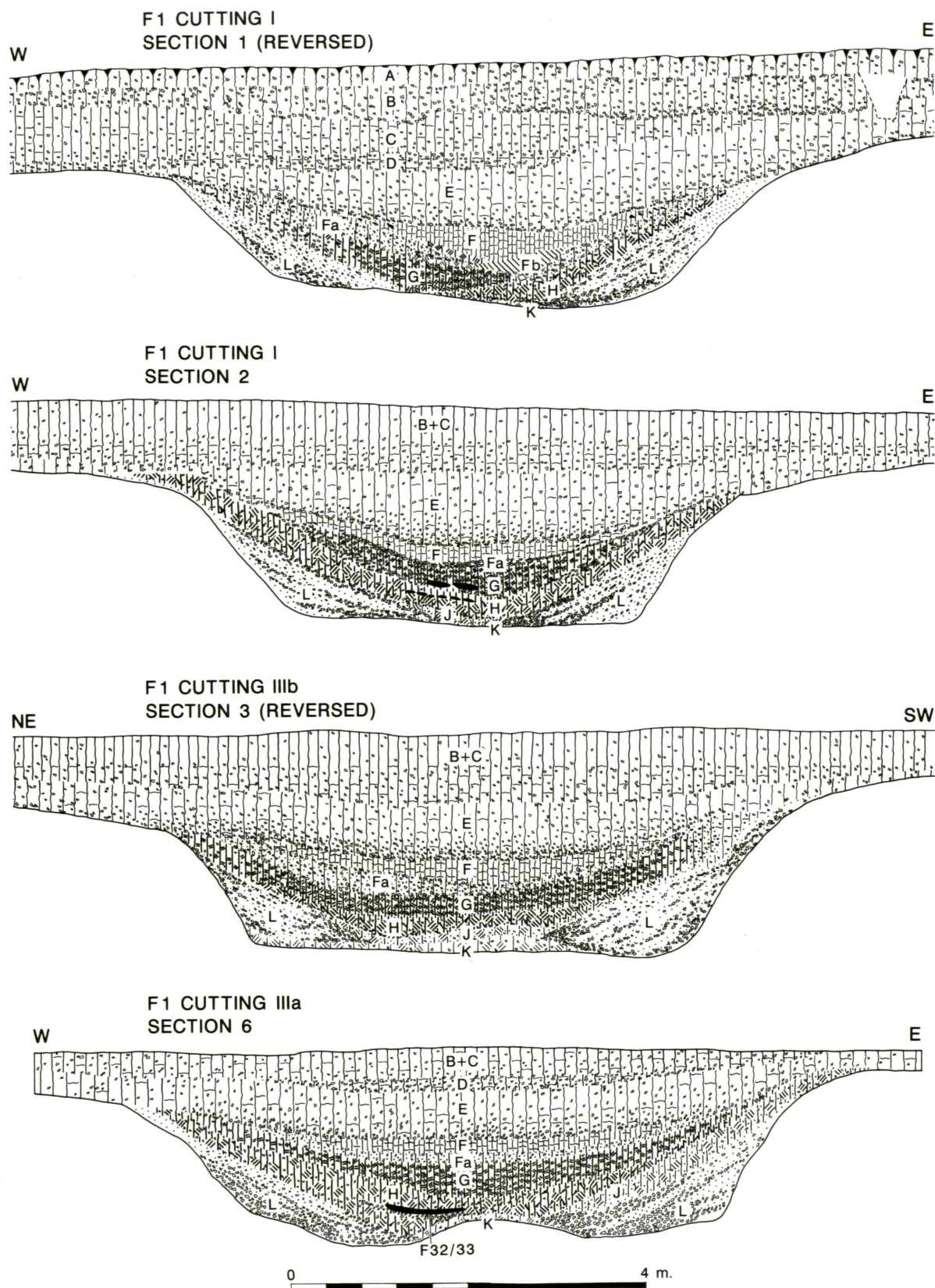
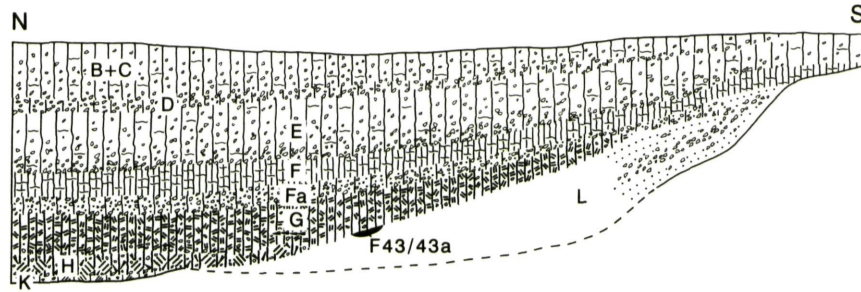
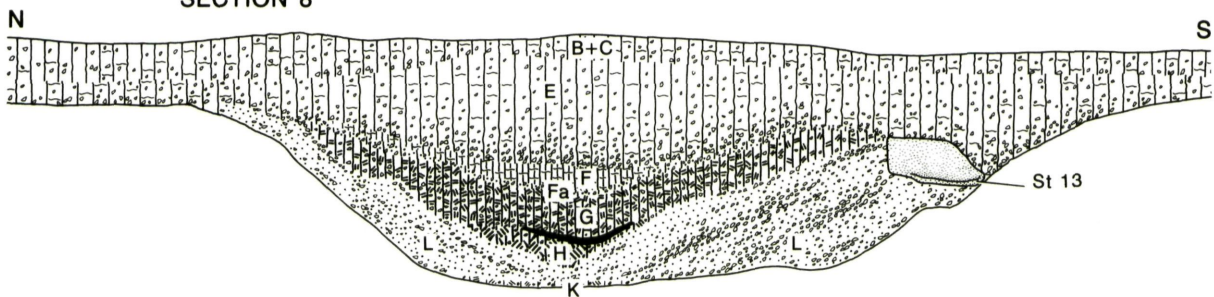


Figure 9 Ditch sections: cuttings I, IIIb, IIIa

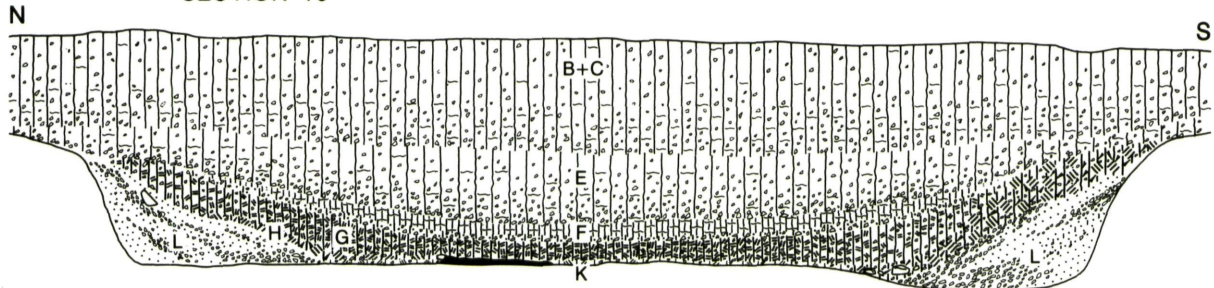
**F1 CUTTING IIIa  
SECTION 5**



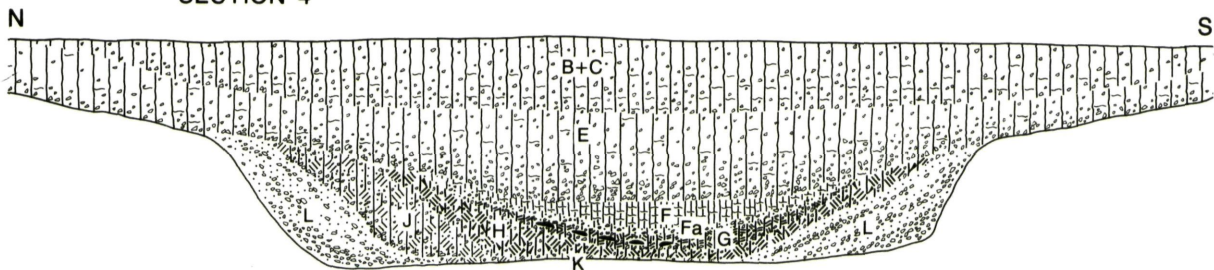
**F1 CUTTING VI  
SECTION 8**



**F1 CUTTING VIII  
SECTION 10**



**F1 CUTTING IX  
SECTION 4**



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*Figure 10 Ditch sections: cuttings IIIa, VI, VIII, IX*



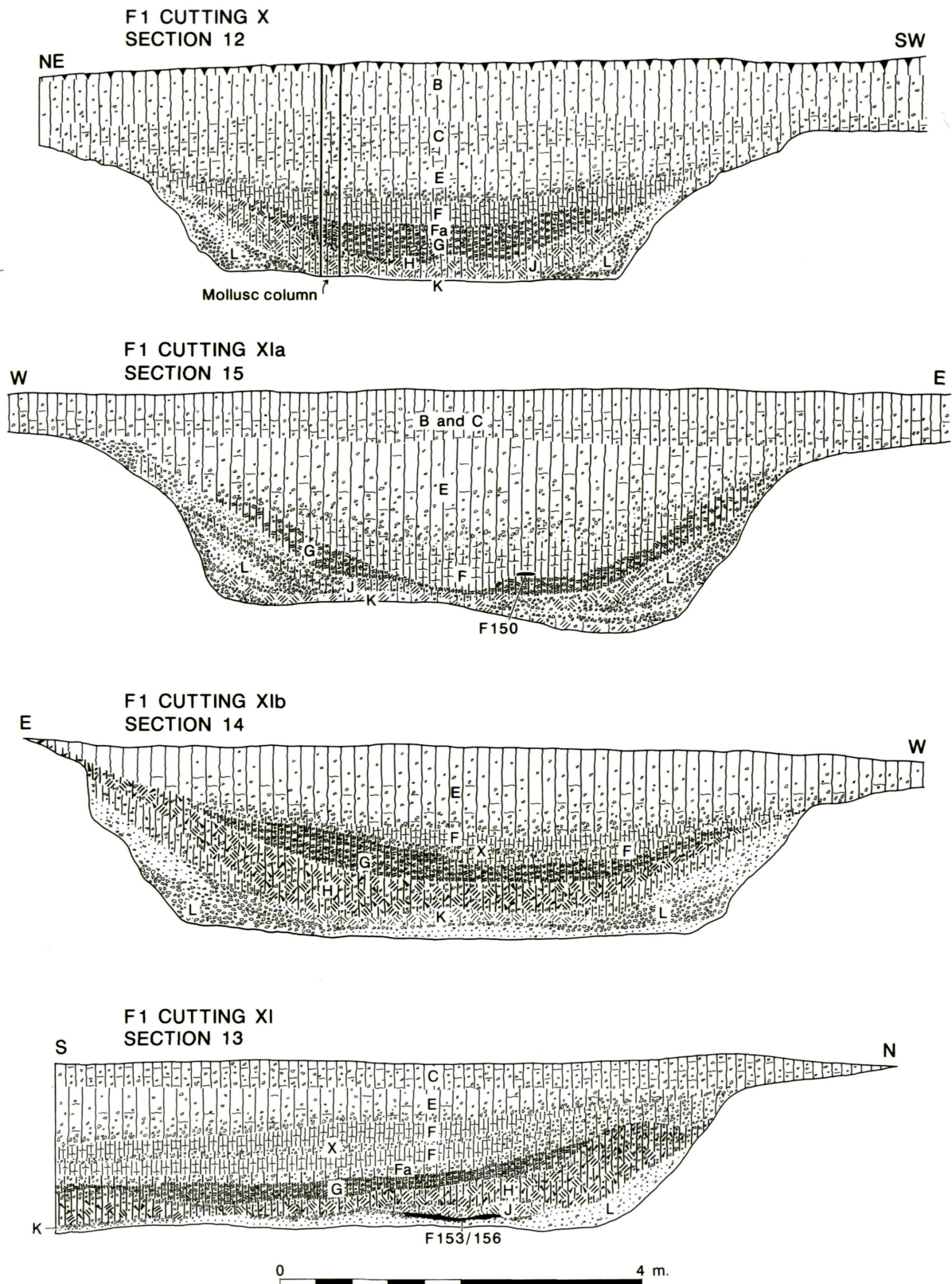


Figure 11 Ditch sections: cuttings X, XIa, XIb, XI

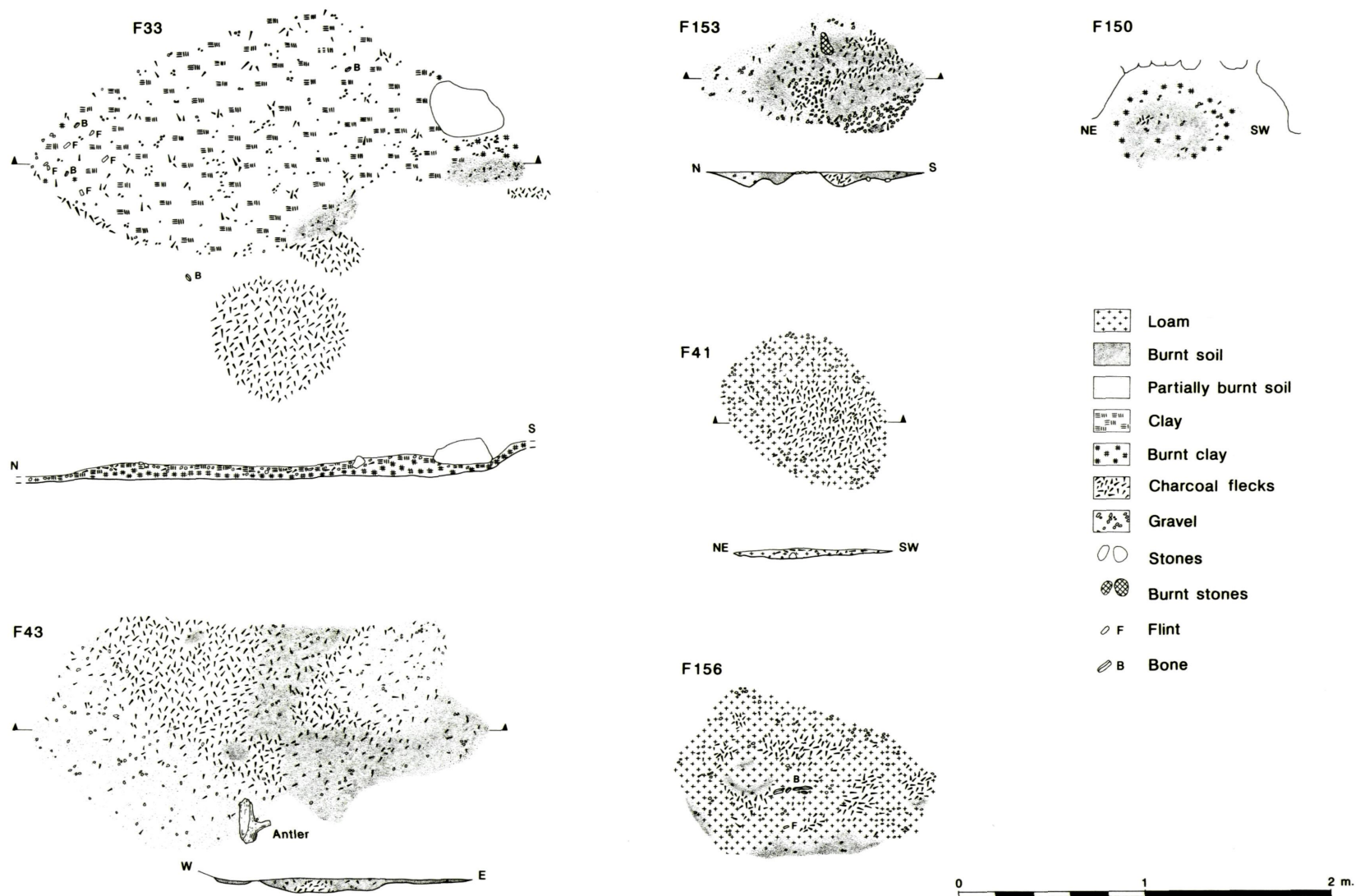


Figure 12 Hearths: F33, F41, F43, F150, F153 and F156



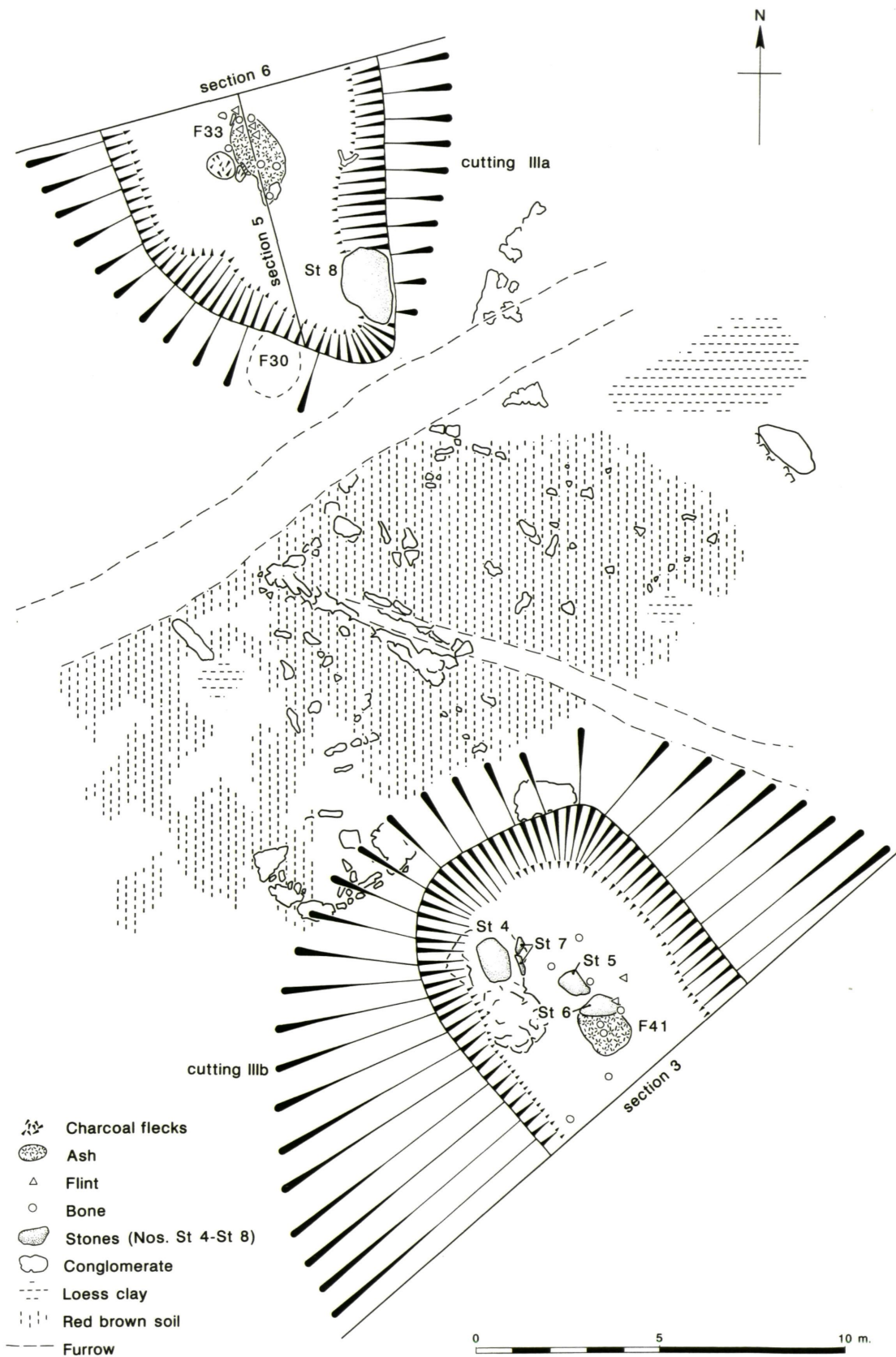


Figure 13 Area A: W entrance, excavated features



There was much carbonized material in the form of small twigs of charred wood, which were kept for radiocarbon dating. There was also a large piece of conglomerate on the S end of the burnt area, but, as this stone was not burnt and lay in a depression in the ash, it may not have been part of this feature. Ash spread F32 was excavated in quadrants and after removing the N section and the second quadrant it was clear that there were several layers of burning over hearth F33. This was definitely burnt *in situ* with burnt clay to the S side. There were fragments of bone, both burnt and unburnt in the ash, and samples were kept.

Hearth F43a was on the slope up to the butt end of the terminal. A shallow dish-shaped depression lay on the surface of layer L with another intense area of burning c. 0.55 m to the NW of it; both appeared to be burnt *in situ* and filled with red/orange burnt material, merging into grey ash. In this ash was found a cattle tibia. An antler pick was found to the W of this complex, in layer K and on the slope of the ditch at the junction of layers J and L. Layer J was present on the E (inner) side of the ditch but not in the area of the hearths.

Hearth F41 in the S terminal of the W entrance was obscured by slabs of conglomerate lying over the ditch bottom (Figs 12–13). The only sign of a hearth at the interface of layers K and L was a subrectangular area of charcoal and ash (F41a) which measured 1.10 × 1.45 m and lay partly under a piece of conglomerate, St 5, to a depth of 0.05 m; there was also a spread of ash over the stone. The burning did not appear to be *in situ*. Red deer antler fragments, one probably a broken pick, lay to the W of this feature. Nearby finds of animal bone, all from layer J, included a cattle humerus, a cattle femur and two red deer antlers.

Hearth F150 was found in the N terminal of the E entrance (Fig. 11, section 15; Figs 12, 14). As the excavation of this terminal was limited by a farm track, it was harder than in the others to define the layers accurately. The top of the hearth was destroyed by mechanical excavation but was a spread of ash measuring approximately 1.70 × 1.10 m when first seen in layer G. This ash covered a heart-shaped area burnt *in situ* in layer J/K just above the primary silt layer L. This ash produced a fragment of human bone, probably the femur of a subadult (Boyle, Ch. 3), ash, and some burnt stones. This hearth was close to and in the same layer as the animal bone concentration described above.

Hearth F153/6 lay in the S terminal of the same entrance (Fig. 11, section 13; Figs 12, 14). Hearth F153 first appeared at the interface of layers J and K as ashy patches and areas of intense burning, with the surrounding gravel burnt to a grey/white colour, measuring 1.40 × 0.08 m. There was a piece of burnt conglomerate on the top and some burnt pebbles in the ash. When the hearth was sectioned it was found

to be lying over a more intense area of burning (hearth F156). Hearth F156 was in layer K almost on the gravel of the ditch bottom. It was bowl-shaped and filled with burnt stone and ash. There were a few fragments of charred wood, although not enough could be found for radiocarbon dating. A flint flake was found on the E side of the hearth and an unidentified animal bone fragment in the centre, 80 mm above the floor of the hearth.

A further hearth was recorded between layers J and K on the surface of the layer L in cutting X, but did not lie on the section line. It was 1.20 m long and 0.2 m deep, dish-shaped, with red burnt clay, ash and charcoal.

Postpits F147 and F155 were found at the butt end of the S terminal of the E entrance (Figs 14–15). Both were cut back into the natural gravel at the end of the ditch and were vertical-sided. Their SE sides were formed by the vertical end of the ditch and they were below the level of the primary silt in depth. Because the pits were not seen in the primary silts of layer L until this layer was being removed it was uncertain from what level they were inserted.

Below layer L, the fill of postpit F155 consisted of slips of very fine gravel and fine yellow sand against which the post socket of larger pebbles and sandy soil showed clearly. In this filling were packing stones.

Postpit F147 had compact yellow gravel on the north side which must have been rammed down the side of the post, and a large piece of conglomerate packing stone. Most of the socket was filled with yellow sand. At the bottom of this pit was an antler pick (Fig. 15).

Pit F46 was cut into and through layer K in the centre of cutting VIII. It was a small oval pit, filled with mottled clayey soil and gravel and produced no finds.

**Dating.** Radiocarbon determinations relating to the construction and early use of the ditch are 2890–2200 cal BC (4010 ± 120 BP; HAR-1887) for a combined sample of bone and antler from layers K and J/K and hearth F156 in the S terminal of the E entrance and 2140–1750 cal BC (3590 ± 70 BP; HAR-1888) for a combined bone and antler sample from layers L and K/L in cuttings IIIb, VIII and XIa. The smaller number of finds making up the sample for HAR-1887 and their more compact distribution (Table 6) makes this determination more likely to approximate to the age of the earthwork. This measurement is also more consistent with those from overlying layers G, H and Fa (Table 6).

### Secondary fills (layers G and H)

Limbrey (Ch. 3) sees both layers as derived from the ditch sides and bank, reflecting bulk movement of soil with little or no sorting. The mollusca from



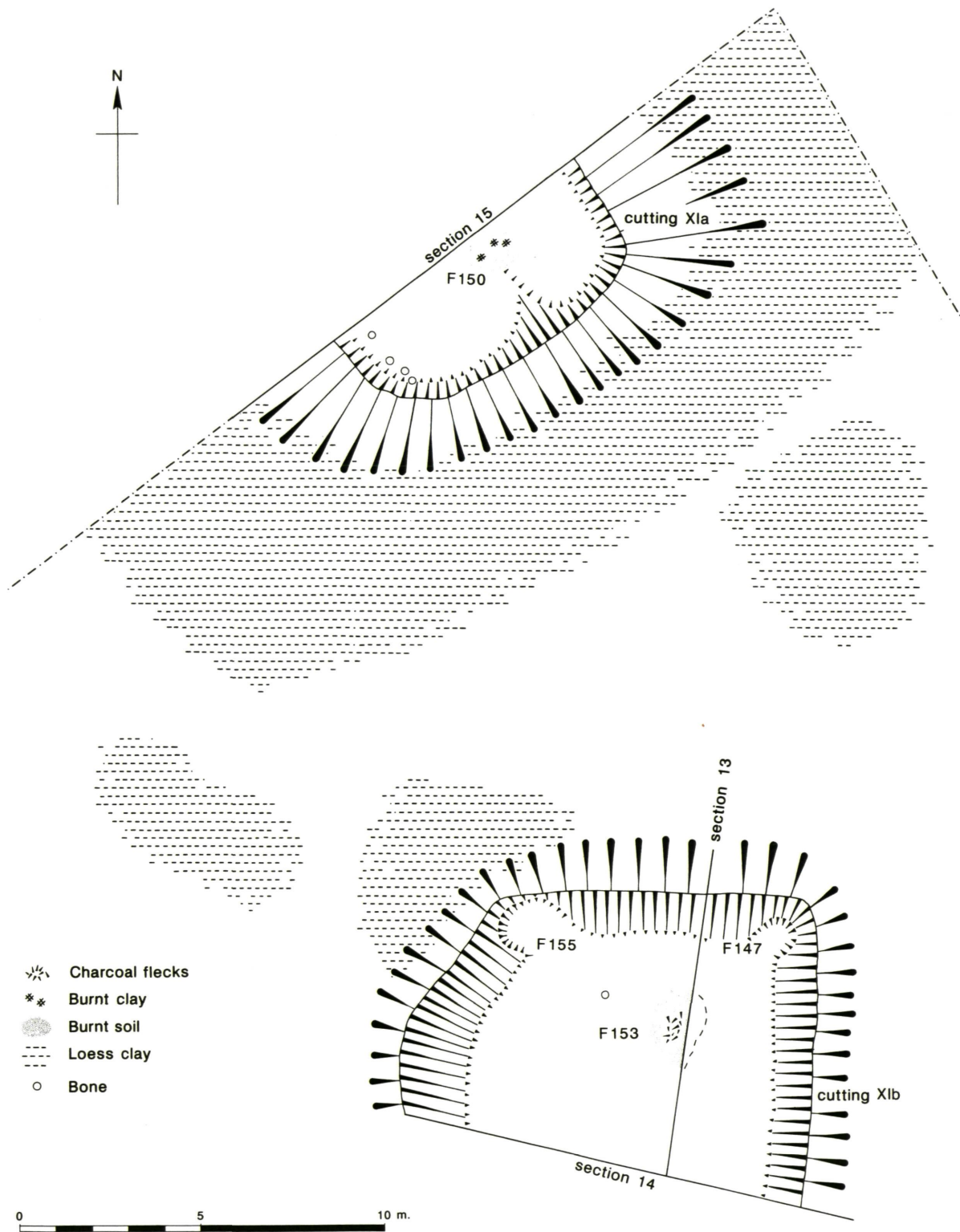


Figure 14 Area B: E entrance, excavated features

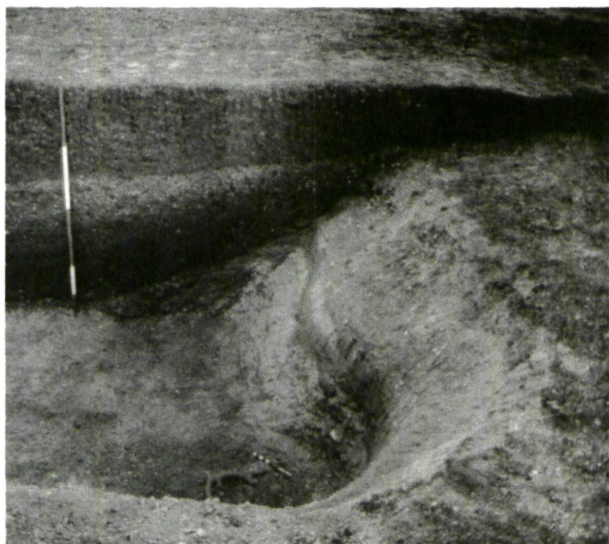


Figure 15 Longitudinal section through SE ditch terminal from W, showing antler pick in position on base of F155

layers H and G reflect increasingly dry conditions in the silting ditch bottom (Fig. 33).

*Layer H*, less stony than layer G, was spread uniformly across the ditch at its centre and up the sides. Three pieces of struck flint from the layer include a triangular arrowhead (Fig. 30, 3). There were also large pieces of conglomerate, especially in the S terminal of the W entrance (Fig. 13; Fig. 16, St 4–7). Some large pieces of conglomerate were also found in cutting I with one large fragment on the S outer edge of the ditch. There were over 90 fragments of animal bone, most of them unidentified (Table 12).

Layer H had spreads of ashy material in cuttings I (Fig. 9, section 2), VI (Fig. 10, section 8) and IX (Fig. 10, section 4), as well as over the large stone (St 5) which overlay hearth F41a in cutting IIIb.

There is a radiocarbon determination of 2490–2130 cal BC ( $3845 \pm 65$  BP; OxA-3688) for animal bone from layer H in the S terminal of the W entrance (Table 6).

*Layer G* had a consistently sharp boundary with layer H below it, and contained more gravel. Limbrey suggests (Ch. 3) that it may possibly have been deposited as a result of anthropogenic disturbance. It is thus likely that the higher stone content can be attributed to increased instability of deposits at the edge of the ditch due to the greater degree of human activity suggested by the more abundant finds from this layer and the fragments of conglomerate, sometimes in quite large pieces, which occurred in all cuttings.

There were 186 pieces of struck flint, almost all of them forming part of a refitting core preparation deposit in the N terminal of the W entrance (Table 8); the technology of the deposit would be compatible

with a Beaker date (Brown, Ch. 3); retouched forms included Fig. 30, 2, 5 and 7 from cutting I and Fig. 30, 4 and 6 from the S terminal of the W entrance. Pottery occurred for the first time in this layer, in the form of two plain body sherds of Beaker fabric in the same terminal, and several conjoining sherds from a Bucket Urn in cutting VI (Fig. 31, 1). A fragment from a late Iron Age or early Roman copper alloy brooch (SF 1), presumed to be intrusive, was found in the N terminal of the W entrance. Layer G produced the overwhelming majority of the animal bone from the ditch, most of it of cattle, although deer antler, including two picks, was also present, as in the construction phases of the ditch (Table 12).

In cutting VI a hearth (not numbered) lay at the interface of layers G and H (Fig. 10, section 8). It was 1 m wide at the section line and 0.06 m thick at the centre. In cutting I there were two areas of burning *in situ*. The smaller ( $1.20 \text{ m} \times 0.60 \text{ m}$ ) lay at the interface of layers G and H, with a collection of animal bone including three cattle mandibles and an elongated ( $0.9 \times 0.1 \text{ m}$ ) spread of charcoal and ash (Fig. 9, section 2). The larger ( $1.60 \text{ m} \times 0.84 \text{ m}$ ) lay within layer G and was surrounded by a further collection of bone mainly of cattle but including red deer antler. There was also a spread of ash within layer G in cutting IX (Fig. 10, section 4).

There is a radiocarbon determination of 2870–2340 cal BC ( $3995 \pm 60$  BP; OxA-3687) for animal bone from layer G in the S terminal of the W entrance (Table 6).

### *Tertiary fills (layers B–Fa)*

The scarcity of finds from layers B–Fa (Tables 8, 10, 11) may in part reflect the extent to which they were machine-excavated (Table 2).

*Layer Fa*, which was very gravelly, is seen by Limbrey (Ch. 3) as a subsidiary layer between G and F, its upper part being non-calcareous like the whole of overlying layer F. Molluscs were not preserved in either. By now the ditch deposits were filling and levelling out with the result that layer Fa lay in a flatter band across the ditch.

There is a radiocarbon determination of 2200–1880 cal BC ( $3745 \pm 60$  BP; OxA-3686) for red deer antler from layer Fa in the S terminal of the W entrance (Table 6).

*Layer F* differed from the underlying layers in being sorted, lacking much of the clay and all of the stones of the source deposits. Limbrey (Ch. 3) sees it the product of slow accumulation without mass movement of soil, in a period when the bank and ditch sides were stabilised by vegetation. Soil formation, humus accumulation and decalcification proceeded during deposition, with consequent deposition of calcium carbonate in the underlying layers. Layer F may possibly, but not certainly, have been wind-deposited. It extended as a fairly level layer over the



centre of the ditch, its top surface much flatter than those of the underlying layers. Artefacts comprised four pieces of struck flint and 18 sherds of late Bronze Age, Iron Age and Roman date (Barclay and Gledhill, Ch. 3). Animal bone was similarly scarce. A large stone, St 4, was found in this layer, on the N edge of the S terminal of the W entrance (Fig. 13). In cutting I layer F appeared to be burnt where it lay over Fa in the centre of the ditch (Fig. 9, section 1, layer Fb).

*Layer E* was a ploughsoil, derived from cultivation which had truncated the upper part of layer F, and in some sections extended over the upper sides of the ditch (Figs 9–11). It was derived from prolonged cultivation over the area of the monument, which substantially altered the profile of the upper edges of the ditch. The molluscan fauna from this and subsequent layers indicate dry, open conditions. Finds included 172 sherds, all but one of them Roman, a nail and another iron object (SFs 6 and 10).

*Layer D*, clearly visible only in manually excavated cuttings, consisted of a narrow band of gravel which did not extend right across the ditch, but was present only on the outer edge. It could have been material from the denuded bank pushed in to level off the ditch before ploughing could take place in the interior of the monument. Alternatively, it may represent a period when cultivation was less intensive with the result that worm-sorting began to have a significant effect. The only sherds associated with this layer were medieval and came from cutting VIII, where a large piece of conglomerate, St 9, was found on the lip of the ditch. Another piece of conglomerate, St 8, was found on the inner edge of the N terminal of the W entrance.

*Layer C*, the medieval ploughsoil, was markedly stonier than layer D. This may reflect further erosion of the bank and/or of the natural gravel underlying the interior of the monument by ploughing in the medieval period.

*Layer B*, less stony than layer C, represents the post-medieval ploughing of the period up to the time of runway construction.

*Layer A* was modern turf and topsoil.

### *The entrance causeways*

Continuous ploughing over the centuries must have removed all signs of human passage over the areas of the entrances, the medieval furrows having scored deeply into the gravels (Figs 5, 6). In spite of hand excavation, only one feature was found, a relatively recent animal burial (F44, described below) outside the W entrance.

### *The W entrance (Fig. 13)*

A seam of conglomerate bedrock, which ran each side of ice wedge cast 12, lay under the causeway of the W entrance. It is uncertain whether the pointed plan of the N terminal here was original or the result of cleaning out or subsequent disturbance. The gap between the ditch ends at the time of excavation was 10 m wide. Unstratified finds from the entrance area were the pin from a late third or fourth century AD penannular brooch of copper alloy (SF 3), an iron nail (SF 22), 13 pieces of struck flint (Table 9), animal bone, and 27 sherds of Roman and medieval pottery.

### *The E entrance (Fig. 14)*

The opposing E entrance lay over an extensive area of loess-derived yellow-brown sandy clay, its terminals 15 m apart.

## THE BANK AND BERM

Since the bank was levelled during airfield construction, the only available information is provided by Grimes' 1940 excavation and by deposits interpreted as residual pre-bank soils, which were found in the 1972–3 excavation in the area where the bank had stood.

In 1940 only the northern part of the monument was available for excavation. Grimes' plan (1960, fig. 60) therefore shows the contours of the bank on this side of the monument only. Unfortunately there is no record of the bank on the south sector, though the ditch has been preserved. The highest recorded level was on the SW exterior where it was 70.80 m OD; on the N side of the monument it was 70.50 m OD. Grimes' section through the bank and ditch (1960 150–1, fig. 61) showed that the bank at that date stood only 0.45 m high. It consisted of a core of mixed clay soil and gravel about 3.70 m wide, apparently derived from the first stripping of the topsoil from the site of the ditch. On this core clean gravel from the excavation of the ditch was piled to form the body of the bank. As excavated, the base of the spread bank had a total width of 14 m, and was offset outwards from its original core.

Vehicle tracks from the mechanical removal of the bank in 1940 were found cutting into the natural gravels in 1972–3 where the northern part of the bank had stood. In this same area there were patches of what may have been pre-bank soil (Fig. 6). These patches were irregular in shape and were found only in the vicinity of the bank on the N side of the monument. The few that were sectioned varied in depth from 0.05 to 0.20 m. The soil was a purple-brown clayey loam, quite distinct in colour and texture from other soils on the site. They were examined by Limbrey who concluded that 'Only small patches of the buried soil, in the deeper cryoturbation hollows, survived levelling of the bank, but what remained was the illuvial horizon of a *sol lessivé*' (1975, 190–1).

The only direct information about the full width



of the berm between ditch and bank is given by Grimes (1960, 150, fig. 61), who records a shelving berm some 7.50 m wide overlain by his layer E which equates to the successive ploughsoils of layers B, C and D recorded in 1972–3. This slope is most readily interpreted as the product of erosion of the ditch edges, mainly by ploughing. As a general rule the band of ploughsoil up to 25 m wide formed by layers E, C and B around the line of the ditch (Figs 5, 6) shows the extent of erosion of the berm and the ditch edges.

## THE STONES AND STONEHOLES (FIGS 17–25)

The original site description, which forms part of the archive, contains more detailed information about each individual stonehole than is published here.

### *The Quoit stones (Table 3)*

These were all of conglomerate quarried from outcrops of this material which survived as rafts in the upper levels of the sands and gravels within and immediately adjacent to the monument. Some, perhaps most, of the slabs used must have come from similar deposits beyond the excavated area. It is a dense, heavy rock with many pebbly inclusions which weathers to a fairly smooth surface, pitted where the pebbles have fallen out. Those parts of the stones which were below ground level for most of the period during which they stood were rough and pitted. This gives some indication of their original appearance and of the proportion of each stone which was earthfast. *In situ* examples of similar slabs still survive on the site.

### *Complete stones*

Grimes saw three of the Quoits before they were buried in 1940 (1960, 146, fig. 59). He describes Quoit A as having an overall length of 11 ft 5 in (3.48 m) with 3 ft (0.90 m) of it below ground level, a maximum width of 7 ft 1 in (2.16 m) tapering to 5 ft 9 in (1.75 m), and a thickness of 1 ft 7 in (0.48 m). These measurements vary slightly from those of St 1, almost certainly the same stone, which has an overall length of 3.10 m and a maximum width of 2.22 m, tapering to 1.20 m at its base. Its overall shape, however, is entirely consistent with that of Quoit A as drawn in elevation by Grimes. When exposed in 1972 the stone was found to have three deep grooves across its surface, created by the teeth of a mechanical excavator during burial (Fig. 2). There were also scored marks from modern ploughing over the centre of the stone, which also shows signs of burning (Fig. 25).

Stones 2 and 3 appear to have been complete stones toppled into pits close to their stoneholes, St 2 into burial pit F25 (Fig. 24), St 3 into burial pit F28 (Fig. 17). On the evidence of the unweathered ends

of St 1–3, some 20–30% of the height of each stone would originally have been earthfast (Table 3).

It is difficult to know if St 4, 6, 8 and 9 were complete as they were considerably smaller than St 1–3. All had one tapering end (Fig. 16), and St 8 and St 9 were less weathered towards that end.

### *Broken stones*

Stone St 5 and the three pieces of St 7 were all fragments of possible Quoit stones found at the bottom of the SE ditch terminal (Fig. 13, cutting IIIb). St 10 was the stump of a Quoit found broken off in its original stonehole F158 (Figs 19, 22). St 13 was part of a broken stone at the top of the primary fill in ditch cutting VI (Fig. 10, section 8). St 11 was broken into two pieces and was *in situ* in outlying stonehole F215 (Fig. 23).

### *Quarry pits*

Ten possible quarry pits for Quoit stones were found along the length of the conglomerate outcrop which ran parallel to the ice wedge cast 12/122. Quarry pit F30 was on the edge of the N terminal of the W entrance (Fig. 13). The possibility of its having been a postpit at the entrance was discounted by the nature of its filling and by the irregularity of its sides and bottom, the latter consisting of pitted bedrock with flat planes of rock between the pits. Comparison of the dimensions of the possible quarries (Table 4) with those of St 1–3, which seem to have been intact (Table 3), indicates that these features could have been among those from which the stones were obtained.

It is possible that the stone was quarried out of the conglomerate bedrock by cutting a vertical edge or by levering the rock from the sides, causing irregular and yet vertical sides to the quarry. If the rock lay on beds of natural sand and gravel, it would be easy to lever it up from the softer surface beneath it, and this would cause the base of the quarries to be of both gravel and bedrock, and the natural gravel to be compacted.

### *The stoneholes*

Information about individual stoneholes is summarised in Table 5, in which they are ordered clockwise from the W entrance. Their location is shown in Figure 7 and individual plans and sections are reproduced in Figures 17–21.

Original size and shape were sometimes difficult to determine because sand- and gravel-cut holes may have been weathered, enlarged during stone removal, or both. The size and shape of stoneholes F17, F25, F28, F29, F98, F215 and F283 were almost certainly altered; those holes originally excavated by Grimes were also enlarged (Table 5). Stoneholes cut into the conglomerate were generally shallower and had steeper edges than those in sand and gravel. This is apparent in the distinction between the rock-



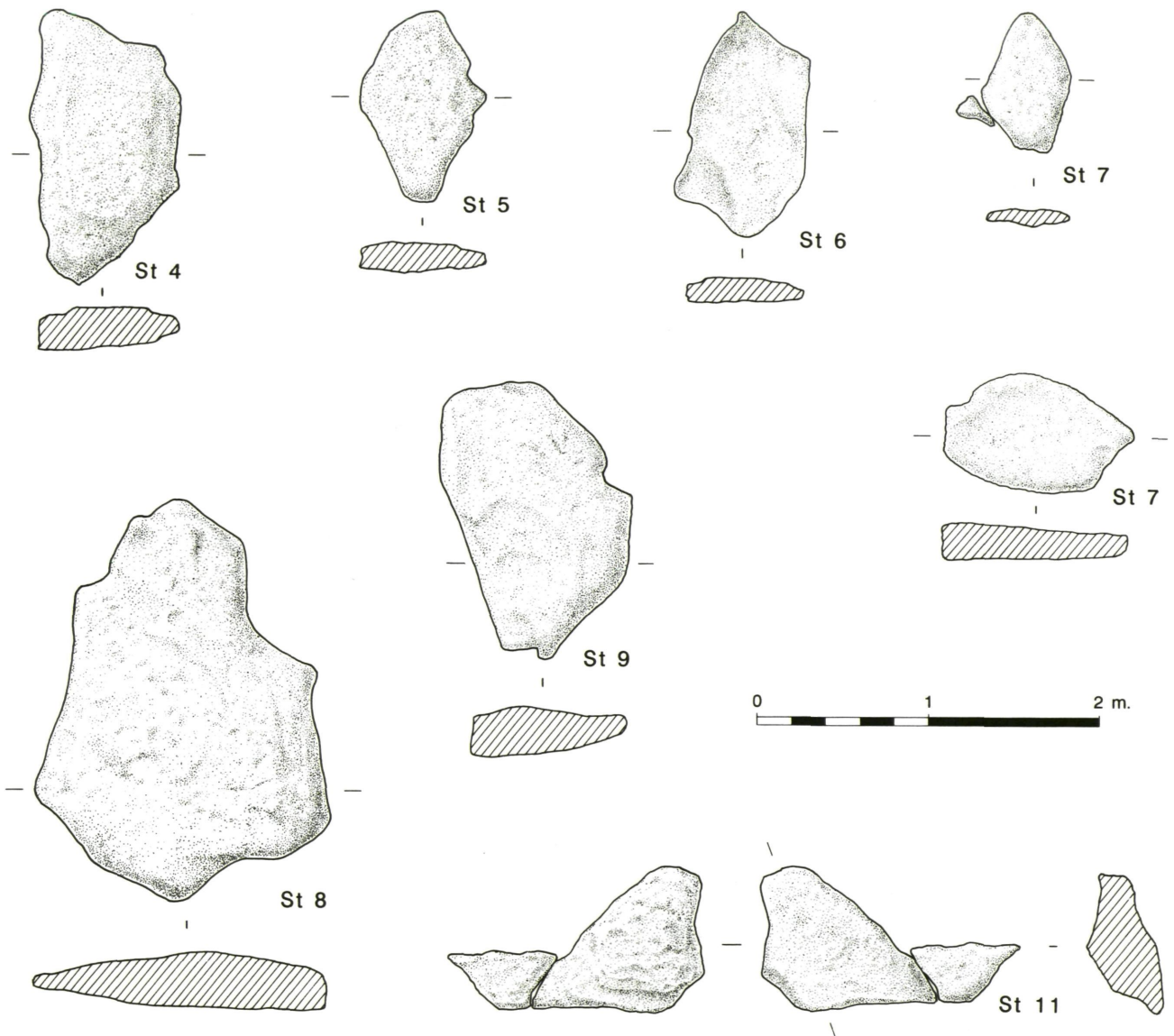


Figure 16 Loose stones

cut SW end and the gravel-cut NE end of stonehole F139 (Fig. 18). Stonehole F134, which was fully rock-cut, was smaller, shallower and steeper-sided than the sand- or gravel-cut stoneholes (Fig. 17).

Apparently absent stoneholes (between F107 and F48, F48 and F19 and F19 and F160) coincide with areas of conglomerate in the N sector of the circle (Fig. 6). It is possible that small stones bedded on this rock would have been set in shallower stoneholes than stones which were bedded on sands and gravels, and that the stoneholes would not even have penetrated the hard bedrock, thus leaving no trace at all of their existence. The continuous ploughing of the site would probably have gone down as far as this bedrock and would have obliterated any features above it.

Where stoneholes cut into sand and gravel showed little sign of disturbance their bases clustered in the middle of a range defined by levels of

68.72 m OD for stonehole F220 and 69.85 m OD for stonehole F48. One of the largest and deepest stoneholes, F159, was at the S side of the E entrance. There are problems of interpretation here, since its recorded orientation is at variance with that of the rest of the stoneholes in the circle; it is unclear how much of the feature was the original stonehole and how much resulted from stone removal, and it seems to have incorporated the remains of two successive sockets (Fig. 19).

Grimes' excavation of Quoit A, the only complete, *in situ* stone of the circle, showed it to have been set against the near-vertical inner face of its stonehole, stabilised by conglomerate packing stones, while the outer face of the stonehole sloped gently (1960, 146, fig. 59). Three of the four other stoneholes excavated by him had a similar profile, with external ramps interpreted as reflecting the side from which the stone had been erected (Grimes 1960, 153, fig. 62). It

Table 3. Stones

Stone no.	Provenance	Comment	Length/height x breadth x thickness (m)	Illustrations
St 1	Stone burial pit F18	Substantially complete. Almost certainly Grimes' Quoit A. Lower 3 ft (0.90 m) below ground when excavated by him. Lower 0.60 m unweathered	3.10 x 2.22 x 0.42 (Quoit A recorded by Grimes (1960, 146) as 3.48 x 2.16 x 0.48)	Figs 2, 25
St 2	Stone burial pit next to stonehole F25	Substantially complete. Lower 0.50 m unweathered	2.34 x 0.68 x 0.34	Fig. 24
St 3	Stonehole + stone burial pit F28	Substantially complete. Lower 0.70-0.90 m unweathered	2.48 x 1.30 x 0.52	Fig. 17
St 4	Ditch cutting IIIb (S terminal of W entrance), layer Fa	?Complete	1.65 x 0.85 x 0.25	Figs 13, 16
St 5	Ditch cutting IIIb (S terminal of W entrance), layer K	Incomplete. Under ash and carbon spread F41 and over ash and carbon spread F41a	1.12 x 0.72 x 0.16	Figs 13, 16
St 6	Ditch cutting IIIb (S terminal of W entrance), layer K	?Complete	1.32 x 0.66 x 0.15	Figs 13, 16
St 7	Ditch cutting IIIb (S terminal of W entrance), layer K	Three fragments, 'wedged against each other'. ??Posthole packing	0.80 x 0.5 x 0.10 1.10 x 0.65 x 0.18 0.20 x 0.16 x ?	Figs 13, 16
St 8	Ditch cutting IIIa (N terminal of W entrance), layer D	?Complete. Resting on inner lip of ditch terminal. First 0.4-0.70 m from narrower end less weathered than rest	2.36 x 1.74 x 0.32	Figs 13, 16
St 9	Ditch cutting VIII, layer D	?Complete. Resting on outer edge of ditch. Narrower end less weathered than wider	1.64 x 1.10 x 0.30	Fig. 16
St 10	Stonehole F158	Stump of stone <i>in situ</i> in original stonehole, against near-vertical inner face of pit	1.72 x 1.90 x 0.20	Fig. 19
St 11	Outlying stonehole F215	Stump of stone (= 2 juxtaposed conjoining fragments) <i>in situ</i> in original stonehole, against near-vertical E face of pit. Further fragments in fill	0.74 x 1.50 x 0.30	Figs 16, 24
St 12	Unstratified	Stone found in 1988 excavation 'from area of 26', ? = St 2?	?	
St 13	Ditch cutting VI, at interface of layers E and L	On inner edge of ditch	?	Fig. 10, section 8

was also observed in the subsequent excavations that there was usually one vertical face to each stonehole with a slope on the opposite side, but this face did not always appear to be on the edge facing inwards to the circle, notably in the case of stonehole F227 (Fig. 21). It was in many cases difficult to distinguish between a slope representing the side of the hole from which the stone was erected and

damage done to the sides of the holes by the robbing out of the stones in the medieval period. A vertical edge was commonly found on the inner side of the holes where this was undamaged by stone robbing operations. The sloping ramps which Grimes recorded may thus have been original features but could equally well have resulted from the later removal of the stones.



Table 4. Possible quarries

No.	Description	Length x Breadth (m)	Depth (m)	Fill(s) from base upwards
F30	Irregular plan, shelving sides and rocky base  Contained a couple of charcoal flecks	1.80 x 1.40	0.22	Homogeneous loam, yellowish and fairly stony towards base, reddish and finer towards top
F34	Irregular plan, fairly steep sides  Conglomerate fragments resting on flat rock base	1.50 x 0.80	0.28	Soil with 70% gravel and lumps of conglomerate  Sandy loam
F64	Irregular plan and profile, with vertical, apparently cut edge to N  Areas of rock <i>in situ</i> in base  Much loose conglomerate	5.00 x 3.00	0.42	70% gravel  Fine, red-brown, stone-free silt
F105	Irregular, elongated plan and irregular section  Edge vertical to S, sloping to N  Bottom composed of alternating pits and flat rock surfaces	2.35 x 1.05	0.48	Compact light brown sandy soil with concreted gravel around edges and on bottom
F105a	Irregular, elongated plan and irregular section  Vertical edge to W	2.70 x 1.15	0.22	Reddish brown soil with pebbles
F126	Irregular plan and section  Some edges cut  Bottom partly rock, partly hard-packed gravel	3.20 x 2.70	0.30	Clayey, reddish-brown soil with fragments of conglomerate
F128	Near-circular plan, gently sloping sides, almost flat rock base	4.00 x 3.50	0.38	Clayey, dark reddish-brown soil with fragments of conglomerate and 40% gravel
F142	Elongated plan with central constriction  Gently sloping sides  Overlying F144	3.00 x 2.00	0.18	Compact, reddish brown clayey soil with fragments of conglomerate and 40% gravel
F143	Subquadrangular plan, irregular profile  Base and sides formed mainly by rock, partly by gravel	0.95 x 0.95	0.20	As F142
F144	Elongated plan  Underlying F142	1.26 x 0.58	0.13	Sandier than F142-3, with 20% pebbly gravel and flecks of charcoal

Where the stumps of stones survived, in stoneholes F158 and F215, they too were set against the steeper sides of their sockets (Figs 19, 22, 23, 24). Where empty sockets were recorded, in stoneholes F159, F227, F207, F220 and F202, most were also against the steeper sides (Figs 19, 20, 21). *In situ*

packing stones were found in several stoneholes, most clearly F283 and F215 (Figs 19, 24). The numerous conglomerate fragments found in later stonehole fills are likely to have resulted both from the disturbance of packing stones and the breaking up of the Quoits themselves.

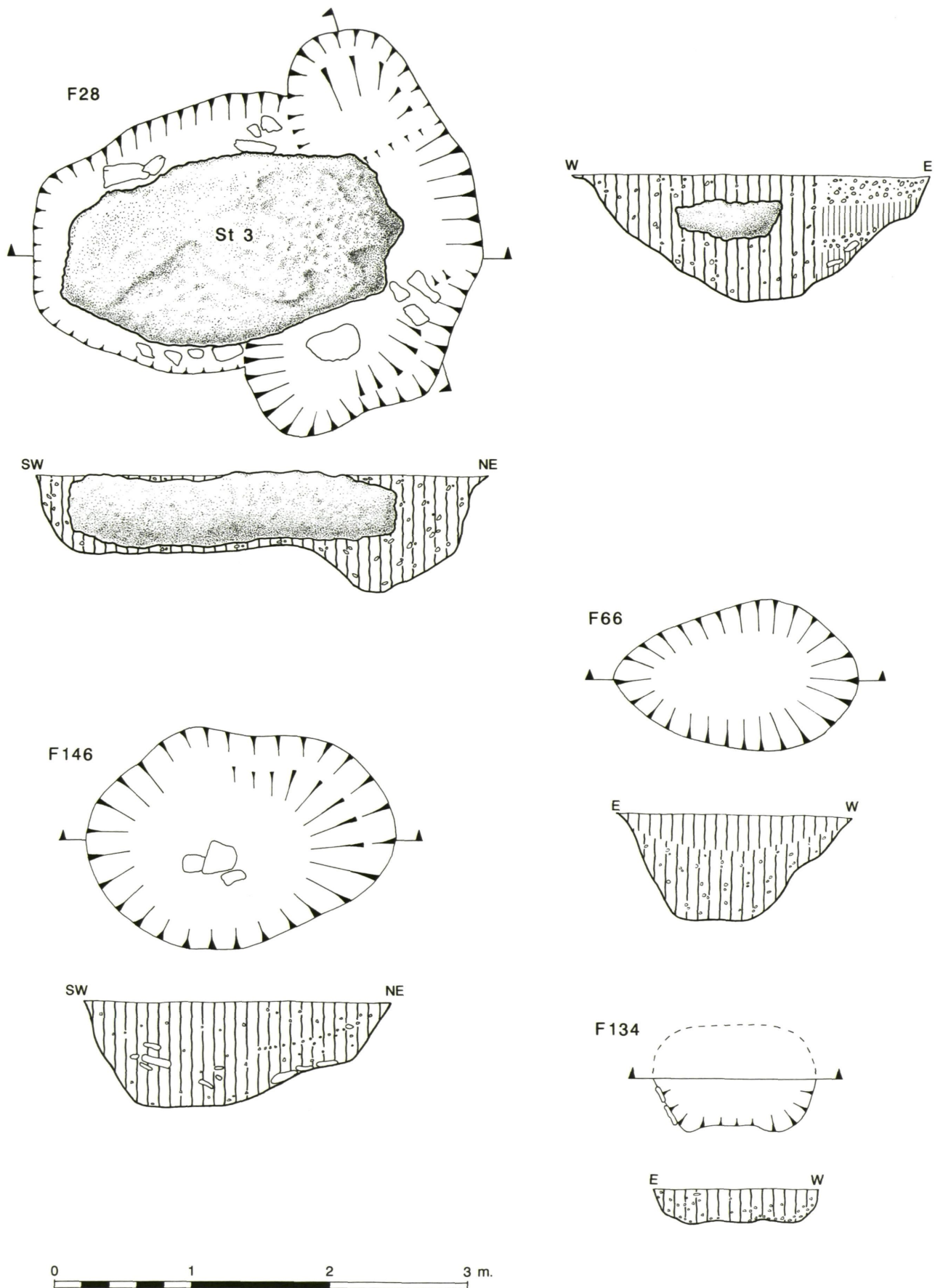


Figure 17 Stoneholes F28, F66, F134 and F146



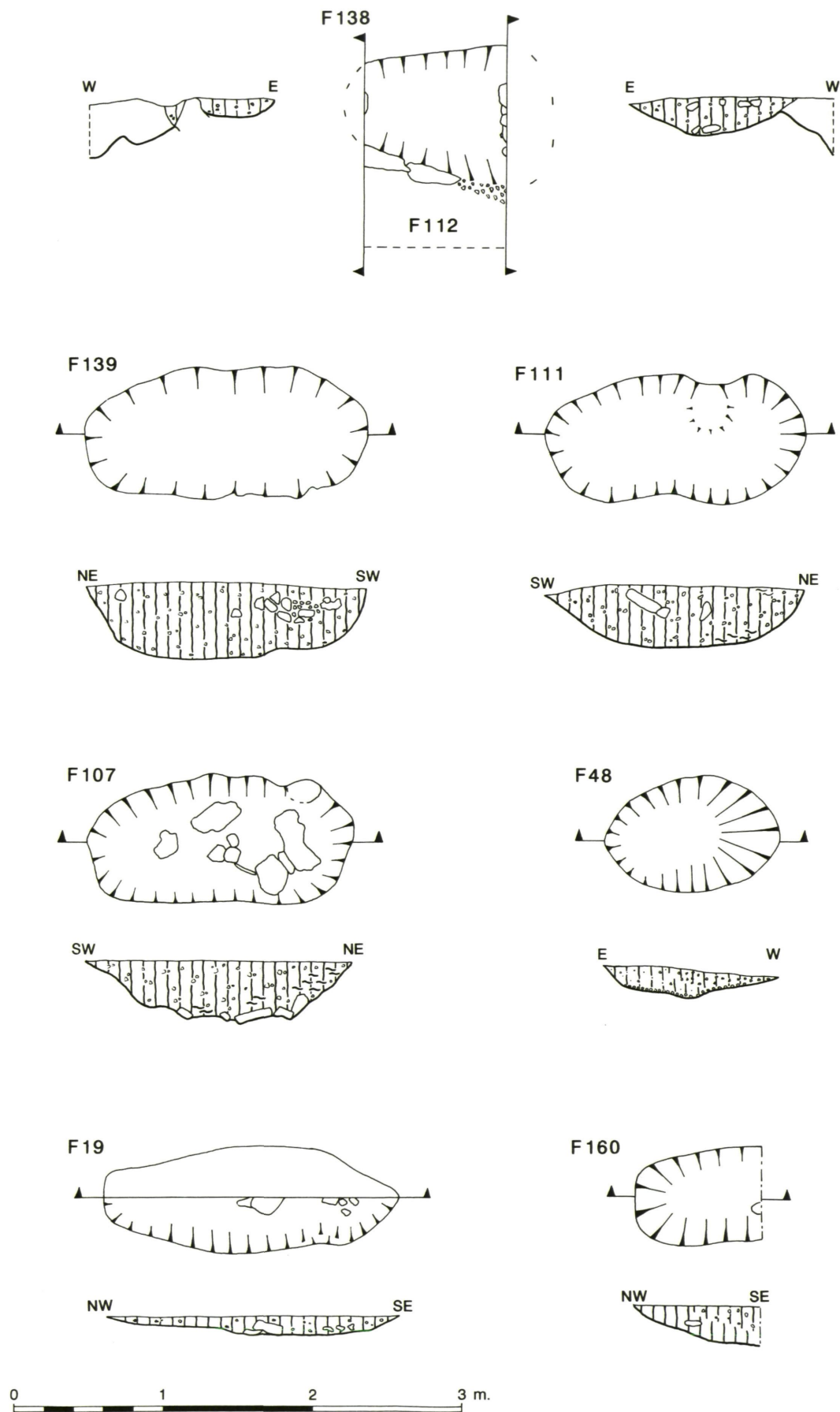


Figure 18 Stoneholes F19, F48, F107, F111, F112, F139 and F160

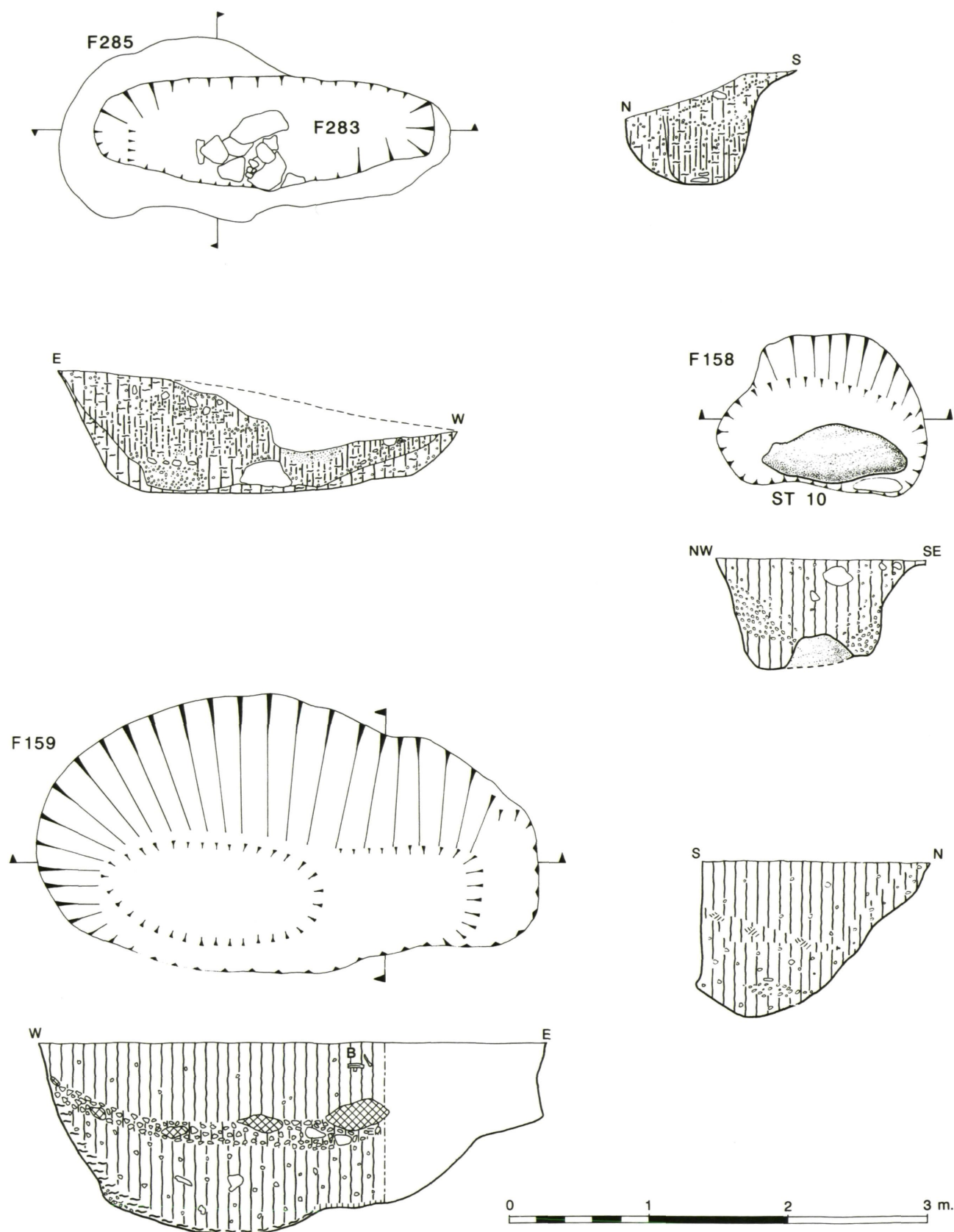


Figure 19 Stoneholes F158, F159 and F283



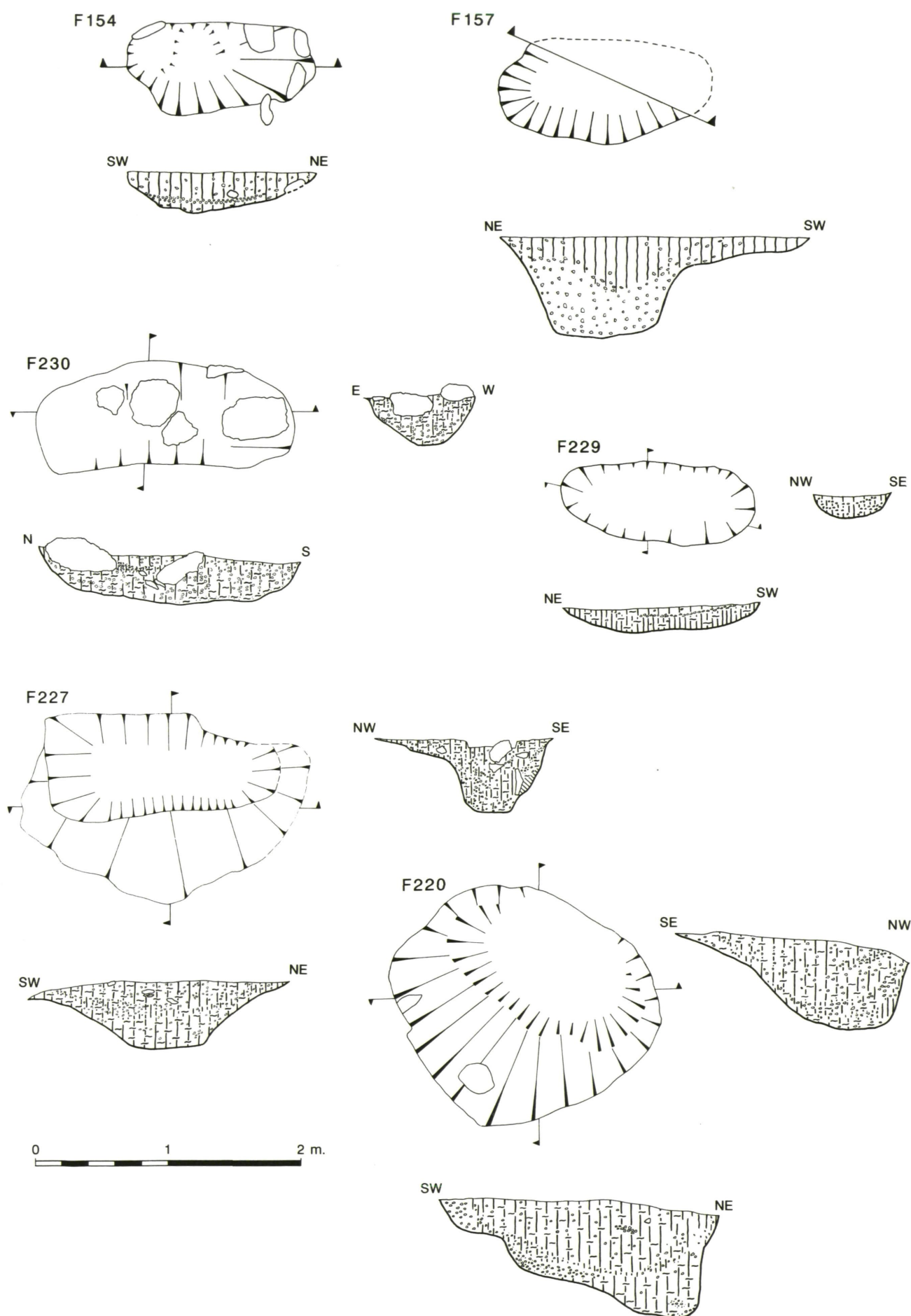


Figure 20 Stoneholes F154, F157, F230, F229, F227 and F220

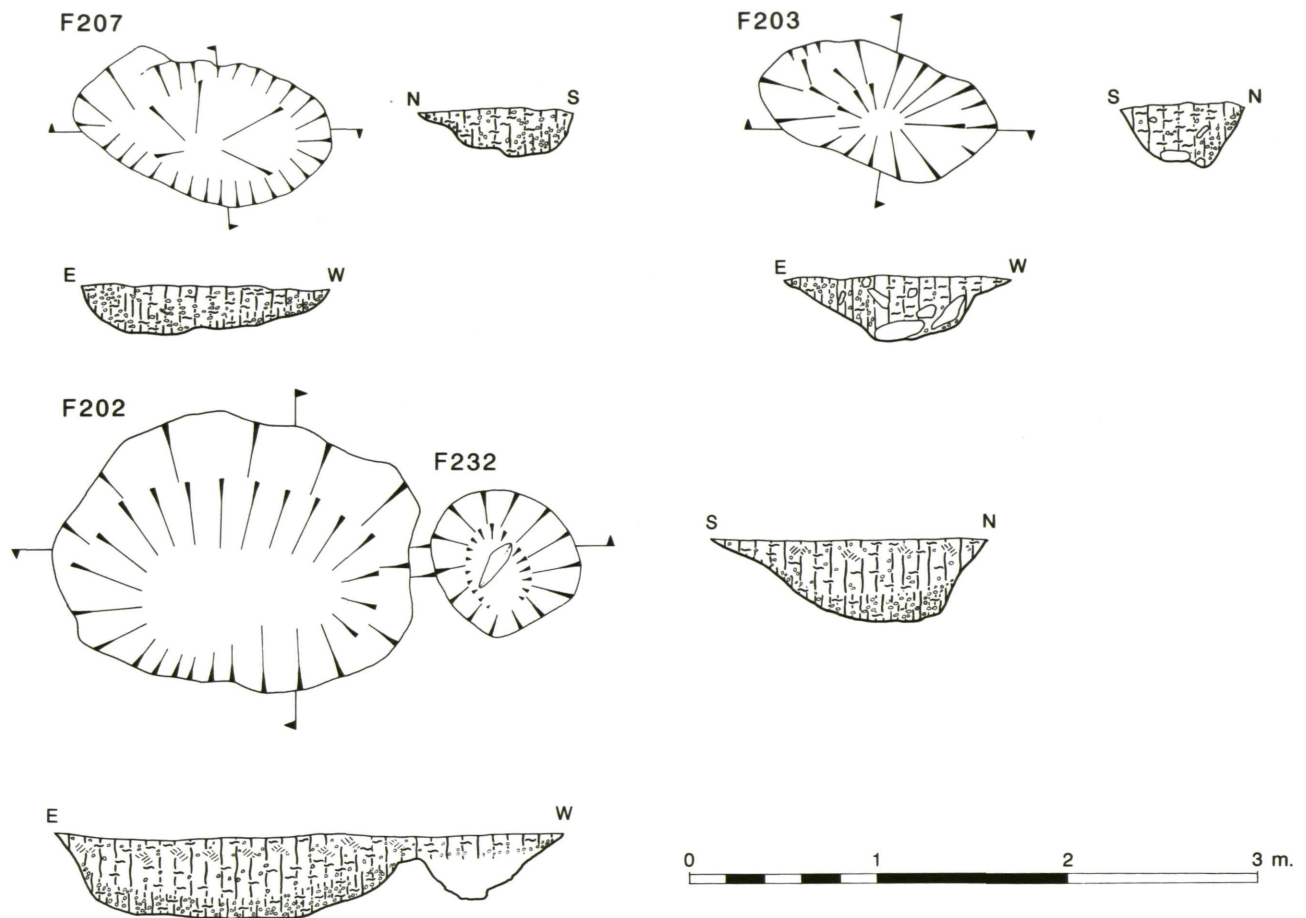


Figure 21 Stoneholes F207, F203, F202

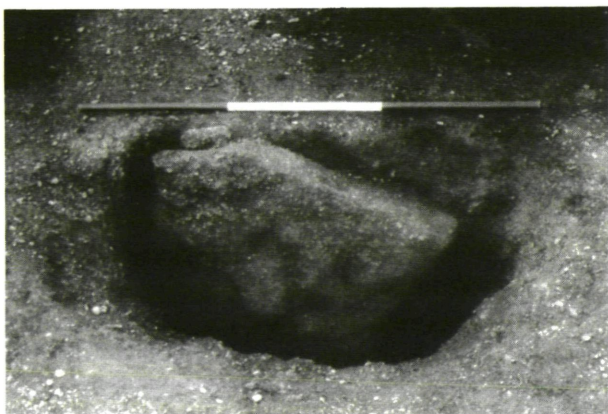


Figure 22 Stonehole F158 with base of broken-off quoit in position

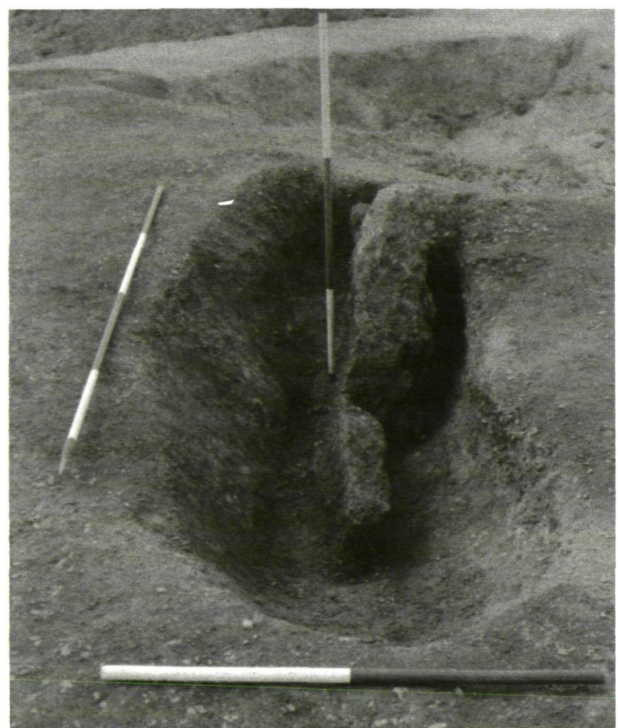


Figure 23 Outlying stonehole F215 from the E



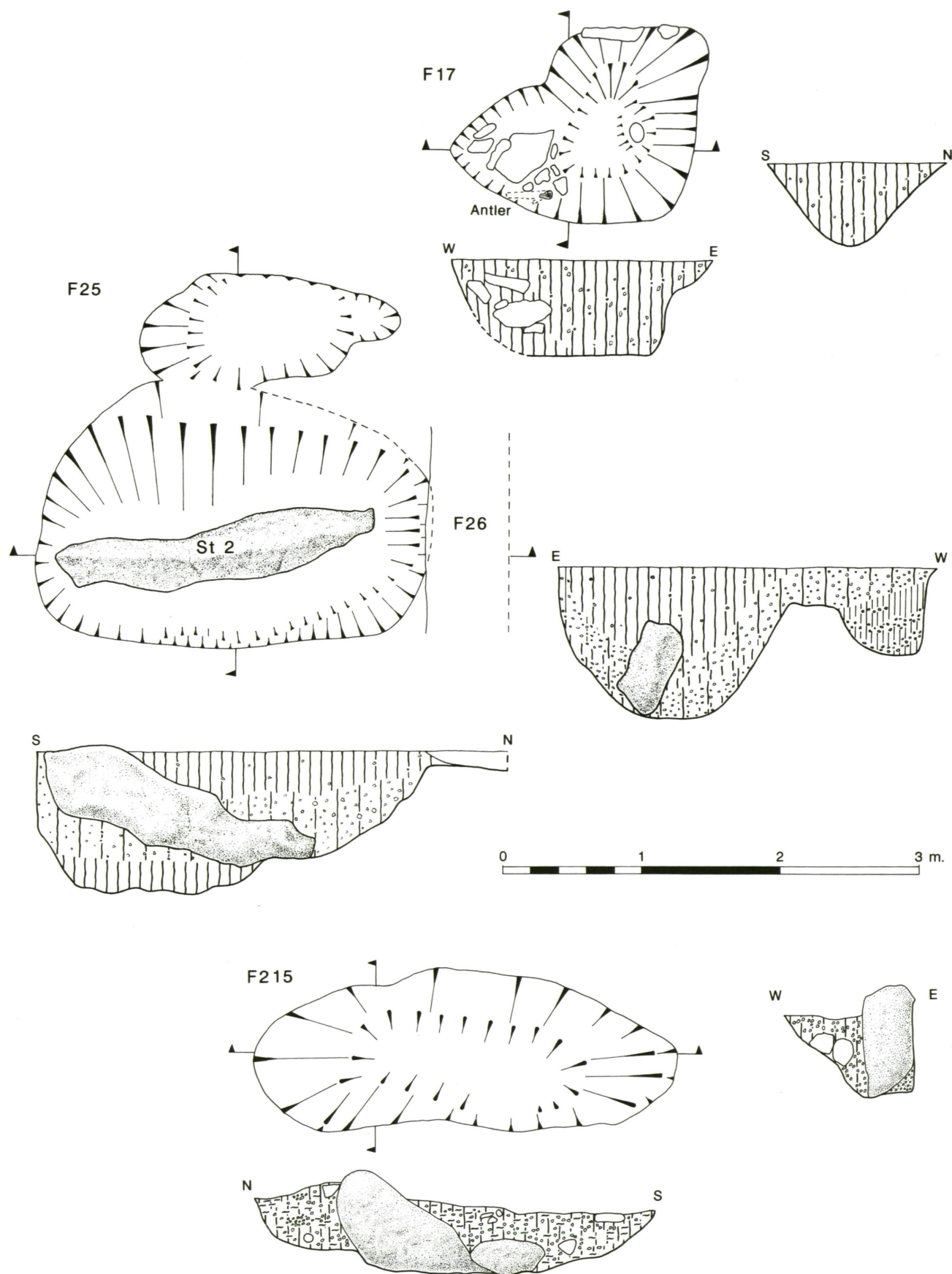


Figure 24 Stoneholes F17, F25 and F215

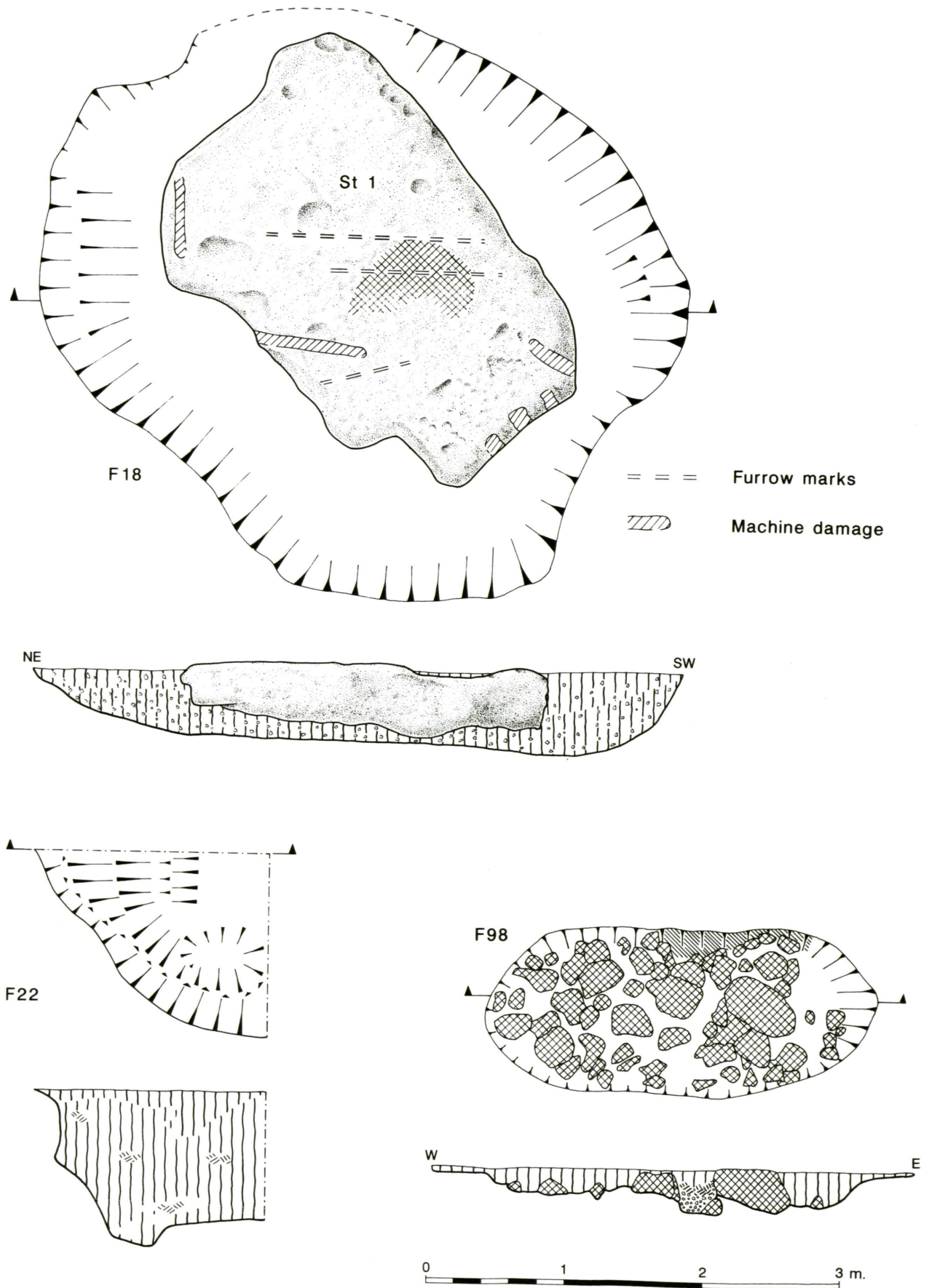


Figure 25 Stone burial pits F18, F22 and F98



Table 5. Stoneholes, clockwise from W entrance (1).

All stoneholes were flat-bottomed unless otherwise stated. \* = packing stones *in situ*, + = packing stones displaced

No.	Level at base	Profile	Length x Breadth (m)	Depth (m)	Fill(s) from base upwards	Packing stones	Description/ Comment	Figs
W ENTRANCE								
F28	69.04	Inner edge near-vertical then shelving, ends more gently shelving	1.85 x 1.00	0.78	Alternating bands of rather black-brown soil and sandy gravel, mainly surviving under E end of stone  Black-Brown, rather 'greasy' soil, mainly against inner edge  Redeposited gravel	*?	SW part removed by adjacent stone burial pit, stone (St 3) tipped outwards into burial pit	17
F146 (Grimes' 3)	68.92 (1972/3)	'Ramp' on outer edge (1940)  S end, cut in conglomerate over gravel, fairly steep; N end, cut in gravel, more gently shelving, ? = 'ramp' (1972/3)	2.13 x 1.67 (1940)  2.25 x 1.62 (1972/3)	0.68 (1940)  0.78 (1972/3)	Brown soil with pieces of conglomerate, lens of clean gravel towards top (1940)  Grimes' backfill (1972/3)	+	Grimes 1960, 153, fig. 62, pl. XXXVIb	17
F66	68.95	Shelving sides, except at steeper NE end	1.80 x 1.10	0.78	Gravelly loam, gravel content rising from base upwards  Fine stone-free loam	*? +? in inner half of fill	Cut through conglomerate into soft sand and gravel	17
F134	69.5	Fairly steep-sided, inner face near-vertical	1.20 x 0.78	0.25	Sandy, gravelly loam, less gravel at SE end	+	Cut in conglomerate	17
F138	69.44	Shelving sides	1.10 x 0.85	0.27	Sandy, gravelly loam	+ larger near base, smaller towards top	Cut partly into ice wedge cast F112, partly into conglomerate	18
F139	69.12	Shelving and deeper to NE, cut in gravel; steeper and shallower to SW, cut in conglomerate	1.87 x 0.90	0.62	Sandy, gravelly loam	+ mainly in upper part of fill at SW end		18
F111	69.28	Sides shelving, more steeply at NE end. 'Wedge' of gravel in base corresponding to indentation in outer edge.	1.75 x 0.80	0.42	Sandy, gravelly loam	+ mainly in upper part of fill	Gravel 'wedge' may represent one end of stone socket	18

Table 5. Stoneholes, clockwise from W entrance (2).

All stoneholes were flat-bottomed unless otherwise stated. \* = packing stones *in situ*, + = packing stones displaced

No.	Level at base	Profile	Length x Breadth (m)	Depth (m)	Fill(s) from base upwards	Packing stones	Description/ Comment	Figs
F107 (Grimes' 2)	69.28 (1972/3)	'good ramp' on outer side (1940)	1.77 x 0.76 (1940)	0.46 (1940)	Gravelly brown soil (1940)	+ through-out (1940)	Grimes 1960, 153, fig. 2, pl. XXXVIa	18
		Outer side shelving, inner side steeper, base uneven (1972/3)	1.75 x 0.80 (1972/3)	0.42 (1972/3)	Grimes' backfill (1972/3)			
F48	69.55	Gently shelving to W, steeper to E. Slight ridge in base on approx. E-W line, dropping to inner side. Slight E-W trough in base on outer side	1.20 x 0.75	0.18	'Peagrit'  In E end and over all of flat base of hole, sandy loam with few pebbles  In W end, overlying W part of underlying layer and forming near-vertical face with it higher up the fill, darker, more gravelly loam.	Large, worn river pebbles present	Near-vertical interface between two fills may reflect stone-removal	18
F19 (Grimes' 1)	69.46 (1972/3)	Sides shelving, particularly gently at SE end. Slight central longitudinal ridge	1.82 x 0.60 (1940)  2.00 x 0.70 (1972/3)	0.46 (1940)  0.13 (1972/3)	'Normal brown soil' (1940)  Grimes' backfill (1972/3)	*? mainly against outer wall (1940)	Grimes 1960, 153, fig. 62. Plan and section suggest socket approx. 1.00 x 0.25 against inner face	18
F160	69.51	Outer edge fairly steep, inner more gently shelving	> 0.80 x 0.64	0.25	Mid-brown clayey loam with gravel  Gravelly red-brown loam	+	Only N part excavated, remainder under farm track	18



Table 5. Stoneholes, clockwise from W entrance (3).

All stoneholes were flat-bottomed unless otherwise stated. \* = packing stones *in situ*, + = packing stones displaced

No.	Level at base	Profile	Length x Breadth (m)	Depth (m)	Fill(s) from base upwards	Packing stones	Description/ Comment	Figs
F283	68.68	SE and SW edges steep, NE and NW edges more gently shelving	2.75 x 1.10	0.54	Relatively gravel-free mid-dark brown silt  Mid-brown silt loam with higher gravel content  <i>in cut</i> : animal disturbance overlain by mid-brown silty loam with gravel  <i>above all</i> : redeposited machine-disturbed material	     *	Partly cut through solution feature F283   NE part of stone hole truncated by recent earth-moving.  Packing stones and cut suggest stone socket at SE end approx. 1.00 x 0.60 m	19
E ENTRANCE								
F159	68.5	Shelving to N and W, steep to S and E, at least one, ?two, sockets in base against S side	3.60 x 2.00	1.36	Compacted dark brown soil on base to E  Silt on base and sides to W  Gravelly loam with some stone  Much broken stone, some burnt  Ploughsoil	   +?  +	Long axis approx. E-W  ?two successive sockets, ?stonehole + stone removal pit  More convincing (?second) socket approx. 1.56 x 0.76 m  Cattle bone fragments from ploughsoil	19

Table 5. Stoneholes, clockwise from W entrance (4).

All stoneholes were flat-bottomed unless otherwise stated. \* = packing stones *in situ*, + = packing stones displaced

No.	Level at base	Profile	Length x Breadth (m)	Depth (m)	Fill(s) from base upwards	Packing stones	Description/ Comment	Figs
F158	69.06	Outer side shelving, inner steep	1.45 x 0.68	0.32	Dark brown loam Yellow gravel Gravelly loam	 * +	Stump of St 10 <i>in situ</i> against inner face, upper part leaning inwards  Lower 2 layers probably = original stone hole fill, upper layer probably deposited and outer edge of pit ?extended when stone broken off	19, 22
F154	69.40	Outer edge and NE end shelving, inner edge and SW end steep, depression in N centre of base	1.45 x 0.68	0.32	Gravelly, sandy loam with layer of 'peagrit' towards base	*? +		20
F157	69.08	All edges fairly steep	1.60 x 0.80	0.76	Gravel Gravelly loam	+	Partly cut into periglacial feature F156a	20
F230	69.89	All sides shelving, inner slightly steeper than rest	1.95 x 0.78	0.35	Gravelly silty loam Mid-brown silty loam against W face Gravelly silty loam	*? +	Some animal disturbance at S end	20
F229	69.17	All sides shelving	1.40 x 1.55	0.22	Compact silty loam with lenses of gravel Compact mottled silty loam with lenses of gravel Gravelly loam	+		20





Table 5. Stoneholes, clockwise from W entrance (6).

All stoneholes were flat-bottomed unless otherwise stated. \* = packing stones *in situ*, + = packing stones displaced

No.	Level at base	Profile	Length x Breadth (m)	Depth (m)	Fill(s) from base upwards	Packing stones	Description/ Comment	Figs
F202	69.95 (1988)	Inner edge vertical, outer shelving (1940)	1.98 x 1.60 (1940) 1.88 x 1.44 (1988)	0.53 (1940) 0.42 (1988)	'Brown gravelly soil' (1940) Mid-brown silty loam with gravel in base, ? original fill (1988) Grimes' backfill (1988)	*	Grimes 1960, 146, fig. 59.  Quoit A still <i>in situ</i> 1940, against vertical inner face, wedged by packing stones up to 0.80 m long  Natural hollow (F232) to W	21
F219	69.24	Sides shelving	0.94 x 0.52	0.12	Silty loam with 80% gravel	*?	Severely ploughed	
F226	69.07	S side shelving	0.92 x 0.50	0.14	Silty loam with 25% gravel Silty loam with 90% gravel Silty loam with 25% gravel	*	Severely ploughed, N side cut by recent pipe-trench	
F17	69.15	Both sides shelving, ?socket in base	1.72 x <1.42	0.61	Silty loam with c. 60% gravel	+	Extended to N by pit cut to remove St 1, buried in pit F18 to E  Antler pick against SW side — 3955±65 BP (OxA-3689)	24
F42	-	Inner edge vertical, outer shelving (1940)	1.98 x 0.82 (1940) 1.70 x 0.50 (1972/3)	0.45 (1940) 0.60 (1972/3)	'Brown soil containing a little conglomerate' (1940) Grimes' backfill (1972/3)	+	Grimes 1960, 153, fig. 62,4	



Table 5. Stoneholes, clockwise from W entrance (7).

All stoneholes were flat-bottomed unless otherwise stated. \* = packing stones *in situ*, + = packing stones displaced

No.	Level at base	Profile	Length x Breadth (m)	Depth (m)	Fill(s) from base upwards	Packing stones	Description/ Comment	Figs
F25	69.82	Outer edge vertical, inner shelving	1.82 x 0.80	0.30	Black brown humic material, ? original fill  Black brown loam with slips of gravel  Gravelly soil continuous with lower fill of adjacent stone burial pit		Originally held St 2, buried in pit immediately to NE	24
OUTLIER								
F215	68.7	Vertical to E, shelving to W	3.08 x 1.16	0.66	Red-brown silty loam with lenses of gravel  Disturbed red-brown soil with many conglomerate fragments	*	Stump of stone (= two joining fragments) <i>in situ</i> against E face	23, 24

Remnants of the original fills survived in up to 13 stoneholes (F28, ?F48, F283, ?F159, F158, F230, F229, F227, F220, ?F207, ?F203, ?F202, F25), often in the form of a compact red-brown soil interspersed with slips of gravel or stone-free clay, which is likely to represent the initial silting of features cut into the natural sand and gravel.

A comparable fill at the base of F98 (Fig. 25), an ovoid pit containing much burnt stone which lay at right-angles to the circle between stoneholes F48 and F19, may suggest that it, like stonehole F215, contained an outlier. The pit was of similar shape to the other stoneholes and Grimes, who excavated it in 1940 (1960, 153) says that it 'was divided by a poorly defined, transverse ridge, which was accompanied by two slight constrictions in the plan, suggesting that the hole had been dug in two parts', which would fit the description of a robbed-out stonehole. The stonehole may have been at the SW end of the pit where it was deeper and more vertical-sided, with a large fragment of stone resting on the bottom of the hole with a layer of yellow clay over red gravel to the N of it.

Finds from stoneholes are confined to cattle bone fragments from the topmost (ploughsoil) fill of F159, an iron nail from an unknown context in the same feature (SF 12), fragments of charred sheep/goat tibia from under a packing stone in the lower fill of F203, and an antler pick found with animal bone and conglomerate fragments against the SW side of F17 (Fig. 24). This stonehole was disturbed, apparently by the digging out of the stone, so that, while the material may represent *in situ* packing, this cannot be demonstrated unequivocally. Even if it was displaced, the pick is likely to date from the excavation of the stonehole. A radiocarbon determination of 2860–2290 cal BC (3955 ± 65 BP; OxA-3689) has been made on the pick. An earlier radiocarbon determination, overlapping with this only at two standard deviations, of 2920–2570 cal BC (4165 ± 70 BP; OxA-3690) has been made on oak charcoal from the basal fill of the socket of stonehole F227.

## POSTHOLES AND PITS (FIGS 26–27)

These features, all undated, were easily distinguished from geological formations by their regularity of shape and the nature of their fills.

### Postholes

F27, F37, F52 and F208 were isolated, F72–F78 were grouped in a straight line, and F90 and F90a–o were grouped in a semicircle (Fig. 26).

Posthole F27 was close to the E side of the stonehole and burial pit F25, and may have been connected with the medieval burial of the stone. There were small pieces of animal bone in the fill. Posthole F37 was at the top of the E slope to terminal IIIb and is of indeterminate date. Posthole F52 was an isolated post in the central area of the monument,

of indeterminate date, as was also F208 in the S sector.

Postholes F72–F78 were of varying size and were all cut into an outcrop of conglomerate in the NW part of the interior of the monument. The sides of the holes were cut vertically into the bedrock and there was a piece of conglomerate packing stone in posthole F78. Their silty loam fill suggests that they may have been contemporary with the monument. They are possibly the only remaining postholes of a larger structure, owing their survival to the fact that they were in the bedrock in an area not deeply disturbed by medieval ridge and furrow cultivation.

Postholes F90 and F90a–o were a group in the centre of the monument which could represent a structure (Fig. 26). Their clayey fills invariably had 'peagrit' at the base, and sometimes up the side of the hole also. Posthole F90n had been re-cut. It is unfortunate that they were in an area where the medieval furrows F23 and F26 crossed the site (Fig. 6). Some were almost obliterated (Fig. 27) and it is possible that postholes to the N and W of this concentration had been destroyed by furrow F26. The posts may all have been of the same diameter originally, but only the bottoms of what appear to be smaller posts survived, the upper part of them having been ploughed off, thus reducing their size. This group of postholes could have formed a structure c. 7 m × 7 m. Alternatively, given the extent of erosion, they could be the surviving elements of a larger one.

### Pits

F56 comprised two pits on the W side of posthole structure 90 and may have been associated with it, although the fills were less clayey. There was charcoal flecking in both pits and a piece of charred wood.

Pits F136 and F137 were also on the W side of posthole complex 90 and had similar fills to F56, but without charcoal flecking. F136 was oval, and was in shape very like many of the stoneholes. If it had held a stone this was withdrawn from the sloping S side. Close to its W side was circular pit F137 with a similar filling, with 'peagrit' at the sides and bottom.

## STONE REMOVAL

Three methods had been used for stone removal, each leaving its distinctive traces.

### Burial pits

The easiest way to dispose of the largest stones, those too heavy to cart away from the site, was to dig a hole adjacent to them and topple them into it. There were two of these burial pits, excluding the pit which Grimes dug to bury Quoit A, F28 and F25 on either side of the E entrance. There is also a possibility that the stone in stonehole F17 (Fig. 24) had fallen naturally and that extensive quarrying took place



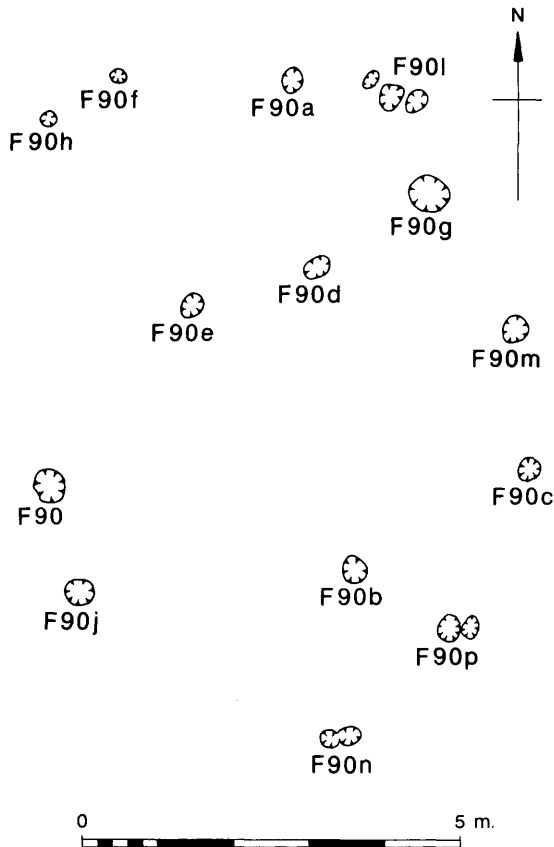


Figure 26 Area C: plan of postholes in centre of monument

around it in medieval times in order to break up the stone prior to its removal.

St 3 in pit F28 may have fallen naturally too, with its base still partly in its original stonehole (Fig. 17). The sides of the burial pit were vertical, showing signs of natural erosion. Pit F28 was part of a complex of stonehole and pits. The only part of the stonehole which remained was its W end, which was composed of alternate layers of yellow gravel and black-brown greasy soil, with lumps of conglomerate packing stones at the bottom of the hole. The rest of the stonehole was brown soil and disturbed gravel, which cut down deeper than the stonehole, and below the level of the end of St 3. The burial pit was filled with red-brown soil and redeposited gravel with about 20 lumps of conglomerate dispersed in the fill, some of them as large as 0.45 m long, but these need not necessarily have been packing stones as the pit had been cut through the natural conglomerate outcrop. There was an air space under the stone, where it rested unevenly on the bottom of the pit, and there was some degree of primary silting down the sides of the pit, suggesting that the pit had been open for a time. There was a large pit on the W side, which cuts the burial pit, as though there had been some attempt to remove the stone.

Pit F25 was the burial pit for stone 2 which had been removed from its stonehole close to the W edge

of the pit (Fig. 24). Medieval plough furrow F26 lay over the N edge of the pit. The fill of the burial pit had a quantity of slipped gravel on its W edge, probably caused by the sliding of the stone into the pit. The stonehole had leverage pits at both N and S ends, the former being the deepest, where the heavy stone had been undermined before toppling it over on to its side and sliding it in to the pit. The edge of the original stonehole was damaged during this operation, the debris falling back into it.

### Fracture of stones

Two methods were used to dispose of stones which were of smaller dimension, and yet too large to carry away in one piece. Pit F98 (Fig. 25) contained fragments of conglomerate which had been burnt to a purple black colour. The pit was 2 m to the E of the stone circle (Fig. 7) and at right-angles to it. There is of course the possibility, raised above, that this was an outlying stone which had been destroyed by the fire and water method *in situ*, but it is also possible that the pit was for the breaking up of a stone already removed from its socket. The SW side of the pit showed signs of burning and the pit's sides sloped more at the S end, the N being fairly vertical. The section also shows disturbed brown soil and gravel to the S, a large fragment of stone in the centre, with lens of yellow clay and red gravel, such as were found in other stoneholes, directly to the N of the large fragment of stone. The rest of the pit to the N was disturbed redeposited sandy soil and gravel, with lumps of burnt conglomerate. It is not clear from Grimes' description if he emptied the pit, but the section of the feature as found in 1972-3 suggests that this was unlikely. The method of breaking up stone by fire and water is described by Burl (1976, 322) to have taken place at Avebury in the medieval period.

The second method of fracturing the stone was the simple one of smashing up the stone *in situ*, and there were two stoneholes which showed evidence of this means of destruction. Stonehole F158, described above, still contained the stump of St 10 in its socket, the stone resting against the S edge of its hole, with the sloping side indicative of leverage at the N side (Fig. 22). The stone stump was 0.53 m below the 1972-3 gravel surface, and therefore must have been quite deep below the medieval one. Stonehole F215 similarly contained the stump of a stone (St 11) with a large piece of broken off stone lying on the N edge of the pit (Fig. 24). There were also large fragments of the stone thrown back into the pit.

### Total removal

There were 26 empty stoneholes, some showing as simple oval pits with fragments of conglomerate in the fill, and others with disturbance at the side of the stonehole which had been caused by levering the stones from their upright position. The stones were

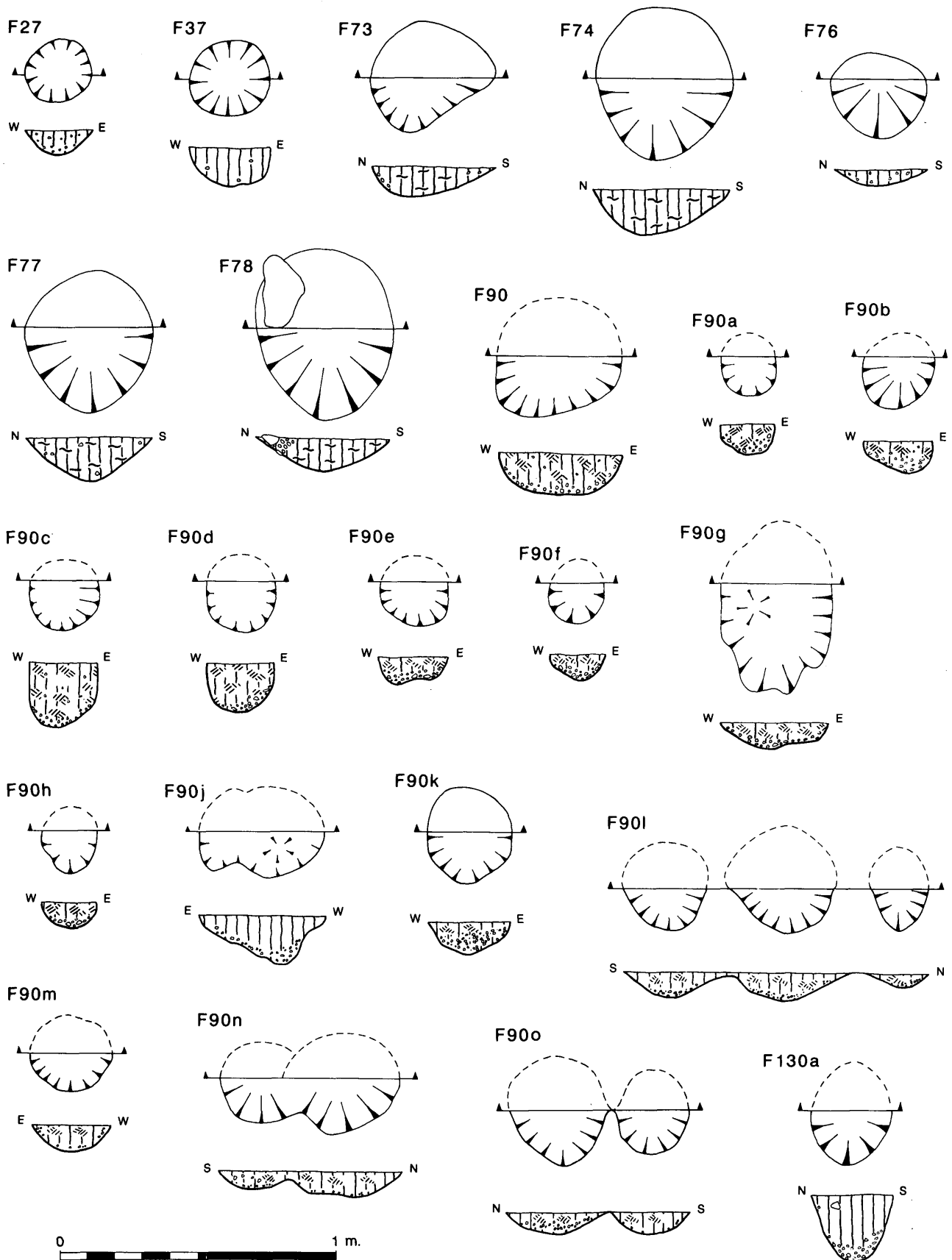


Figure 27 Sections of pits and postholes



no doubt useful for building, but some were dumped or reburied in the top layers of the ditch fill. St 8 was found resting on the E edge of the N terminal of the W entrance (Fig. 13) in layer D, a layer which may represent the pushing back of the bank into the ditch before ploughing. St 9 was found on the N lip of the ditch at cutting VIII also in layer D.

### MEDIEVAL FURROWS

Eight furrow marks were observed crossing the interior of the enclosure from west to east (Figs 5–6; F20, F23, F26, F50, F62, F104/F125, F209, F210) with a possible additional furrow F233 to the south of F210. There may also have been a furrow between F50 and F104 which did not penetrate the hard bedrock in that part of the site.

The distance between the centre of one furrow and the next was c. 10 m. A 2 m section was excavated through furrows F20 and F23. F20 contained one early Iron Age sherd, F23 had a piece of post-medieval bottle glass (SF 24) and three fragments of animal bone with one Roman sherd, and F62 had two fragments of iron plate or sheet (SF 8–9) and two fragments of animal bone.

### CATTLE BURIAL (FIG. 28)

This was found in a crevice in a seam of conglomerate to the W of the W entrance of the monument. Grimes' contour plan (1960, fig. 60) suggests that it would have lain at the foot of the slope formed by the terminal of the bank. The burial pit was covered with a layer of red-brown clay soil, which was not ploughsoil. Levitan (Ch. 3) has identified the skeleton as a calf less than a year old and, on the evidence of its anatomy and condition, probably modern. There was an iron ring (SF 7) near the neck.

### MODERN FEATURES

A hedge line running across the S part of the monument recorded by Grimes in 1940 (1960, fig. 57) was not present on the ground in 1972–3. It was, however, picked up in excavation as a 0.9 m wide trench with decayed wood and roots in the dark brown soil fill. It continued SE into the 1988 area of excavation.

Pit F18 (Fig. 25) was where Grimes buried St 1 (his Quoit A) in 1940 (Fig. 2). The stone had been removed from stonehole F202 in the S section of the circle. Before excavation F18 showed as a weathered mass of conglomerate, surrounded by red-brown soil, probably modern ploughsoil. The S side of the pit had been cut away by an RAF junction box and wiring trench. The sides of the pit were sloping and the lower layer was composed of redeposited red-brown soil and gravel.

A trench for the runway lights ran down the whole length of the concrete runway and farm track, 0.3 m wide and with a filling of lead wiring, brown soil and some brick fragments.

## DISCUSSION

### Date

While radiocarbon determinations (Table 6) have shed some light on the chronology of the monument and clearly established its later Neolithic origin, questions remain, especially the relative chronology of the earthwork and stone circle, an uncertainty matched at Avebury (Pitts and Whittle 1992). If HAR-1887 is taken as the most likely date for the construction and early use of the ovoid earthwork, then it and the circular setting of stones within it could be effectively contemporary. This might be reflected in the choice of a site with a suitable supply of stone for building the circle, although this could be coincidental.

Alternatively, the near-identity of OxA-3687 for layer G and OxA-3689 for an antler pick from stonehole 17 could suggest that the stone circle was constructed during the deposition of layer G in the ditch, some time after its original excavation. The possibility is heightened by the presence of conglomerate fragments and antler picks in layer G, as well as by a contemporary intensification of activity, represented by *in situ* hearths, displaced hearth material, and an increase in the frequency of artefacts and animal bone. Both the molluscan sequence and the soils provide corresponding evidence of a more open environment and a greater degree of disturbance of soil and vegetation during the deposition of layer G (Ch. 3).

OxA-3687, sherds in Beaker fabric, and a knapping cluster technologically compatible with Beaker-associated industries all point to a Beaker date for at least part of layer G. The presence in it of fragments of a middle Bronze Age urn (Fig. 31, 1) and a late Iron Age or early Roman brooch pin, however, indicates that accumulation continued over a long period.

### The earthwork

The appearance of the ditch immediately after its construction would have differed considerably from the structure found in excavation. Constant erosion of the sides, probable cleaning out, and later ploughing have substantially increased the width of the ditch and altered its profile. The dimensions and profiles recorded in 1972–3 also reflect the nature of the material through which each part of the ditch was cut, which varied greatly around its circuit. This comprised three differing subsoils, (1) fairly firm gravel with a low percentage of sand, (2) soft sand and loess derived sandy loam over gravel, (3) the irregular surface of conglomerate.

Those sections of the ditch which were cut into firm gravel, I and XIa, seem to have retained their narrower width and less sloping sides, as did IIIa and IIIb which were cut through the conglomerate. The rest of the cuttings all showed wider profiles and evidence of possible cleaning out in their early stages.

Table 6. Radiocarbon determinations

Context	Sample	Lab. no.	BP	cal BC 1 $\sigma$	cal BC 2 $\sigma$
Stonehole F227, layer 5 (basal fill of socket)	Oak charcoal Identified by Mark Robinson	OxA-3690	4165 $\pm$ 70	2890-2620	2920-2570
Ditch, S terminal of E entrance, layers J/K	Combined sample consisting of 3 bone finds: 1 from hearth 156 in layer K, 1 from layer J/K, 1 from layer K comprising a red deer metatarsal and antler and a cattle tibia	HAR-1887	4010 $\pm$ 120	2865-2400	2890-2200
Ditch, S terminal of W entrance, layer G	Cattle ulna	OxA-3687	3995 $\pm$ 60	2610-2460	2870-2340
Stonehole F17	Red deer antler pick	OxA-3689	3955 $\pm$ 65	2580-2360	2860-2290
Ditch, S terminal of W entrance, layer H	Vertebra of unidentified large mammal	OxA-3688	3845 $\pm$ 65	2460-2200	2490-2130
Ditch, S terminal of W entrance, layer Fa	Red deer antler	OxA-3686	3745 $\pm$ 60	2140-1940	2200-1880
Ditch, layers K/L	Combined sample consisting of 3 antler fragments from layer L in S terminal of W entrance, 1 ?horse tibia fragment from layer K/L in cutting VIII, 1 bone fragment from the surface of layer L in cutting VIII and 3 pig scapulae and 1 ?cattle rib fragment from layer L in N terminal of E entrance.	HAR-1888	3590 $\pm$ 70	2120-1880	2140-1750

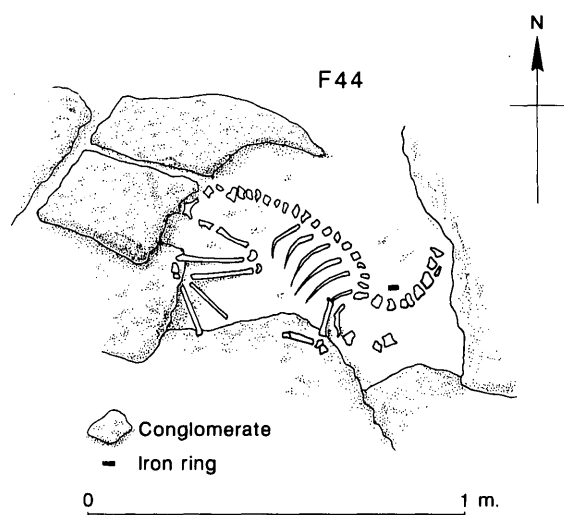


Figure 28 F44 calf burial

The bottom of the ditch was remarkably consistent in its level throughout its length, the measurements varying from 67.21 m OD at the S terminal of the E entrance to 68.19 m OD at S11 in cutting X but with an average level of about 67.70 m

OD (Table 2). A change in the alignment of the ditch in cutting VIII (Fig. 7), suggests that the ditch may have been cut in straight lengths which were joined to form two semi-circles.

It is impossible to tell if the pointed shape of the N terminal of the W entrance (Fig. 13) was original. Its form may have been modified by the burial of St 8 and/or also by medieval ploughing, since furrow F62 cut across the end of the terminal. A curve in the contour of the ditch bottom on the W side of this terminal could have represented a postpit like those in the S terminal of the E entrance (Fig. 14). Most noteworthy is the concentration in all four terminals of hearths, antler (including picks), struck flint and animal bone.

### *The destruction of the monument*

Although gravel extraction has been the most dramatic agent in the destruction of the Stanton Harcourt complex, it is the more insidious effects of centuries of ploughing which have mixed the natural, non-calcareous loessic soil with the underlying gravel, changing the character of the soil and truncating the shallow archaeological deposits. These processes destroyed all stratification within the



monument, leaving only the stratified ditch deposits as substantial, *in situ* remnants of the original life of the monument. This makes the dating of the later history of the site difficult, especially the destruction of the stone circle. This may well have been piecemeal, some of the larger stones having fallen naturally in the unstable sand and gravel subsoil.

The relatively stone-free composition of layer F and its gradual accumulation, accompanied by soil formation, indicate a long period of stability for the monument, with the bank and the ditch sides stabilised by vegetation (Limbrey, Ch. 3). This is likely to have extended up to the early Roman period, since almost no Iron Age pottery has been recovered from the site (Table 10), despite the proximity of contemporary settlements (Benson and Miles 1974, fig. 12, plan 22). Excavated examples include Gravelly Guy (Lambrick *et al.* in prep.) and the Vicarage Field (Williams 1951, 5–22), both in Stanton Harcourt to the NW of the Devil's Quoits.

It was in the 1st–2nd centuries AD that ploughing, represented by layer E with its contemporary pottery, accelerated the reduction of the bank and the infilling of the ditch. Nearby settlement may be represented by cropmarks to the E of the monument where there are rectilinear enclosures and long trackways which could be of Romano-British date (Grimes 1960, fig. 59) and from which Romano-British sherds have been recovered (Benson and Miles 1974, 50). The nearest excavated settlements are those of the Vicarage Field (Thomas 1955, 7–12 and 14–22) and Gravelly Guy (Lambrick *et al.* in prep.).

It is impossible to tell at what stage the earthwork was actually ploughed over or most of the stones removed. Layer D, a subsequent, more gravelly ploughsoil, recorded in section 1 (Fig. 9) as lying towards the outer edge of ditch, may represent material displaced from the bank. A 13th–15th century sherd from layer D and a 12th–13th century sherd from layer D/E (Barclay and Gledhill, Ch. 3) may provide an approximate date for this event.

The ploughsoils of layers B–D must relate at least in part to the remains of ridge and furrow cultivation which crossed the interior and the entrances (Fig. 6), representing a technique most widespread in the late 13th and early 14th centuries (Taylor 1975, 85). Since the whole of the bank was levelled in the course of the airfield construction, it was not possible to ascertain whether the medieval furrows had cut it or stopped short of it.

Other lines of evidence would accord with destruction during the medieval period. Margaret Gelling suggests (pers. comm.) that the name Stanton predates the Norman Conquest and refers to the stones, while the name the Devil's Quoits is likely to be post-conquest. This suggests that the stones were in place into the post-conquest period. They would, furthermore, hardly have attracted such a name and the local superstitions mentioned in chapter 1 unless a good many stones had remained standing.

It may be surmised that the stones disappeared

between the 12th century, the date of the earliest medieval pottery from the interior of the monument, and the 17th century observations of Aubrey and Plot (Ch. 1). This indicates a similar history to that of the Avebury stones which remained undamaged during the Roman, Saxon and Norman periods, but were partly dismantled and destroyed in the early years of the 14th century, the church having become antagonistic to the pagan worship and superstitions associated with stone circles (Burl 1979, 36; Bender 1993, 254–5).

## THE EXCAVATION OF RING DITCH XXII, 6, 1979

by John Taylor (originally written 1988)

In September 1979 over two-thirds of one of the wartime runways was demolished and machine-stripped prior to gravel extraction. Immediately underneath the runway, about 1 m below the adjacent ground level, a ring ditch barely visible on a pre-war photograph (Grimes 1960, pl. XXXIIIa) was discovered at SP 4129 0489, about 230 m NE of Devil's Quoits. It was excavated in November of that year by members of the Oxford University Archaeological Society.

### The excavation

An area of 225 m<sup>2</sup> around the ring ditch was systematically cleaned and gridded. Two transverse sections (T1 and T2) were placed across the ditch on the E and W sides. The remaining circuit was partially examined by a system of lateral quadrants. Segments S4 and S5 were totally excavated, as were the five postholes and two adjacent pits (Fig. 29). All features were planned and sections recorded.

The ring ditch, as it survived, was penannular with a diameter of about 12 m and was composed of a series of bowl-shaped segments, oval in plan. These 'quarry-pits' varied in size and depth, giving the circuit a decidedly irregular appearance. The ditch segments of the southern quadrant were largely separate entities, divided from each other by 'causeways' of natural gravel. By contrast, the ditch in the northern quadrants was more regular, with steeply-angled sides and a rounded bottom. In one instance, a gap in the circuit of the ditch, measuring 0.33 m, occurred. The ditch seems to have been laid out on a chordal plan, and its consequent angular arrangement is reminiscent of the Bromfield barrow (B20) ditch (Stanford 1982, 298–99).

Of the two transverse sections, T1 had a width of 1.62 m and was 0.74 m deep, while T2 measured 1.55 m wide and 0.69 m deep. Both were similarly V-shaped in profile. The fill of both can be divided into five main depositional phases. The primary fill consisted of a mixture of a dark grey-brown loam and gravel. This was followed by a slump of clean gravel in a sandy matrix. The next layer consisted of

XXII, 6

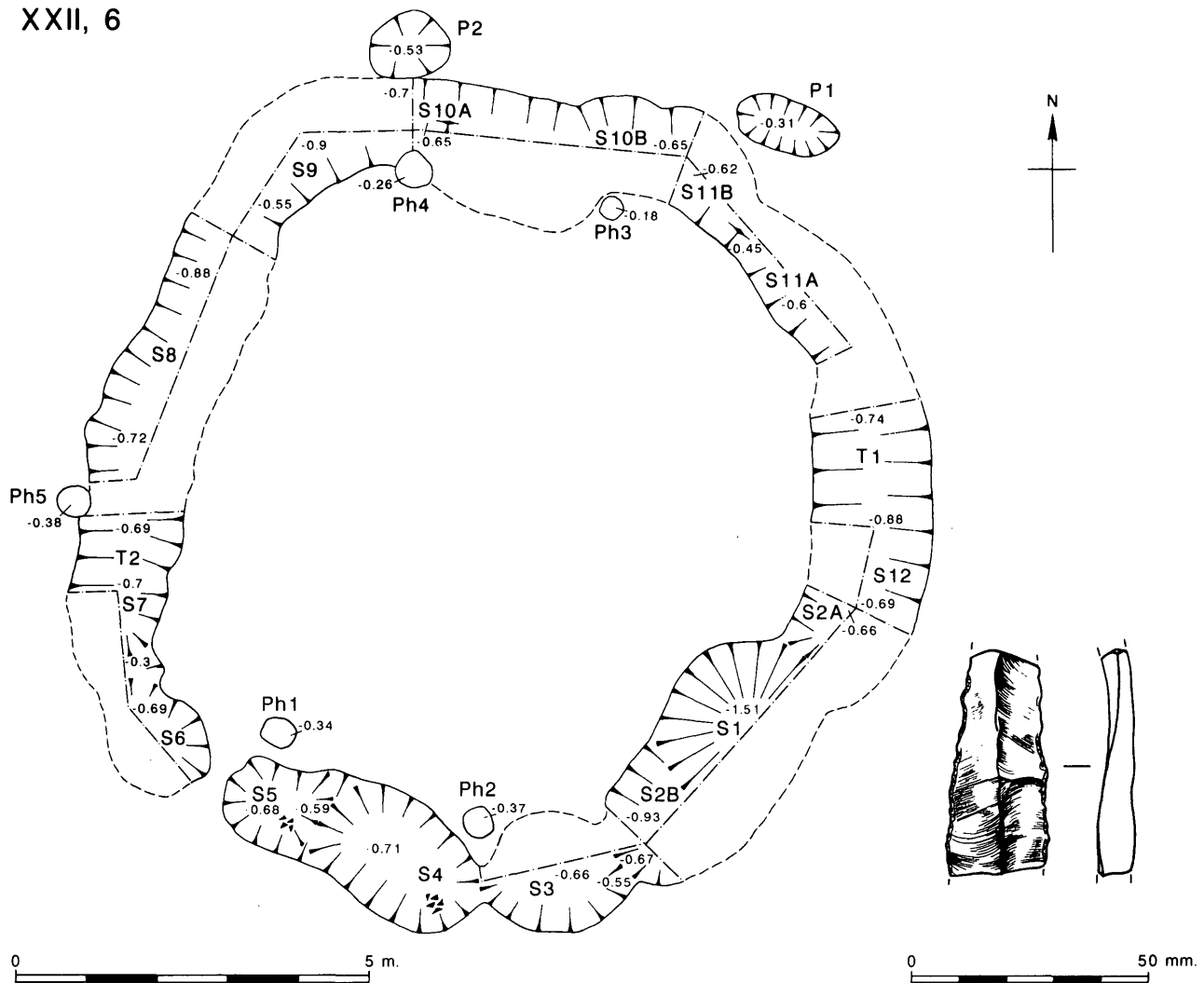


Figure 29 Ring ditch XXII, 6 and the fragmentary flint blade found in it. Depths in metres below the stripped surface are indicated by figures preceded by a minus sign.

brown silt-loam. The penultimate deposit was a ferruginous red-brown clay-loam, followed by another layer of clean gravel. In each transverse section, the layers of gravel were deposited from the interior, and are suggestive of an internal gravel bank or mound.

In the SE quadrant, feature S1 was about 1 m deeper than the adjacent ditch section to the NE (S2A) and over 0.60 m deeper than ditch section (S2B). It was not possible to determine with certainty the relationship between S1 and the ditch. It was, however, clear that S1 and the ditch had silted up over the same period. Whether S1 was contemporary with or existed prior to the ditch and was incorporated into the construction of its circuit, or whether this feature was cut through the ditch while it was still open, remains unclear.

It is noteworthy that two thin lenses of charcoal were deposited in the bottom of S4 and S5 before

silting. Ditch segment S8 yielded three fragments of unburnt bone, which were too small to identify.

In addition to the features discussed above, five postholes were discovered. These followed the line of the ditch. It was demonstrated by section that Ph4 and Ph5 cut the ditch fill. Postholes Ph1, Ph2 and Ph3, were apparently discrete, but since they were placed close to the ditch, they may have cut through its fill at a higher level. Assuming that all the postholes were contemporary, it would appear that after the erosion of the bank or mound and silting of the ditch, a post-circle may have been constructed. It is possible that further postholes existed, but were indiscernible in the ditch fill. None of the extant postholes had a recognizable void or packing. Their characteristics are summarised in Table 7.

Two shallow pits were found, external to the ring ditch. The first, P1, was located 0.20 m from the outer edge of the NE ditch segment. It was ovoid in

Table 7. Postholes of site XXII, 6

Posthole	Fill	Depth	Diameter
Ph1	Uniform brown loam	0.34 m	0.50 m
Ph2	(Primary) dark brown loam; (secondary) light brown loam with mixed gravel	0.37 m	0.45 m
Ph3	Uniform brown loam	0.18 m	0.62 m
Ph4	(Primary) gravel in ferruginous clay loam matrix; (secondary) mixed gravel and brown loam with flecks of charcoal	0.26 m	0.62 m
Ph5	Uniform brown loam	0.38 m	0.45 m

plan, with a maximum width of 0.70 m, and was 0.31 m deep. It contained one stone of local gravel conglomerate (c. 0.18 m long  $\times$  0.12 m wide  $\times$  0.19 m thick), of similar rock to the stones of the Devil's Quoits. The second pit, P2, was roughly circular in plan, and measured 1 m in diameter and 0.45 m deep. It was situated immediately adjacent to the N sector of the ditch. The pit and ditch were seemingly discrete. This pit also contained a local gravel conglomerate stone (0.24  $\times$  0.17  $\times$  0.22 m) and charcoal deposits in association with burnt natural gravel, indicating burning *in situ*.

Since both pits contained the same type of rock, it is attractive to regard them as contemporary features. One might speculate that they housed portal stones which flanked an entrance to the post-circle. Such portal stones are claimed to have been a particularly early feature among henge monuments (Catherall 1971, 147–49). If the postholes and pits were contemporary features, post-dating the ditched enclosure, one might argue for the 'perpetuation of a tradition of sanctity', such as one finds at Dorchester II (phase 2).

The only find, apart from the bone fragments from S8, was the central segment of a flint blade with fine, steep bilateral edge retouch (Fig. 29).

### Discussion

The monument has close affinities with a class of 'enclosed cemeteries' which Kinnes labels Fb, the majority of which are 'defined by ring ditches of complete or penannular circuit, tending to formal segmentation or of fluctuating width and depth' (Kinnes 1979, 67–69). Similar to the Stanton Harcourt monument are sites II, IV, V and VI at Dorchester on

Thames (Atkinson *et al.* 1951; Whittle *et al.* 1992). All these sites were of segmented-ditch class, and figure largely in the Kinnes catalogue of Fb sites. Dorchester II (phase 2) provides a close parallel, in that it is similar in form, plan and dimensions. Also comparable is segmented ring ditch 2123 at Barrow Hills, Radley, the lower fills of which contained few finds, and which is likely to have been constructed in the middle or late Neolithic on the evidence of small quantities of Beaker and related material from its upper fills (Barclay and Halpin forthcoming).

Like Dorchester II (phase 2), the Stanton Harcourt ring ditch produced virtually no finds. Consequently, one is inclined to conclude that its purpose was ceremonial rather than sepulchral.

The dating of Dorchester II (phase 2) rests heavily upon its relationship to the later phase 3 ditch, where a fragment of the shoulder of a Peterborough Ware bowl was found in the upper silting. Further parallels to the Stanton Harcourt and Dorchester sites can be found at Barford, Warwickshire (Oswald 1969, 1–64) and Llandegai in north Wales (Houlder 1968, 216–21), both of which have radiocarbon dates. Barford A is a henge monument of three periods. The central penannular ditch II was seemingly cut in disconnected sections and later joined together. This yielded a radiocarbon date of 3320–2880 cal BC (4368  $\pm$  64 BP; Birm-7) and sherds of Peterborough Ware. Within the Llandegai complex, outside the entrance to henge A, occurred the segmented ditch of a circular cremation cemetery. This monument produced a radiocarbon date of 3620–2880 cal BC (4480  $\pm$  145 BP; NPL-224). The close similarity of the Stanton Harcourt monument to those at Dorchester, Barford and Llandegai suggests a comparable middle Neolithic date for it (Bradley and Holgate 1984, 123).