

THE EXCAVATION OF A CROSS-DYKE AT OLD ERRINGHAM FARM UPPER BEEDING, WEST SUSSEX 1976

by Owen Bedwin, B.A., Ph.D.

Part of a cross-dyke on the South Downs near Upper Beeding was excavated in advance of its destruction by quarrying. The dyke consisted of a continuous ditch, the material from which had been thrown up to form a parallel but irregular bank. The construction of the dyke is tentatively ascribed to the early Iron Age.

INTRODUCTION

During routine survey of planning applications by Mr. F. G. Aldsworth, Field Archaeologist, West Sussex County Council, a hitherto unrecorded linear earthwork was noticed on an aerial photograph. This earthwork, a cross-dyke, was in an area due to be taken over by the Blue Circle Cement Company for the extension of an existing quarry. The Sussex Archaeological Field Unit was informed, and excavation was carried out in October 1976, before the site was affected.

The cross-dyke, NGR TQ 208 090, was 170m. long, running approximately north-south, with a bend at its southern end (Fig. 2). It was situated across the top of a broad spur of Upper Chalk, which drops gradually westward to the River Adur (Fig. 1). The site was extremely exposed, and from it there was a comprehensive view over the valley of the Adur and also of part of the coastline, 5km. to the south. To the east of the site, there are a number of well-known Iron Age sites (Fig. 1).

For most of its length, the bank of the dyke has been ploughed out; the ditch was faintly discernible as a shallow depression. The field in which it lay has been cultivated for about 15 years; prior to that it was scrub, and is shown as such on Ordnance Survey maps of the early part of this century. Before the scrub was cleared, the bank and ditch of the dyke were much more pronounced.¹ The only survivor of regular modern ploughing was the final 15m. at the extreme northern end of the dyke, where both bank and ditch are quite conspicuous. Fortunately this part of the earthwork, to the north of the new fence line in Fig. 2, will be outside the limits of the new quarry.

EXCAVATION

A large area, 50m. long, was excavated towards the northern end of the dyke (Fig. 2; Area I), and a narrow trench was put across the ditch towards the southern end (Fig. 2; Area II). Ploughsoil was removed from Area I by machine, and the ditch sections were then dug by hand. Area II was entirely excavated by hand.

The results of the excavation can be described briefly. Nothing survived of the bank, which formerly stood to the west of the ditch, i.e. slightly lower down the spur. It was, however,

¹ Mr. F. Grantham, owner of Old Erringham Farm, pers. comm.

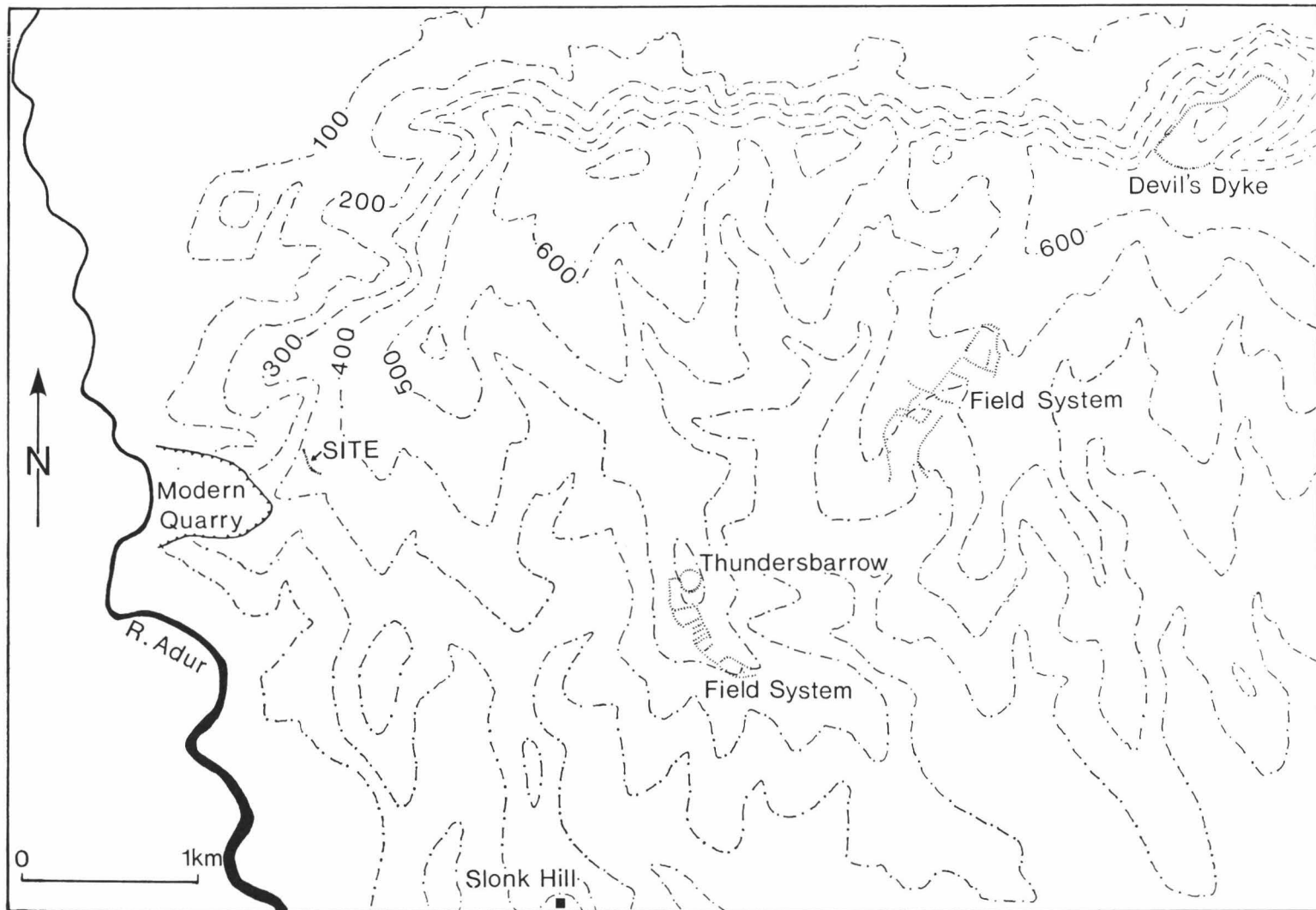


Fig. 1. Upper Beeding. Site location

possible to estimate the dimensions of the bank from the areas of raised chalk left where it once stood (Fig. 3). Thus the base of the bank was at most 5m. wide; no structures were found associated with it, and there had been no berm. In Figs. 2 and 3, gaps in these areas of raised chalk are shown. Two such gaps were exposed in Area I, and an examination of aerial photographs held by West Sussex County Council suggests a third at the point where the earthwork bends. Although it is tempting to interpret these gaps as interruptions in the original bank, a more likely explanation is that the variable size of the ditch (Fig. 3) was reflected in a bank of variable height. The raised areas of chalk are thus due to a substantial bank protecting the subsoil beneath from the plough. The gaps, on the other hand, correspond to lower stretches of bank, insufficient to protect the subsoil from the plough. This is presumably why the gaps occur where the ditch was smallest. In support of this latter interpretation, it is worth mentioning that none of the *unploughed* cross-dykes in Sussex exhibit a continuous ditch with an interrupted bank; all "gaps" in these earthworks are caused by modern footpaths.

The ditch, which was continuous, varied considerably in both width and depth. It was 450cm. at its widest; 140cm. at its narrowest; 140cm. at its deepest, and 70cm. at its shallowest (Fig. 4). In spite of this variation in size, the general profile was that of a ditch with gently sloping sides and a narrow, flat bottom. The only exception to this was in Area II (Fig. 4; G-H) where the bottom of the ditch was noticeably wider. The ditch sections were extremely similar throughout the excavated area, and indicated silting that was undisturbed until modern ploughing. The primary silt, layer 6 in Fig. 4, was considerable, especially on the side nearer the bank.

Few finds were made during the excavation. Some animal bones, marine shells, and abraded potsherds were all that was recovered. These latter, where diagnostic, were of an early Iron Age date; none were found in the primary silt, however. There was a complete absence of pottery between the early Iron Age and the twentieth century, and it is likely that the ditch silted up naturally during this time.

DISCUSSION

In southern England, the linear earthworks known as cross-dykes are generally confined to rather broken upland, typified by the South Downs.¹ At least 60 cross-dykes are known in Sussex, and about half of these are situated across ridges at the top of the scarp slope of the Downs. It is almost certain that more exist, as they are often inconspicuous, easily levelled by ploughing, after which they may only be visible from the air in favourable conditions.

There is considerable variation in both siting and morphology among Sussex cross-dykes. For example, there are single, double, and multiple dykes; earthworks of this last type are usually found on ridges at the top of the scarp slope, e.g. to the east and west of Harting Beacon.² There are dykes which are close to settlements and enclosures, e.g. at Bury Hill, Houghton (Fig. 5A); some even form one side of an enclosure, as at Bow Hill (Fig. 5C). On the other hand, there are dykes which are distant from known, contemporary settlements, e.g. the excavated example at Upper Beeding (2km. from Thundersbarrow Hill and 2½km. from Slonk Hill). There are dykes which run across ridges and those which run across spurs; those which are straight and those which have a bend, or bends: finally, some are continuous whereas others have a "break" or entrance.

¹ R. J. Bradley, "Stock Raising and the Origins of Hill Forts on the South Downs." *Antiquaries Journal*, vol. 51 (1971), pp. 8-29.

² O. Bedwin, "Excavations inside Harting Beacon Hill Fort 1976," *Sussex Archaeological Collections* (hereafter *S.A.C.*), vol. 116 (1977), p. 225.

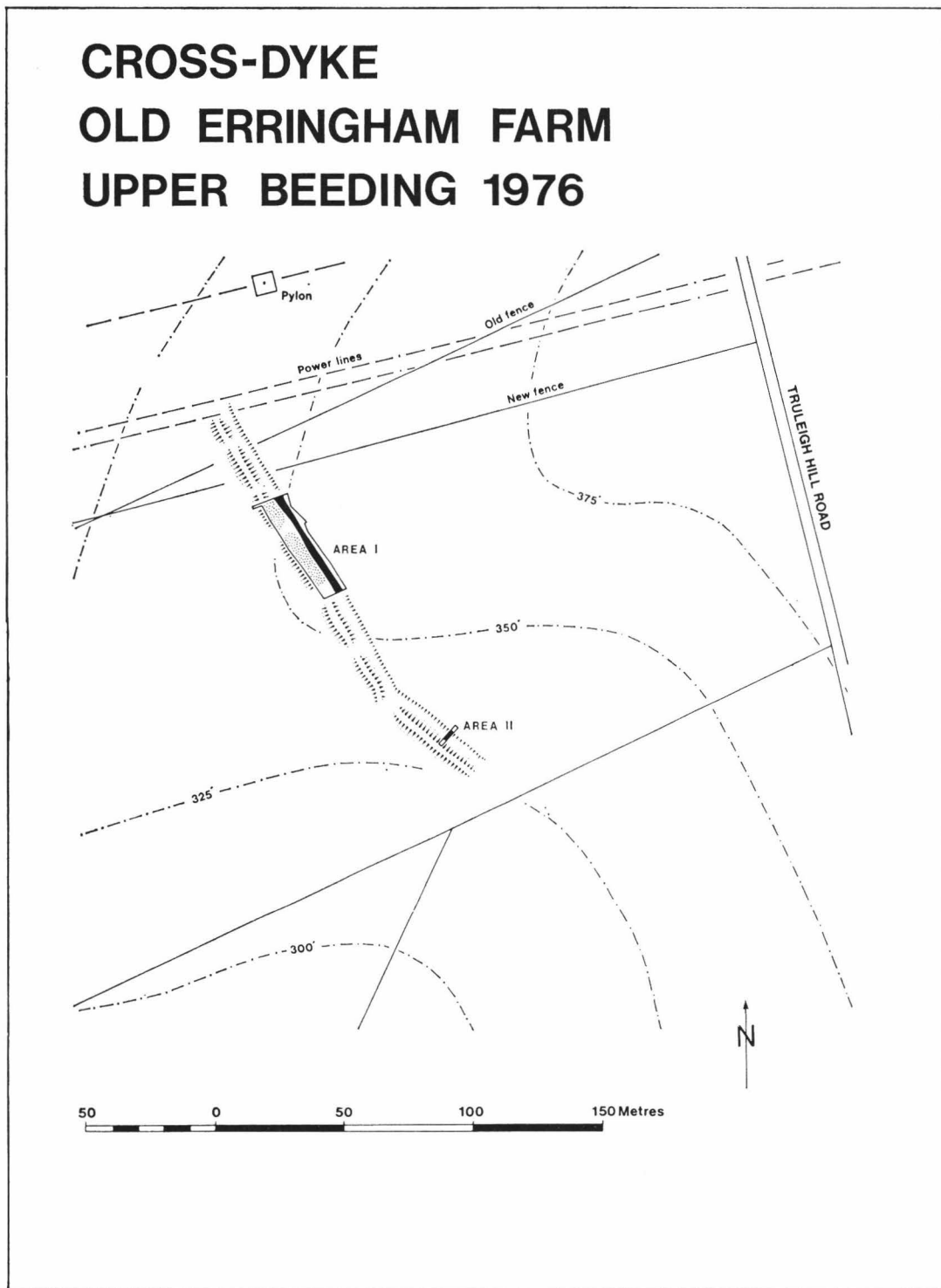


Fig. 2. Upper Beeding. General site plan (by F. G. Aldsworth). Contours in feet

CROSS-DYKE, OLD ERRINGHAM FARM, UPPER BEEDING 1976

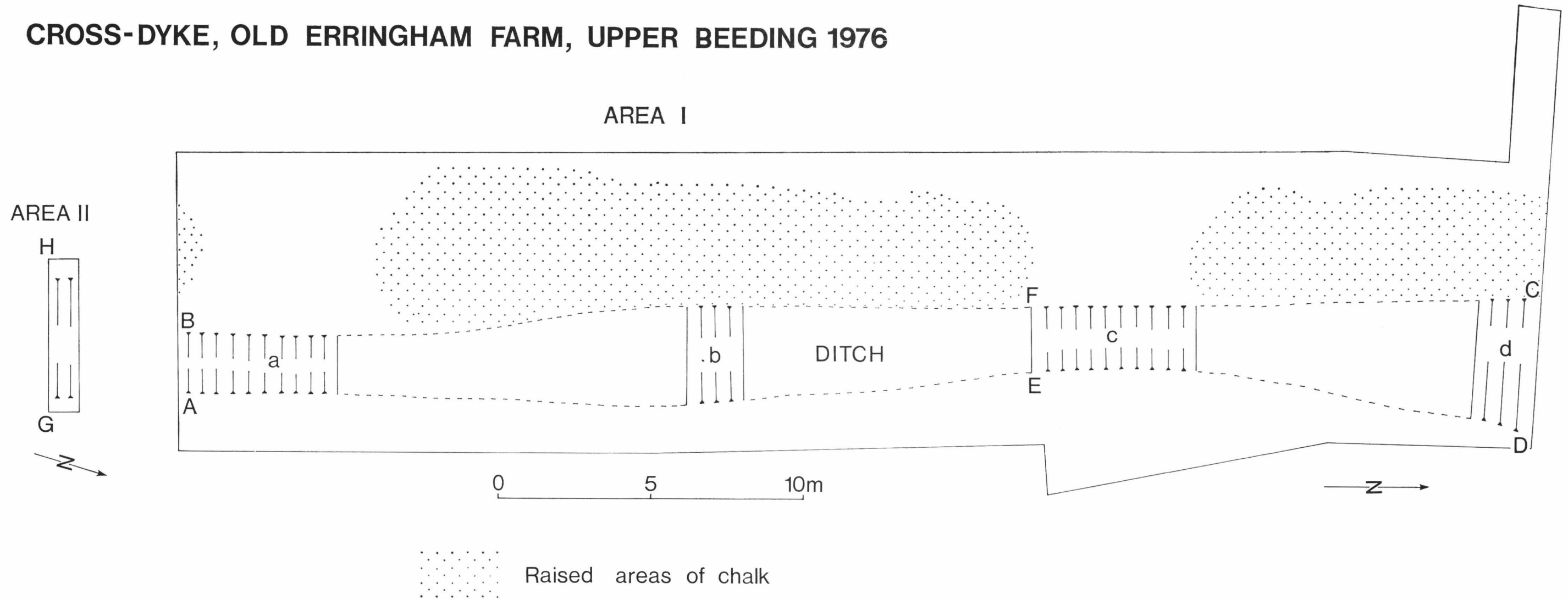


Fig. 3. Upper Beeding. Plan of excavation

The pioneering study of cross-dykes was carried out by the Curwens in the early part of this century.¹ Apart from surveying many of these earthworks, the Curwens investigated three of the more prominent examples by means of narrow sections, on Newtimber Hill, Glatting Down, and Upwaltham Hill. All the ditch profiles were remarkably similar, i.e. with sloping sides and flat bottom. There was usually a considerable amount of primary silt, and no evidence of re-cutting. No old land surface was found beneath any of the banks, nor was there any evidence of associated palisades. More recent excavation has corroborated these findings, e.g. sections through a cross-dyke on Alfriston Down, East Sussex,² and a cross-dyke on Buxbury Hill, Sutton Mandeville, Wiltshire.³

However, even when excavated, cross-dykes are by no means easy to date because of the paucity of artefacts; on the evidence provided by the pottery, for example, the Upper Beeding cross-dyke was certainly silting up during the early Iron Age. Since the nearby settlements also belonged to the early Iron Age, its construction is most likely to date from this period. In their study of cross-dykes, the Curwens came to the conclusion that they were pre-Roman, partly as a result of excavation and partly from a consideration of the surface evidence, e.g. the observation that the cross-dyke on Glatting Down is cut by Stane Street.⁴ The dyke excavated on Alfriston Down in 1975 was thought to date from the late Bronze Age or early Iron Age.⁵

Given the difficulty of dating these sites accurately, positive statements about the function of cross-dykes are not easy to make. The Curwens suggested that some of the dykes, especially those across a ridge, might have been droveways for moving stock from one area of pasture to another.⁶ Recent re-appraisals⁷ have rejected this suggestion and focussed instead on the idea that some of these earthworks may be territorial boundaries akin to the much longer "ranch boundaries" found on the plateau upland of Wessex. In particular, Fowler has produced convincing evidence of the role of bivallate cross-dykes (i.e. two parallel banks with a central ditch) as territorial boundaries along the Ebble-Nadder ridge in Wiltshire.⁸ It is this writer's belief that many cross-dykes can be interpreted as means of demarcating areas of land both *within* and *at the edge of* territories. This second category includes dykes situated at the junction of contiguous territories.

(i) *Cross-dykes which may form the boundary of a territory.* The excavated dyke at Upper Beeding probably belongs in this category. Other examples are the two cross-dykes on Alfriston Down (Fig. 5B), each about 1km. from the Bronze Age settlement at Blackpatch. The dyke on Sullington Hill, West Sussex (NGR 094 125), 2km. north of Harrow Hill, may also be of this type.

These earthworks can perhaps be seen as a response to increasing population pressure; thus, in a given area, such dykes would become necessary at a time when most of the available land was already in use, and delineation of territory became increasingly important. In Sussex,

¹ E. Curwen and E. C. Curwen, "Covered Ways on the Sussex Downs," *S.A.C.*, vol. 59 (1918), pp. 35-75.

² T. P. O'Connor, "The excavation of a Round Barrow and Cross-ridge dyke at Alfriston, East Sussex," *S.A.C.*, Vol. 114 (1976), pp. 151-163.

³ P. J. Fowler, "The Cross-dyke on Buxbury Hill, Sutton Mandeville," *Wiltshire Archaeology and Natural History Magazine*, Vol. 60 (1965), pp. 47-51.

⁴ E. Curwen and E. C. Curwen, *op. cit.*

⁵ T. P. O'Connor, *op. cit.*

⁶ E. Curwen and E. C. Curwen, *op. cit.*

⁷ R. J. Bradley, *op. cit.*

⁸ P. J. Fowler, "Cross-dykes on the Ebble-Nadder ridge," *Wiltshire Archaeology and Natural History Magazine*, Vol. 59 (1964), pp. 46-57.

**CROSS-DYKE
OLD ERRINGHAM FARM
UPPER BEEDING 1976**

DITCH SECTIONS

KEY

- 1,1a Modern ploughsoil
- 2 Lens of fine, black soil
- 4 Flinty, black soil
- 5 Light brown, gritty chalk
- 6 Small chalk rubble

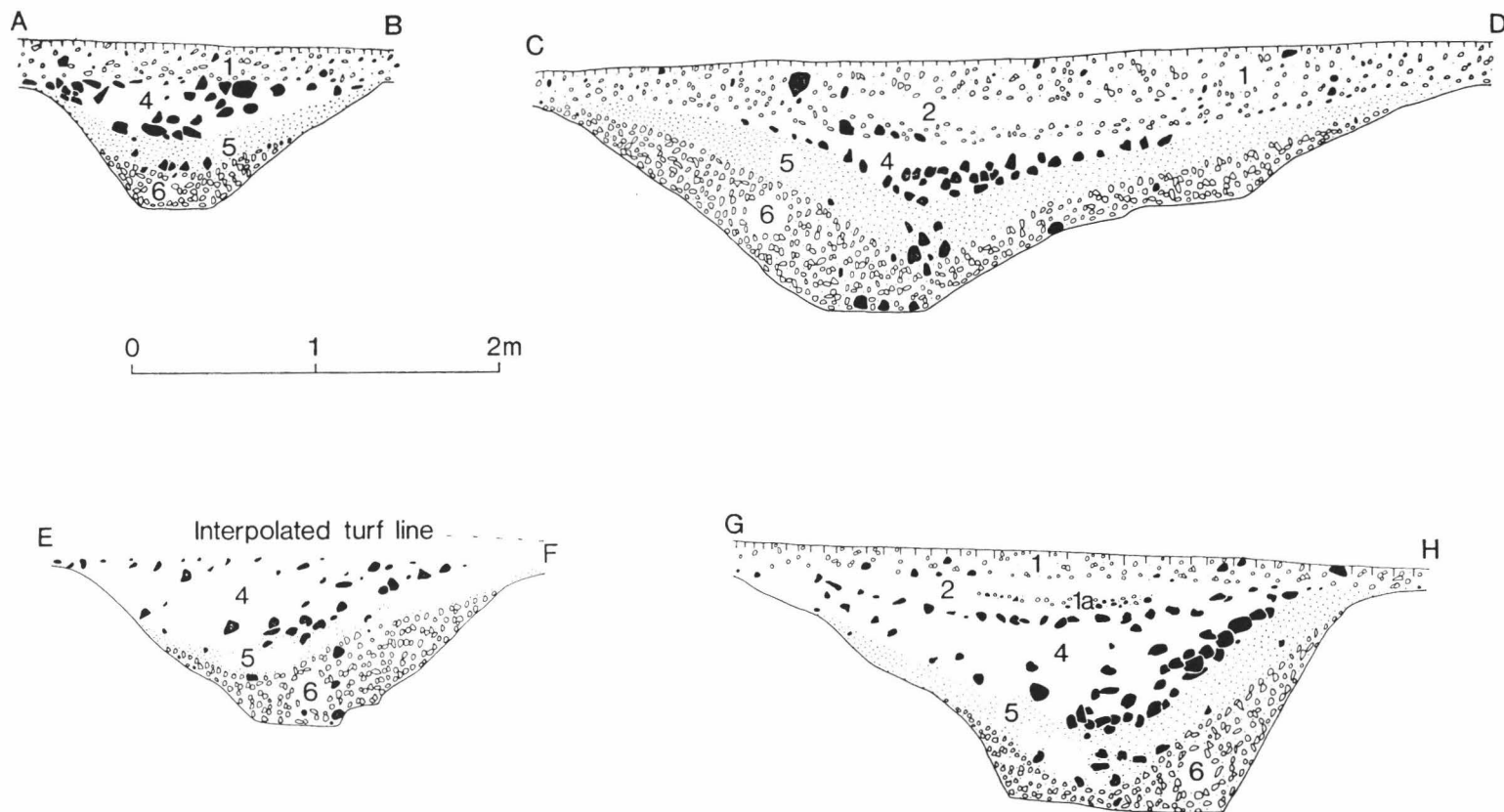


Fig. 4. Upper Beeding. Sections through cross-dyke ditch. Refer to Fig. 3 for location of sections

this is likely to have been in the later part of the Bronze Age, or early Iron Age, but could have been earlier in other parts of southern England.

It is unfortunate that Fowler's analysis of cross-dykes and settlements on the narrow Ebble-Nadder ridge,¹ with its more or less linear array of sites, cannot be extended to deal with the South Downs. The latter is a far broader chalk ridge with a considerably more complex pattern of sites.

(ii) *Cross-Dykes within a territory.* On Bow Hill, West Sussex, there are several examples of dykes which may delineate areas within a territory; two of these dykes form one side of small enclosures (Fig. 5C). At the Trundle, one of the dykes forms the inner boundary of a field system (Fig. 5D); Bradley has suggested that this type of earthwork separates arable land from infield pasture.² Similarly, at Itford Hill, a prominent cross-dyke forms the inner boundary of a series of fields (though the excavators were in favour of a Roman date for the field system).³

Without comparative evidence from large-scale excavations of other dykes, it is perhaps unwise to make generalisations from the results of the excavation at Upper Beeding. One or two points are worth making, however. First, this earthwork, in which the shallowest parts of the ditch and feeblest parts of the bank correspond, cannot have presented a severe obstacle either to man or animals (unless reinforced by a substantial hedge along the top of the bank). Secondly, there is no obvious reason for the bend towards the southern end of the dyke; it does not cut off the spur any more effectively as a result. The answer to this problem may lie in some topographical factor present at the time when the dyke was being built, e.g. the extent of the woodland may have influenced the line.

The pottery (by Susan Morris, Institute of Archaeology, Oxford)

The total number of sherds, 32 in all, was too small a sample for conclusive dating; some of the more diagnostic sherds are illustrated in Fig. 6.

Area I; Layer 1.

Not illustrated; 1 sherd fine/medium flint grit fabric; 7 sherds fine grog with quartz sand fabric, including 1 shoulder sherd.

Area I; Section d; Layer 4.

1. Small upright rim, slightly rounded, vessel widens below rim, smooth surface, light brown, fine sand with grit fabric.

Not illustrated; 2 sherds fine/medium flint grit fabric; 5 sherds fine quartz sand with grit fabric; 3 sherds fine sand.

Area I; Section a; Layer 4.

2. Body sherd, with cordon or edge of rim, smooth surface; fine quartz sand fabric.

Not illustrated; 2 sherds fine flint grit; 2 sherds fine quartz sand.

Area I; Section b; Layer 5.

3. Rim sherd, narrow upright rim, profile thickens below rim; fine flint grit with quartz sand fabric.

4. Rim, flat top, upright, smooth finish, fine flint grit with quartz sand fabric.

Not illustrated; 1 sherd fine flint grit with quartz sand.

Area II; Layer 5.

5. Flat base, roughly smoothed surface, fine/medium flint grit with quartz sand.

Not illustrated; 2 sherds fine/medium flint grit with quartz sand; 1 sherd fine flint grit with sand; 1 sherd fine sand, vesiculated surface.

Discussion

The paucity of the sample makes analysis difficult. The sherds are largely undiagnostic, although the illustrated ones suggest an early date. The fabrics are generally fairly fine, particularly in the case of the illustrated sherds, and are usually well finished.

¹ P. J. Fowler, (1964), *op. cit.*

² R. J. Bradley, *op. cit.*

³ G. P. Burstow and G. A. Holleyman, "Late Bronze Age Settlement on Itford Hill, Sussex," *Proceedings of the Prehistoric Society*, Vol. 23 (1957), pp. 167-212.

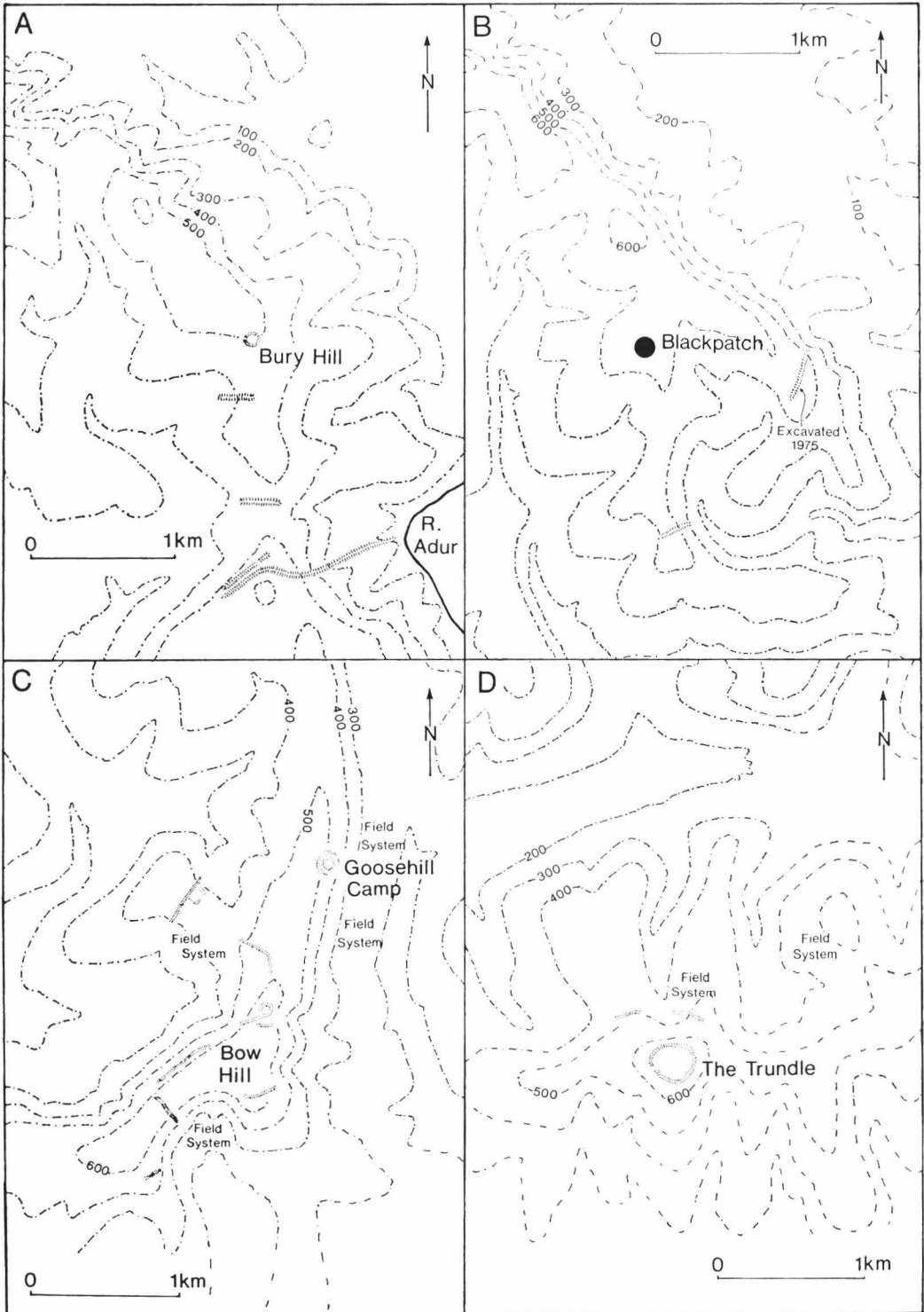


Fig. 5. Upper Beeding. Examples of the location of cross-dykes in relation to other sites and earthworks

The ditch may represent two periods, the earlier phase recognisable by the flint gritted ware and the simple upright profiles, and the later one by the finer fabrics and the more globular profile (Fig. 6). However, the phases may be extremely narrow, or possibly of consecutive or even contemporary date. The pottery probably belongs to the late sixth to fifth centuries B.C., although the forms represented may conceivably have continued in use into the early fourth century B.C. The proximity and comparability of material from this site, Slonk Hill and Thundersbarrow may suggest that the pottery from these sites all came from one source.

Further excavation of diagnostic pottery is needed to provide more specific evidence. The pottery is broadly comparable to several Sussex sites (usually in the early phases), e.g. Caburn,¹ Stoke Clump, Hollingbury,² and Torberry,³ among others

Animal bones and marine molluscs.

A few fragments of animal bones and marine shells were found. These are as follows:

Layer 4: *Bos taurus*; 1 fragment of tibia
 1 fragment of pelvis
Ovis aries; 1 fragment of upper molar
Mytilus edulis (mussel); 4 fragments.
Ostrea edulis (oyster); 1 valve

Layer 5: *Bos taurus*; 1 fragment of metacarpal
 1 fragment of upper molar.

Acknowledgements

Thanks are due to the Blue Circle Cement Company for permission to excavate, and also for allowing excavators to use their canteen at the Shoreham works.

I am also grateful to those who helped on site; Martin Howe, Jill Craddock, Ray Hartridge, Alec Barr-Hamilton, Fred Witten, Brian Holmes, and Joyce Barry. I would also like to thank Lys Drewett for Fig. 6, Fred Aldsworth for Fig. 2, and Sue Morris for examining the pottery. The finds have been deposited in Brighton Museum.

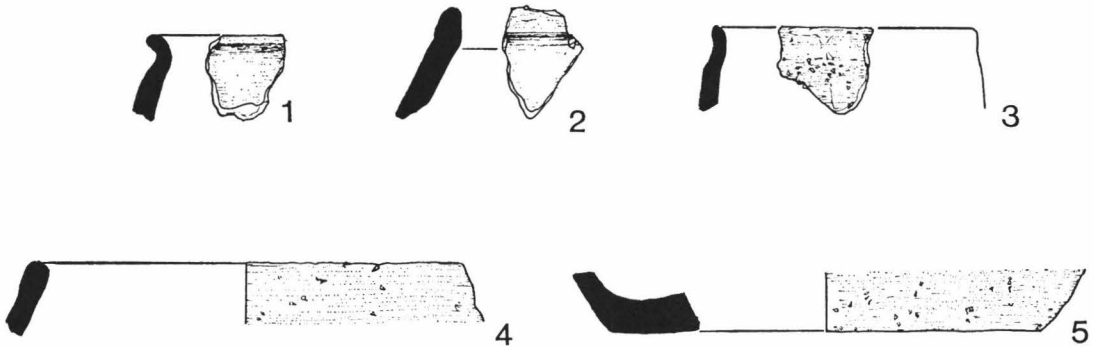


Fig. 6. Upper Beeding. Iron Age pottery ($\times \frac{1}{4}$)

The Society is grateful to the Department of the Environment for a generous grant towards the cost of publishing this paper.

¹ E. Curwen and E. C. Curwen, "Excavations in the Caburn, near Lewes," *S.A.C.*, Vol. 68 (1927), pp. 1-56.

² B. Cunliffe, "Stoke Clump, Hollingbury, and the Early Pre-Roman Iron Age in Sussex," *S.A.C.*, Vol. 104 (1966), pp. 109-120.

³ B. Cunliffe, "Iron Age sites in Central Southern England," *CBA Research Report No. 16* (1976).