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An Archaeological Evaluation at Echills Farm, King's Bromley, Staffordshire

by
Iain Ferris

For further information please contact:
Simon Buteux (Manager), Peter Leach or Iain Ferris (Assistant Directors)
Birmingham University Field Archaeology Unit
The University of Birmingham
Edgbaston
Birmingham B15 2TT.
Tel: 021 414 5513 Fax: 021 414 3952

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Introduction

In April/May 1992 Birmingham University Field Archaeology Unit (B.U.F.A.U.) was commissioned by Coal Contractors Limited to carry out an archaeological evaluation of land proposed for sand and gravel extraction at Echills Farm, near King's Bromley, Staffordshire (centred on NGR SK10351682). The evaluation was to consist of a replotting of the aerial photographic coverage of the development zone, geophysical survey of a selected sample area and trial trenching. The aims of the evaluation were to provide sufficient structured information about the history of the development zone to allow informed decisions to be made about the archaeological implications of the proposed extraction programme, and to lead to the formulation of recommendations for the mitigation of any potentially destructive effects on the archaeological resource. The main part of the site consists of a single large arable field, rolled and planted shortly before the evaluation, and a smaller field to the northeast, now under grass.

The Site

The site is located in the Trent Valley, in the centre of an area of intensive prehistoric and Romano-British activity, represented by an impressive and important palimpset landscape revealed from the air as cropmarks, recorded photographically and later in the form of map plots, both being retained in the Staffordshire County Sites and Monuments Record (SMR). A considerable amount of recent archaeological work in this area (Hughes 1991; Ferris and Buteux 1992; Hughes 1992; Jones 1992) has provided much useful data on the nature of the deposits here.

The aerial photographic coverage showed the presence here of a number of features of potential archaeological origin and importance, including two definite ring ditches, one partially cut away by King's Bromley Lane, the

other, to the west, being complete and with a noticeable central feature, both indicating the presence of former Bronze Age barrows; a third, possible, ring ditch or ?enclosure; a pit alignment and a number of linear features, possibly ?trackways or ?boundaries; and a widespread scatter of ?pits.

Aerial Photographic Replotting

The originals of the aerial photographs were borrowed from Staffordshire County Council to enable more accurate plots to be constructed. This was done using the Mobius Network system though in one or two cases photographs lacked a sufficient number of central points to guarantee complete accuracy. The plots allowed the more-or-less accurate positioning of geophysical sample areas to examine the main cropmarks and their environs.

The Geophysical Survey

The geophysical survey was carried out by Geophysical Surveys of Bradford and has been reported on in detail (Geophysical Surveys of Bradford, Report Number 92/31); only a short summary will here be offered. Six sample areas were selected for survey (Figure 2), and each area was surveyed using a magnetometer, with sub-sampling taking place with resistivity equipment.

In Area A there was identified a north-south aligned anomaly, corresponding with a cropmark ?pit-alignment, which was interpreted as either a pit alignment or an interrupted linear ditch. In Area B a circular anomaly was undoubtedly a ring-ditch with central feature, as identified from the air, with a number of isolated anomalies outside the ring-ditch possibly representing pits. Results in Area C were rather less conclusive, with only a small number of isolated anomalies being identified. In Area D two or three possible linear features were represented by interrupted anomalies. In Area E, despite considerable distortion caused by the presence of a pipeline to the east, magnetometry highlighted a concentration of activity within the bounds of the second ring-ditch

identified from the air. In Area F, in the pasture field, magnetometry identified three or four possible features, represented by irregular anomalies.

The Trial Trenching

A total of 11 trial trenches was dug, to investigate the geophysical anomalies and air photographic features (Figure 2). Ploughsoil in all trenches was removed by machine and the underlying surface then cleaned by hand in an attempt to define archaeological features and contexts. All features so identified were sectioned in order to recover evidence for their form, function, and date. It was noted in all of the trenches in the arable field that the plough had cut down into the surface of the natural sands and gravels, creating linear furrows each about 0.20m wide and 0.15m deep.

Each trench was recorded by photography, notes and the compilation of standard pro forma record sheets for features and contexts (layers). The evidence from each trench will first be presented below, to be followed by a synthetic discussion of the overall results of the evaluation.

Trench 1 (Figure 3).

This trench, 40m in length and 1.6m wide, was aligned roughly northwest-southeast and was positioned within Geophysical Area E to examine the located ring-ditch here. Despite unequivocal evidence for the position of the defining ditch this was difficult to recognise in plan. After the removal of the 0.30-0.35m deep ploughsoil, the digging of sondages across the presumed lines of the feature in the east and west allowed for their firm identification and their recording in section . The eastern stretch of ditch (F101) was 4.80m wide and consisted of a relatively shallow cut on its west side with a deeper, pronounced double V-shaped, cut on the east side, suggesting recutting. Along the western edge of the V-shaped recut were noted in plan two possible stakeholes, filled with loose charcoally sand (1004), cut into the natural gravel edge. The recut was filled with a dark brown sandy silt with gravel and charcoal lumps (1003), up to 0.30m

thick. The main fill of the ditch consisted of a dark orange-brown silty sand and gravel with some charcoal fleck inclusions (1002), material which, apart from the presence of charcoal, was very similar in its make-up to the natural gravels here. The western stretch of the ditch (F102) was again 4.80m wide and relatively shallow , once more with a distinct V-shaped recut towards the outer western edge. The recut was filled with dirty grey mixed sand (1006), overlain by mixed sand and gravel (1008). The main fills of the ditch, layered bands of mixed sand and dirty gravel , were different in the west and in the east, to either side of a straight sided feature , filled with mixed sand (1013), which must represent the position of a former vertical post. Inside the area defined by the ditch was a slightly raised area of either dumped, burned sand or natural sand burned in situ. Cut into this was a series of what would appear to be post-holes with the charred bases of posts still in situ and, on the surface of which lay spreads of charcoal and concentrations of charcoal representing horizontal spars or branches (F100 being the feature number assigned to this whole inner area). While some of the charcoal had undoubtedly been spread by ploughing - plough marks could be seen cut across the surface of F100 - it seems fair to say that here is an internal 'barrow' feature of some complexity and importance, presumably some form of timber mortuary structure burned in situ and then buried beneath the barrow mound.

No finds were recovered from this trench. Charcoal samples for possible C14 dating and identification of species were taken from F100 while samples for the capture of environmental data were taken from the backfills of both ditch sections. Processing of these samples has not yet taken place.

Trench 2

This trench, 20m by 1.60m and orientated southwest-northeast, was positioned in the northwest corner of Geophysical Area E where no anomalies had been recorded but to coincide with a sub-circular cropmark feature. After removal of the 0.30-0.35m deep ploughsoil (2000) the cleaned surface of the natural sands and gravels was examined. No archaeological features were deemed to be present and the sectioning of a roughly north-south aligned ?linear feature (F200), filled with clean yellow-grey clay sand with cobbles (2001), proved this to be of geological origin.

A single struck flint flake was recovered from the base of the ploughsoil during the cleaning of the trench.

Trench 3

Aligned northwest-southeast, this 19m by 1.60m trench lay between Geophysical Areas D and E, positioned to examine one of the numerous linear cropmarks within the proposed extraction zone. After removal of the 0.30-0.35m deep ploughsoil (3000) the surface of the natural was cleaned to reveal three linear possible archaeological features cutting across the trench. All these features were sectioned; two of them (F300, F302) were found to be pipe-trenches, one carrying a field-drain and the other a pipe of a greater bore, and the third (F301) a ?geological feature identical in fill to F200 in Trench 2.

Bizarrely, the upper backfill (3001) of pipetrench F302 contained a complete copper alloy bracelet, probably Romano-British in date. No other finds came from this trench.

Trench 4

Trench 4, 19m by 1.60m and aligned northwest-southeast, lay within Geophysical Area D and was positioned to examine linear anomalies recorded here, possibly corresponding with a continuous linear cropmark.

After removal of the 0.35-0.45m depth of ploughsoil (400), a greater depth of soil accumulating here towards the base of a natural break in slope, the surface of the natural was cleaned to reveal only one negative feature, a single trench, backfilled with dark brown sandy soil, running southwest-northeast across the trench. In the upper fill of this feature were fragments of modern brick and it was therefore decided not to section the trench.

No finds were recovered from Trench 4.

Trench 5

Aligned east-west and 12m by 3.20m, this trench lay within Geophysical Area A and was positioned to inspect the ?pit alignment or ?interrupted ditch,

detected by both the aerial photographic coverage and the geophysical survey. After removal of the 0.40-0.45m ploughsoil (5000), despite two careful trowel cleanings of the surface of the natural sands and gravels and the sectioning of three possible features, all of which were revealed to be geological in origin, the expected archaeological features were not located or identified.

No finds were recovered.

Trench 6

Aligned northwest-southeast and 16m by 4.80m, this trench lay within Geophysical Area C and was positioned to try and locate ?pits indicated by the survey and seen on the air photographs to be widespread in this area. After removal of the 0.35m-0.40m thick ploughsoil (6000) and the cleaning of the natural sands and gravels no signs of the presence of archaeological features were detected.

Two struck flint flakes were recovered from the base of the ploughsoil during cleaning.

Trench 7

Aligned roughly east-west and 18m by 1.60m this trench lay within Geophysical Area B and was positioned to try and locate a linear cropmark, not registered on the geophysical survey, and a number of ?pit-type anomalies registered in association with a ring ditch to the south. Cleaning of the trench after the removal of the 0.35-0.40m thick ploughsoil (7000) revealed a distinct pedological/geological change towards the west end of the trench which may account for the linear cropmark. No other features were identified. No finds were recovered.

Trench 8

Aligned roughly east-west and 24m by 1.60m, this trench was located within Geophysical Area B, positioned to try and locate a linear cropmark and geophysical anomaly. After removal of the 0.35-0.40m thick topsoil (8000) the trench was cleaned. No features were identifiable. No finds were recovered.

Trench 9 (Figure 4)

Aligned roughly east-west and originally 35m by 1.60m, this trench lay within Geophysical Area B and was positioned to try and locate the complete ring-ditch identified both as a fine cropmark and as a very distinctive geophysical anomaly. The eastern 20m of the trench was subsequently widened by machine to 3.20m. After removal of the 0.35-0.40m thick ploughsoil (9000) the surface of the natural sands and gravels was cleaned but no features were visible. The JCB excavator was recalled to further lower this surface by c.0.05m and the trench cleaned again; the cut for the eastern part of the ring ditch was now revealed. The ditch (F900), c.2m wide and 0.80m deep with an upper V-shaped but subsequently rounded profile and well-cut edges, was backfilled with a deposit of yellow orange-brown sand with cobbles and pea-grit (9002), found only on the east side of the feature and doubtless representing slumping from the edge here, and dark orange-brown sand with cobbles (9001). No central feature within the bounds of the ring ditch was identified. No finds were recovered from the backfill of the ditch.

Towards the east end of the trench was cut a north-south aligned ?ditch or an irregular ?hollow (F901), lying only partially within the area of excavation. With a gently sloping edge on the west side and a flat base this 0.30m deep feature was backfilled with a dark orange brown sandy deposit (9003) which contained pieces of modern brick or tile.

Trench 10

Aligned roughly north-south and 20m by 1.60m, this trench was located in the pasture field within Geophysical Area F, in an area of ?water-meadow. The trench was positioned to locate an anomaly identified by magnetometry. It was immediately apparent that this anomaly was coincidental to a patch of obviously modern burning directly under the 0.30m thick topsoil and over a 0.65-0.70m thick deposit of alluvium overlying, in turn, the natural gravels. No further work or recording was carried out in this trench. No finds were recovered.

Trench 11

Aligned northwest-southeast and 30m by 1.60m, this trench lay within

Geophysical Area D, positioned to try and locate a linear anomaly. After removal of the 0.30-0.35m deep ploughsoil (1050) it was found that the anomaly coincided with a modern pipe-trench, the continuation of F302 examined in Trench 3. No further excavation or recording was carried out in this trench. No finds were recovered.

The Finds

The Flint (by L. Bevan)

The flint comprised fifteen artefacts and flakes ranging from light to dark grey to greenish-grey in colour, originating from a possible local source. Only three small flakes were recovered during excavation, one from Trench 2 and two from Trench 6. All three were recovered by hand with the final removal of topsoil. One of the flints from Trench 6 had retained traces of retouch.

The remainder of the collection were surface finds. Artefacts comprised one core and four plough-damaged scrapers, three of which were originally discoidal and of possible Bronze Age date. One of the discoidal scrapers was a tool rough-out abandoned during manufacture. A fourth was a flat ovate scraper which had retained only 15% of its retouched edge. Seven flakes were also collected, one of which, a primary flake, showed evidence of retouch and may have been intended as a scraper. In addition, two small flakes of yellow chert were collected from the surface of the ploughsoil.

Discussion

The overall results of the evaluation, from an archaeological point of view, have been good. The most impressive evidence came from the truncated ring-ditch by King's Bromley Lane, the trial trenching (Trench 1) indicating this to be a structure of considerable complexity. The excavated stretches of the ditch showed that this was a multi-phase feature, with evidence of recutting and of stake and post construction both within the ditch and around one of its edges. The interior, slightly dome-shaped, was taken up by what may be the remains of a pre-barrow, timber mortuary structure burned *in situ* and collapsed in on itself. This would seem to be unique to the region and no wider parallels have been found in an initial inspection of the more readily available sources and publications. A model of the sequence of use of the site can be offered; firstly a wide, shallow circular ditch is dug, perhaps associated with a ring of stakes or a fence; spoil from the ditch is used to create a low earthen platform or mound inside the area enclosed by the ditch, the fence perhaps acting as a revetment for this mound; the interior is used to house a timber mortuary structure; after either the deliberate or accidental burning of this structure, a deeper but narrower ditch is dug along the line of the shallower and wider marker ditch, with spoil now being used to create a barrow mound over the levelled former structure; a ?ring of posts is placed on the outside of the ditch. Parallels for some elements of this model can be found (see Hughes 1991, 4-5, for a discussion of multi-phase ditches, post-settings etc.). Of course, internal barrow mortuary features are known, usually represented by post-settings (see Warrilow, Owen and Britnell 1986 for one of the best examples), as are charcoal spreads representing the positions of pre-mound funerary pyres (as at Bromfield, Shropshire in barrow B15; pers comm Gwilym Hughes) but the possible combination of the two, with the timber mortuary structure burned *in situ*, is rare, if not unparalleled.

The second ring ditch, though difficult to locate in plan in Trench 9, was found to be relatively simple, with a single phase ditch and an interior ploughed down to the natural sands and gravel. No internal feature could be located but this may not necessarily imply its absence - it was

extremely well-defined on both the aerial photographs and the geophysical plots - but rather highlights the difficult nature of the Trent Valley gravels and their often cussed refusal to facilitate the definition of archaeological features in certain weather conditions. These gravels are best excavated in damp and/or frosty conditions where differing moisture retention between disturbed and undisturbed areas of sands and gravels, and the general effects of weathering, aid feature definition. The same problem could account for the failure to identify the ?pit-type features expected in Trenches 5, 6 and 7.

Results from Trenches 2, 3, 4, 7, 8 and 11 suggest that many of the linear cropmarks and anomalies are either of recent or of geological/pedological origin.

As to the sub-circular cropmark features, these were not satisfactorily dealt with through the evaluation. Those within Geophysical Area D were not picked up as convincing anomalies, nor was the one in the northwest corner of Area E. The presence of a pipeline across the eastern part of Area E prevented geophysical identification and trial trenching.

Implications and Recommendations

The results of the evaluation have considerable archaeological implications for the proposed development. Solutions for mitigating the effects of the extraction programme should be found through agreement with the County Field Archaeologist, though some possible options will here be considered. All areas examined have already been subject to plough disturbance and the lack of survival of vertical stratigraphy above the general level of the natural sands and gravels is complete except in Area E (as noted above for Trench 1).

The ring-ditch/barrow in Area E is of considerable importance and may merit preservation in situ; the only other option would seem to be total excavation of the barrow and surrounding area ahead of development.The ring ditch in Area B is less complex and less well-preserved; preservation in

situ may not be justified, and therefore total excavation of this feature and part of its surrounding area should be considered an option. The areas around the sub-circular cropmarks in ,and between, Areas D and E should not be written-off at this stage, especially in the light of the finding of a residual Romano-British object nearby, but should perhaps be examined after topsoil stripping with a contingency period set aside for archaeological investigation to determine the nature of the features here and to assess their date and function through sample excavation. A similar strategy could apply to the area of the ?pit alignment running through Area A and the ?pit groupings in and around Area C. No further investigation of the linear cropmarks is recommended.

Retrospectively, the decision not to fieldwalk the development zone, based upon a half-day 'walkover' examination of the ploughed field, may have been a mistake. Casual collection of flints off the field surface and the proportionally large number of tools within this albeit small assemblage suggest that useful information could have been collected. It is recommended that an intensive fieldwalking exercise over the ploughed zone be considered as part of any second stage archaeological response.

Acknowledgements

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Figures

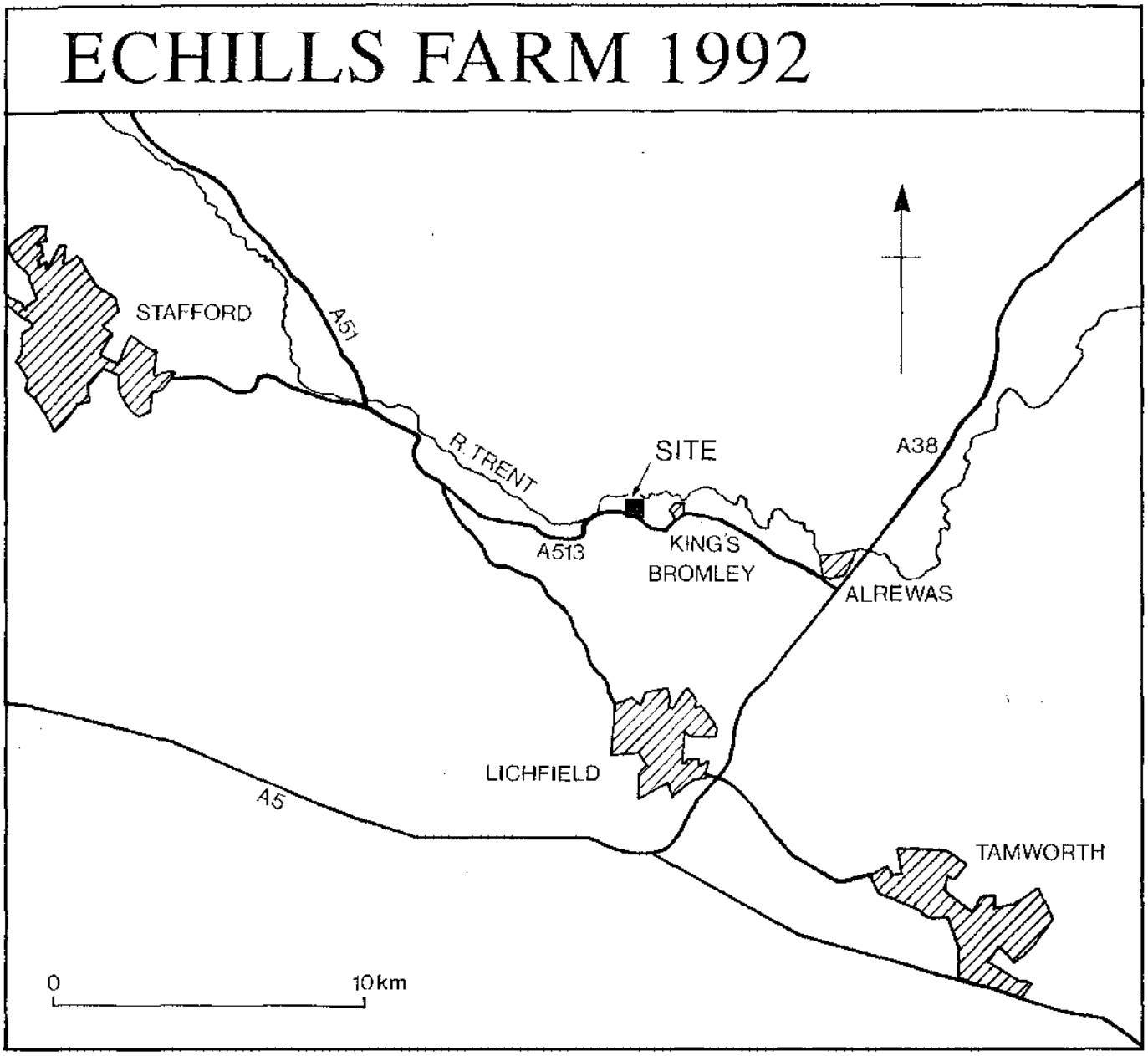
ECHILLS FARM 1992
STAFFORD
A51
R. TRENT
SITE
A38
A513
KING'S
BROMLEY
ALREWAS
LICHFIELD
A5
TAMWORTH
0
10 km

Figure 1

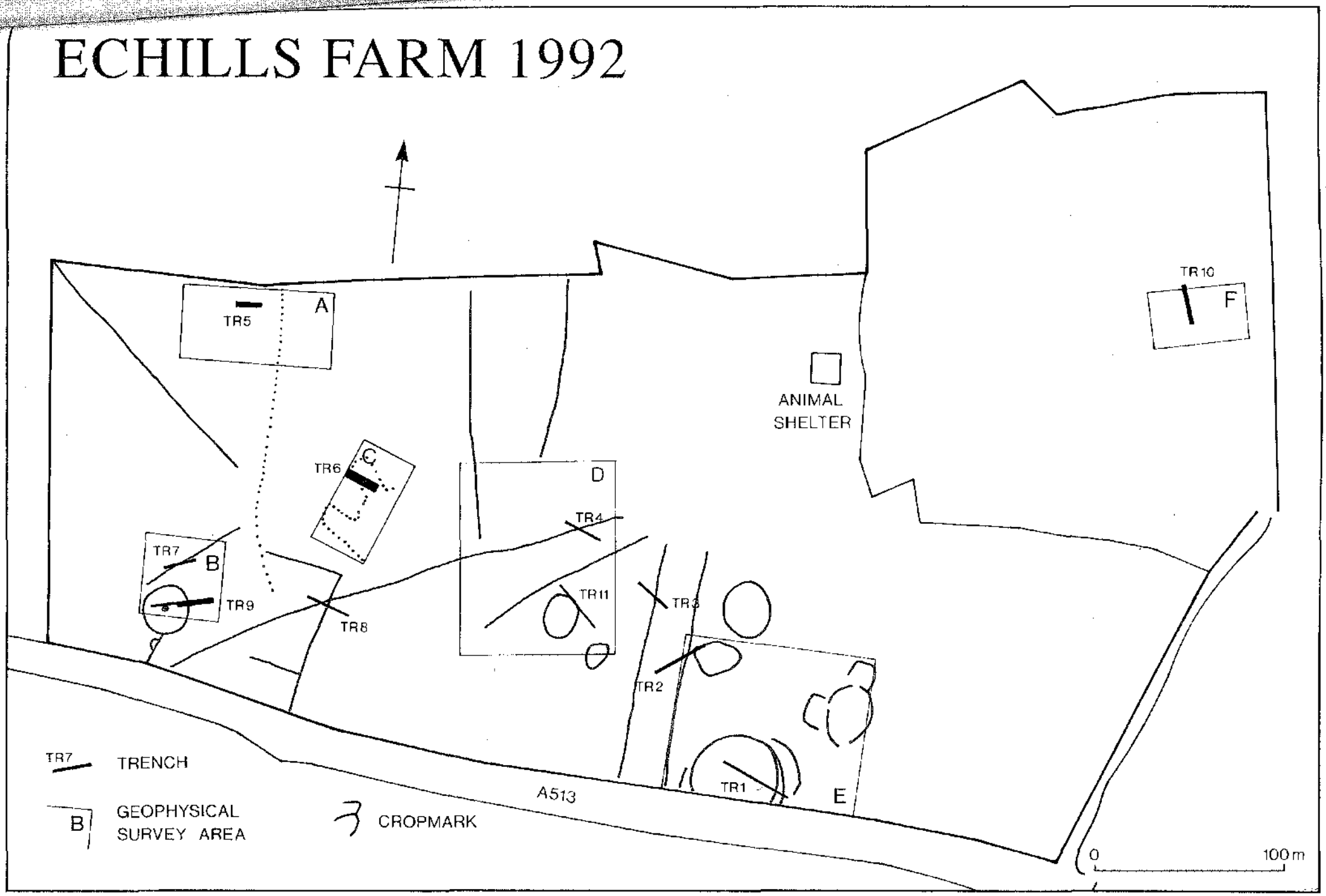
ECHILLS FARM 1992
TR5
A
TR10
F
ANIMAL
SHELTER
TR6
C
D
TR4
TR7
B
TR9
TR8
TR11
TR3
TR2
TR1
E
A513
TR7 TRENCH
B GEOPHYSICAL SURVEY AREA
CROPMARK
0
100 m

Figure 2

ECHILLS FARM 1992

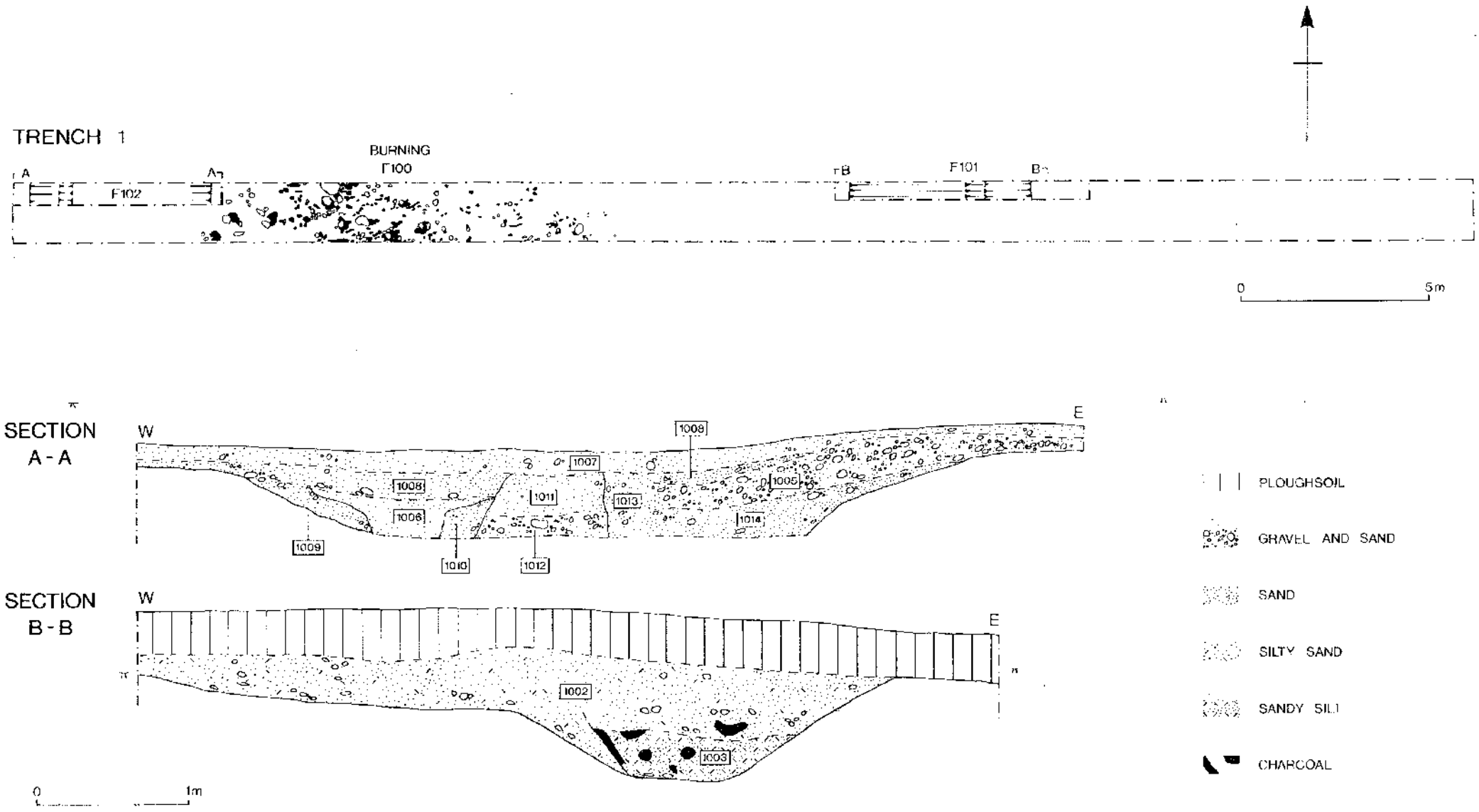

Figure 3

ECHILLS FARM 1992

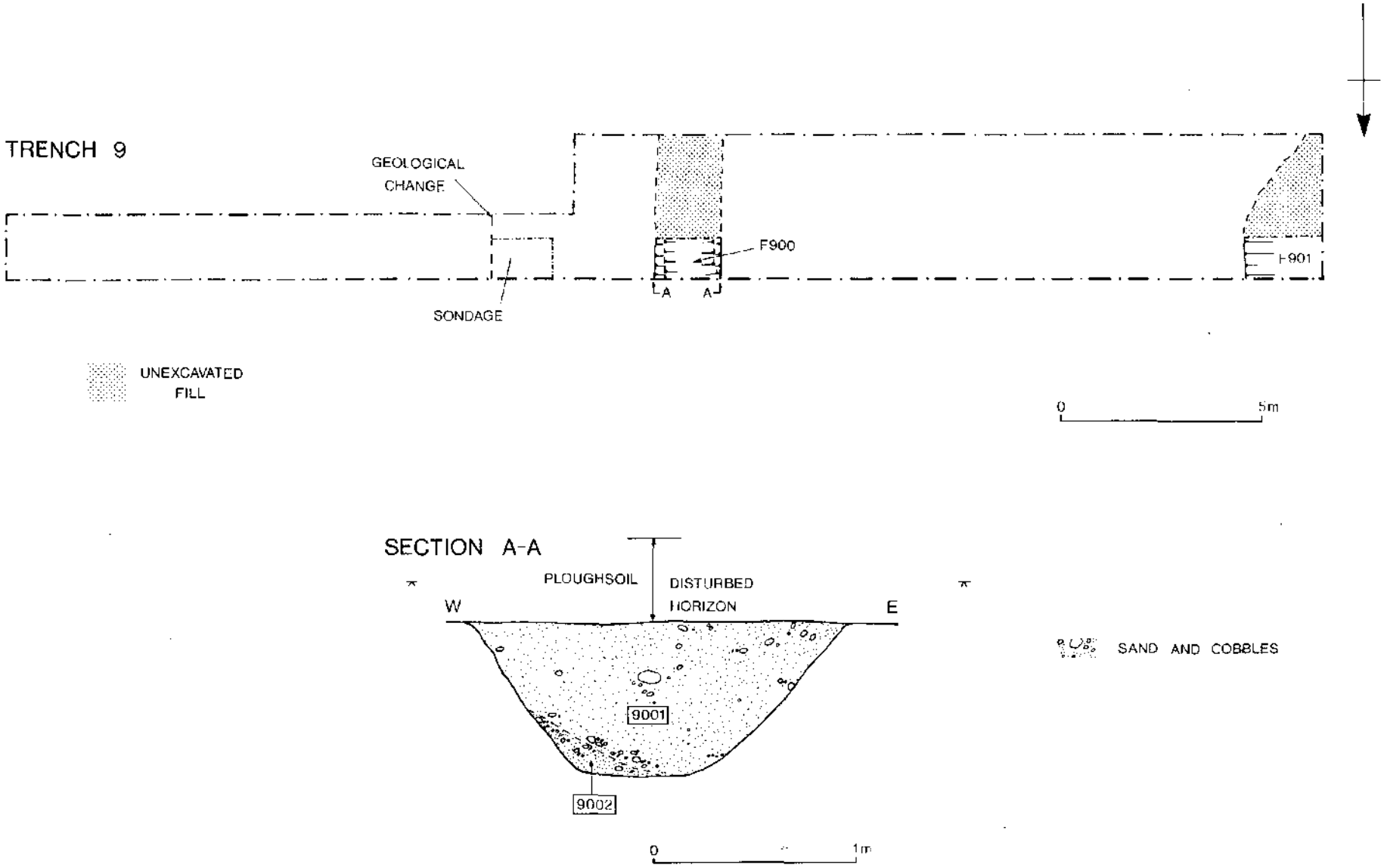

Figure 4