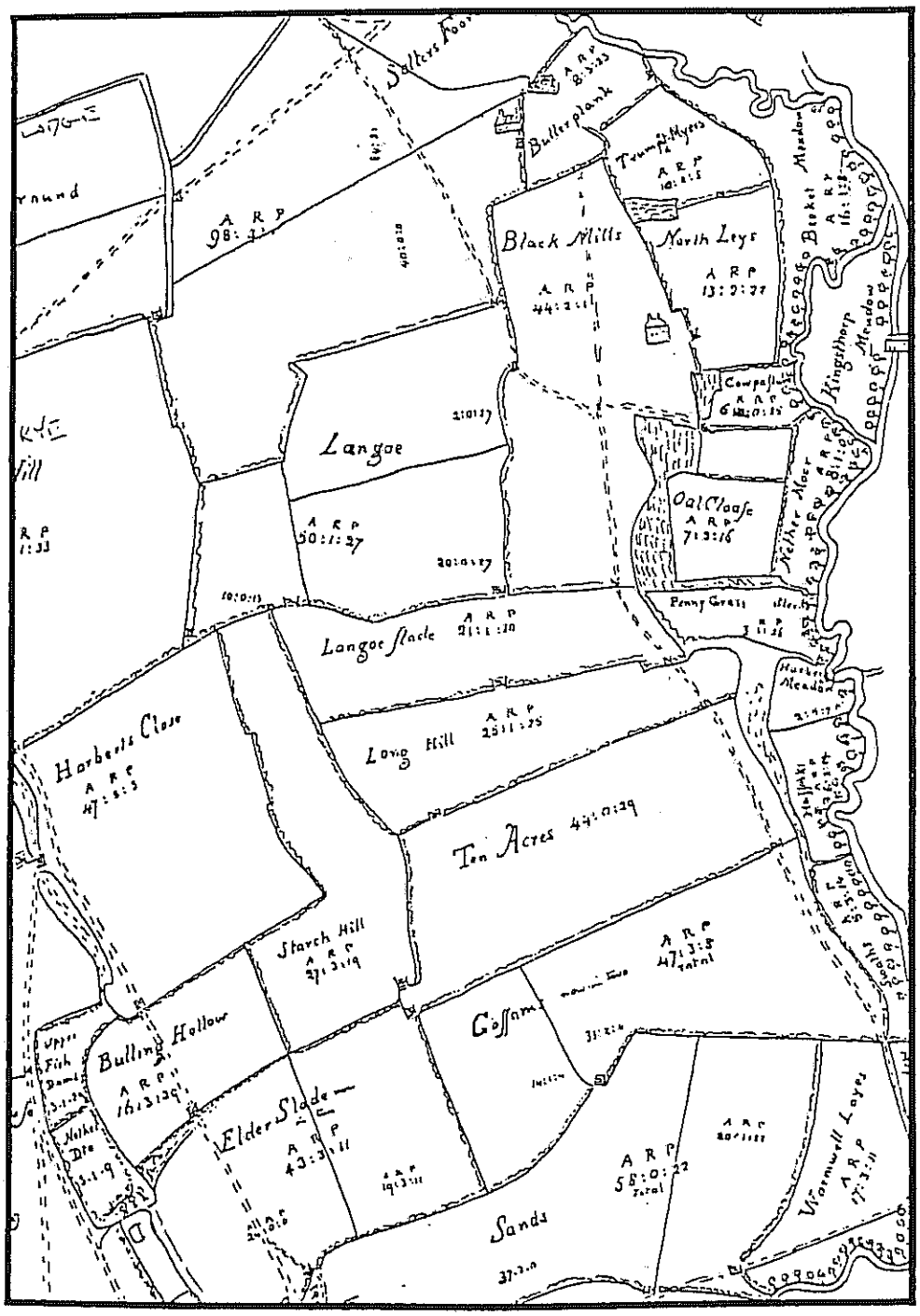
June '91

King's Heath Whitelands, Northampton

Archaeological Evaluation Report



Oxford Archaeological Unit

June 1991

KINGS HEATH WHITELANDS, NORTHAMPTON
SU 730635

ARCHAEOLOGICAL EVALUATION REPORT

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ABSTRACT

The Oxford Archaeological Unit was commissioned by the Althorp Estate to undertake an archaeological evaluation of land at Kings Heath Whitelands, Northampton (SU 730635). An integrated, staged programme of desk-top study and fieldwork was undertaken from March - June 1991. Sites studied included a Neolithic Causewayed Enclosure (Site 1), Iron Age and Roman enclosures and field systems (Sites 2-4, Cropmarks 1-2), and an early Saxon area of activity (Site 6). The land is adjacent to a field owned by Northampton Borough Council where an archaeological evaluation was undertaken by Northamptonshire Archaeological Unit in 1990. This report considers the relationship of the archaeological remains in the two areas.

1 INTRODUCTION

1.1 The Project

The Oxford Archaeological Unit (OAU) was commissioned by the Althorp Estate to undertake an evaluation of the archaeological potential of approximately 120ha of land at Whitelands, Kings Heath, Northampton, to a brief prepared by Northamptonshire Archaeology Unit (NAU). The land, which consists of a single field, is currently set-aside pasture. The brief required a phased programme of desk-top study and fieldwork. The former included a survey of the published sources regarding Causewayed Enclosures, and production of a cropmark plan compiled from aerial photographs of the area. The latter involved fieldwalking, geophysical survey, and trial trenching.

1.2 Geology (Fig. 1) and Topography (Fig. 2)

Geologically the land is dominated by Northampton Ironstone. There are two outcrops of the Lower Estuarine Series, and one consisting of a sequence of Lower and Upper Estuarine Series and Limestone, culminating in Great Oolite Limestone. Upper Lias Clay occurs at the extreme E corner of the field. Information from the tenant farmer suggested that a number of springs occur within the field.

The land predominantly lies below 100m OD, with three peaks above that level in line running NW-SE. The NW and central peaks coincide with the outcrops of the Lower Estuarine Series, while the SE peak is occupied by the sequence of Estuarine and Limestone deposits. Shallow dry valleys run NE-SW between the peaks. There is a shallow valley between the central peak and a NW-SE ridge immediately to the NE. The lowest point, slightly below 70m OD, lies in the extreme east corner of the field. Immediately to the N is the floodplain of a stream draining into the R Nene.

1.3 Archaeological Potential

The land is in an area of known archaeological potential. The assessment area contains several sites identified from aerial photographs: Site 1, a possible Neolithic Causewayed Enclosure known in the literature as Dallington Heath (Northamptonshire County Sites and Monuments Record no. 4892/1) occupying the western peak on the Lower Estuarine Series outcrop and possibly overlain by a Henge (SMR no. 4892/2); Site 2, a ditched enclosure complex of Iron Age/Roman date (SMR no. 4889); Site 3, also a ditched ?enclosure complex of Iron Age/Roman date (SMR no. 4894); and Site 5, an isolated annular feature. Furthermore, the adjacent land to the south, owned by Northampton Borough Council, contains an extensive mid-late Iron Age site which might extend

into the Althorp Estate land (SMR No. 4895, Site 4). Three alignments of pits are present, one to the south (SMR No. 4893, Cropmark 3) and two to the east of the Causewayed Enclosure (SMR nos 4890-1, Cropmarks 2 and 1 respectively).

1.4 Development

A proposed extension of the Northampton ring-road and by-pass system would run along the NE side of the field to a roundabout between Lodge and Grange Farms. The road would then continue westwards across the field. Contingent upon this, the Althorp Estate wish to have the field designated as an area suitable for development within the local Development Plan. Before such revision took place, an archaeological evaluation was required by the County Council.

1.5 Methodology

A programme of works was agreed with the curatorial section of NAU. The results are described in detail in Sections 2-6 below. The general principal of the working method is outlined here.

The programme was carried out in four stages, after each of which the progress, and results to date, could be reviewed with the overall aims of the evaluation in mind. The primary, desk-top survey was used to define the second stage, which represented the initial fieldwork programme (fieldwalking data plot and geophysical survey). The results of the second stage dictated the positioning of trial trenches in order to define the nature, extent and preservation of the various sites. Finally, the third stage was reviewed with NAU and further trenches were agreed in order to provide final clarification of questions raised by the preceding stages of work. At all stages NAU were informed of progress, and all additional works were agreed with them.

The desk-top work was carried out by OAU staff. Fieldwalking had already been undertaken by NAU (Contracts Section) in 1988. Following negotiations with Savills (Agent for the Althorp Estate), the NAU fieldwalking data were made available to OAU; the data were then analysed and plotted by OAU staff. OAU commissioned Geophysical Surveys of Bradford to undertake a magnetometer survey. The trial trenching was carried out by a team employed by OAU, under the direction of a Senior Archaeologist.

Section 2 describes the cropmarks plotted from aerial photographs. Section 3 represents a brief review of published sources relating to Causewayed Enclosures. Section 4 contains the results of the fieldwalking, while Section 5 deals with the geophysical survey. Section 6 describes the trial trench results on each Site.

2 CROPMARK PLOT

2.1 Method

A plot of the cropmarks had already been produced by the Royal Commission on Historical Monuments (England) for the County Inventory (RCHM 1984, 240-1). Certain elements of this were redrawn by NAU during their work on the adjacent field owned by Northampton Borough Council (information from Glenn Foard, NAU).

The accuracy of the cropmark plots was tested by computer rectification at a scale of 1:2500, while certain cropmarks not already plotted were also mapped at that scale (Fig. 3). The geophysical survey and, more particularly, the trial trenching acted as a further test on the validity of the plots. In general the existing and new plots were found to be accurate at a level of ± 5m except where specified below.

2.2 The Sites

2.2.1 Site 1

Site 1, centred on SU 72546350, consists of a discontinuous cropmark representing a ditch circuit interrupted by causeways. The site measures 280m (N-S) x 240m (E-W), enclosing an area of approximately 6ha consisting of the NW peak (see Section 1.1), predominantly above the 100m contour. Part of a second interrupted circuit can be identified 60-70m within the W side of the outer circuit. A sub-annular cropmark in the centre of the enclosed area has been interpretted as a later Neolithic/early Bronze Age Henge monument (County SMR No. 4892/2). Other cropmarks, apparently overlying the N and S side of the outer circuit, may represent later enclosure and ditch systems.

2.2.2 Site 2

Site 2, centred on SU 73156390, consists of two conjoining sub-rectangular enclosures, features within the enclosures, and a linear feature running SW from the N enclosure. The complex covers approximately 1ha. Examination of aerial photographs taken in 1983, and subsequent examination of the site, shows that this site is now covered by modern farm buildings (see also Sections 5.2.2 and 6.2.2).

2.2.3 Site 3

Site 3, centred on SU 73456340, consists of a sub-rectangular enclosure apparently associated with a complex of ditches and/or

trackways. The features are generally aligned SW-NE or NW-SE. They cover an area of approximately 4ha.

2.2.4 Site 5

Site 5 consisted of an isolated annular feature, perhaps 20m in diameter, to the W of Grange Farm. This lies within the proposed road corridor. It was agreed with NAU, therefore, that this would not be dealt with in this assessment.

2.2.5 Cropmark 1

Cropmark 1 is a N-S pit alignment, running for c. 250m into the field from its N edge between Lodge and Grange Farms.

2.2.6 Cropmark 2

Cropmark 2 is a N-S pit alignment emanating from the N edge of the field at Grange Farm. The original air photo plots showed this feature running c. 350m into the field, crossing the western dry valley floor. Re-examination of the aerial photographs suggested that this exaggerrated the true extent of the cropmark by c. 140m; subsequent trial trenching confirmed this (see Section 6.9). Thus the cropmark in fact stops at the valley floor, broadly in line with the termination of Cropmark 1.

2.2.7 Cropmark 3

Cropmark 3 comprised a single, well-defined N-S linear feature in the centre of the field. Consultation with the tenant farmer showed that this was a modern service trench. It was agreed with NAU that no further investigation was required.

2.2.8 Cropmark 4

Cropmark 4 consists of several linear features, mostly oriented N-S, in the centre of the N half of the field to the W of Grange Farm. Not all of these cropmarks need be archaeological, but two of them appear to run in parallel. The road corridor will cross these features.

2.2.9 Cropmark 5

Cropmark 5 consists of a WNW-ESE pit alignment in the W corner of thw field, immediately to the S of Site 1.. No further fiedwork was required by NAU on this cropmark.

3 SURVEY OF PUBLISHED SOURCES, CAUSEWAYED ENCLOSURES

3.1 Sources and Evidence

The evaluation brief required a survey to be made of

> "the immediate archaeological context of Causewayed Enclosures to assist in determining any likely features in the immediately surrounding area of the Causewayed Enclosure to assist in decisionmaking on the trenching strategy".

Accordingly, a wide range of sources was consulted. These included general introductory works, articles synthesising primary data, interim excavation reports, and final excavation reports. The following sections describe various aspects of Causewayed Enclosures which are of relevance to this project. Appendix 1 lists the sources consulted.

Causewayed Enclosures evidently served a variety of purposes, most notably defense, settlement, livestock compound, manufactuing/trade centre, and ritual centre. Any one site could encompass one or more of these functions, either at the same time, or during different phases of activity. Carn Brae, Cornwall, was certainly a defensive enclosure; but it was also a substantial settlement of 100-150 people who were engaged in the production of polished axes and their subsequent exchange. At Crickley Hill, Gloucestershire, the heavily-defended settlement was also a site for complex ceremonial activities. A shrine was contained within the Enclosure. It is notable that this continued in use even after the Enclosure fell into disuse after having been violently assaulted and captured. A variation of this occurs at Hambledon Hill, Dorset, where the primary monument (the Stepleton Spur enclosure) became part of a much larger complex which appears to have been largely ceremonial in function.

3.1.1 External Features

It has been said that "enclosure was essentially a physical and psychological statement of power" (Mercer 1990, 29). It follows from this that activity would occur within the confines of the enclosure, but not outside it. This does appear to be the case at the vast majority of sites, but it should be stressed that attention has rarely been turned specifically to the area immediately beyond the enclosed space. Furthermore, at Maiden Castle, Dorset, where Sir Mortimer Wheeler's excavations on the Iron Age hillfort fortuitously revealed a Neolithic Causewayed Enclosure beneath it, eight pits containing Neolithic material were discovered outside the apparent extent of the Causewayed Enclosure. This should be treated with caution, however, for two reasons: firstly, because the full extent of the Enclosure is not known; and secondly, because it is not clear whether the pits were contemporary with the Enclosure. In at least three cases - Crickley Hill; Windmill Hill, Wiltshire; and Briar Hill,

Northamptonshire, 4km S of Kings Heath - pre-Enclosure activity occurred on-site.

3.1.2 Associated Monuments

There are numerous examples where Causewayed Enclosures are associated with other, contemporary monuments in their immediate vicinity. At Crickley Hill, a second enclosure (The Peak) has been identified within 1km of the Causewauyed Enclosure. Similarly at Etton, Cambridgeshire, the Causewayed Enclosure has a partly-enclosed site associated with it, Etton Woodgate I, lying on the opposite bank of a (now-extinct) stream. To some extent this pairing of monuments is reflected in the close association between the Dallington Heath and Briar Hill Causewayed Enclosures, which are less than 4km apart on either side of the R Nene.

Causewayed Enclosures can also form the central element of a more complex series of earthworks. Hambledon Hill is the most notable example in this category. Here, the Causewayed Enclosure was subsumed within a slightly later defensive system which involved the enclosure of an entire hilltop, covering an area of some 50ha. Further outworks were added to this system during its life. The Causewayed Enclosure at Hembury, Devon, was similarly located within a much larger system of outworks.

3.1.3 Physical Setting

Most Causewayed Enclosures occupy hilltop or ridge positions, although this need not be simply for defensive reasons. It has been noted that the Enclosures are often very complex, multi-functional monuments, and their siting often reflects this. Indeed it has long been noted that even hilltop enclosures can be akwardly sited, ignoring the natural defensive qualities of the landscape. At The Trundle, Sussex, and Rybury, Wiltshire, the enclosure ditches lie across the hilltop, whereas the superimposed Iron Age hillforts follow the contours much more closely. The same is true of Dallington Heath, where the outer circuit, although enclosing the hilltop, lies eccentrically to the peak.

3.1.4 Entrances

Several Causewayed Enclosures were provided with entrances leading into and/or through the ditch circuits. Such features are present at Hembury; Carn Brae; Crickley Hill; and Hambledon Hill.

3.1.5 Polished Axes

It has already been mentioned that Carn Brae was closely

associated with the manufacture and trade of polished axes. Other sites which are similarly associated with production and exchange are Helman Tor, Cornwall, Hembury and Windmill Hill. Cornish polished stone axes have been found at Windmill Hill, Maiden Castle, High Peak, Devon, and Hazard Hill, Devon; and during fieldwalking at Ham Hill, Somerset, Bradford Abbas, Dorset, and East Week, Devon. Stone axes from the Lake District have been found at Abingdon, Berkshire, Staines, Middlesex, and Windmill Hill.

4 FIELDWALKING

4.1 Method

Fieldwalking was undertaken by NAU in November-December 1988. The entire field was covered, using a system of transects at 30m intervals. Collection was based on 20m stints within these transects. The latter were oriented NE-SW, thus running across the contours. Initially, 47 transects were walked, running from 1 at the NW edge of the field to 47 at the SE side. Subsequently, two further transects (50 and 51) were surveyed 15m to either side of Transect 7, on its N and S side respectively. All finds were collected. Ground conditions were adequate; the surface had weathered after harrowing, and there was a low crop growth (10cms). Conditions were generally damp to wet, with variable light.

The finds and transect/stint records were supplied by NAU to OAU. All the finds were examined and classified according to material, type and date. This information was placed on a computer database, which was then used to generate lists by matrial category and date. Plots were produced at a scale of 1:2500, and at 1:10,000.

4.2 Results

The collected assemblage was dominated by medieval and post-medieval pottery, and modern material such as bottle glass. The pottery, in particular, was widely-distributed, although it is interesting to note that there was very little material in the area N of cropmark 5 and W of cropmark 2. This material represents no more than a background scatter, probably derived from medieval and later agricultural practice such as manuring. The 'gap' in the record noted above would suggest that this underwent a different agricultural regime than the rest of the field. A similarly low density of medieval pottery was evident in the fieldalking results from the Northampton Borough Council land (NAU 1990). This material is of little archaeological significance, and the relevant plots are not reproduced in this report. The following sub-sections describe the distribution of the archaeologically-significant material categories: prehistoric

flintwork, and Iron Age, Roman and Saxon pottery.

4.2.1 Prehistoric Flintwork

Figure 4 presents the distribution of flint tools and cores, while Figure 5 shows the distribution of struck flakes showing evidence of retouch. A very similar distribution of non-worked flakes was found, but with a greater density of material to either side of Transect 10 between stints 35-45. Excepting this concentration, however, the non-worked flints exhibit only a background distribution with a slightly higher density in the W half of the field.

Examination of the distribution of recognisable flint tools shows that most of the material occurs on or in the immediate vicinity of Site 1. There is a general, low-density scatter of tools in the E half of the field, but this does not correspond with any of the known sites. The most significant find is of four polished flint axe fragments, the source probably being Lincolnshire. Polished axes are frequently found at Causewayed Enclosures, to the extent that the sites are often associated with their production and exchange (eg Carn Brae and Helman Tor, Cornwall, Hembury, Devon, and Windmill Hill, Wiltshire).

4.2.2 Iron Age Pottery

Only eight sherds of Iron Age pottery were present. The distribution, unsurprisingly, was very scattered. Two sherds were found in the vicinity of Site 3, but there were none at or near Sites 2 and 4. The latter is perhaps surprising, but is in line with the poor 'visibility' of the known cropmark sites during fieldwalking in the Northampton Borough Council land (NAU 1990). A more specific reason for the lack of pottery at Site 4 will be described in Section 6.2.4.

4.2.3 Roman Pottery

Sixty-five sherds of Roman pottery were recovered. The distribution was widely-scattered across the E half of the field, E of Cropmark 2. It is notable that only a single sherd was found W of Cropmark 2. It is possible that this reflects the apparent difference in agricultural regimes noted in Section 4.2 above, but this seems unlikely given the distribution of Iron Age (Section 4.2.2) and, more particularly, Saxon (4.2.4) pottery. It is suggested that this differential distribution is more likely to reflect the actual distribution of Roman sites within the field.

Within the E half of the field, there is a slightly increased density of finds at Site 3. It should be stressed, however, that the numbers of finds by stint are invariably small.

The maximum number of finds per stint is four (one instance), while most produced only a single sherd. Site 2 does not show at all, because the presence of modern farm buildings obviously reduces the potential for plough disturbance of artefacts to zero.

4.2.4 Saxon Pottery

Twenty-four sherds of early Saxon pottery were recovered. Three of these were isolated finds and can be discounted here (see Fig. 6). The remaining 21 sherds occur in a small area N of Site 1. Three sherds act as outliers to the main group, of 18 sherds, recovered from transects 7, 51, and 58, between stints 34-40. Thus 75% of the assemblage occurred in an area of 120m (N-S) x 30m, or 3600 square metres. The highest number of sherds by stint was 5, in the centre of the the concentration. All the sherds were small and heavily abraded. The pottery from this area was originally identified as Iron Age by NAU; the early Saxon identification by OAU was subsequently confirmed by NAU.

5 GEOPHYSICAL SURVEY

5.1 Method

Six areas were selected for surveying, the work being sub-contracted to Geophysical Surveys of Bradford. Two areas (A and B1/2) were selected at Site 1, while Sites 3, 4 and 5 were also surveyed (Areas F, D and C1/2 respectively). The sixth area, Area E, lay on the SE peak and was intended to check on the possibility that structures associated with Site 1 might be present. These areas are shown on Figure 7.

The survey was undertaken with a Geoscan FM36 magnetometer. Readings were logged at 0.5m intervals in one axis, with a 1m separation between traverses. Thus 800 readings were taken for each 20m x 20m grid square. The data were recorded on computer for processing and print-out. Various types of print-out were produced, including dot-density, contour and grey scale. The plots which have been selected for inclusion in this report are those which provide the most readily comprehensible displays of the geophysical anomalies recored during the survey. The transects were 20m or 40m wide.

5.2 Results

In some areas, the low level of the geophysical responses made interpretation difficult. The transects at Sites 3 and 4 were very successful in determining the presence of archaeologically-produced anomalies. Survey of Site 2 proved to be ineffective due to the extent of modern disturbance. Problems were

encountered at Site 1, however, where the character of the fills of the Causewayed Enclosure ditches meant that the anomalies were weak. Nevertheless the ditches were definitely located, especially in Area B1/B2. Weak anomalies recorded in several transects appeared to result from ploughing.

5.2.1 Site 1

Area A, 80m x 100m max., examined an apparent out-turn in the outer circuit of the Causewayed Enclosure which might be interpretted as an entrance (Fig. 8). The results were partially confused by a large anomaly caused by a telegraph pole. An interrupted linear feature can be traced across the E side of the Area. This roughly correlated with the air photo evidence, although the alignment is somewhat askew. A more clear linear anomaly running N-S across the centre of the Area, and terminating close to a very clear E-W linear anomaly, might represent the course of the outer circuit; if so, the interrupted anomaly might represent an avenue entering the interior of the Causewayed Enclosure.

Area B1/B2, covering 1.24ha of the interior, and part of the W and N sides of the outer circuit, produced clear anomalies representing the latter (Figs 9 and 10). Both elements of the circuit appeared to be in the correct location relative to the air photo plots (see Section 2.2.1). A curving linear feature in Area B1, however, appeared to coincide with a cropmark which had been plotted c. 30m NE of the geophysical anomaly. This apparent divergence was tested by trial trenching (see Section 6.2.1).

Area B2 contained several curving linear anomalies which clearly relate to the inner circuit of the Causewayed Enclosure, and the sub-annular feature at its heart (Fig. 10). The anomalies would suggest that the extent of the inner circuit is understated by the cropmark; the linear anomaly in the centre of the NE arm of Area 2 represents a substantial extension of the cropmark, and also demonstrates that the inner circuit was interrupted. The central sub-annular feature is also visible at the junction of the two arms of Area B2 and at the SE end of the SE arm.

Several discrete anomalies were recorded at the NW end of Area B1 (Fig. 10). The nature of the signals suggested that these were pits. Contemporary features such as pits are occasionally found at Causewayed Enclosures (see Section 3.1.1). A trial trench was dug in order to test the existence and nature of these features (see Section 6.2.1). A major anomaly in the SW half of Area B1 seems to correspond to the break in geology from ironstone to the Lower Estuarine Series (see Fig. 1).

5.2.2 Site 2

Although Site 2 has been covered by modern farm buildings, a NE-SW transect was surveyed in order to determine whether any archaeological features could still be located (Fig. 11). The transect also crossed Cropmark 1, a pit alignment. A linear feature in the centre of the transect seems to correspond with the cropmark. An area of substantial magnetic disturbance at the west end of the area clearly represents modern activity. This includes a pipe trench.

5.2.3 Site 3

Two contiguous transects were surveyed at Site 3 (Fig. 12). The first, measuring 300m x 20m and oriented NE-SW, was intended to confirm the presence of geophysical features corresponding to the cropmarks. The second, measuring 200m x 20m and oriented NW-SE, was intended to determine whether or not the site extended to the SE of the cropmarks.

The NE end of the first transect contained a profusion of archaeological features, including ditches and pits. These were constrained to the NE of a modern pipe trench; there were no anomalies to the SW of this. Several of the ditches can be related to the cropmarks.

The second transect included a zone of c. 60m at its NW end in which there were no anomalies. Thereafter, several linear features were present, suggesting the existence of enclosures. These could represent a separate site if the gap at the NW end of the transect is real. Alternatively the features could be an extension to the SE of Site 3.

5.2.4 Site 4

Two transects were surveyed:- Areas C1 and C2. The former, measuring 140 x 40m and oriented NW-SE, ran parallel to the field boundary; the transect was sited in order to locate any north-eastward extension of the Iron Age site identified on the Northampton Borough Council land. Transect C2, measuring 160m x 40m, ran NE from transect C1 and was intended to determine how far certain anomalies extended.

Linear features were located in the centre and east end of Area C1, the former features continuing for some 25 metres into Area C2 (see Figs 13-15); there were no other archaeological features beyond this point in the transect. Two curving linear features were identified at the SE end of Area C1 (Fig. 13). Both features continued SE beyond the transect; the western feature emanated from the Northampton Borough Council land. Possible pits were identified in the NW half of Area C1, and at

the SW end of Area C2 (Figs 13-15).

5.2.5 Area E

Area E, 60m square, was sited on the SE peak at the E end of the field. The survey of published sources (Section 3) had shown that archaeological features contemporary with the causewayed enclosure could be present in such a location. No such features were identified, however, although there was evidence for ploughing (see Fig. 16).

6 TRIAL TRENCHING

6.1 Methodology

Twenty-eight trial trenches were excavated, on Sites 1-4 and 6-7, and Cropmarks 1, 2 and 4. Site 5 and Cropmarks 3 and 5 were not examined, by agreement with NAU. Most trenches were 30m long, and all were 1.6m wide; trench 27 was widened to 3.2m in order to reveal a complete pit in plan. Topsoil, and hillwash where relevant, was removed by a JCB mechanical excavator using a 1.6m toothless ditching bucket. Archaeological features were cleaned and excavated by hand except where stated below. Trench plans were drawn at a scale of 1:100, and detailed feature plans were drawn at a scale of 1:20 where appropriate. Sections were drawn at a scale of 1:20.

6.2 Results

In the following sections, the trenching results are described for each site and cropmark examined. The purpose of the trenching is briefly stated at the beginning of each section. No details are given of trenches in which no archaeological features were encountered. Features are described individually, and the finds from them are noted. Detailed finds reports are not presented in this document.

6.2.1 Site 1: Trenches 1, 15, 25

Purpose: To confirm the position of the outer enclosure ditch and investigate geophysical anomalies to the SW of the enclosure.

Trench 1, 53m long and oriented NW-SE, was machine-dug through 0.2m of modern topsoil and approximately 0.18m of medieval ploughsoil to the natural ironstone. Location of the enclosure ditch was difficult, as ploughing had spread ironstone over the top fill of the ditch. Further carefully-controlled machining located the ditch 1/6, aligned E-W across the trench, and c. 7m wide. A small sample area of the upper ditch fill was hand excavated to a depth of 0.4m, to confirm the archaeological

nature of the feature, and to determine its state of preservation. The fill was compact, reddish-brown sandy silt. No finds were recovered from the fill of the ditch, but two flint scrapers and a flint core were recovered during the machining.

Trench 15, 100m long, lay parallel to and 20m to the NW of Trench 1. The same difficulty in locating the enclosure ditch was encountered, but the slower drying rate of the ditch fill meant that its position became visible after 2-3 days' exposure. The ditch was not sampled in this trench.

Trench 25, 30m long and oriented ENE-WSW, lay close to the SW edge of the Causewayed Enclosure. Two pits were partially revealed and excavated (25/3 and 25/4). Both were approximately 1.7m wide and up to 0.6m deep, and contained a sandy, reddish grey-brown silt fill. No finds were recovered from either pit but the fills were similar in character to that of the Enclosure ditch.

6.2.2 Site 2, Trench 8.

Purpose: to investigate cropmark site to the E of Grange Farm buildings in order to determine whether archaeological features survived.

A 20m trench, aligned N-S, revealed no archaeological features. Topsoil was 0.15m deep, sealing an earlier ploughsoil 0.20m deep.

6.2.3 Site 3, Trenches 9-14, 16-20

Purpose: to evaluate the extent and nature of cropmarks in the E of the site.

Trenches 9, 10, and 11 contained no archaeological features. The natural subsurface in Trench 10 sloped sharply downwards from S-N; a layer of hillwash (10/2) varied in depth from 0.3m at the S end, to 1.0m deep at the N end.

Trench 12, 30m long and oriented NW-SE, contained several features. A stone-lined well (12/6), with a shaft 0.5m in diameter, was 6.0m deep. The top 2.0m was excavated by hand, and the bottom was sectioned by machine. This method has been used sucessfully during the excavation of wells at Stanwick Roman villa, Northants. A large quantity of animal bone and 4th century Roman pottery sherds were recovered from the fill.

SE of the well was a drain, (12/3), aligned SW-NE, comprising a vertical-sided gully, 0.3 to 0.5m wide and 0.3m deep, containing large (up to 0.4m) flat stones, laid to form

a rough 'V' shaped channel. A few small fragments of red tile were found in the gully fill; these are not very diagnostic in date, but could be early Roman.

Two gullies (12/4 and 12/5) were found. 12/4 was aligned E-W with a width of 0.5m and a depth of 0.3m. 12/5 was aligned E-W with a width of 1.1m and a depth of 0.3m. An iron nail was recovered from the fill of 12/5, and a few sherds of early Roman pottery from 12/4.

Trench 13, 28m long and aligned NW-SE and sited 130m to the NW of Trench 12, contained four ditches. 13/3, aligned SW-NE, was 2m wide, 0.95m deep, and parallel to 13/5, 6m to the NW, which was 2m wide and 1.1m deep. 13/5 cut 13/4, a ditch aligned E-W, 1m wide and 0.8m deep. 13/6, a 2m wide, 0.9m deep ditch lay immediately to the NW of 13/5, and was oriented slightly more towards N-S. No relationship was visible between the two. The fill of all the ditches was orangey-grey sandy silt. None of the features produced dating evidence, but all were sealed by a ploughsoil containing Roman and medieval pottery. The former is likely to have been disturbed from the ditch fills.

Trench 14, 30m long, 10m N of Trench 13 and oriented NE-SW, contained three ditches (14/4, 14/5, 14/6), all aligned approximately NW-SE, and the terminal of a shallow gully (14/3), aligned N-S. 14/3 was 0.4m wide and 0.3m deep, with 45 degree sloping sides and a flat bottom. 14/4 was 1.2m wide and 0.4m deep, with 30 degree sloping sides and a rounded bottom. 14/5 was 0.6m wide and 0.24m deep, with 60 degree sloping sides and a rounded bottom. 14/6 was 2.1m wide and 1.2m deep with 60 degree sloping sides and a flat bottom. All the fills were orangey-brown sandy silts. Roman potsherds were recovered during machining and a few small fragments of Iron Age and possible Bronze Age pottery were found in the fill of 14/4.

Trench 16, 28.5m long and oriented NW-SE, was dug between Trenches 12 and 13. Two ditches were revealed. 16/3 was aligned E-W, 1m wide, 0.25m deep, with shallow sloping sides and a rounded bottom; late 3rd/4th century Roman sherds (Oxfordshire colour coated) were recovered. 16/4 was aligned N-S, 1m wide, 0.25m deep, with sloping sides and a flat bottom. No dating evidence was recovered, but the fills of both ditches consisted of orangey-grey sandy silt fill.

Trenches 17, 18, 19, and 20, were each approximately 10m long, aligned NE-SW, and situated either side of Trench 12. Trenches 17 and 20 contained no archaeological features. Trench 18 revealed two features; 18/3 was a shallow ditch, aligned SE-NW, 1.6m wide and 0.2m deep, with sloping sides and a flat bottom. 18/4 was a gully, aligned SE-NW, 0.33m wide and 0.3m deep. No finds were recovered from either feature. A modern

land drain, 18/5, cut gully 18/4.

Trench 19 contained two ditches, both aligned NW-SE. 19/3 was 1/8m wide and 1.4m deep, and 'V' shaped in profile and contained middle Iron Age sherds. 19/4 was 1m wide and 0.8m deep, with sloping sides and a rounded bottom. Both ditches contained a similar grey-brown silty clay fill.

6.2.4 Site 4, Trenches 4 and 5

Purpose: to assess how far the settlement identified to the S of the site on Borough Council land extends into the Althorp Estate land.

Trench 5 contained no archaeological features.

Trench 4, 30m long and oriented SW-NE, revealed two ditches, both aligned NW-SE. 4/3 was 0.6m wide, 0.4m deep with sloping sides and a rounded bottom. 4/5 was 1.6m wide and 0.6m deep, with steeply sloping sides and a rounded bottom; middle Iron Age sherds were recovered from this ditch. Both ditches were filled with light grey sandy silt. The upper layers of 4/5 were disturbed by a later feature (4/4) which extended north-eastwards. The full extent of this feature was not established. It contained medieval pottery and numerous modern metal objects (especially bullet fragments). The presence of this feature partly explains the lack of Iron Age pottery recovered from fieldwalking in this area.

6.2.5 Site 5

Site 5 was not investigated as it lies within the proposed road corridor.

6.2.6 Site 6, Trenches 1, 2, 15, 23-4

Purpose: to investigate concentration of early Saxon pottery recovered during fieldwalking.

Trench 23 contained no archaeological features.

Trench 2, 28m long and oriented NE-SW, revealed one posthole (2/3), with stone packing and a post-pipe, 6m from the SW end of the trench. Two small pieces of slag were recovered from the fill. Two early Saxon potsherds were recovered during machine removal of the topsoil.

Trench 24, 30m long and aligned NW-SE, was dug approximately 30m to the NE of Trench 2. One feature was revealed, 24/3, a

shallow, round-bottomed ditch 1.2m wide, and 0.4m deep, aligned N-S. The fill was reddish-grey sandy silt. No dating evidence was found.

Near the NE end of trench 1, a gully (1/3) aligned EW, 0.4m wide and 0.3m deep, and two small pits (1/4 and 1/5) were revealed. A flint scraper was found in the fill of 1/4. These features lay within the area of the Saxon pot scatter.

In the NE end of trench 15 a shallow, flat-bottomed gully was revealed, aligned EW, 0.9m wide, and 0.3m deep. No dating evidence was found. As with 1/3-1/5, however, the features lay within the area of the Saxon pot scatter.

6.2.7 Site 7

Purpose: to investigate a concentration of flints found during field-walking.

Trench 3 contained no archaeological features, and no dating evidence was recovered during machining.

6.2.8 Cropmark 1, Trenches 7 and 22

Purpose: to evaluate the extent and nature of a possible alignment of pits running NW-SE across the site.

Trench 7, 30m long and oriented E-W, was dug across the projected line of the cropmarks, approximately 120m to the SE of their apparent end. The trench contained no archaeological features.

Trench 22, 20m trench and oriented E-W, was dug at the end of the cropmark. The trench revealed, under the topsoil, a considerable depth of hillwash. At a depth of about 1.7m the edge of a large pit was revealed, but the collapse of the section prevented a proper record of the pit being made.

6.2.9 Cropmark 2, Trenches 6, 26 and 27; Trench 28

Purpose: to evaluate the extent and nature of a possible alignment of pits, running NW-SE across the site.

Trench 6, 30m long and oriented E-W, was dug across the projected line of the pits, approximately 200m to the SE of its end. No archaeological features were found. Trench 5, Site 4, lay a further 100m to the S on the same alignment; as has already been said, this trench was also devoid of archaeological features.

Trench 26, 30m long and oriented E-W, was dug across the projected line of the pits approximately 140m NW of Trench 6. On the basis of the original cropmark plot, this should have been on the pit alignment. No archaeological features were found.

Trench 27, 9.5m long and oriented E-W, was dug across the projected line of the pits, approximately 120m NW of Trench 26, where the revised cropmark plot placed the termination of the alignment. Two features were revealed. 27/3 was a large sub-circular pit, 2.5m across and 1.4m deep, with steeply sloping sides and a rounded bottom. The fill was greyish-brown sandy silt. No dating evidence was recovered. 27/4 was the edge of a possible pit, partially revealed in section to the NW of 27/3.

Trench 28, 20m long and oriented N-S, was placed between the termini of Cropmarks 1 and 2, but failed to locate any archaeological features.

6.2.10 Cropmark 4

Purpose: to evaluate the nature of Cropmark 4

Trench 21, 30m long and oriented N-S, failed to locate any archaeological features.

6.2.11 Cropmarks 3 and 5

By agreement with NAU, Cropmarks 3 and 5 were not examined by trial trenching.

7 DISCUSSION

7.1 Methodological Reliability of Fieldwork Results

The consecutive and complementary nature of the fieldwork programme means that each technique used can be cross-checked by the others in order to establish the validity of the results. The following observations can be made.

7.1.1 Fieldwalking

Artefacts were collected in the vast majority of stints, showing that there was a consistent spread of material and, equally, a consistent collection rate despite less-than-ideal circumstances in terms of crop growth and weather conditions. Although the density of finds is generally low, examination of individual artefact categories by date reveals some interesting trends:

The worked flint is mostly, though not exclusively, found

in the W half of the field, and specifically W of Cropmark 2.

There is very little Iron Age pottery. In the case of Site 4, this appears to be because of a large modern feature which masks the Iron Age features; nevertheless these are visible on the geophysical plots. The few sherds of Iron Age pottery recovered at or near Site 3 may reflect an Iron Age origin for this predominantly Roman site. Iron Age pottery was recovered from one ditch (14/4) in Trial Trench 14.

The Roman pottery is virtually all found to the E of Cropmark 2. The trial trenching also failed to produce settlement evidence of Roman date W of Cropmark 2. It is known that the Causewayed Enclosure was slightly plough-damaged, but that features coinciding with the early saxon pottery scatter were cut through the disturbed layer. It can be assumed, therefore, that the cultivation took place in later prehistoric or Roman times. If the latter is the correct date, it would argue for a clear separation of land-use to either side of Cropmark 2.

The density of Roman pottery in the area of Site 3, while being higher than the background, was surprisingly low. Trial trenching revealed significant deposits of hillwash N/NE of the 80m contour; thus the entirety of Site 3 appears to have been protected from all but the deepest ploughing.

A similar pattern occurs with the medieval pottery. Taken with the preservation of features in the area of the Saxon pottery scatter, it would appear that the W half of the field was not cultivated in the medieval period. The post-medieval (probably late 17th century) map of Kings Heath (Fig. 24) shows that what is now one field was originally several smaller fields. By the early 20th century some of these had disappeared, but the same general layout remained (Fig. 25). It is likely, therefore, that several of the original western fields were permanent pasture or heathland.

7.1.2 Geophysical Survey

The magnetometer survey was largely successful, although readings were sometimes weak, especially on Site 1. With the exception of Site 2 where modern disturbance was prevalent, all the major cropmark sites were successfully located. At Site 4, the geophysical survey was successful in detecting archaeological features despite the masking effect of a modern feature which severely reduced the efficacy of fieldwalking. Similarly at Site 3 the survey was able to confirm and extend the cropmark evidence in a way which was not possible from fieldwalking. At Site 1, the existence of pits outside of the Causewayed Enclosure to its W was first demonstrated by the geophysical survey. Trial

trenching confirmed the existence of these features, although dating evidence was not forthcoming.

7.1.3 Trial Trenching

The trenching confirmed the existence, nature and date of all the major sites revealed by air photo and geophysical survey. Trenching also confirmed the existence of Site 6, but did not reveal any features under the flint scatter NE of the Causewayed Enclosure. As has been mentioned above, the pits identified by geophysical survey were confirmed by trial trenching.

The trial trenching was able to confirm the position of the pit alignments, Cropmarks 1 and 2. Furthermore, the revision of the southward extent of Cropmark 2 was confirmed, reducing the length of the alignment by more than 100m. The pits thus stop on the valley floor, indicating that the topographical feature itself acted as a form of boundary. Finally the trenching confirmed the existence and date of Sites 3 and 4; confirmed the poor state of preservation at Site 2; and confirmed the differential land-use pattern in the Roman period.

The presence of substantial deposits of hillwash in trenches below the 80m contour in the N half of the field suggests that preservation of archaeological remains will generally be good. The hillwash appears to respect a medieval or later field boundary shown on the post-medieval map (Fig. 24). This feature would therefore seem to be a headland.

8 SUMMARY

8.1 Site 1

The existence and form of Site 1 was confirmed. Furthermore the inner circuit was found to be more extensive than shown on air photos. The discontinuous nature of both circuits was confirmed. The recovery of Neolithic flintwork - and especially the presence of polished axe fragments - confirms the date of the monument. There can be no doubt that Site 1 is a Causewayed Enclosure.

Although the site has suffered some plough damage, evident in the spread of ironstone debris across the top fill of the outer circuit ditch, it is suggested that this occurred in the Roman period. The sample excavation of the outer circuit ditch in Trench 1, though strictly limited in extent, did confirm that the ditch had not suffered substantial erosion. The fieldwalking results, and the survival of insubstantial features cut through the Roman plough-damaged layer, shows that there has been little or no medieval or later ploughing of the site. The survival of pits outside of the Enclosure confirms that the monument is very

well-preserved. The pits did not produce dating evidence. Their fills, however, were of the same character as the top fill of the outer circuit ditch of the Causewayed Enclosure; the pits could therefore be contemporary with the Enclosure.

8.2 Site 2

The fieldwalking, geophysical and excavation evidence suggests that this site has suffered extensive damage from the construction of modern farm buildings. The nature, extent and date of the cropmarks could not be determined. To all intents and purposes, the site would appear to have been destroyed.

8.3 Site 3

The fieldwork has confirmed that Site 3 is of Roman date with a possible Iron Age origin; and that the site extends further E from the cropmarks, effectively to the floor of the eastern dry valley. The Roman features, therefore, appear to be constrained between the two dry valleys. A similar pattern of constraint was evident in the Iron Age site evaluated by NAU on the Northampton Borough Council land.

There was little evidence of settlement activity except around Trench 12, where a well, a drain and several gullies were found. Features in other trenches were generally very substantial ditches. The character of Site 3, therefore, suggests that it consists of stock enclosures, boundary features, and possibly trackways; a small settlement area may exist at the E end of the Site.

Features were well-preserved, with little evidence of plough damage or other erosion. This partly explained the low density of fieldwalking finds in the area. The presence of substantial deposits of hillwash below the 80m contour, apparently coinciding with a medieval or later headland (see Fig. 24), suggests that Site 3 has been protected from all but the deepest ploughing.

8.4 Site 4

The Iron Age site on the Northampton Borough Council land was found to extend into the Althorp field. A modern feature had disturbed the archaeological features, so that only deeply-cut ditches were visible below it. Shallow features, however, are likely to have been destroyed by the modern feature. The site did not extend far into the field, being constrained upon the central peak and not continuing into the slight NW-SE valley which separates the peak from the ridge to its NE.

8.5 Site 6

Trial trenching in the area of the early Saxon pottery scatter located several features. No dating evidence was recovered from these features, although early Saxon pottery was recovered during machine removal of the topsoil and medieval ploughsoil in Trench 2. The stratigraphic position of all the features, cutting through the later prehistoric or Roman plough-damaged layer, shows that the features are later in date than that layer. It is likely, therefore, that most of the features are of early Saxon date.

8.6 Site 7

No features were located where a slightly higher density of flint had been noted in fieldwalking.

8.7 Cropmarks 1 and 2

The existence and nature of the pit alignments, Cropmarks 1 and 2, was confirmed by trial trenching, although no dating evidence was recovered. Cropmark 2 was found to be less extensive than originally assumed. It terminated at the valley floor, level with the end of Cropmark 1. No connecting feature could be found between the cropmark termini.

8.8 Cropmark 4

No archaeological feature could be located on the line of Cropmark 4.

8.9 Inter-Site Relationships

No monuments associated with the Causewayed Enclosure were located. Site 3 may have been established when Site 4 was still in use, although it is clear that Site 3 was only intensively used in the Roman period. It has been possible to identify differential land use in the Roman period, largely based on topographical factors. Unfortunately the place of Site 2 within the Iron Age or Roman landscape cannot be determined. The early Saxon site, Site 6, seems to be isolated within the landscape. In the medieval and later periods the land was divided into numerous small fields, some of which appear to have been left as permanent pasture. In the 20th century, the individual fields have been subsumed into one very large field.

APPENDIX 1 PUBLISHED SOURCES CONSULTED

THOSE DIRECTLY REFERRED TO IN THE TEXT

Mercer R J 1990 Causewayed Enclosures

NAU 1990 Archaeological Evaluation at King's Heath, Northampton

RCHM 1984 An Inventory of the Historical Monuments in the County of Northamptonshire; VI, Archaeological Sites and Churches in Northampton

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Burgess C (ed.) 1989 Enclosures and Defences in the Neolithic of Western Europe British Archaeological Reports, International Series, 403

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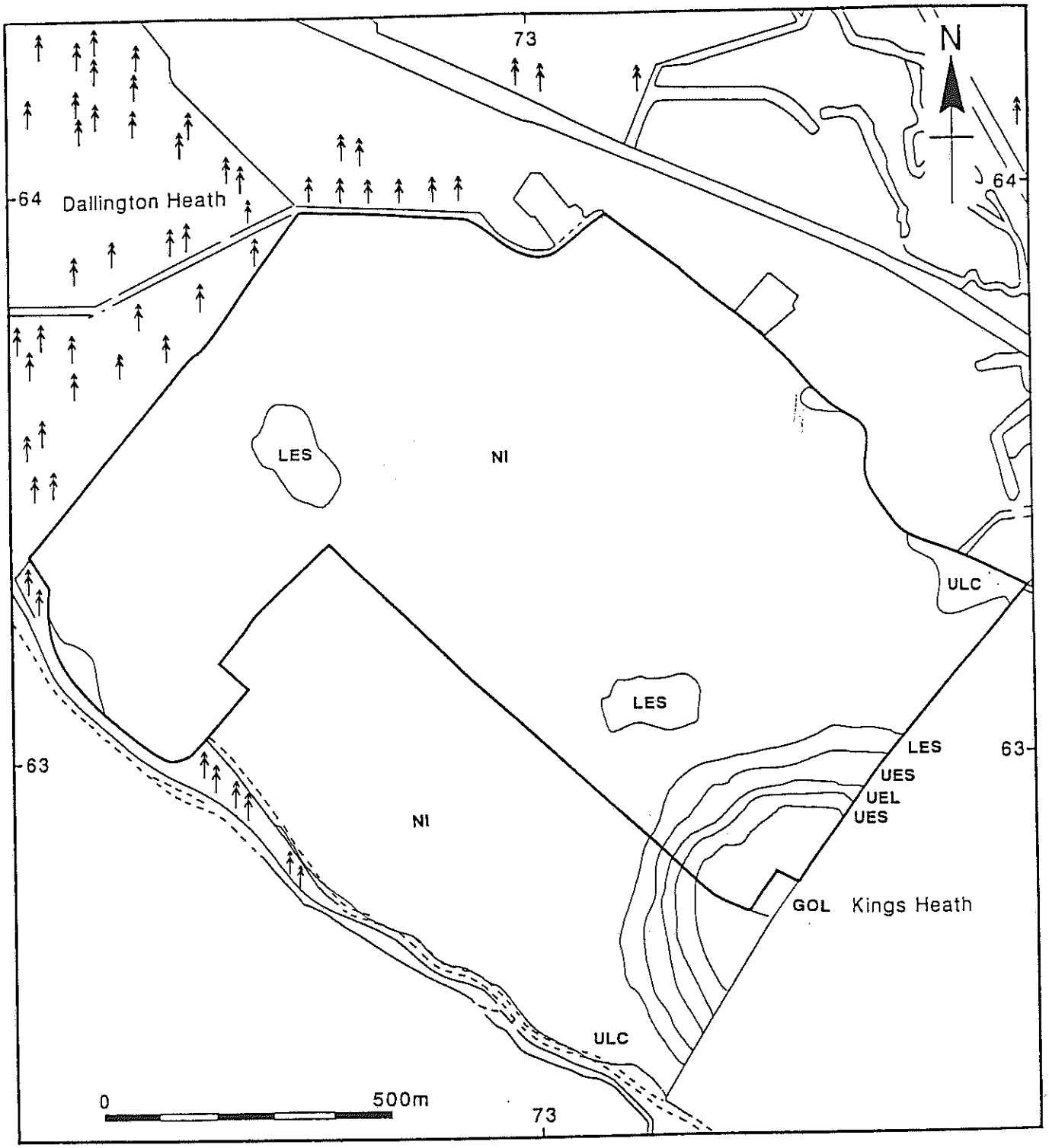
Mercer R J 1989 'Hambledon Hill, Dorset, England' in C Burgess (ed.) 1989

Pryor F 1989 'Etton, Maxey, Cambridgeshire' in C Burgess (ed.) 1989

Smith I F 1971 'Causewayed Enclosures' in D D A Simpson (ed) 1971 Economy and Settlement in Neolithic and Early Bronze Age Britain and Europe

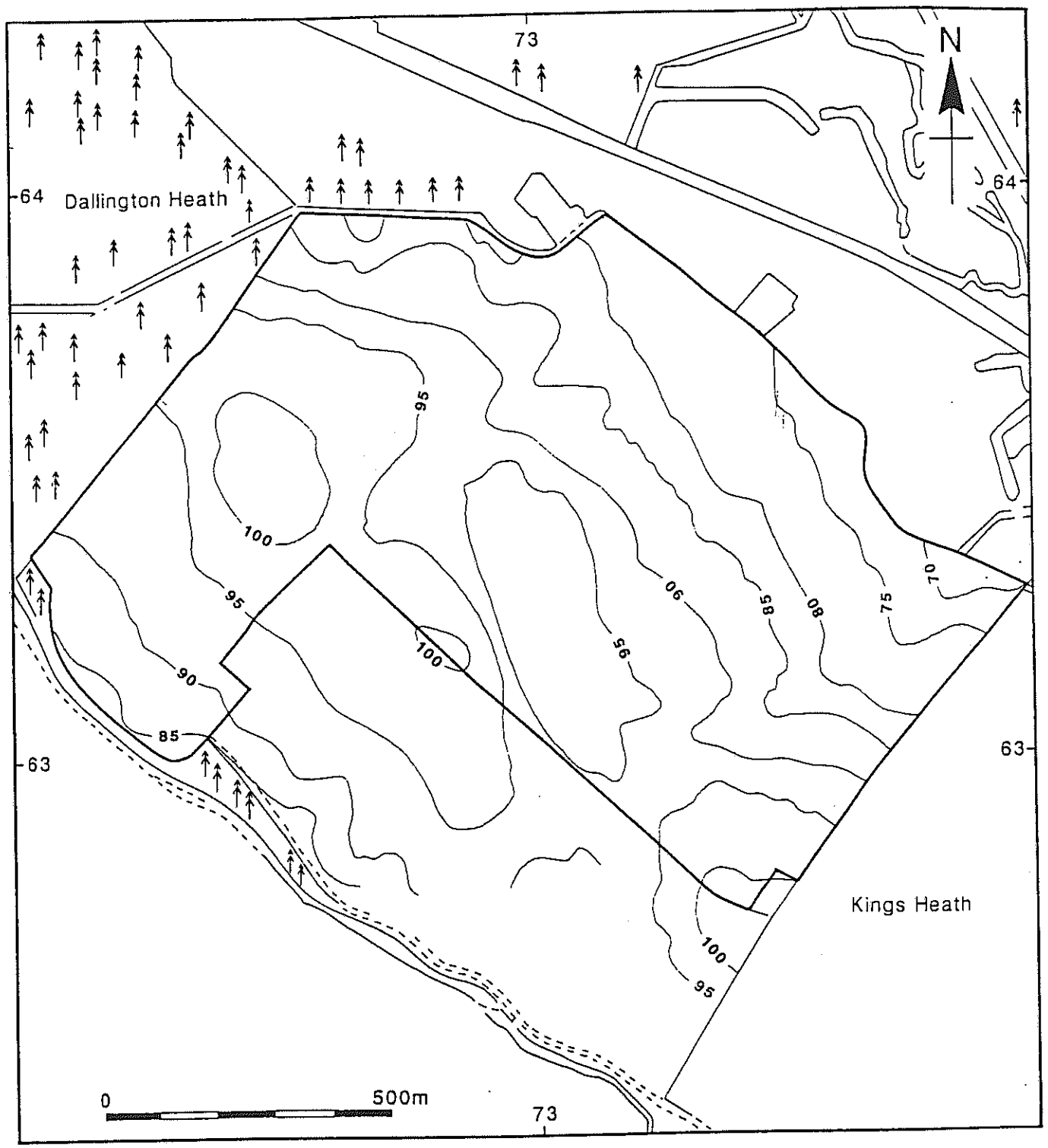
Wheeler R E M 1943 Maiden Castle, Dorset Society of Antiquaries Research Report 12



Geology

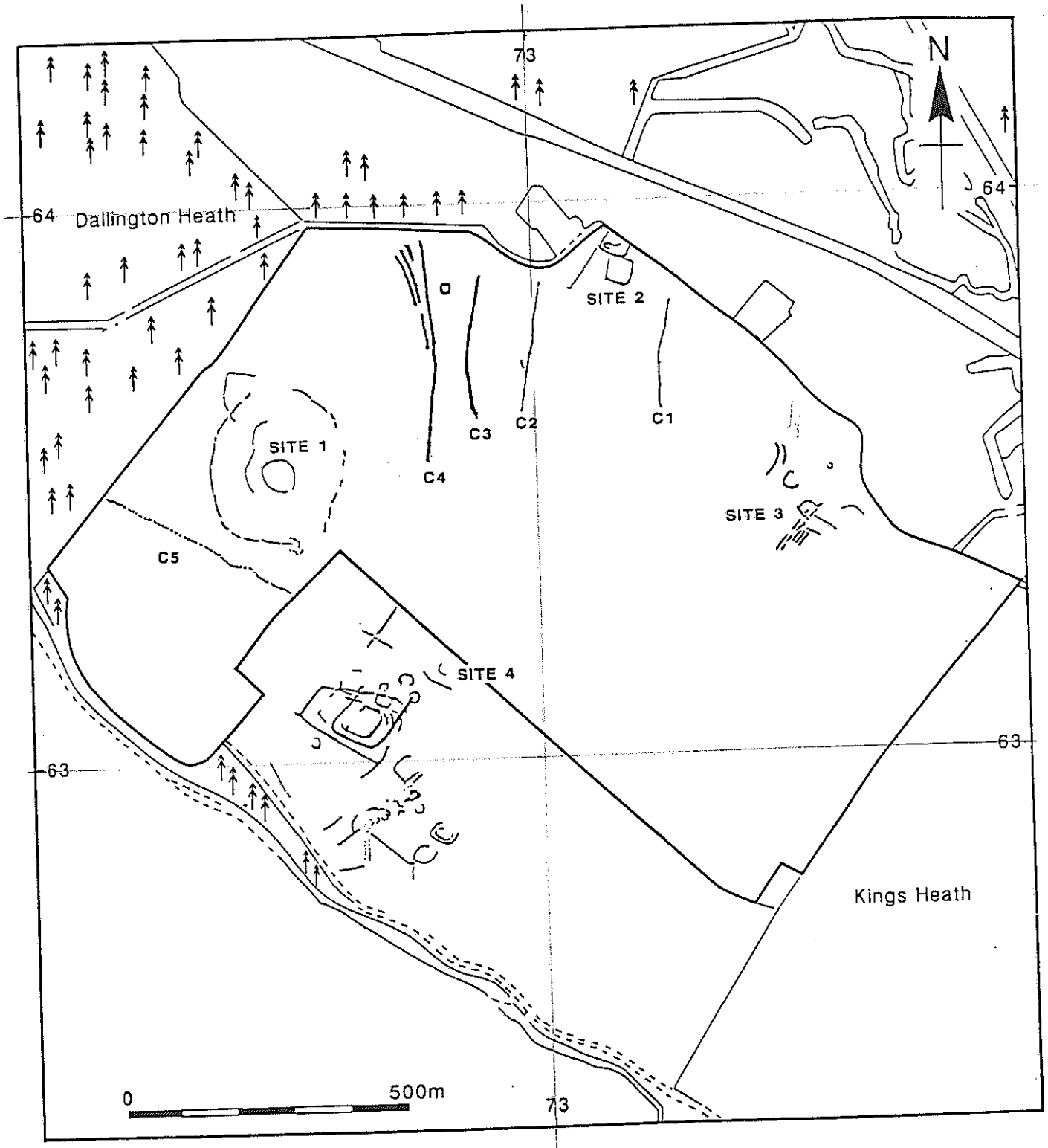
ULC	UPPER LIAS CLAY	UEL	UPPER ESTUARINE LIMESTONE
NI	NORTHAMPTON IRONSTONE	UES	UPPER ESTUARINE SERIES
LES	LOWER ESTUARINE SERIES	GOL	GREAT OOLITE LIMESTONE

Figure 1



Topography

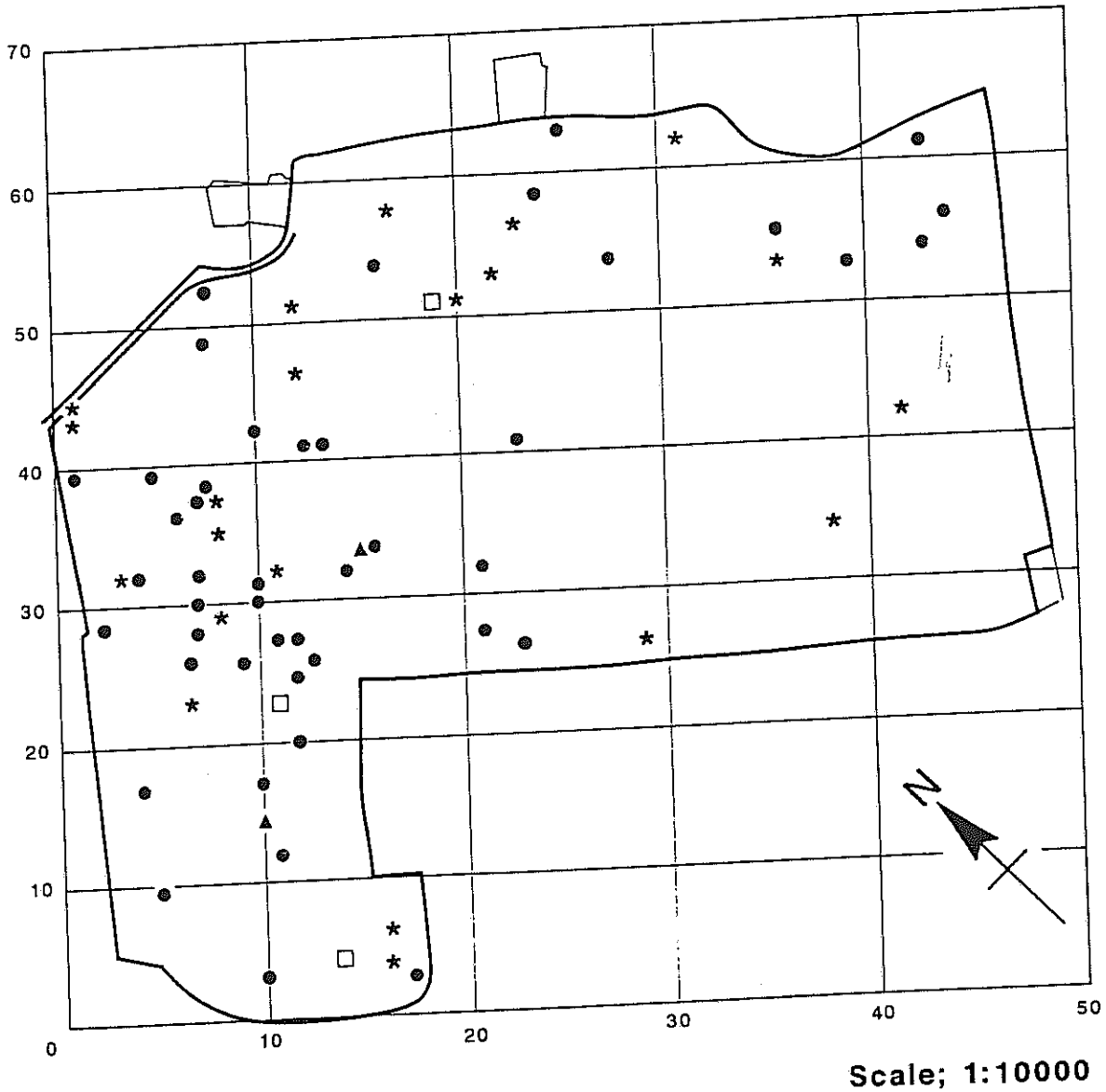
Figure 2



Cropmarks

Figure 3

Fieldwalking: Prehistoric flint tools



Scale; 1:10000

* FLINT CORES

● SCRAPERS

▲ TANGED ARROWHEAD

▲ LEAF SHAPED ARROWHEAD

● FLINT BLADES

□ POLISHED FLINT AXE FRAGMENT

Figure 4

Fieldwalking: Prehistoric flint flakes

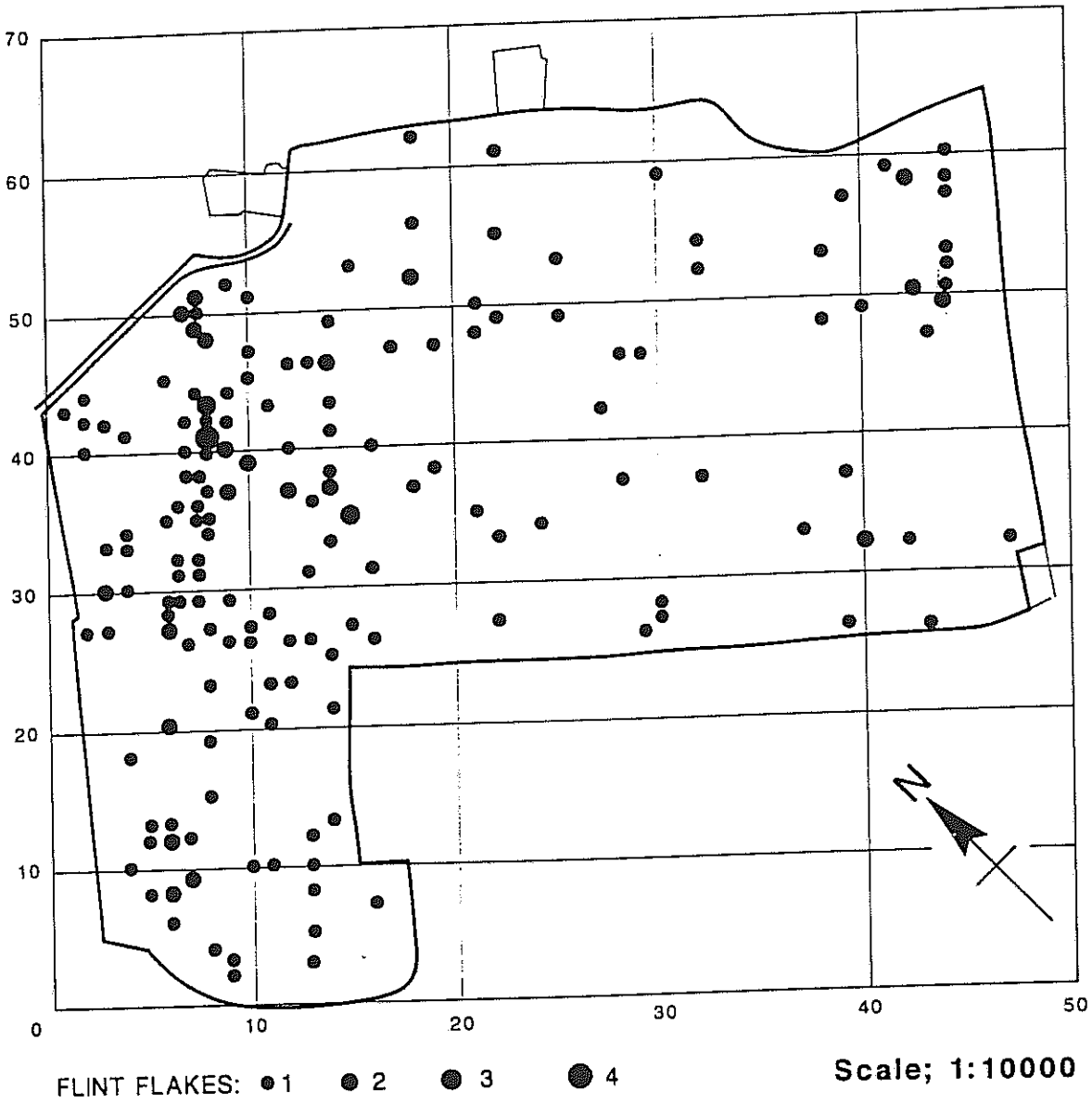
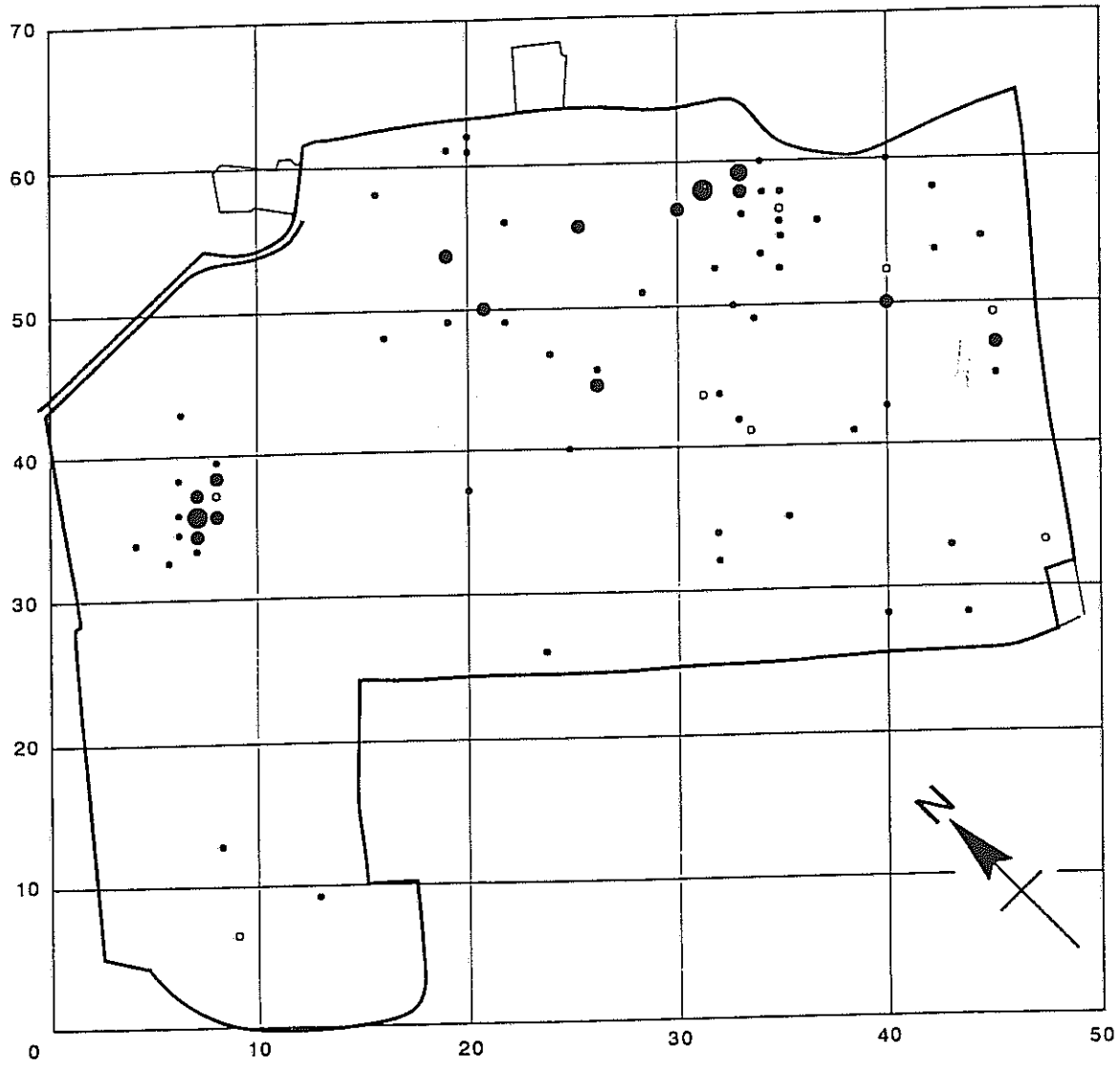


Figure 5

Fieldwalking: Pottery



Scale; 1:10000

IRON AGE: ▫ 1 (No. of sherds)

ROMAN: • 1 ● 2 ● 3 ● 4

SAXON: • 1 ● 2 ● 5

Figure 6

KING'S HEATH

LOCATION PLAN

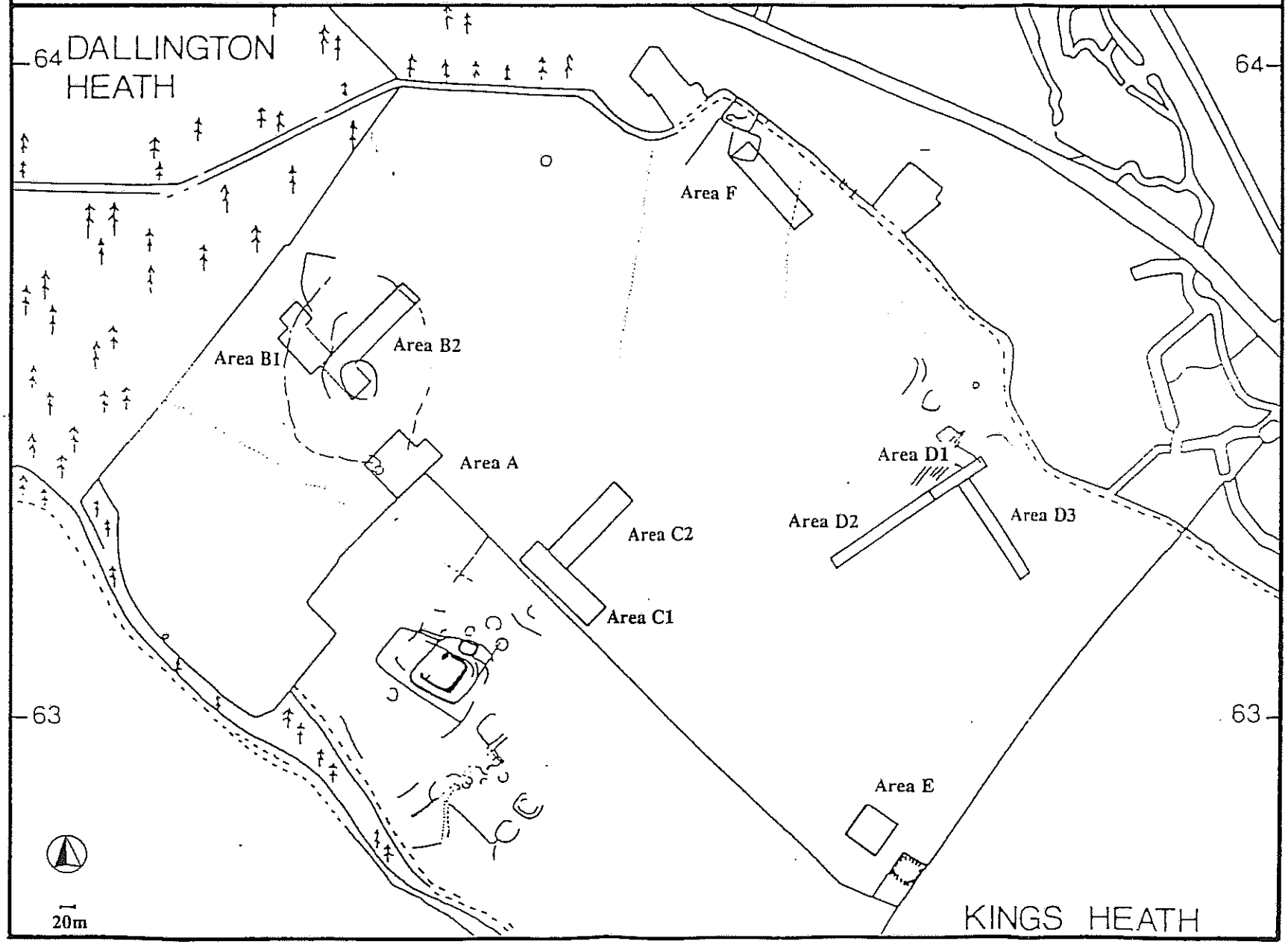
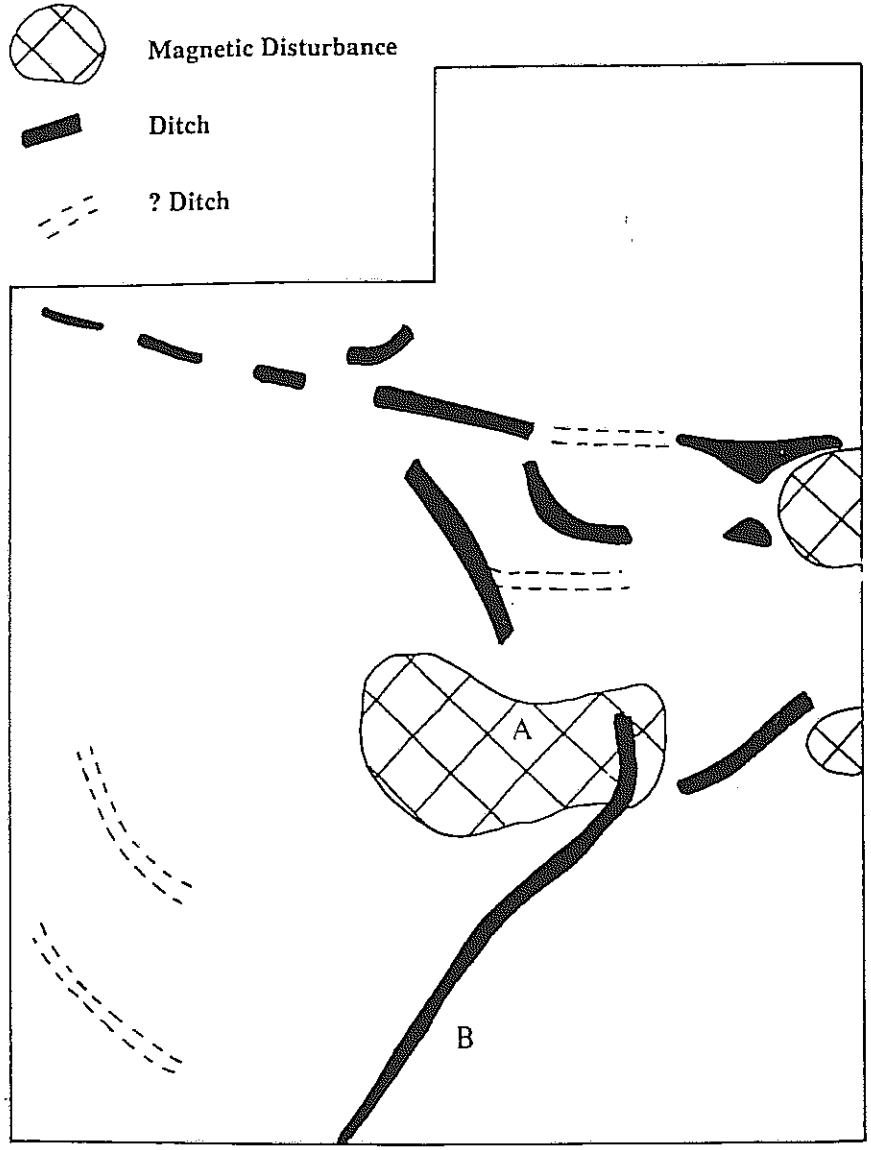


Figure 7

KING'S HEATH

Interpretation



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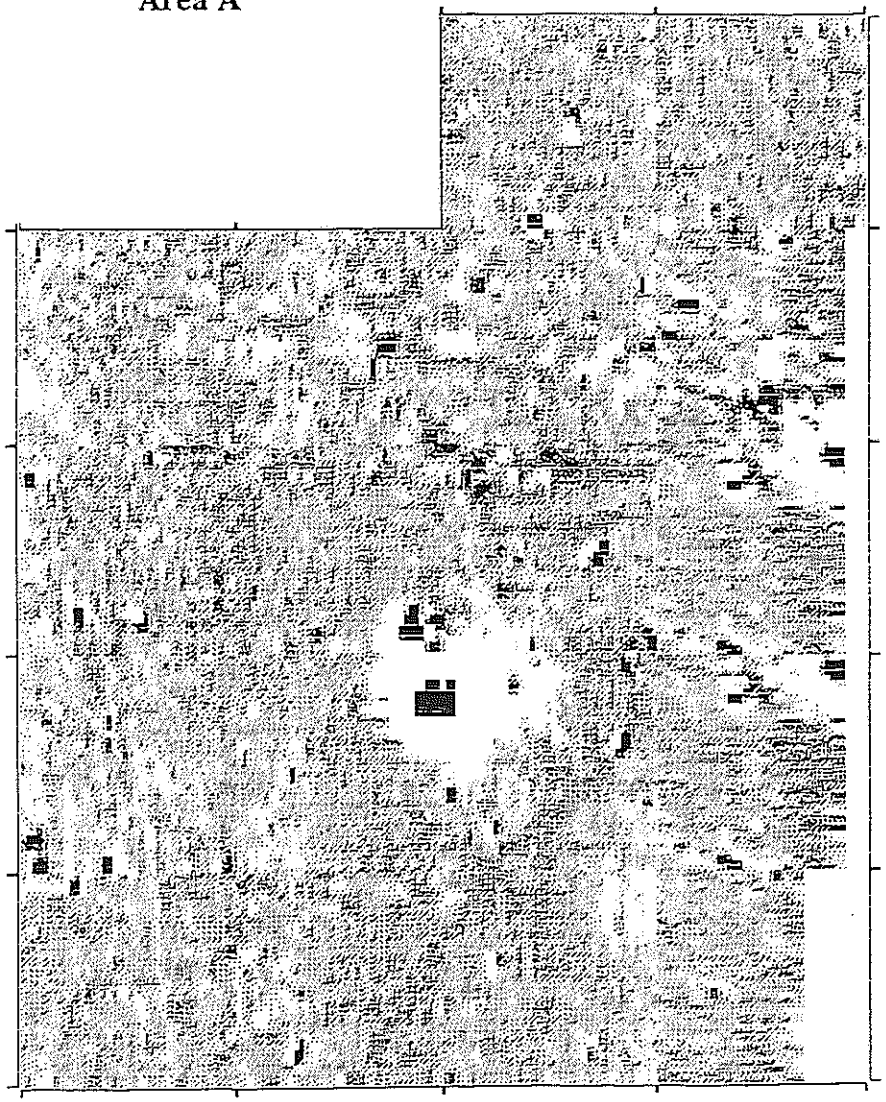
Area A



Range: -1 to 3 nT

Figure 8

KING'S HEATH

Area B

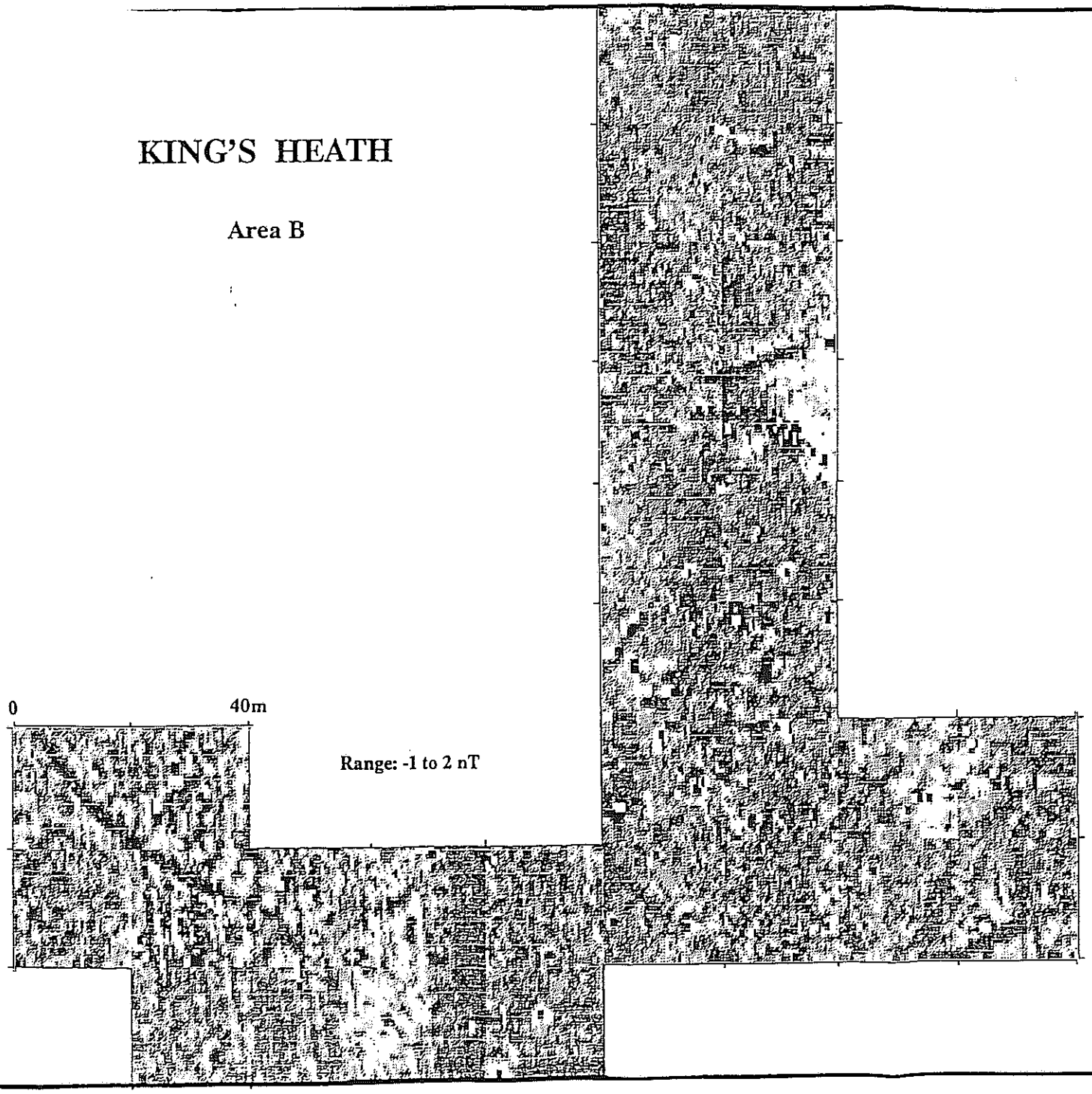


Figure 9

KING'S HEATH

Area B

Interpretation

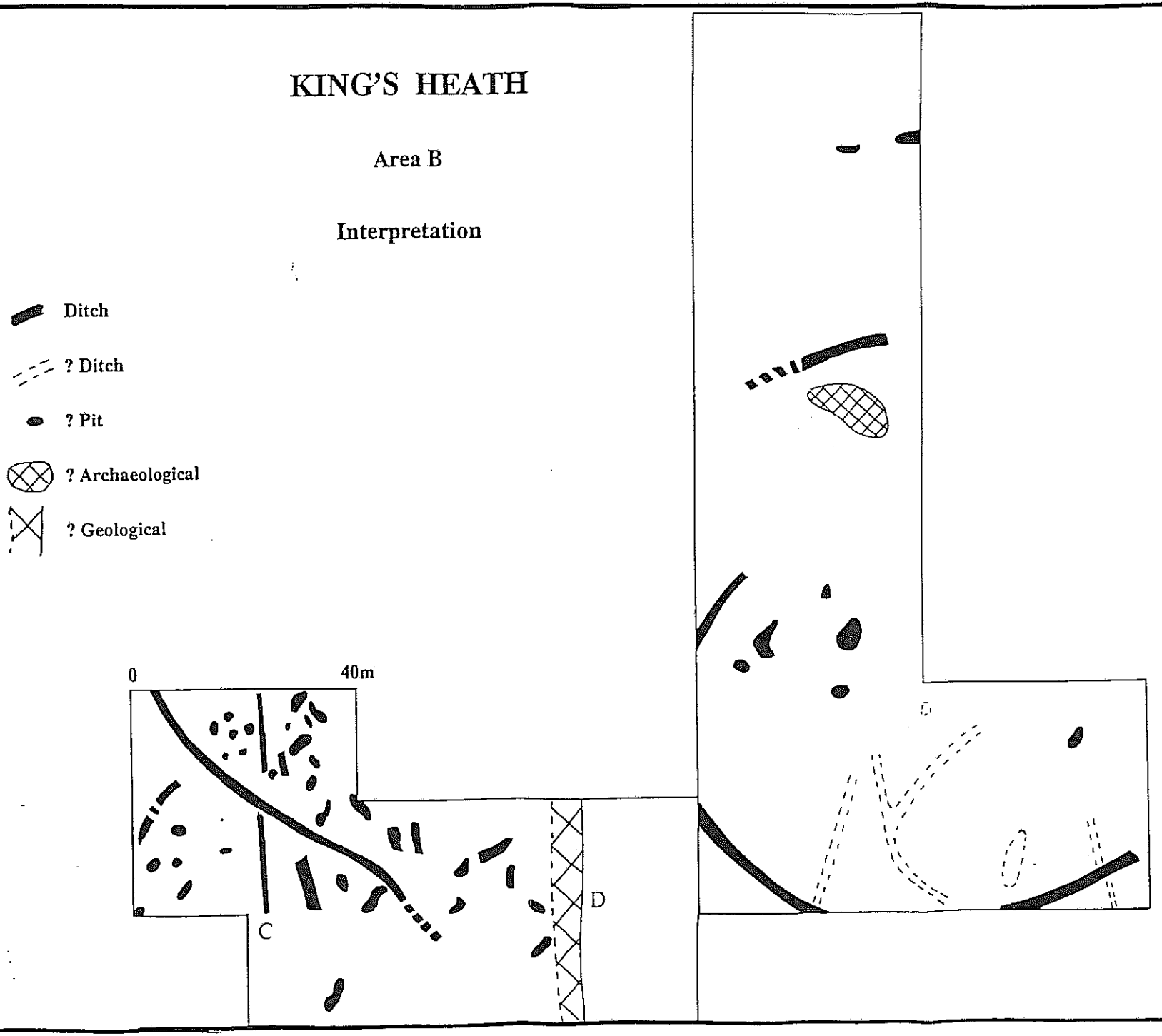
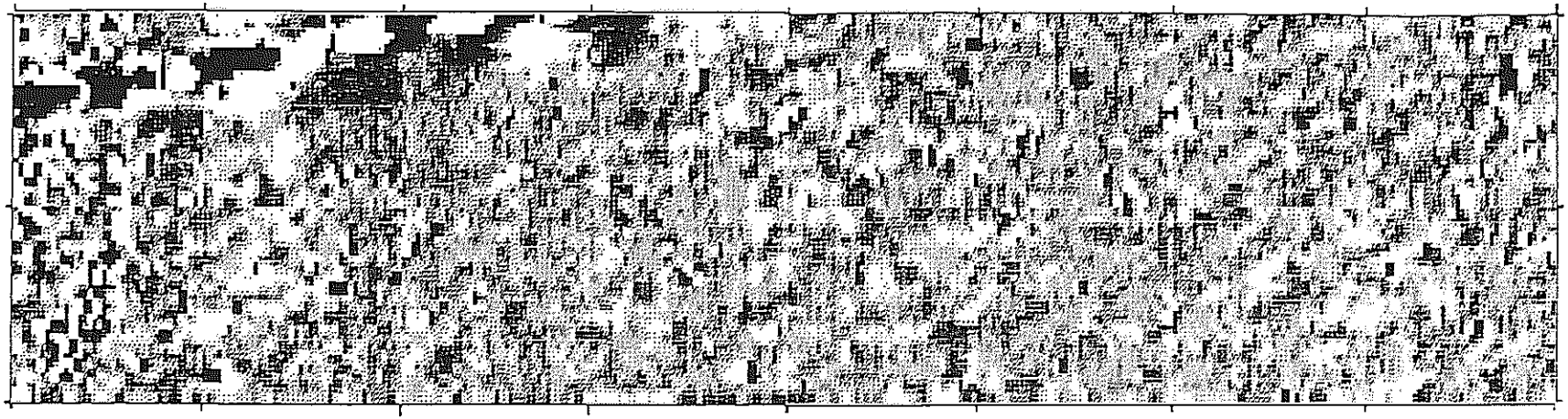


Figure 10

KING'S HEATH

Area F



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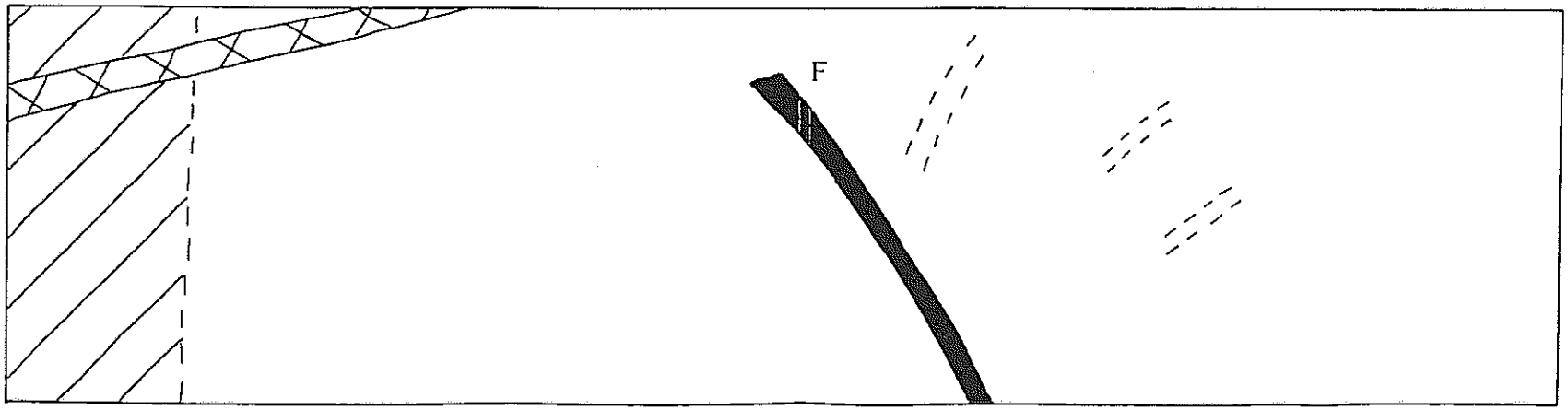

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Interpretation

- Pipe
- Area of Disturbance
- ? Ditch / Pits
- ? Ditch

Figure 11

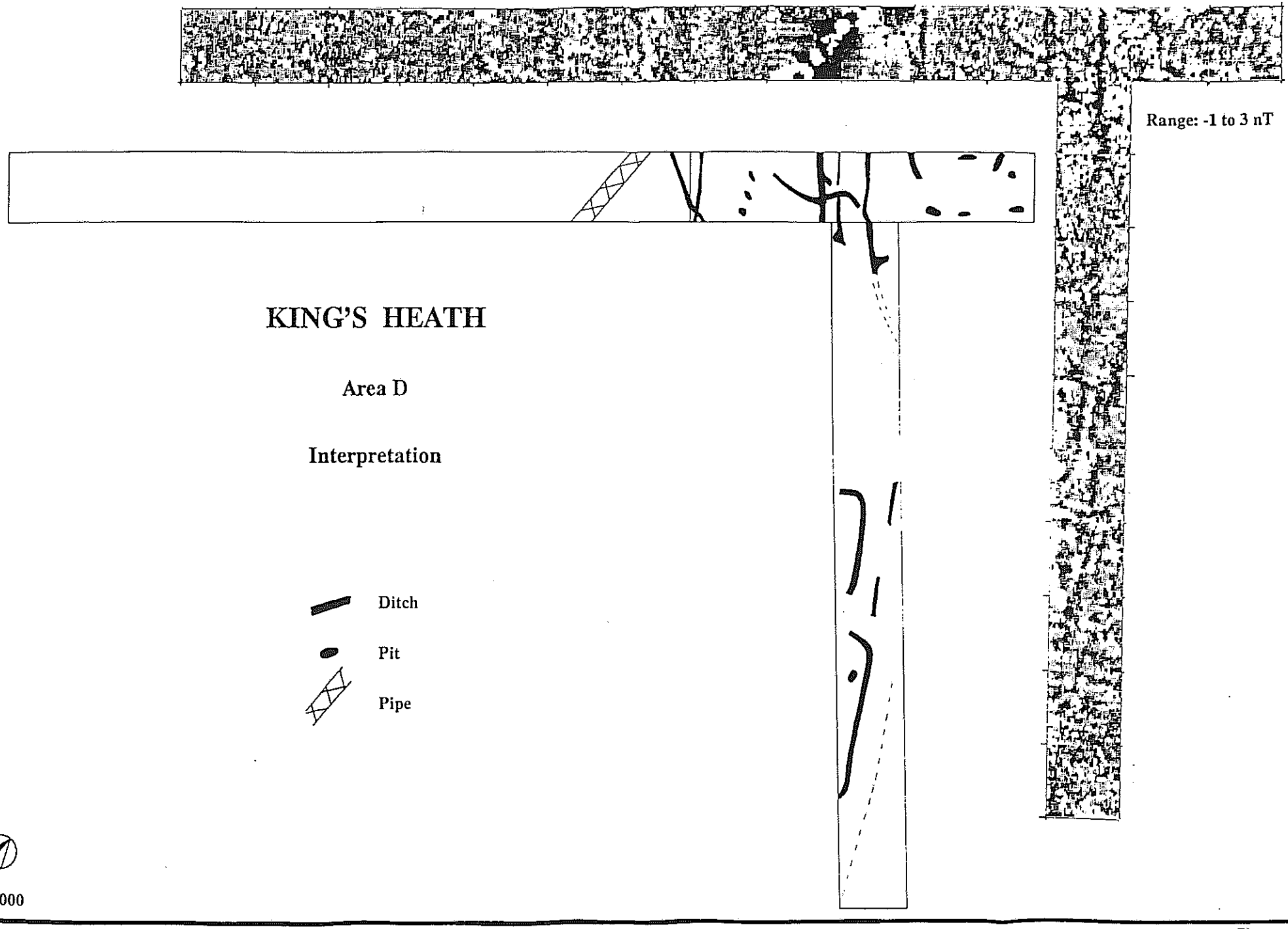
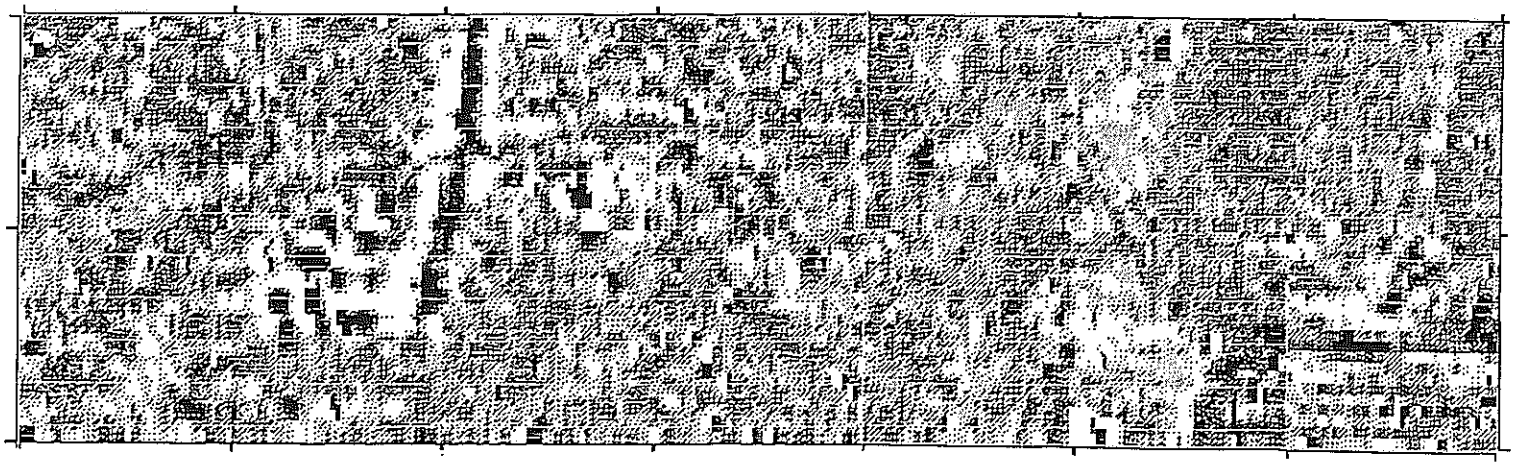

Range: -1 to 3 nT
KING'S HEATH
Area D
Interpretation
Ditch
Pit
Pipe
1:1000

Figure 12

KINGS HEATH

Area C1



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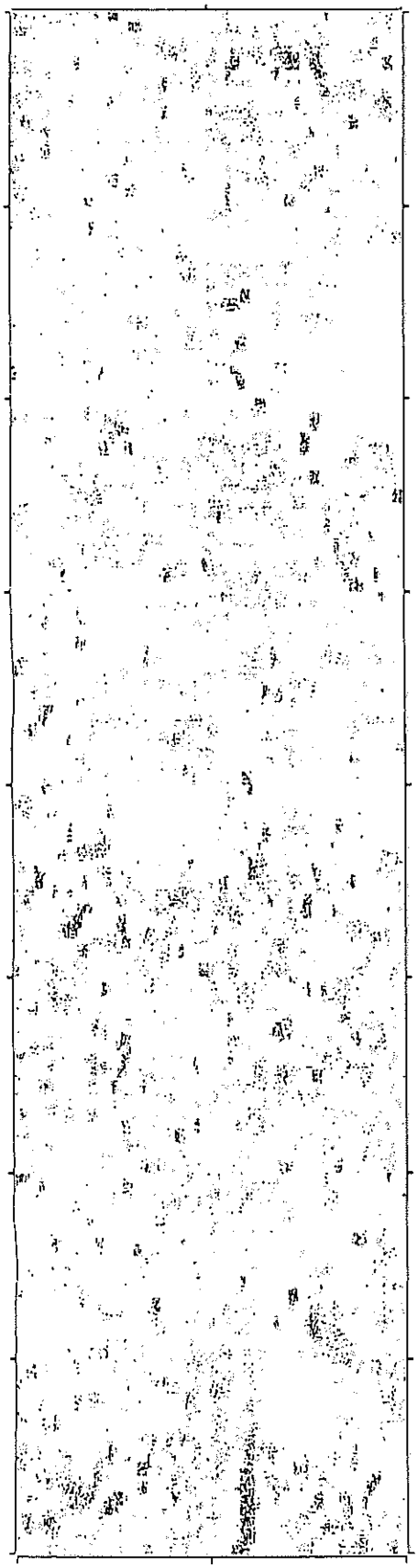
KING'S HEATH

Area C2



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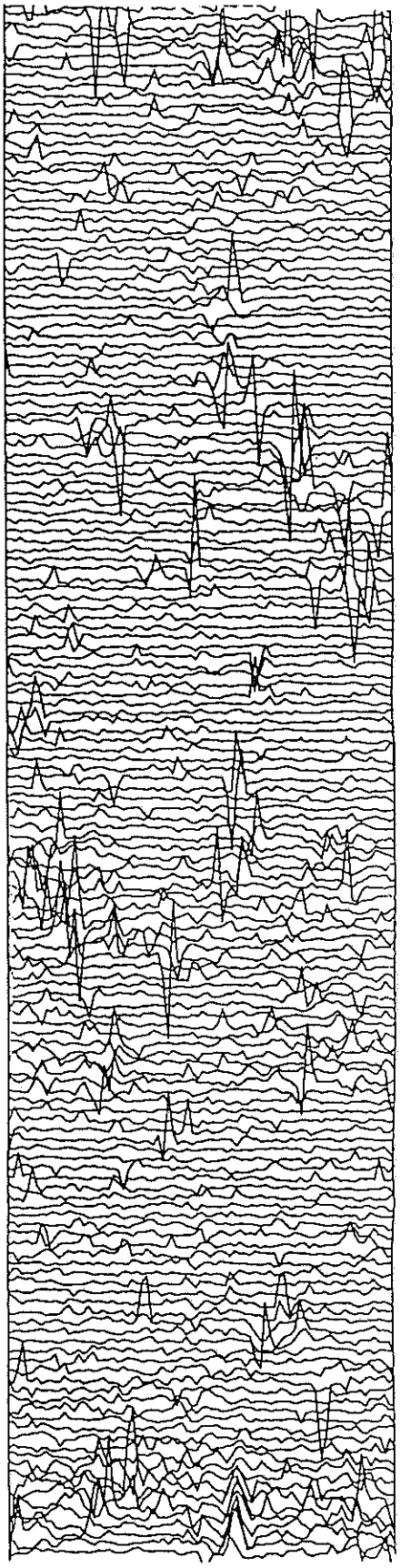

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KING'S HEATH

Area C

Interpretation

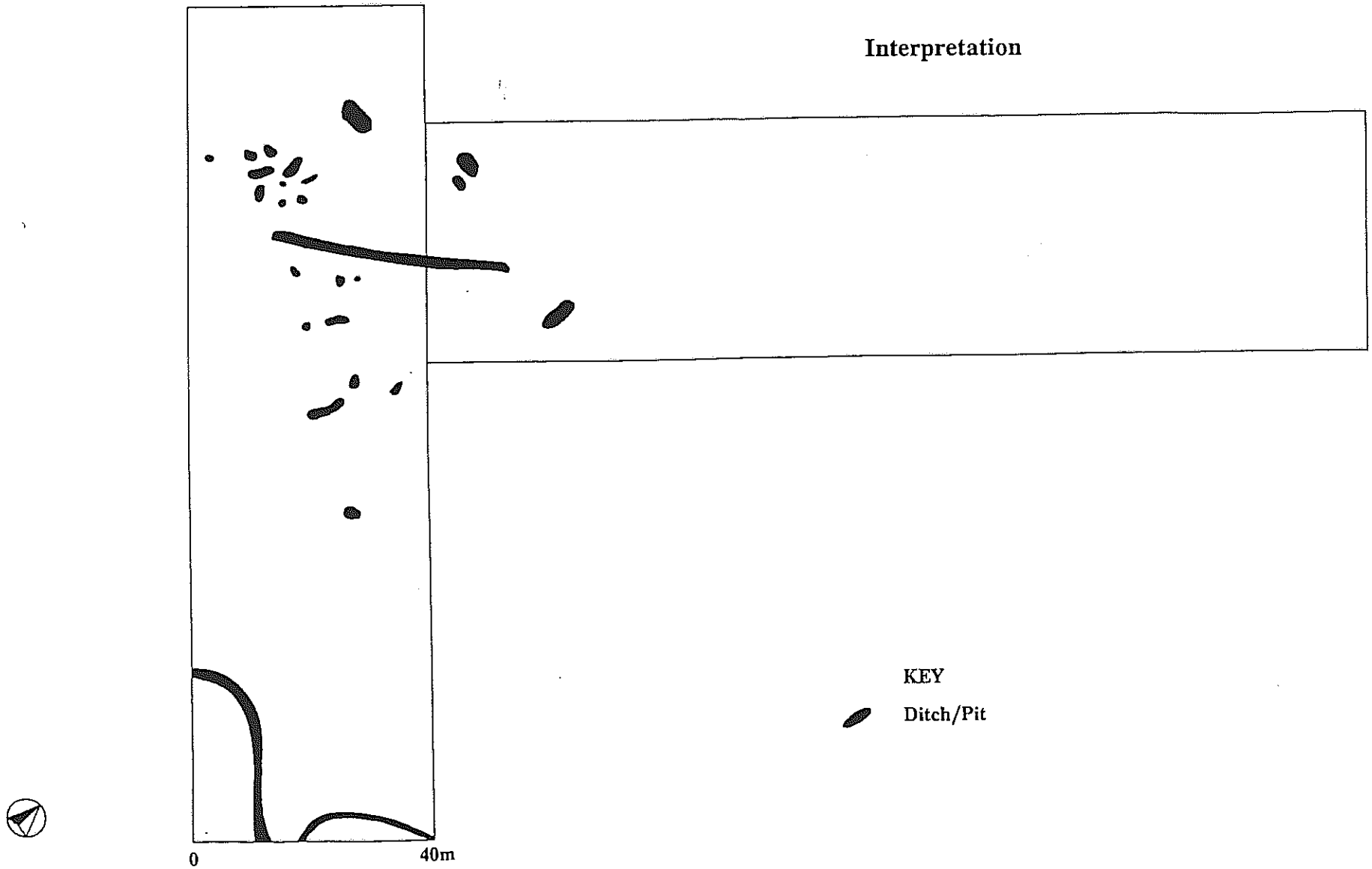
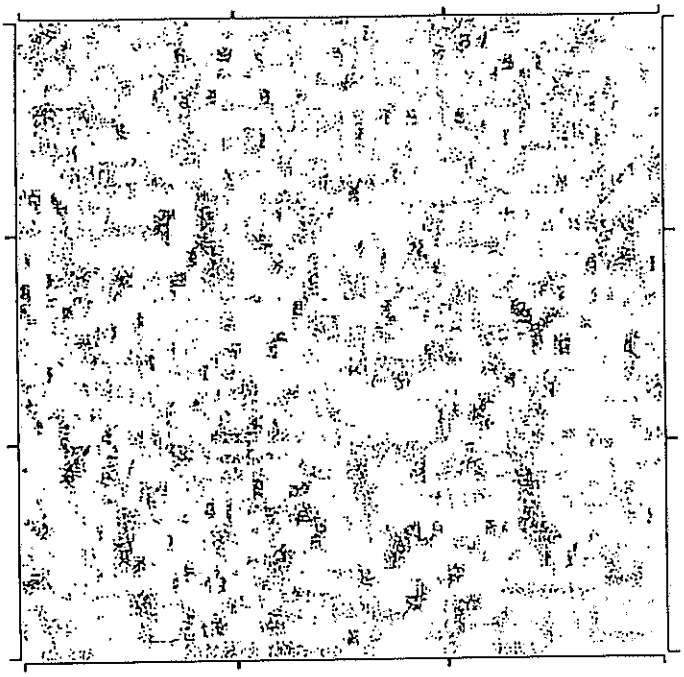


Figure 15

KING'S HEATH

Area E



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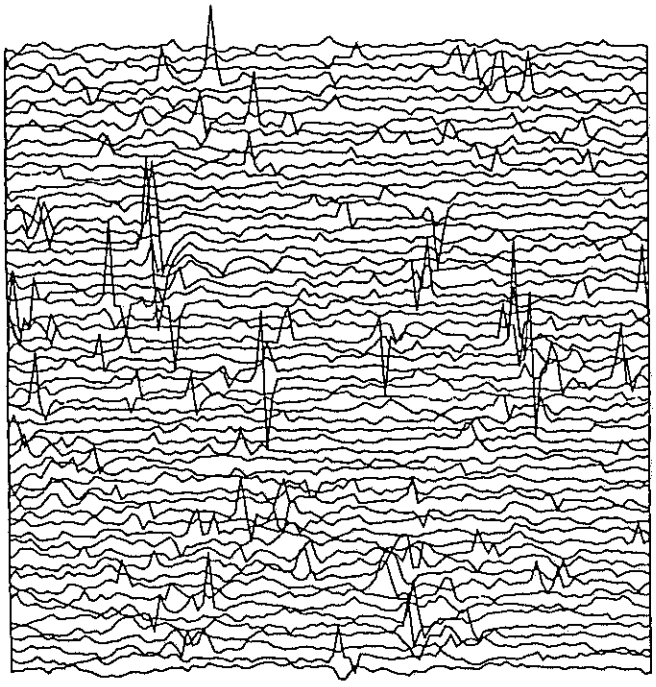

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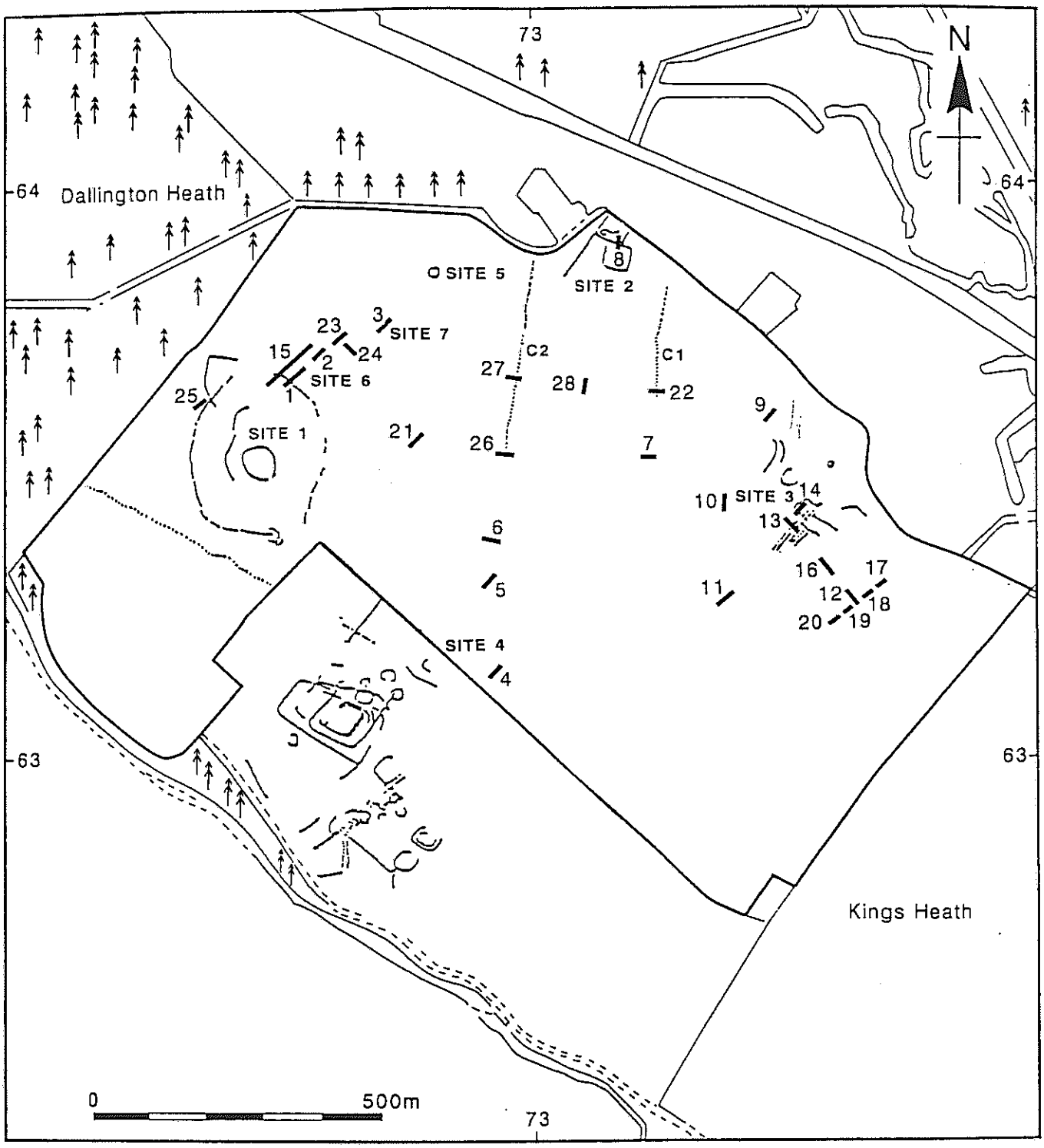
Figure 16



Trench locations

Figure 17

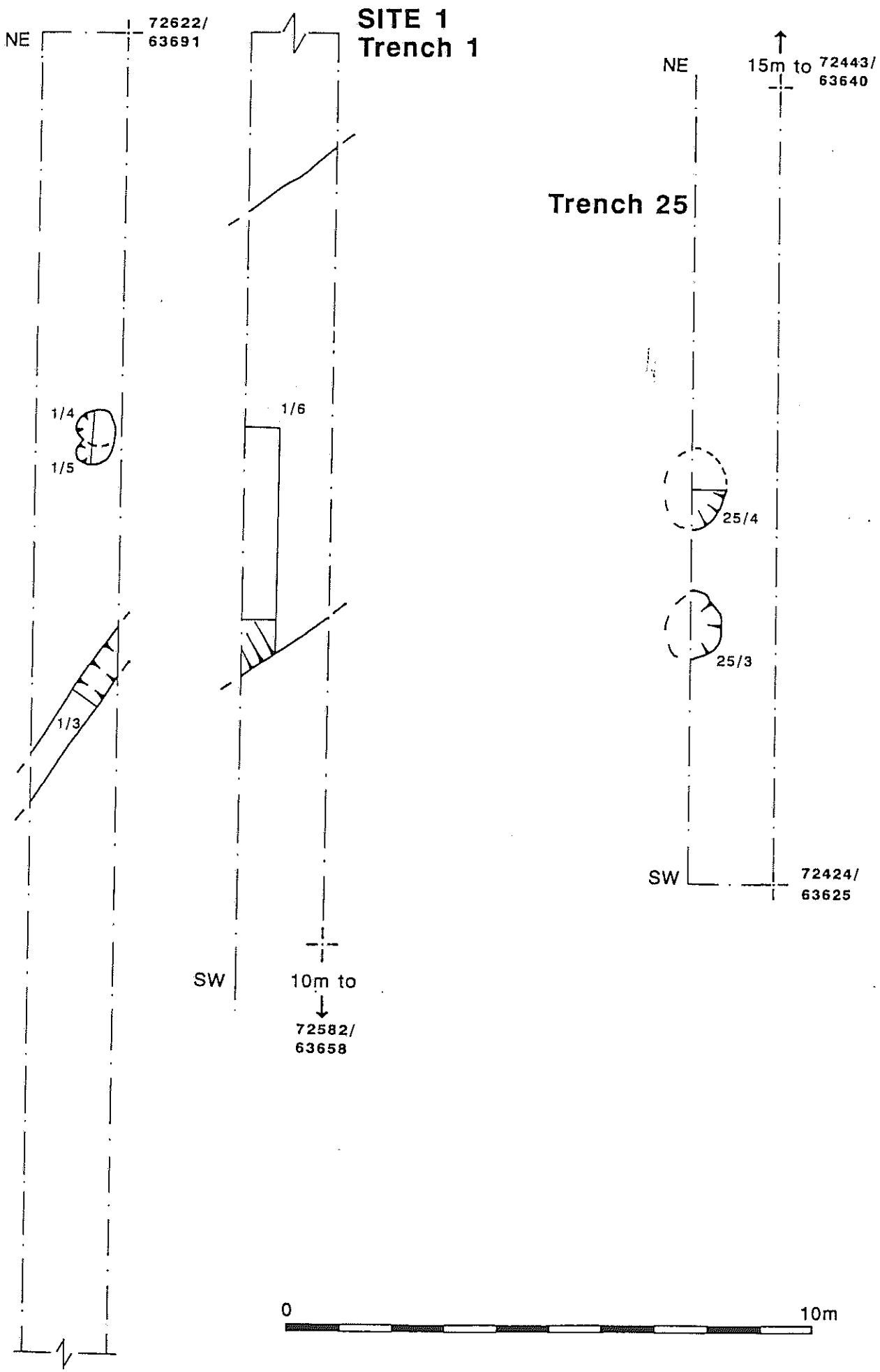

SITE 1
Trench 1
NE
72622/
63691
1/4
1/5
1/3
1/6
SW
10m to
72582/
63658
Trench 25
NE
15m to 72443/
63640
25/4
25/3
SW
72424/
63625
0
10m

Figure 18

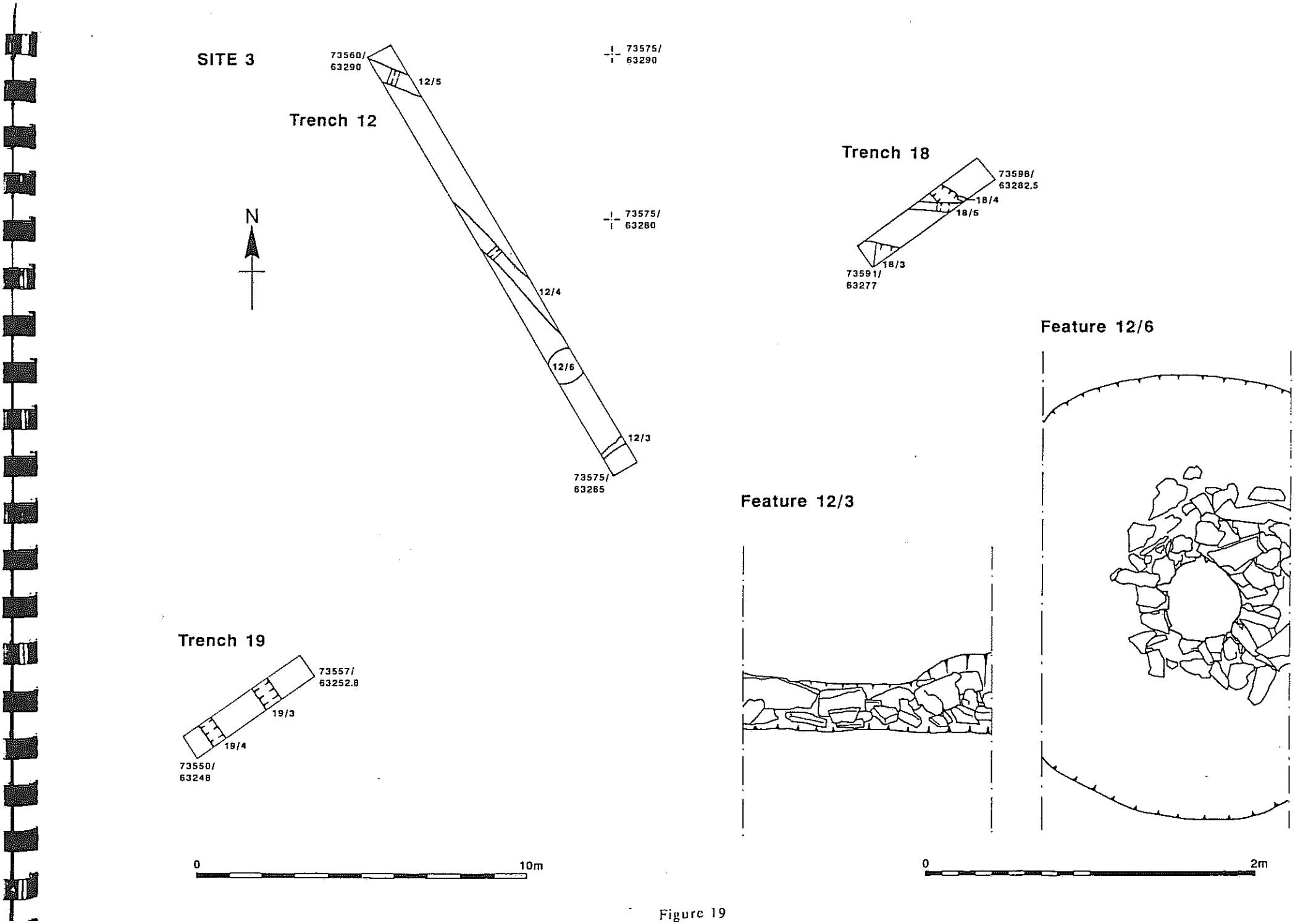

SITE 3
73560/
63290
12/5
73575/
63290
Trench 12
N
73575/
63280
12/4
12/6
12/3
73575/
63265
Trench 18
73598/
63282.5
18/4
18/5
18/3
73591/
63277
Feature 12/6
Feature 12/3
Trench 19
73557/
63252.8
19/3
19/4
73550/
63248
0
10m
0
2m

Figure 19

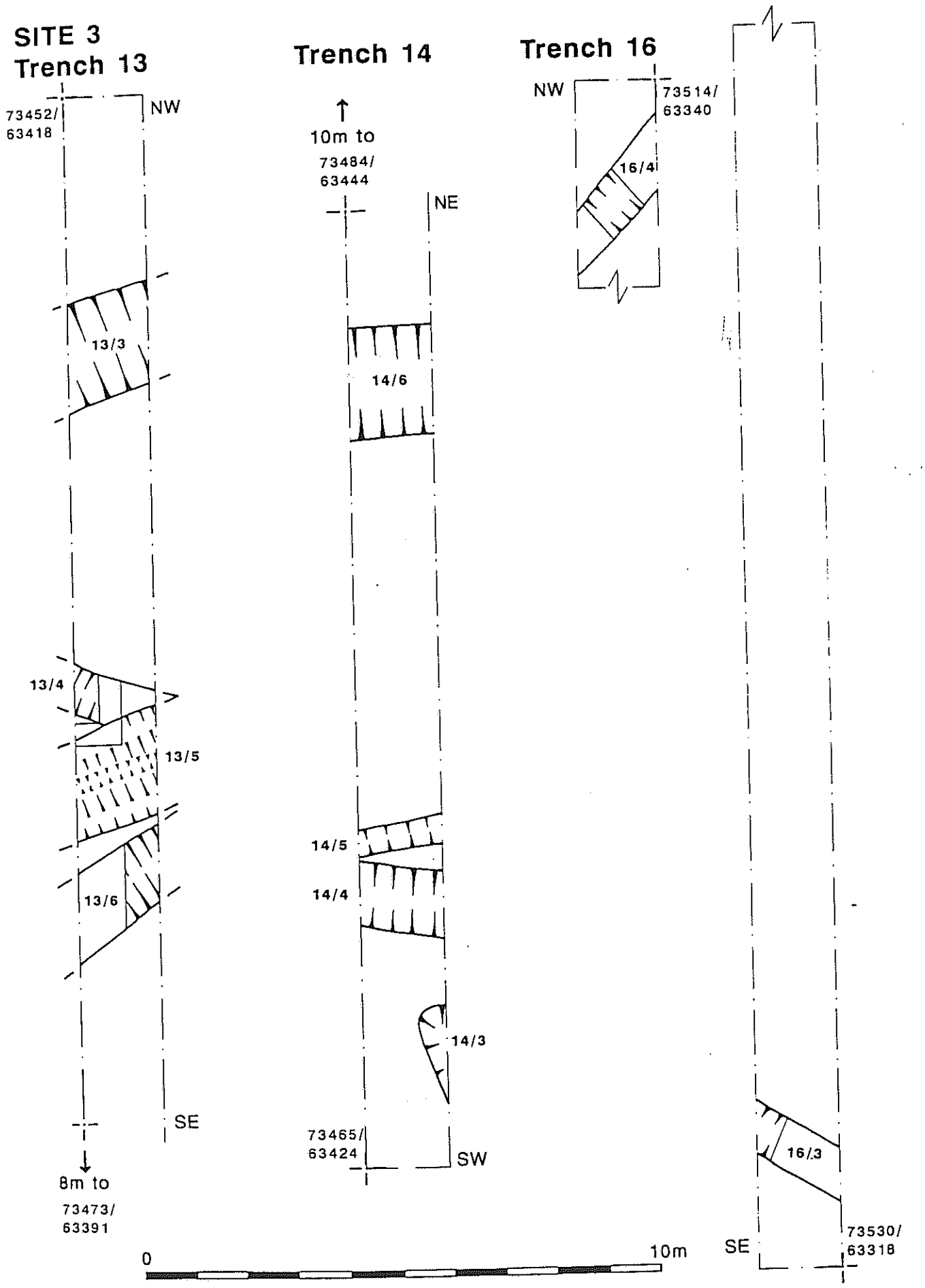

SITE 3
Trench 13
73452/
63418
NW
13/3
13/4
13/5
13/6
SE
8m to
73473/
63391
Trench 14
10m to
73484/
63444
NE
14/6
14/5
14/4
14/3
73465/
63424
SW
Trench 16
NW
73514/
63340
16/4
16/3
73530/
63318
SE
0
10m

Figure 20

SITE 4
Trench 4

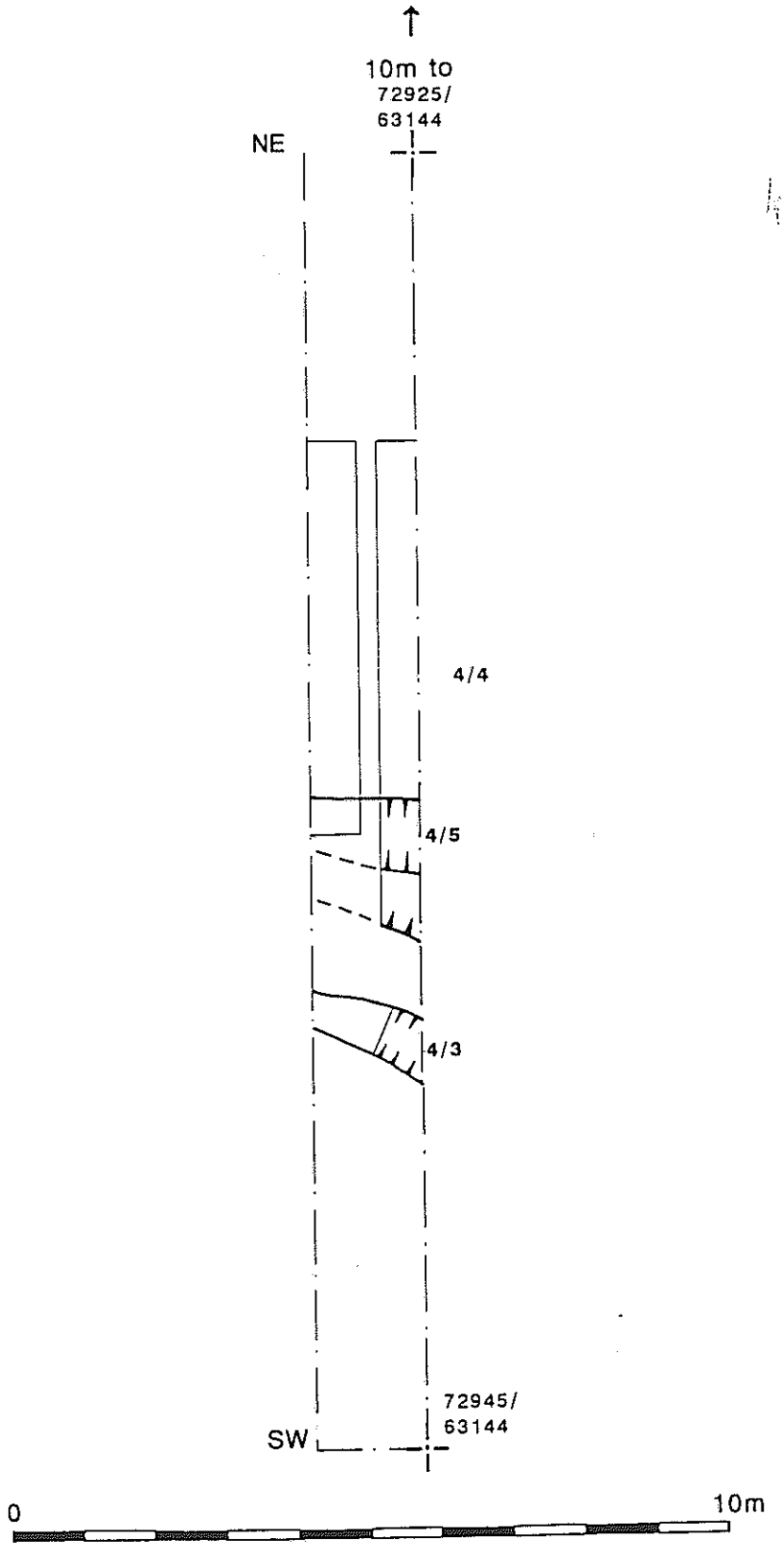


Figure 21

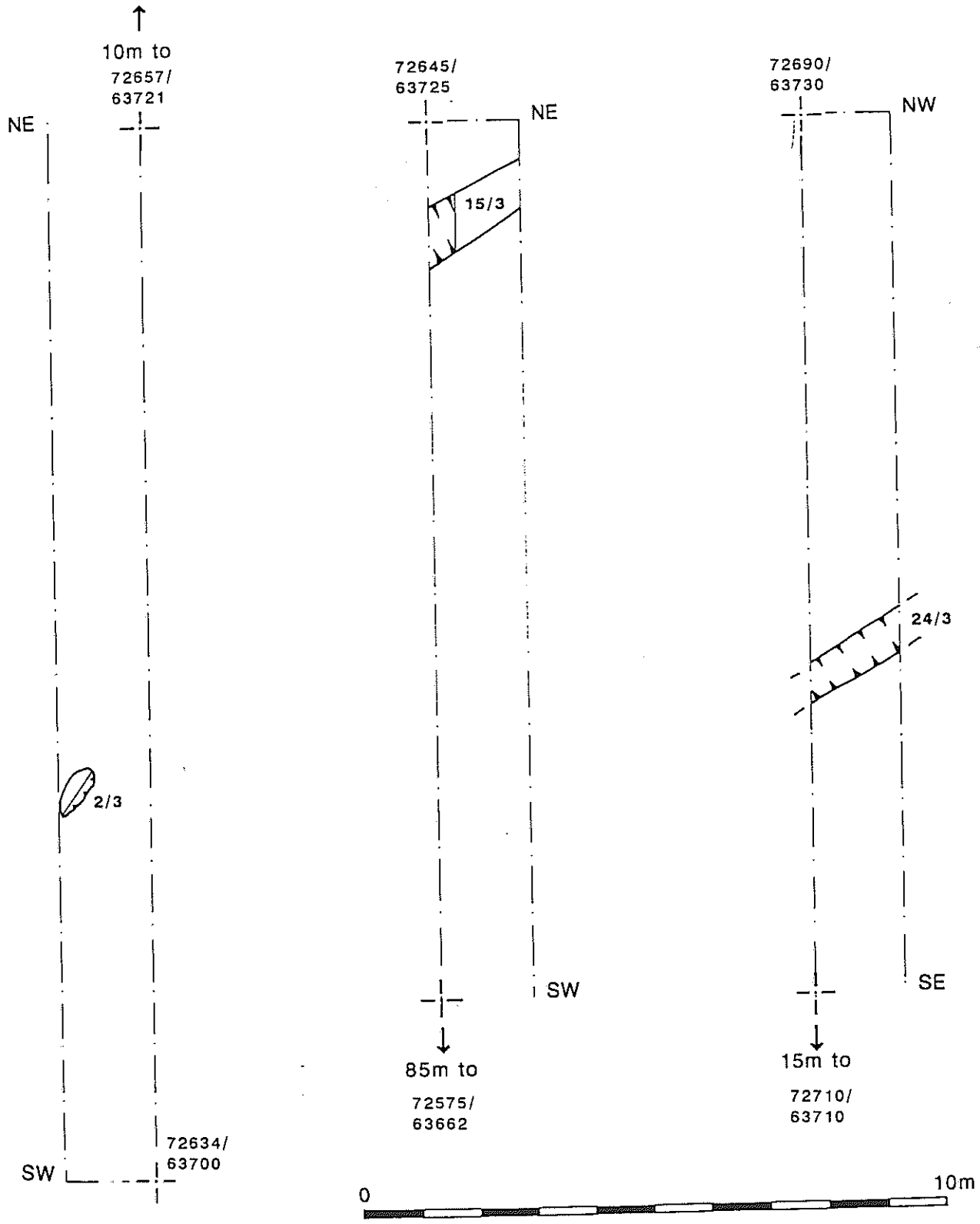

SITE 6
Trench 2
Trench 15
Trench 24
10m to
72657/
63721
NE
2/3
SW
72634/
63700
72645/
63725
NE
15/3
SW
85m to
72575/
63662
72690/
63730
NW
24/3
SE
15m to
72710/
63710
0
10m

Figure 22

Cropmark 2 (C2)
Trench 27

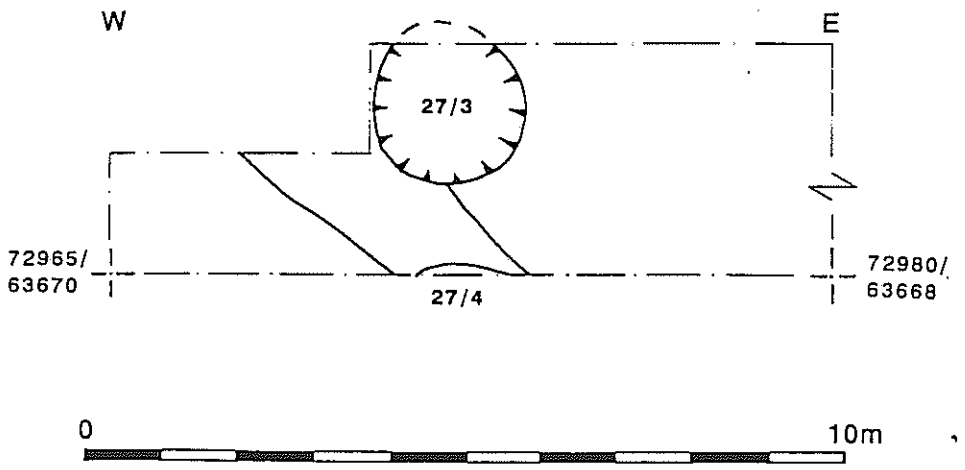
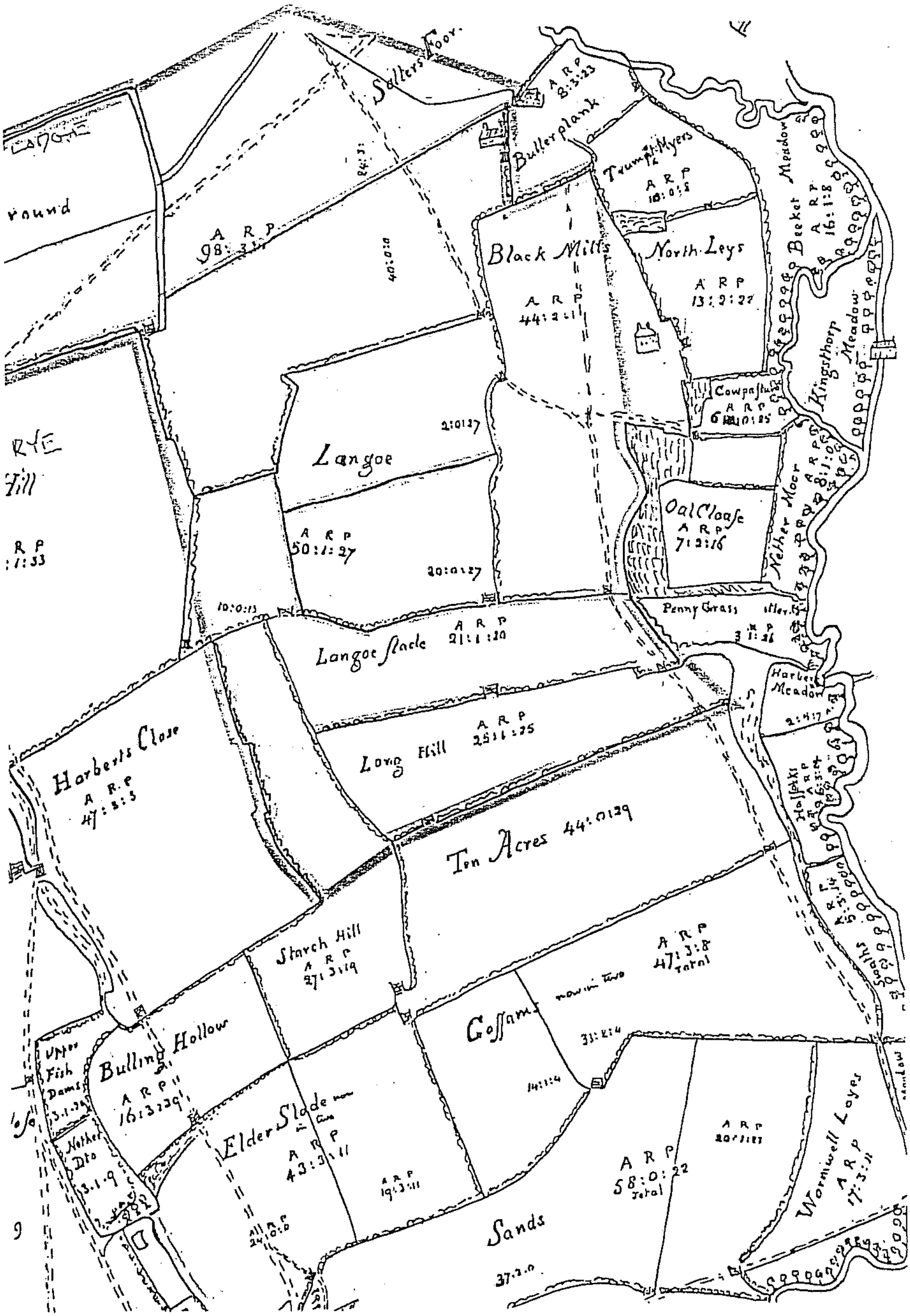
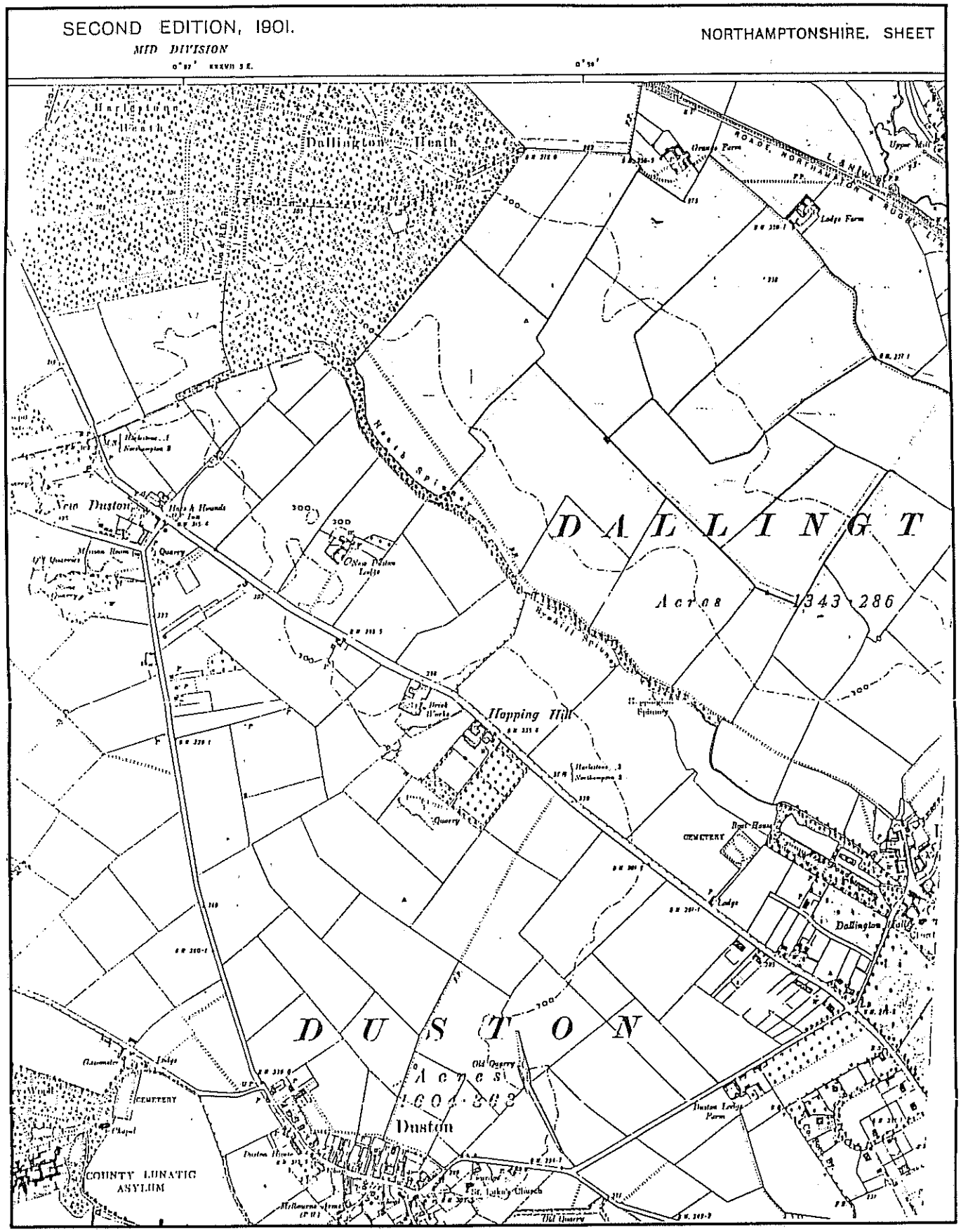


Figure 23

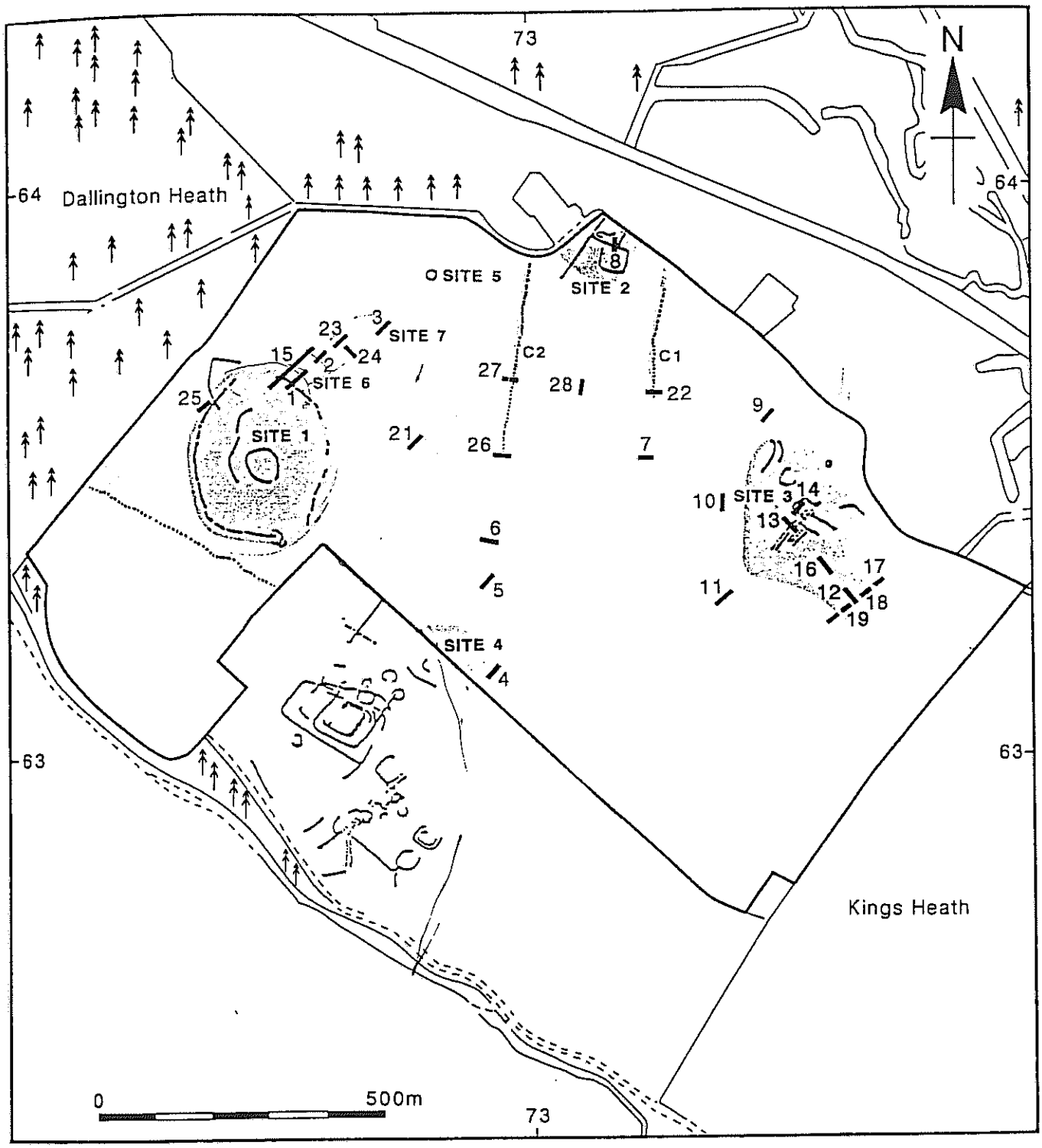


Bullerplank
Black Mills
North Leys
Cowpasture
Langoe
Oal Cloase
Nether Moor
Penny Grass
Langoe Slade
Long Hill
Harberts Close
Ten Acres
Starch Hill
Bulling Hollow
Upper Fish Dams
Nether Dto
Elder Slade
Sands
Wormwell Layes
Kingsthorp Meadow

Figure 24



Field boundaries the same as on a map of c.1662 (fig. 24)



Interpretative plan of archaeological results

THE CAUSEWAYED ENCLOSURE, SITE 1

AREAS OF ARCHAEOLOGICAL INTEREST

AREA OF EXTENSIVE MODERN DISTURBANCE

Figure 26

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