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Ancient Monuments Laboratory
Report 77/91

BLAGDEN COPSE, HURSTBOURNE TARRANT, HANTS. REPORT ON GEOPHYSICAL SURVEY , AUGUST 1990.

Andy Payne

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Summary

The purpose of this geophysical survey of a small Iron Age earthwork complex in Hampshire was to provide supplementary evidence to that obtained by topographic survey and limited excavation. The site is being assessed as part of the Danebury Environs Project. In the event, owing to vegetation cover, and the magnetic response from other parts of the site was interrupted by recent disturbance. Some features were detected, however, confirming both the lay-out of the main earthwork enclosure and that this does not contain evidence for entensive settlement. Some evidence for later cultivation was also tentatively identified.

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BLAGDEN COPSE, HURSTBOURNE TARRANT, HANTS

Report on Geophysical Survey, August 1990.

INTRODUCTION

A magnetometer survey was carried out in August 1990 at Blagden Copse, Hampshire - an area of woodland containing various earthworks thought to date from the Middle Iron Age. The work focused on attempting to define the density and extent of occupation associated with the rectangular enclosure at SU 3635 5250, thereby contributing to a detailed assessment of the monument then being undertaken by the Danebury Trust. An attempt was also made to trace the course and extent of subsidiary earthworks in the vicinity of the enclosure. Excavations at the site by the Andover Archaeological Society in 1987 had revealed no signs of intensive settlement although a large pit, over 2 m deep, was discovered in the NE part of the enclosure. The pit's filling included a horse skull, found at its base, suggesting a possible ceremonial fuction for this feature and the enclosure.

The site overlies chalk capped by clay-with-flint.

METHOD

i) Recorded survey

Conditions at the site only allowed detailed recorded survey to be attempted over about two thirds of the interior of the enclosure. The most accessible area for uninterrupted coverage was the SW part of the site, of about 0.5 hectare, marked Area (iii) on plot 1. Rather more disjointed coverage was possible over the eastern end of the monument (Areas (i) and (ii), plot 1).

The survey was based on a 30m grid. The data was recorded along 30m traverses, orientated approximately N-S, and spaced at 1.0m intervals. A Geoscan FM36 fluxgate gradiometer was used to record readings of the vertical magnetic field gradient (at 0.1nT sensitivity) at 0.25m intervals along each traverse. The resulting data is displayed on plots 2 & 3 in the form of grey-tone and trace plots. The data has been mathematically treated to remove the effects of random 'noise'.

ii) scanning

Recorded survey had to be ruled out over large sections of the site due to dense undergrowth and disturbance caused by the excavation trenches and spoil heaps left after the AAS investigations. Vegetation cover also effectively ruled out any attempt at tracing the course of subsidiary earthworks by intensive survey.

An alternative was to resort to scanning the woodland around the enclosure. This technique simply involves the use of the magnetometer in a rapid search for archaeological anomalies, relying on the operator's concurrent assessment of the signal output, rather than on any detailed and formal stored record.

RESULTS

In agreement with the excavation evidence, the survey has revealed no indications of intensive settlement. The clearest anomalies detected are those produced by the enclosure ditch and by features such as former excavation trenches. Lengths of ditch marked A-B, C-D and D-E on plot 1 are clearly visible on the plots. Ditch A-B has been disturbed by a previous excavation trench, indicated by the local presence of reactions to iron debris. Recent disturbance probably also accounts for anomalies in the areas indicated by shading on plot 1. A weak anomaly in Area (i) (plot 1) suggests that the ditch marked F-G extends further in a SE direction, closing the assumed gap in the NW corner of the enclosure depicted on the earthwork plan.

Rather unusually for this type of site, the response over the ditches is negative - a reflection of the fact that the upper fill of the ditches was deliberately infilled with chalk blocks and flint during the Late Iron Age (as evidenced by stratified pottery). Such material filling the ditches would be expected to possess a lower magnetic susceptibility (MS) than the topsoil, and would therefore produce a negative anomaly in relation to background levels. Had the ditches been allowed to silt up naturally, a positive response would be expected, such as that seen in the top NE corner of Area (i) (plot 1).

MS measurements were made on samples of topsoil from within the enclosure and on samples of soil (but excluding stones) obtained from sections across the ditch to either side of the entrance causeway. The resulting readings averaged at 33 x 10^{-8} SI/kg for the topsoil and 42 x 10^{-8} SI/kg for the ditch fill. Despite the slightly greater magnetic enhancement of the matrix of the ditch fill, the negative response of the ditch to the magnetometer must remain explained by the presence of a large proportion of non-magnetic chalky stones and flints.

In the middle of Area (iii) very slight traces of intermittent linear anomalies running approximately N-S are apparent. Similar anomalies on approximately the same orientation also appear in Area (i) and together these may reflect past cultivation on the site. The latter features are on a different orientation to the enclosure, and may therefore relate to a different phase of activity on the land.

Elsewhere there are other smaller anomalies visible within the area of the earthworks, and these may represent pits. However, these are isolated and infrequent occurances and indicate a lack of intensive occupation on the site. Examples are marked on plan 1 (H-M).

CONCLUSIONS

Despite the problems of surveying this site, these results have both confirmed the arrangement and added some detail to the plan of the earthworks mapped by the Danebury Trust. Anomalies detected by the magnetometer are compatible with the interpretation of the site based on limited excavation. The lack of magnetic evidence for many features typical of occupation

supports the view that the monument was not intensively or long occupied. Evidence of past agricultural landuse has also apparently been detected.

Surveyed by: A Payne
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Reported by: A Payne

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REFERENCE

Poole, C., 1991 "An Archaeological Assessment of Blagden Copse, Hampshire." Unpublished report.

BLAGDEN COPSE

HURSTBOURNE TARRANT, HAMPSHIRE.

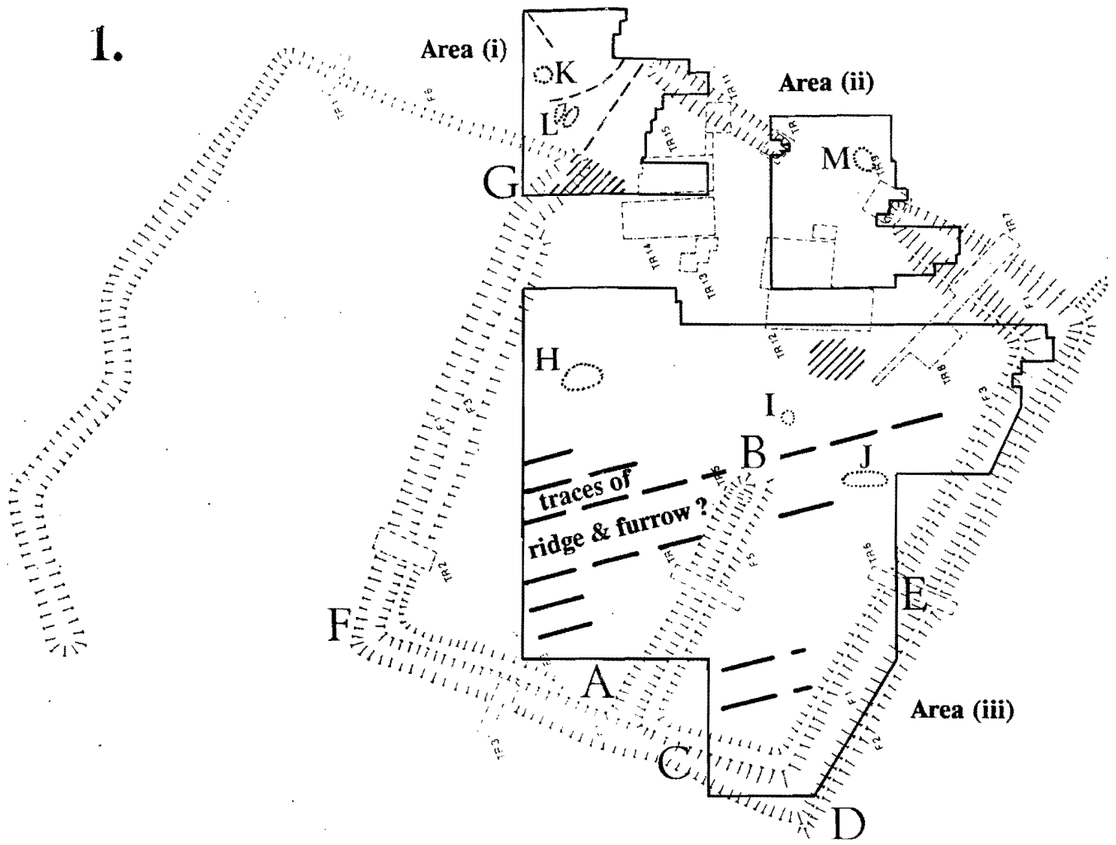
Magnetometer Survey 1990

1 : 1000

0 ——— 90m

N ←

1.



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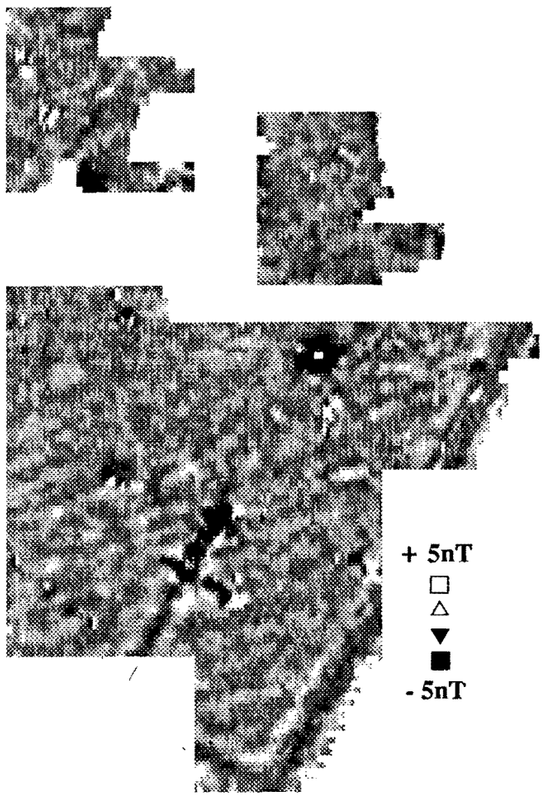

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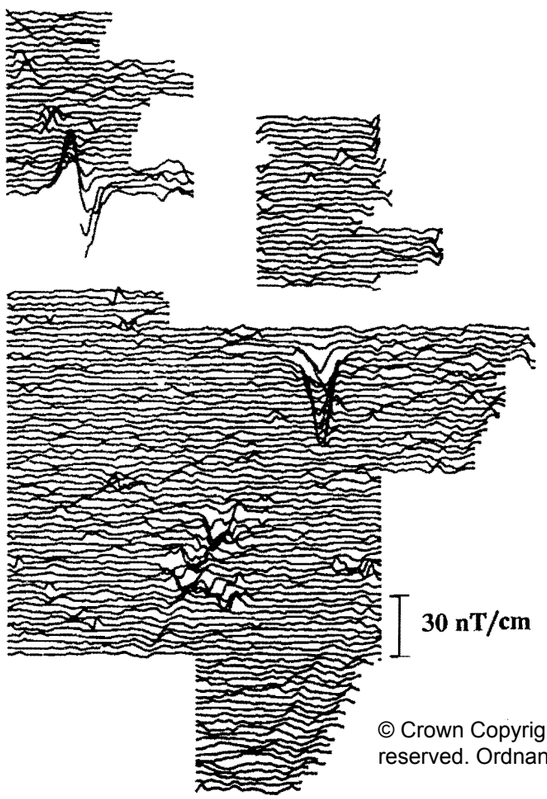


1.

Location of survey with respect to earthwork plan (Danebury Trust 1990)

2.

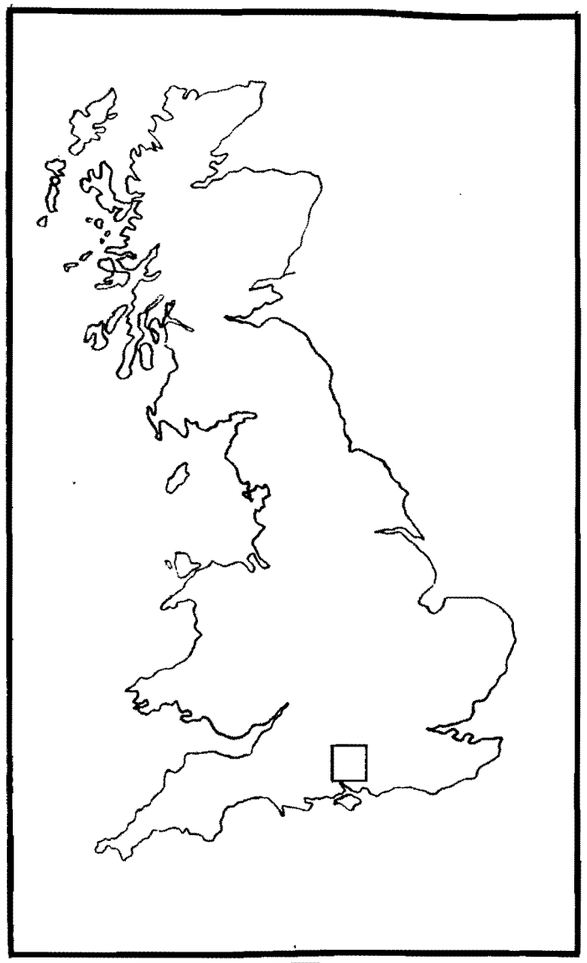
Grey-tone plot (slightly smoothed data)

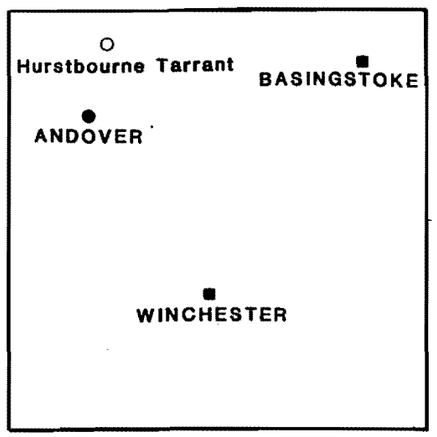
3.

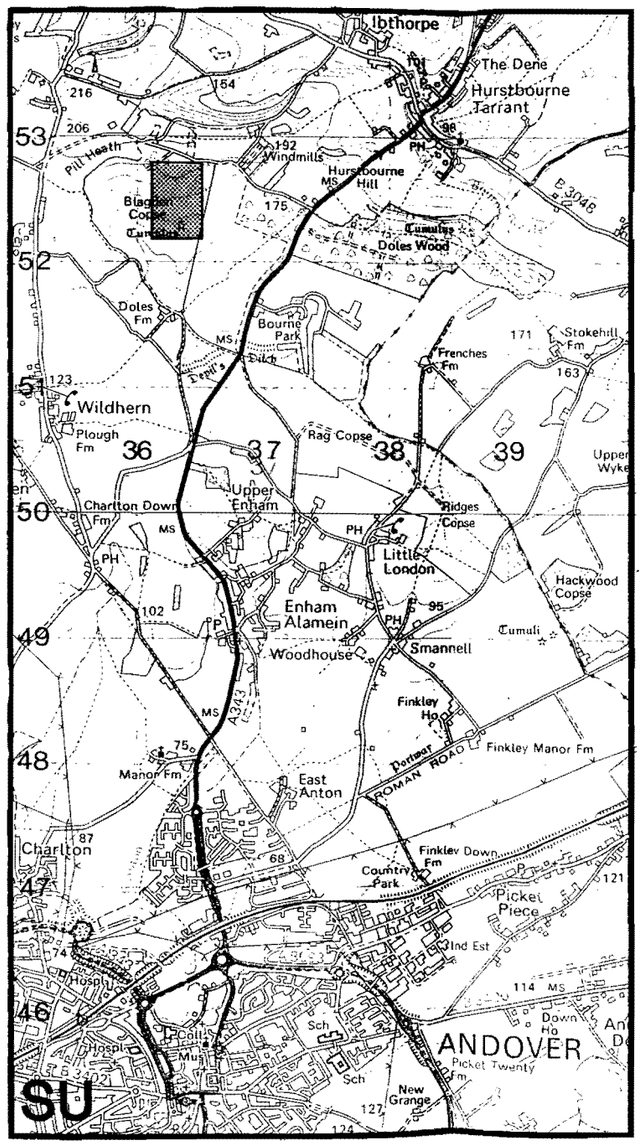
Profile plot (data as 2).

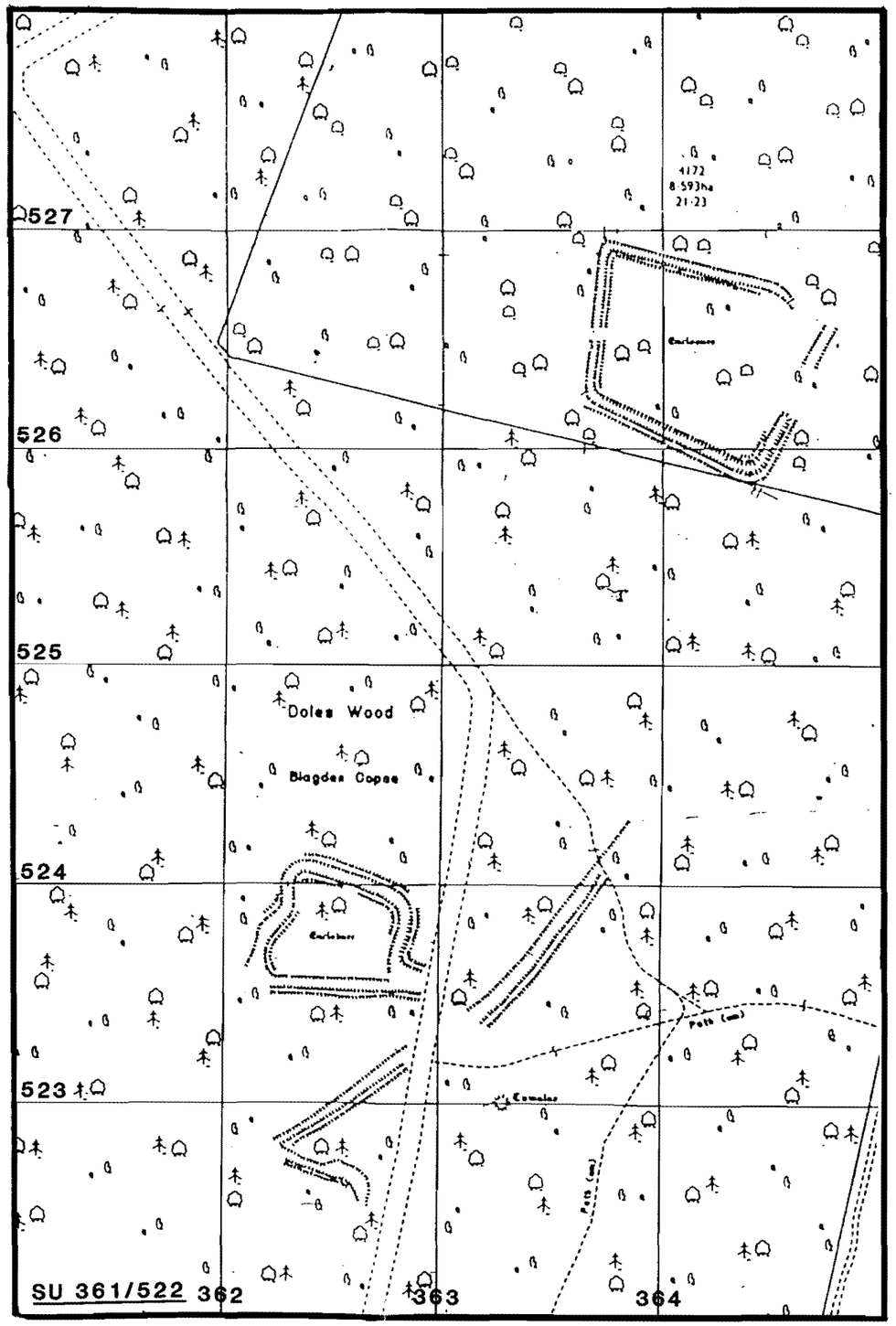
A.M.LAB. English Heritage 1991

BLAGDEN COPSE, HANTS : LOCATION









0 90m

1 : 2500