

Ancient Monuments Laboratory  
Report 113/90

ALREWAS, STAFFORDSHIRE:  
GEOPHYSICAL SURVEY.

Steven Noon

AML reports are interim reports which make available the results of specialist investigations in advance of full publication. They are not subject to external refereeing and their conclusions may sometimes have to be modified in the light of archaeological information that was not available at the time of the investigation. Readers are therefore asked to consult the author before citing the report in any publication and to consult the final excavation report when available.

Opinions expressed in AML reports are those of the author and are not necessarily those of the Historic Buildings and Monuments Commission for England.

Ancient Monuments Laboratory Report 113/90

ALREWAS, STAFFORDSHIRE:  
GEOPHYSICAL SURVEY.

Steven Noon

Summary

The purpose of this survey was to locate a circular cropmark (County SAM 199) in order to protect it from the future dumping of topsoil from the adjacent quarry at Alrewas. The geophysical response indicates an outer ring ditch, 35m in diameter, and an interior ditch or central depression. No conclusive evidence for associated features was detected.

Author's address :-

Steven Noon

Ancient Monuments Laboratory  
Fortress House  
23 Savile Row  
London  
W1

Alrewas, Staffordshire.

Report on geophysical survey, 1989.

## **Introduction**

The survey was undertaken to establish the location and character of a circular cropmark (SK 1854 1460), scheduled as a possible ring ditch/henge (SAM 199). The exact position of the ditch had to be established in order to protect the site from the dumping of topsoil from the adjacent gravel quarry at Alrewas, worked by Redland Aggregates Ltd of Leicester. The survey might also be expected to clarify the suggestion that the site may be of henge type, and to detect adjacent features.

The location of the survey grid is shown in Figure 1. Areas 1-7 were surveyed by resistivity, using the Geoscan RM4 meter and DL10 datalogger. The Twin Electrode probe configuration was used, with a mobile probe spacing of 0.5m, and readings taken at 1.0m intervals. The resulting data has been plotted in graphical form (Figure 2) and also as a grey-level image (Figure 3).

Areas 2-5 were also surveyed using a Geoscan FM19 fluxgate gradiometer. The resulting data is illustrated here by the grey-level image shown in Figure 4. It was hoped that the use of both survey techniques would provide complementary information on the character of the site.

## **Results**

**Magnetometer survey:** this has located the greater part of the ring ditch as a weak positive magnetic anomaly in grid squares 3 and 4. Although the course of the ditch is clearly distinguishable, the magnetic response to its fill scarcely exceeds that from the local soil background. Measurement of samples of topsoil for magnetic susceptibility gave readings in the range  $41-58 \times 10^{-8}$  SI/Kg - values which suggest that local magnetic enhancement, caused for instance by occupational activities, had not been intense.

Within the ring ditch there is a slight indication of an internal feature - perhaps a concentric inner ditch or depression - but this is very poorly defined. With the exception of a faint linear anomaly on the western side of area 1, the magnetometer does not seem to have located any features of significance.

**Resistivity survey:** low resistivity values from the fill of the ring ditch contrast well with background levels to provide a clear anomaly in grid squares 3 and 4. From this the ditch would appear to be 4m wide and the ring 35m in diameter. In contrast to the magnetic data, there is no evidence from the resistivity survey for an inner concentric ditch although the concentration of low values in the central area suggests at least a depression. No evidence of other features was located.

cont/

## Conclusions

The geophysical survey has succeeded in locating the cropmark. A weaker than expected magnetic response suggests an outer and inner ditch, with slight evidence for adjacent linear features. A possible depression within the centre of the feature is suggested from the resistivity response. There is no evidence for a bank, although any such feature can be presumed to have entirely eroded.

The resistivity survey failed to locate the eastern portion of the ring, in squares 7 and 6, owing to soil compression under a trackway and local levelling of topsoil. Within the circuit of the ring ditch to the west, however, neither magnetic nor resistivity data indicate the presence of gaps or 'entrances' - suggesting that this feature is more probably a round barrow than a henge.

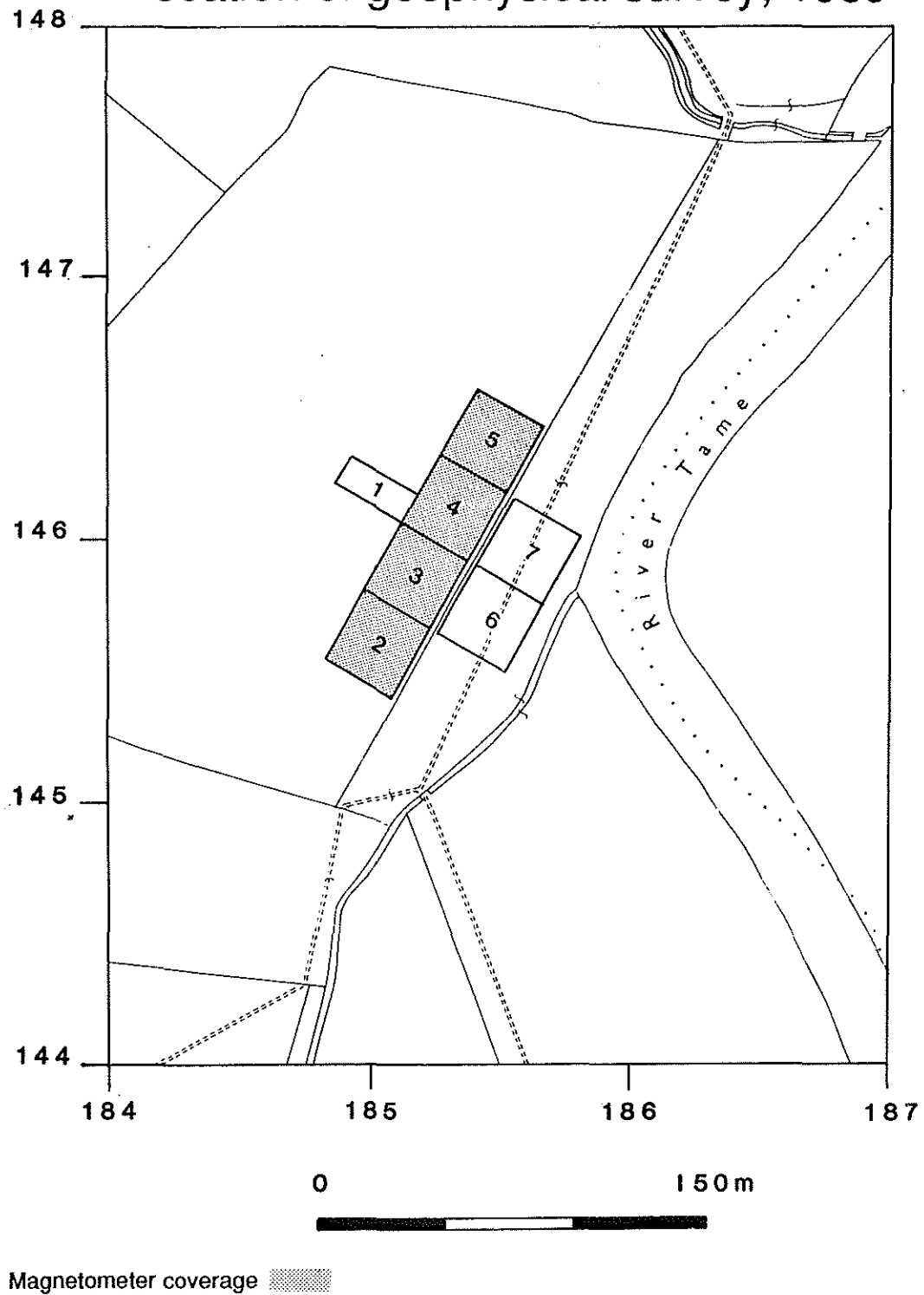
Finally, it should be pointed out that differential crop growth over the ring ditch was clearly visible at ground level at the time of the survey. Had this been observed beforehand, the main objective of locating this feature could have been achieved without the need to resort to geophysical techniques.

Surveyed by: S. D. Noon.  
A. Payne.

Reported by: S. D. Noon.

# Alrewas, Staffordshire.

Location of geophysical survey, 1989



Magnetometer coverage

Lower left hand corner SK 184 144

Ancient Monuments Laboratory HBMC, 1989

Figure 1.

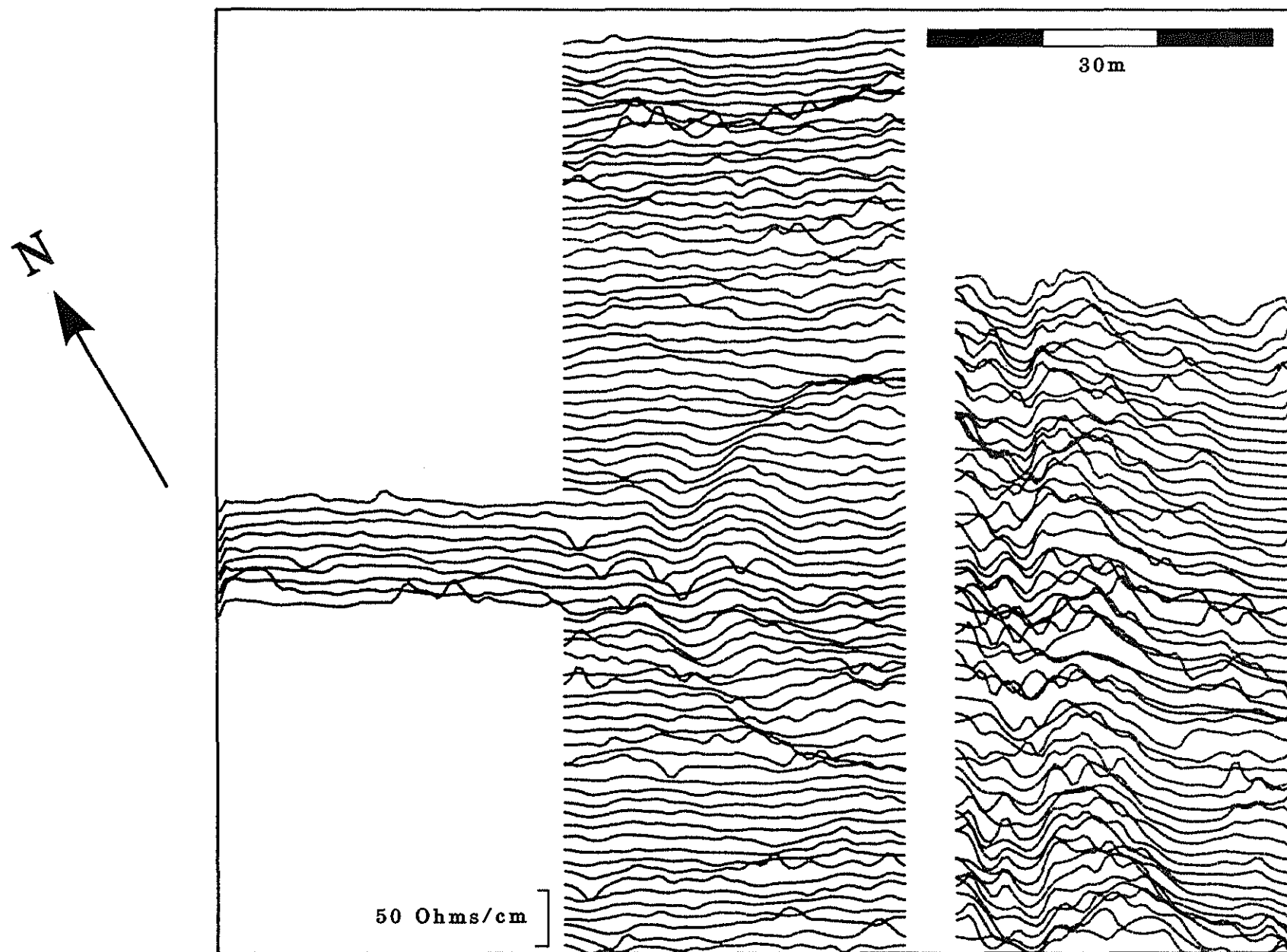


Figure 2.

Graphical trace plot of resistivity response

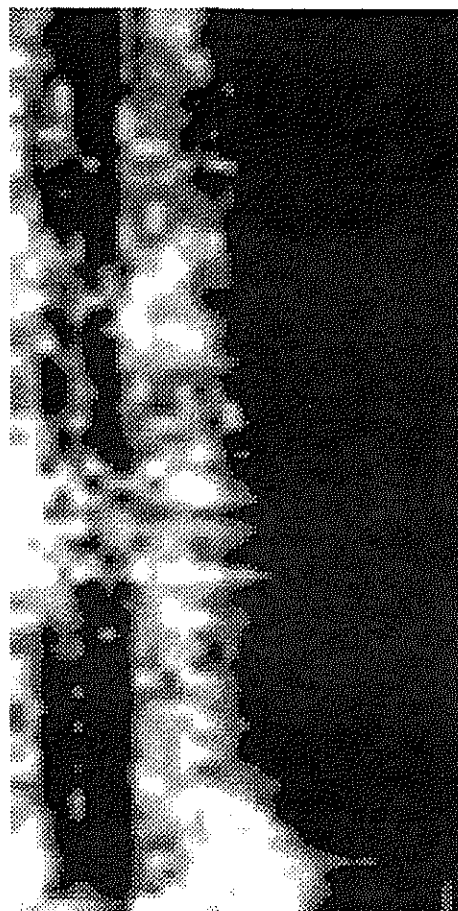
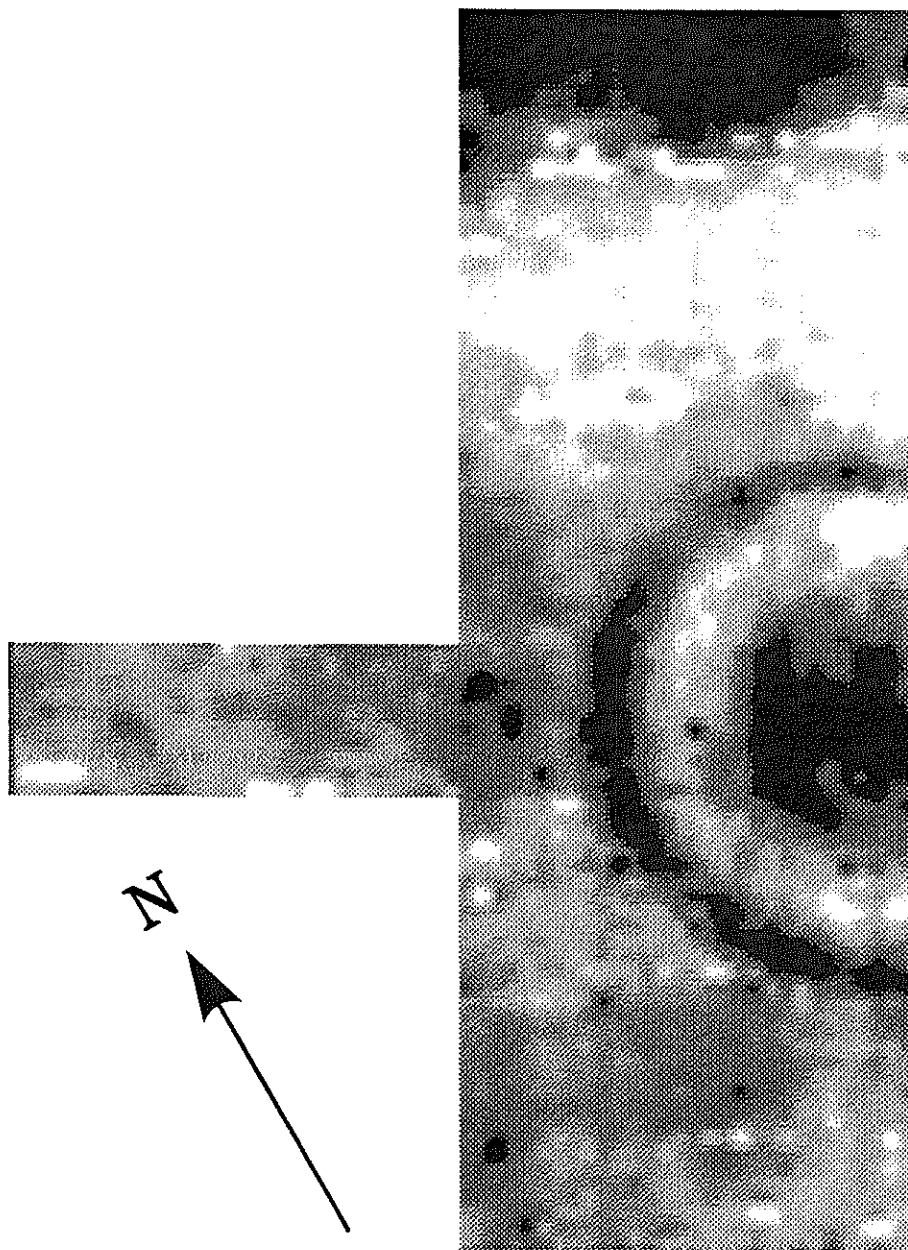


Figure 3.

Grey-level image of resistivity response.

Max. value (white) : 96.5 Ohms

Min. value (black) : 72.5 Ohms



30m

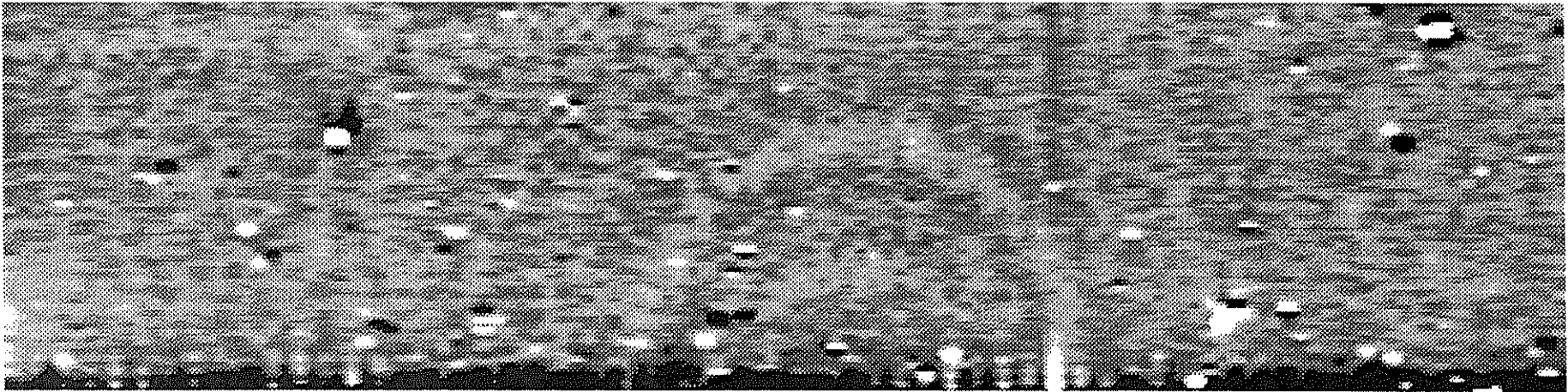
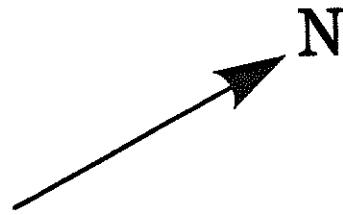
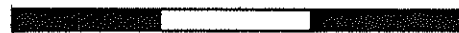


Figure 4.

Grey-level image of magnetometer response

Max. value (white) : +3 nT

Min. value (black) : -3 nT



30m