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Ancient Monuments Laboratory
Report 159/88

HORKSTOW HALL, HUMBERSIDE. REPORT ON RESISTIVITY SURVEY, 1987.

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Summary

The results of a resistivity survey over the site of a Roman villa in the grounds of Horkstow Hall, Humberside are described. The survey clearly identifies disturbance arising from the presence of the villa, although no clear plan of the building has been detected.

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HORKSTOW HALL, HUMBERSIDE: report on resistivity survey, 1987

Introduction

The survey work reported on here is an extension of that carried out by the Ancient Monuments Laboratory (AML) in 1986.

The grounds surrounding Horkstow Hall were surveyed with a Geoscan RM4 resistivity meter, using a 0.5m probe spacing and the twin electrode configuration. The purpose of the survey was to detect any evidence of the extent of the Roman villa which produced the mosaic excavated by the British Museum earlier this century. The plan provided contains an inset showing the area covered by the survey, trace and dot density plots of the results, and an annotated dot density plot indicating areas of interest. It was possible to survey most of the grounds, although the areas to the south of squares 11 and 9 were omitted due to the construction work being carried out on the house.

Results

It can be seen from the plots that there has been a lot of disturbance on the site, much of it recent, and this has been a major factor hindering the clear interpretation of the results. A further complication was caused by the large contrast in resistivity values between the east and west ends of the survey area. This was due to drainage which was towards the west, therefore considerably increasing soil moisture levels across the site in this direction. A third difficulty was encountered with the trees planted in the grounds, which tend to alter the local soil moisture level in an unpredictable way.

Several non-archaeological features can be identified from the plots, the most striking of which are the two linear structures running the full width of the surveyed area in the east-west direction. These show up clearly on the trace-plot as anomalies running almost parallel to the traces, one through squares 1-4 and the other along the edge separating squares 9 and 10 from squares 12 and 13. As they run down the slope towards the field -drain to the west of the grounds and the drain covers and concrete blocks marked on the annotated plot lie directly on their path, these must be drainage pipes. The section of the northernmost drain running through square 2 corresponds to the linear feature found in the earlier AML survey in 1986. The larger area encompassed in this survey removes any doubt as to its origin.

A similar anomaly is visible on the trace plot in square 11. Whilst this does not appear to run the full width of the survey, its proximity to the drain cover in this square suggests that it may well also be connected with drainage. Another linear depression can be seen in square 12. This, along with the various other linear anomalies visible in squares 12-15, is almost certainly associated with the formal garden that once existed in this area. A rather diffuse curved anomaly, which probably represents part of the bank separating the grounds of the house form the field to the west, is also visible, running

through squares 13 and 14. The apparent anomaly running along the edge of squares 2 and 3 must also be pointed out, as this was due to the fact that the two adjacent areas were not surveyed on the same day. The average soil moisture level thus changed and the two squares do not match perfectly along their common edge. This anomaly was therefore caused by the survey technique, and does not represent an actual feature.

The most noticeable aspect of the survey plots is, however, the large area of high resistance in squares 2, 3, 6, 7, 10, and possibly 11. The amount of disturbance which this suggests is too great to be accounted for by the effect of the trees in this region. Indeed, it is probable that this is the site of the British Museum excavation and is thus the area where Roman remains are most likely to be situated. Unfortunately this disturbance prevents the detection of the remains themselves: however, several linear features can be discerned at its edges and these may possibly be surviving wall footings from the villa. One such feature can be seen in square 1 running towards the northwest corner of the survey and two other rectangular alignments are indicated on the annotated plot. The large linear anomaly in square 10 may also be associated with the villa, yet the general level of disturbance makes this uncertain.

Conclusions

In conclusion it can be seen that the general area where surviving Roman remains are likely to be concentrated has been well defined by the survey. The disturbance caused by excavation in this area, and no doubt the villa remains themselves, prevents any clear building plan from emerging. However, the merits of extending the earlier survey have clearly been demonstrated, both in diagnosing the non-archaeological features and in delimiting the extent of archaeological disturbance which exceeded the boundaries of the previous attempt.

Surveyed by P. Linford and D. Shiel.

Date of report: 26th August 1988

HORKSTOW HALL, HUMBERSIDE

Resistivity Survey 1987

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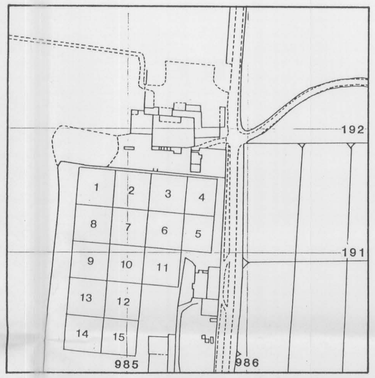
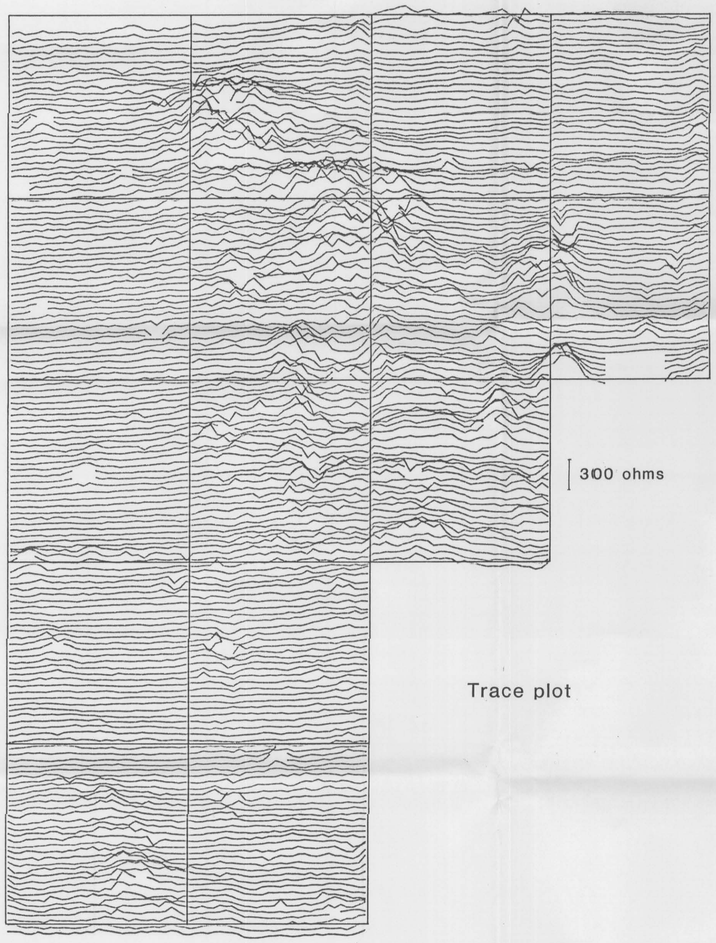
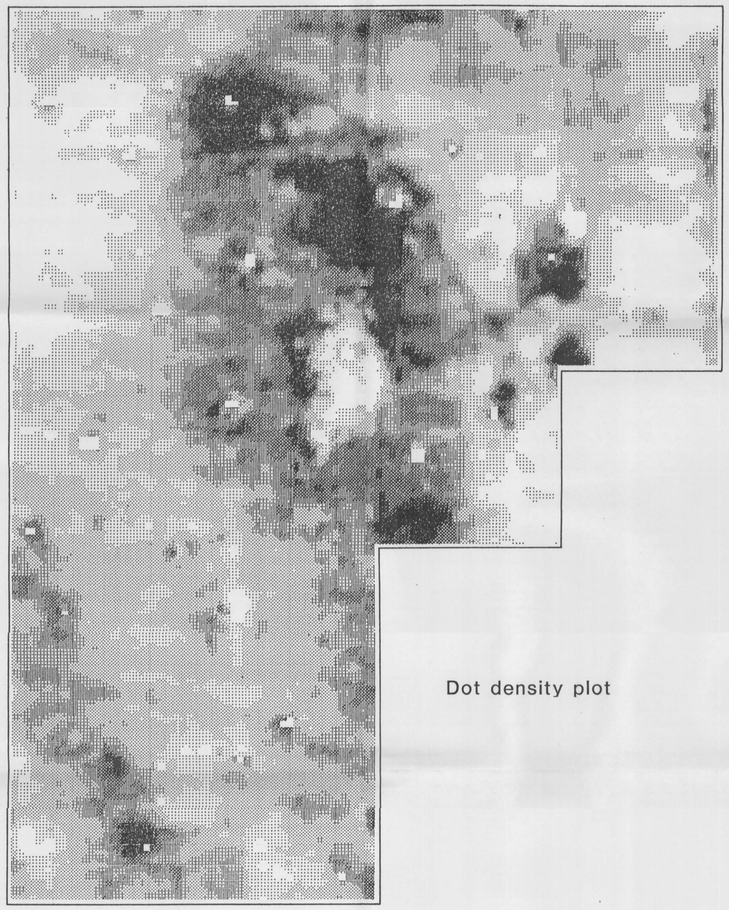
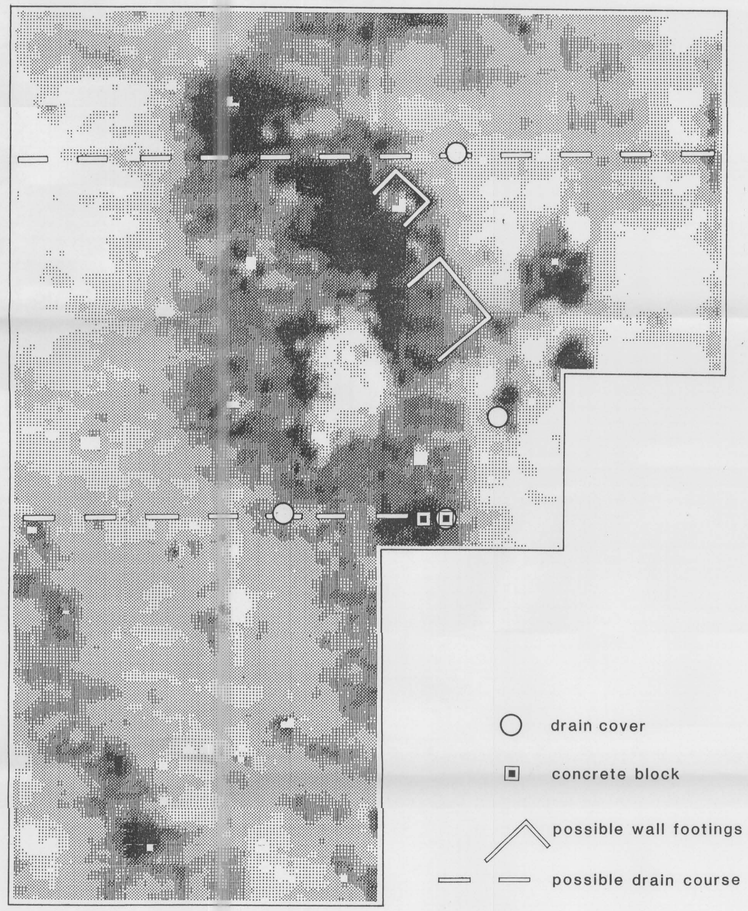




Trace plot



Dot density plot



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