

Ancient Monuments Laboratory
Report 135/88

HUCCLECOTE SCHOOL, HUCCLECOTE,
GLOS. GEOPHYSICAL SURVEY, 1988.

P Linford & D Shiel

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Summary

Extensive magnetometer survey in the grounds of Hucclecote School, including the coverage of the site of a Roman villa, has not produced significant results. Magnetic response was mostly limited to that from modern features, although some of the weaker anomalies detected may be of archaeological origin.

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Introduction:

The forthcoming closure of Hucclecote School, and the possibility of development on the school's grounds, poses a threat to archaeological remains known from excavations and chance finds (Glos. SMR). There is evidence for prehistoric activity in the area and also a Roman villa, the site of which has been scheduled (SAM No. 188). The objective of the magnetometer survey reported on here was to provide information on the location and distribution of features as an aid to the full assessment of the archaeological potential of the site.

Survey method:

The playing fields surrounding the school, including those areas excavated in 1911, 1933 and 1958, were surveyed using a Philpot DM02 fluxgate gradiometer. Due to the size of the area it was decided that only those parts to the north and east of the school buildings, in close proximity to the recorded Roman remains, would be surveyed in detail. The entire site was scanned, however, in order to assess the merit of a more extensive survey.

A plan of the survey grid in relation to the school buildings is enclosed, accompanied by a computer representation of the resulting data. The latter is displayed as a series of traces, representing magnetometer traverses walked across the grid at 1.0 m. intervals. Vertical displacements in these indicate the presence of localized magnetic anomalies.

Results:

It is clear from the traces that there has been recent disturbance on the site. The linear feature running down the edge of squares 4-6 and turning into square 3 is the response to a pipe or cable the magnitude of which is too great to have been caused by any archaeological process. A similar explanation accounts for the strong linear anomaly running through squares 22-25.

A second major contribution to the disturbance visible on the plots is the presence of upstanding structures on and around the playing fields. The large perturbation in the local magnetic field in squares 1 and 2 was caused by the proximity of a metal gate and chain-link fence. A similar fence was the cause of the magnetic distortion in squares 18 and 21. The disturbance in square 16 was caused by metal rugby posts erected in this area.

It is clear that any response from archaeological features will be obscured in the region of the sources of magnetic interference mentioned above. Even so, the general lack of anomalies elsewhere suggests that there has been little artificial magnetic enhancement of the soil. Nevertheless, several possible archaeological features have been tentatively indicated on the plot. The most pronounced is the diffuse linear anomaly running through squares 15 and 16, close to the disturbance caused by the rugby posts. This is suggestive of a buried ditch, but due to its apparent isolation from other features, it may be of

relatively recent origin. A second linear feature is that indicated in square 7 although its proximity to the disturbance caused by the buried pipe or cable makes it difficult to see clearly. Unfortunately, no further interpretation of these features can be made, both due to the low magnitude of their magnetic response and to the lack of any associated archaeological anomalies.

Another anomaly of possible significance is that in square 4. Although characteristic of a kiln, its magnitude and spatial extent are both curiously large. For this reason, and because of proximity to the pipe trench, the possibility of a more recent origin may be more probable. If it is a kiln then it would appear to be unusually substantial.

The apparently uniform or slight magnetic enhancement of soil on a Roman site is, in itself, interesting. One possible explanation is that the soil in this area (overlying fan gravels on Lower Lias clay: Geological Survey Map 234) contains few iron-bearing minerals. If this were the case, and concentrated burning had taken place, the iron necessary to form the required ferrimagnetic compounds would not be present and little enhancement would result. Whilst more work would be required to establish this proposition, there is some evidence to support it. In recent years bonfires had apparently been situated in the area covered by squares 3 and 7. However, the circular patches of enhanced soil that might be expected have not in fact been detected. Thus, even where activities which enhance the magnetic susceptibility of the soil are known to have taken place, no magnetic disturbance has been observed.

Conclusions:

Overall, the results of the magnetometer survey were disappointing, with little useful evidence having been detected. The results of the scanning of those areas not covered by the survey suggest that any further work here would be similarly unsuccessful. Indeed, the southern half of the school grounds appeared to be more disturbed by recent activity than the area already covered by detailed survey. It is therefore unlikely that a more extensive survey would be of any value.

Surveyed by: P. Linford and D. Shiel.

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Magnetometer survey, 1988

1 : 500



possible archaeological features indicated in red

