AP

2905

PARTON ROMAN FORT, CUMBRIA

Geophysical Survey, 1979

The Roman Fort of Tunnocelum sits at Parton overlooking the Irish Sea to the west, and bounded by bluffs to the north and west and by recent housing to the south. The fort itself is partially overlain by a church and its churchyard, while the land containing the supposed vicus slopes down gently to the south, rising again to the south east. The site forms part of the lands of Moresby Hall Farm to the east.

Although the only archaeological find from the area appears to be a spear head found nearby in 1892, proposed drainage of the field OS 3478 had raised fears of untold damage to the vicus, intensified by a subsequent planning application to build two bungalows in the south western corner. This survey examined a sample area of 30m x 170m running approximately N-S through this field with the object of plotting any sub-surface features; for comparison a second, parallel area of 30m x 180m was examined in the field OS 1400 to test the portion of vicus between the threatened area and the fort.

Survey method

A plessey fluxgate gradiometer was used, together with the Ancient Monuments Laboratory automatic plotting system. Considerable previous experience has shown that most buried traces of occupation such as ditches, pits, etc, amy be detected with this magnetometer provided there exists a sufficient contrast in magnetic susceptibility between top- and sub-soil. Being themselves magnetic, structures of fired or burnt clay - kilns, some hearths, etc, - are also detectable, together with iron slag or magnetic rock.

After the site grid has been laid out in 30m squares the survey is carried out by carrying the instrument along traverses 30m long and 1m apart, covering the site at the rate of one 30m square every half hour. The electrical output is simultaneously recorded to scale in graphical form on the plotter.

Plan 1 shows the relation of the survey grid to the site, while Plan 2 shows the assembled and edited graphical record in which anomalies are seen as vertical deflections from what would otherwise be horizontal baselines.

Interpretation

1. Field OS 1400

Lying so close to the fort, and with soil of sufficient magnetic susceptibility (56×10^{-6} emu/gm) to enable detection of ditches, etc, this field was surveyed for comparative purposes.

Firstly, the most widespread features of this area are the numerous small spikey patterns which generally affect only the traverse on which they lie, and rarely the adjacent one. These represent iron and most may be ignored as their distribution is too random to suggest either the regularity of, say, a road ditch or surface, or the concentration one would expect of an iron working area. They are more probably agricultural than archaeological.

Next, although the anomalies in square 13 are strong, suggesting perhaps a furnace, surrounded partly by a semi-circular ditch, the possible iron structures of previous allotments reported to have been somewhere at this end of the site may be responsible. Within this square and southwards the field is faintly marked with ridge and furrow (not magnetically detectable on this site) and it is worth noting that the allotments appear to have had little effect on the topography. Their working may therefore have been shallow enough not to have interfered with the anomaly, or at least to have produced small finds, so that it may well be an iron-working region.

The anomalies in square 12 suggest archaeology more strongly, although their nature is not clear. They are similar to those in square 8, which may be kilns or substantial pits. Apart from the short lengths of gulley-like anomaly in this square (8), there is a faint feature running diagonally through it reminiscent of these representing edges of roads on other surveys of Roman sites. Alternatively it could represent an enclosing ditch to an area of industrial activity. The background in squares 8 and 9 is also more noisy than elsewhere, implying either undefined subsurface disturbance or a spread of magnetic rubbish.

Were there a well defined road running south from the fort, it should pass through this line of squares, possibly with detectable side-ditches or a surface marked by an accumulation of small pieces of scrap iron. There is no visible agger, nor is it evident from the magnetic traces, and while it is unlikely that it would pass through or to the west of square 13, the anomalies in that square could then be associated with it.

2. Field OS 3478

Here there is also a spread of small iron objects, probably agricultural. The feature running E-W across square 4 is a buried pipe or drain, confirmed by tracing it across the entire width of the field. It may be related to the allotment complex in the adjoining field.

There is some activity in 'square' 1, but this is so amorphous, confused by iron, and disturbed by the nearby fences that no interpretation can be made. Nevertheless, archaeology can not be ruled out.

Squares 4 and 5 contain the only clear cut feature in this field, a ditch running N-S for about 30m and turning slightly westwards at its northern end. ~~In progressing northwards into square 5, and westwards at its northern end.~~ In progressing northwards into square 5, and westwards, the ground falls away from a platform in square 4, but its apparent topographic potential is not otherwise used. This ditch may then be the result of modern drainage, but this theory is not supported by similar ditch(es) running down westwards, and seems most likely, therefore, to be archaeological.

Extensive scanning with the instrument alone over both fields confirmed that the activity is concentrated near the fort.

Conclusion

In surveying this site, little of archaeological nature has been detected, particularly in the threatened area. Although a widespread vicus may exist on the site surveyed, those features found suggest that similar features would be detected anywhere on the site if present, which is not the case. There are probably areas of industrial activity in field OS 1400.

From this it seems unlikely that drainage of building will interfere with the archaeology to more than the slightest extent, and it is recommended that only a watching brief should be necessary.

Reference:

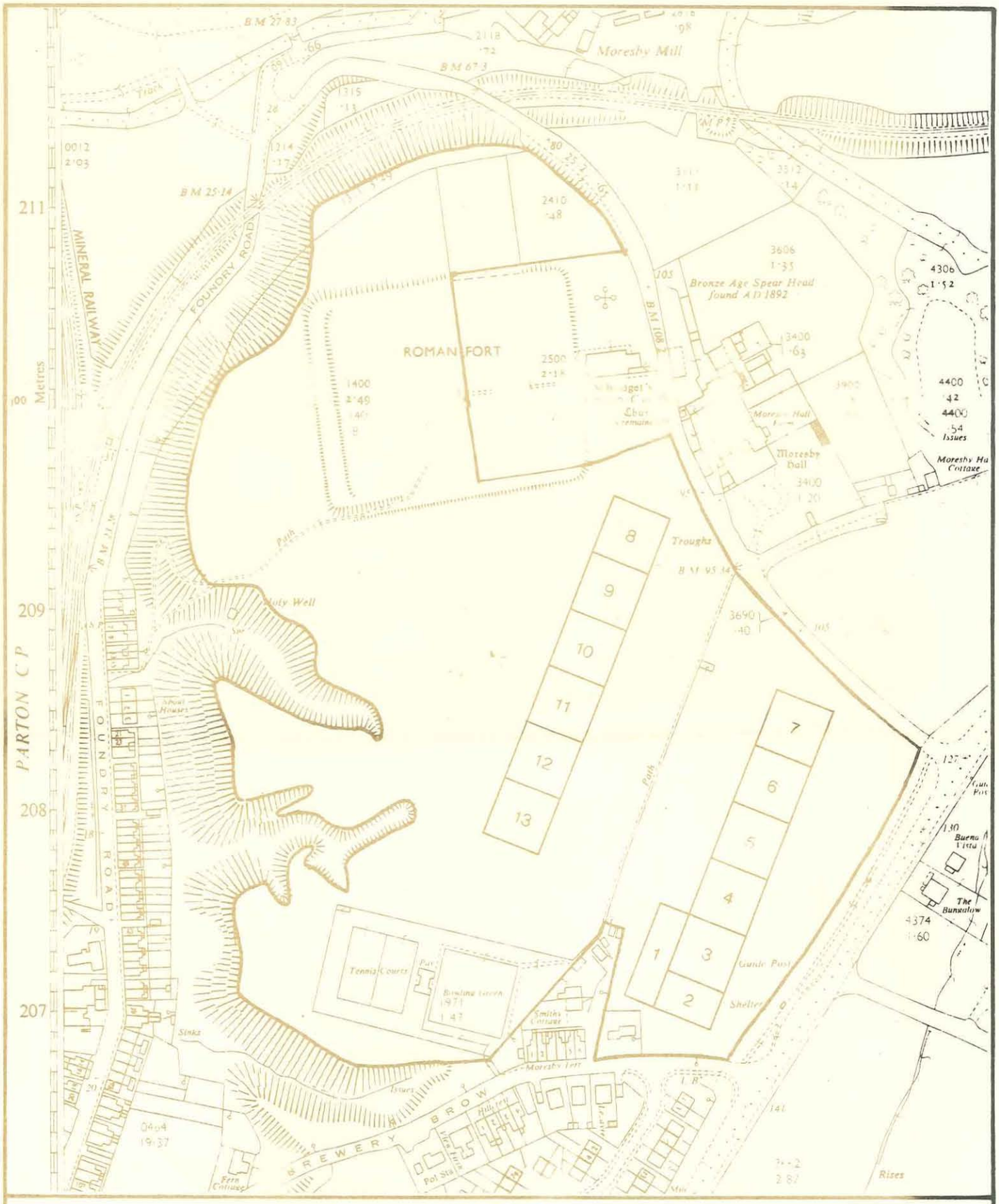
"An Automatic plotting system for using a Plessey fluxgate gradiometer", Clark, A J, and Haddon-Reece, D, in Prospezione Archaeologiche 7-8, (1972), 107-115.

D Haddon-Reece

A E U David

Ancient Monuments Laboratory
Department of the Environment

July 1979



PARTON

MAGNETOMETER SURVEY
Location

NG ref. NX 983 208

Survey no. 11/79
Plan no. 1 of 2

0 1:2500 200m

DoE A.M. Laboratory
Geophysics Section