

ANCIENT MONUMENTS LABORATORY GEOPHYSICS SECTION

REPORT ON MAGNETOMETER SURVEY

SURVEY: GORHAMBURY

DATE: 7-9/7/81

Report no. 14/81

1. SITE

OS grid reference: TL 118 079

Field no. 0080
8400

Location: on the Gorhambury estate, two miles w of St. Albans

Geology: gravel and clay over Chalk

Archaeological evidence: extensive Roman and Iron Age activity in adjacent excavations.

2. SURVEY

Object: to locate additional features relating to the Roman settlement

(a) Magnetic survey

Magnetometer : fluxgate
Survey : automatic
Setting : 10 gammas/cm.
Scale : 1 : 200

(b) Other tests

(i) Magnetic susceptibility:

topsoil:	subsoil: 9.7	fill: 13.6	x10 ⁻⁶ emu/gm (ac bridge readings)
		11.5	
(ii)		10.7	

Survey grid measured to: field boundaries

Plans/charts enclosed: 1 - Location plan (1:2500)
2 - magnetometer traces (1:500)

3. This preliminary magnetic survey at Gorhambury covered the squares marked 1 - 21 on the enclosed location plan. These were located close to the excavations and the the main settlement to test the response over known archaeological features where anomalies might be expected to be at their strongest in an area where soil magnetic susceptibility is generally weak. The magnetometer traces are shown on plan 2 where significant anomalies have been outlined.

RESULTS

Squares 1 - 5 are almost completely devoid of any response to archaeology, with the possible exception of faint linear anomalies in sq.2. These could be of natural or agricultural origin but are sufficiently distinct to repay test excavation. They appear to bear no obvious relationship to nearby earthworks, which were themselves undetectable in sq. 1.

Squares 6 - 21 are much disturbed and obscured by the presence of iron, both from fences, pipes, surface litter, and former excavation trenches. Where this noise abates, notably in the E half of the area, archaeological anomalies are weakly but clearly defined. These are almost all ditches, the most remarkable of which form a rectilinear intersecting pattern centred in sqs. 8, 9, 12 and 13. In addition to this there are other linear features and some smaller discrete anomalies that might refer to pits or other magnetic features of the same scale. That in the centre of sq. 7 is more substantial than the others and may include burnt or baked material. The ditch detected along the N edges of sqs. 7 and 11 is known to be part of the rectangular enclosure surrounding the settlement under excavation immediately to the N. A small part of a medieval ditch has been detected in sqs. 19 and 20.

CONCLUSIONS

The rectilinear arrangement of ditches noted above, is a striking feature to be disclosed so clearly by magnetic survey. There is less soil noise and associated disturbance than would be expected from a Roman building, and so the pattern might be consistent with some sort of arrangement of cultivation plots. A very similar pattern has been noted at North Thoresby in Lincolnshire where the fill of the ditches had been highly organic, and the lay-out thought to relate to vineyard or orchard management (mentioned in 'Roman Britain', J. Watcher, Dent, 1978, p. 144)

Clearly, magnetic survey can be effective over parts of this site despite a very low susceptibility and poor contrast between subsoil and feature fill (magnetic susceptibility of subsoil: 9.7×10^{-6} emu/gm., ditch fills: $11.5, 13.6 \times 10^{-6}$ emu/gm.). This detectability might be a direct result of the proximity of occupation, and such results cannot necessarily be relied upon further afield.

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11th. Feb. 1982.

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GORHAMBURY

Location of magnetometer survey, 1981

1-21 : survey grid

1 : 2500



081

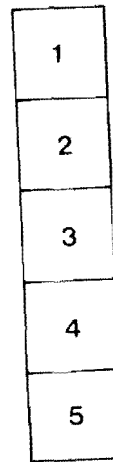
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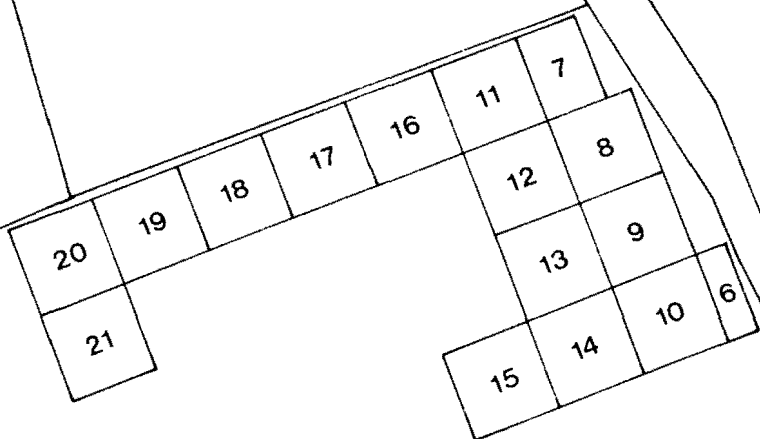
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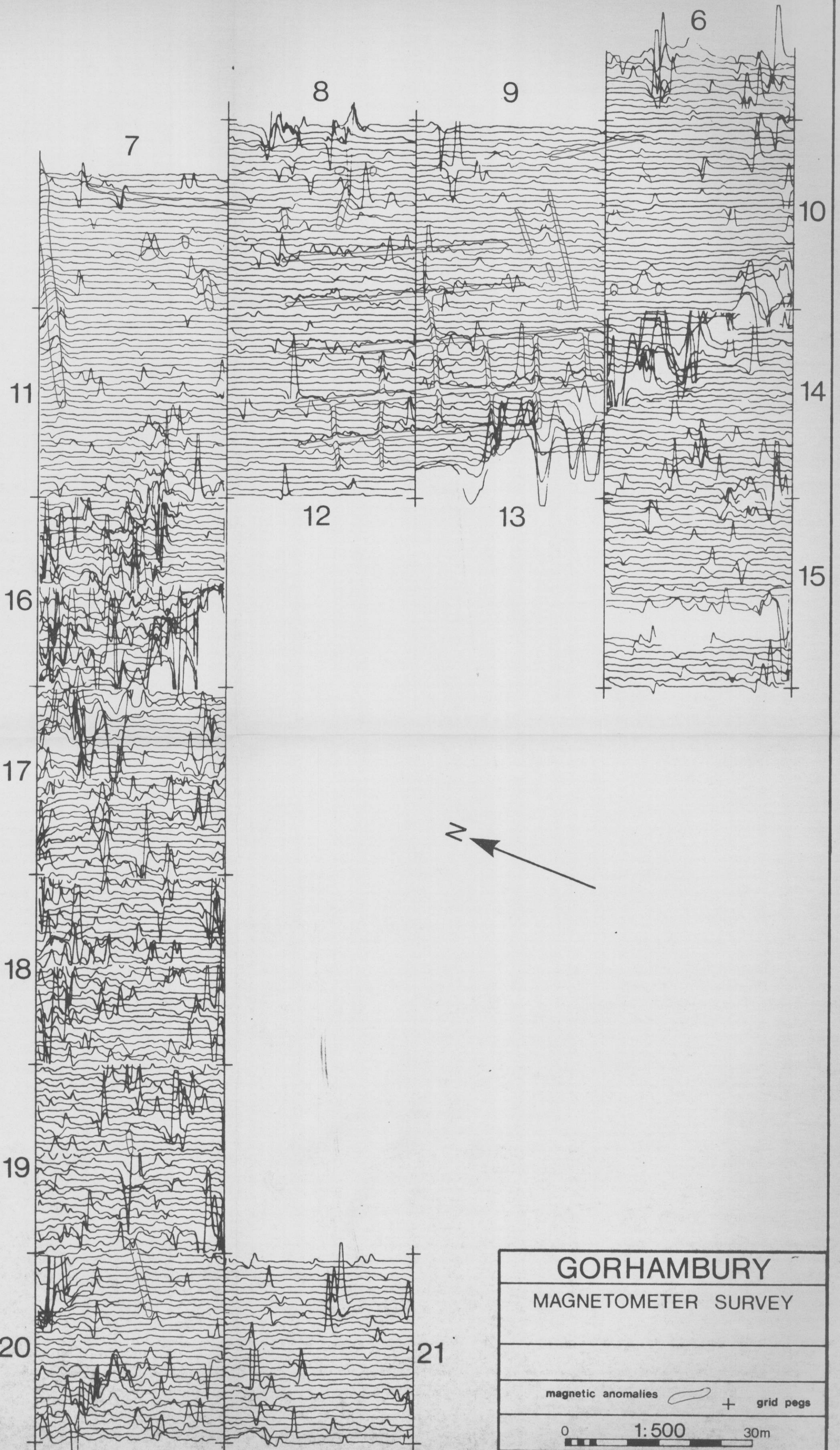
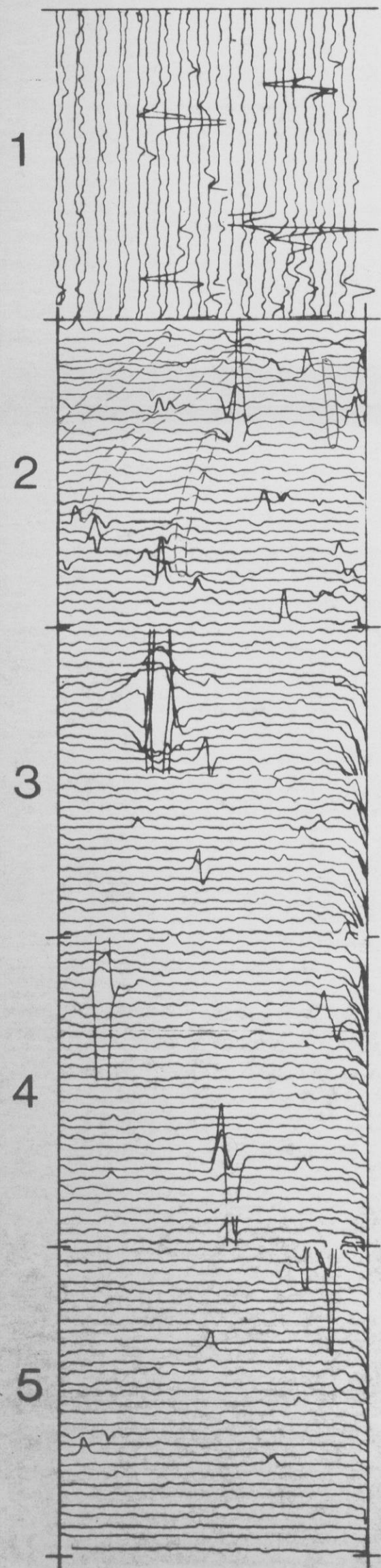
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excavations





GORHAMBURY	
MAGNETOMETER SURVEY	
magnetic anomalies + grid pegs	
0 1:500 30m	
Survey no. 14/81 Plan no. 2 of 2	DoE A.M. Laboratory Geophysics Section