ANCIENT MONUMENTS LABORATORY GEOPHYSICS SECTION

REPORT ON MAGNETOMETER SURVEY

SURVEY: MAGIOVINIUM **DATE:** 25/5/78

Report no. 24/78

---

1. SITE

OS grid reference: SP 8889 3389 **Field no.** 9400

Location: in the valley of the river Ouzel, east of Bletchley, and north of the A5. See plan 1.

Geology: alluvial deposits - sandy clay with flint and pebble

Archaeological evidence: proximity to the Roman settlement at Magiovinium, and features exposed by nearby excavation.

---

2. SURVEY

Object: to examine an area adjacent to the CEU excavations for evidence of the extension of archaeological features.

(a) Magnetic survey

Type of survey: automatic

Magnetometer: fluxgate **Range:** 100 γ

Initial chart recorder settings — **Y:** 15 γ/cm
X: 1:200 **scale**

Logged for computing: ~~xyes~~/no

(b) Other tests

(i) Magnetic susceptibility:

topsoil: 69.3 **subsoil:** 57.3 **fill:** 333.3 **x10^{-6} emu/gm (ac bridge readings)**

(ii)

Survey grid measured to: CEU excavtion grid

Plans/charts enclosed:

1 - location plan, 1:2500
2 - magnetometer traces and interpretation, 1:200
3 - magnetic anomalies and excavated features, 1:500

---

cont/

3. RESULTS

Magnetic susceptibility of soil on the site is high and a sample of ditch fill showed a strength many times greater than that recorded for surrounding subsoil (a contrast of 333 to 57 x 10^{-6} emu/gm. respectively). Such conditions are ideal for magnetic detection, and over the survey area the larger buried features show up clearly as pronounced magnetic anomalies (see plan 2). A variety of shapes and sizes of ditches and pits are responsible for the better defined anomalies. Smaller and less substantial features account for the less definable undulations and minor contrasts amongst the magnetometer traces.

The eastern half of the survey area is crossed on an approximately N-S alignment by the Roman road exposed in the excavation trenches to the north. It is clearly defined by flanking ditches with lesser anomalies between them possibly representing rutting and gullying of the road surface. Apart from this road system, the remaining anomalies cannot be seen to resolve into a recognizable pattern on the evidence of such a relatively small area.

4. CONCLUSIONS

The density of archaeological features seen in the adjacent excavation trenches continues to the north as a variety of plainly detectable magnetic anomalies. Settlement and/or industrial activity related to the Roman roadway seems likely, and would account for the strong magnetic enhancement here.

Surveyed and reported by: A. David. **with:** G. McDonnell

For: D. Neal.
F. McAvoy

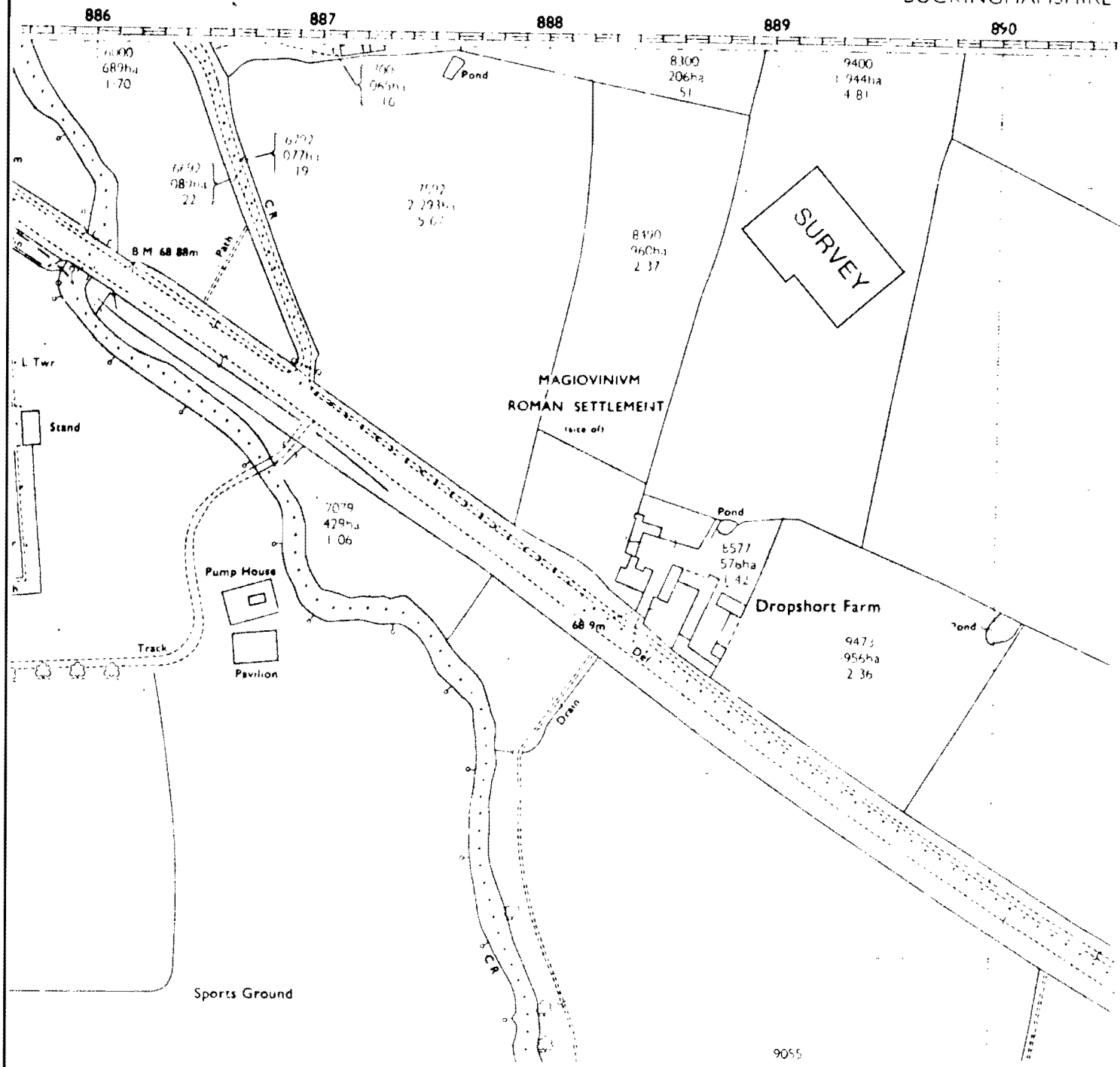
Date of report: 28/1/80

Ancient Monuments Laboratory Geophysics Section
Department of the Environment
Fortress House
23 Savile Row
London W1X 2HE **01-734 6010 ext** 591

ORDNANCE SU

SP 8834-8934

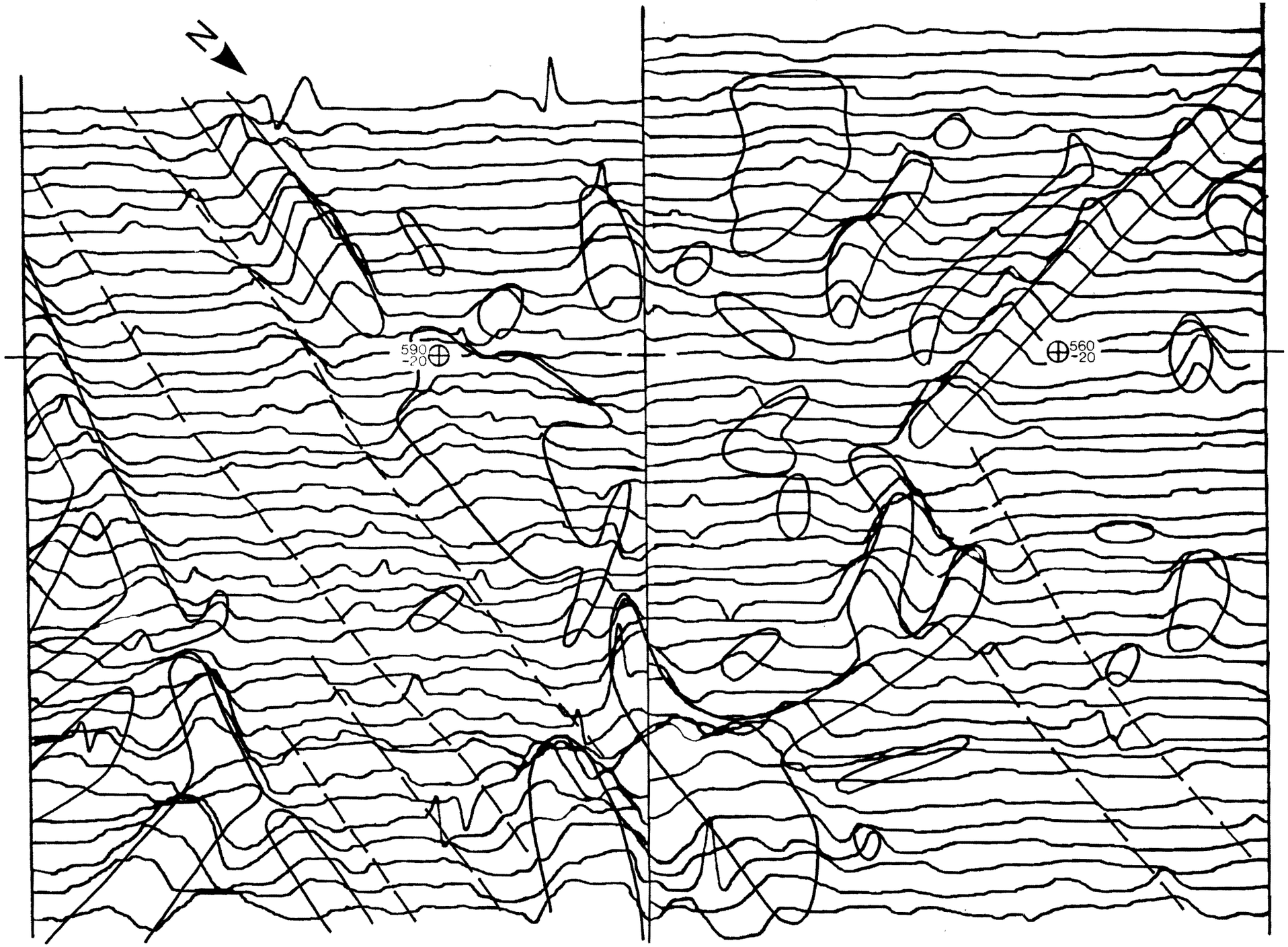
BUCKINGHAMSHIRE



MAGIOVINIUM

MAGNETOMETER SURVEY
Location

Survey no. 24 78 Plan no. 1 of 3		Survey no. SP Based on 1:2500 OS sheet 8833
0 1:2500 200m		DoE A.M. Laboratory Geophysics Section



Survey no. 24 78
Plan no. 2 of 3

MAGIOVINIUM

NG ref. SP8889 3389

grid pegs

archaeologist's grid pegs

MAGNETOMETER SURVEY
Interpretation

anomalies

0 1:200 30m

DoE
Ancient Monuments Laboratory
Geophysics Section

N

SP88994
33999

500
075

650
075

Roman road alignment

500
000

650
000

MAGIOVINIUM (site code 18)

Magnetometer survey, 1978

magnetic anomalies

excavation trenches & features

1:500