ANCIENT MONUMENTS LABORATORY GEOPHYSICS SECTION

REPORT ON MAGNETOMETER SURVEY

SURVEY: HAYLING ISLAND **DATE:** 18th Sept, 1979

Report no. 21/79

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1. SITE

OS grid reference: SU 030725 **Field no.** –

Location: ½ mile W of North Hayling village

Geology: clay

Archaeological evidence: Continuing excavation of Iron Age and Roman temple site.

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2. SURVEY

Object: To test the magnetic response of an area close to the temple prior to trial excavation.

(a) Magnetic survey

Grid of 30m squares surveyed with traverses plotted at 1m separation. Also general scanning with magnetometer.

Magnetometer: Littlemore 1m fluxgate gradiometer

(b) Other tests

(i) Magnetic susceptibility:

topsoil: 19 **subsoil:** 9.7 **fill:** – **$x10^{-6}$ emu/gm (ac bridge readings)**

(ii)

Survey grid measured to: excavation site grid

Plans/charts enclosed:

1. Survey squares located on 60m site grid (from excavators' plan).
2. Survey chart with interpretation, 1:400.

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cont/

3. RESULTS

The survey shows little archaeologically significant magnetic disturbance close to the temple, but some elsewhere in the field. The observed response may in part be due to the clay soil which gives conditions only moderately favourable for magnetic detection. There is some contrast in magnetic susceptibility readings between topsoil and subsoil so that detection of silted features is possible, but the values are low and the response therefore weak. Only larger features or those with a magnetically enhanced fill associated with occupation or burning are likely to be detected, while smaller features may not be. Magnetic anomalies which are distinguishable from the background noise are marked on the plot. The weaker anomalies are shown in dotted outline. The practical limit of resolution appears to be such that only features greater than some 1.5 - 2m in width are detected.

The block of 30m squares near the temple (1-9) shows only scattered anomalies with no indication of substantial features or concentrations of activity. There is one strong anomaly at the junction of squares 6 and 7 which may be due to buried iron, but if not it could be a hearth or similar burnt structure. There are fragments of ditches in squares 2 and 6 but the remainder of whatever pattern they represent is undetected.

Additionally there may be parallel ditches leading from the temple. These are marked by tentative dotted lines in squares 3 and 7, and may continue through squares 11 and 12 where they bound the raised causeway visible on the ground.

The most conspicuous magnetic activity is in squares 10 and 11 which were located to correspond to an area of surface finds. Of the areas surveyed this is the most likely to yield remains of occupation. There may be similar features close to square 13 but the picture is less clear because the detected anomalies all lie at the edge of the survey square.

Scanning elsewhere with the magnetometer alone showed that most of the field is as quiet as the less disturbed sections of the plotted survey. The scan was not sufficiently intense to detect all isolated local features, but the only disturbed area found was again where surface finds are known in the NW corner of the field close to the houses. Field 6800 to the E was also scanned and found to be similarly quiet. The only response was from a line of disturbance crossing the field E - W. The line continues into the temple field and across the plot 6m from the top of square 10. It may be a pipe or field drain.

Surveyed and reported by: A. Bartlett **with:** A. David

Date of report: 12th Nov, 1979

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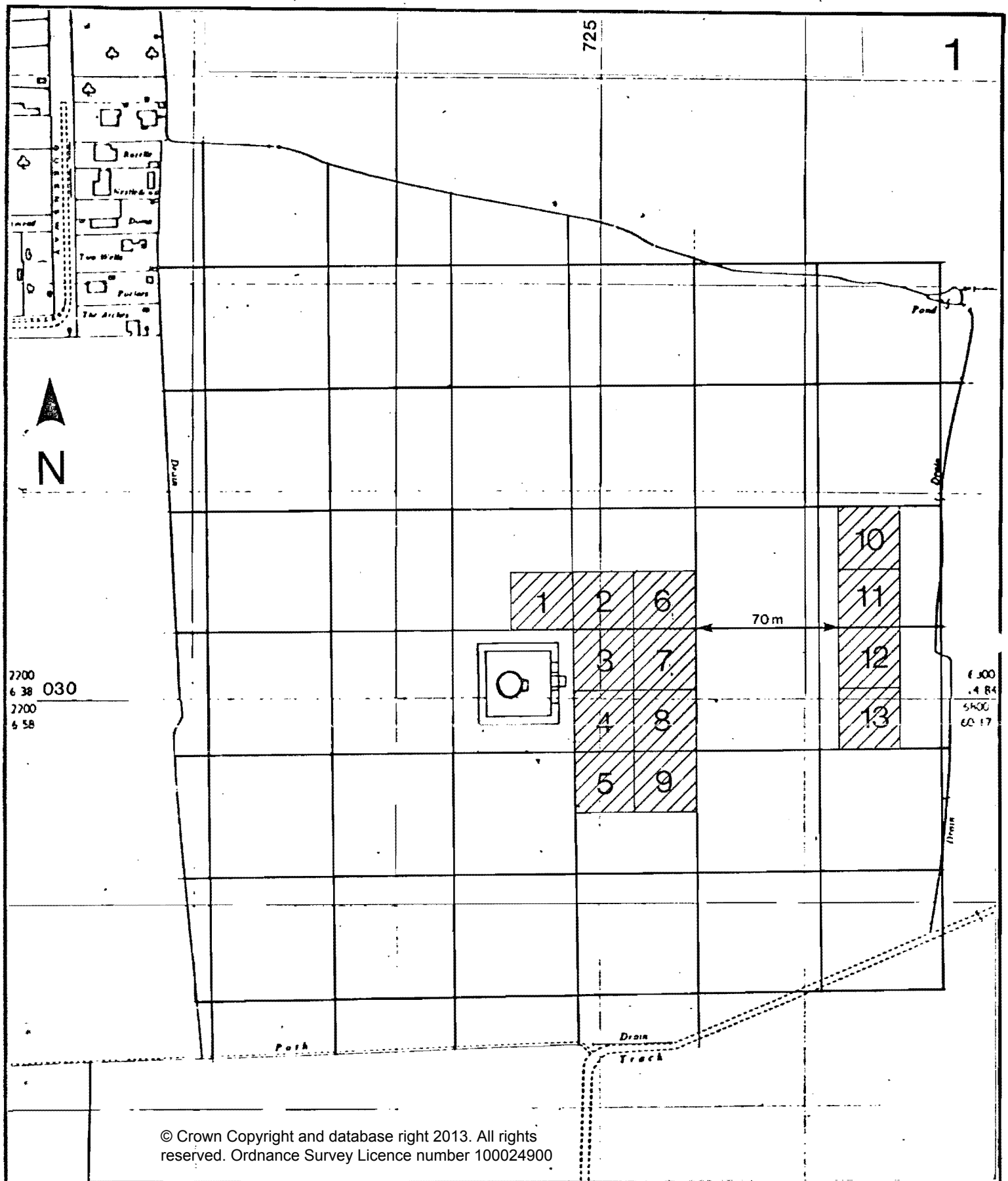

HAYLING ISLAND

MAGNETOMETER SURVEY

Location

Survey no. 21/79	Survey ////	NG ref. SU 030725
0 1:2500 200m	DoE A.M. Laboratory Geophysics Section	

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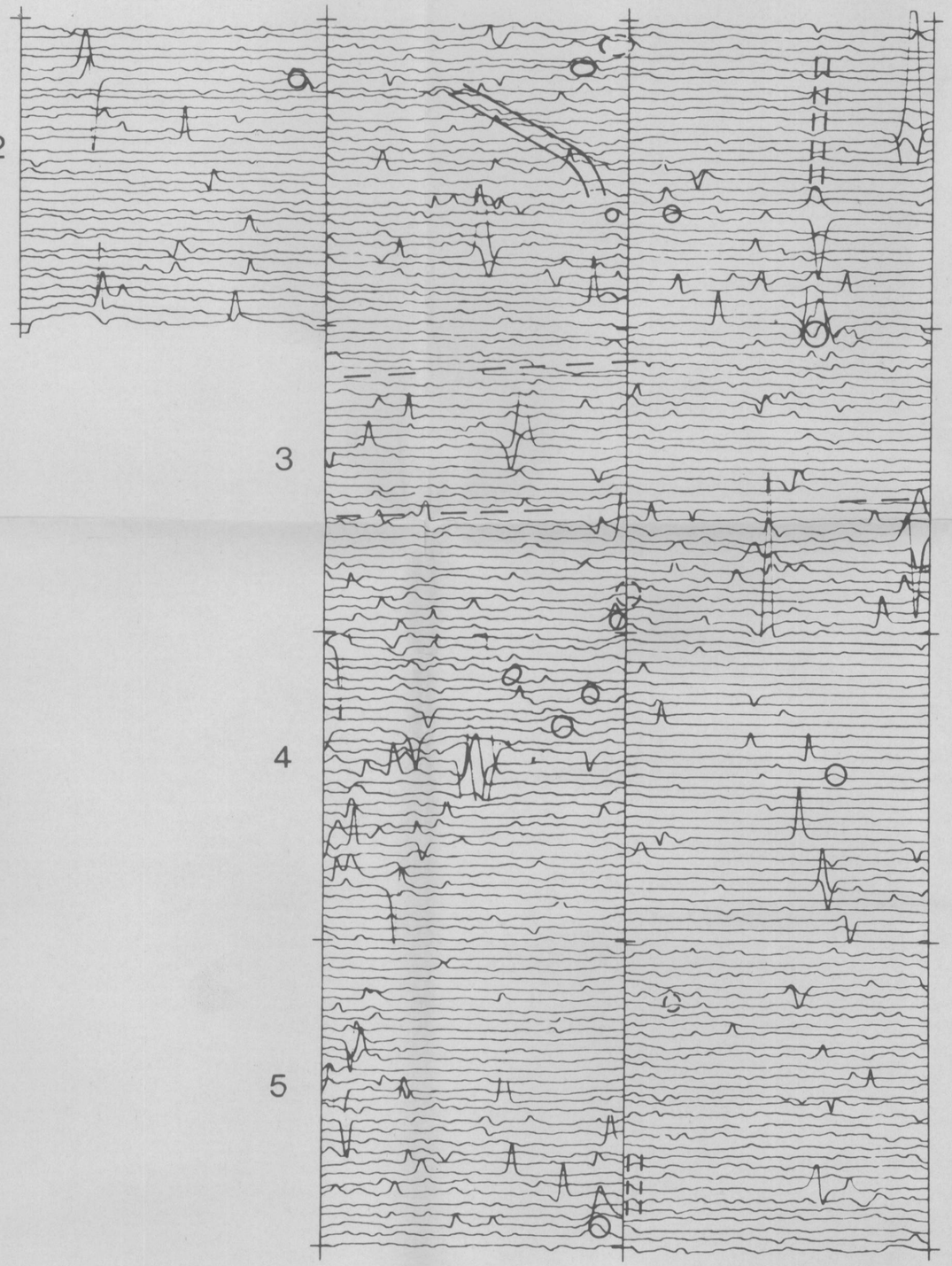

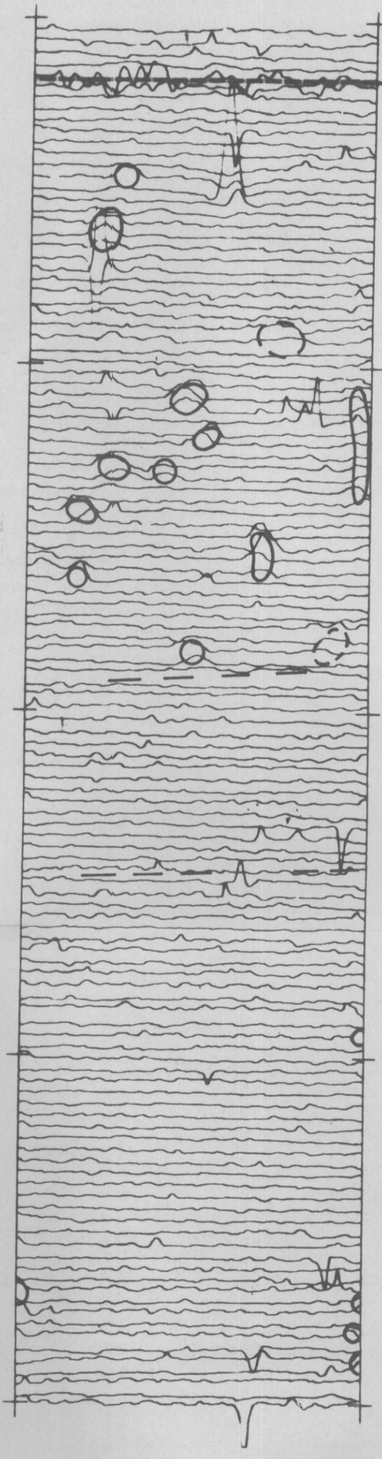

HAYLING ISLAND

MAGNETOMETER SURVEY

O (O) magnetic anomalies

vertical scale 15 gamma / cm

0 1:400 30m

Survey no. 21/79 Plan no. 2 of 2	DoE A.M. Laboratory Geophysics Section