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Ancient Monuments Laboratory
Report 55/94

ST ANDREW'S HILL
CULLOMPTON, DEVON
REPORT ON GEOPHYSICAL SURVEY
JANUARY 1992

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Summary

Magnetic survey of the site at St Andrew's Hill, Cullompton, Devon confirmed the presence of archaeological anomalies detected as a series of cropmarks by aerial photography in 1984. However, no significant magnetic anomalies were detected in the immediate environs of the fort to the west, where the town council proposed the extension of the existing town cemetery. Subsequent excavation by the Exeter Museum Archaeological Field Unit, prior to this development revealed a Roman fort ditch running alongside the eastern boundary of the proposed cemetery extension. The failure of this quite substantial feature to be detected as a magnetic anomaly was attributed to the concentration of modern ferrous material that had accumulated within this area of the survey.

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ST ANDREW'S HILL, CULLOMPTON, DEVON.

Report on geophysical survey, January 1992

Introduction

The Roman military site at St Andrew's Hill, Cullompton was first discovered from aerial photographs taken in 1984 (Griffith 1984) and was subsequently protected as a scheduled ancient monument, Devon 1029. This survey was instigated in response to the submission of a planning application by the Cullompton town council for the extension of the current cemetery into a small field (*approx.* 0.3ha - **Figure 1**) immediately west of the scheduled fort complex. The aim of the survey was to aid the archaeological evaluation of this area and to further examine the relationship between the Roman fort and its immediate environs.

The site (NGR ST 018 076) occupies a commanding position 95m OD above the Culm valley and the geology is composed of Permian breccia and conglomerate.

Method

A magnetometer survey was deemed to be the most suitable survey technique due to the large area of ground to be covered.

A survey grid divided into 30m squares was established over the site (**Figure 1** - location plan) with partial squares extending to the field boundaries. The area was then surveyed with a Geoscan FM36 fluxgate gradiometer along successive N-S traverses separated by 1.0m intervals. Readings were logged every 0.25m and the data was downloaded to a microcomputer in the field. Final presentation of the data has been enhanced by the application of a local median filter to remove the intense response of buried/surface iron and a low pass Gaussian filter to suppress image noise (Scollar *et al* 1990); the data is presented as a greyscale image superimposed upon the OS map (**Figure 2**) and a traceplot of the raw data (**Figure 3**).

Results

Despite the quiet magnetic response over the site and the interference from modern features such as the telegraph pole and the former field boundary to the east, the survey has identified a number of magnetic anomalies complementing the interpretation of the 1984 aerial photograph. The existence of alignments suggestive of at least two Roman forts is supported by the position of the curvi-linear anomalies (1) and (2), that are believed to represent the corners of separate ditched enclosures. Closer examination of (1) reveals a pair of ditches separated by a central negative anomaly in contrast to the single wide ditch of anomaly (2). Additional linear anomalies exist on either side of the former field boundary separating the two corner sections. These anomalies replicate the linear cropmarks and in places suggest the existence of additional defensive alignments beyond those of anomalies (1) and (2). However, the intense response from the two linear features in the extreme north-east of the survey area

and their absence from the 1984 AP suggests that they are of a more recent origin than the section of curved ditch (2) that they are seen to cross.

Identification of the discrete internal features observed from the air has largely been frustrated by the presence of amorphous areas of magnetic disturbance. However, the AP anomaly interpreted as a courtyard well (Griffith 1984) has been replicated as a curious magnetic anomaly, consisting of a positive annulus 4m in diameter surrounded by a negative halo. Interpretation of this unusual anomaly cannot be certain, although a thermoremanent origin, for example a kiln or a hearth, does not seem unreasonable.

The survey data from the two land parcels to the west (squares 1→12) has been affected by the presence of modern ferrous disturbance largely concentrated in the extant field boundaries. The course of the ferrous pipeline, bisecting the south-west corner of the smallest field, is curious as it fails to continue through the field boundary into the survey area immediately to the west -suggesting that it represents a former agricultural supply to an animal drinking trough. The significance of the weakly defined linear anomalies originating in the most westerly land parcel is again difficult to determine, although it seems unlikely that they are associated with the Roman military activity recorded in the field to the east.

Conclusion

This survey has successfully identified a number of ditch-type magnetic anomalies associated with the Roman military activity on this site, complementing the 1984 cropmark evidence. The data from squares 1→12 contains few significant magnetic anomalies and does not suggest the presence of any archaeological activity associated with the Roman forts identified immediately to the east. However, subsequent excavation by the Exeter Museum Archaeological Field Unit (Simpson 1992) discovered a substantial Roman ditch running alongside the field boundary to the east of squares 10 and 12 which, presumably, was obscured by the ferrous disturbance within this area.

Surveyed by: G Fookes
N Linford

Date of survey: 20-24/1/92

Reported by: N Linford

Date of report: 5/12/94

Enclosed Figures and Survey Plans:

Figure 1 - Location of the survey data *1:2500.*

Figure 2 - Magnetometer survey data superimposed upon OS map *1:1250.*

Figure 3 - Traceplot of raw magnetometer data *1:1250.*

References

Griffith, F, M, 1984 Roman Military sites in Devon: some recent discoveries, *Proceedings of the Devon Archaeological Society* **42**.

Scollar, I, *et al* 1990 Archaeological Prospecting and Remote Sensing, 507-508, Cambridge.

Simpson, S, J, 1992 Archaeological Evaluation of Proposed Cemetery Extension, St Andrew's Hill, Cullompton. *Exeter Museums Archaeological Field Unit* **Report No. 92.49**.

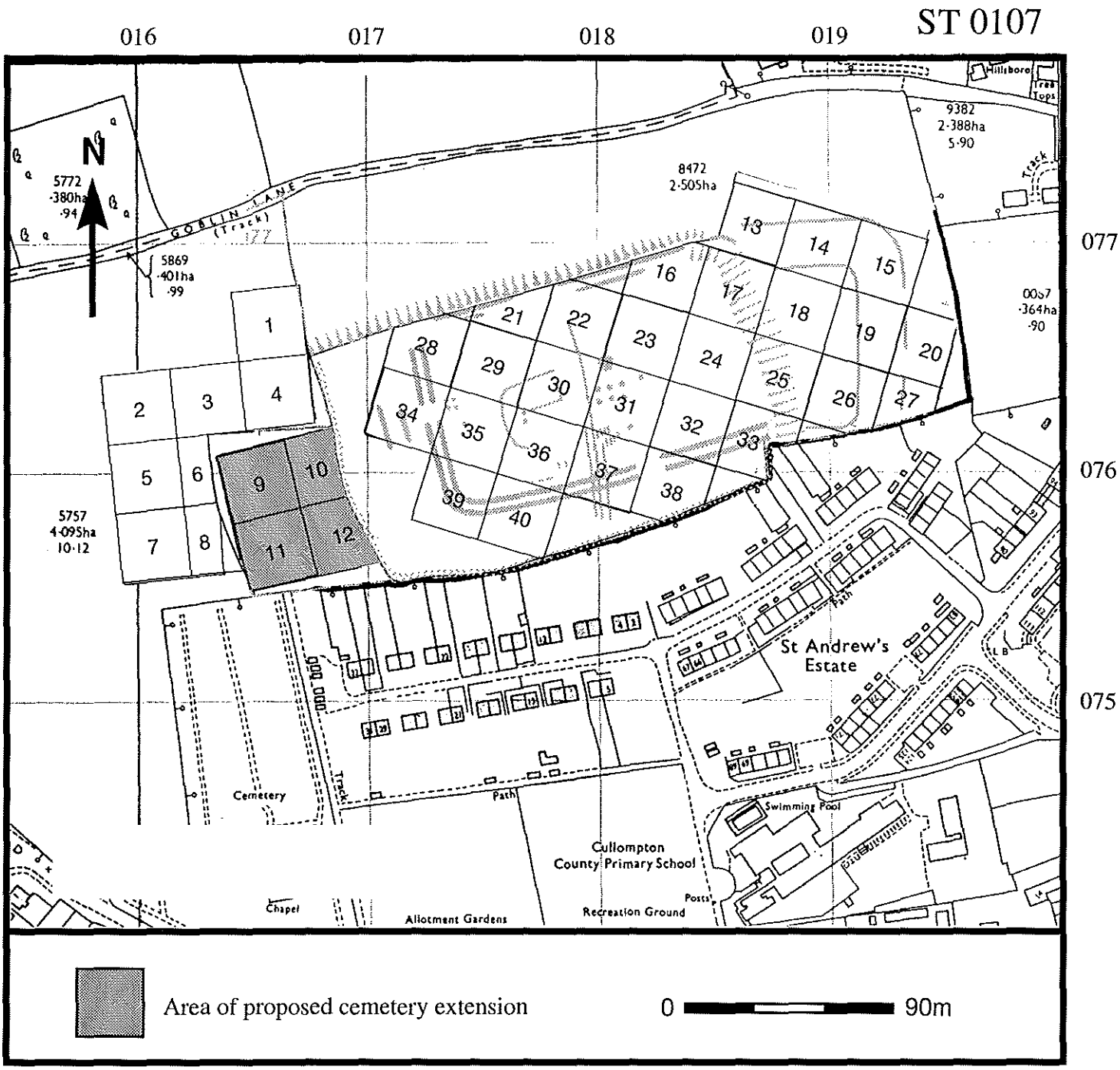

Figure 1; St Andrew's Hill, Cullompton, Devon. Location of magnetometer survey and 1984 cropmarks.

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Magnetometer survey 1992

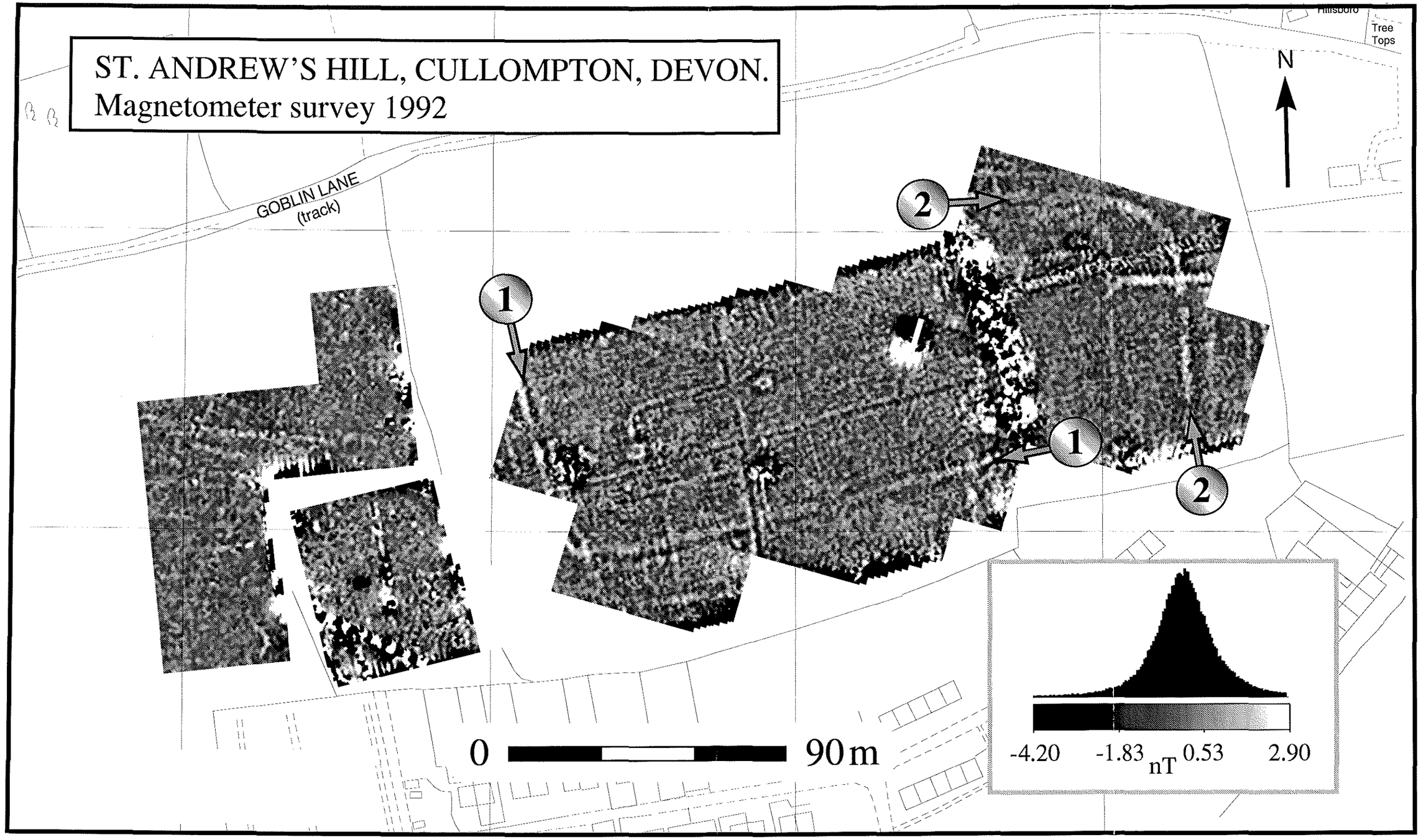

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Figure 2

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Magnetometer data January 1992.

Figure 3