Birmingham University Field Archaeology Unit

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AN ARCHAEOLOGICAL EVALUATION AND WATCHING BRIEF AT REDHILL, TELFORD, SHROPSHIRE 1991/2

by
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An Archaeological Evaluation and Watching Brief at Redhill, Telford, Shropshire in 1991

Introduction

In October/November 1991 Birmingham University Field Archaeology Unit was commissioned by Severn Trent Water Limited to carry out an archaeological evaluation of land to the east of Redhill Reservoir (NGR SJ725111), c.1.5 miles east of Telford, in advance of the digging of a new pipeline linking the Redhill Reservoir to another at nearby Sheriffhales.

Subsequently, in March/April 1992, two watching briefs were carried out during construction work, in accordance with the archaeological recommendations arising from the initial stage of archaeological evaluation.

The land in question lay in two fields, both under scrubby permanent pasture, largely within the identified boundaries of the Roman settlement of Uxacona (County Monument SA 1113), though not within the Scheduled Areas (Figure 1), which lie to the north west (AM 188) and to the south east (AM 201).

The Evaluation

The evaluation consisted of a geophysical survey, followed by trial trenching to assess the nature and date of any identified anomalies.

The Geophysical Survey (by S. Buteux)

Principles and restrictions of magnetic survey

The detection of archaeological features by magnetic survey depends on the presence of weakly-magnetised iron oxides in the earth. A magnetometer

measures local changes in magnetic field strength caused by differences between the topsoil, which is generally rich in iron oxides, and the subsoil, which is generally less so. Thus a feature such as a ditch cut into the subsoil and filled with iron-rich subsoil will register as a positive magnetic anomaly relative to the surrounding area. Other circumstances, such as thermo-remnant magnetism caused by the firing of kilns and hearths or the presence of ferrous objects, will cause much stronger anomalies than those caused by soil differences alone.

The success of magnetic survey in detecting buried archaeological features depends on the nature of those features and the contrast in magnetic susceptibility between the topsoil and subsoil. Even in good conditions features such as postholes and minor gullies are unlikely to be detected by the technique unless enhancement is achieved through burning or organic decomposition associated with prolonged occupation.

Instrumentation and method

A Geoscan FM18 Fluxgate Gradiometer with ST1 automatic trigger was used to carry out the survey. Magnetic readings were logged at 0.5m intervals along the northwest-southeast axis, with traverses at 1.0m intervals (800 readings per 20m x 20m grid). This standard method enables relatively good spatial resolution to be combined with rapid coverage. Readings were logged at the most sensitive, 0.1nT (nanotesla), range.

Data were transferred to a Toshiba T1000 portable computer for analysis and display using the Geoplot (version 1.20) programme, and were plotted in dot-density on an Epson printer. The interpretation of the data offered below is based on both the plots and the raw data.

Layout of the survey area

The survey area consisted of two blocks(Area A,Area B/C) of six 20m x 20m squares each, centred on the proposed pipe route. Square 11 was only partially surveyed due to logistical problems and its being dissected by a modern hedgeline.

Results

Magnetically the site proved to be quiet (Figure 2) with readings seldom exceeding 1.0 nT from zero. In Square 1 an anomaly resulted from the magnetic 'shadow' of the nearby oil pipeline.In Square 10 a possible, but very feint, linear anomaly, aligned roughly east-west, was tentatively identified. A number of other anomalies was identified, in Squares 7 and 10 for example, which possibly indicated pit-type features, although again only very tentatively.Single point anomalies, which occur as a scatter across both survey areas,are in all probability the result of modern ferrous debris in the topsoil.The apparent anomaly in the northeast corner of Square 12 results from the presence of a nearby parked van.

In general, therefore, the geophysical results suggested very little in the way of buried archaeological features, a conclusion borne out by the results of the trial excavations.

The Trial Trenching

In view of the poor results of the geophysical survey it was decided to dig a series of trial trenches,10m long by 1.8m wide, at regular intervals across the line of the pipe, and to further investigate the anomalies in Squares 10 and 12 with shorter trenches (Figure 1c). The trenches, numbered from 1 at the reservoir end of the pipeline, were opened by machine to the base of the topsoil, cleaned by hand and inspected. Trenches 1-3 were seen to contain significant hillwash deposits which were subsequently removed by machine. All trenches displayed either undisturbed natural bedrock or clean subsoil with bedrock showing through in patches. The only remotely possible archaeological feature lay partially in Trench 9 and consisted of an irregular hole or hollow (F1), about 1m in diameter and 0.10m deep with an uneven base, backfilled with grey-yellow silty clay with charcoal flecking (1003). No finds came from the feature and its nature suggests its identification as a possible tree disturbance.

The only finds from the trial trenching exercise came from Trenches 12 and 13 and consisted of a single sherd of post-medieval pottery and four small fragments of brick or tile of an uncertain date.

Conclusions and Recommendations

The evaluation has demonstrated an apparent absence of archaeological features or deposits within the proposed pipeline corridor. Nevertheless, the fact of the pipeline zone lying within a demonstrated Roman site, with the boundary being identified by aerial photography (though this may cut through the evaluated area in the unsurveyed zone of Square 11) means that further archaeological work must be recommended, if only to confirm the apparent absence of activity across this whole area. It is therefore recommended that the site be inspected after the stripping of topsoil along the length of the pipeline corridor in both fields to the west of the private road, and that provision be made for the salvage excavation of any features so exposed and further threatened by the next stage of the pipe laying operation, with particular attention being paid to the area roughly covered by geophysical Squares 10-12 where the settlement boundary should be found.

The certain demonstration of such an extensive open area within a projected settlement would raise interesting questions concerning the nature of the Roman activity here.

Appendix: The Watching Briefs

Two further stages of archaeological monitoring were carried out between March and April 1992 as recommended in the initial evaluation report (above). First, removal of the topsoil along the course of the pipeline corridor was monitored to see if any features were cut into the subsoil; this was followed by observation of the cutting of the pipe trench, particularly in Area 11 (Figure 1c), around the hedgeline.

The results confirmed the conclusions of the initial evaluation. No archaeological features, deposits or artefacts were found within the pipeline corridor. For most of the length of the pipeline a clean red clay subsoil underlay the thin (c.0.30m) band of topsoil. In Area 11, around the present hedgeline, it would appear that any stratigraphic evidence for the boundary of the Roman settlement identified from aerial photographs has been obliterated by later disturbance associated with this field boundary.

Acknowledgements

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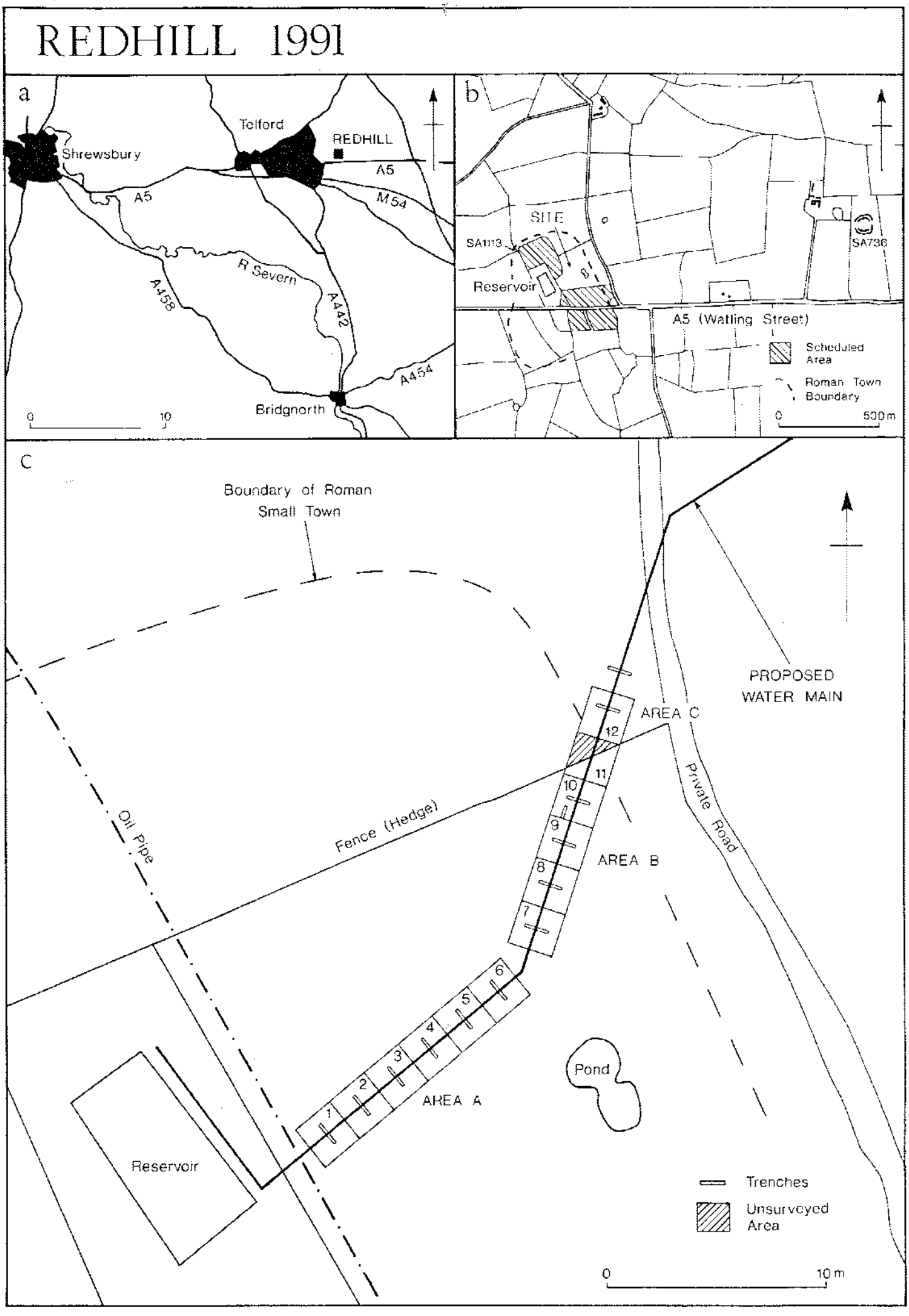
REDHILL 1991
a
Shrewsbury
Telford
REDHILL
A5
A5
M54
R Severn
A458
A442
A454
Bridgnorth
0
10
b
SITE
SA1113
Reservoir
SA736
A5 (Watling Street)
Scheduled Area
Roman Town Boundary
0
500m
c
Boundary of Roman Small Town
PROPOSED WATER MAIN
AREA C
AREA B
AREA A
Private Road
Fence (Hedge)
Oil Pipe
Pond
Reservoir
1
2
3
4
5
6
7
8
9
10
11
12
Trenches
Unsurveyed Area
0
10 m

Figure 1

REDHILL 1991 Geophysical Survey

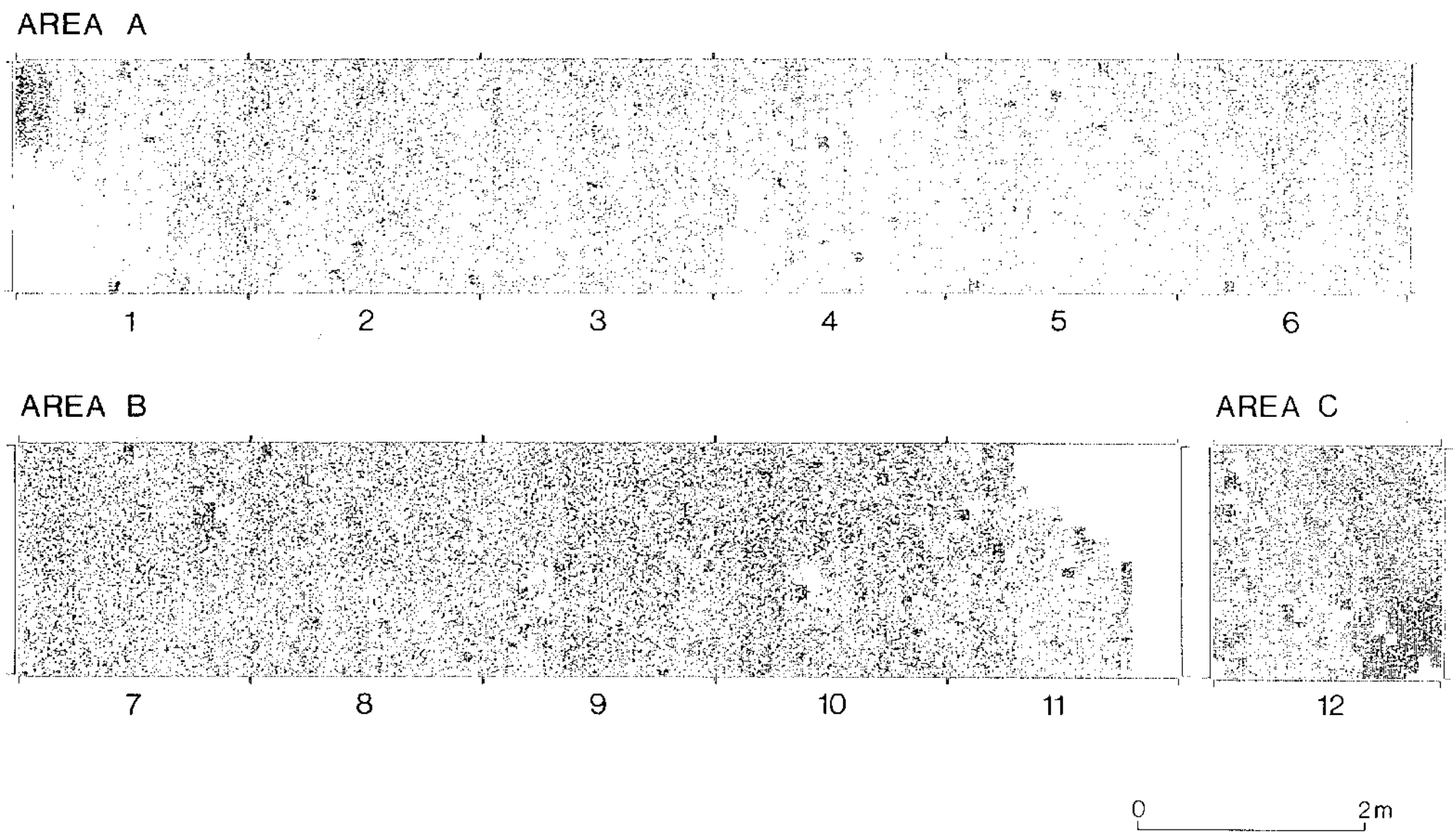

Figure 2