Land off Evesham Road, Salford Priors, Warwickshire

Geophysical Survey
2014

Prepared by A. Boucher

CONTENTS

Abstract

This geophysical survey was undertaken as part of an archaeological field evaluation of a proposed development site at Salford Priors, Warwickshire.

The survey has detected various magnetic disturbances, most of which appear to be of recent origin. The ground surface across the remainder of the site appears to be substantially undisturbed, and the survey has not provided any evidence for the presence of archaeological findings, other than a few minor magnetic anomalies of no clear significance.

1. **Introduction**

The survey was commissioned from Bartlett Clark Consultancy, Specialists in Archaeogeophysics of Oxford, by Headland Archaeology (UK) Ltd on behalf of Bloor Homes. Fieldwork for the survey was done on 16 June 2014. [The survey was carried out at the same time as another nearby investigation for the same client at Bidford on Avon, Warwickshire. The two surveys are reported on separately.]

The site occupies a field and adjacent small paddock to the west of Evesham Road, Salford Priors. The evaluation area (as indicated by a red outline in Illustration 1) is centred approximately at NGR SP074510, and amounts to c. 1.33ha. It was surveyed as completely as obstructions permitted.

2. Objectives of the Survey

The general aim of the geophysical survey was to identify the extent and character of any archaeological remains capable of producing a magnetic response; these can include ditches, large pits, kilns, ovens etc.

3. Geological Background

The site is on a bedrock of Triassic Mercia Mudstone beneath a drift deposit of glacial sand and gravel. These conditions are similar to those at the Bidford site (mentioned above). Soils on Triassic bedrock are sometimes not strongly responsive to magnetometer surveys, although gravel soils often provide satisfactory surveying conditions. Magnetic susceptibility readings taken at the site during the survey gave readings in a range 13-22 (x 10^{-5} SI), which should be sufficient for effective magnetic investigation.

4. Archaeological Background

A plan (supplied to Headland Archaeology by Warwickshire County Council) and showing entries from the County Historic Environment Record is reproduced in Illustration 1. It indicates a number of listed buildings in the village, but no previously identified archaeological findings are shown within the evaluation area. The survey will therefore serve as a prospecting exercise to test for the presence of previously unrecorded archaeological features at the site.

5. Survey Procedure

The procedure used for the investigation was a fluxgate gradiometer survey across the evaluation area, with results presented as described below.

A survey grid was set out at the required locations, and tied to the OS grid using a GPS system with VRS correction to provide 0.1m or greater accuracy. The plans are therefore geo-referenced, and OS co-ordinates of map locations can be read from the AutoCAD version of the plans.

The magnetometer readings were collected along transects 1m apart using Bartington 1m fluxgate gradiometers, and are plotted at 25cm intervals along each transect. The results of the survey are presented as grey a scale plot in Illustration 1 (1:1250 scale at A4), and as a graphical (x-y trace) plot (at 1:1000) in Illustration 2. Inclusion of both types of presentation allows the detected magnetic anomalies to be examined in plan and profile respectively.

The graphical (x-y) plot represents minimally pre-processed magnetometer readings, as recommended for initial presentation of survey data in the 2008 English Heritage geophysical guidelines document (English Heritage 2008). Adjustments are made for irregularities in line spacing caused by variations in the instrument zero setting (as is required for legibility in gradiometer data), but no further filtering or other process which could affect the anomaly profiles or influence the interpretation of the data has been applied. A weak additional 2D low pass filter has been applied to the grey scale plot to adjust background noise levels.

An interpretation of the findings is shown in Illustration 2, and is reproduced separately to provide a summary of the findings in Illustration 3. Colour coding has been used in the interpretation to distinguish different interpretations and anomaly types.

6. Results

The survey has detected considerable magnetic activity at the site, but there are no findings which can be claimed with any confidence to be of archaeological significance.

There are strong recent magnetic disturbances (outlined in grey) which in part represent the surfacing of an area used for car parking near to Evesham Road at the east of the site, and various other strong disturbances near to field boundaries. A pipe (blue) intersects the larger field in the centre of the survey.

Further strong magnetic anomalies (as labelled A in Illustration 3) align with a field boundary, and so could represent debris or an infilled ditch on the line of a former boundary.

The only other identifiable findings are a few small magnetic anomalies which are characterised by rounded profiles (in the graphical plot, Illustration 2), and so could be interpreted as silted pits. Such features are commonly found at archaeological sites, but the examples outlined in red (including those labelled B and C in Illustration 3) are weak and isolated, and are not clearly distinguishable from other background disturbances.

7. Conclusions

Conditions at the site appear to be favourable for the magnetic detection of archaeological features, and the survey has detected a number of clearly non-archaeological magnetic features and disturbances. The only findings which show any of the characteristics to be expected from archaeological features are a few small pit-like magnetic anomalies, but these are weak and isolated, and it is therefore unlikely they indicate the presence of an archaeological site.

Report by:

A. Bartlett BSc MPhil

Bartlett - Clark Consultancy
Specialists in Archaeogeophysics
25 Estate Yard
Cuckoo Lane
North Leigh
Oxfordshire
OX29 6PW 01865 200864 bcc123@ntlworld.com

with:

A. Boucher

Headland Archaeology (UK) Ltd

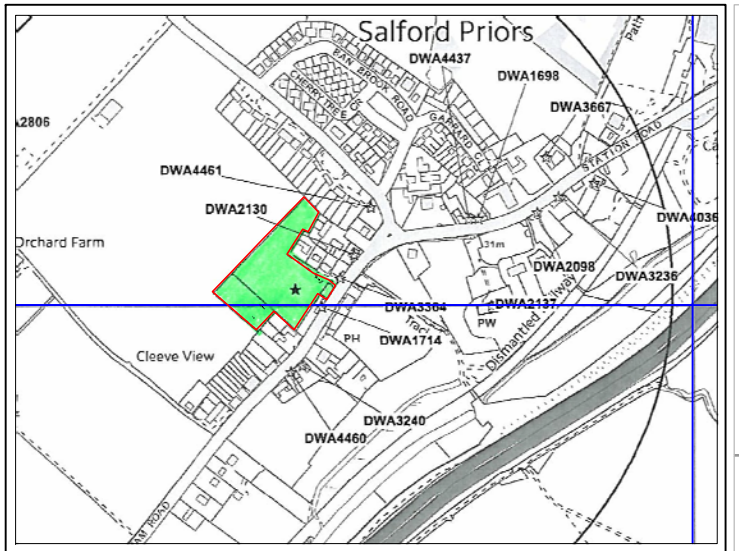
14 July 2014

The fieldwork for this project was done by N. Paveley and R. Organ.

References

English Heritage 2008a *Geophysical Survey in Archaeological Field Evaluation* [online facsimile] (English Heritage: Swindon, 2008), English Heritage Research

English Heritage 2008b *Professional Services Guideline no. 1, 2nd edn* English Heritage Research.



Background mapping based on site plan by Axis Surveys, Burton on Trent.

407500E

N

251000N

car park

obstructed

shed

Land off Evesham Road,
Salford Priors, Warwickshire
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Illustration 1: Magnetometer survey
(grey scale plot)

1:1250 @ A4

0 50m

Surveyed by: Bartlett-Clark Consultancy 01865 200864
for: Headland Archaeology (UK) Ltd

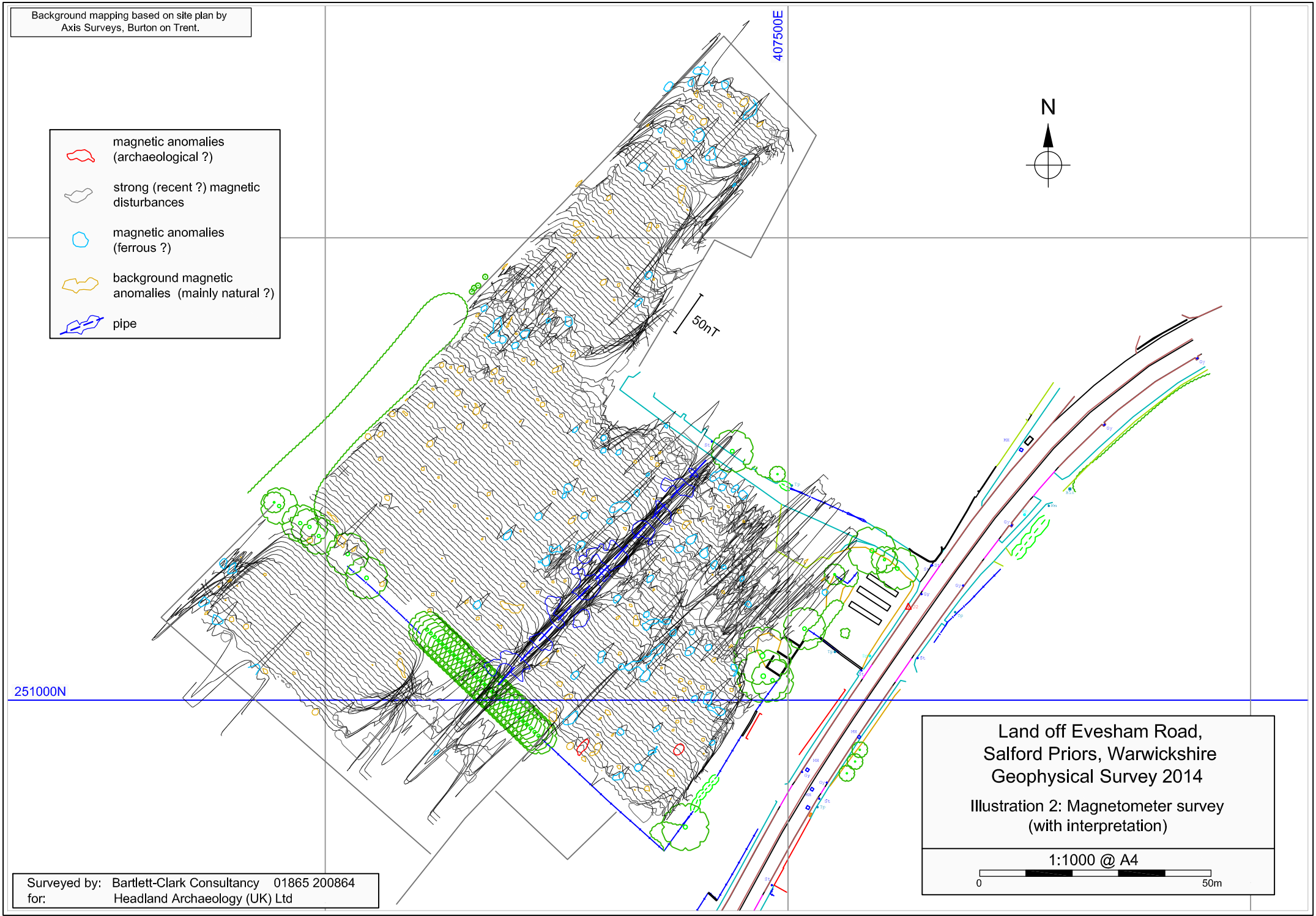
Background mapping based on site plan by
Axis Surveys, Burton on Trent.
magnetic anomalies
(archaeological ?)
strong (recent ?) magnetic
disturbances
magnetic anomalies
(ferrous ?)
background magnetic
anomalies (mainly natural ?)
pipe
407500E
N
50nT
251000N
Land off Evesham Road,
Salford Priors, Warwickshire
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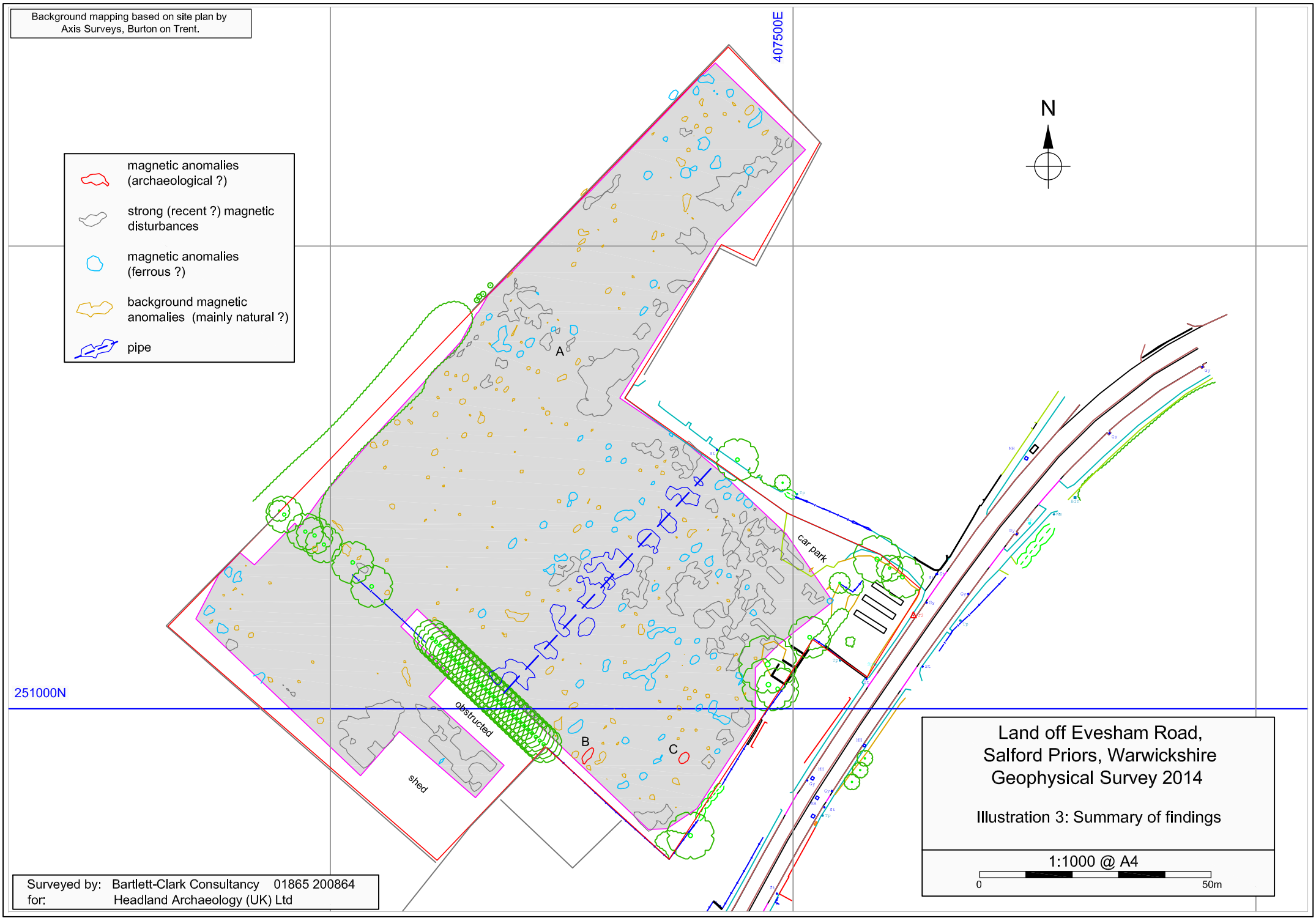
Illustration 2: Magnetometer survey
(with interpretation)
1:1000 @ A4
0
50m
Surveyed by: Bartlett-Clark Consultancy 01865 200864
for: Headland Archaeology (UK) Ltd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Land off Evesham Road,
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Illustration 3: Summary of findings
1:1000 @ A4
0
50m
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