

**LAND OFF NORTHAMPTON LANE, MOULTON,
NORTHAMPTONSHIRE**

Report on Archaeological Geophysical Survey 2012

A.D.H. Bartlett

Surveyed by:

Bartlett-Clark Consultancy

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for:

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Studley House, Station Road
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MK43 8BH**

on behalf of:

**Redrow Homes South Midlands
Land off Northampton Lane, Moulton**

Report on Archaeological Geophysical Survey 2012

Introduction

This report describes a geophysical survey which has been undertaken as part of an archaeological field evaluation of a proposed development site at Moulton, Northamptonshire. The survey was commissioned from Bartlett Clark Consultancy, Specialists in Archaeogeophysics of Oxford, by Phoenix Consulting Archaeology Ltd on behalf of Redrow Homes South Midlands. Fieldwork was done between 27 and 29 February 2012.

The evaluation site is an arable field of c. 8.1ha, located as indicated on the map extract inset in figure 1. The garden of number 108 Northampton Lane North (at the NW corner of the site) was also included in the survey coverage.

The Site

The following notes are summarised in part from the Archaeological Desk Based Assessment for the project, which was prepared and supplied to us by Phoenix Consulting Archaeology (*Document Reference PC369a; 3 November 2011*).

Location and Topography

The evaluation area is a field at c. 110m AOD, and centred at NGR SP 784 655. It is located to the east of Northampton Lane c. 1km south of Moulton village, and 6km NE of central Northampton.

The site is on a bedrock of Jurassic Oolite and Lias. Boulder Clay drift deposits are recorded nearby, and may be present at the site itself. Sites on comparable Jurassic geology (in Northamptonshire and elsewhere) have responded well in previous magnetometer surveys, and have often produced clear archaeological findings. The relatively high magnetic susceptibility readings recorded at the site (mean= 41 SI) also indicate that conditions should be favourable for a magnetometer survey.

Archaeological background

Previous archaeological findings from the site itself are limited to a few Roman and medieval surface finds of coins, metal objects and pottery. These are insufficient to confirm the presence of an archaeological site, and the DBA therefore concludes that the site offers only a low to moderate potential for the presence of archaeological remains.

The possible presence of archaeological features cannot however be wholly discounted in advance of investigation, given that sites and findings in the vicinity (as noted in the

DBA) include Bronze Age cropmarks indicating a barrow cemetery and nearby settlement about 1km to the north. A further Bronze Age settlement was recorded in the 1960s 0.5km to the east, and Iron Age and Roman settlements were excavated in the 1970s 1km to the SW, and 0.5km to the SE respectively.

Remains of buildings and occupation of later periods are likely to lie within the present village to the north of the evaluation area. Ridge and furrow has been recorded in various nearby fields, including one immediately to the east of the site. The 1886 OS map (reproduced from the DBA and inset in figure 3) shows field boundaries present within the evaluation area at that date.

Survey Procedure

Magnetometer readings were collected using Bartington 1m fluxgate gradiometers, and are plotted at 25cm intervals along transects 1m apart. The results of the survey are shown as a grey scale plot in figure 1, and as a graphical (x-y trace) plot in figure 2. Inclusion of these alternative presentations allows the detected magnetic anomalies to be examined in plan and profile respectively. An interpretation of the findings is shown superimposed on the graphical plots (so that the interpretation can be compared with the underlying readings), and is also reproduced separately to provide a summary of the findings in figure 3 (all at 1:1250 scale).

The survey plots show the magnetometer readings after minimal processing which includes adjustment for irregularities in line spacing caused by variations in the instrument zero setting, and slight linear smoothing. The readings in the grey scale plot have additionally been subjected to weak 2D low pass filtering, which is applied to reduce background noise levels.

Colour coding has been used in the interpretation to distinguish different effects. Magnetic anomalies which appear to show possible archaeological characteristics are outlined in red. Background geological disturbances are indicated in a light brown, and stronger (probably recent) disturbances in a darker brown. Weak linear cultivation effects are in green, and ferrous objects (identifiable as narrow spikes in the graphical plots) are in blue.

The survey grid was set out and located at the required national grid co-ordinates by means of a differential GPS system (accurate to c. 0.1m). OS co-ordinates of map locations can be read from the AutoCAD (.dwg) version of the plans which can be supplied with this report.

The magnetometer survey was supplemented by a background magnetic susceptibility survey with readings taken at 30m intervals using a Bartington MS2 meter and field sensor loop. A plot of the readings is inset in figure 3.

Susceptibility readings can provide a broad indication of previously occupied or disturbed areas in which burning associated with past human occupation has enhanced

the magnetic susceptibility of the topsoil, although the readings may be affected by a number of non-archaeological factors, including geology and land use.

The magnetometer responds to cut features such as ditches and pits when they are silted with topsoil, which usually has a higher magnetic susceptibility than the underlying natural subsoil. It also detects the thermoremanent magnetism of fired materials, notably baked clay structures such as kilns or hearths, and so responds preferentially to the presence of ancient settlement or industrial remains. It is also strongly affected by ferrous and other debris of recent origin.

Results

Conditions at the site should (as noted above) be favourable for the detection of archaeological features, if any are present, but only minimal findings were obtained.

Two of the more conspicuous features visible in the survey plots are lines of disturbances (marked by narrow red outlines, and labelled A and B on figure 3). These correspond to the former field boundaries, as indicated on the 1886 map inset in figure 3. [Boundary B had been removed by the time of the 3rd Edition OS map in 1927.] The boundaries are indicated by small magnetic anomalies representing tree holes or similar disturbances along former hedge lines, rather than by ditches.

Various other magnetic findings are likely to be of recent or natural origin. There are strong magnetic anomalies, as are often seen near boundaries and modern buildings, along the western and southern edges of the field. A particularly dense concentration towards the north of the field at C could perhaps indicate an infilled pit or pond, although a scatter of rubble or ferrous debris could give rise to a similar response. Magnetic susceptibility values (as inset in figure 3) are high in this corner of the field (and elsewhere along the western boundary), but there are no nearby interpretable features to suggest the effect is archaeologically significant. A similarly disturbed magnetic response was obtained from the garden of 108 Northampton Lane. No individually interpretable magnetic anomalies can be identified in the garden, other than a pipe near the northern boundary.

Disturbances along the southern boundary of the main field are less concentrated than to the west. They may relate to a former track which previously followed this boundary, as is indicated on the 1927 OS map, and is noted in the DBA.

Some isolated individual ferrous magnetic anomalies are outlined in the interpretation in blue. They are sparsely distributed across the survey, which suggests there has been little recent ground disturbance away from the southern and western boundaries.

The remaining findings include some broad and weak magnetic anomalies (as outlined in light brown). These are probably slight natural hollows or variations in the depth of soil cover. A few small and more distinct magnetic anomalies could perhaps represent silted pits, as are often seen in magnetic surveys of ancient settlement sites (and are outlined in

red in the interpretation). The most distinct of these is towards the south of the field at D, but others are less clearly distinguishable from nearby background magnetic activity. These features are also widely dispersed, and do not form any groups or clusters of a kind which could suggest the presence of an archaeological site.

Various linear cultivation effects are visible in the grey scale plot, and are indicated schematically by broken green lines in the interpretation. It is probable that the parallel north-south lines result from recent ploughing, but some of the east-west markings (as seen particularly at E and F) could perhaps represent surviving traces of ridge and furrow.

Conclusions

The survey findings include disturbances along two former hedge lines, and cultivation effects which may indicate traces of ridge and furrow. A few magnetic anomalies which could represent silted pits or hollows have been identified, but they are too isolated or widely dispersed to suggest the presence of any concentrations of archaeological features.

Report by:

A.D.H. Bartlett BSc MPhil

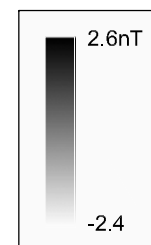
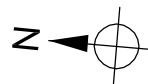
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8 March 2012

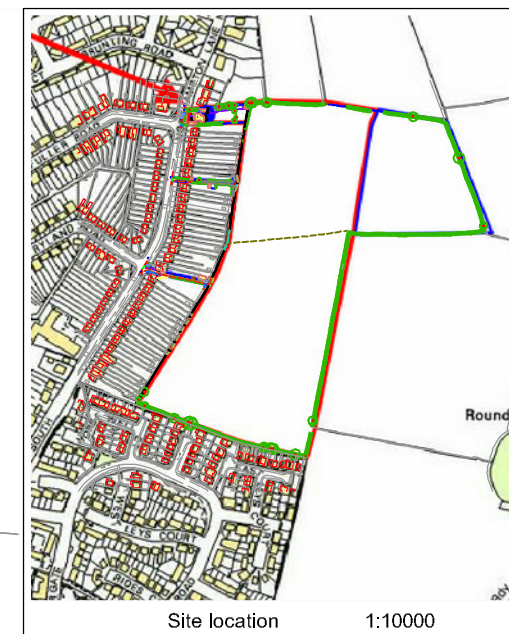
The fieldwork and data processing for this project were done by P. Cottrell and F. Prince.

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265500N

478500E

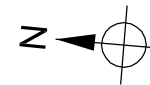


Site location

1:10000








Land off Northampton Lane
Moulton, Northamptonshire
Geophysical Survey 2012
Figure 1: Magnetometer survey
(grey scale plot)

0 1:1250 50m



60 nT

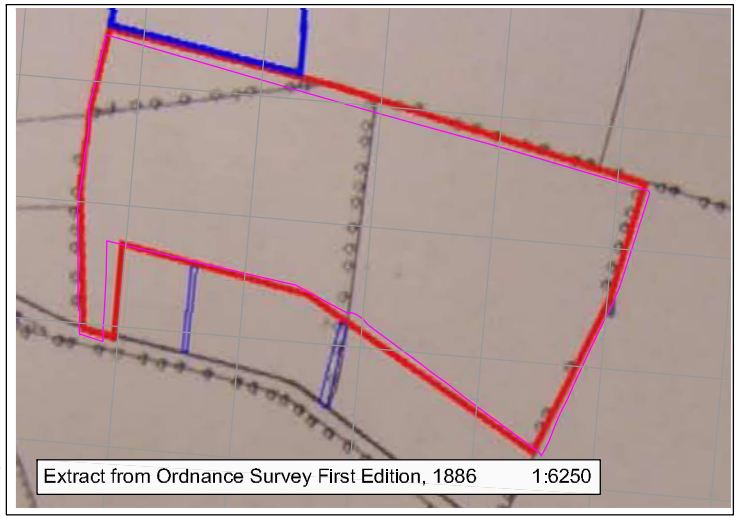
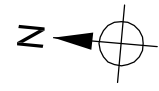
140 nT

-  magnetic anomalies (archaeological ?)
-  magnetic disturbances
(recent / non-archaeological)
-  background magnetic activity
(natural / non-archaeological ?)
-  cultivation
-  disturbances on former boundaries
-  strong (ferrous) magnetic anomalies
-  pipe

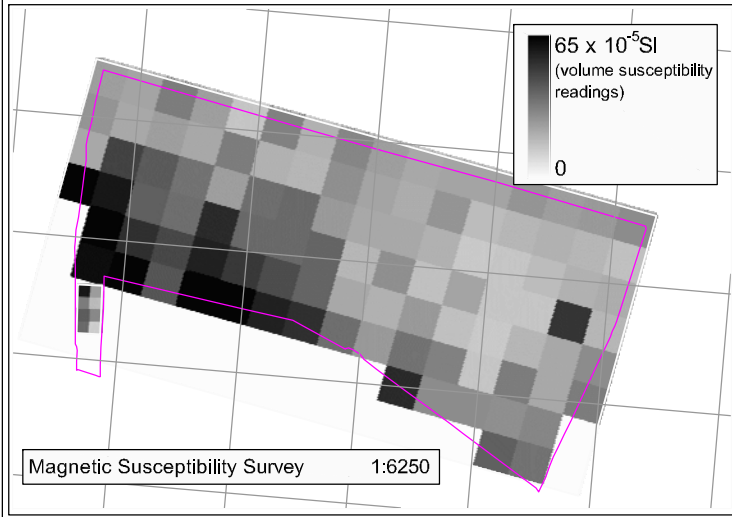
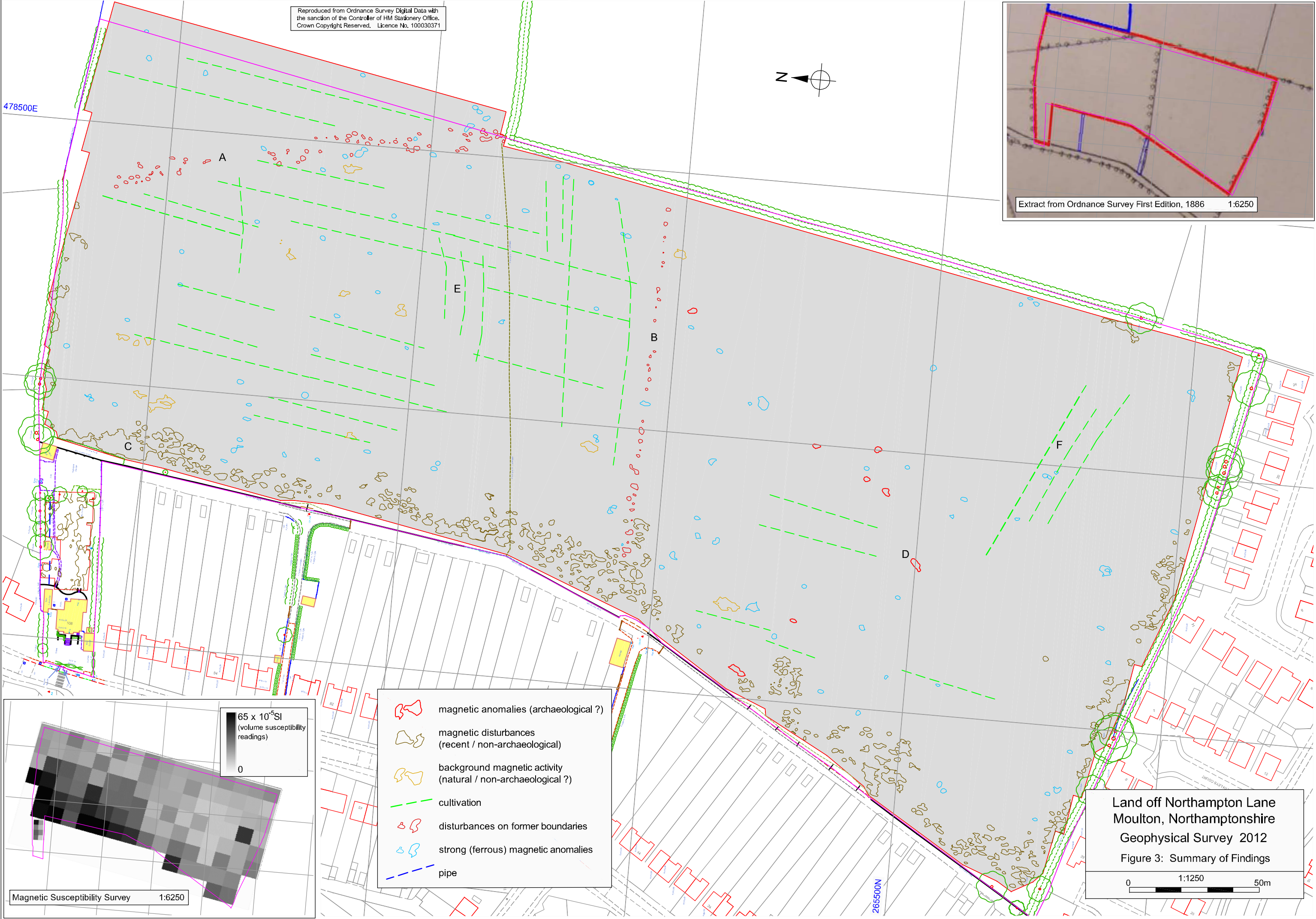
Land off Northampton Lane
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Figure 2: Magnetometer survey
(with interpretation)

0 1:1250 50m

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478500E



65 x 10⁻⁵SI
(volume susceptibility readings)
0

- magnetic anomalies (archaeological ?)
- magnetic disturbances (recent / non-archaeological)
- background magnetic activity (natural / non-archaeological ?)
- cultivation
- disturbances on former boundaries
- strong (ferrous) magnetic anomalies
- pipe

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Figure 3: Summary of Findings
0 1:1250 50m