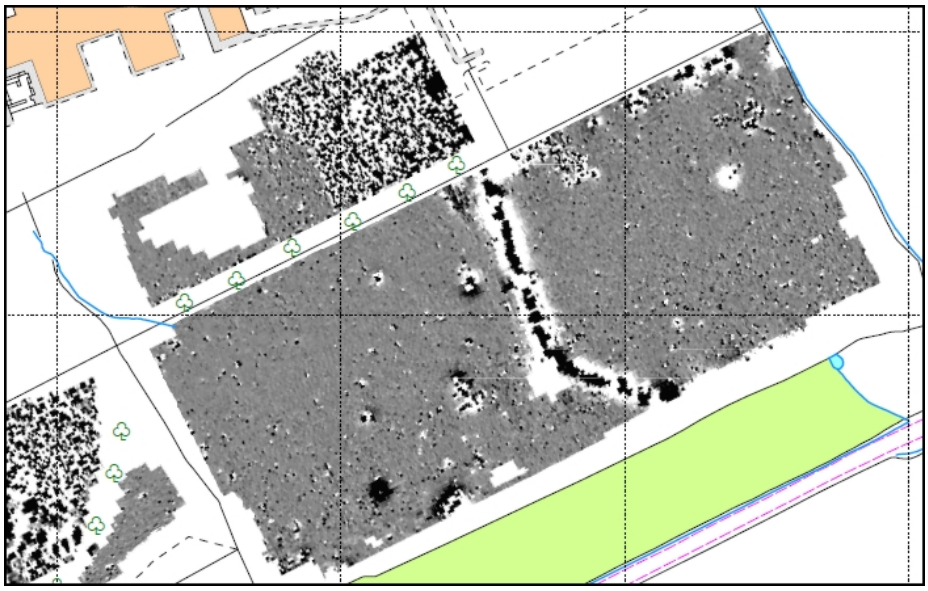


Archaeological geophysical survey of land south of Alexandra Hospital, Redditch Worcestershire April 2014

Report No. 14/95

Author: John Walford

Illustrator: John Walford

Project Manager: Mark Holmes
Site Code: None
NGR: SP 062 645

MOLA
Bolton House
Wootton Hall Park
Northampton
NN4 8BN 01604 700 493
www.mola.org.uk
sparry@mola.org.uk

Archaeological geophysical survey of land south of Alexandra Hospital, Redditch Worcestershire April 2014

Report No. 14/95

Quality control and sign off:

Issue No.	Date approved:	Checked by:	Verified by:	Approved by:	Reason for Issue:
2	02/05/2014	Ant Maull	Ian Fisher	Steve Parry	Final issue

Author: John Walford

Illustrator: John Walford

MOLA
Bolton House
Wootton Hall Park
Northampton
NN4 8BN
01604 700 493
www.mola.org.uk
sparry@mola.org.uk

STAFF

Project Manager:	Mark Holmes BA MA MIfA
Fieldwork:	James Ladocha BA
	Garreth Davey BA
	Adam Meadows BSc
Text and illustrations:	John Walford BSc MSc

OASIS REPORT

PROJECT DETAILS	Oasis No. molanort1-178505	
Project name	Archaeological geophysical survey of land south of Alexandra Hospital, Redditch, Worcestershire	
Short description	MOLA was commissioned to carry out a detailed magnetometer survey on land south of Alexandra Hospital, Redditch, Worcestershire. The survey detected two small linear features of indeterminate character, as well as pipelines and made ground. Nothing of definite archaeological significance was identified.	
Project type	Geophysical survey	
Site status	None	
Previous work	None known	
Current Land use	Pasture / waste ground	
Future work	Unknown	
Monument type/ period	None	
Significant finds	None	
PROJECT LOCATION		
County	Worcestershire	
Site address	Land south of Alexandra Hospital, Redditch	
Study area	*c* 5ha	
OS Easting & Northing	SP 062 645	
Height OD	*c* 145-150m AOD	
PROJECT CREATORS		
Organisation	MOLA	
Project brief originator	AMEC Environment and Infrastructure UK	
Project design originator	MOLA	
Director/Supervisor	James Ladocha	
Project Manager	Mark Holmes	
Sponsor or funding body	AMEC Environment and Infrastructure UK	
PROJECT DATE		
Start date	14 April 2014	
End date	15 April 2014	
ARCHIVES	Location	Content
Physical	N/A	
Paper	MOLA Northampton	Site survey records
Digital		Geophysical survey & GIS data
BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report	
Title	Archaeological geophysical survey of land south of Alexandra Hospital, Redditch, Worcestershire, April 2014	
Serial title & volume	MOLA Northampton Reports 14/95	
Author(s)	John Walford	
Page numbers	3	
Date	2 May 2014	

Contents

Figures

Archaeological geophysical survey of land south of Alexandra Hospital, Redditch Worcestershire April 2014

ABSTRACT

MOLA was commissioned to carry out a detailed magnetometer survey on land south of Alexandra Hospital, Redditch, Worcestershire. The survey detected two small linear features of indeterminate character, as well as pipelines and made ground. Nothing of definite archaeological significance was identified.

1 INTRODUCTION

MOLA was commissioned by AMEC Environment and Infrastructure UK to conduct a geophysical survey on land south of Alexandra Hospital, Redditch, Worcestershire (NGR SP 062 645; Fig 1). A detailed magnetometer survey was undertaken on 14 - 15 April 2014, and covered a total area of approximately 5ha.

2 BACKGROUND

2.1 Location and geology

The survey area comprised approximately 5ha of rough grass and waste ground, lying between Alexandra Hospital to the north and Green Lane to the south (Fig 1). It is located on a gentle east-facing slope at an elevation of *c*75m to 90m aOD. To the east, the slope leads down towards the River Arrow, and to the west the ground rises more steeply towards Wirehill. The underlying geology is mapped as Mercia Mudstone with no superficial drift (BGS 2014).

2.2 Historical and archaeological background

The survey area lies immediately south of the recorded location of a rectangular enclosure cropmark (Worcs HER WSM 00222; Fig 1). The date of this feature is not specified, but such enclosures are frequently of Iron Age or Roman date. Other HER records for the wider vicinity mainly relate to medieval and post-medieval features, including ridge and furrow, woodland earthworks, and a deserted settlement site. The latter is located approximately 300m east of the survey area, around the junction of Green Lane with Studely Road (Warks HER MWA 6481).

3 METHODOLOGY

The magnetometer survey was conducted with Bartington Grad 601-2, twin sensor array, vertical component fluxgate gradiometers (Bartington and Chapman 2003). These are standard instruments for archaeological survey and can resolve magnetic variations as slight as 0.1 nanoTesla (nT). The survey covered all suitable parts of the survey area, but some had to be excluded due to due to tree planting, overgrown vegetation and boggy ground (Fig 2).

An independent network of 30m grid squares was established within each of the fields to be surveyed. These grids were set out with a tape measure and optical square and were tied in to the Ordnance Survey National Grid by measurement to field boundaries and other points of detail. The gradiometers were carried at a brisk but steady pace through each grid square, collecting data along 1m spaced traverse lines. Measurements were automatically triggered every 0.25m along the traverses, giving a total of 3600 measurements per square. All fieldwork methods complied with the guidelines issued by English Heritage and by the Institute for Archaeologists (EH 2008; IfA 2011).

The survey data were processed using Geoplot 3.00v software. Striping was removed using the 'Zero Mean Traverse' function and de-staggering of the data was performed where necessary. The processed data is presented in this report in the form of greyscale plots at a range of +4nT (black) to -4nT (white). These have been scaled, rotated and resampled (georectified) for display against the Ordnance Survey base mapping (Fig 2) and are shown with an interpretative overlay in Figure 3. Separate greyscale plots of the unprocessed data are presented in Figure 4.

4 SURVEY RESULTS

The survey has identified nothing of certain archaeological significance, but it has detected two short linear anomalies which could either represent lengths of ditch or of field drains. Both of these anomalies occur in the large eastern field, and follow parallel north-west to south-east alignments. The more intense of the two appears to have a short spur branching off perpendicularly to the north-east.

Two modern pipelines have been detected by the survey. One is represented by an intense positive anomaly and associated negative halo passing through the centre of the eastern field. The other is represented by a much weaker positive anomaly in the south-western field. The relative weakness of the latter anomaly may indicate that the pipe lies at a greater depth than is usually the case. One large ferrous anomaly lying on the line of this second pipe indicates the location of a manhole cover.

Substantial areas of made ground have been detected in the northern and western parts of the survey area. Each is represented by a zone of intense magnetic noise, which indicates the presence of abundant brick rubble, ferrous scrap and other modern magnetic debris mixed with the imported spoil. Isolated pieces of ferrous material have been detected elsewhere across the survey area, and are represented by intense dipolar anomalies in the data.

One roughly triangular positive anomaly, located at the northern edge of the eastern field, is of uncertain origin. It may represent a minor geological feature, or possibly a small area of disturbed ground associated with the adjacent pipe.

5 CONCLUSION

The survey has detected nothing of archaeological significance, apart from a couple of linear anomalies which may be tentatively interpreted as representing sections of ditch. However, overgrown vegetation meant that the survey could not cover the land closest to cropmark enclosure MWA00222, where archaeological features are perhaps most likely to occur. Also, the results demonstrate parts of the survey area are covered with a layer of made ground, through which it would have been impossible to detect any underlying remains.

BIBLIOGRAPHY

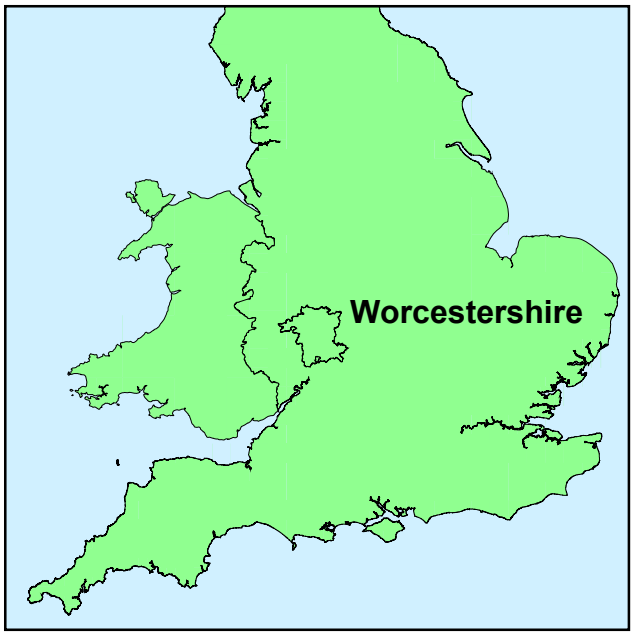
Bartington, G, and Chapman, C, 2003 *A high-stability fluxgate magnetic gradiometer for shallow geophysical survey applications,* Archaeological Prospection, **11**, 19-34

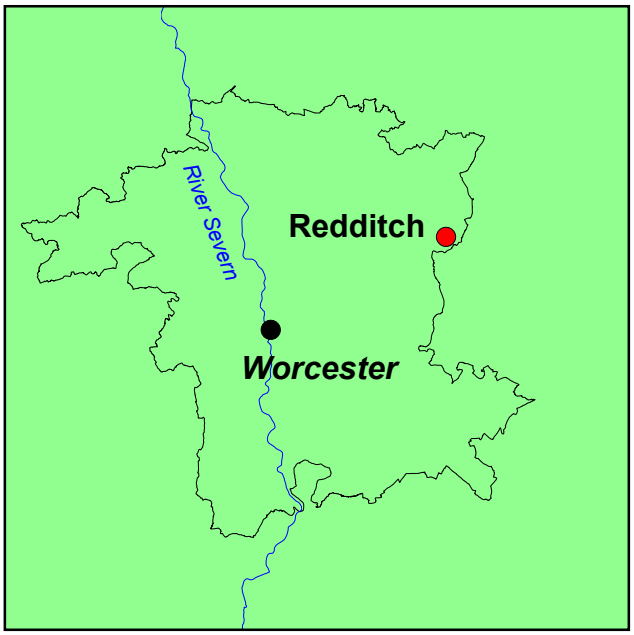
BGS 2014 *Geoindex* www.bgs.ac.uk/geoindex.htm, British Geological Survey, accessed April 2014

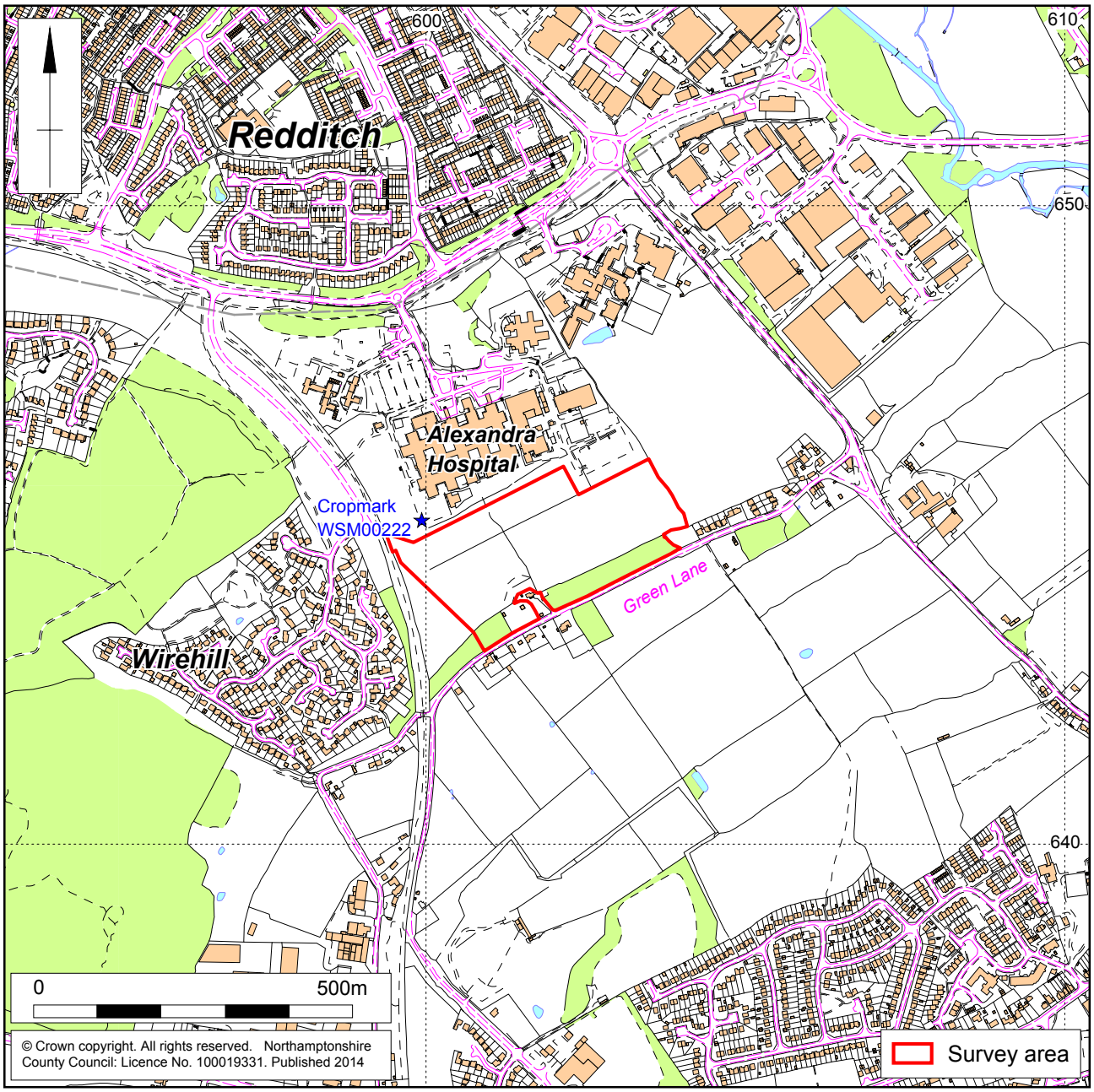
EH 2008 *Geophysical Survey in Archaeological Field Evaluation*, English Heritage

IfA 2011 *The Use of Geophysical Techniques in Archaeological Evaluations, (*2nd Edition), Institute for Archaeologists Technical Paper

MOLA
2 May 2014





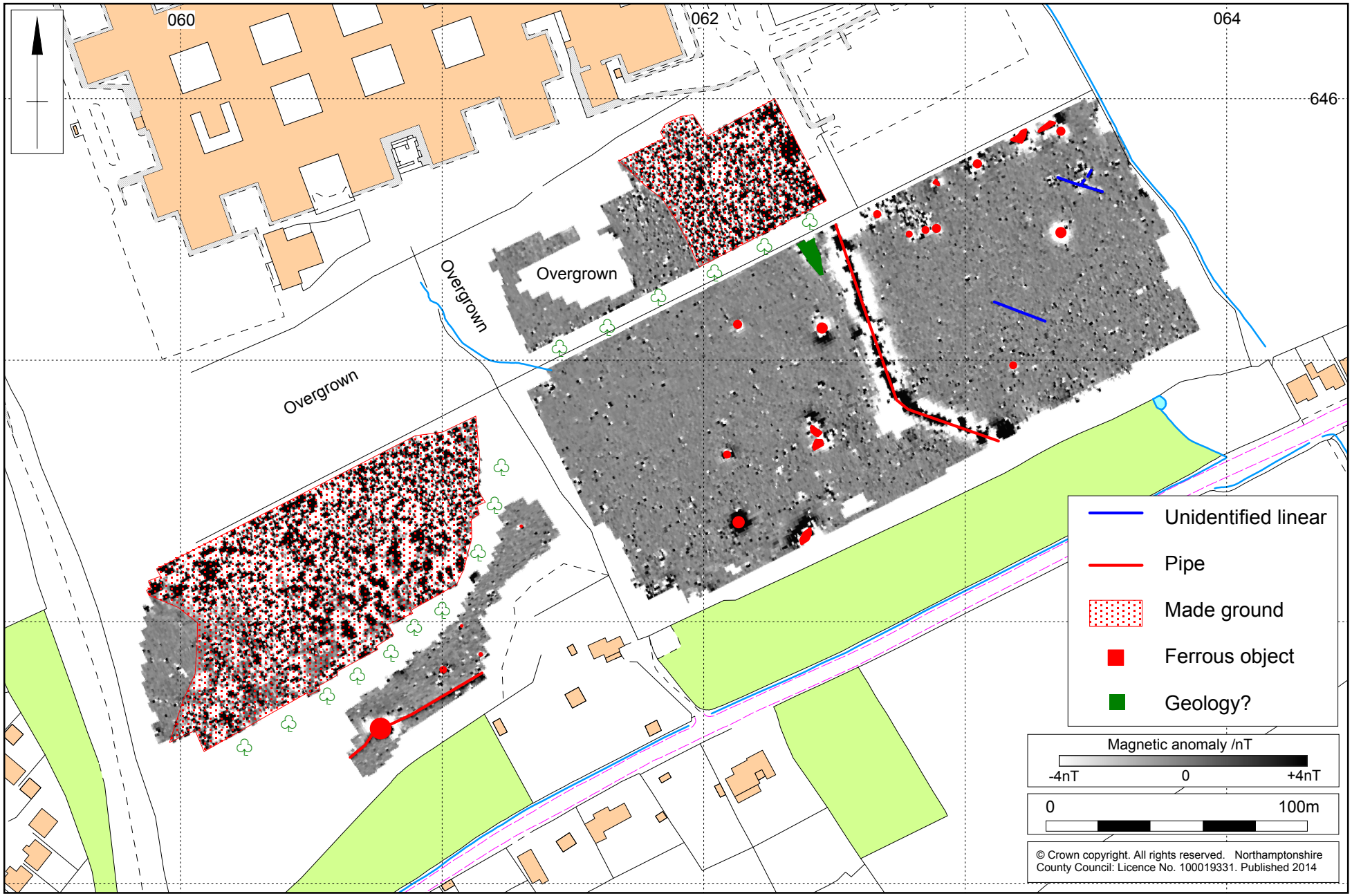


Scale 1:10,000

Site location Fig 1

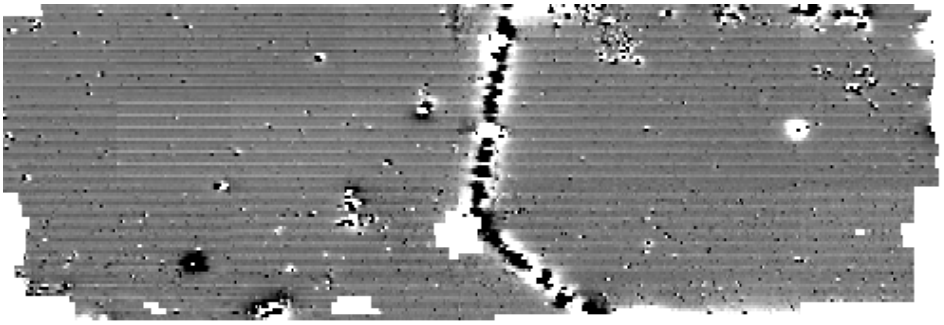
Scale 1:2000

Magnetometer survey results Fig 2



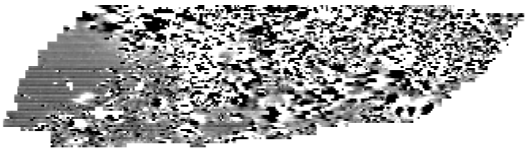
Scale 1:2000

Magnetometer survey interpretation Fig 3

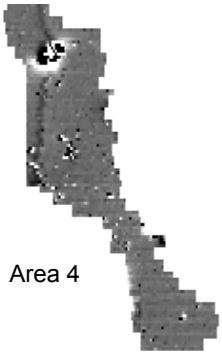


Area 1

Area 2



Area 3



Area 4

0 125m

Magnetic anomaly /nT

-10nT 0 +10nT

1:2000

Unprocessed magnetometer data Fig 4

MOLA

MOLA
Bolton House
Wootton Hall Park
Northampton
NN4 8BN
01604 700 493
www.mola.org.uk
business@mola.org.uk