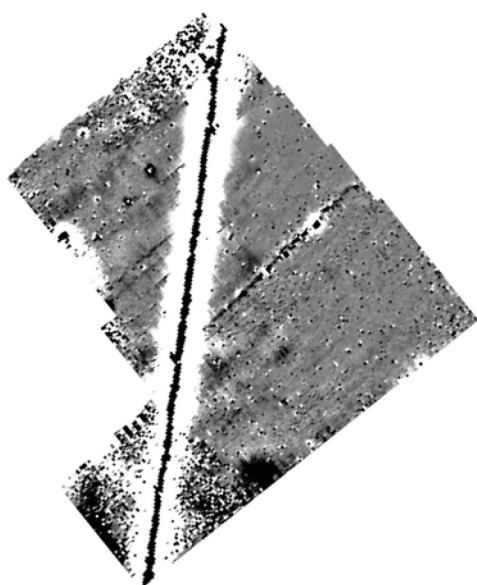




Northamptonshire Archaeology

Archaeological Geophysical Survey on land at
Loughborough Road, Hathern, Leicestershire
X.A135.2010



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Report 10/127

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QUALITY CONTROL

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Checked by	Adrian Butler	<i>AB</i>	28/07/10
Verified & Approved by	Andy Chapman	<i>AC</i>	28/07/10

OAS/S REPORT FORM

PROJECT DETAILS		
Project name	Archaeological Geophysical Survey on land at Loughborough Road, Hathern, Leicestershire X.A.135.2010	
Short description	Northamptonshire Archaeology was commissioned by CgMs Consulting to conduct archaeological geophysical survey on land at Loughborough Road, Hathern, Leicestershire. Magnetometry of a 2.4ha area revealed little evidence of archaeology other than two parallel linear ditches and a former field boundary.	
Project type	Geophysical survey	
Site status	None	
Previous work	Unknown	
Current Land use	Arable	
Future work	Unknown	
Monument type/ period	Unknown	
Significant finds	None	
PROJECT LOCATION		
County	Leicestershire	
Site address	Loughborough Road, Hathern	
Study area	2.4ha	
OS Easting & Northing	45060 32185	
Height OD	c41m AOD	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology (NA)	
Project brief originator	CgMs Consulting	
Project Design originator	Mike Dawson, CgMs	
Director/Supervisor	Ian Fisher	
Project Manager	Adrian Butler	
Sponsor or funding body	CgMs Consulting	
PROJECT DATE		
Start date	22 July 2010	
End date	22 July 2010	
ARCHIVES	Location	Content
Physical	N/A	
Paper	NA	Site survey records
Digital	NA	Geophysical survey & GIS data
BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report	
Title	Archaeological Geophysical Survey on land at Loughborough Road, Hathern, Leicestershire X.A.135.2010	
Serial title & volume	Northamptonshire Archaeology Reports 10/127	
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Fig 1	Site Location, 1:20,000
Fig 2	Magnetometer Survey Results, 1:2500
Fig 3	Magnetometer Survey Interpretation, 1:2500

**ARCHAEOLOGICAL GEOPHYSICAL SURVEY ON LAND AT
LOUGHBOROUGH ROAD, HATHERN, LEICESTERSHIRE**

X.A135.2010

JULY 2010

ABSTRACT

Northamptonshire Archaeology was commissioned by CgMs Consulting to conduct archaeological geophysical survey on land at Loughborough Road, Hathern, Leicestershire. Magnetometry of a 2.4ha area revealed little evidence of archaeology other than two parallel linear ditches and a former field boundary.

1 INTRODUCTION

Northamptonshire Archaeology was commissioned by CgMs Consulting Ltd, to conduct an archaeological geophysical survey on land at Loughborough Road, Hathern, Leicestershire (NGR 450600 321850; Fig 1).

The objectives of the geophysical survey were to identify the presence or absence of archaeological remains within the proposed 2.4 hectare development area. The fieldwork consisted of an area magnetic gradiometer survey.

2 TOPOGRAPHY AND GEOLOGY

The site is situated on the south-eastern edge of Hathern, adjacent to the east of Loughborough Road. The investigation area covers a single field, bordered to the north west and south west by housing, arable fields to the north-east and allotments to the south-east (Fig 1). At the time of fieldwork the field was arable that had just been harvested (Fig 2).

The investigation area is located on level ground of the second terrace of the River Soar and sits at approximately 41m AOD (Dawson 2009). The site is situated on Triassic mudstone including Keuper Marl, Dolomitic Conglomerates and Rhaetic (www.geodata.bgs.ac.uk/website/leicester/viewer.htm).

3 ARCHAEOLOGICAL BACKGROUND

Details of the archaeological background to the site may be found in a desk-based assessment by CgMs Consulting (Dawson 2009). This found no indication of any previous archaeological work having been carried out on the site. There is no archaeological evidence from within the proposed development area relating to early prehistoric, Iron Age or Roman activity. Further afield, a Bronze Age barrow has been recorded west of Dishley Grange (MLE8970). Geophysical survey and cropmarks have identified two possible Iron Age settlements, one close to Dishley Grange (MLE9450) and a second west of Dishley Farm. West of Dishley Farm there is evidence of Roman settlement (MLE9540).

4 METHODOLOGY

The 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 area was divided into a network of 29 whole and partial, 30m x 30m grid squares. These were set out manually by tape measure and optical square. The instruments were carried at a brisk but steady pace through each grid, collecting data along 1m spaced traverse lines. Measurements were automatically triggered every 0.25m along the traverses, giving a total of 3600 measurements per grid.

All fieldwork was carried out in accordance with the guidelines issued by English Heritage and by the Institute for Archaeologists (EH 2008; Gaffney, Gater and Ovendon 2002).

The data was processed using Geoplot 3.00u software. Striping, occasionally caused by slight mismatches in sensor balance, was removed using the 'Zero Mean Traverse' function (ZMT) and destaggering of the data was performed as necessary.

The processed data is presented in this report in the form of a greyscale plot (scale +4nT to -4nT black ~ white). This has been scaled, rotated and resampled (georectified) for

display against the Ordnance Survey base mapping (Fig 2). An interpretative plot has been produced and is shown overlain onto the data in Figure 3.

5 SURVEY RESULTS

Diffuse, weakly positive magnetic anomalies recorded in the western half of the survey area were likely to represent subtle changes in the underlying geology. The only potential archaeological remains identified by the survey were a pair of parallel linear positive anomalies, possibly ditches, orientated north-east to south-west. A third linear anomaly orientated north-east to south-west represents a former field boundary.

In the south-west a roughly square area of thermoremnently magnetised (fired / baked, e.g. brick) material was recorded, approximately from Loughborough Road to the line of the rear of housing. At the time of survey the field had recently been under a single crop. However, upon referring to Google Earth™ imagery, the area in question may have been under different usage to the rest of the field for the six years 2004 - 2010. A second area of thermoremnant material was identified in the north. This may represent a debris scatter associated with the adjacent houses. The survey area is bisected north to south by a modern ferrous pipe, identified from an intensely magnetised linear anomaly.

6 CONCLUSION

The magnetometer survey of land at Loughborough Road, Hathern produced some evidence of archaeological remains. Two parallel linear ditches were identified, the remains of a possible former track way and a former field boundary. An area of thermoremnently magnetised debris adjacent to Loughborough Road suggests that the area has either supported construction of some form or acted as a receptacle for brick – type waste.

BIBLIOGRAPHY

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

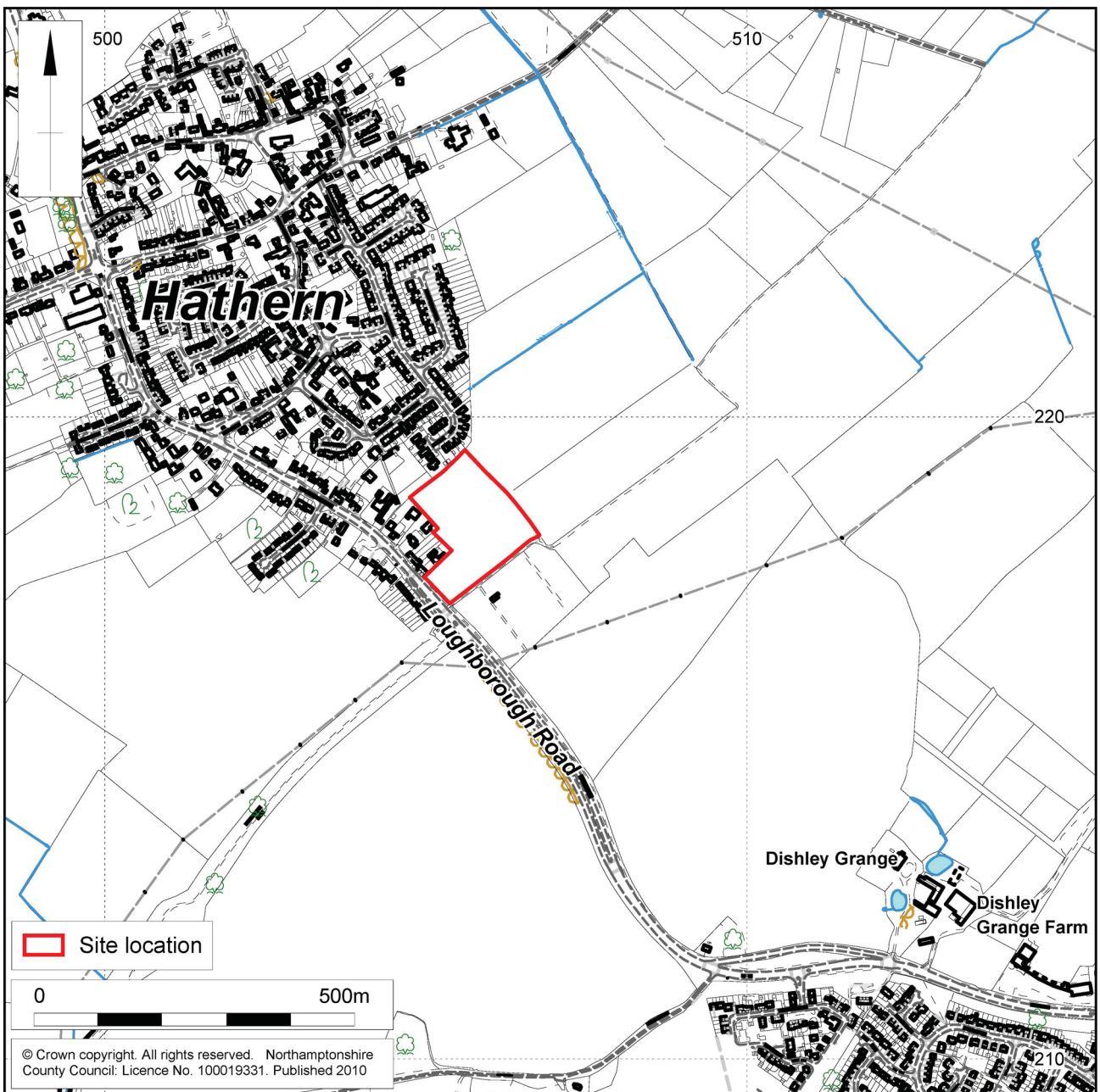
Dawson, M 2009 *Archaeology Desk Based Assessment, Land off Loughborough Road, Hathern, Leicestershire*, CgMs Consulting

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

Gaffney, C, Gater, J, and Ovendon, S, 2002 *The Use of Geophysical Techniques in Archaeological Evaluations*, Institute of Field Archaeologists Technical Paper, **6**

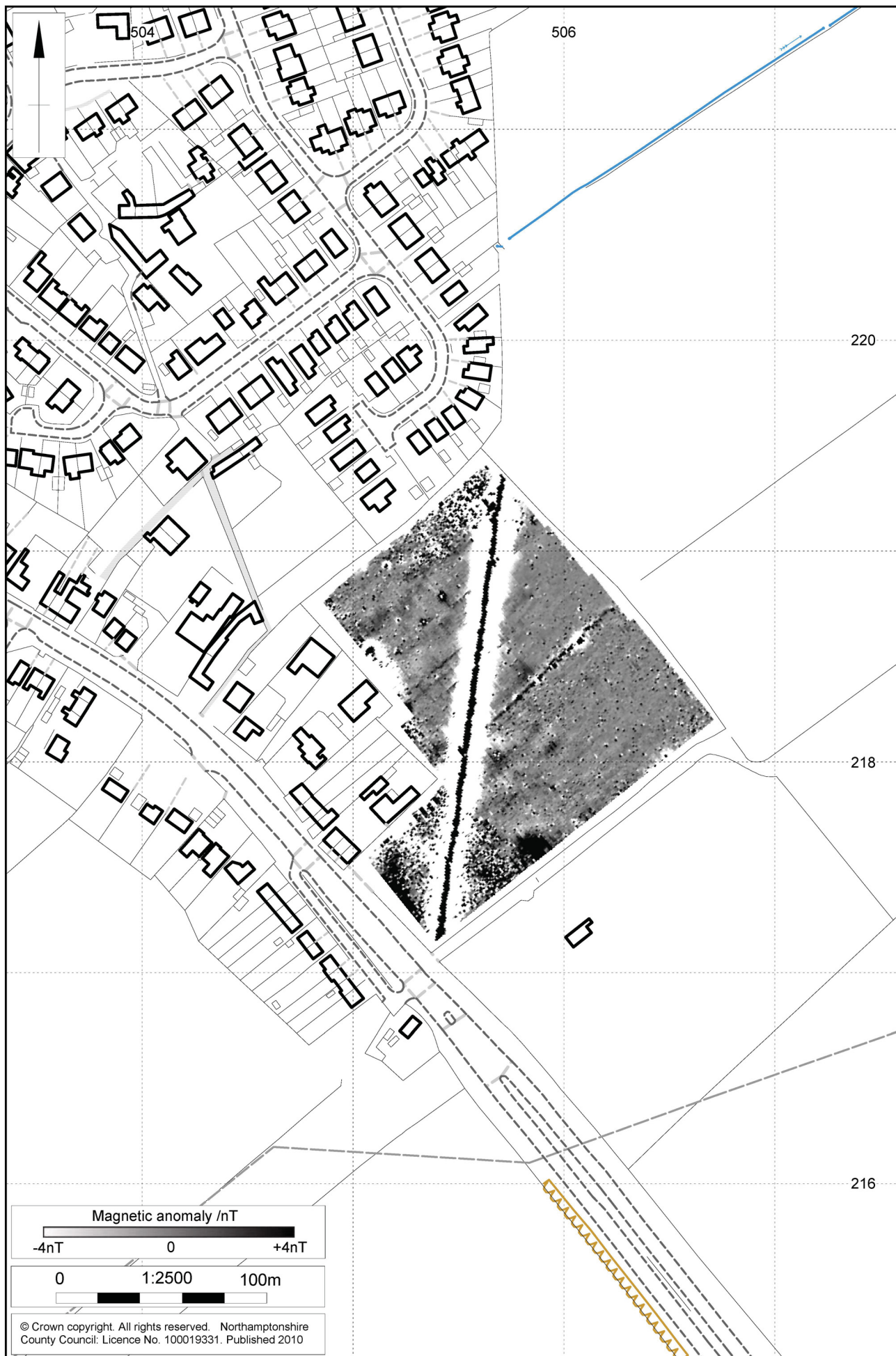
WEBSITES

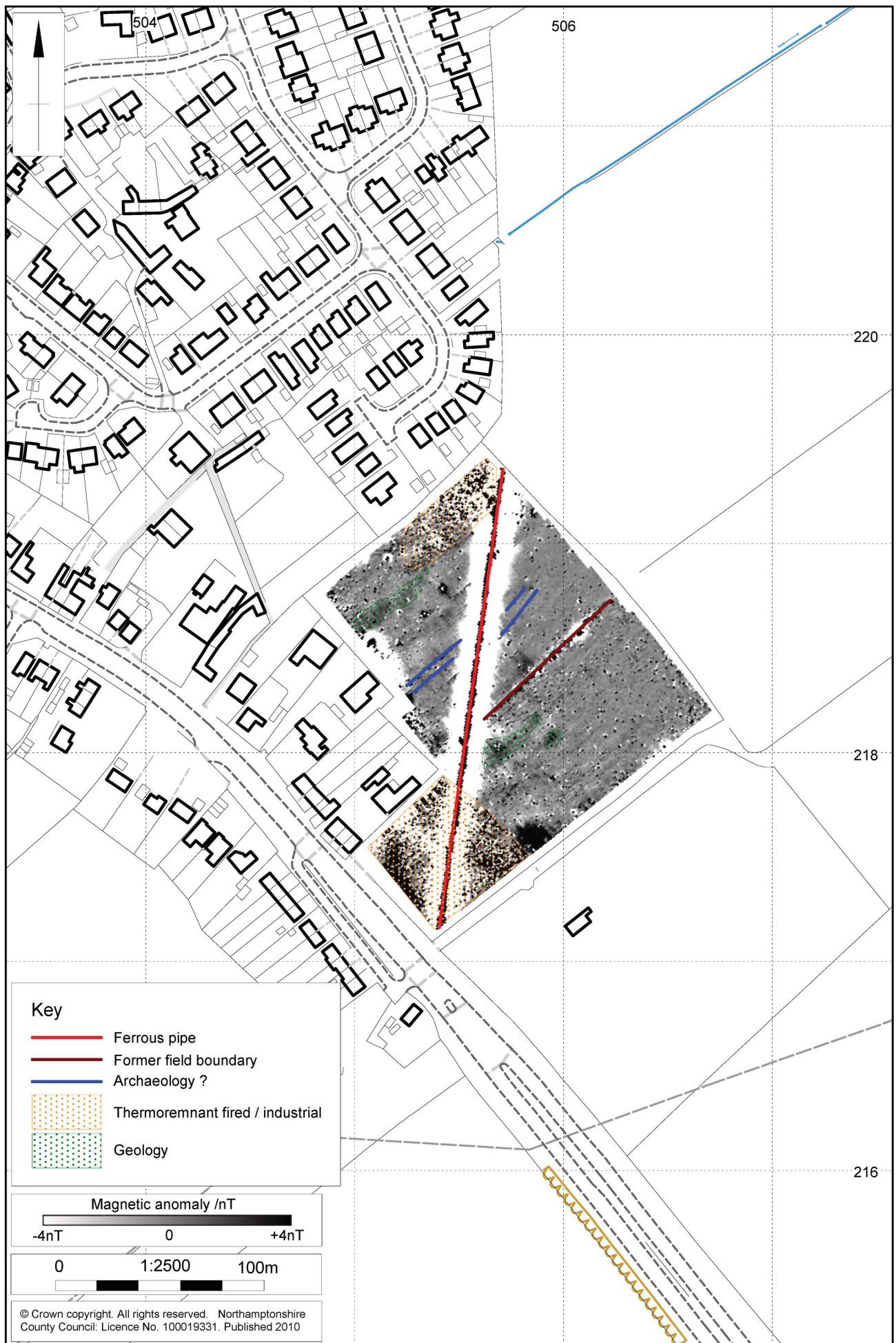
www.geodata.bgs.ac.uk/website/leicester/viewer.htm Geology of Leicestershire and Rutland, accessed 27/07/10



Scale 1:10,000

Site Location Fig 1







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