



# Northamptonshire Archaeology

## Archaeological Geophysical Survey at Ashby Road, Ibstock, Leicestershire



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Report 10/27

February 2010



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**QUALITY CONTROL**

	Print name	Signature	Date
Checked by	Pat Chapman	<i>PC</i>	12/02/2010
Verified & Approved by	Andy Chapman	<i>AC</i>	12/02/2010

**OASIS REPORT FORM**

<b>PROJECT DETAILS</b>		
Project name	Archaeological Geophysical Survey at Ashby Road, Ibstock, Leicestershire	
Short description	University of Leicester Archaeological Services commissioned Northamptonshire Archaeology to conduct an archaeological geophysical survey on 7.5ha land at Ashby Road, Ibstock in January 2010. The survey identified a single possible pit in the south-west of the site. Two sets of ridge and furrow cultivation were detected aligned generally east to west in the north and south of the site together with a former east-west field boundary which may have divided the field into two. Considerable amounts of small ferrous debris were detected scattered across the field. Otherwise, no other significant archaeological features were located.	
Project type	Geophysical survey	
Site status	None	
Previous work	None	
Current Land use	Arable	
Future work	Unknown	
Monument type/ period		
Significant finds	None	
<b>PROJECT LOCATION</b>		
County	Leicestershire	
Site address	Ashby Road, Ibstock	
Study area	7.5 ha	
OS Easting & Northing	440300, 211000	
Height OD	140m AOD	
<b>PROJECT CREATORS</b>		
Organisation	University of Leicester Archaeological Services	
Project brief originator	University of Leicester Archaeological Services	
Project Design originator	Patrick Clay	
Director/Supervisor	James Ladocha	
Project Manager	Adrian Butler	
Sponsor or funding body	University of Leicester Archaeological Services	
<b>PROJECT DATE</b>		
Start date	27 January 2010	
End date	28 January 2010	
<b>ARCHIVES</b>		
Physical	N/A	-
Paper	N.A	Site survey records
Digital	N.A	Geophysical survey & GIS data
<b>BIBLIOGRAPHY</b>		
Title	Archaeological Geophysical Survey at Ashby Road, Ibstock, Leicestershire	
Serial title & volume	Northamptonshire Archaeology Reports 10/27	
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**ARCHAEOLOGICAL GEOPHYSICAL SURVEY AT**  
**ASHBY ROAD, IBSTOCK**  
**LEICESTERSHIRE**  
**FEBRUARY 2010**

*ABSTRACT*

*University of Leicester Archaeological Services commissioned Northamptonshire Archaeology to conduct an archaeological geophysical survey on 7.5ha land at Ashby Road, Ibstock in January 2010. The survey identified a single possible pit in the south-west of the site. Two sets of ridge and furrow cultivation were detected aligned generally east to west in the north and south of the site together with a former east-west field boundary which may have divided the field into two. Considerable amounts of small ferrous debris were detected scattered across the field. Otherwise, no other significant archaeological features were located*

**1 INTRODUCTION**

Northamptonshire Archaeology was commissioned by University of Leicester Archaeological Services (ULAS), to conduct an archaeological geophysical survey on land at Ashby Road, Ibstock, Leicestershire (centred on NGR SP 40300 11000; Fig 1). A magnetic gradiometer survey was carried out on the field, comprising an area of 7.5ha, as part of an archaeological field evaluation. The work was undertaken between 27th and 28th January 2010.

**2 TOPOGRAPHY AND GEOLOGY**

The site lies at an altitude of approximately 140m AOD. The underlying solid geology comprises undifferentiated Triassic mudstones, siltstones and sandstones, covered by a drift of boulder clay (BGS Geology of Great Britain 1:650,000 scale map, 2010; [www.bgs.ac.uk/geoindex.htm](http://www.bgs.ac.uk/geoindex.htm) accessed 11/02/10).

A single flat arable field consisting of a seedling crop was surveyed. The field was orientated roughly north-east to south-west in a 'P'-shape. Ashby Road formed the southern boundary of the field. Sence Valley Forest Park defined the western side and Melbourne Road the north-east. The south-eastern corner of the site was a playing field at the time of survey. Two former ponds were visible as flooded depressions in the north

and south of the field (Fig 2).

### **3 ARCHAEOLOGICAL BACKGROUND**

No prior archaeological fieldwork appears to have been carried out within the survey area. Cropmarks of a variety of possible prehistoric features have been noted in the fields around Heather, 1km to the west of the site (Archaeology Data Service; <http://ads.ahds.ac.uk> accessed 11/02/10). Modern Ibstock is a former coal mining town, well known internationally today for its brick making industry.

### **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).

Each survey area was divided into 30m grid squares. A tape measure and optical square were used to set out each field. The gradiometers 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 1600 measurements per grid.

All fieldwork methods followed guidelines issued by English Heritage, and by the Institute for Archaeology (EH 2008; Gaffney, Gater and Ovendon 2002).

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

The processed data is presented in this report in the form of a greyscale plot scaled to highlight the weaker anomalies (scale +3.0nT to -3.0nT black ~ white). These have been scaled, rotated and resampled (georectified) for display against the Ordnance Survey base mapping (Fig 2). Interpretative plots have been produced and are shown overlain onto the data in Figure 3.

## 5 SURVEY RESULTS

The survey area was magnetically quiet, with very few anomalies of archaeological origin. A localised positive anomaly (max strength c 15nT) towards the south-western part of the area may be consistent with a pit.

There were two large hollows in the field surface which both contained standing water and thus could not be surveyed. The northern one, which is thought to be the vestigial remnants of a pond, was found to be fringed by an area of dense ferrous anomalies. This suggests that the feature was once more extensive and had been partially infilled by iron scrap and other refuse.

It would appear that the field was once divided into two by an east to west fence, indicated by dipolar a linear positive anomalies extending c 50m west in a line from the north of the playing field. Remnants of likely ridge and furrow were detected orientated east to west in both the north and south of the field. Three chains of dipolar anomalies, probably indicating ceramic field drains were located in the north of the field, one north to south the others east-west.

Extensive magnetic halos caused by the adjacent fences were detected around the edges of the survey area. Much smaller dipolar ferrous anomalies occur across the entire field. These are of little significance, demonstrating only the presence of small pieces of iron or steel debris within the ploughsoil. A few of the more prominent ones have been highlighted on the interpretation plot.

## 6 CONCLUSION

The survey has identified a single possible pit in the south-west of the site. Two sets of ridge and furrow cultivation were detected aligned generally east to west in the north and south of the site. Evidence was located of a former east-west field boundary which may have divided the field into two. Considerable amounts of small ferrous debris were detected scattered across the field. Otherwise, no other significant archaeological features were located

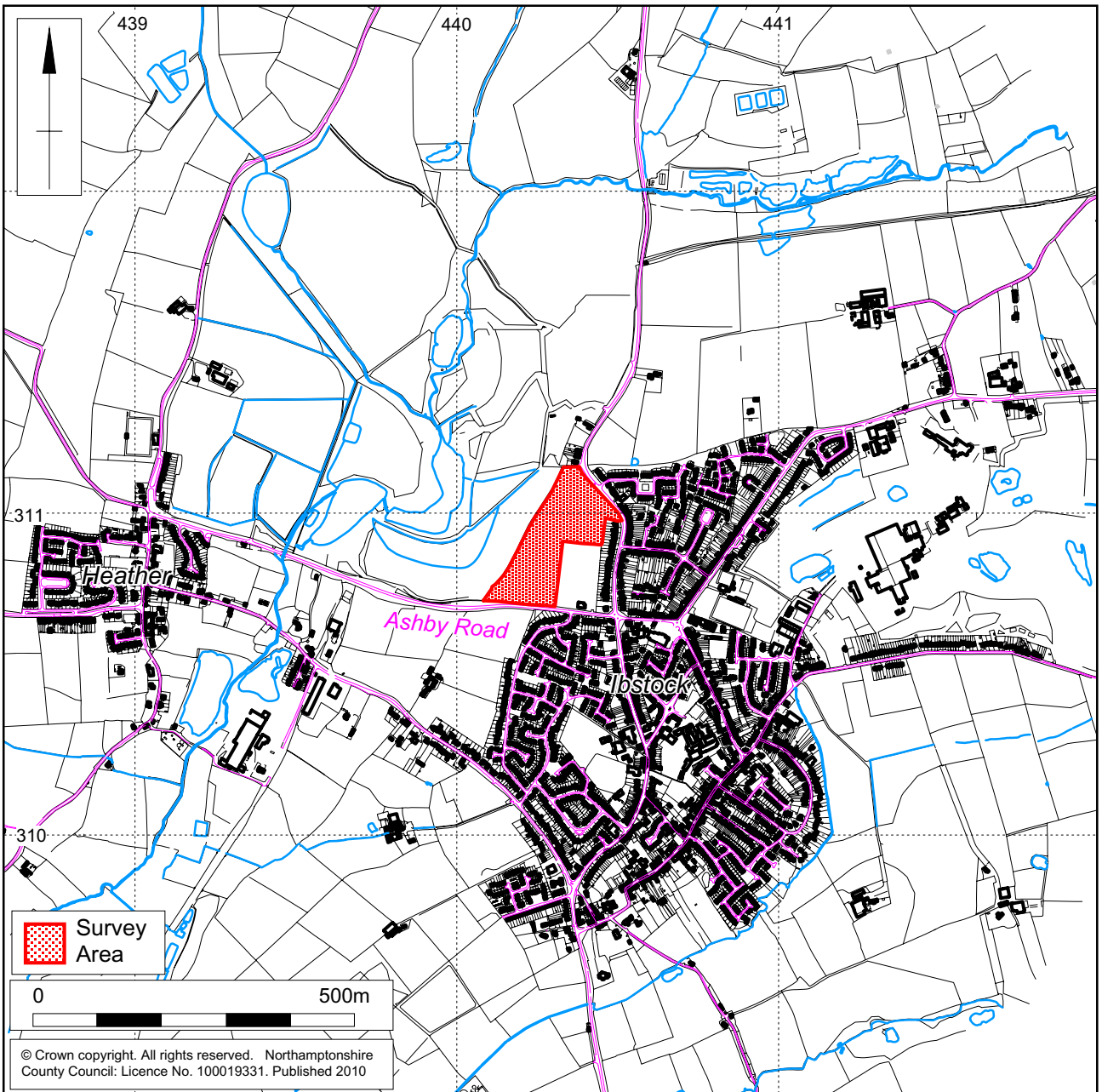
**BIBLIOGRAPHY**

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

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**





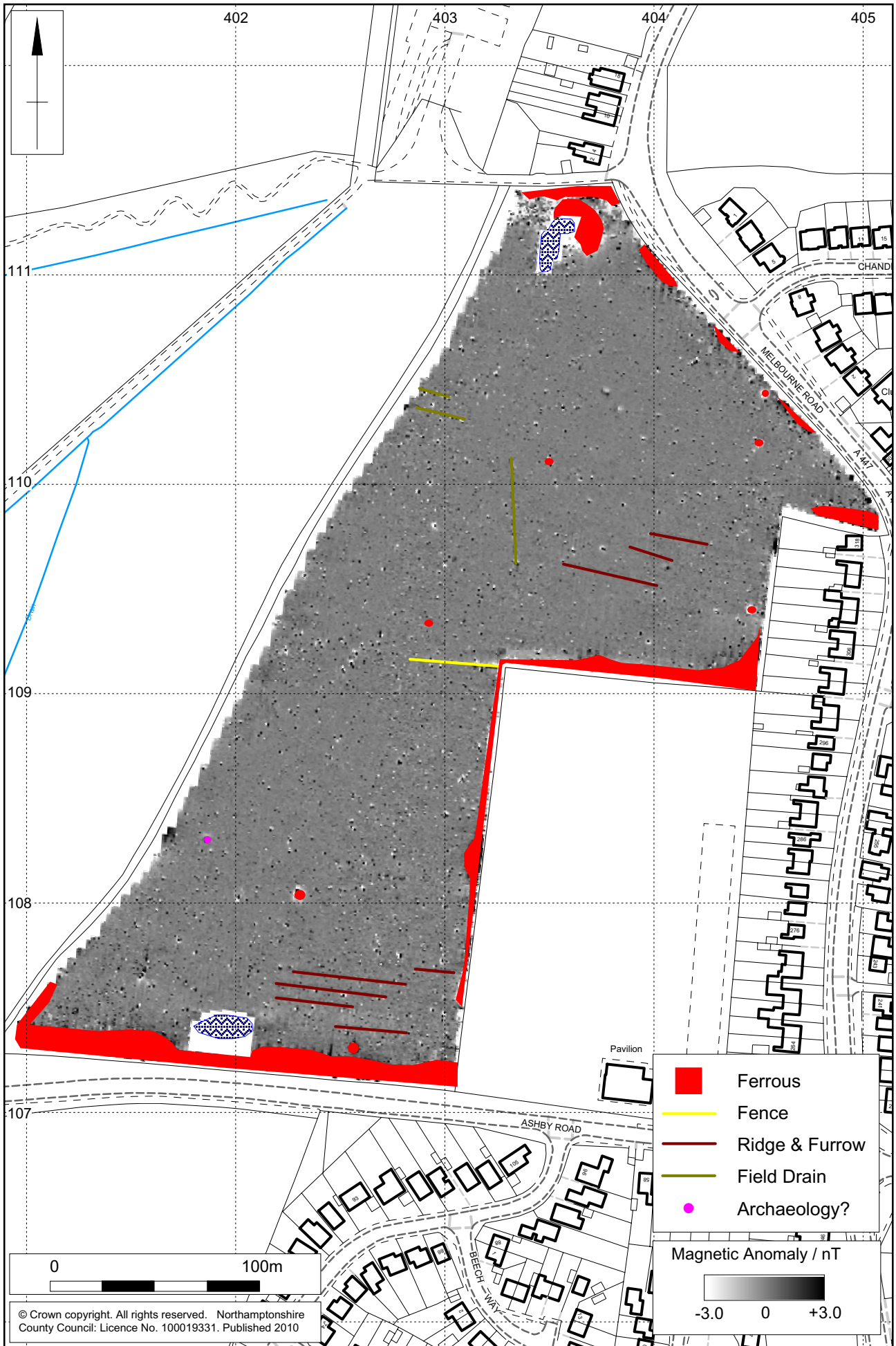
Scale 1:20,000

Site Location Fig 1



Scale 1:2500

Magnetometer Survey Results Fig 2



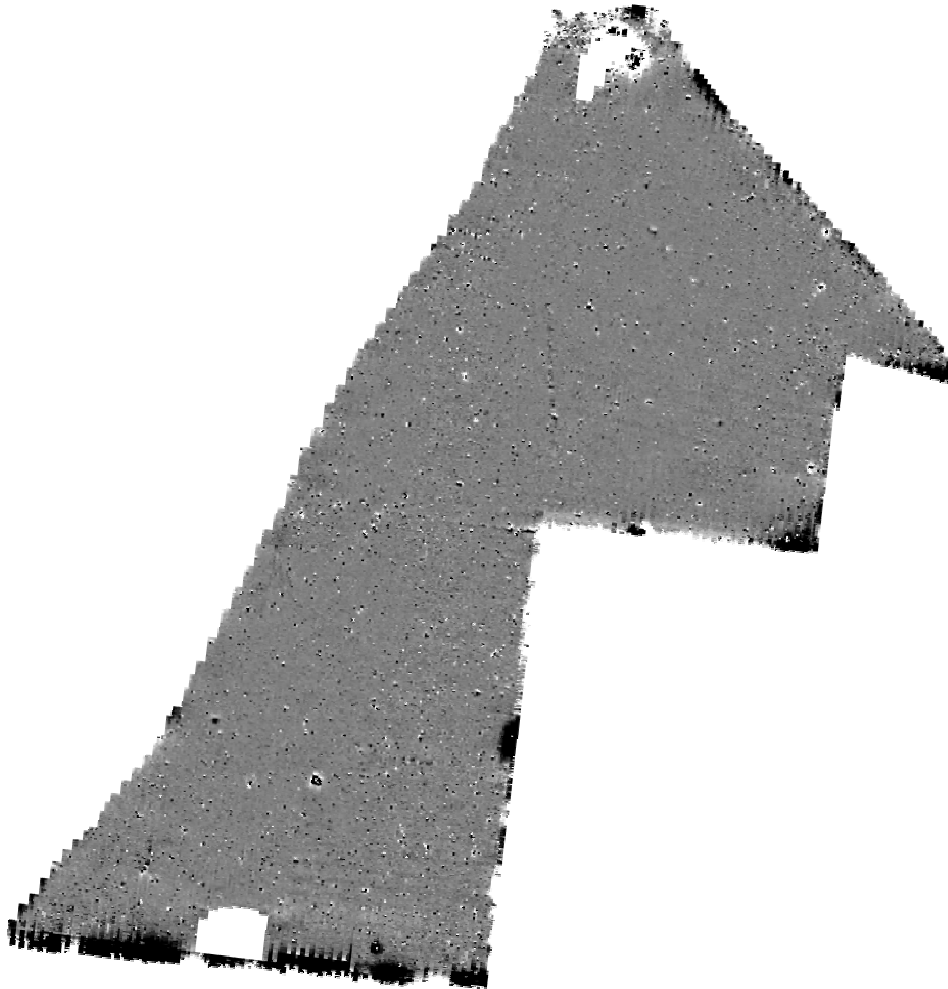
Scale 1:2500

Magnetometer Survey Interpretation Fig 3



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