



# Northamptonshire Archaeology

## Archaeological Geophysical Survey on land at Airfield Farm, Market Harborough, Leicestershire



### **Northamptonshire Archaeology**

2 Bolton House  
Wootton Hall Park  
Northampton NN4 8BE  
t. 01604 700493 f. 01604 702822  
e. [sparry@northamptonshire.gov.uk](mailto:sparry@northamptonshire.gov.uk)  
w. [www.northantsarchaeology.co.uk](http://www.northantsarchaeology.co.uk)



**Northamptonshire  
County Council**

Adrian Butler

Ian Fisher

Report 10/40

February 2010



### STAFF

Project Manager                      Adrian Butler BSc MA AlfA

Fieldwork                              Adrian Butler  
    Ian Fisher BSc  
    Carol Simmonds BA  
    Paul Clements BA  
    Jonathan Elston BA  
    Robin Foard  
    Heather Smith MA  
    Angela Warner BA  
    John Walford MSc

Text and illustrations                Adrian Butler  
    Ian Fisher

### QUALITY CONTROL

	Print name	Signature	Date
Checked by	Pat Chapman	<i>PC</i>	26/02/10
Verified by	Adrian Butler	<i>AB</i>	26/02/10
Approved by	Andy Chapman	<i>AC</i>	26/02/10

**OAS/S REPORT FORM**

<b>PROJECT DETAILS</b>		
Project name	Archaeological Geophysical Survey on land at Airfield Farm, Market Harborough, Leicestershire	
Short description	Northamptonshire Archaeology were commissioned by CgMs Consulting, to conduct an archaeological geophysical survey on land at Airfield Farm, Market Harborough, Leicestershire. Magnetometry of a 41.9ha area revealed two enclosure systems, with associated roundhouses and internal features, and possible round barrows. Extensive ridge and furrow was identified across the whole area.	
Project type	Geophysical survey	
Site status	None	
Previous work	Geophysical Survey (GSB 2005) and Evaluation (NA 2005) & Excavation (NA 2007)	
Current Land use	Arable	
Future work	Unknown	
Monument type/ period		
Significant finds		
<b>PROJECT LOCATION</b>		
County	Leicestershire	
Site address	Airfield Farm, Market Harborough	
Study area	41.9ha	
OS Easting & Northing	SP 721 891	
Height OD	109m AOD	
<b>PROJECT CREATORS</b>		
Organisation	Northamptonshire Archaeology (NA)	
Project brief originator	CgMs Consulting	
Project Design originator	Paul Gajos, CgMs Consulting	
Director/Supervisor	Ian Fisher	
Project Manager	Adrian Butler	
Sponsor or funding body		
<b>PROJECT DATE</b>		
Start date	25 January 2010	
End date	17 February 2010	
<b>ARCHIVES</b>	<b>Location</b>	<b>Content</b>
Physical	N/A	
Paper	NA	Site survey records
Digital	NA	Geophysical survey & GIS data
<b>BIBLIOGRAPHY</b>		
	Journal/monograph, published or forthcoming, or unpublished client report	
Title	Archaeological Geophysical Survey on land at Airfield Farm, Market Harborough, Leicestershire	
Serial title & volume	Northamptonshire Archaeology Reports 10/40	
Author(s)	Adrian Butler & Ian Fisher	
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**ARCHAEOLOGICAL GEOPHYSICAL SURVEY ON LAND AT  
AIRFIELD FARM, MARKET HARBOROUGH, LEICESTERSHIRE  
FEBRUARY 2010**

*ABSTRACT*

*Northamptonshire Archaeology were commissioned by CgMs Consulting, to conduct an archaeological geophysical survey on land at Airfield Farm, Market Harborough, Leicestershire. Magnetometry of a 41.9ha area revealed two enclosure systems, with associated roundhouses and internal features, and possible round barrows. Extensive ridge and furrow was identified across the whole area.*

**1 INTRODUCTION**

Northamptonshire Archaeology (NA) were commissioned by CgMs Consulting, to carry out a geophysical survey on land at Airfield Farm, Market Harborough, Leicestershire, NGR SP 721 891 (Fig 1).

The objectives of the geophysical survey were to identify the presence or absence of archaeological remains within the proposed survey area. The fieldwork consisted of magnetic gradiometer survey across seven fields. An Accession Number for the site has been issued by Leicestershire County Museums: X.A25.2010.

**2 TOPOGRAPHY AND GEOLOGY**

Airfield farm is situated northwest of Market Harborough, in south Leicestershire, immediately west of the B6047 Harborough Road. The River Welland lies approximately 2.5km to the south. The site is bounded to the east by the Grand Union Canal.

The survey consisted of twelve fields. At the time of survey only seven were surveyable, six were arable and one was under pasture. The site lies at an average height of 109m aOD and slopes down towards the south (Clarke and Chapman 2009).

Geologically the area is mapped as Middle Lias Clays and Silts (BGS Sheet 170 Market Harborough).



### **3      ARCHAEOLOGICAL BACKGROUND**

A geophysical survey was conducted in 2005 (GSB Prospection Ltd 2005) at Airfield Farm. The survey identified a ditched enclosure with internal divisions, a ring ditch, several pits and other anomalies of probable prehistoric to Romano-British date. In the southern most part of the survey area a potential field system was identified (Fig 2).

In 2005 an archaeological evaluation was conducted by Northamptonshire Archaeology, followed up by archaeological excavation in 2007. The aim of the works was confirm the date and nature of the features. The works identified a sub-square ditched enclosure that contained a single large roundhouse and an internal sub-enclosure. The enclosure abutted a ditched droveway to the east. The pottery assemblage and radiocarbon dating indicate the enclosure was in use during the later Middle Iron Age, the second century BC. A second enclosure was identified to the south that also abutted the droveway and contained a single roundhouse (Clarke and Chapman 2009).

### **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 field were divided into a network of contiguous, whole and partial, 30m x 30m grid squares. A total of 520 grids (whole and partial) were surveyed. These were set out manually by tape measure and optical square, and were tied to the Ordnance Survey grid by Leica System 1200 differential GPS. 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 Archaeology (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 (Figs 2, 4 & 6). Interpretative plots have been produced and are shown overlain onto the data (Figs 3, 6 & 7).

## **5 SURVEY RESULTS**

The magnetometer survey identified two enclosure systems (Fig 2 & 3).

The large rectangular enclosure system is located in Field 1 and extends into Field 3 (Fig 4 & 5). However, detection in Field 3 was hindered by the surface rubbish from a neighbouring traveller's camp. The enclosure system measures approximately 180m in length, and activity may extend a further 80m north into Field 3, but due to the surface rubbish it is difficult to say for certain. The enclosure extends 120m eastwards, but its full width was not determined. To the west there is a series of smaller square and sub-square enclosures, which appear to share a common linear boundary to both the west and south, and perhaps the north as well. The results also suggest the presence of internal pits.

To the north, in Field 3, there are at least two roundhouses, two sub-circular enclosures and further pits, along with much ferrous debris.

This enclosure system lies immediately south of the enclosures identified by the previous geophysical survey and excavation (see Figs 2 & 3).

In the northern part of the survey area there are three isolated ring ditches located on higher ground (Figs 6 & 7). These may be round barrow ring ditches rather than roundhouses.

To the west, in Field 4, the survey identified a linear pattern of adjoining enclosures. The group is orientated north-west to south-east and comprises of five rectilinear enclosures. North-east of the enclosures, both in Field 1 and Field 4, there are nine unenclosed roundhouses, each measuring 12-15m in diameter. Abutting the southernmost enclosure three linear ditches are orientated north-east to south-west. These may be part of the

same ditched driveway that was identified in previous geophysical survey and excavation. It certainly extends north-east towards the excavated ditched driveway; however, it is not visible in Field 1. Further south a pair of parallel ditches are aligned north-east to south-west, and extend into Field 2.

The only other archaeological features were detected in Field 6 (Figs 2 & 3). The survey identified a linear ditch orientated north-east to south-west and extending into Field 7. A curvilinear ditch was also detected in Field 6, which may be part of a circular enclosure.

The survey was successful in mapping medieval ridge and furrow, with the exception of Field 3.

A linear alignment of ferrous features was detected in fields 3 and 4, aligned north-east to south-west. These are visible on the surface as markers and are believed to indicate a non ferrous pipe.

## **6 CONCLUSION**

The geophysical survey was successful in detecting significant archaeological features at Airfield Farm that probably relate to features identified in previous work conducted on an area to the immediate north. The ditched driveway that was previously identified may continue southwest through the survey area. A possible second ditched driveway was also detected parallel to it.

The most significant archaeological features detected were the two large rectangular enclosure systems, and the associated unenclosed roundhouses lying close by. In addition, a further three ring ditches on slightly higher ground are possible round barrows or further roundhouses. There may also be a continuation of a ditched driveway located in previous excavations to the north.

The survey also detected ridge and furrow across the whole site.





## BIBLIOGRAPHY

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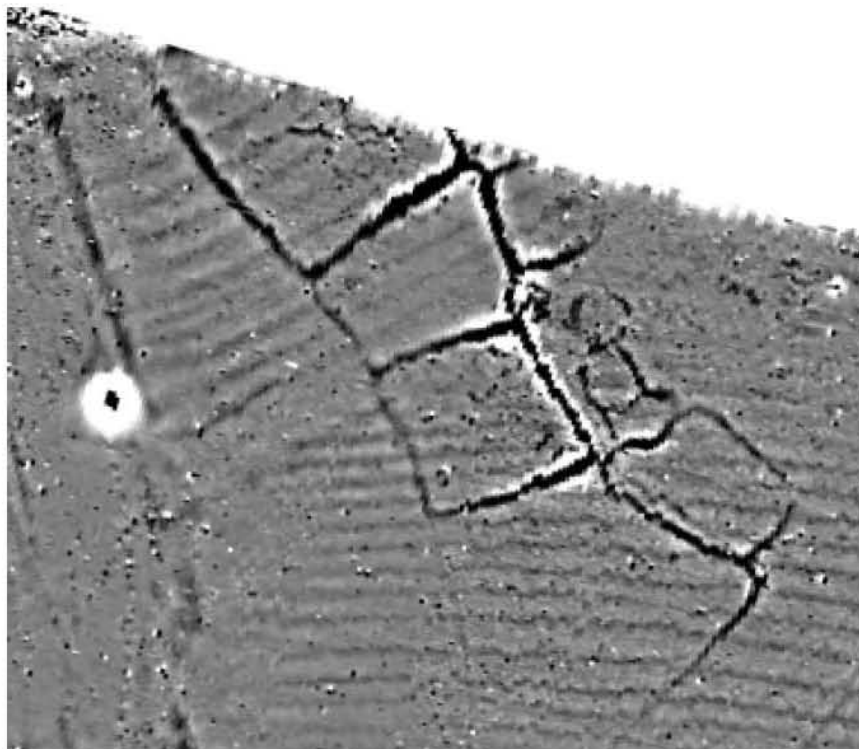
Gaffney, C, Gater, J, and Ovendon, S, 2002 *The Use of Geophysical Techniques in Archaeological Evaluations*, Institute of Field Archaeologists Technical Paper, **6**

Clarke, J, and Chapman, A, (ed) 2009, *Iron Age Enclosures and Droeway at Airfield Farm, Market Harborough, Leicestershire*, Northamptonshire Archaeology report, **08/85**



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2 Bolton House  
Wootton Hall Park

Northampton NN4 8BE

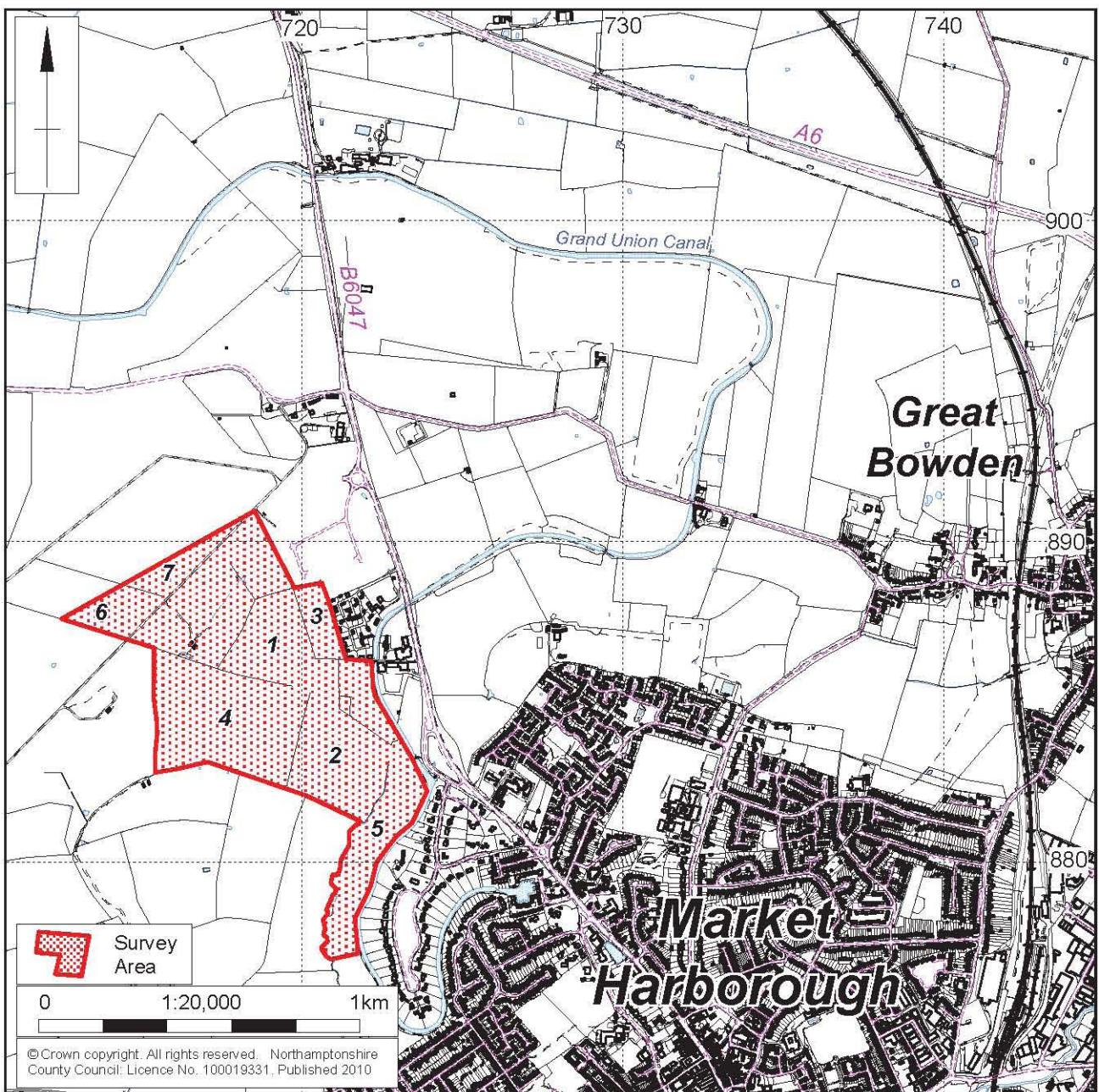
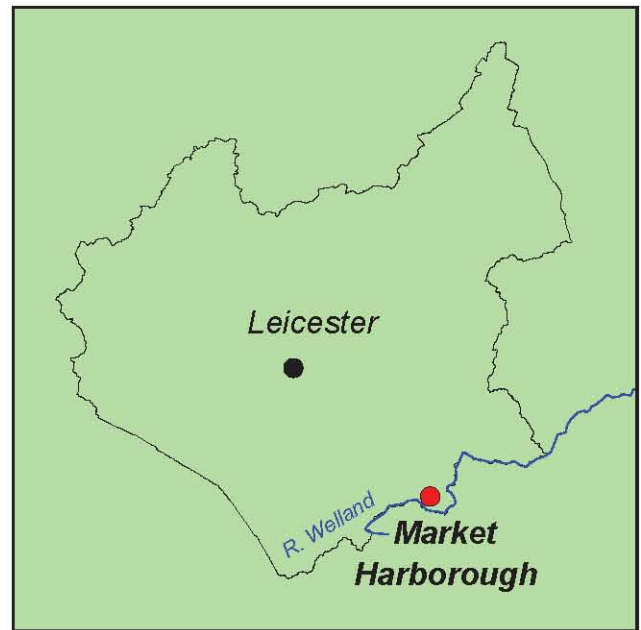
t. 01604 700493 f. 01604 702822

e. [sparry@northamptonshire.gov.uk](mailto:sparry@northamptonshire.gov.uk)

w. [www.northantsarchaeology.co.uk](http://www.northantsarchaeology.co.uk)



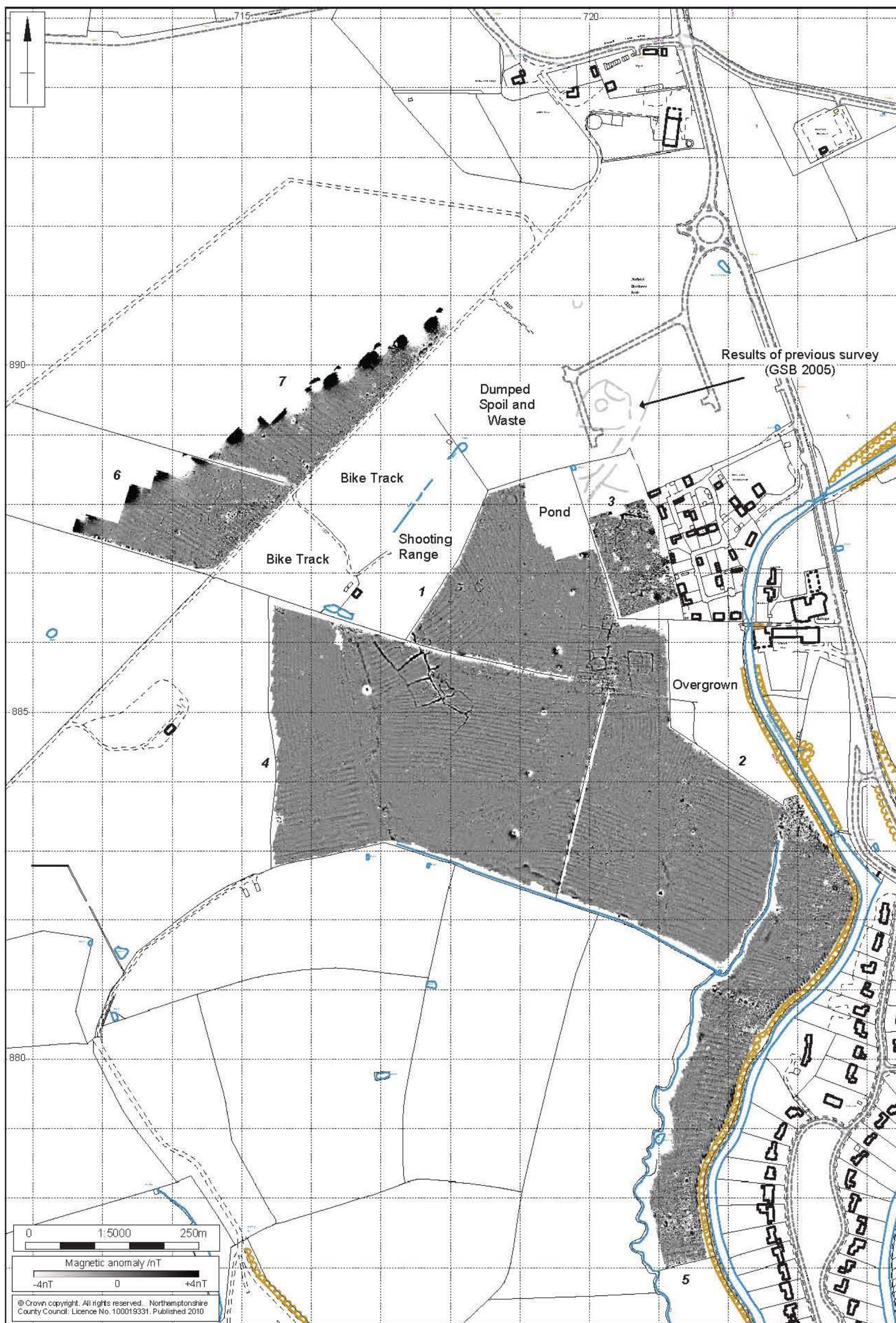
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Scale 1:20,000

Site location Fig 1

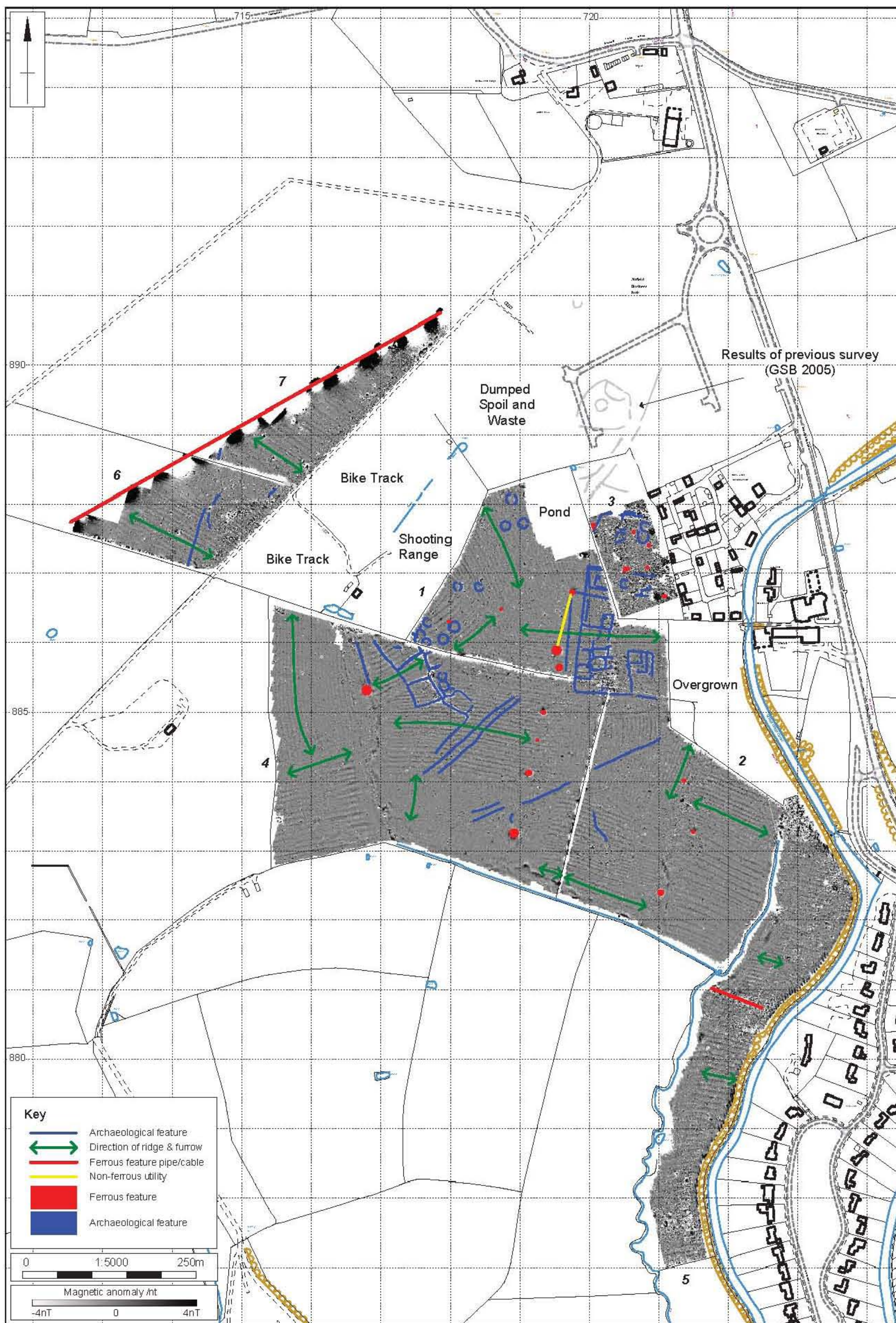




Scale 1:5000

Magnetometer Survey Results Fig 2





Magnetometer Survey Interpretation Fig 3

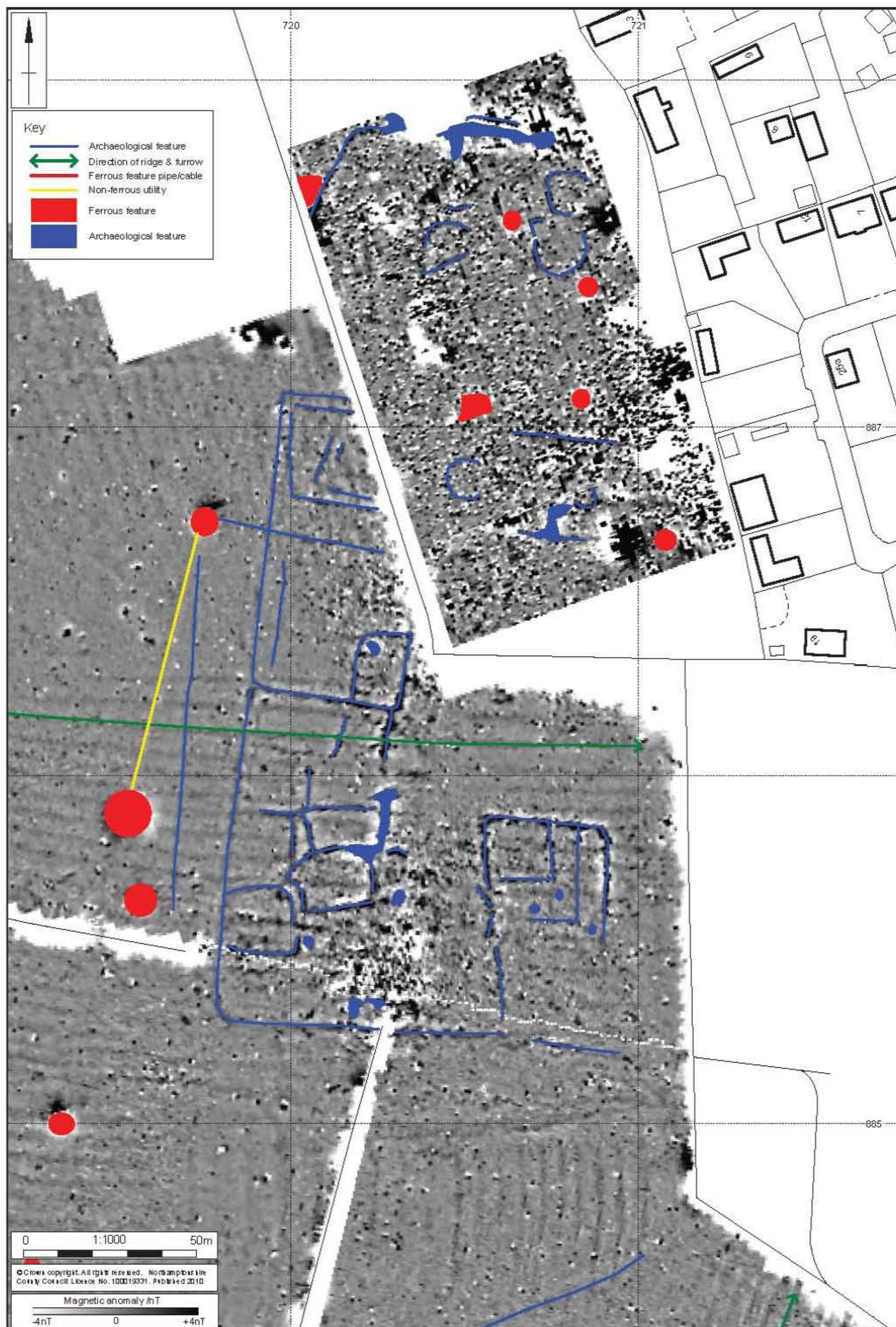




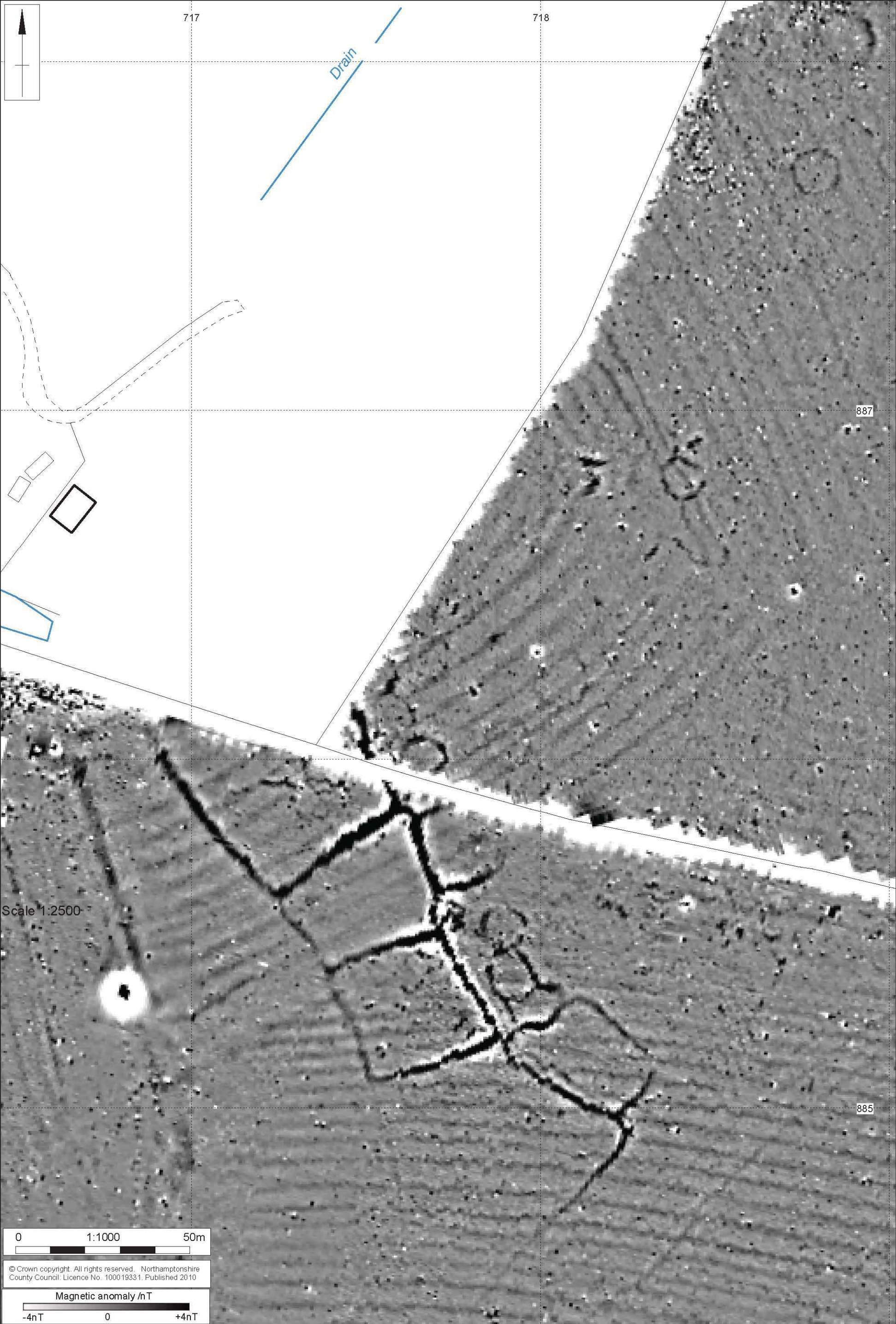
Scale 1:1000

Magnetometer Survey Results, Detail Fields 1, 2 & 3 Fig 4









Scale 1:1000

Magnetometer Survey Results, Detail Fields 1 & 4 Fig 6



