



Northamptonshire County Council

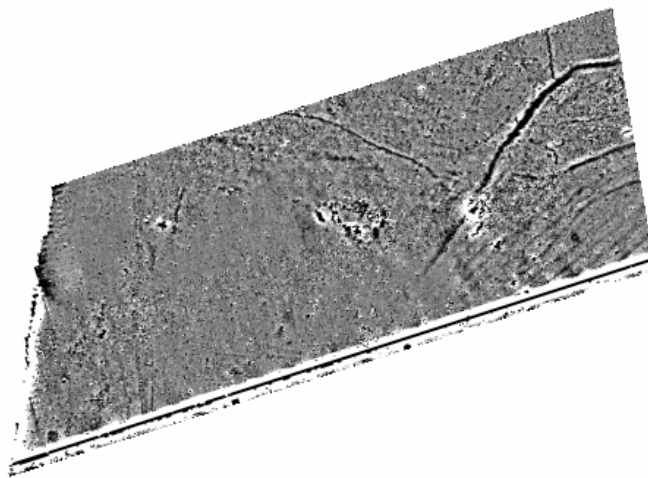
# Northamptonshire Archaeology

Archaeological Geophysical Survey

At Borderville Farm

Stamford, Lincolnshire

April 2009



John Walford

April 2009

Report 09/50

## Northamptonshire Archaeology

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BORDERVILLE FARM, STAMFORD, LINCOLNSHIRE

**OASIS REPORT FORM**

<b>PROJECT DETAILS</b>		
Project name	Archaeological Geophysical Survey at Borderville Farm, Stamford, Lincolnshire (Western Area)	
Short description	Northamptonshire Archaeology was commissioned by University of Leicester Archaeological Services to conduct an archaeological geophysical survey on land belonging to Borderville Farm, on the northern edge of Stamford. A single area of <i>c</i> 7.5ha was surveyed by fluxgate gradiometer. This was shown to contain part of a probable Iron Age or Romano-British enclosed settlement with internal features including at least one hut circle. The survey also detected several outlying ditches and two areas of strong magnetic disturbance. The latter may possibly represent ancient industrial features.	
Project type	Geophysical survey	
Site status	None	
Previous work	Aerial Photography. Desk-based Assessment (Hunt 2008).	
Current Land use	Arable	
Future work	Unknown	
Monument type/ period	Iron Age or Roman enclosed settlement. Medieval ridge and furrow. Undated possible industrial features.	
Significant finds	None	
<b>PROJECT LOCATION</b>		
County	Lincolnshire	
Site address	Borderville Farm, Stamford	
Study area	7.5 ha	
OS Easting & Northing	TF 034 085	
Height OD	Circa 30m-50m AOD	
<b>PROJECT CREATORS</b>		
Organisation	Northamptonshire Archaeology	
Project brief originator	University of Leicester Archaeological Services	
Project Design originator	University of Leicester Archaeological Services	
Director/Supervisor	John Walford	
Project Manager	Adrian Butler	
Sponsor or funding body	Stamford AFC	
<b>PROJECT DATE</b>		
Start date	14 <sup>th</sup> April 2009	
End date	16 <sup>th</sup> April 2008	
<b>ARCHIVES</b>		
	Location	Content
Physical	N/A	
Paper	NA	Site survey records
Digital	NA	Geophysical survey & GIS data
<b>BIBLIOGRAPHY</b>		
Title	Journal/monograph, published or forthcoming, or unpublished client report	
Serial title & volume	Archaeological Geophysical Survey at Borderville Farm, Stamford, Lincolnshire	
Author(s)	NA Report 09/50	
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**ARCHAEOLOGICAL GEOPHYSICAL SURVEY AT BORDERVILLE  
FARM, STAMFORD, LINCOLNSHIRE – WESTERN SECTOR**

**APRIL 2009**

*ABSTRACT*

*Northamptonshire Archaeology was commissioned by University of Leicester Archaeological Services to conduct an archaeological geophysical survey on land belonging to Borderville Farm, on the northern edge of Stamford. A single area of c 7.5ha was surveyed by fluxgate gradiometer. This was shown to contain part of a probable Iron Age or Romano-British enclosed settlement with internal features including at least one hut circle. The survey also detected several outlying ditches and two areas of strong magnetic disturbance. The latter may perhaps represent ancient industrial features.*

**1 INTRODUCTION**

Northamptonshire Archaeology was commissioned by University of Leicester Archaeological Services, on behalf of Stamford AFC, to undertake an archaeological geophysical survey at Borderville Farm, on the northern edge of Stamford, Lincolnshire (NGR TF 034 085; Fig 1). The work was undertaken to support a planning proposal for the development of sports pitches.

The objectives of the geophysical survey were to identify the presence or absence of archaeological remains within the proposed development area. The fieldwork consisted of a magnetic gradiometer survey covering approximately 7.5 hectares of land.

**2 TOPOGRAPHY AND GEOLOGY**

The survey area occupies the south-eastern half of an undulating arable field between Borderville Farm and the northern edge of Stamford. It is bounded to the east by Ryhall Road. The maximum elevation is approximately 50m AOD, at the south-west corner of the site. From here the ground drops to the north and east. The northern edge of the site coincides approximately with a steep-sided, eastward trending, dry valley.

The area is mapped by the British Geological Survey (sheet 157, 1978 edition) as straddling a series of limestone beds – namely the Blisworth Limestone, Upper Estuarine Beds and Upper Lincolnshire Limestone. A thin ironstone band occurs sporadically at the base of the Estuarine Beds but is not recorded as outcropping within the survey area.

### **3 ARCHAEOLOGICAL BACKGROUND**

A desk-based assessment of the site (Hunt 2008) has shown it to contain a set of undated cropmarks. These appear to indicate ditched enclosures and related features. Other cropmarks occur in the wider area, including several late Bronze Age to Early Iron Age pit alignments, and a suspected Roman villa lies approximately 400m north-west of Borderville Farm. There is no evidence for Saxon or medieval remains in the immediate vicinity of the site.

### **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 entire site was divided into a single mesh of 30m grid squares. These were set out manually by tape measure and optical square, and were tied in by measurement to the field boundaries. 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 following the project brief and specification (Young 2008; Northamptonshire Archaeology 2009) and in accordance with the guidelines issued by English Heritage and by the Institute of Field Archaeologists (EH 2008; Gaffney, Gater and Ovendon 2002).

The majority of the data was processed using Geoplot 3.00s software. Striping was removed using the 'Zero Mean Traverse' function (ZMT) and destaggering of the data was performed as necessary. In some cases, however, ZMT was found to remove genuine anomalies aligned with the survey traverse direction. Where this occurred an alternative destriping procedure was employed, using a spreadsheet routine developed in-house.

The processed data is presented in this report in the form of a greyscale plot (scale +3nT to -3nT black ~ white). These have 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

The survey has revealed a complex of archaeological remains, the principal element of which is an irregularly-shaped ditched enclosure encompassing c 0.5ha. This contains at least one probable hut circle, in the north-eastern corner, as well as a number of less clearly defined internal features. Of particular note is a short, strongly positive, linear anomaly with a pronounced negative halo. This is of quite unusual form and is tentatively interpreted as a corn-drier or similar heat-effected structure. These remains cannot be precisely dated but an Iron Age or Romano-British attribution would be most plausible.

Several ditches radiate out from the enclosure and, to the south, a further ditch follows a sinuous easterly course. These ditches are likely to represent land divisions associated with the enclosure. There are some weak linear anomalies in the data which could represent further ditches but are too discontinuous or indistinct to interpret with confidence.

There are two areas of intense dipolar noise to the west of the enclosure which defy confident interpretation. Although they may simply indicate ferrous debris, they would also be consistent with areas of industrial remains – kilns, furnaces or other high temperature structures. Such uncertainty regarding amorphous anomalies is common and can only be resolved by excavation.

To the south of the enclosure are a series of weak parallel linear anomalies. These probably represent furrows from medieval or early post-medieval cultivation. Their alignment and wide spacing is not consistent with modern ploughing.

A strong positive linear anomaly with a wide negative halo runs right through the southern edge of the data, parallel with the modern field boundary. This response is typical of a buried pipe or cable. Other halos can be seen around the field margins. A few discrete anomalies, representing small pieces of ferrous debris, also occur.

## 6 CONCLUSION

The survey has confirmed the presence of an enclosure and associated ditches, which were previously known from cropmarks. The detection of features within this enclosure, including a hut circle, indicate that it was a site of occupation and allow a broad attribution to the Iron Age or Romano-British periods.

Several prominent dipolar anomalies in the data present difficulties of interpretation. A modern

ferrous origin is possible, but such anomalies might also be consistent with the presence of kilns, furnaces or other ancient industrial remains. This uncertainty can only be resolved by excavation.

The archaeology detected extends beyond the boundary of the eastern edge of the survey.

## **BIBLIOGRAPHY**

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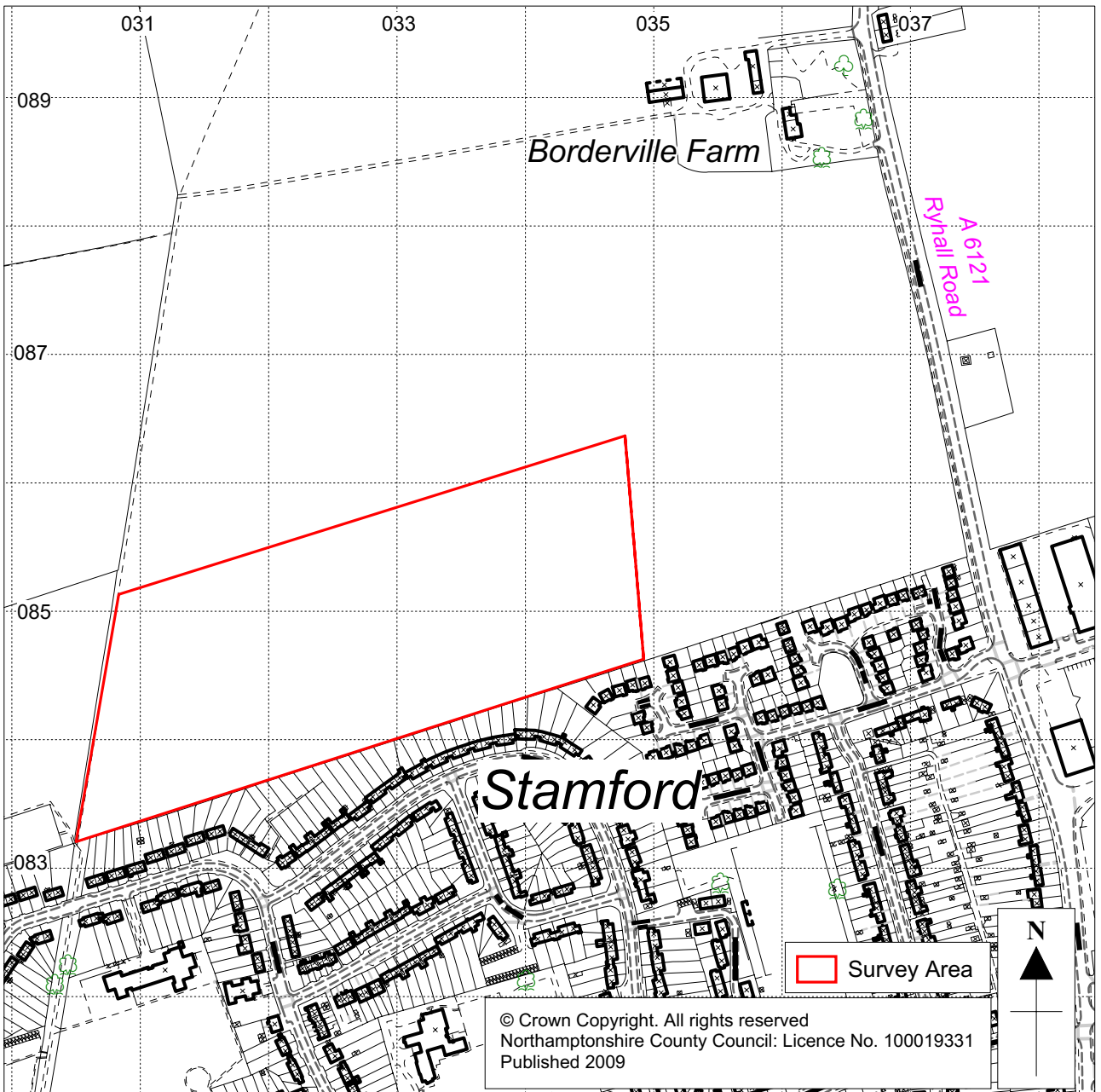
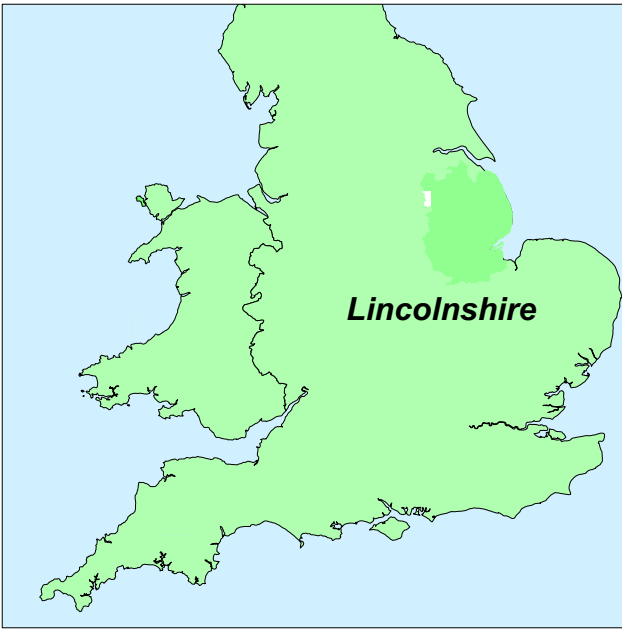
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Scale 1:5000

Site Location Fig 1

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033

035

037

Magnetic anomaly strength



N



031

Old quarry pit

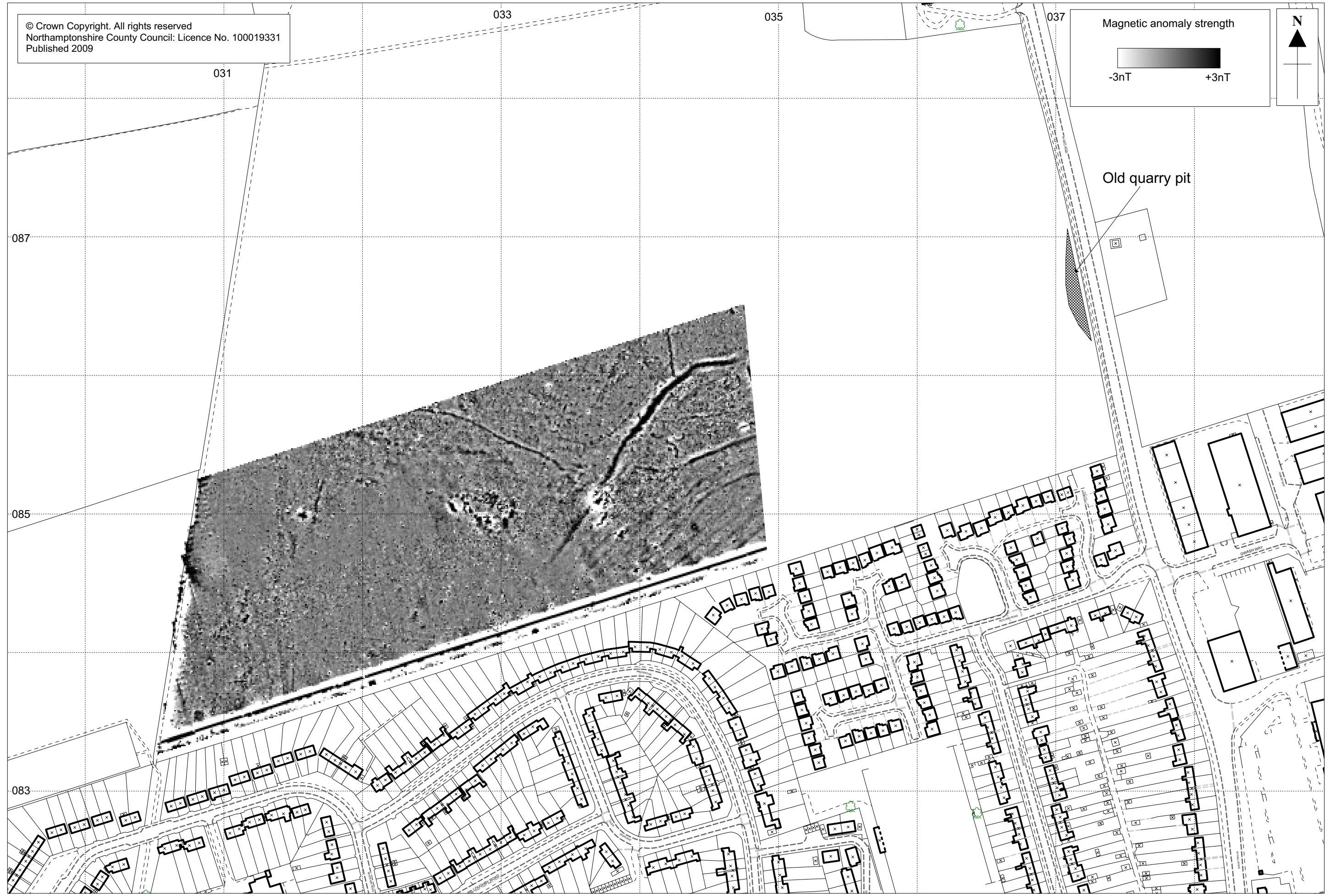
087

085

083

Scale 1:2500

Magnetometer survey results Fig 2



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Magnetic anomaly strength



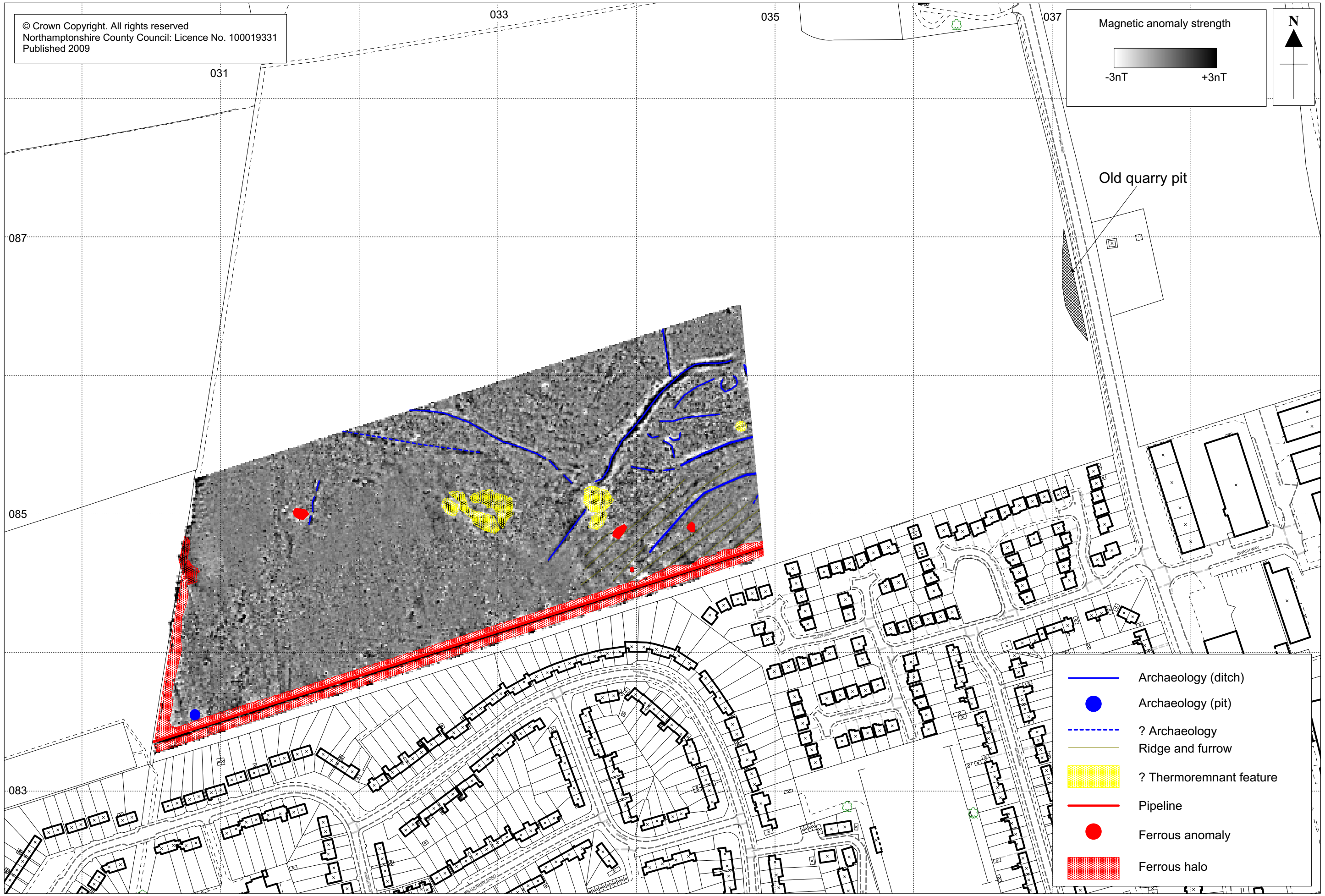
031

Old quarry pit

087

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Scale 1:2500

Interpretation of magnetometer survey results Fig 3