



Archaeological geophysical survey of land west of Station Road Ibstock, Leicestershire January 2014

Report No. 14/31

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OASIS REPORT FORM

PROJECT DETAILS		OASIS No: molanort1-170938
Project name	Archaeological geophysical survey of land west of Station Road, Ibstock, Leicestershire.	
Short description	Northamptonshire Archaeology, now trading as MOLA, was commissioned by Richborough Estates to carry out a detailed magnetometer survey on 6.65ha of land in advance of a proposed development west of Station Road, Ibstock, Leicestershire. The results identified two possible sections of undated ditch and furrows of medieval to post-medieval ridge and furrow cultivation.	
Project type	Geophysical survey	
Site status	None	
Previous work	Desk Based Assessment (Chapman 2013)	
Current Land use	Pasture	
Future work	Unknown	
Monument type/ period	Undated ditches, medieval furrows	
Significant finds	None	
PROJECT LOCATION		
County	Leicestershire	
Site address	Land to the west of Station Road, Ibstock	
Study area	c 6.65ha	
OS grid reference	SK 402 100	
Height OD	c130 aOD	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology NA (now trading as MOLA)	
Project brief originator	Archaeological Advisor, Leicestershire County Council	
Project Design originator	NA	
Director/Supervisor	Adam Meadows	
Project Manager	Mark Holmes	
Sponsor or funding body	Richborough Estates	
PROJECT DATE		
Start date	27 January 2014	
End date	28 January 2014	
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BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report	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 of land west of Station Road, Ibstock, Leicestershire January 2014	
Serial title & volume	MOLA Reports 14/31	
Author(s)	Adam Meadows, Gemma Hewitt, Paul Clements	
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**ARCHAEOLOGICAL GEOPHYSICAL SURVEY
OF LAND WEST OF STATION ROAD, IBSTOCK
LEICESTERSHIRE
JANUARY 2014**

Abstract

Northamptonshire Archaeology, now trading as MOLA, was commissioned by Richborough Estates to carry out a detailed magnetometer survey on 6.65ha of land in advance of a proposed development on land west of Station Road, Ibstock, Leicestershire. The results identified two possible sections of undated ditch and furrows of medieval to post medieval ridge and furrow cultivation.

1 INTRODUCTION

Northamptonshire Archaeology, now trading as MOLA, was commissioned by Richborough Estates to undertake a detailed geophysical survey in advance of a proposed development on land west of Station Road, Ibstock, Leicestershire (NGR: SK 402 100). The aim of the survey was to detect any archaeological remains that may be present at the site, in accordance with the National Planning Policy Framework (NPPF). The fieldwork was conducted between the 27th and 28th January 2014 and comprised the detailed magnetometer survey.

2 BACKGROUND

2.1 Location and geology

The site comprised three fields totalling 6.65ha extant on the south-western edge of Ibstock at c 130m aOD. The development area is bounded to the east by Station Road, residential housing to the south and pasture fields to the north and west. The site slopes westwards from Station Road and rises to the south towards the copse at the southern boundary. The site also rises at the northern boundary towards the allotment gardens.

The bedrock geology of the site comprises undifferentiated Triassic rocks of mudstone, siltstone and sandstone. The drift geology is on the border between glacial sands and gravels and Diamicton Till (BGS 2014) The soils are identified as freely draining slightly acid loamy soils (Landis 2014).

2.2 Historical and archaeological background

No previous archaeological work has been undertaken within, or around the immediate vicinity, of the development area. A desk based assessment was carried out by Northamptonshire Archaeology (Chapman 2013) from which the following background is taken. A magnetometer survey was conducted in 2010 by Northamptonshire Archaeology, 900m north-east, which detected a single pit and some very slight traces of ridge and furrow cultivation (Butler 2010). Subsequent trial trenching by ULAS (University of Leicester Archaeological Services) revealed a series of linear features and gullies, which were probably modern since brick/tile and earthenware were recovered, as well as undated pits (Jarvis 2010).

Evidence of prehistoric activity has been identified north-east and c 1km south-east of the development area by fieldwalking surveys which recovered a few worked flints. A desk-based assessment of land north of Ashby Road, c 900m north-east, noted the potential for further prehistoric activity. It also indicated the potential for Roman activity in the area.

The development area is outside the medieval and post-medieval settlement core of Ibstock. Other evidence of medieval activity has been identified by fieldwalking surveys south-east and north-east of the development area, during which several sherds of medieval pottery were recovered.

3 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).

An independent system of 30m grids was established in each of the areas to be surveyed. The grids were established with a tape measure and optical square and tied in to the Ordnance Survey National Grid using Leica System 1200 dGPS (see EH 2008, 19). 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) and with the written scheme of investigation for the project (NA 2013). The survey data were processed using Geoplot 3.00v software. The striping was removed using the 'Zero Mean Traverse' function. Destaggering of the data was performed where necessary. The processed data is presented in this report in the form of grey-tone plots at a scale of +/- 4nT black/white. These have been scaled, rotated and resampled (georectified) for display against the Ordnance Survey base mapping (Fig 2). An interpretative overlay is shown in Figure 3.

4 SURVEY RESULTS

The survey has identified two anomalies of possible archaeological origin. In Field 1 a weak positive linear anomaly aligned west-north-west possibly represents a ditch segment. Remnant furrows of medieval to post-medieval ridge and furrow cultivation, on a north-west to south-east alignment, have been detected in Fields 1 and 3. One of the furrows appears magnetically stronger than the surrounding furrows which may indicate a ditch on a similar alignment.

A dense spread of magnetic anomalies across Field 2 are caused by ferrous debris within the topsoil. These are likely to be debris from the allotments in the field. A negative anomaly along the western edge of Field 3 is likely a modern feature indicating the edge of ploughing when the field was under arable use.

Other scattered, isolated magnetic anomalies across the survey area indicate ferrous objects within the topsoil. These are likely to be of recent origin. Ferrous anomalies around the edge of the fields are the result of metal fences.

5 CONCLUSION

The survey has identified the presence of two positive linear anomalies. These are probably undated lengths of ditch, possibly former field boundaries. However, the anomaly on the same alignment as the furrows may simply be a magnetically enhanced furrow instead of ditch. It should be considered that any features within Field 2 may be masked by the abundant ferrous debris.

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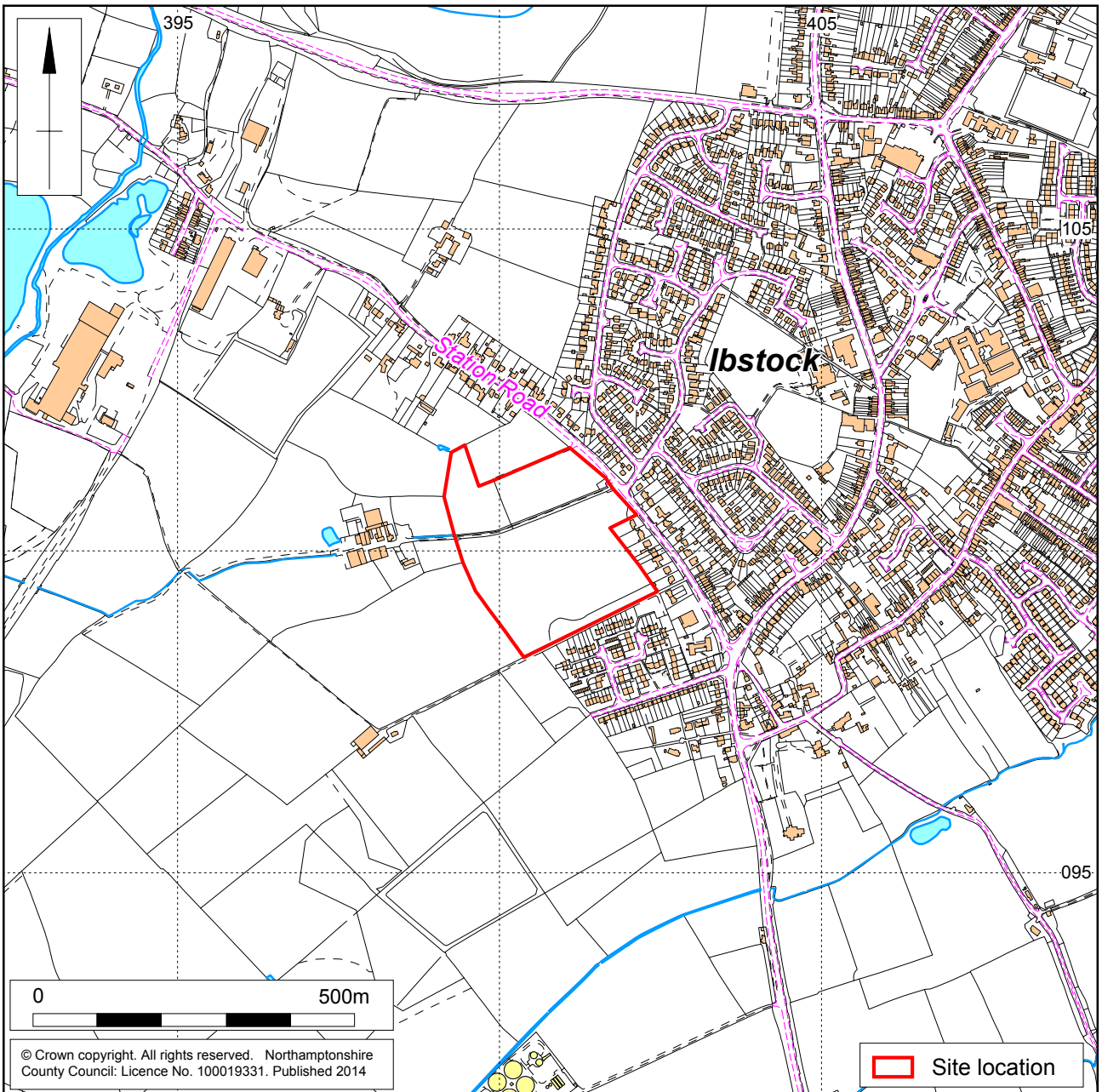
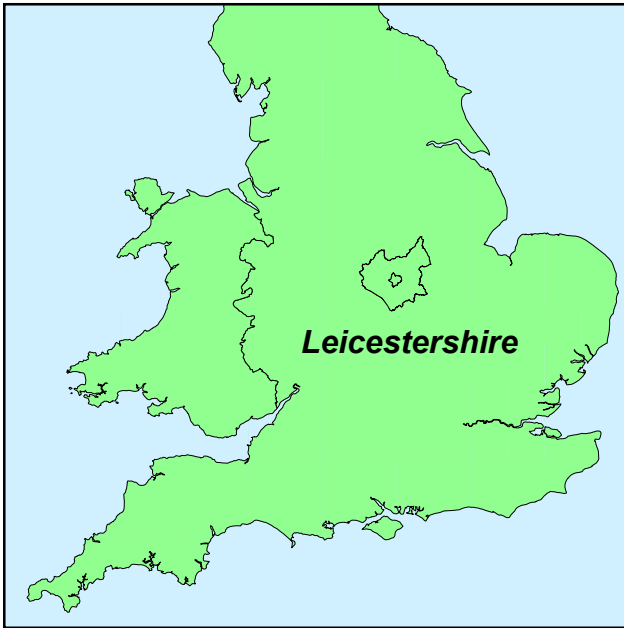
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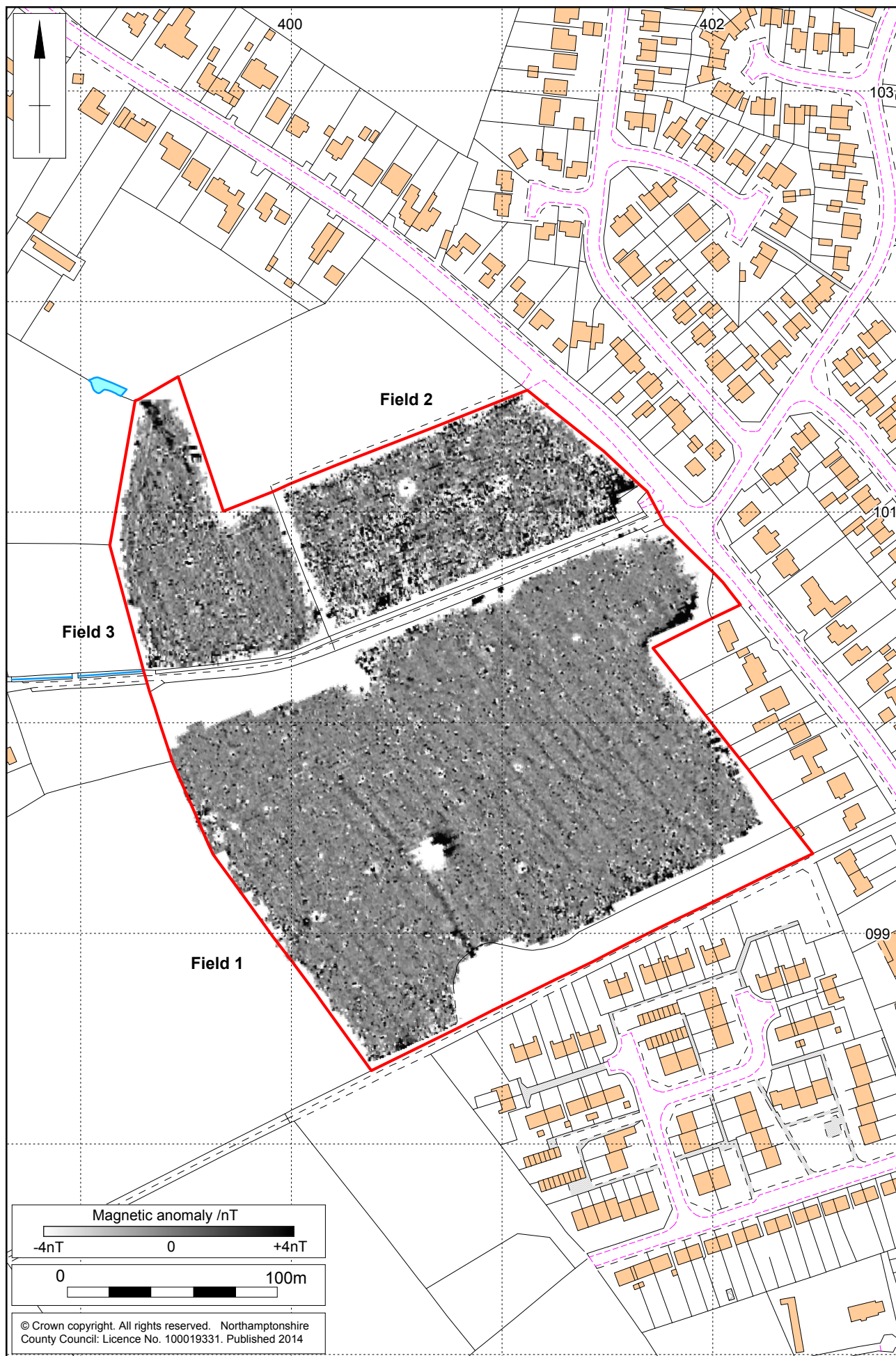
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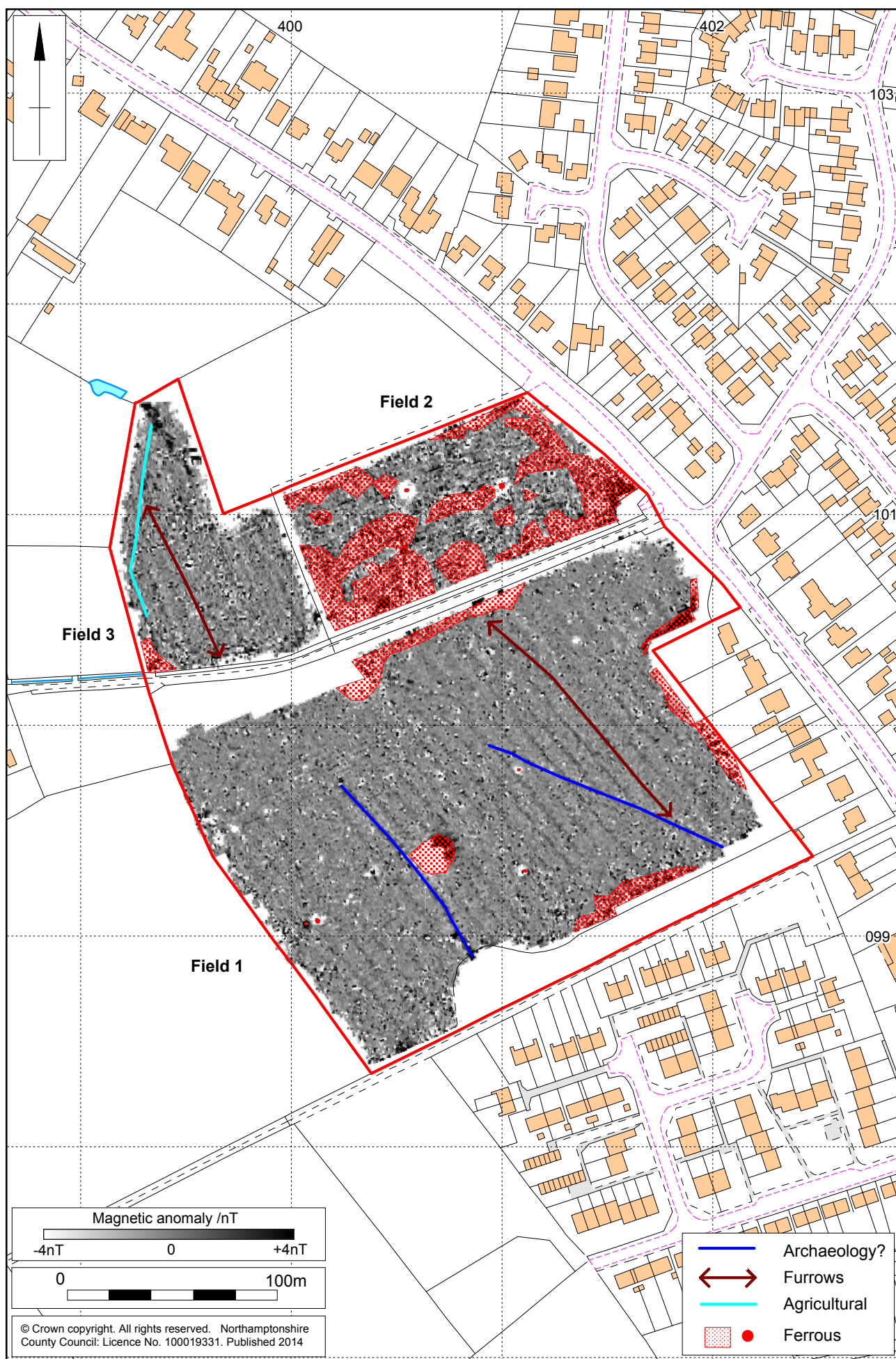
Scale 1:10,000

Site Location Fig 1



1:2500

Magnetometer survey results Fig 2



1:2500

Magnetometer survey interpretation Fig 3

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