



# Archaeological geophysical survey of land south of Hinckley Road, Sapcote Leicestershire February 2016

Accession No: X.A28.2016

Report No: 16/29

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NGR: SP 483 933

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**OASIS REPORT**

<b>PROJECT DETAILS</b>		Oasis No. <b>molanort1-244512</b>	
Project name	Archaeological geophysical survey of land south of Hinckley Road, Sapcote, Leicestershire		
Short description	MOLA Northampton was commissioned to carry out a detailed magnetometer survey of land south of Hinckley Road, Sapcote, Leicestershire. The survey detected no archaeological features other than medieval to early post-medieval ridge and furrow. Much superficial magnetic debris was also detected, and it is thought that this probably derives from the recent manuring of the site with 'green' waste.		
Project type	Geophysical survey		
Site status	None		
Previous work	Desk-based assessment (CgMs)		
Current land use	Arable		
Future work	Unknown		
Monument type/ period	Medieval to early post-medieval ridge and furrow		
Significant finds	None		
<b>PROJECT LOCATION</b>			
County	Leicestershire		
Site address	Hinckley Road, Sapcote		
Study area	c 8ha		
OS Easting & Northing	SP 483 933		
Height OD	c 90m aOD		
<b>PROJECT CREATORS</b>			
Organisation	MOLA Northampton		
Project brief originator	Leicestershire County Council		
Project design originator	MOLA Northampton		
Director/Supervisor	Ian Fisher		
Project Manager	John Walford		
Sponsor or funding body	CgMs Consulting		
<b>PROJECT DATE</b>			
Start date	15 February 2016		
End date	16 February 2016		
<b>ARCHIVES</b>	Location	Content	
Physical	N/A		
Paper	MOLA Northampton	Site survey records	
Digital		Geophysical survey & GIS data	
<b>BIBLIOGRAPHY</b>	Journal/monograph, published or forthcoming, or unpublished client report		
Title	Archaeological geophysical survey of land south of Hinckley Road, Sapcote, Leicestershire, February 2016		
Serial title & volume	MOLA Northampton Reports 16/29		
Author(s)	John Walford		
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# Archaeological geophysical survey of land south of Hinckley Road, Sapcote Leicestershire February 2016

## ABSTRACT

*MOLA Northampton was commissioned to carry out a detailed magnetometer survey of land south of Hinckley Road, Sapcote, Leicestershire. The survey detected no archaeological features other than medieval to early post-medieval ridge and furrow. Much superficial magnetic debris was also detected, and it is thought that this probably derives from the recent manuring of the site with 'green' waste.*

## 1 INTRODUCTION

MOLA was commissioned by CgMs Consulting to conduct a geophysical survey on c 7.8ha of land at Hinckley Road, Sapcote, Leicestershire (NGR SP 483 933; Fig 1). The purpose of the survey was to identify and map any archaeological features which might be affected by a proposed development scheme. The fieldwork was undertaken from 15th to 16th February 2016 and has been allocated accession number X.A28.2016 by Leicestershire Museums Service.

## 2 BACKGROUND

### 2.1 Location, topography and geology

The survey area comprises a single arable field, c 7.8ha in extent, located on the western edge of Sapcote (Fig 1). It lies between Sapcote itself and a new housing development, known as 'The Limes' that lies c 200m west of the village.

The survey area stands at just over 90m aOD on the broad, flat crest of a ridge between two eastward-draining stream valleys. Its geology is mapped as superficial deposits of Thrussington Diamicton and Woolston Sand and Gravel overlying a Mercia Mudstone bedrock (BGS 2016).

### 2.2 Historical and archaeological background

The survey area lies almost immediately west of Sapcote Castle (Scheduled Monument No. 1010301). This was a motte and bailey castle, the location of which is indicated by residual earthworks. Piecemeal excavation of this site throughout the last century has revealed the remains of stone buildings and other features of 13th to 15th century date. However, despite its proximity to the castle, the survey area itself is not known to contain any medieval features other than remnants of ridge and furrow cultivation.

The Leicestershire Historic Environment Record has information about two locations near the survey area where pre-medieval remains have been discovered. One is c 300m to the south-west, where a dense scatter of Bronze Age flintwork has been discovered (MLE 287). The other is c 500m to the north, at Sapcote Gravel Pit, where a Palaeolithic flint implement, a Bronze Age spearhead and (possibly) a crouched inhumation have been discovered on separate occasions (MLE 6043, MLE 9899, MLE 8215).

An archaeological trial trench evaluation was undertaken at The Limes, immediately west of the survey area, in 2013. This identified no archaeological remains other than ridge and furrow (Upson-Smith and Muldowney 2013).

### **3 METHODOLOGY**

The magnetometer 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).

A network of 30m grid squares was established across the field to be surveyed. This was set out with a tape measure and optical square and was tied in to the Ordnance Survey National Grid by means of a Leica Viva RTK GPS. 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 Historic England and by the Chartered Institute for Archaeologists (HE 2015; ClfA 2014).

The survey data was processed using TerraSurveyor 3.0.29.1 and Geoplot 3.00v software. The median destripe function in TerraSurveyor was applied on a per sensor basis in order to remove striping caused by slight imbalances between the instrument sensors whilst preserving genuine anomalies aligned parallel with the traverse direction. Geoplot was then used to correct minor grid-edge effects introduced by the destriping and also to destagger where necessary to compensate for slight irregularities in survey pace. The processed data is presented in this report as a greyscale plot (range +15nT to -15nT / black to white), rotated and scaled for display against the Ordnance Survey base mapping (Fig 2). An interpretative plot is provided as Figure 3 and a plot of the unprocessed data as Figure 4.

### **4 SURVEY RESULTS**

The survey results exhibit much magnetic 'noise' arising from modern debris in the ploughsoil, and for this reason the data has had to be plotted at an unusually wide display range (+/-15nT) in order for the plot to be intelligible. Apart from the 'noise', the only other noteworthy anomalies are a series of parallel linear anomalies relating to ridge and furrow.

The ridge and furrow anomalies are aligned east to west, and appear to represent parts of two furlongs meeting at a headland near the centre of the field. The headland itself has not been detected, but its location is clearly indicated by slight northerly and southerly deflections of the furrows where the plough teams would have turned at the ends of the furlongs.

One furrow anomaly, close to the southern edge of the survey area, stands out as being slightly more enhanced than the others. The most likely explanation for this would be that the line of the furrow was followed by a more recent field boundary and that the boundary ditch has a slightly different backfill from the adjacent furrows.

The magnetic noise comprises a locally dense scatter of small dipolar and monopolar magnetic anomalies (spikes) arising from small ferrous objects and other magnetic debris in the ploughsoil. The usual cause of such a widespread area of noise is 'green waste'; poorly sorted composed material, contaminated with fine pieces of scrap metal,



which is spread on fields as manure. This explanation probably applies in this case, although it should be noted that the 'noise' is at its most intense in the northern part of the survey area where the survey team noted a surface scatter of modern hardcore perhaps associated with the recently built housing to the west.

## 5 CONCLUSION

The survey data is heavily disturbed due to the presence of modern debris (probably including 'green waste') across the entirety of the survey area but, despite this, some weak anomalies relating to medieval or early post-medieval ridge and furrow can be discerned. Nothing else of obvious archaeological interest has been detected.

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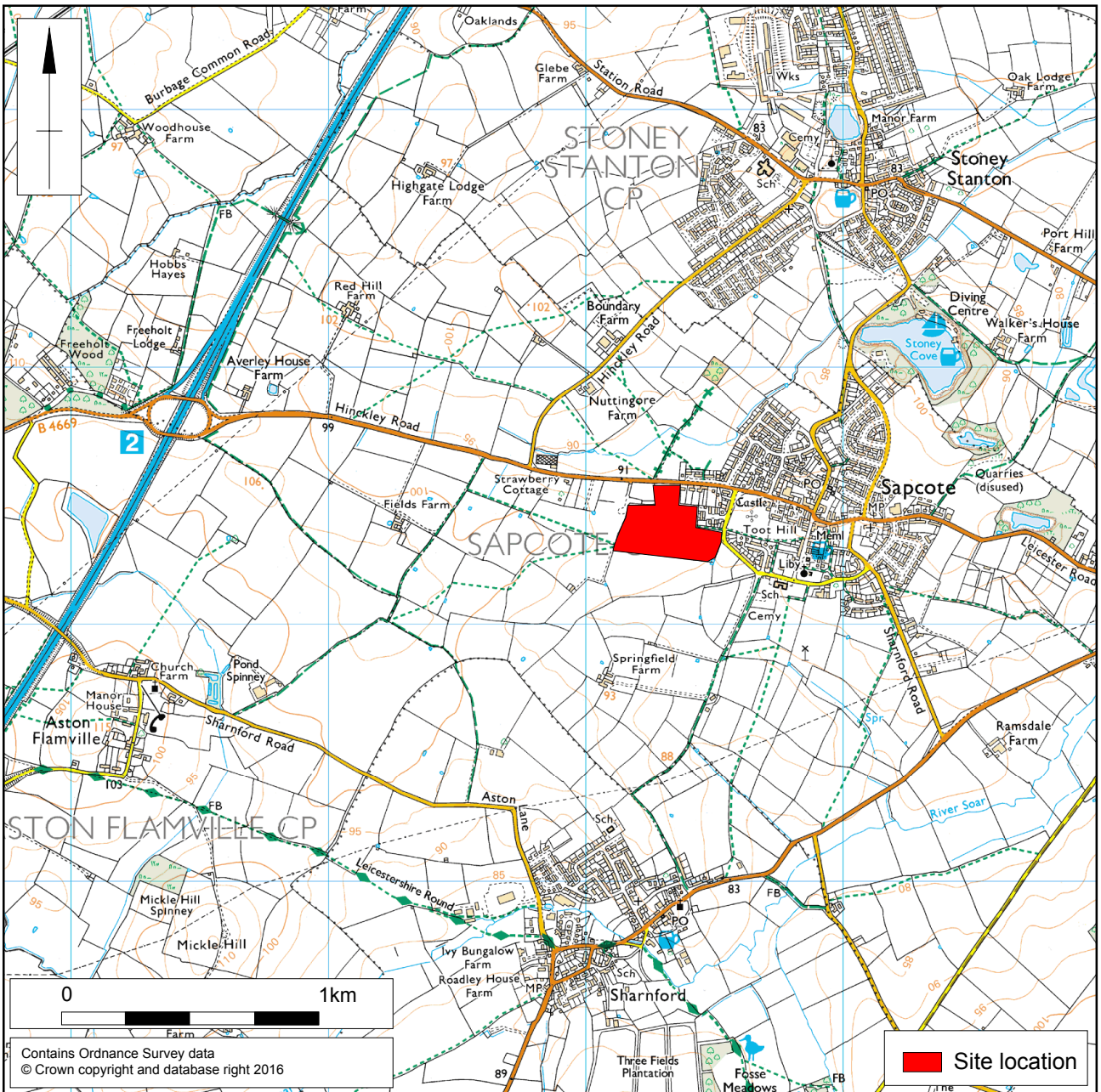
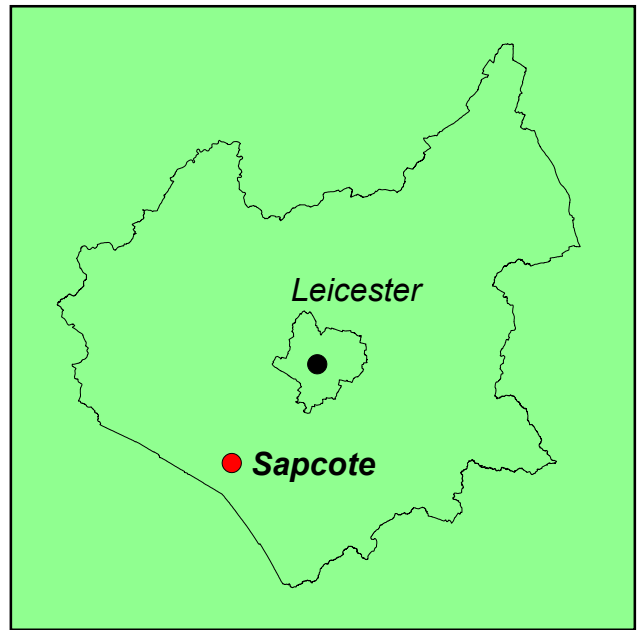
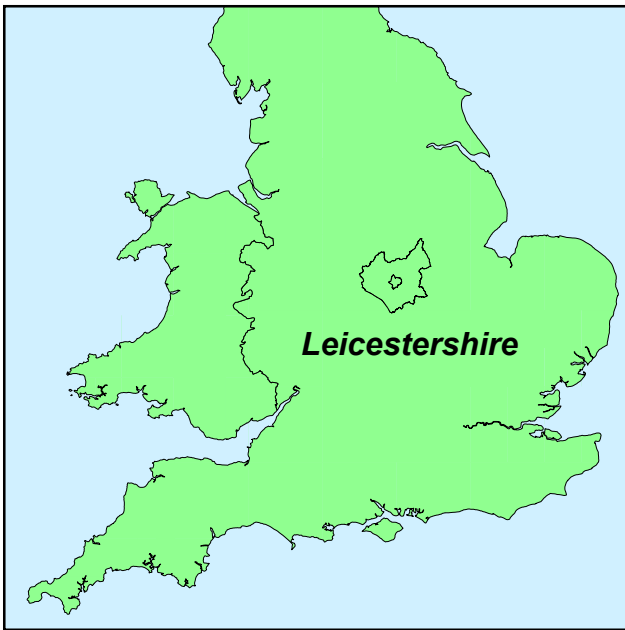
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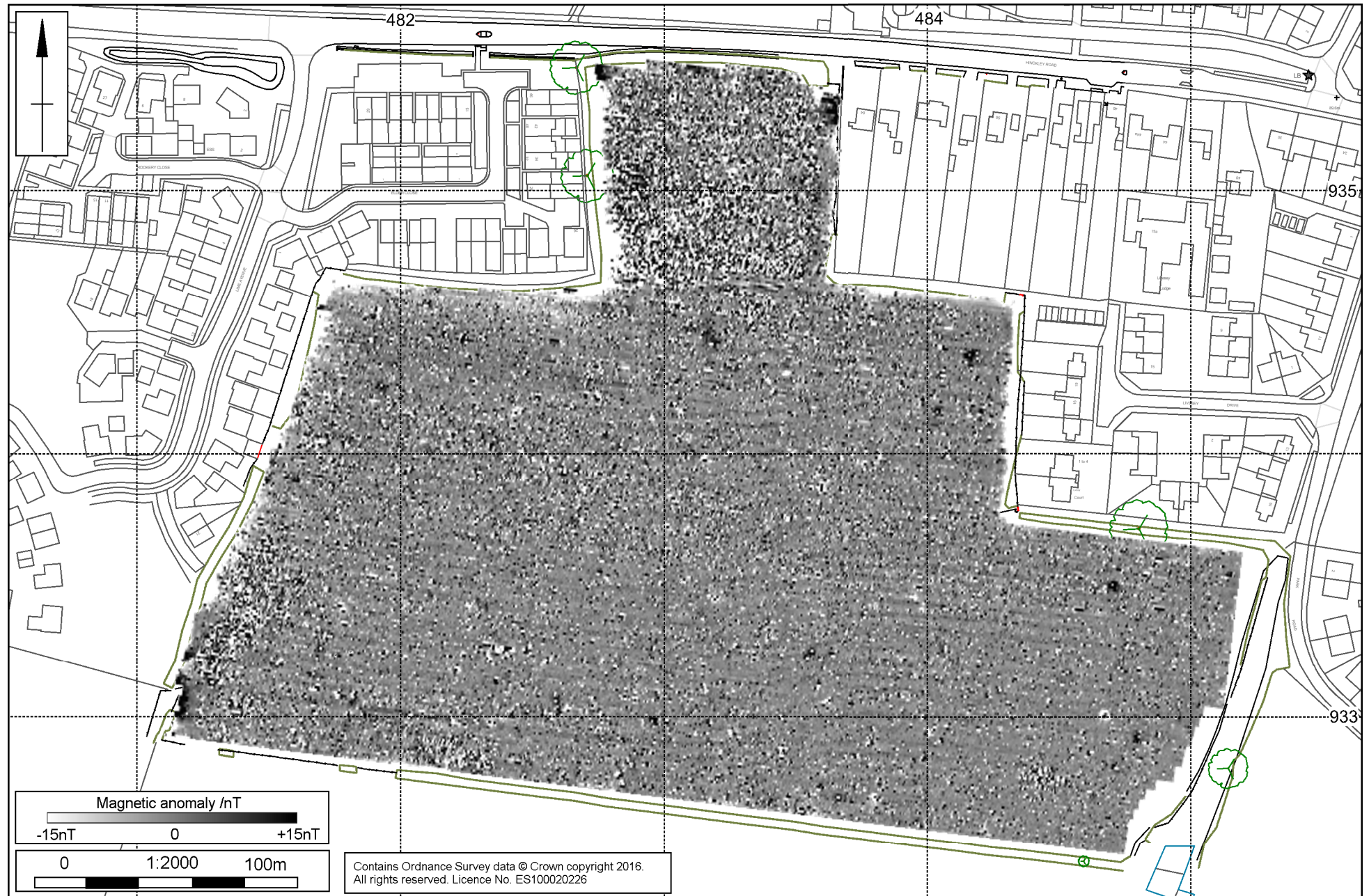
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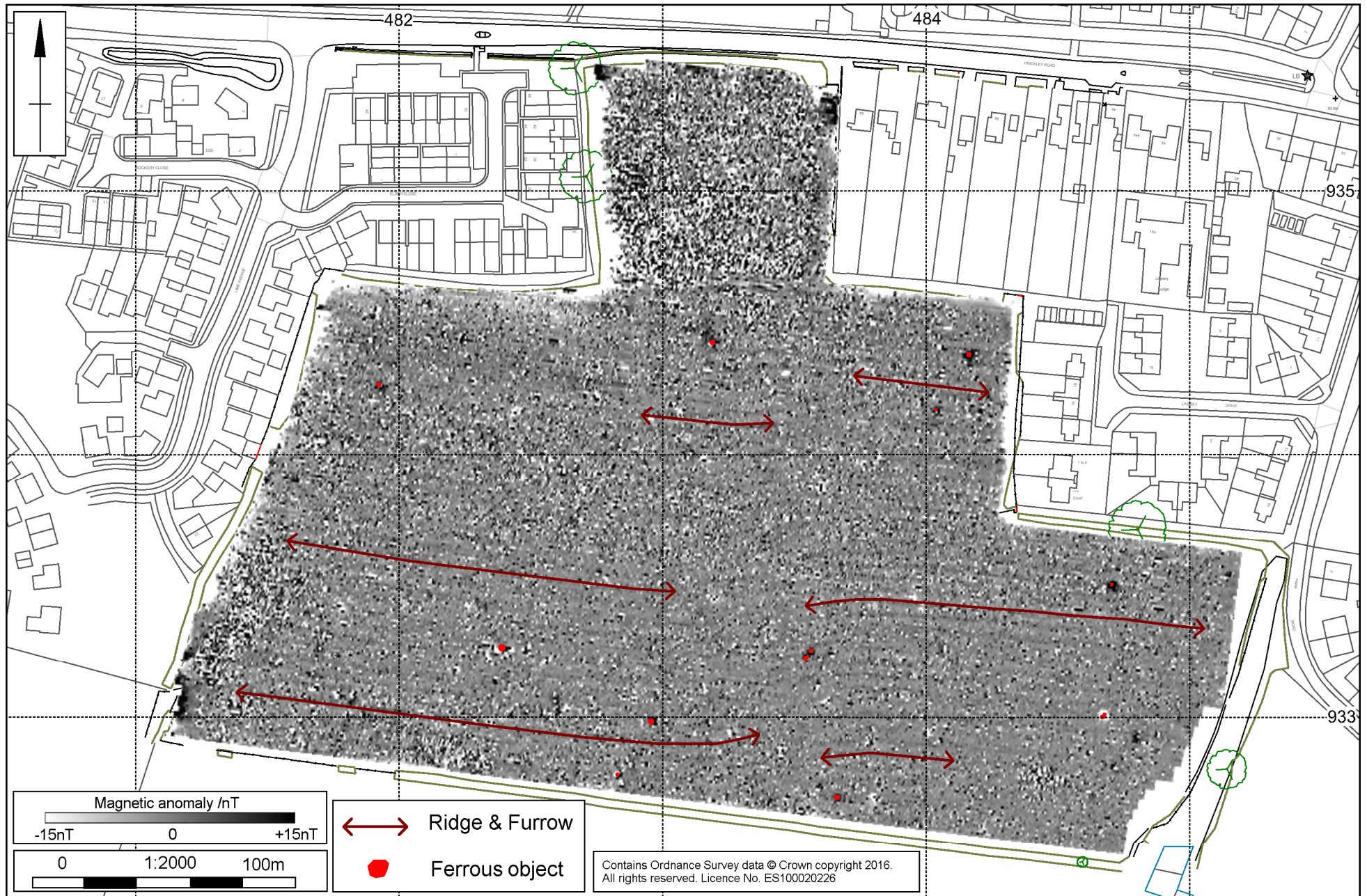
Scale 1:25,000

Site location Fig 1



Scale 1:2000

Magnetometer survey results Fig 2



Scale 1:2000

Geophysical survey interpretation Fig 3



Scale 1:2000

Unprocessed magnetometer data Fig 4



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