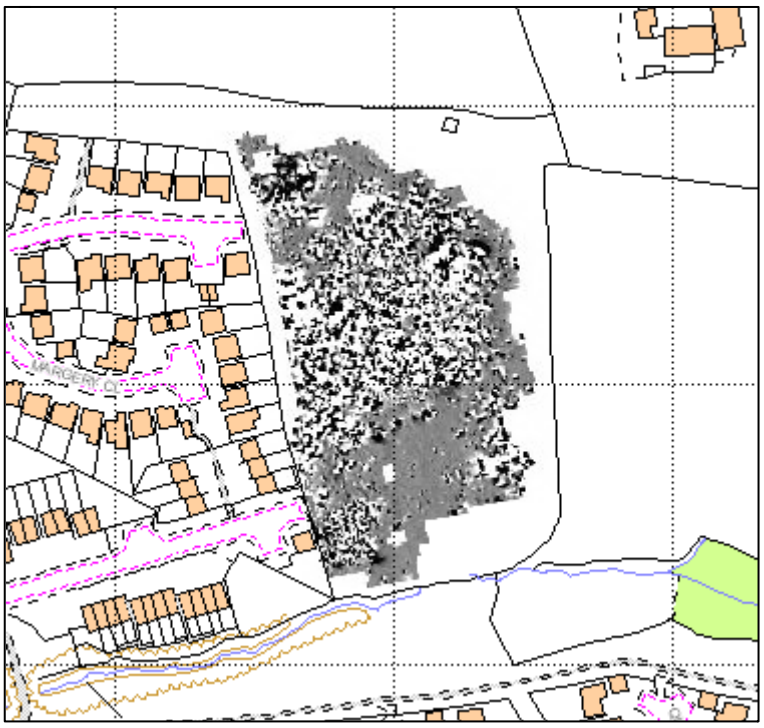

Archaeological geophysical survey of land at Lodge Farm Chase Ashbourne, Derbyshire February 2014

Report No. 14/37

Authors: John Walford
Gemma Hewitt

Illustrator: Ian Fisher

Project Manager: Mark Holmes
Site Code: None
NGR: SK 178 459

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Archaeological Geophysical Survey of land at Lodge Farm Chase Ashbourne, Derbyshire February 2014

Report No. 14/37

Quality control and sign off:

Issue No.	Date approved:	Checked by:	Verified by:	Approved by:	Reason for Issue:
1	13-02-14	Pat Chapman	Mark Holmes	Andy Chapman	Draft for client review

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Illustrations:	Ian Fisher BSc

OASIS REPORT FORM

PROJECT DETAILS	**OASIS No: molanort1-171465**	
Project name	Archaeological geophysical survey of land at Lodge Farm Chase, Ashbourne, Derbyshire, February 2014	
Short description	MOLA (formerly Northamptonshire Archaeology) was commissioned by CgMs Consulting to carry out a detailed magnetometer survey at Lodge Farm Chase, Ashbourne, Derbyshire. The survey results were dominated by intense magnetic disturbance, probably caused by a superficial deposit of imported soil and construction waste.	
Project type	Geophysical survey	
Site status	None	
Previous work	Unknown	
Current Land use	Pasture	
Future work	Unknown	
Monument type/ period	None	
Significant finds	None	
PROJECT LOCATION		
County	Derbyshire	
Site address	Lodge Farm Chase, Ashbourne	
Study area	*c*1.7ha	
OS grid reference	SK 178 459	
Height OD	*c*135-155m aOD	
PROJECT CREATORS		
Organisation	MOLA (formerly Northamptonshire Archaeology)	
Project brief originator	CgMs Consulting	
Project Design originator	MOLA	
Director/Supervisor	John Walford	
Project Manager	Mark Holmes	
Sponsor or funding body	CgMs Consulting	
PROJECT DATE		
Start date	6 February 2014	
End date	13 February 2014	
ARCHIVES	Location	Content
Physical	N/A	
Paper	MOLA Northampton	Site survey records
Digital	MOLA Northampton	Geophysical survey & GIS data
BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report	
Title	Archaeological geophysical survey of land at Lodge Farm Chase Ashbourne, Derbyshire, February 2014	
Serial title & volume	MOLA 14/37	
Author(s)	John Walford and Gemma Hewitt	
Page numbers	3	
Date	13 February 2014	

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ARCHAEOLOGICAL GEOPHYSICAL SURVEY OF LAND AT LODGE FARM CHASE, ASHBOURNE, DERBYSHIRE FEBRUARY 2014

ABSTRACT

MOLA (formerly Northamptonshire Archaeology) was commissioned by CgMs Consulting to carry out a detailed magnetometer survey at Lodge Farm Chase, Ashbourne, Derbyshire. The survey results were dominated by intense magnetic disturbance, probably caused by a superficial deposit of imported soil and construction waste.

1 INTRODUCTION

MOLA (formerly Northamptonshire Archaeology) was commissioned by CgMs Consulting to conduct a geophysical survey in advance of a proposed development of land at Lodge Farm Chase, Ashbourne, Derbyshire (NGR SK 178 459, Fig 1). The aim of the survey was to investigate whether there were any archaeological remains present which might be affected by the proposed development. The fieldwork, which comprised a detailed magnetometer survey, was conducted on 6th February 2014.

2 TOPOGRAPHY AND GEOLOGY

The proposed development area consists of a sub-rectangular field, approximately 1.7ha in extent, located towards the south-western end of Ashbourne. It lies to the south-west of Keeperleys Farm and is bordered to the west by modern housing along Lodge Farm Chase and Highfield Road. At the time of the survey, the field surface was in a rough condition, with tussocky grass and patches of brambles which had been cut down but not cleared. Felled shrubs and backfilled geotechnical pits also presented obstacles to survey.

The north-eastern corner of the field stands at an elevation of *c*155m aOD. From there the ground slopes southwards, gently at first but increasingly steeply, down to the floor of a narrow stream valley. The south-eastern corner of the field is especially steep and, being partly overgrown, was considered unsafe for survey. The stream which forms the southern boundary of the site, flows at approximately 135m aOD.

The geology of the proposed development area is mapped as Nottingham Castle Sandstone. No drift deposits are recorded, but boulder clay is present over much of the adjacent high ground (BGS 2014).

3 ARCHAEOLOGICAL BACKGROUND

The proposed development area has been the subject of a recent archaeological desk-based assessment (Mortimer 2013) which noted that it lies beyond the historic core of Ashbourne in an area where, to date, only sparse archaeological remains have been identified. The nearest recorded feature of any note is a round barrow, or pair of barrows (the evidence is ambiguous), which formerly stood about 400m to the east of the area (MDR814). Other records mention undated linear earthworks on Ashbourne Golf Course, *c*600m to the south (MDR856), and the finding of a Roman quern and a Saxon cross fragment near the 13th-century parish church of St Oswald, in the centre of Ashbourne (MDR807 & MDR830). Historic maps of the proposed development area do not depict any features of likely historic significance (Mortimer 2013).

The fields immediately east of the proposed development area, extending past Hill Side Farm to Wyaston Road, were investigated by magnetometer survey in July 2013. This work identified little of clear archaeological interest, apart from some weak linear trends which were interpreted as possible ridge and furrow (Adcock & Wood 2013).

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).

A grid of contiguous 30m squares was established across the field to be surveyed. The grid points were set out with a tape measure and optical square and were 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).

The survey data were processed using Geoplot 3.00v software. The striping was removed using the 'Zero Mean Traverse' function and destaggering of the data was performed where necessary.

The processed data is presented in this report in the form of a grey-tone plot at a scale of +/- 10nT black/white. This has been scaled, rotated and resampled (georectified) for display against the Ordnance Survey base mapping (Fig 2). An interpretative overlay is shown in Figure 3.

5 SURVEY RESULTS

The survey results are dominated by very extensive zones of magnetic noise, consisting of densely intermingled intense dipolar anomalies. Such noise is usually diagnostic of made ground containing ferrous scrap, brick rubble and other magnetic materials. In this case there was some modern brick and tile evident on the surface of the field (particularly in the spoil from the geotechnical pits), and the two considerations together point to the presence of a superficial layer of imported soil and construction debris across the site

In the north-western corner of the field there is a very large and amorphous positive anomaly which has a typical intensity of around 10-30nT. Its significance is not entirely clear, but it does not attain the extreme values which would be indicative of ferrous debris. Possible explanations include an area of burnt soil from a bonfire or else some form of geological or pedological feature.

6 CONCLUSION

The survey results are dominated by intense magnetic noise which is suggestive of modern disturbance: probably a layer of imported soil and building debris deriving from the construction of the adjacent housing. Should any archaeological remains be present beneath the affected areas, they will have been completely masked from detection. However, there is no sign of any archaeological anomalies in those small areas which are unaffected by magnetic noise.

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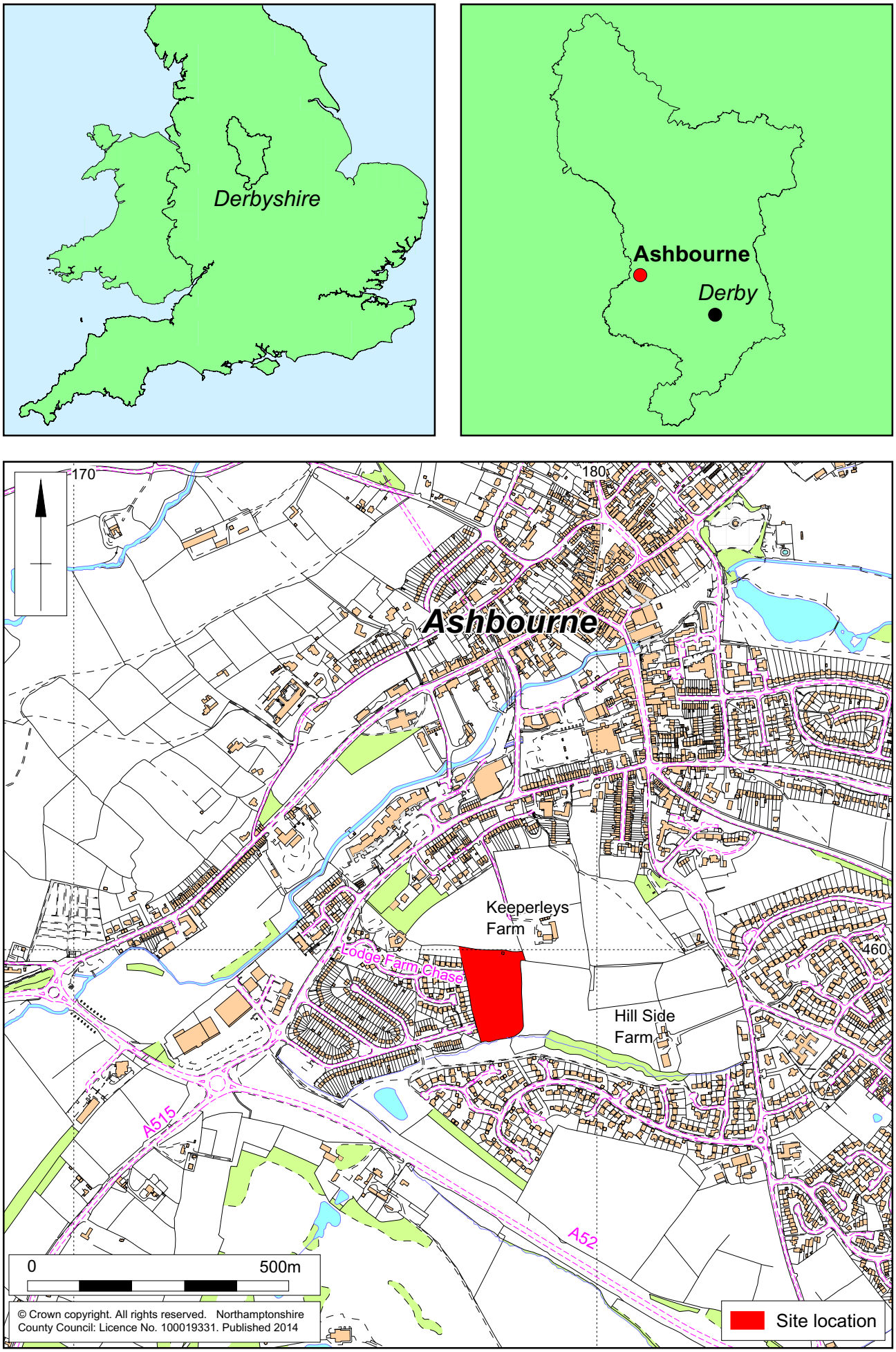
MOLA
13 February 2014

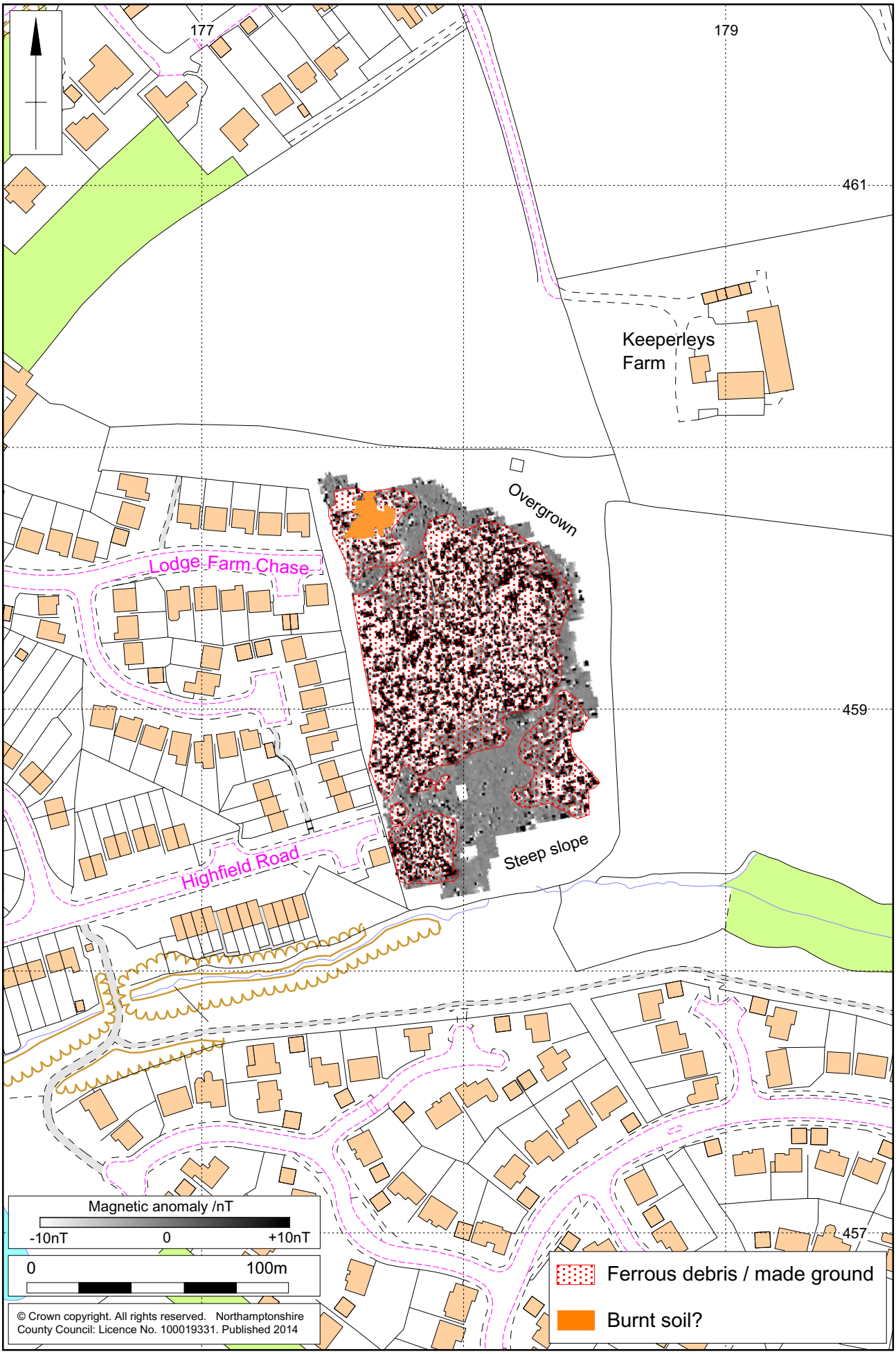


Scale 1:10,000

Site location Fig 1

1:2000 (A4)

Magnetometer survey results Fig 2



1:2000 (A4)

Magnetometer survey interpretation Fig 3

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