Archaeological geophysical survey at Willow Meadow Farm Ashbourne, Derbyshire (January 2014)

Report No. 14/23

Authors: Gemma Hewitt
Ian Fisher
Illustrator: Ian Fisher

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Project Manager: Mark Holmes
Site Code: None
NGR: SK 184 453

MOLA
Bolton House
Wootton Hall Park
Northampton
NN4 8BN 01604 700 493
www.mola.org.uk
business@mola.org.uk

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Registered office: Mortimer Wheeler House, 46 Eagle Wharf Road, London N1 7ED.

STAFF

Project Manager:	Mark Holmes MA MIfA
Fieldwork:	Adam Meadows BSc
	David Haynes
	Gemma Hewitt BA
	Adam Reid MSc
Text:	Gemma Hewitt
	Ian Fisher BSc
Illustrations:	Ian Fisher

OASIS REPORT FORM

PROJECT DETAILS	**OASIS No: molanort1-170173**	
Project name	Archaeological geophysical survey of land at Willow Meadow Farm, Ashbourne, Derbyshire	
Short description	Northamptonshire Archaeology, now operating as MOLA, was commissioned by CgMs Consulting to carry out a detailed magnetometer survey at Willow Meadow Farm, Ashbourne, Derbyshire. The survey identified anomalies of modern origin but no archaeologically significant features.	
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	Wyaston Road, Willow Meadow Farm, Ashbourne	
Study area	2.4ha	
OS grid reference	SK 18470 45330	
Height OD	162-174m aOD	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology (now operating as MOLA)	
Project brief originator	CgMs Consulting	
Project Design originator	NA	
Director/Supervisor	Adam Meadows	
Project Manager	Mark Holmes	
Sponsor or funding body	CgMs Consulting	
PROJECT DATE		
Start date	7 January 2014	
End date	7 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BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report	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 at Willow Meadow Farm, Ashbourne, Derbyshire	
Serial title & volume	MOLA 14/23	
Author(s)	Gemma Hewitt and Ian Fisher	
Page numbers	4	
Date	03 February 2014	

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ARCHAEOLOGICAL GEOPHYSICAL SURVEY OF LAND AT WILLOW MEADOW FARM, ASHBOURNE, DERBYSHIRE JANUARY 2014

ABSTRACT

Northamptonshire Archaeology, now operating as MOLA, was commissioned by CgMs Consulting to carry out a detailed magnetometer survey at Willow Meadow Farm, Ashbourne, Derbyshire. The survey identified anomalies of modern origin but no archaeologically significant features.

1 INTRODUCTION

Northamptonshire Archaeology, now operating as MOLA, was commissioned by CgMs Consulting to conduct a geophysical survey in advance of a proposed development on land at Willow Meadow Farm, Ashbourne (NGR SK 18470 45330; 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 was conducted on 7th January 2014.

2 TOPOGRAPHY AND GEOLOGY

The proposed development area consists of two pasture fields, totalling 2.4ha, standing at 162-174m aOD. Field 1 has a gentle south-east slope down to a stream and Field 2 is relatively flat. The area is bounded by the A52 road to the south and the Wyaston Road to the west. To the north and the east are housing estates.

The solid geology of the area is mapped as Triassic siltstones, sandstones and conglomerates belonging to the Sherwood Sandstone and Mercia Mudstone groups. These strata are capped by drift deposits of glacial till and head (BGS 2014).

3 ARCHAEOLOGICAL BACKGROUND

This is an abridged summary taken from the desk-based assessment for the wider area by CgMs Consulting (Mortimer 2013).

The town of Ashbourne is first mentioned in the Doomsday Book as a small Saxon village known as *Esseburn* (‘the stream where the ash trees grow’).

A number of possible round barrows have been indicated within the area of Ashbourne. These include a cluster of five which have been designated Scheduled Monuments. One of these may have been uncovered in 1858 by T. Bateman, however the exact location of the excavation is unclear.

The only record for Iron Age activity within the wider landscape is the discovery of part of a beehive quern (SMR 304/MDR830) within the churchyard of St. Oswald. A similar lack of Roman artefacts from the area may suggest limited activity from the period. Later finds appear confined to the discovery of a portion of a Saxon cross found during the restoration of the church of St. Oswald in 1877.

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).

An independent system of 30m grids was established in each of the fields 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.

5 SURVEY RESULTS

The survey was conducted across all available parts of the site, but did not cover the areas of overgrown vegetation around the perimeter of the two fields. A number of modern features were detected but there was no clear evidence for archaeological remains.

Two modern pipelines have been detected. One is represented by a broad, curving, intensely magnetic linear anomaly with a negative halo which passes from north to south through Field 1, and the other by an intense linear anomaly of alternating magnetic polarity which runs near to the eastern edge of Field 2. Parallel to the latter there is a narrow positive linear anomaly, with an intensity of around 10 – 20nT. In principle this could represent an infilled ditch, but it is unusually straight and narrow, and it more probably relates to a modern feature such as a path.

In the north-western part of Field 1 there is a thin and poorly defined negative linear anomaly. Such anomalies can have a variety of possible causes, including ruts, cable trenches, plastic or concrete pipes, and plough furrows.

In Fields 1 and 2 there are a number of moderately large dipolar anomalies which represent iron objects. There are also some areas of weak magnetic noise which indicate accumulations of magnetic debris, typically either brick rubble or small pieces of ferrous scrap.

6 CONCLUSION

The only significant anomalies detected by this survey relate to pipelines and other modern features. This indicates that substantial, magnetically detectable, archaeological remains are unlikely to be present within the area covered by the survey.

BIBLIOGRAPHY

Bartington, G, and Chapman, C, 2003 'A high-stability fluxgate magnetic gradiometer for shallow geophysical survey applications', *Archaeological Prospection*, **11**, 19-34

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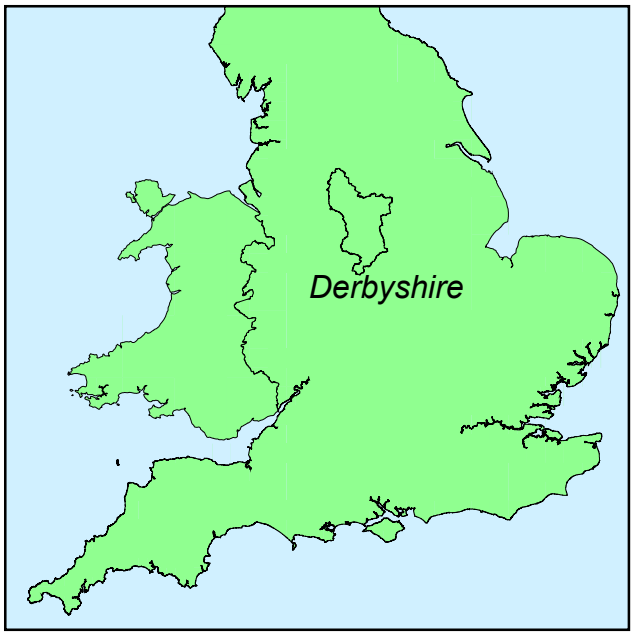
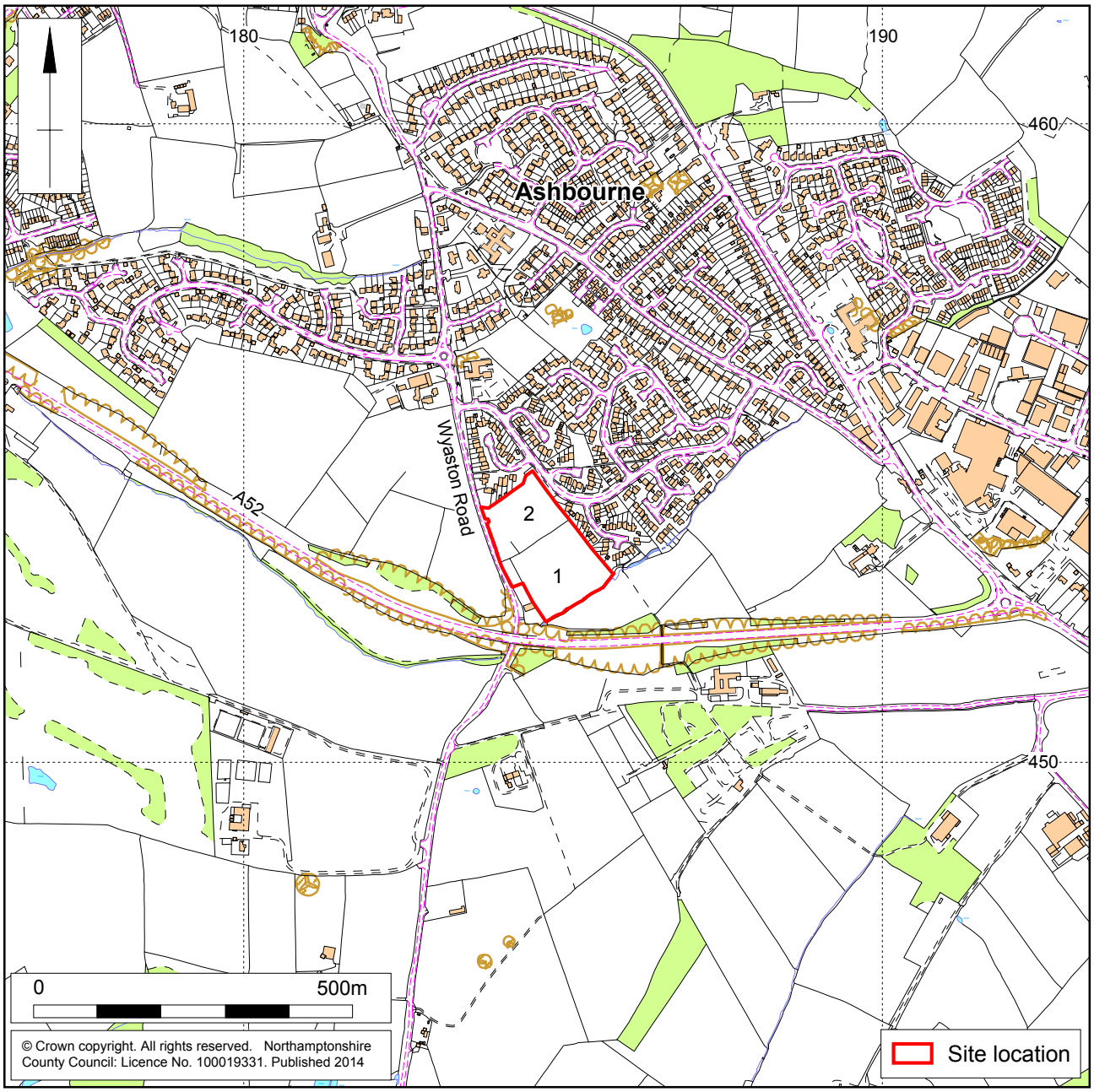
Websites

http://www.bgs.ac.uk/

http://www.old-maps.co.uk/index.html

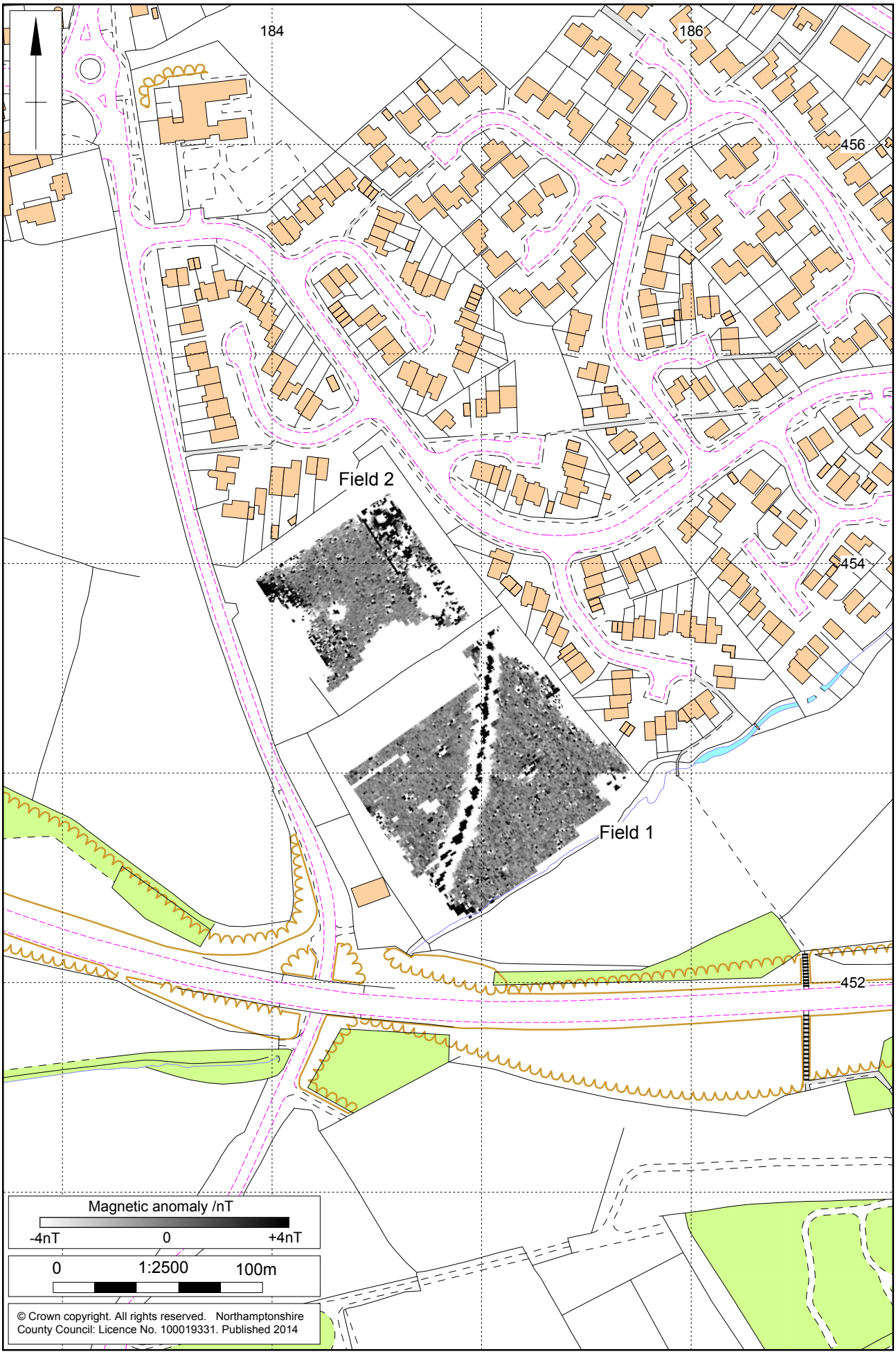
MOLA 03 February 2014





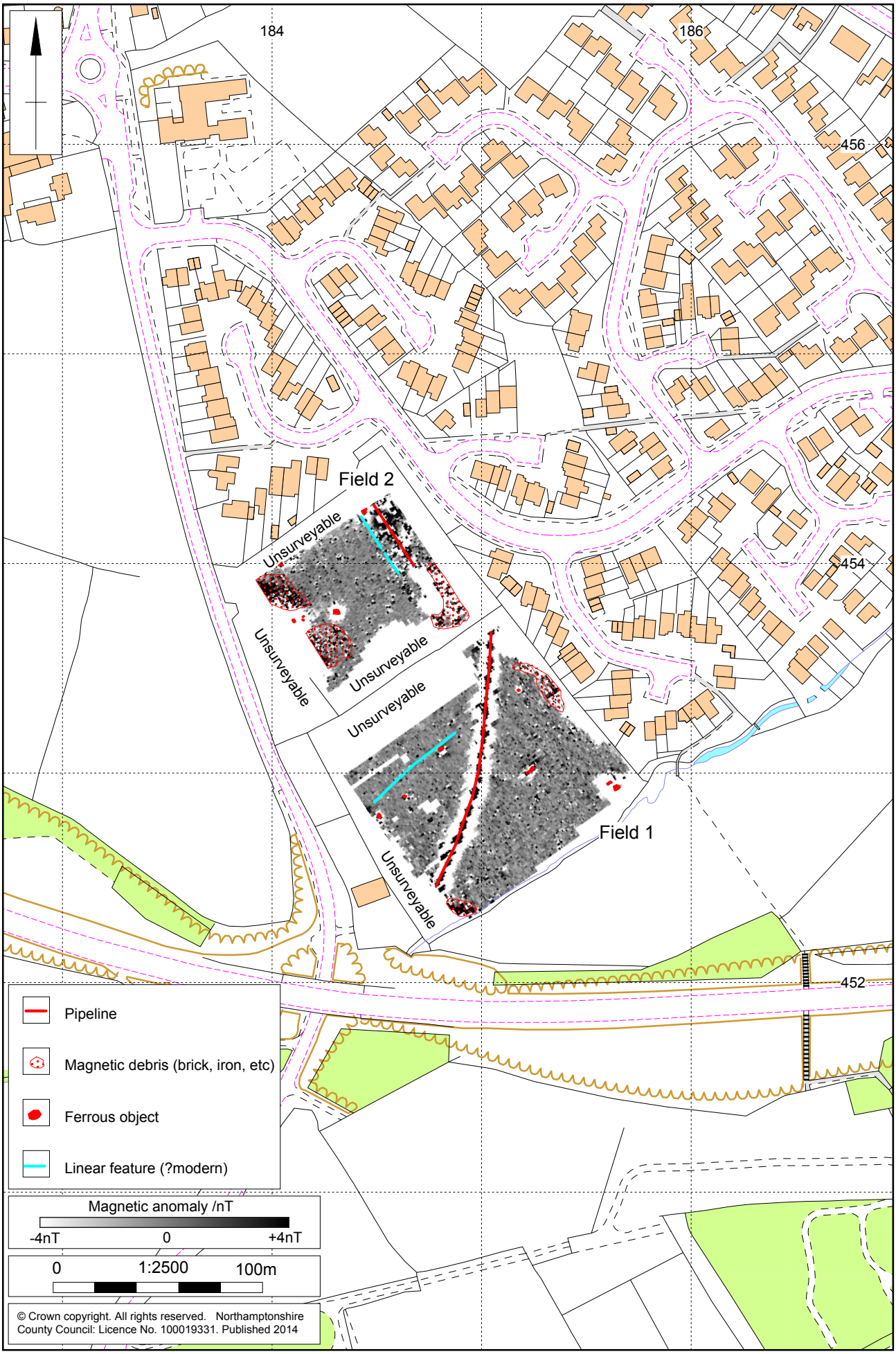
Scale 1:10,000

Site location Fig 1



1:2500 (A4)

Magnetometer survey results Fig 2



1:2500 (A4) Magnetometer survey interpretation Fig 3

MOLA

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www.mola.org.uk
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