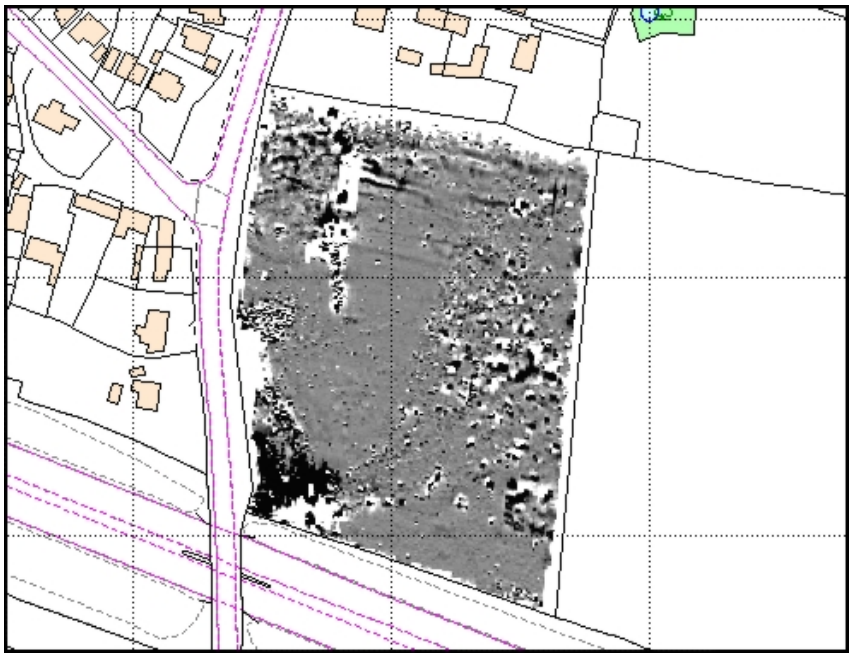


Archaeological geophysical survey at Daventry Road, Kilsby Northamptonshire April 2014

Report No. 14/114

Author: John Walford

Illustrator: John Walford

MOLA
MUSEUM OF LONDON
ARCHAEOLOGY

REGISTERED ORGANISATION IfA

© MOLA Northampton
Project Manager: Mark Holmes
NGR: SP 563 707

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

Archaeological geophysical survey at Daventry Road, Kilsby Northamptonshire April 2014

Report No. 14/114

Quality control and sign off:

Issue No.	Date approved:	Checked by:	Verified by:	Approved by:	Reason for Issue:
1	29/05/2014	Pat Chapman	Mark Holmes	Andy Chapman	Client approval

Author: John Walford

Illustrator: John Walford

© MOLA Northampton 2014

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

MOLA Northampton is a company limited by guarantee registered in England and Wales with company registration number 8727508 and charity registration number 1155198. Registered office: Mortimer Wheeler House, 46 Eagle Wharf Road, London N1 7ED.

STAFF

Project Manager:	Mark Holmes BA MA MIfA
Fieldwork:	Ian Fisher BSc Adam Meadows BSc
Text:	John Walford MSc
Illustrations:	John Walford

OASIS REPORT

PROJECT DETAILS	Oasis No. molanort1-179969	
Project name	Archaeological geophysical survey at Daventry Road, Kilsby, Northamptonshire	
Short description	MOLA was commissioned to carry out a detailed magnetometer survey on land at Daventry Road, Kilsby, Northamptonshire. The survey identified a few possible archaeological features, tentatively interpreted as medieval or post-medieval property boundaries, at the northern end of the survey area. The results also provided evidence for modern disturbance, including possible made ground across the eastern half of the area.	
Project type	Geophysical survey	
Site status	None	
Previous work	Archaeological desk-based assessment (Walker 2013)	
Current Land use	Rough pasture	
Future work	Unknown	
Monument type/ period	Uncertain (survey results not sufficiently diagnostic)	
Significant finds	None	
PROJECT LOCATION		
County	Northamptonshire	
Site address	Daventry Road, Kilsby	
Study area	*c* 2.3ha	
OS Easting & Northing	SP 563 707	
Height OD	*c* 135m - 145m AOD	
PROJECT CREATORS		
Organisation	MOLA Northampton	
Project brief originator	Liz Mordue, Northamptonshire Assistant Archaeological Advisor	
Project design originator	MOLA Northampton	
Director/Supervisor	Ian Fisher	
Project Manager	Mark Holmes	
Sponsor or funding body	Strutt & Parker LLP	
PROJECT DATE		
Start date	25 April 2014	
End date	25 April 2014	
ARCHIVES	Location	Content
Physical	N/A	
Paper	MOLA Northampton	Site survey records
Digital		Geophysical survey & GIS data
BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report	
Title	Archaeological geophysical survey at Daventry Road, Kilsby, Northamptonshire, April 2014.	
Serial title & volume	MOLA Northampton Reports 14/xxx	
Author(s)	John Walford	
Page numbers	3	
Date	29 May 2014	

Contents

Figures

Archaeological geophysical survey at Daventry Road, Kilsby, Northamptonshire April 2014

ABSTRACT

MOLA was commissioned to carry out a detailed magnetometer survey on land at Daventry Road, Kilsby, Northamptonshire. The survey identified a few possible archaeological features, tentatively interpreted as medieval or post-medieval property boundaries, at the northern end of the survey area. The results also provided evidence for modern disturbance, including possible made ground across the eastern half of the area.

1 INTRODUCTION

MOLA was commissioned by Strutt & Parker LLP to conduct a geophysical survey on land at Daventry Road, Kilsby, Northamptonshire (NGR SP 563 707; Fig 1). A detailed magnetometer survey was undertaken on 22nd April 2014, and covered a total area of approximately 2.3ha.

2 BACKGROUND

2.1 Location and geology

The survey area consisted of a rectangular pasture field located on the south-eastern edge of Kilsby. It lies immediately east of Daventry Road and is bounded to the south by the M45 Motorway. At the time of the survey the field was in a rough condition, with some patches of nettles and other tall weeds.

The survey area lies on a north-west facing slope between the 135m and 145m contour lines and contains a small slade which drains northwards through the northern part of the field. The geology of the area is recorded as Dyrham Formation (Middle Lias) mudstone with an overlying drift of Hillmorton Sand (BGS 2014).

2.2 Historical and archaeological background

A desk-based assessment of the survey area (Walker 2013) noted that it lies *c* 500m north-west of a cropmark which is believed to represent an Iron Age or Roman enclosure. No other prehistoric or Roman remains have been identified in the near vicinity, although an extensive Iron Age settlement has been excavated at DIRFT, 2km to the north-east, in advance of development from the 1990s onwards.

The survey area lies outside the known limits of Saxon and medieval settlement at Kilsby, and the 19th-century mapping of the area shows it as largely undeveloped agricultural land with only one small barn or animal shelter in its south-eastern corner (Walker 2013, fig 9). However, there are some irregular earthworks along the Daventry Road frontage of the field, and these could represent medieval or post-medieval settlement features. Alternatively, they may indicate an area of disturbed ground associated with the construction of the M45 motorway (Walker 2013, 18).

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. The grid 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 dGPS. 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 was 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 greyscale plot at a range of +8nT (black) to -8nT (white). This has been scaled, rotated and resampled (georectified) for display against the Ordnance Survey base mapping (Fig 2) and is shown with an interpretative overlay in Figure 3. A separate plot of the unprocessed data is presented in Figure 4.

4 SURVEY RESULTS

The survey data is dominated by zones of complex magnetic anomalies, most of which probably relate to modern ground disturbance. However, there are a few anomalies in the northern part of the field for which an archaeological interpretation can be tentatively suggested. These consist of five positive linear anomalies, running on parallel east to west courses, one similarly aligned anomaly of more diffuse character, and a cluster of small irregular anomalies and weak background noise.

Whilst the parallel linear anomalies bear some resemblance to those produced by ridge and furrow, they are less regular and less extensive than might be expected. Also, aerial photographic evidence suggests that there may never have been ridge and furrow within the survey area (Walker 2013, 15). An alternative, and perhaps more plausible, interpretation would be that the anomalies represent a series of medieval or post-medieval boundary ditches demarking a series of narrow tenement plots extending back from the road frontage.

The northernmost linear anomaly is broader and less distinct than the others, and has both positive and negative components. It is open to several possible interpretations, including a trackway, a ploughed-down bank or an outcrop of a weakly magnetic geological stratum. The complex of anomalies in the north-western corner of the field is similarly hard to interpret. It could represent a concentration of pits, gullies, midden and similar settlement features, but it might also indicate an area of magnetically variable geology.

A narrow band of intense magnetic disturbance runs northwards across the area of possible archaeology, indicating an accumulation of ferrous material (probably modern rubbish) at the base of the natural slade. At the northern end of the slade there is a more coherent linear anomaly with alternating polarity which probably marks the line of a drainage pipe.

Another alternating linear anomaly, also representing a pipe, occurs in the south-western corner of the field. It is surrounded by an intense magnetic halo which merges westwards with the halo from an adjacent stretch of metal fencing. To the north there are two small and tightly defined areas of magnetic noise. One is linear in form, and possibly represents a strip of track hardcore, or else a line of debris along a backfilled pipe easement. The other area of noise is more rounded, and may represent a former hardstanding or a dump of modern rubbish.

A moderately dense spread of magnetic noise and larger dipolar anomalies has been detected across the eastern half of the field. The limits of the spread are quite sharply defined, and its overall form is funnel-shaped with a narrow extension towards the south-western field corner. The most likely cause of such anomalies would be a layer of made ground: possibly, in this case, spoil from the adjacent motorway cutting.

5 CONCLUSION

The magnetometer survey has identified a set of parallel linear features in the northern part of the survey area. These have been tentatively interpreted as a set of medieval or post-medieval property boundaries extending back from the road frontage. A less coherent set of features in the north-western field corner are very poorly diagnostic but could conceivably indicate an area of former settlement.

The survey results also suggest that parts of the survey area may have seen considerable modern disturbance. Two sections of pipes and three separate patches of modern debris have been detected in the western half of the area, and it appears that much of the eastern half of the area may be covered with a layer of made ground.

BIBLIOGRAPHY

BGS 2014 *Geoindex*, http://www.bgs.ac.uk/geoindex/home.html, British Geological Survey, consulted 21 May 2014

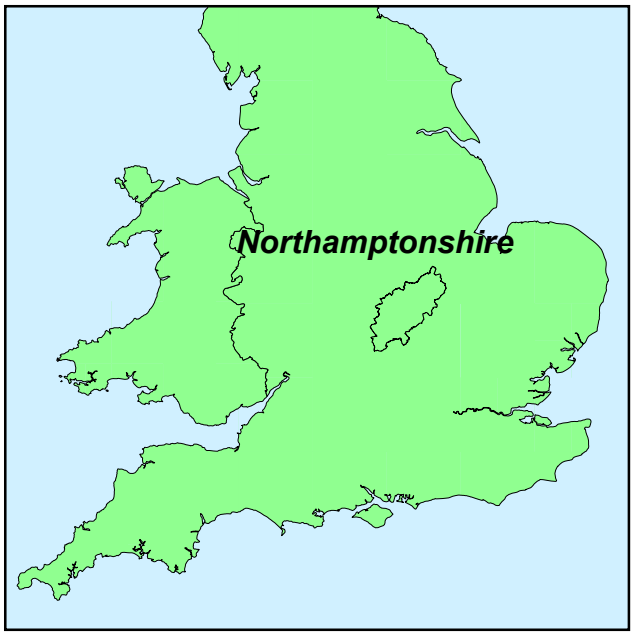
Bartington, G, and Chapman, C, 2003 A high-stability fluxgate magnetic gradiometer for shallow geophysical survey applications, *Archaeological Prospection*, **11**, 19-34

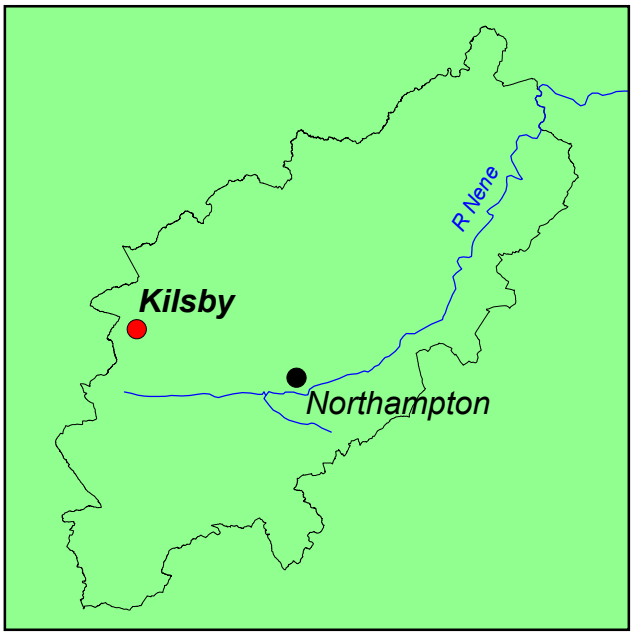
EH 2008 *Geophysical Survey in Archaeological Field Evaluation*, English Heritage

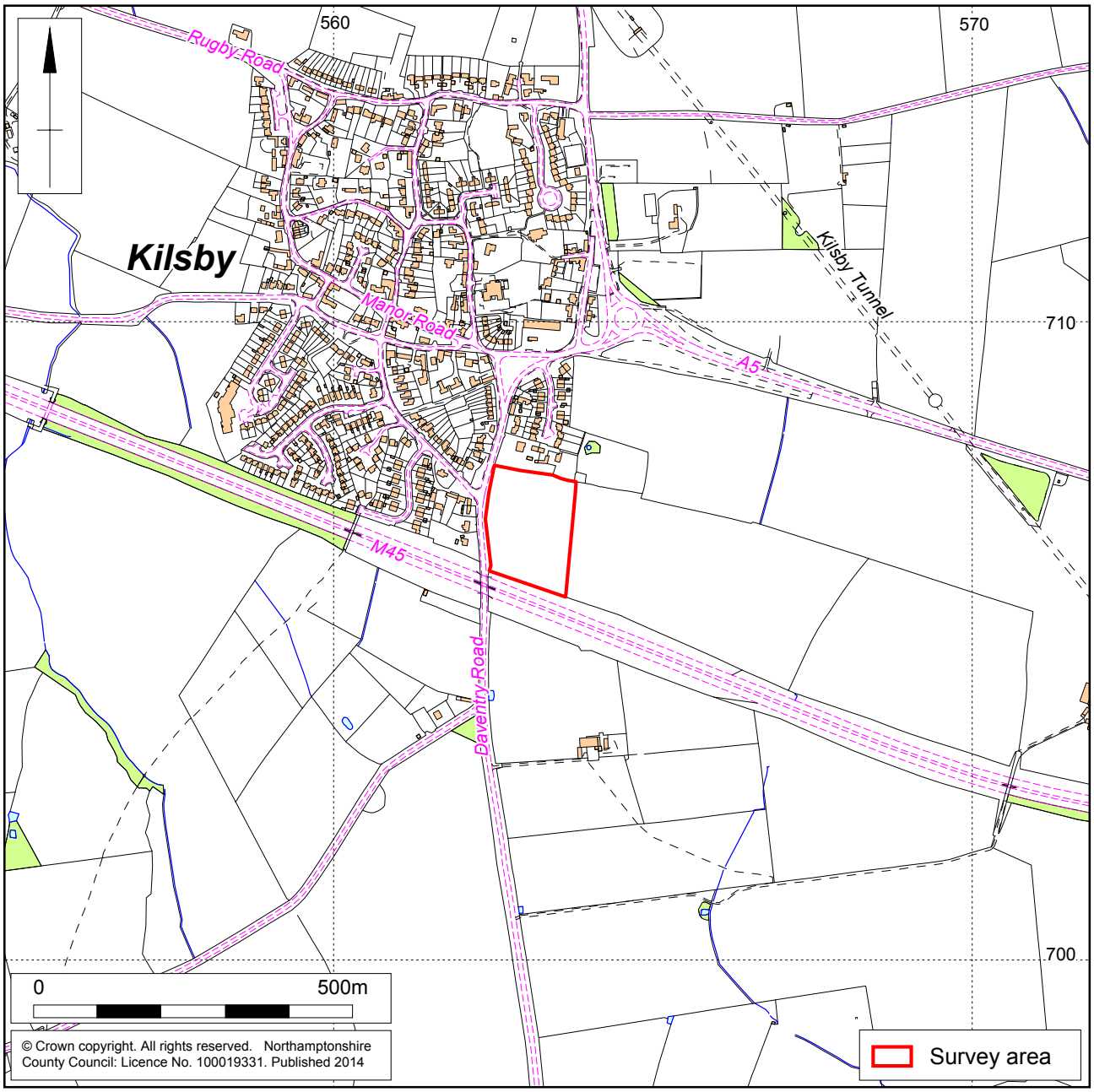
IfA 2011 *Standard and Guidance for Archaeological Geophysical Survey*, Institute for Archaeologists

Walker, C, 2013 *Archaeological desk-based heritage assessment of land at Daventry Road, Kilsby, Northamptonshire*, Northamptonshire Archaeology report, **13/240**

MOLA
29 May 2014







Scale 1:10,000

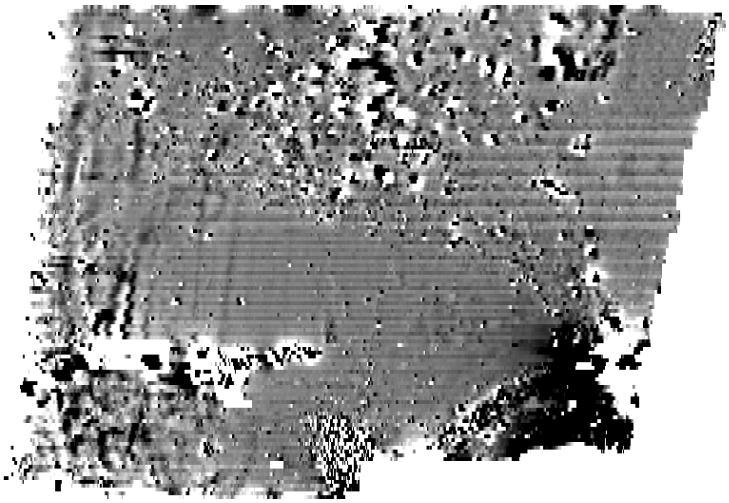
Site location Fig 1

1:2000 (A4)

Magnetometer survey results Fig 2

1:2000 (A4)

Magnetometer survey interpretation Fig 3



0 100m

Magnetic anomaly /nT

-8nT 0 +8nT

1:2000

Unprocessed magnetometer data Fig 4

MOLA

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