Northamptonshire Archaeology

Archaeological Geophysical Survey at Crostwick Lane, Spixworth, Norfolk

April 2012

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QUALITY CONTROL

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OASIS REPORT FORM 124402

PROJECT DETAILS		
Project name	Archaeological Geophysical Survey at Crostwick Lane, Spixworth, Norfolk	
Short description	Northamptonshire Archaeology was commissioned to carry out a detailed magnetometer survey of a proposed development site at Crostwick Lane, Spixworth, Norfolk. Approximately 1.8ha of land was surveyed. Nothing of archaeological significance was detected.	
Project type	Geophysical survey	
Site status	None	
Previous work	None known	
Current Land use	Pasture and arable	
Future work	Unknown	
Monument type/ period	None	
Significant finds		
PROJECT LOCATION		
County	Norfolk	
Site address	Crostwick Lane, Spixworth	
Study area	*c* 1.8ha	
OS grid reference	TG 252 153	
Height OD	*c* 20 m AOD	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology (NA)	
Project brief originator	AMEC Environment and Infrastructure UK Ltd	
Project Design originator	NA	
Director/Supervisor	John Walford	
Project Manager	Adrian Butler	
Sponsor or funding body	AMEC Environment and Infrastructure UK Ltd	
PROJECT DATE		
Start date	23 April 2012	
End date	27 April 2012	
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BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report	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 at Crostwick Lane, Spixworth, Norfolk, April 2012	
Serial title & volume	Northamptonshire Archaeology Reports 12/83	
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ARCHAEOLOGICAL GEOPHYSICAL SURVEY AT CROSTWICK LANE, SPIXWORTH, NORFOLK APRIL 2012

ABSTRACT

Northamptonshire Archaeology was commissioned to carry out a detailed magnetometer survey of a proposed development site at Crostwick Lane, Spixworth, Norfolk. Approximately 1.8ha of land was surveyed. Nothing of archaeological significance was detected.

1 INTRODUCTION

Northamptonshire Archaeology (NA) was commissioned by AMEC Environment and Infrastructure UK Ltd to conduct a geophysical survey in advance of a proposed development on land at Crostwick Lane, Spixworth, Norfolk (NGR TG 252 153; 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 23 April 2012, and comprised the magnetometer survey of *c* 1.8ha of land.

2 TOPOGRAPHY AND GEOLOGY

The proposed development area consists of two fields on the north side of Crostwick Lane, between the eastern edge of Spixworth and the B1150. The survey was confined to the western half of this area, encompassing a small pasture field, about 1.3ha in extent, and a 0.5ha strip of land in the adjacent arable field (Fig 1).

The survey area is largely flat, and stands at an elevation of *c* 20m AOD. The underlying geology is mapped as Wroxham Crag (BGS 2012). No superficial deposits are mapped within the survey area, but brickearth is recorded in the near vicinity.

3 ARCHAEOLOGICAL BACKGROUND

The proposed development area contains no known archaeological sites or find-spots, and nothing of interest has been recorded within the immediately surrounding area. However, at a slightly greater distance from the area (within a radius of 2km) there are a number of locations of archaeological interest. These include the find-spot of a Neolithic axe (NHER 8009), the suspected line of the Brampton to Thorpe St Andrew Roman road (NHER 52126), the probable site of Beeston St Andrew church (NHER 18125) and various sets of cropmarks, mostly of medieval or later field boundaries (NHER 53494, 50805, 50793, 53606).

The historic mapping of the proposed development area shows that it has been in agricultural use since at least the 19th century. The present boundary between the two fields does not appear on any of the historic mapping, and so is presumed to be of relatively recent date.

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 within each of the fields to be surveyed. The grids were established with a tape measure and optical square and were tied in to the Ordnance Survey National Grid by measurement to field boundaries and other points of detail. 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. A single grid of data was recollected on each day of survey, for quality management purposes as required by Norfolk Historic Environment Service.

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. Striping, caused by slight mismatches in sensor balance, was removed using the 'Zero Mean Traverse' function and destaggering of the data was performed as necessary.

The processed data is presented in this report in the form of a grey-tone plot, at a scale of +/- 4nT black/white. The plots have been scaled, rotated and resampled (georectified) for display against the Ordnance Survey base mapping (Fig 2). An interpretative overlay has been produced and is shown in Figure 3. A plot of the minimally processed repeat survey data is presented as an inset on Figure 2.

5 SURVEY RESULTS

The survey data reveals nothing of archaeological interest, and is instead dominated by anomalies of modern origin.

In the western field there is a large dipolar halo which was caused by a heap of rubbish stacked up for a bonfire. To the west of this there is an area of magnetic noise, which probably indicates an area of burnt soil and iron scrap on the site of a previous bonfire. There are also a number of discrete dipolar anomalies at various points in the field, marking the locations of buried ferrous objects. One particular large example occurs to the north of the bonfire heap.

Further ferrous anomalies and magnetic noise occur around the margins of the western field, particularly to the north and south. These will have been caused by the adjacent fences and structures, and by a general accumulation of modern detritus.

In the south-eastern part of the field there is a weak and ill defined positive linear anomaly. This could, theoretically, represent a ditch, but its lack of intensity and irregular course would be more consistent with a geological feature, such as an ice wedge, or the outcrop of a particularly magnetic lens of sediment.

The surveyed part of the eastern field contains little of note. There is one large ferrous anomaly, and an ill-defined linear trend which probably represents a continuation of the geological feature noted above.

6 CONCLUSION

The survey has detected no features of archaeological interest, and this suggests that no substantial remains exist within the proposed development area. However, the negative results do not entirely preclude the existence of small or ephemeral remains (eg post-holes, cremations, etc) as such things rarely produce clear and diagnostic magnetic anomalies (EH 2008, 14).

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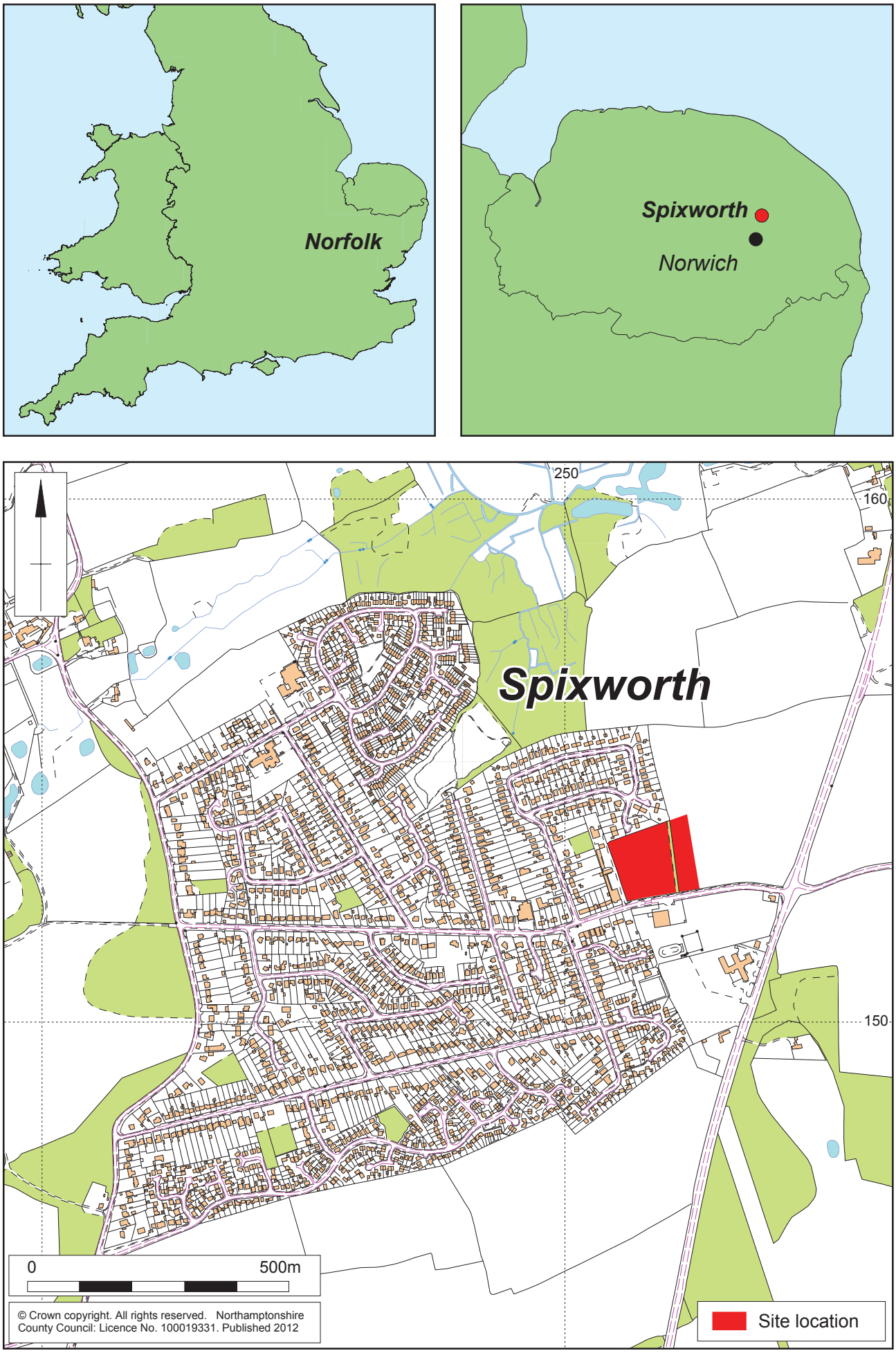
EH 2008 *Geophysical Survey in Archaeological Field Evaluation*, English Heritage

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



Scale 1:10,000

Site location Fig 1

1:2000

Magnetometer survey results Fig 2

1:2000

Magnetometer survey interpretation Fig 3