Northamptonshire Archaeology

Archaeological Geophysical Survey of land East of Aylsham, Norfolk

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OASIS REPORT FORM

PROJECT DETAILS	**OASIS No: 148911**	
Project name	Archaeological geophysical survey of land east of Aylsham, Norfolk	
Short description	Northamptonshire Archaeology was commissioned by CgMs Consulting to carry out a magnetometer survey in advance of a proposed development scheme on 15.5ha of land east of Sir William's Lane, Aylsham, Norfolk. The survey produced little of archaeological interest. Four former field boundaries and a small quarry pit were mapped in the positions they were known to have been historically. A single feature of unknown origin was located in the north-west of the site.	
Project type	Geophysical survey	
Site status	None	
Previous work	Desk-based Assessment (Watkins and Brown 2011) Geophysical Survey (Butler 2011)	
Current Land use	Arable	
Future work	Not known	
Monument type/ period	None	
Significant finds	None	
PROJECT LOCATION		
County	Norfolk	
Site address	Sir Williams Lane, Aylsham	
Study area	15.5ha	
OS Easting & Northing	620260 326900	
Height OD	*c* 14m - 22m AOD	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology (NA)	
Project brief originator	CgMs Consulting	
Project Design originator	NA	
Director/Supervisor	Adrian Butler & Ian Fisher	
Project Manager	Adrian Butler & Adam Yates	
Sponsor or funding body	CgMs Consulting	
PROJECT DATE		
Start date	16 August 2011	
End date	29 April 2013	
ARCHIVES	Location	Content
Physical		
Paper	ENF131298	Site survey records
Digital		Geophysical survey & GIS data
BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report	
Title	Archaeological geophysical survey of land east of Aylsham, Norfolk	
Serial title & volume	Northamptonshire Archaeology Reports 13/70	
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ARCHAEOLOGICAL GEOPHYSICAL SURVEY OF LAND EAST OF AYLSHAM, NORFOLK AUGUST 2011

ABSTRACT

Northamptonshire Archaeology was commissioned by CgMs Consulting to carry out a magnetometer survey in advance of a proposed development scheme on 15.5ha of land east of Sir William's Lane, Aylsham, Norfolk. The survey produced little of archaeological interest. Four former field boundaries and a small quarry pit were mapped in the positions they were known to have been historically. A single feature of unknown origin was located in the north-west of the site.

1 INTRODUCTION

Northamptonshire Archaeology (NA) was commissioned by CgMs Consulting to carry out an archaeological geophysical survey in advance of a proposed development scheme east of Aylsham (NGR TG 20260 26900, Fig 1). The original fieldwork was undertaken from 16 to 19 August 2011, when the northern half of the proposed development area was surveyed. This was reported on in Butler (2011). The remainder of the area, two separate fields in the southern half of the area, were surveyed on 15 to 16 April 2013.

2 TOPOGRAPHY AND GEOLOGY

The site is located on the eastern edge of Aylsham, to the west of the A140 bypass and north-east of housing on Sir William's Lane. The site comprises three separate fields and covers an area approximately 15.5ha, sloping gently east-south-east from *c*21m to *c*14m AOD. The geology of the area has been mapped as sandy Crag in the east and Cromer till to the west (BGS 2013).

In Field 1 in the north of the site, three trees were situated in the eastern half of the field, probably the remains of a former boundary. A three-cable electricity line crosses the site north-south in this area, supported by a pole between the trees. To the east was located a raised inspection hatch of concrete and steel. A raised inspection hatch was also visible in Field 2 on the line of a pipe.

3 ARCHAEOLOGICAL BACKGROUND

The site has not been the subject of any previous field investigation, but a desk-based assessment was carried out by NAUA in 2011 (Watkins and Brown 2011). This detailed the following; there are no Scheduled Monuments or listed structures within the proposed survey area although work in the surrounding area indicates some archaeological features could be present.

Archaeological investigations along the line of the A140 bypass which runs along the eastern boundary of the site revealed a Bronze Age pit and other undated prehistoric features (NHER 15074). Evidence of iron working has been found during the construction of a road depot to the south of the site. Isolated finds of Roman date have been recovered across the area around the site.

4 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).

Each field within the survey area was sub-divided into a system of 30m grid squares, which were established by means of a tape measure and optical square. The grids were tied into the national grid by means of a Leica 1200 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 grid. In accordance with the written scheme of investigation (NA 2011; NA 2013), one grid was surveyed twice each day to demonstrate the repeatability of the results (Fig 4).

All fieldwork methods complied with the written schemes of investigation for the respective phases of the project (NA 2011; NA 2013) and with guidelines issued by English Heritage and by the Institute for Archaeologists (EH 2008; I*f*A 2011).

The survey data was processed using Geoplot 3.00u 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 greyscale plots (+/- 4nT black/white) which have been scaled, rotated and resampled (georectified) for display against the Ordnance Survey base mapping (Fig 2). Interpretative overlays have been produced and are shown in Figure 3. The repeated survey grids are shown as greyscale plots in Figure 4.

5 SURVEY RESULTS

The greyscale image of the survey data indicates a level of short wavelength, sub-nanoTesla variability in the background levels of magnetisation across the site area (Fig 2). Such variability, particularly towards the east, is likely to reflect the subsurface topography of the underlying Crag geology.

5.1 Field 1

Small and intensely magnetised 'dipolar' (paired positive/negative) anomalies, usually stemming from pieces of ferrous or ceramic debris in the ploughsoil, were detected in large quantities across the site area, particularly against the south-west boundary adjacent to gardens.

Four linear positive magnetic anomalies were located by the survey (Fig 3). Two of these were orientated north-south across the area, dividing the field into three parts. The anomalies almost definitely represent the remnants of former field boundary ditches. A very weakly positive linear anomaly was found to be aligned west-east in the western half of the field and a short length of anomaly crossing the north-east corner, both also likely to represent former field boundaries.

In the west of the area a positive magnetic anomaly was detected, 40m long and orientated south-east to north-west. Although the south-east end was larger and more highly magnetised (+6nT), there was little in the shape of the anomaly to characterise it

and there was no obvious category to ascribe the feature to, other than perhaps a natural deposit.

Although the inspection cover in the east of the site was detected as highly magnetised, no utility line was obviously detected. This suggests that any utility was of a non-magnetic material (plastic) or that the hatch was for access to something entirely unrelated to services.

5.2 Field 2

In the south-western corner of the field there is an area of intense magnetic disturbance which coincides with the location of a small quarry pit or dried-up pond shown on the first edition Ordnance Survey map (1886). The strength of the anomalies suggests that there is much ferrous or ceramic debris within the backfill of this feature. In the same area is an intense linear anomaly which represents a pipe. An inspection hatch for this is visible on the field surface.

This probably represents a scatter of ferrous or ceramic debris in the ploughsoil, although no indication of this was observed on the field surface.

5.3 Field 3

A single ferrous anomaly on the east side of the field may represent a former inspection hatch or pylon. No other significant anomalies were detected.

6 CONCLUSION

Geophysical survey of land east of Sir William's Lane, Aylsham has produced little of archaeological interest. Four former field boundaries and a small quarry pit were mapped in the positions they were known to have been historically (Watkins and Brown 2011, fig 10). A single feature of unknown origin was located in the north-west of Field 1.

BIBLIOGRAPHY

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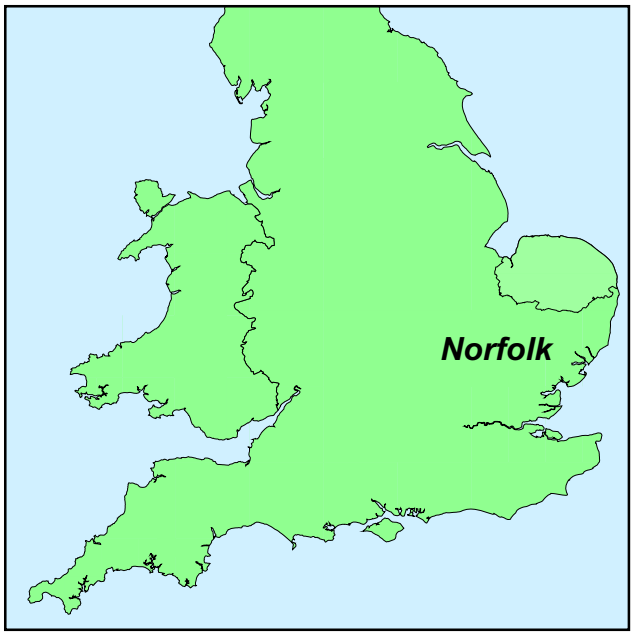

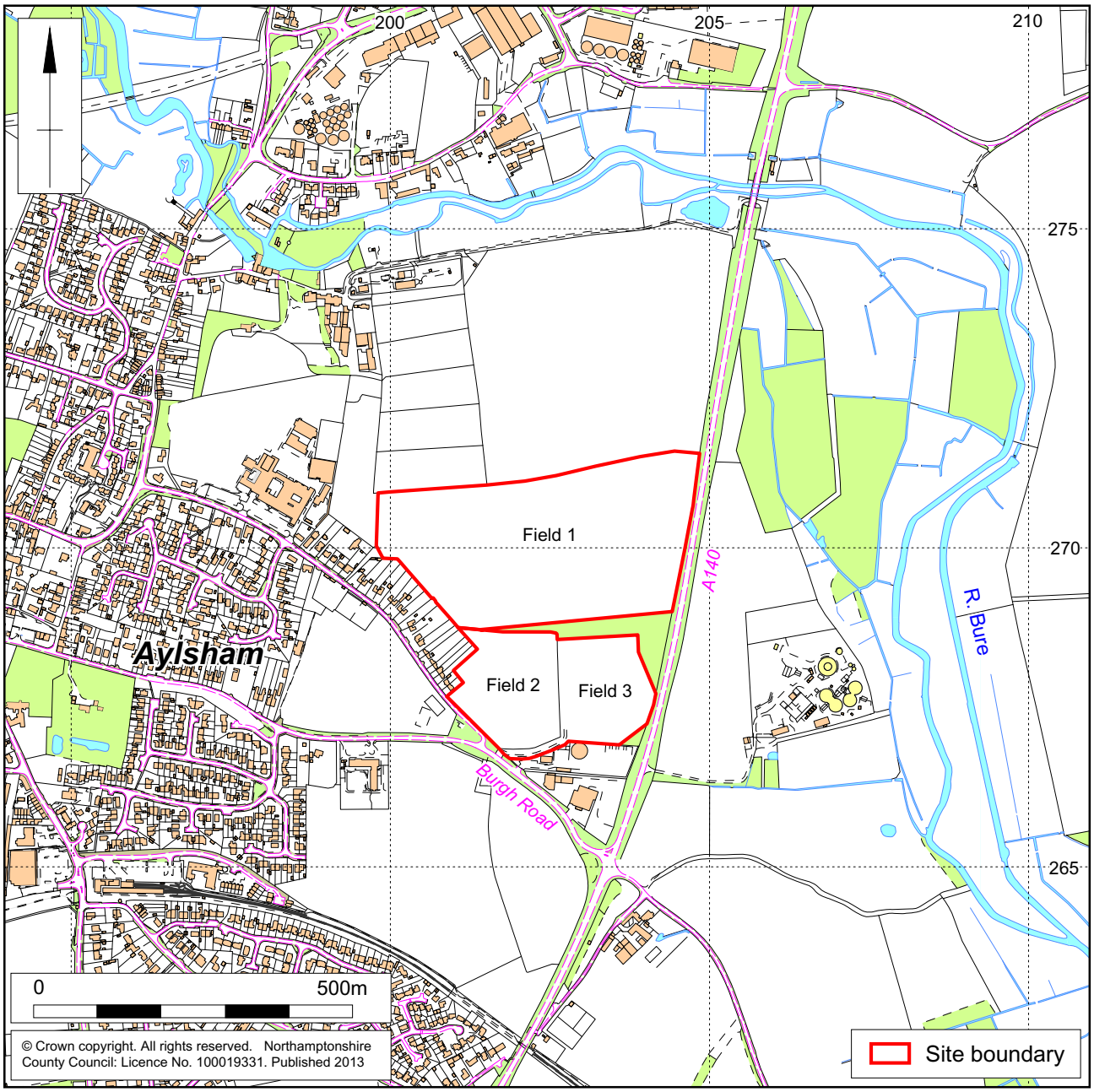

Scale 1:10,000

Site location Fig 1

Scale 1:2500 (A3)

Magnetometer survey results Fig 2

Scale 1:2500 (A3)

Magnetometer survey interpretation Fig 3

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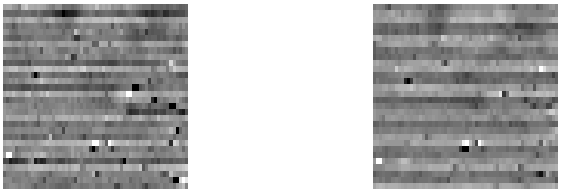
Weds 17/08/2011



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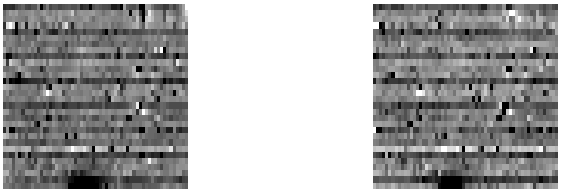

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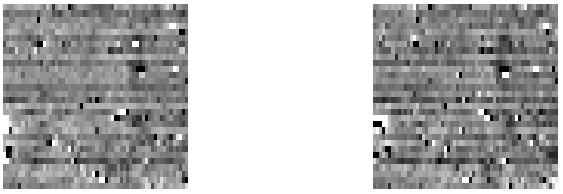
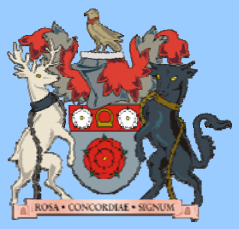


0 1:1250 50m

Magnetic anomaly /nT

-4nT 0 +4nT

1:1250 (A4) Repeated magnetometer survey grids Fig 4



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