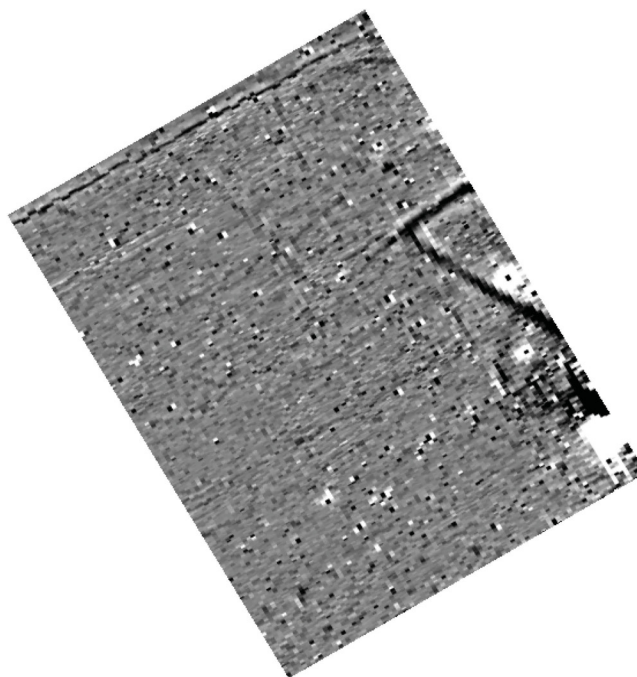




Northamptonshire Archaeology

Archaeological geophysical survey of land at Bonby, North Lincolnshire March 2013



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Report 13/47

March 2013



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QUALITY CONTROL

	Print name	Signed	Date
Checked by	Pat Chapman	<i>PC</i>	13/03/13
Verified by	Mark Holmes	<i>MH</i>	13/03/13
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OASIS REPORT FORM

PROJECT DETAILS		OASIS No: 145402	
Project name	Archaeological geophysical survey of land at Bonby, North Lincolnshire, February 2013		
Short description	Northamptonshire Archaeology was commissioned to carry out a detailed magnetometer survey to inform a planning application on land at Bonby, Lincolnshire. The results indicate the presence of enclosure ditches of unknown date.		
Project type	Geophysical survey		
Site status	None		
Previous work	None		
Current Land use	Arable		
Future work	Unknown		
Monument type/ period	Unknown		
Significant finds	Enclosure ditches		
PROJECT LOCATION			
County	Lincolnshire		
Site address	Bonby Lane, North Lincolnshire		
Study area	c 1.1ha		
OS grid reference	TL 0150 1650		
Height OD	c 80m AOD		
PROJECT CREATORS			
Organisation	Northamptonshire Archaeology (NA)		
Project brief originator	CgMs Consulting		
Project Design originator	NA		
Director/Supervisor	Ian Fisher		
Project Manager	Mark Holmes (NA), Mike Dawson (CgMs)		
Sponsor or funding body	CgMs Consulting		
PROJECT DATE			
Start date	7 March 2013		
End date	7 March 2013		
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BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report		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 Bonby, North Lincolnshire, March 2013		
Serial title & volume	Northamptonshire Archaeology Reports 13/47		
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**ARCHAEOLOGICAL GEOPHYSICAL SURVEY OF LAND
AT BONBY, NORTH LINCOLNSHIRE
MARCH 2013**

ABSTRACT

Northamptonshire Archaeology was commissioned to carry out a detailed magnetometer survey to inform a planning application on land at Bonby, Lincolnshire. The results indicate the presence of enclosure ditches of unknown date.

1 INTRODUCTION

Northamptonshire Archaeology (NA) was commissioned by CgMs Consulting, on behalf of Tamar Energy, to conduct a geophysical survey in support of a planning application for an anaerobic digestion facility on land at Bonby, Lincolnshire (NGR TL 0150 1650; 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 March 2013 and comprised the detailed magnetometer survey of c 1.2ha of land. It followed the written scheme of investigation prepared by Northamptonshire Archaeology (NA 2013).

North Lincolnshire Museum services have been contacted for an accession number but this is still to be issued.

2 TOPOGRAPHY AND GEOLOGY

The site consists of a single arable field to the north-east of Bonby village. The site is bounded to the south by Bonby Lane, arable fields to the north and west and a Thermophyllic Aerobic Digestion plant and former farm buildings to the east. The site lies at c 80m aOD. The solid geology is recorded as Welton Chalk (BGS 2013).

3 ARCHAEOLOGICAL BACKGROUND

A desk-based assessment undertaken as part of the heritage assessment indicated that there were no known archaeological sites or find-spots within the development area (Dawson 2013). However, the application area does lie within a wider zone of archaeological interest with known prehistoric and Roman sites occupying higher ground in the surrounding area. Cropmarks thought to indicate trackways of possible late prehistoric date are known in the vicinity and the line of a Roman road passes c 400m to the east.

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 comprising 30m x 30m grid squares was established with a tape measure and optical square and tied in to the Ordnance Survey National Grid by measurements to current field boundaries and other fixed points in the landscape. 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 was processed using Geoplot 3.00v software. Striping 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 grey-tone plots at a scale of +/- 4nT black/white. These have been scaled, rotated and re-sampled (georectified) for display against the Ordnance Survey base mapping (Fig 2). An interpretative overlay is shown in Figure 3.

5 SURVEY RESULTS

The survey identified the ditches of two possible conjoined rectilinear enclosures. The enclosure ditches occupy the north-east quarter of the survey area but extend beyond its boundaries to the north and east. The easternmost enclosure has strong positive readings, suggesting that its fill contains magnetically enhanced material. The enclosure to the north is more weakly magnetic. A further ditch is appended on its internal eastern side, possibly forming a smaller internal enclosure. There are no other internal features evident and the ditches remain undated. Their form, however, would not be unusual in an Iron Age or Roman context.

Along the northern edge of the survey area, a single linear feature was present running parallel with the existing hedgeline. This indicates the edge of cultivation and is a modern agricultural feature.

On the eastern edge of the survey area is an area of magnetic disturbance and isolated ferrous objects. These are probably related to the adjacent buildings and car park.

6 CONCLUSION

The survey identified ditches belonging to two enclosures, one of which has an internal division. Their full extent and character is unknown as they extend outside the survey area to the north and have probably been truncated by the existing recycling facility at the west. There were no diagnostic features which could be used to date the enclosures.

BIBLIOGRAPHY

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

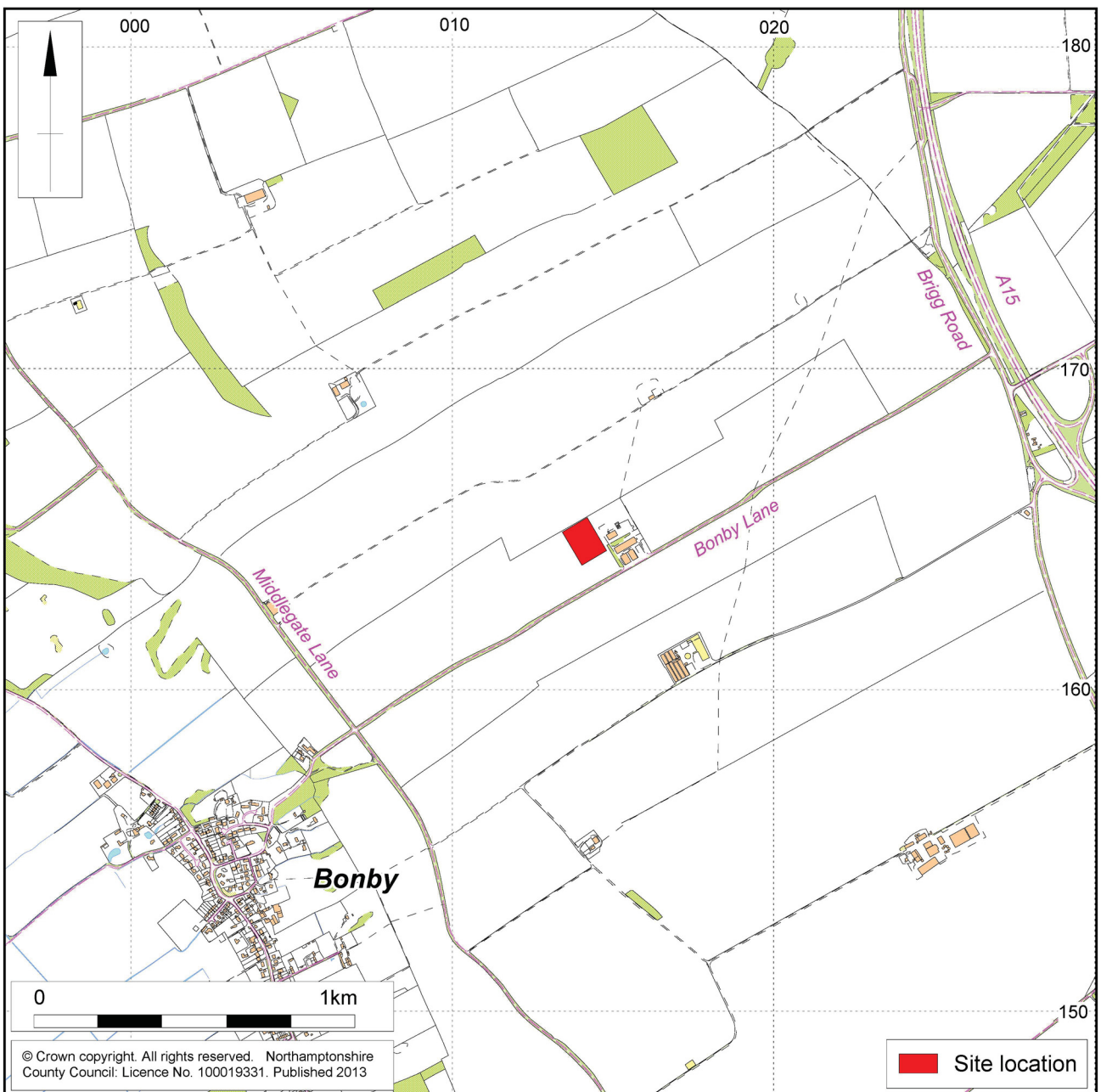
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Dawson, M, 2013 *Archaeological Desk Based Assessment Land at Bonby, Lincolnshire* CgMs Consulting, **MD/14972**

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

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

NA 2013 *Archaeological geophysical evaluation, land at Bonby, Lincolnshire, written scheme of investigation*, Northamptonshire Archaeology



Scale 1:20,000

Site Location Fig 1







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