Archaeological geophysical survey of land south of Wilburton Road, Haddenham Cambridgeshire

April 2014

Accession No. ECB4166

Report No. 14/84

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Project Manager: Mark Holmes
Site Code: ECB4166
NGR: TL 468 748

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OASIS REPORT

PROJECT DETAILS	Oasis No. molanort1-177184	
Project name	Archaeological geophysical survey of land south of Wilburton Road, Haddenham, Cambridgeshire.	
Short description	MOLA was commissioned to carry out a detailed magnetometer survey on land south of Wilburton Road, Haddenham, Cambridgeshire. The survey identified a possible Iron Age or Roman enclosure in the northern part of the survey area and some features of less certain significance to the south. Ridge and furrow, of medieval or early post-medieval date, was identified across the entire survey area.	
Project type	Geophysical survey	
Site status	None	
Previous work	None known	
Current Land use	Arable	
Future work	Unknown	
Monument type/ period	Possible prehistoric or Roman enclosure, medieval ridge and furrow	
Significant finds	None	
PROJECT LOCATION		
County	Cambridgeshire	
Site address	Wilburton Road, Haddenham	
Study area	*c* 4.1ha	
OS Easting & Northing	TL 468 748	
Height OD	*c* 15-35m AOD	
PROJECT CREATORS		
Organisation	MOLA	
Project brief originator	CgMs Consulting	
Project design originator	MOLA	
Director/Supervisor	Ian Fisher	
Project Manager	Mark Holmes	
Sponsor or funding body	CgMs Consulting	
PROJECT DATE		
Start date	2 April 2014	
End date	2 April 2014	
ARCHIVES	Location	Content
Physical	N/A	
Paper	ECB 4166	Site survey records
Digital		Geophysical survey & GIS data
BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report	
Title	Archaeological geophysical survey of land south of Wilburton Road, Haddenham, Cambridgeshire. March 2014	
Serial title & volume	MOLA Northampton Reports 14/84	
Author(s)	John Walford and Garreth Davey	
Page numbers	3	
Date	17 April 2014	

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April 2014

ABSTRACT

MOLA was commissioned to carry out a detailed magnetometer survey on land south of Wilburton Road, Haddenham, Cambridgeshire. The survey identified a possible Iron Age or Roman enclosure in the northern part of the survey area and some features of less certain significance to the south. Ridge and furrow of medieval or early post-medieval date was identified across the entire survey area.

1 INTRODUCTION

MOLA was commissioned by CgMs Consulting to conduct a geophysical survey on land south of Wilburton Road, Haddenham, Cambridgeshire (NGR TL 468 748; Fig 1). A detailed magnetometer survey was undertaken on 2 April 2014 and covered a total area of approximately 4.1ha.

2 BACKGROUND

2.1 Location and geology

The survey area is located to the south of Wilburton Road and immediately east of Pear Tree Close, Haddenham. It encompasses two arable fields which lie on the southern flank of a large fen island, sloping down gently from 37m aOD in the north to 15m aOD in the south. The underlying geology is predominantly Kimmeridge Clay, but narrow bands of Gault Clay and Lower Greensand are mapped in the far north of the area (BGS 2014). No drift geology is mapped.

2.2 Historical and archaeological background

A desk-based assessment of the survey area has recently been undertaken (Clark 2013). This notes that there are no recorded archaeological sites or findspots within the survey area itself but that several archaeological sites occur in the wider vicinity. Iron Age and Roman settlement remains have been excavated approximately 0.8 to 1.0km to the north-west, at West End and High Street. Saxon remains, including burials and a stone cross have also been found to the north-west of the survey area, within the historic core of Hadenham village (Clark 2013).

The historic mapping of the survey area (Clark 2013, figures 4-7) shows that there was little development from the mid 19th century until about 1952, at which date it was planted as an orchard. The orchard trees have since been removed, and the land has reverted to arable use.

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 area to be surveyed. The grid was set out with a tape measure and optical square and were tied in to the Ordnance Survey National Grid by means of a Leica Viva GNSS. 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 were 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 greyscale plot of the unprocessed data is presented in Figure 4.

4 SURVEY RESULTS

The survey has detected a group of probable archaeological anomalies in the northern part of the survey area. One positive linear anomaly crosses the area from north-west to south-east and two others extend perpendicularly to the north-east, apparently defining three sides of a rectilinear ditched enclosure. A less distinct anomaly to the north may represent part of the fourth edge of the enclosure and several other anomalies suggest the presence of associated pits and gullies. The general morphology of the enclosure and the other features would be most consistent with an Iron Age or Roman date.

Parallel linear anomalies, representing remnants of medieval to early post-medieval ridge and furrow cultivation, extend from north to south across the entire survey area. Two other linear anomalies run approximately east to west, indicating the courses of former field boundaries. The southern one of these correlates with a boundary recorded on historic maps of the area and the northern, although unmapped, is clearly a continuation of the extant boundary that lies to its west. Some other, shorter linear anomalies have been detected elsewhere in the survey area, and possibly represent ditch segments of indeterminate date and function.

Close to the southern edge of the survey area, there is a large sub-rectangular positive anomaly, measuring approximately 4m wide by 18m long. It has a typical intensity of 20-30nT along most of its length, rising to around 60-70nT at its western end. This level of magnetic intensity is usually associated with brickwork or burnt soil, and can be diagnostic of brick kilns, lime kilns and similar industrial features. However, an anomaly of this size seems implausibly large for a kiln, and so its true significance remains in doubt.

Close to the northern edge of the southern field there is a small patch of weak and amorphous magnetic disturbance, approximately 8m across. This may represent another area of burnt soil, but its size and appearance is more consistent with a bonfire site than with any kind of industrial feature.

A chain of small, regularly spaced positive anomalies extends from north to south through the northern field, running parallel with the ridge and furrow. Superficially, it resembles the response that might arise from a prehistoric pit alignment. However, the strength of the anomalies (typically 10-30nT) is greater than pits would normally produce. A more probable interpretation is that the anomalies mark the line of an irrigation pipe with regularly spaced collars or other metal fittings.

Dipolar magnetic anomalies, representing small pieces of ferrous debris, have been detected widely across the survey area. Ferrous halos, arising from adjacent buildings and fences, have also been detected in a number of places.

5 CONCLUSION

The survey has detected some probable archaeological anomalies located on the upper slope of the survey area, just south of Wilburton Road. These apparently represent a rectilinear ditched enclosure and associated features, perhaps of Iron Age or Roman date. To the south, there are other anomalies of less certain archaeological significance, including one which seems to represent a large concentration of ceramic material or burnt soil. Anomalies representing remnant furrows of medieval or early post-medieval ridge and furrow cultivation have also been detected, and extend across the whole of the survey area.

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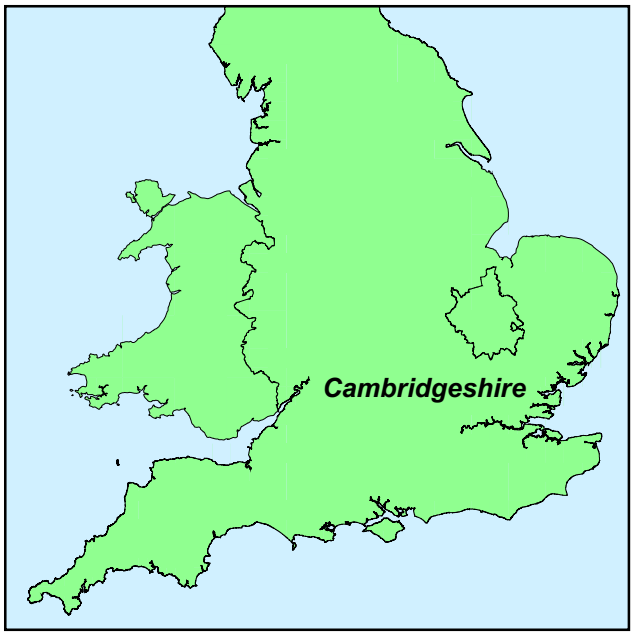
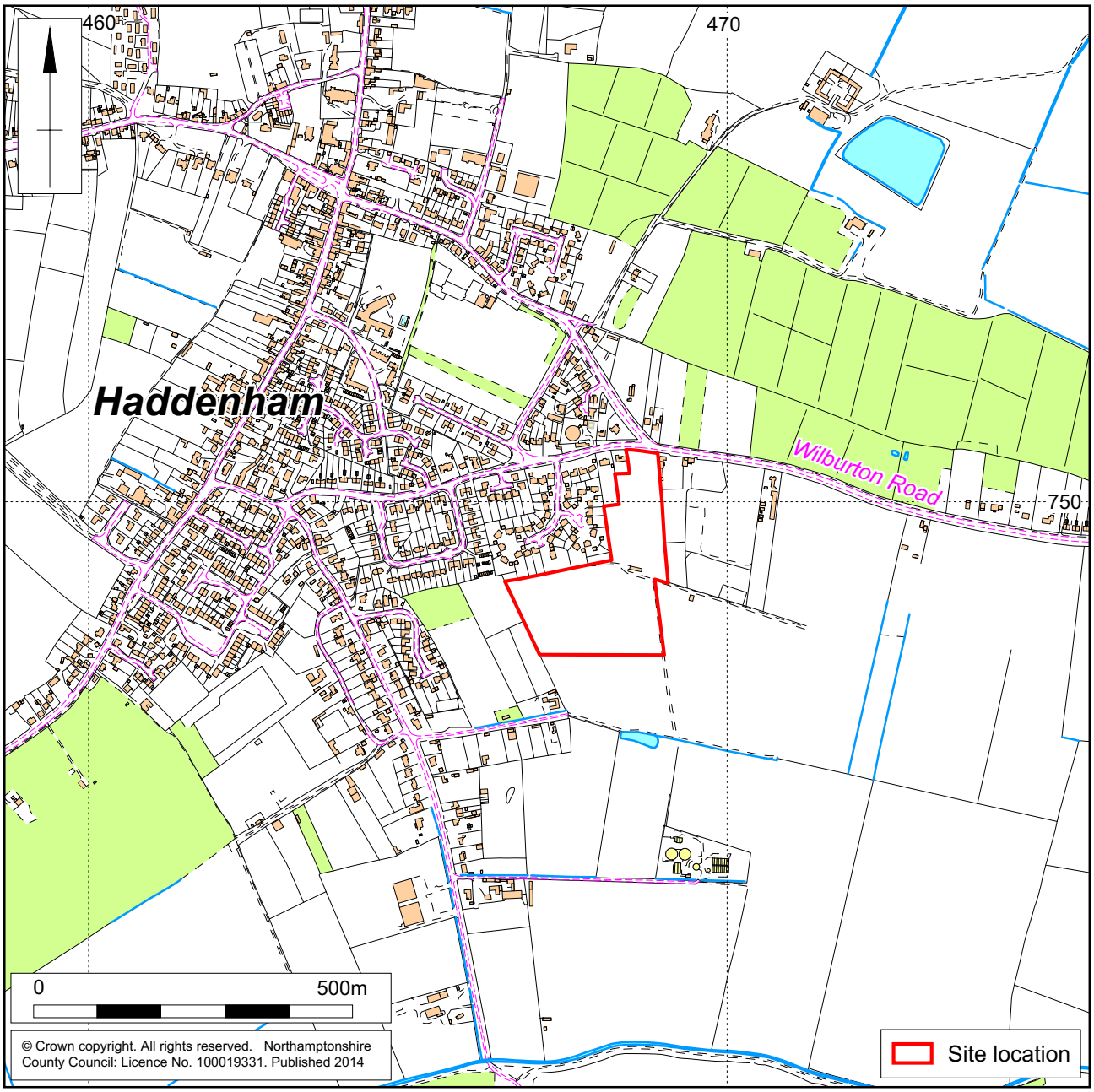
17 April 2014





Scale 1:10,000

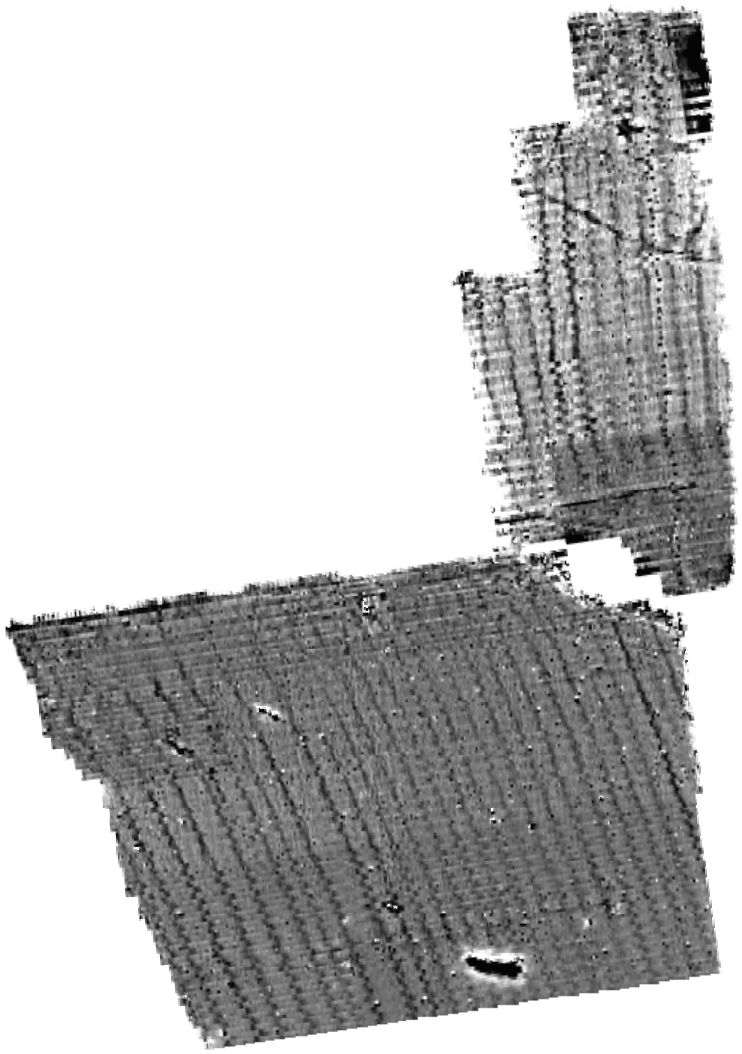
Site location Fig 1

1:2500

Magnetometer survey results Fig 2

1:2500

Magnetometer survey interpretation Fig 3



0 125m

Magnetic anomaly /nT
-8nT +8nT

1:2500

Unprocessed magnetometer data Fig 4

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