



Northamptonshire Archaeology

Archaeological geophysical survey of land at
Harbrook Lane, Clifton, Bedfordshire
February 2013



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Report 13/32

February 2013



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QUALITY CONTROL

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Approved by	Andy Chapman	<i>AC</i>	19/02/2013

OASIS REPORT FORM

PROJECT DETAILS		OASIS No:143959
Project name	Archaeological geophysical survey of land at Harbrook Lane, Clifton, Bedfordshire.	
Short description	Northamptonshire Archaeology was commissioned to carry out a detailed magnetometer survey of a proposed development area at Harbrook Lane, Clifton, Bedfordshire. The survey identified the remains of ridge and furrow cultivation across the majority of the site. No other archaeological features were present. The survey also identified areas of modern disturbance associated with existing housing on the site.	
Project type	Geophysical survey	
Site status	None	
Previous work	Desk Based Assessment (Dawson 2009)	
Current Land use	Pasture/Gardens	
Future work	Unknown	
Monument type/ period	Uncertain	
Significant finds		
PROJECT LOCATION		
County	Bedfordshire	
Site address	Harbrook Lane, Clifton	
Study area	c 3.1ha	
OS grid reference	TL 1623 3874	
Height OD	c 45-50m AOD	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology (NA)	
Project brief originator	CgMs Consulting	
Project Design originator	NA	
Director/Supervisor	Chris Chinnock	
Project Manager	Mark Holmes	
Sponsor or funding body	CgMs Consulting	
PROJECT DATE		
Start date	13 February 2013	
End date	13 February 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BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report	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 Harbrook Lane, Clifton, Bedfordshire, February 2013	
Serial title & volume	Northamptonshire Archaeology Reports 13/32	
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Contents

1	INTRODUCTION
2	TOPOGRAPHY AND GEOLOGY
3	ARCHAEOLOGICAL BACKGROUND
4	METHODOLOGY
5	SURVEY RESULTS
5.1	Field 1
5.2	Fields 2 and 3
5.3	Field 4
6	CONCLUSION
	BIBLIOGRAPHY

Figures

Cover	Magnetometer survey results	
Fig 1	Site location	1:5000
Fig 2	Magnetometer survey results	1:2500
Fig 3	Magnetometer survey interpretation	1:2500
Fig 4	Unprocessed magnetometer data	1:2500

**ARCHAEOLOGICAL GEOPHYSICAL SURVEY OF LAND AT HARBROOK LANE
CLIFTON, BEDFORDSHIRE
FEBRUARY 2013**

ABSTRACT

Northamptonshire Archaeology was commissioned to carry out a detailed magnetometer survey of a proposed development area at Harbrook Lane, Clifton, Bedfordshire. The survey identified the remains of ridge and furrow cultivation across the majority of the site. No other archaeological features were present. The survey also identified areas of modern disturbance associated with existing housing on the site.

1 INTRODUCTION

Northamptonshire Archaeology (NA) was commissioned by CgMs Consulting to conduct a geophysical survey in advance of a proposed development on land around Harbrook Lane, Clifton, Bedfordshire (NGR TL 1623 3874; 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 13th February 2013 and comprised the detailed magnetometer survey of c 3.1ha of land.

2 TOPOGRAPHY AND GEOLOGY

The proposed development area consists of one rectangular pasture field, two small rectangular lawned areas and a larger irregular lawned field formerly used as a tree nursery. These areas stand at an elevation of c 45m aOD and slope gently down towards the east.

The solid geology of the area is made up of Gault Formation mudstone. The superficial deposits are described as Lowestoft Formation Till Deposits (BGS 2013).

3 ARCHAEOLOGICAL BACKGROUND

The site lies on the southern edge of the historic core of Clifton. The village is first mentioned in AD 944 in the Cartulanium Saxonicum and later in the Domesday Survey of AD 1086. Historic Environment Records indicate that there are many points of interest in the local vicinity.

An Early Bronze Age beaker in association with five inhumation burials was found to the east of the site in the first half of the 20th-century (HER 394). A number of cropmarks, thought to be of later prehistoric or Roman date, can be seen around Clifton (HERs 1664, 1888, 15095 and 15097). These sites are likely to form part of the extensive prehistoric and Roman landscape known to exist in the valleys of the River Ival and its tributaries. A Saxon pot was discovered to the east of the development site in 1930 (HER 393). The medieval parish church of All Saints which lies to the north-east of the site (HER 1037) has 14th-century elements but is likely to have an earlier origin. Clifton has a complex manorial history and it has been suggested that the settlement was polyfocal during the medieval period. Harbrook Lane which runs through the proposed development area is recorded on a 1745 estate map drawn up for Lord Torrington. This map suggests the survey area was sub-divided into furlongs and strip fields during the medieval period and may have remained as such up until the 19th-century (Dawson 2009). Evidence for post-medieval and modern gravel and clay extraction can be found around the village.

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 in each of the areas to be surveyed. The grids were 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 method statement for the project (NA 2013).

The survey data were largely processed using Geoplot 3.00v software. Most of the striping was removed using the 'Zero Mean Traverse' function but some areas had to be de-striped separately, using a spreadsheet based routine, in order to preserve linear anomalies lying parallel to the traverse direction. Destaggering of the data was performed where 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 resampled (georectified) for display against the Ordnance Survey base mapping (Fig 2). An interpretative overlay is shown in Figure 3, and plots of the unprocessed survey data and repeated survey grids are presented in Figure 4.

5 SURVEY RESULTS

5.1 Field 1

Parallel linear anomalies aligned east-west can be seen across the majority of the field (Fig 3). These are most likely to represent ridge and furrow earthworks which have since been ploughed out. Parallel and diagonal anomalies in the north-east quadrant almost certainly reflect modern field drains. Magnetic noise along the southern boundary of the field relates to a modern bund likely to contain brick rubble and/or ferrous material (Fig 3). Further magnetic noise and magnetic halos can be seen around the north and east boundaries. These relate directly to fences and buildings to the north and agricultural vehicles to the south-east.

5.2 Fields 2 and 3

Both of these small areas exhibit intense magnetic noise. As these areas constitute part of the gardens associated with nearby houses it is likely that the ground has been levelled or made up using construction debris and/or material brought in from elsewhere (Fig 3). No archaeological features could be seen in these areas.

5.3 Field 4

Much like Field 1, the results from this field show no evidence of archaeological features pre-dating the ridge and furrow. Parallel linear anomalies representing ridge and furrow earthworks can only be seen in the original data (Fig 4). Unavoidable processing techniques have removed the faint remnants of the ridge and furrow (Fig 3). The anomalies are aligned roughly east to west. A weakly positive anomaly can be seen aligned north-south along the western boundary of this field (Fig 3). This may be a headland associated either with the ridge and furrow or modern ploughing. Intense dipolar anomalies and magnetic noise scattered around the field reflect modern debris on the surface, such as large water troughs and old broken gates. Magnetic halos, seen around the margins of the field, are due to the presence of fences and field boundaries.

6 CONCLUSION

The survey shows ridge and furrow cultivation across the two larger fields (Fields 1 and 2). This correlates with the 1745 map drawn up for Lord Torrington which suggested the area proposed for development had been divided into furlongs and strip fields. This ridge and furrow is not present as earthworks. The results also confirm that much of the area surrounding the existing houses has been heavily disturbed.

BIBLIOGRAPHY

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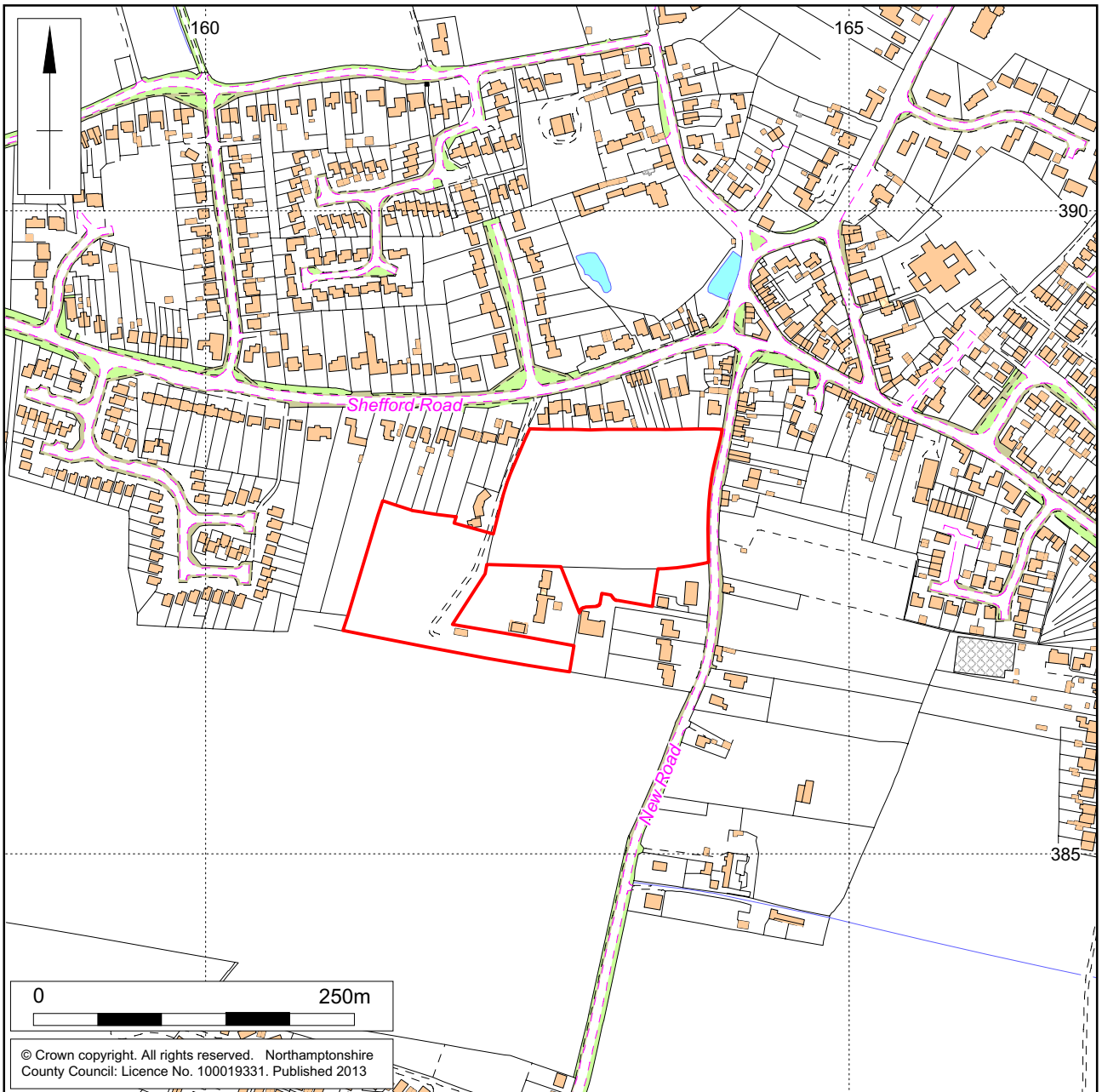
BGS 2013 *GeoIndex*, <http://mapapps2.bgs.ac.uk/geoindex/home.html>, consulted 23/1/2013

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

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NA 2013 *Archaeological geophysical evaluation: Land at Harbrook Lane, Clifton, Bedfordshire: Method Statement*, Northamptonshire Archaeology



Scale 1:5000

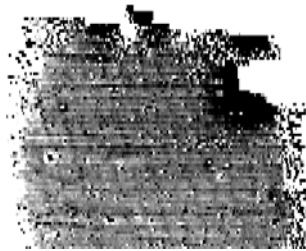
Site location Fig 1





1:2500 (A4)

Magnetometer Survey Interpretation Fig 3



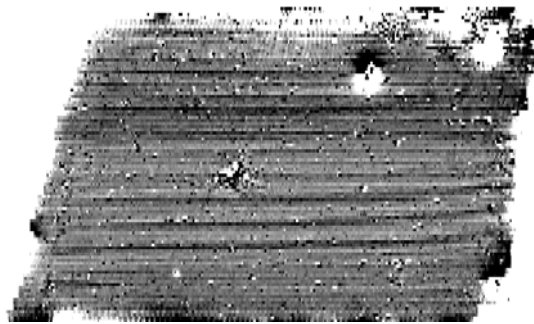
Field 1



Field 3



Field 2



Field 4

