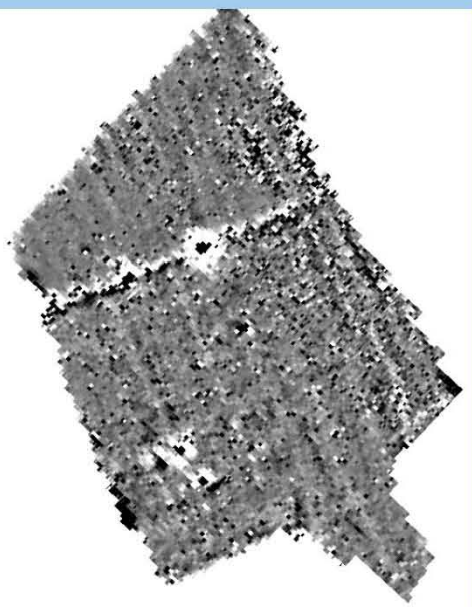
Northamptonshire Archaeology

Archaeological Geophysical Survey on land to the south of Britannia Road Burbage, Leicestershire March 2010



Northamptonshire Archaeology
2 Bolton House
Wootton Hall Park
Northampton NN4 8BE
t. 01604 700493 f. 01604 702822
e. sparry@northamptonshire.gov.uk
w. www.northantsarchaeology.co.uk

Northamptonshire County Council

Adrian Butler

Report 10/54

March 2010

STAFF

Project Manager	Adrian Butler BSc MA AlfA
Fieldwork	John Walford MSc
	James Ladocha BA
	Lazlo Lichtenstein MA
Text and illustrations	Adrian Butler
	Charlotte Walker BSc AlfA

QUALITY CONTROL

	Print name	Signature	Date
Checked by	Pat Chapman	*PC*	25/03/10
Verified & Approved by	Andy Chapman	*AC*	25/03/10

OASIS REPORT FORM

PROJECT DETAILS		
Project name	Archaeological Geophysical Survey on land to the south of Britannia Road, Burbage, Leicestershire	
Short description	Northamptonshire Archaeology was commissioned by the University of Leicester Archaeological Service (ULAS) to conduct an archaeological geophysical survey of 2.5ha of land to the immediate south of Britannia Road, Burbage, Leicestershire. The survey identified a few anomalies of possible archaeological interest, including a possible rectilinear enclosure, a former field boundary and ridge and furrow cultivation patterns	
Project type	Geophysical survey	
Site status	None	
Previous work	None	
Current Land use	Pasture	
Future work	Unknown	
Monument type/ period	Medieval ridge and furrow cultivation, Possible ditched enclosure	
Significant finds	None	
PROJECT LOCATION		
County	Leicestershire	
Site address	Britannia Road, Burbage	
Study area	2.5ha	
OS Easting & Northing	SP 441 920	
Height OD	*c* 128m AOD	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology (NA)	
Project brief originator	Leicestershire County Council Natural Heritage & Environment Team	
Project Design originator	Dr Patrick Clay (ULAS)	
Director/Supervisor	John Walford	
Project Manager	Adrian Butler	
Sponsor or funding body	University of Leicester Archaeological Services (ULAS)	
PROJECT DATE		
Start date	05 March 2010	
End date	25 March 2010	
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 on land to the south of Britannia Road, Burbage, Leicestershire	
Serial title & volume	Northamptonshire Archaeology Reports 10/54	
Author(s)	Adrian Butler	
Page numbers	4	
Date	25/03/2010	

Contents

Figures

ARCHAEOLOGICAL GEOPHYSICAL SURVEY OF LAND TO THE SOUTH OF BRITANNIA ROAD, BURBAGE LEICESTERSHIRE MARCH 2010

ABSTRACT

Northamptonshire Archaeology was commissioned by the University of Leicester Archaeological Service (ULAS) to conduct an archaeological geophysical survey of 2.5ha of land to the immediate south of Britannia Road, Burbage, Leicestershire. The survey identified a few anomalies of possible archaeological interest, including a possible rectilinear enclosure, a former field boundary and ridge and furrow cultivation patterns.

1 INTRODUCTION

Northamptonshire Archaeology was commissioned by University of Leicester Archaeological Service (ULAS) to conduct an archaeological geophysical survey of 2.5ha of land located to the south of Britannia Burbage, near Hinckley, Leicestershire ahead of proposed residential development (NGR SP 441 919; Fig 1). The geophysical survey was undertaken on 5th March 2010.

2 TOPOGRAPHY AND GEOLOGY

The survey area is located to the south of the village of Burbage, which is considered a southern suburb of Hinckley. The survey area is broadly rectangular in shape sloping gently, along its axis, down to the south-south-east. It is bounded to the north-east by residential development that fronts onto Britannia Road, to the north-west by Britannia Fields Recreation Ground and in all other directions by pasture fields. The area is divided into three pasture fields of varying size (Figs 2 and 3: Fields 1-3). Fields 2 and 3 are divided by a north-east to south-west footpath.

The survey area lies at a height of *c* 128m aOD. The geology comprises Till overlying Triassic sediments (www.geodata.bgs.ac.uk/website/leicester/viewer.htm).

3 ARCHAEOLOGICAL BACKGROUND

Burbage is a village of medieval origins centred on its thirteenth-century Church of St Catherine's, Britannia Road lying to the south of the historic core. The archaeological background to site has been detailed in a Desk-Based Assessment (Richards 2009).

Although some Roman and prehistoric remains have been recovered on the northern outskirts of Burbage and in adjacent Hinckley, little is known from the southern side of the village. An undated lithic implement was recovered to the north of the site in the early twentieth century. No archaeological finds are known from the proposed development area. Immediately west of the site, however, metalwork of Roman and Saxon dates has been recovered. A possible circular cropmark has been tentatively identified within the Britannia Fields playing field also to the west (Richards 2009, 1-4).

Ordnance Survey mapping shows Britannia Road to have been previously named *Ball's Lane* when surveyed between 1889 and 1950 (ads.ahds.ac.uk). The development area appears to have continually been fields as now (Fig 1), the crossing footpath included but the southern field divided into two by an east-west boundary.

It is likely that prior to the nineteenth-century expansion of Burbage, the development area would be situated in the medieval open fields.

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).

The basic unit of survey was the 30m grid square. A separate network of grids was established in each field, by means of tape measure and optical square, and was tied in by measurement to the field boundaries. The instruments 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.

All fieldwork complied with the guidelines issued by English Heritage and by the Institute for Archaeology (EH 2008; Gaffney, Gater and Ovendon 2002).

The data was processed using Geoplot 3.00u software. Striping, caused by slight mismatches in sensor balance, was removed using the 'Zero Mean Traverse' function (ZMT). Destaggering of the data was performed as necessary.

The processed data is presented in this report in the form of greyscale plots (scale +4nT to -4nT black ~ white). These have been scaled, rotated and resampled (georectified) for display against the Ordnance Survey base mapping (Fig 2). An interpretative plot has been produced and is shown overlain onto the data (Fig 3).

5 SURVEY RESULTS

Field 1

This field was found to contain large amounts of small dipolar magnetic anomalies, likely to represent small subsurface fragments of iron. Extensive negative magnetic halos along the field margins were a magnetic response to modern wire fences, and a building on the eastern edge. A group of mixed anomalies on the southern boundary may represent debris of a ceramic nature, such as brick and tile.

Field 2

As in Field 1, there was a scatter of dipolar ferrous anomalies across this field. A broad strip of mixed magnetic anomalies along the northern boundary may reflect more ceramic debris with along with ferrous material. Larger dipolar, ferrous, anomalies were detected within Field 2, as was another area of possible brick-type debris.

A very weakly positive 'L-shaped' anomaly was detected in the north-eastern corner of Field 2. It is possible that this reflects part of a rectilinear ditched enclosure. Alternate positive and negative magnetic banding north-west to south-east through the field indicated traces of medieval ridge and furrow cultivation, and a possible ceramic field drain on the same alignment centrally.

Field 3

Ridge and furrow was detected throughout Field 3. A strongly positive linear anomaly cutting the ploughing, south-west to north-east across the field indicates the former boundary identified in Section 3 (above). An intense positive anomaly identified central to the line of the boundary was likely to indicate a large ferrous-based feature or object. An area of possible ceramic (brick) was detected in the north-east of Field 3, within the region of a more magnetically noisy eastern boundary to the field. Three additional larger dipolar, ferrous anomalies were detected in the south of Field 3.

6 CONCLUSION

Magnetometer survey of three fields south of Britannia Road, Burbage demonstrated that each, to some degree, contained a large amount of ferrous and ceramic debris. It was known that Field 3 had been divided into two fields in the past and the boundary was confirmed as a positive magnetic anomaly.

The north-east corner of Field 2 was found to contain evidence of a possible rectilinear ditched enclosure. This identification will remain tentative as the north-west to south-east side of the feature was along the line of ridge and furrow.

BIBLIOGRAPHY

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

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

Gaffney, C, Gater, J, and Ovendon, S, 2002 *The Use of Geophysical Techniques in Archaeological Evaluations*, Institute of Field Archaeologists Technical Paper, **6**

Richards, G, 2009 *An Archaeological Desk-Based Assessment of Land Adjacent to Britannia Road, Burbage, Leicestershire (SP 440 919)*, University of Leicester Archaeological Services, **2009-161**

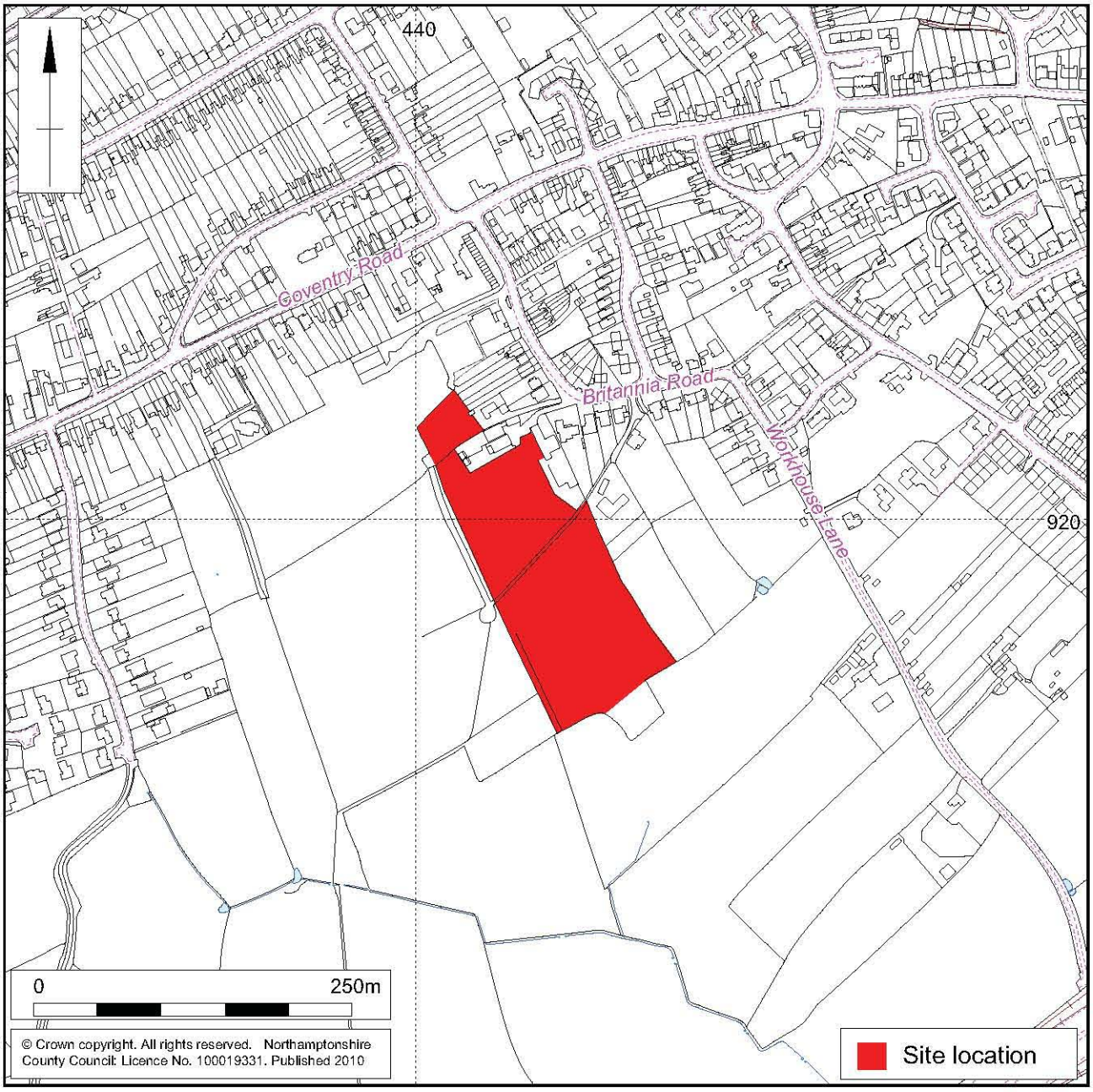
WEBSITES

ads.ahds.ac.uk, Archaeology Data Service, accessed 22/03/2010

www.geodata.bgs.ac.uk/website/leicester/viewer.htm, Geology of Leicestershire and Rutland, accessed 22/03/2010

www.old-maps.co.uk, Ordnance Survey 6" Map of Warwickshire & 2" Map of Leicestershire, 1889-1950, accessed 25/03/2010

Northamptonshire Archaeology
a Cultural Service of Northamptonshire County Council 25 March 2010



1:5,000

Site Location Fig 1

1:1250

Magnetometer Survey Results Fig 2

1:1250

Magnetometer Survey Interpretation Fig 3

Northamptonshire County Council

Northamptonshire Archaeology

Northamptonshire Archaeology
2 Bolton House
Wootton Hall Park
Northampton NN4 8BE
t. 01604 700493 f. 01604 702822
e. sparry@northamptonshire.gov.uk
w. www.northantsarchaeology.co.uk