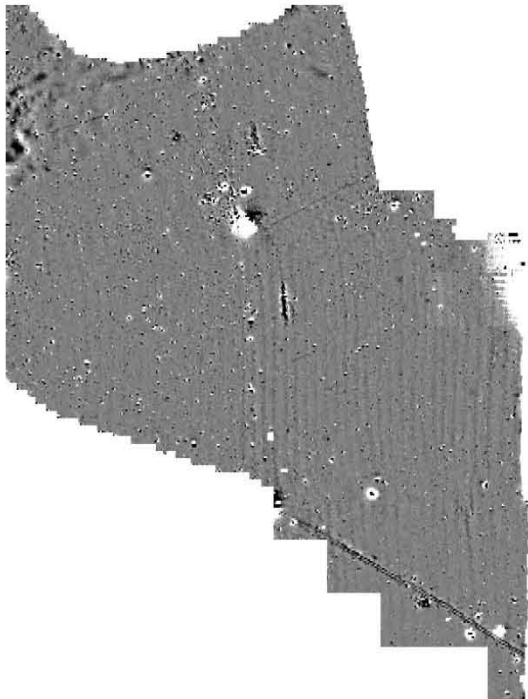




Northamptonshire Archaeology

Archaeological geophysical survey
At Brookfield Farm, Hallfields Lane
Rothley, Leicestershire



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Report 10/69

March 2010



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QUALITY CONTROL

	Print name	Signature	Date
Verified & Approved by	Dr Bill Boismier	<i>WAB</i>	17/04/2010

OASIS REPORT FORM

PROJECT DETAILS		
Project name	Archaeological Geophysical Survey at Brookfield Farm, Hallfields Lane, Rothley, Leicestershire	
Short description	Northamptonshire Archaeology was commissioned by University of Leicester Archaeological Services (ULAS), to conduct an archaeological geophysical survey on 16ha of land at Brookfield Farm, Hallfields Lane, Rothley. A possible palaeochannel of Rothley Brook and a former woodland track were located. Ridge and furrow cultivation was widespread across the fields. Otherwise, little of archaeological interest was identified.	
Project type	Geophysical survey	
Site status	None	
Previous work	Unknown	
Current Land use	Pasture	
Future work	Unknown	
Monument type/ period		
Significant finds	None	
PROJECT LOCATION		
County	Leicestershire	
Site address	Brookfields Farm, Hallfields Lane, Rothley	
Study area	16ha	
OS Easting & Northing	4585 3122	
Height OD	c 50m-65m AOD	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology (NA)	
Project brief originator	ULAS	
Project Design originator		
Director/Supervisor	Paul Clements	
Project Manager	Adrian Butler	
Sponsor or funding body	ULAS	
PROJECT DATE		
Start date	09 March 2010	
End date	16 April 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BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report	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 at Brookfields Farm, Hallfields Lane, Rothley, Northamptonshire	
Serial title & volume	Northamptonshire Archaeology Reports 10/69	
Author(s)	Heather Smith & Adrian Butler	
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Fig 3 Magnetometer Survey Interpretation, 1:2500

**ARCHAEOLOGICAL GEOPHYSICAL SURVEY AT BROOKFIELDS FARM,
HALLFIELDS LANE, ROTHLEY, LEICESTERSHIRE**

MARCH 2010

ABSTRACT

Northamptonshire Archaeology was commissioned by University of Leicester Archaeological Services, to conduct an archaeological geophysical survey on 16ha of land at Brookfield Farm, Rothley. A possible palaeochannel of Rothley Brook and a former woodland track were located. Ridge and furrow cultivation was widespread across the fields. Otherwise, little of archaeological interest was identified.

1 INTRODUCTION

Northamptonshire Archaeology was commissioned by University of Leicester Archaeological Services (ULAS), to conduct an archaeological geophysical survey on 16ha of land at Brookfields Farm, Hallfields Lane, Rothley, Leicestershire (NGR SK 585 122, Fig 1). The detailed gradiometer survey was undertaken during March 2010.

2 TOPOGRAPHY AND GEOLOGY

The survey area is located at Brookfields Farm, Hallfields Lane, immediately to the south of the village of Rothley, Leicestershire. The area consists of a block of fields surrounding the farm buildings, stretching from Hallfields Lane and the Rothley Brook to the north at c50m AOD and running southwards upslope to a path along the top of the slope c70m AOD. However the southern boundary of the surveyed area diverts from this path to the west and follows the line of an old field boundary that remains on the ground as a rough line of trees. The survey area is bounded on the west by a road and track and on the east by a path running alongside the last residential house and garden on Hallfields lane and continuing up to the top of the hill.

The area is divided into five main fields, one of which is a large pasture field. The others are smaller pasture fields, which at the time of the survey were subdivided by electric fencing and contained horses.

The geology consists of a series of superficial deposits. To the south of Rothley Brook is a strip of alluvium. A strip of sand and gravel from undifferentiated fluvial glacial deposits occurs between the alluvium and a larger area of Boulder clay which covers the sides and top of the hill (www.geodata.bgs.ac.uk/website/leicester/viewdata.htm).

3 ARCHAEOLOGICAL BACKGROUND

A search for any archaeological sites in the development area using Arch Search (<http://ads.ahds.ac.uk/catalogue/search>) did not reveal any known archaeological sites in the present geophysical survey area. However, several sites are known within 1km of the centre of the site. The centre of the village of Rothley lies about 500 metres to the north on the other side of the Rothley Brook, the church here mainly dates from the 13th to 15th centuries but is of Norman origin, it was restored in 1878. In the churchyard is an 8th or 9th century Mercian cross with carved decoration on a low mound.

To the north of the present churchyard, Northamptonshire Archaeology carried out an open area excavation in 2007 that revealed Roman post-pits and spreads of roof tiles indicating nearby Roman occupation. This excavation also revealed 138 late Saxon and Medieval inhumations and 149 deposits of disturbed bone indicating that the churchyard

was larger in the medieval period. Additional medieval features included pits and a well, and post-medieval formal garden features (Upson-Smith 2008).

Rothley was a minster in the Saxon period and the centre of a large estate (<http://ads.ahds.ac.uk/catalogue/search>). A Roman hoard contained in an urn was found somewhere in Rothley in 1895. Directly to the east of the site in an allotment field behind the houses on Hallfields Lane is a cropmark of a probable ringditch, possibly from a barrow. 500m west of the site are the remains of a Knights Templar preceptory.

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

It will be noted from Figure 3 that surrounding the farm buildings, a number of anomalies have been tagged 'magnetic shadow'. These areas of positive and negative magnetism were part of the large anomalies caused by the buildings, fences and equipment.

Field 1

Evidence of ridge and furrow cultivation was detected, orientated south-east to north-west across the southern two thirds of Field 1. A modern water trough was situated towards the centre of the field. A weakly positive magnetic anomaly orientated north-east from the fixture is considered to reflect a buried water pipe, perhaps of ceramic make. A number of dipolar (paired positive/negative) anomalies adjacent to the trough indicate ferrous debris and probable brick rubble in the topsoil, likely to represent a dump of hardcore to firm the ground around the water feature. Two other probable dumps of

ceramic/brick material were located to the north and south-east of the trough.

A pair of parallel positive linear magnetic anomalies was detected orientated west-east across the south of Field 1. As this feature is within the former extent of woodland, it may represent a trackway, perhaps related in some way to the numerous ferrous anomalies identified in close proximity. Mixed positive and negative anomalies detected in the western corner of the field possibly reflect a former channel of the Rothley Brook to the north. A linear positive anomaly, possibly a narrow ditch, was detected orientated south-west to north-east in the same area.

Field 2

South-east to north-west orientated ridge and furrow was detected through Field 2. A former quarry pit on the eastern boundary may be the root of the large area of ceramic-type positive and ferrous anomalies grouped to the west, around a fence. Many other dipolar, ferrous anomalies were detected throughout the field. Central to the northern half of Field 2, an area of small dipolar anomalies indicates a spread of possible ceramic debris.

Field 3

As with Field 1 and 2, ridge and furrow was identified in Field 3_1 on a north-westerly alignment. Parallel positive anomalies detected orientated west to east across the south of the field were likely to represent a continuation of the possible woodland track located in Field 1. Similarly, ferrous anomalies were identified adjacent to the track. Field 3_2, in the north-west, showed a mixed magnetic background, suggesting that the ground had been disturbed in some manner.

Field 4

The fields north-west of Brookfield Farm all appear to share a background distribution of small dipolar anomalies, be they ferrous or ceramic. A large, intense dipolar magnetic anomaly was detected in the southern corner of Field 4. This is likely to indicate a sizable buried ferrous object, perhaps a storage tank.

A short length of ferrous pipe was identified in the north of Field 4_2. A larger pipeline, characterised as a chain of dipoles, was detected orientated north-east from the south-west corner of the same field. A positive anomaly was located north of and slightly divergent from the pipe. The straightness and situation of the feature suggests that it may be a modern trench.

Field 5

This field was surveyed amongst former woodland. Numerous ferrous anomalies were located over the tracks and boundaries and several diffuse positive anomalies may indicate tree-boles.

6 CONCLUSION

Survey of the agricultural land surrounding Brookfield Farm located little of obvious archaeological interest. Medieval ridge and furrow cultivation patterns were identified, likely to be part of the Infield furlongs of medieval Rothley. A pair of parallel features, cutting across the south of Fields 1 and 3 was considered likely to represent a track formerly within the woodland that stood until relatively recently. A possible palaeochannel of Rothley Brook was located in the west of the site, together with a possible narrow ditch.

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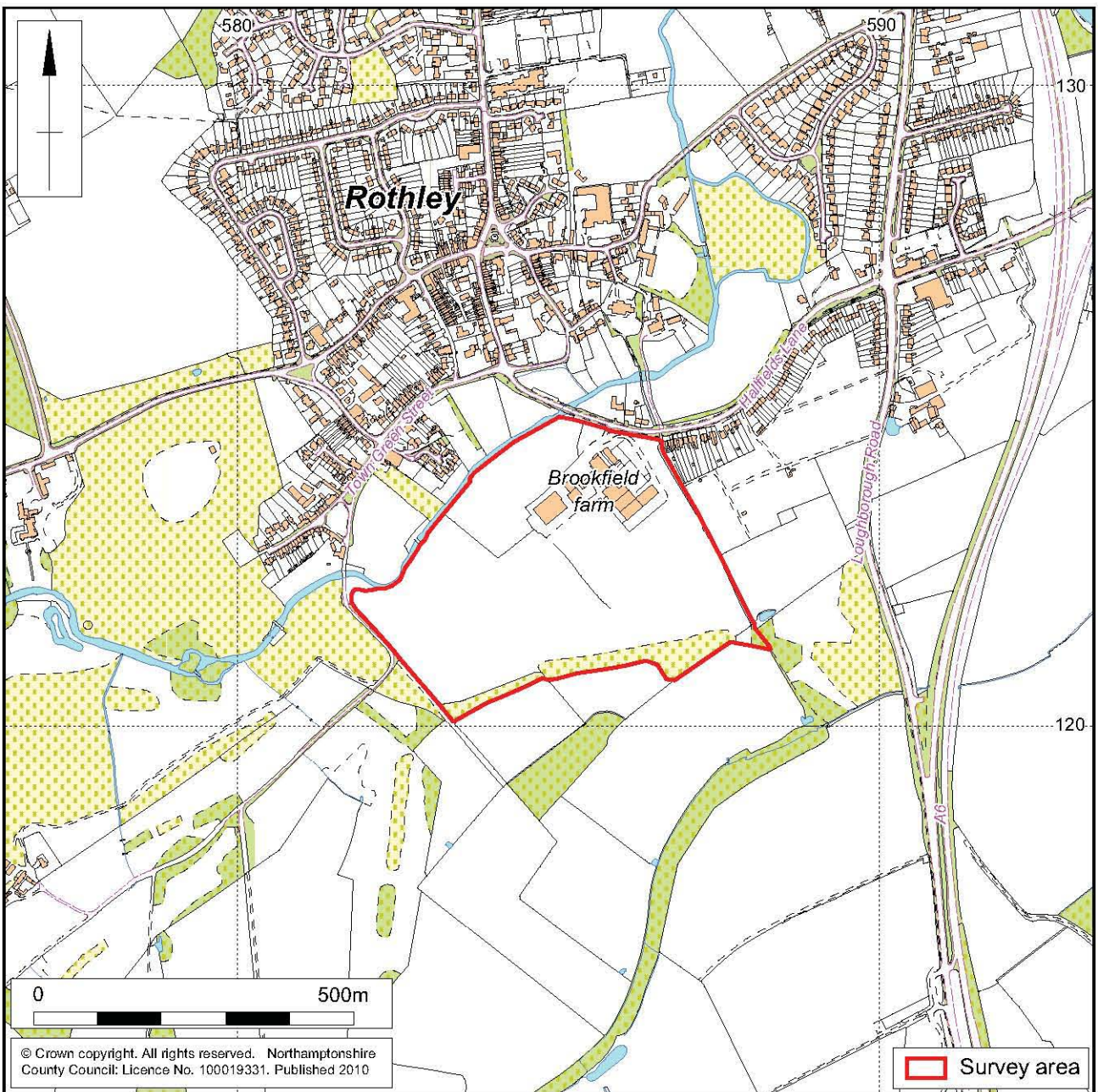
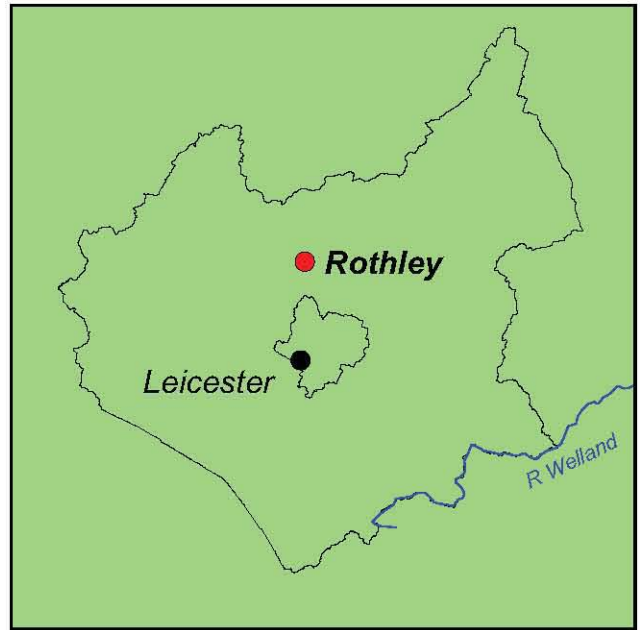
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Northamptonshire Archaeology

A Cultural Service of Northamptonshire County Council

17 April 2010



Scale 1:10,000

Site Location Fig 1

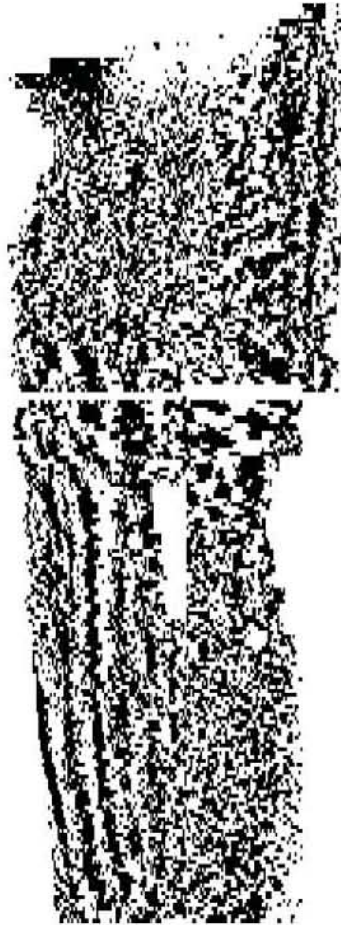






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