

Archaeological geophysical survey on land at Upton Lane, Littleport Cambridgeshire May 2015

Report No. 15/126

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Illustrator: Adam Meadows



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OASIS REPORT

PROJECT DETAILS		Oasis No. molanort1-216466	
Project name	Archaeological geophysical survey on land at Upton Lane, Littleport, Cambridgeshire		
Short description	MOLA was commissioned to carry out a detailed magnetometer survey on land at Upton Lane, Littleport, Cambridgeshire. The survey discovered two linear anomalies of potential archaeological origin, extensive medieval ridge and furrow cultivation and scatters of ferrous objects.		
Project type	Geophysical survey		
Site status	None		
Previous work	None known		
Current Land use	Pasture		
Future work	Trial trench evaluation		
Monument type/ period	Medieval ridge and furrows, Unidentified linear features		
Significant finds	None		
PROJECT LOCATION			
County	Cambridgeshire		
Site address	Upton Lane, Littleport		
Study area	c 2ha		
OS Easting & Northing	TL 563 865		
Height OD	c 10m aOD		
PROJECT CREATORS			
Organisation	MOLA Northampton		
Project brief originator	Kasia Gdaniec, Cambridgeshire Archaeological Planning Officer		
Project design originator	MOLA Northampton		
Director/Supervisor	Olly Dindol		
Project Manager	John Walford		
Sponsor or funding body	Manor Oak Homes		
PROJECT DATE			
Start date	26 May 2015		
End date	26 May 2015		
ARCHIVES	Location	Content	
Physical	N/A		
Paper	ECB4498	Site survey records	
Digital	MOLA Northampton	Geophysical survey & GIS data	
BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report		
Title	Archaeological geophysical survey on land at Upton Lane, Littleport, Cambridgeshire, May 2015		
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ABSTRACT

MOLA was commissioned to carry out a detailed magnetometer survey on land at Upton Lane, Littleport, Cambridgeshire. The survey discovered two linear anomalies of potential archaeological origin, extensive medieval ridge and furrow cultivation and scatters of ferrous objects.

1 INTRODUCTION

MOLA was commissioned by Manor Oak Homes to carry out a detailed magnetometer survey covering c 2ha of land near Upton Lane, Littleport, Cambridgeshire (NGR TL 563 865; Fig 1). The purpose of the survey was to investigate the archaeological potential of a proposed development site. The fieldwork was undertaken on 26 May 2015 and has been recorded on the Cambridgeshire Historic Environment Record (HER) under event number: ECB4498.

2 BACKGROUND

2.1 Topography and geology

The survey area comprises a single pasture field encompassed by housing to the east and west and pasture fields to the north and south. The field covers c 2ha on the northern side of a gravel island within the Cambridgeshire fens at an elevation of 10m aOD. The underlying geology is mapped as glacial till overlying Kimmeridge Clay (BGS 2015)

2.2 Historical and archaeological background

A trial trench evaluation located immediately to the west of the survey area uncovered artefacts within a number of prehistoric ditches, gullies and a pond (CHER: ECB141). Further prehistoric activity has been recorded within the Old Croft River Channel where isolated flint scatters, areas of flint working and flint tools were discovered near to the route of the Ely Bypass (HER: 07192, HER: 07193). Around 600m north of the survey area a Bronze Age burnt mound (MCB 19320) located within Littleport.

The only evidence of Iron Age occupation in Littleport is a dense concentration of pits and postholes containing flints, animal bones and early Iron Age pottery discovered off Wisbech Road, north of the survey area (MCB 17425).

Evidence of the Roman occupation within Littleport is widespread. Roman settlements and field systems are known to follow the course of the Old Croft River which was exploited for salt making. A high status structure or villa with surrounding infrastructure is also present c 500m north of the survey area (11961). Furthermore, find spots of Roman coins have been found within 200m north of the site; one hoard of 29 bronze coins representing a 3rd century hoard was pulled from the Old Croft River in 1771 and a bronze coin of Gallienus at Old School Close (07222).

Evidence of medieval and post-medieval occupation comes from the widespread evidence of cultivation systems as observed in nearly all prior excavations and aerial photography (CB15683, MCB16496).

The survey area is located c 450m north-east of a currently unpublished site at Highfield Farm. Here prehistoric remains were uncovered alongside Roman enclosures and a Saxon cemetery (Gdaniec, pers com).

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 field to be surveyed. The grid was set out with a tape measure and optical square and was tied in to the Ordnance Survey National Grid by means of a Leica Viva dGPS. 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 Historic England and by the Chartered Institute for Archaeologists (HE 2015; CIfA 2014).

The survey data was 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 plot of the unprocessed data is presented in Figure 4.

4 SURVEY RESULTS

The survey data contains two faint linear anomalies of possible archaeological origin. One is a long curved linear feature or anomaly that crosses the north-eastern corner of the field; this may represent a small gully or field drain. The other is a very weak positive circular anomaly located near the centre of the survey area. This feature may represent a shallow gully or a natural variation within the substrate.

There are a series of positive linear anomalies that represent medieval ridge and furrow cultivation aligned west-north-west to east-south-east. Towards the eastern edge of the survey area the ridge and furrows stop with a slight northwards kink. This is indicative of a headland where the plough was turning left towards the end of the furlong.

The survey area contains a number of ferrous anomalies that have a positive core surrounded by a negative 'halo'. These represent discrete magnetic objects within the soils. Four of these readings in the eastern half of the data are evenly spaced, forming a square that is aligned to the field boundaries and ridge and furrow cultivation. This may represent the remains of corner supports for a temporary building or fence. It may even be the remnants of sporting equipment within the modern playing field.

The survey data also displays clusters of magnetically alternating dipoles resulting from ferrous anomalies, gravels and broken up materials that provide a magnetic response. Furthermore, to the north-eastern corner of the site a magnetically alternating linear anomaly is present indicating a modern ferrous pipeline.

5 CONCLUSION

The survey detected a linear anomaly and a curvilinear anomaly that may have archaeological origins and medieval ridge and furrow cultivation. Areas of disturbance and a modern pipeline were also present.

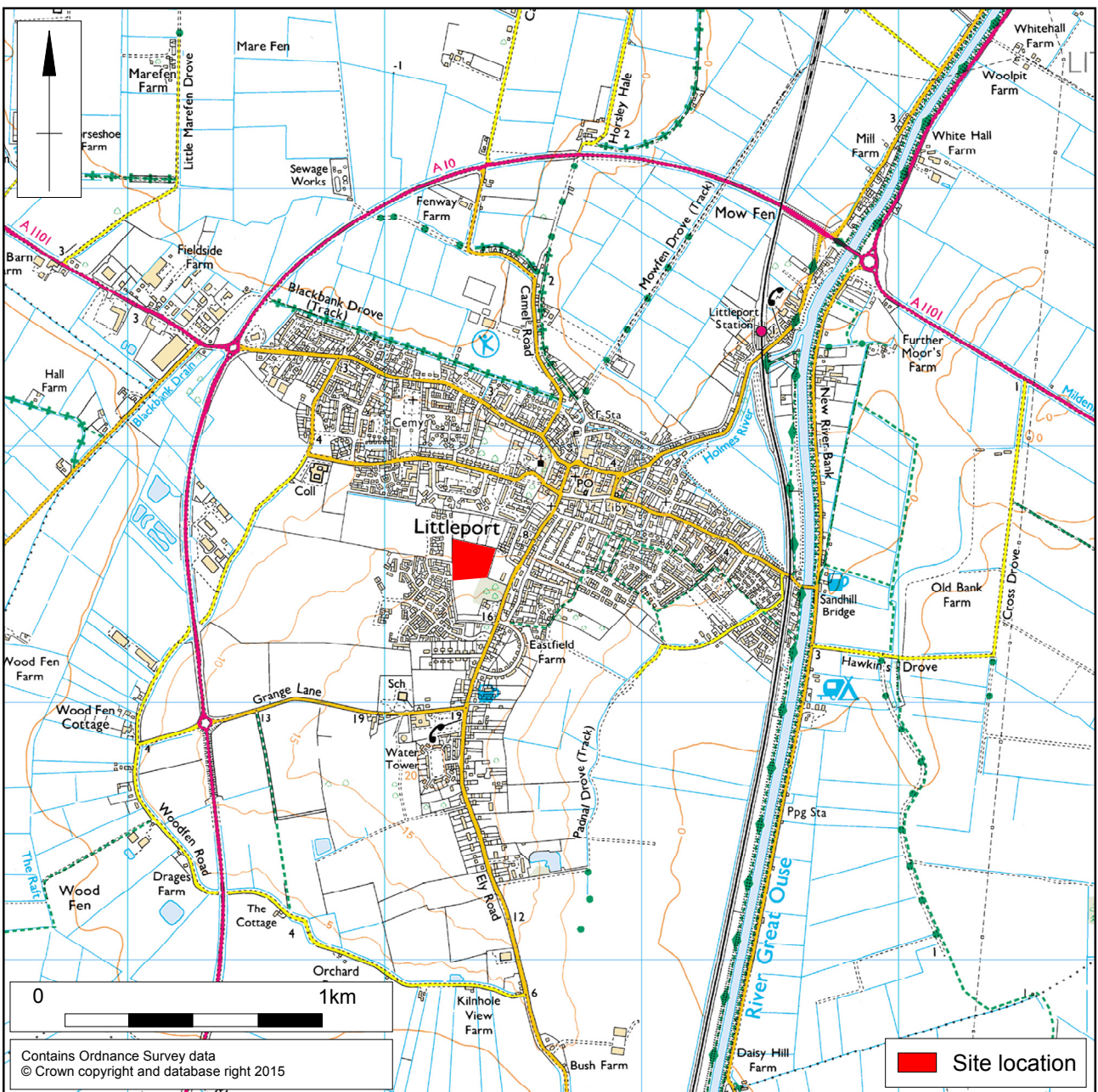
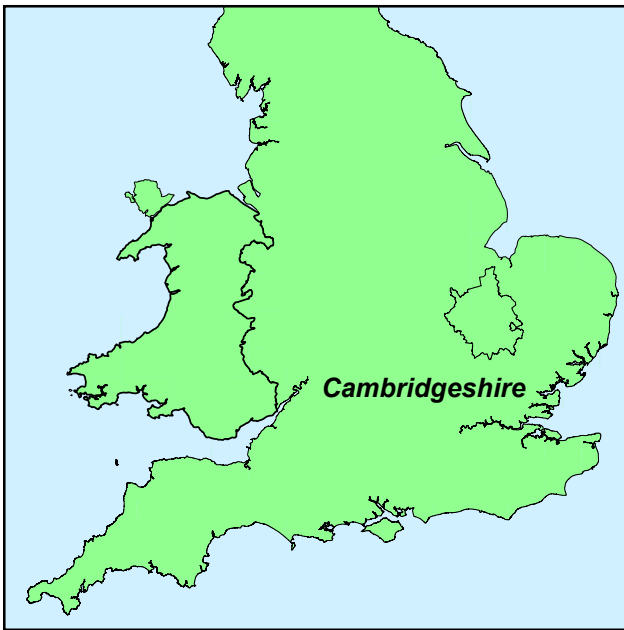
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CIfA 2014 *Standard and Guidance for Archaeological Geophysical Survey*, Chartered Institute for Archaeologists

HE 2015 *Geophysical Survey in Archaeological Field Evaluation*, Historic England



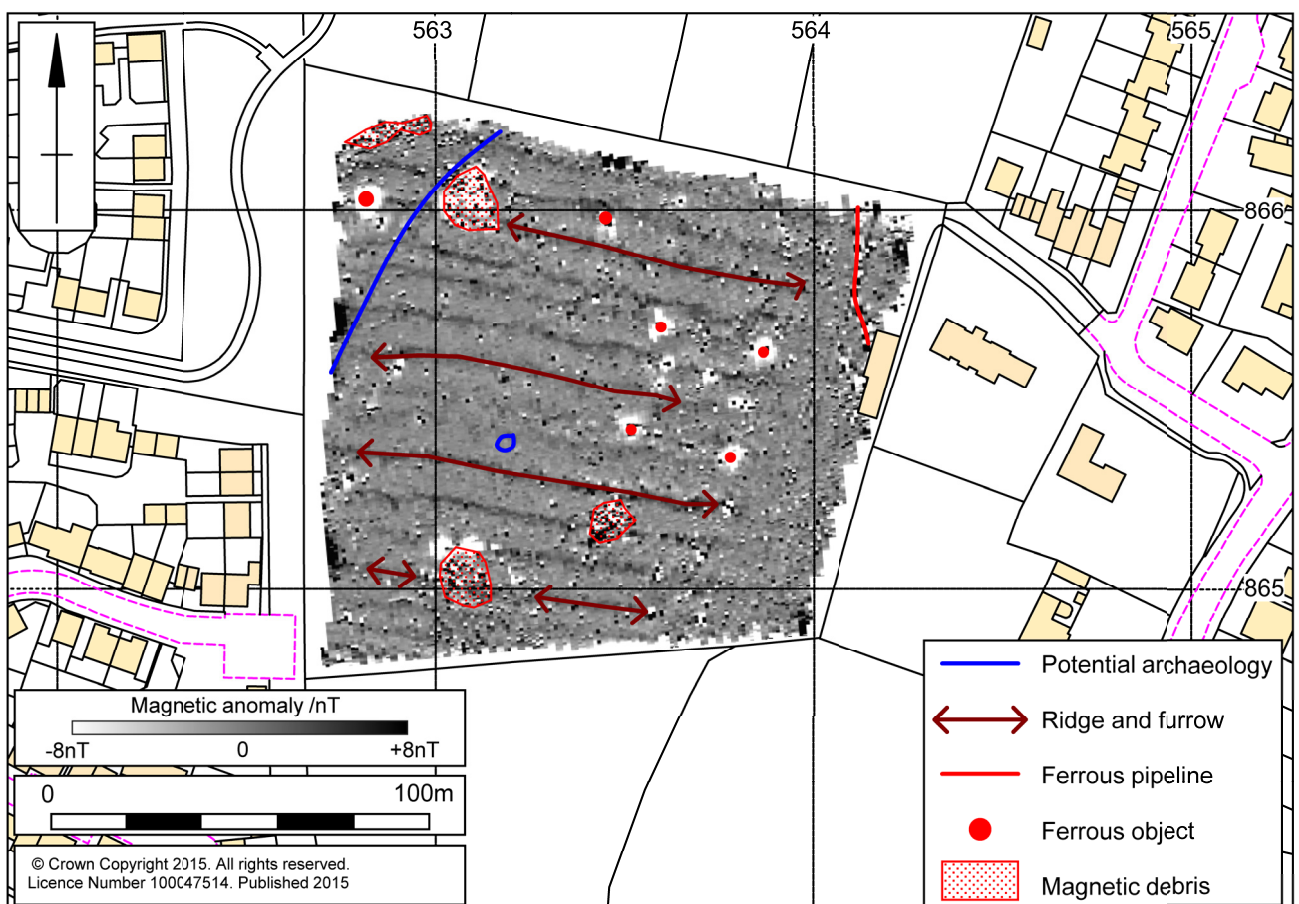
Scale 1:25000

Site location Fig 1



1:2000

Magnetometer survey results Fig 2



1:2000

Magnetometer survey interpretation Fig 3



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