Archaeological Geophysical Survey of land east of Station Road, Langford, Bedfordshire

March 2014

Report No. 14/82

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John Walford

Illustrator: Ian Fisher

Project Manager: Mark Holmes
Site Code: BEDFM 2014.30
NGR: TL 194 404

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Quality control and sign off**:**

Issue No.	Date approved:	Checked by:	Verified by:	Approved by:	Reason for Issue:
1	11/04/2014	Pat Chapman	Andy Chapman	Mark Holmes	Client approval

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OASIS REPORT

PROJECT DETAILS	Oasis No. Molanort1-176894	
Project name	Archaeological geophysical survey of land east of Station Road, Langford, Bedfordshire.	
Short description	MOLA was commissioned to carry out a detailed magnetometer survey on land east of Station Road, Langford, Bedfordshire. The survey identified two rectilinear enclosures of unknown date and two areas of magnetic noise which may relate to buildings depicted on the 1829 inclosure map of Langford.	
Project type	Geophysical survey	
Site status	None	
Previous work	None	
Current Land use	Arable	
Future work	Trial trench evaluation	
Monument type/ period	None	
Significant finds	Undated enclosure ditches, possible post-medieval buildings	
PROJECT LOCATION		
County	Bedfordshire	
Site address	Station Road, Langford	
Study area	*c* 5.9ha	
OS Easting & Northing	TL 190 404	
Height OD	*c* 38-42m AOD	
PROJECT CREATORS		
Organisation	MOLA	
Project brief originator	CgMs Consulting	
Project design originator	MOLA	
Director/Supervisor	Ian Fisher & John Walford	
Project Manager	Mark Holmes	
Sponsor or funding body	CgMs Consulting	
PROJECT DATE		
Start date	17 March 2014	
End date	07 April 2014	
ARCHIVES	Location	Content
Physical	N/A	
Paper	BEDFM 2014.30	Site survey records
Digital		Geophysical survey & GIS data
BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report	
Title	Archaeological geophysical survey of land east of Station Road, Langford, Bedfordshire. March 2014	
Serial title & volume	MOLA Northampton Reports 14/82	
Author(s)	Garreth Davey and John Walford	
Page numbers	9 (including figures)	
Date	April 2014	

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ABSTRACT

MOLA was commissioned to carry out a detailed magnetometer survey on land east of Station Road, Langford, Bedfordshire. The survey identified two rectilinear enclosures of unknown date and two areas of magnetic noise which may relate to buildings depicted on the 1829 inclosure map of Langford.

1 INTRODUCTION

MOLA was commissioned by CgMs Consulting to conduct a geophysical survey on land east of Station Road, Langford, Bedfordshire (NGR TL190 404; Fig 1). A detailed magnetometer survey was undertaken on 17-18 March and 7 April 2014, and covered a total area of approximately 5.9ha.

2 BACKGROUND

2.1 Location and geology

The survey area comprised a single field, approximately 5.9ha, in extent, located on the south-eastern edge of Langford to the east of Station Road. The western, southern and majority of the northern edges are bounded by residential housing. The eastern edge of the site is bounded by a railway line. The river Ivel flows approximately 500m to the west.

The survey area lies between 38m and 42m aOD on a gentle north facing slope. Its underlying geology consists of Gault formation mudstone with superficial deposits of sand and gravel to the west of the site and till across the rest (BGS 2014).

2.2 Historical and archaeological background

The archaeological potential of the survey area has been examined as part of a Heritage Assessment (Smith 2013). It contains no previously recorded archaeological remains, but several prehistoric and Roman findspots are recorded within the surrounding fields and Anglo-Saxon settlement remains have been excavated 900m north-west, at Pound Close.

Medieval and early post-medieval settlement at Langford was concentrated around three nuclei, Church End, Water End and Flexmore End, the last named of which lies immediately east of the survey area. Historic mapping shows the extent of Flexmore End in the early 19th century and indicates that there were several buildings standing within the westernmost part of the survey area (Smith 2013, figs 3-4). However, these buildings were no longer extant by the time of the first edition Ordnance Survey map (1881), and subsequent editions of the Ordnance Survey show the land continuing in agricultural use throughout the 20th century.

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 within the field to be surveyed. The grids were 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 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 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 +4nT (black) to -4nT (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 Fig 3.

4 SURVEY RESULTS

In the southern half of the survey area a group of archaeological anomalies has been detected, representing a conjoined pair of rectilinear ditched enclosures. The larger, northern enclosure measures approximately 60m north to south and 40m east to west. Its western edge has not been precisely defined: it may lie beneath the modern hedgeline or it may be represented by an indistinct positive anomaly that occurs a little further to the west. The smaller, southern enclosure measures approximately 30m north to south and extends an unknown distance westwards, beyond the limit of the survey area.

Within the larger enclosure there are several positive magnetic anomalies which appear to represent internal partitions and structures. There may also be a circular feature within the southern enclosure, but this is less certain as it is represented by a very weak anomaly. Extending from the north-east and south-east corners of the larger enclosure there are further linear anomalies, which may be associated boundary ditches.

In the west of the survey area, three zones of magnetic disturbance have been detected. One is a tightly defined oval-shaped cluster of intense magnetic readings which corresponds with an infilled pond. The other two zones, which are less well defined, coincide with the approximate location of buildings shown on the 1829 inclosure map. It is possible that each represents a concentration of brick rubble or other structural debris deriving from these buildings.

The survey has detected two positive linear anomalies and two indistinct linear trends which correspond to former field boundaries recorded on the historic mapping of the area. It has also detected some very faint parallel linear trends, extending across the north-western part of the area, which are likely to represent remnant furrows of medieval or early post-medieval ridge and furrow cultivation.

A few intense dipolar anomalies have been detected randomly distributed across the survey area. These will represent pieces of ferrous debris, perhaps of agricultural or domestic origin, scattered throughout the ploughsoil.

5 CONCLUSION

The survey has detected a pair of rectilinear ditched enclosures and associated features located in the southern half of the survey area. The form and scale of the enclosures would be most consistent with an Iron Age or Roman date, although a medieval date cannot be entirely discounted.

In the westernmost part of the survey area, the survey has identified two areas of magnetic disturbance which appear to correspond with the locations of buildings depicted on the 1829 inclosure map of Langford. It is possible that the disturbance represents the presence of brick rubble or other structural debris associated with these buildings.

BIBLIOGRAPHY

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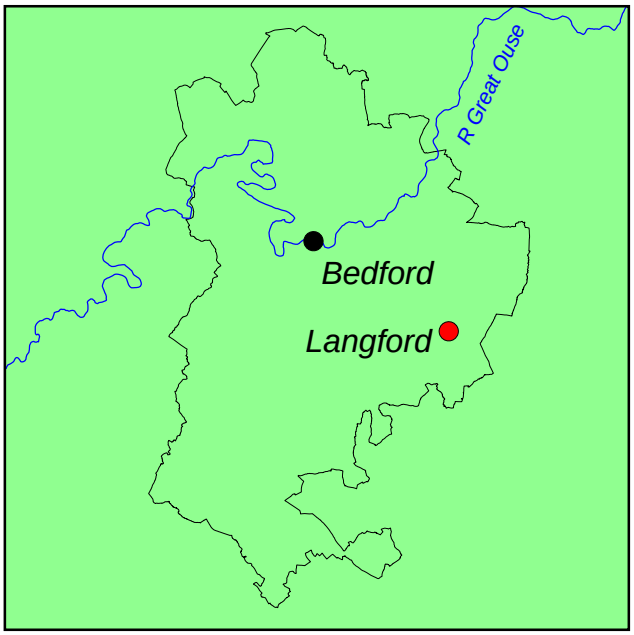
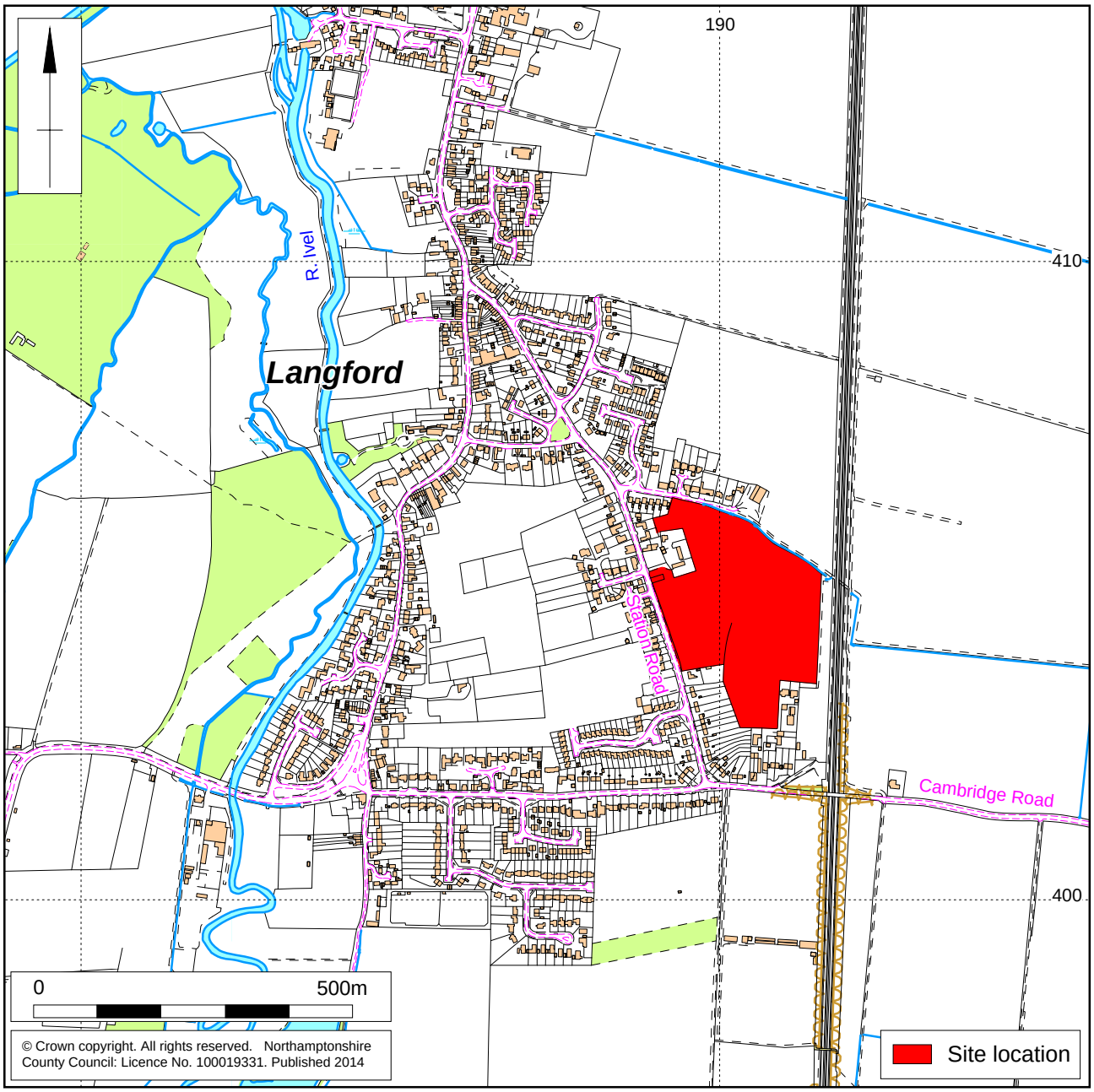
MOLA
11 April 2014



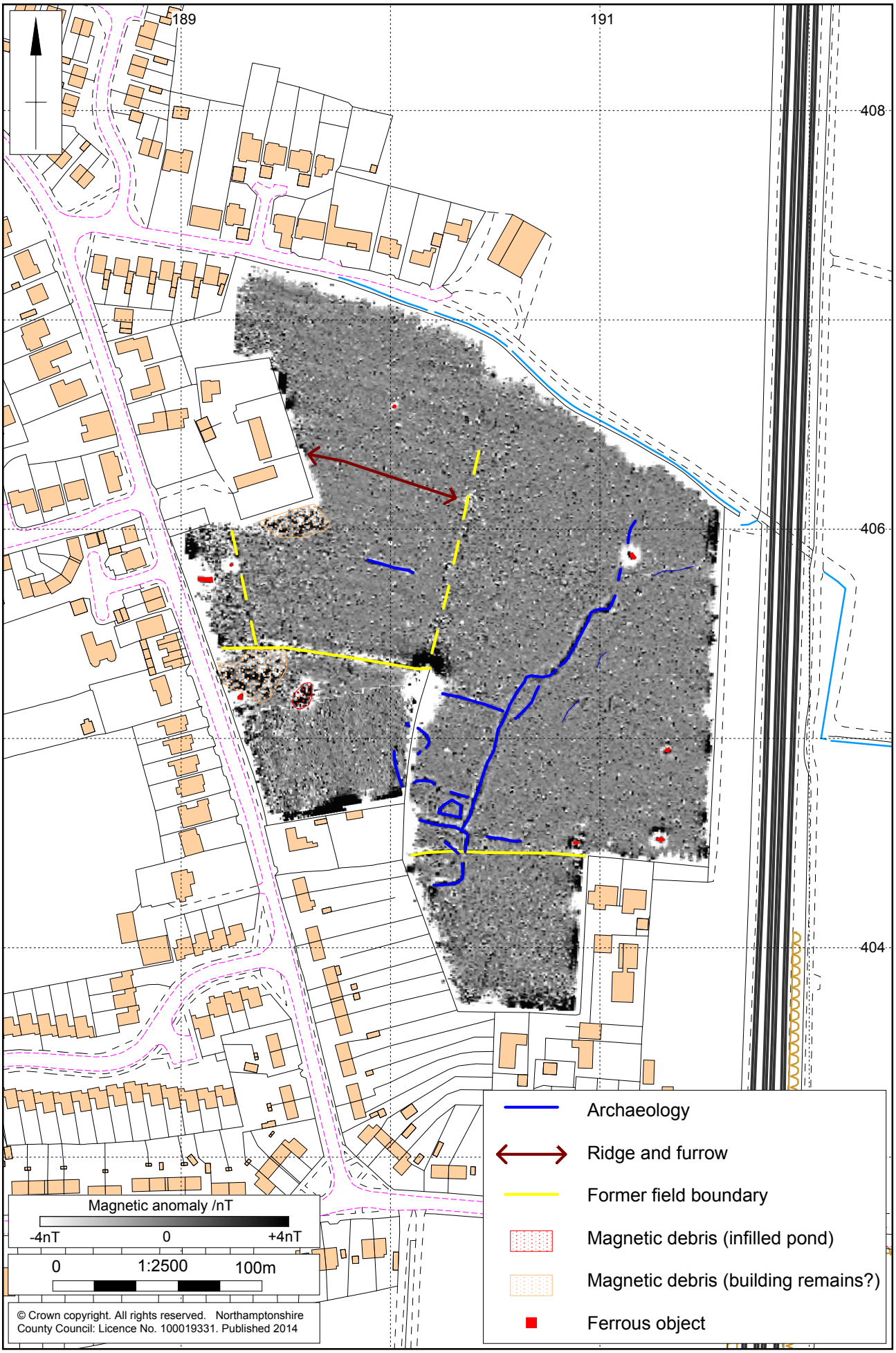


Scale 1:10,000

Site location Fig 1

1:2500 (A4)

Magnetometer survey results Fig 2



1:2500 (A4)

Magnetometer survey interpretation Fig 3

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