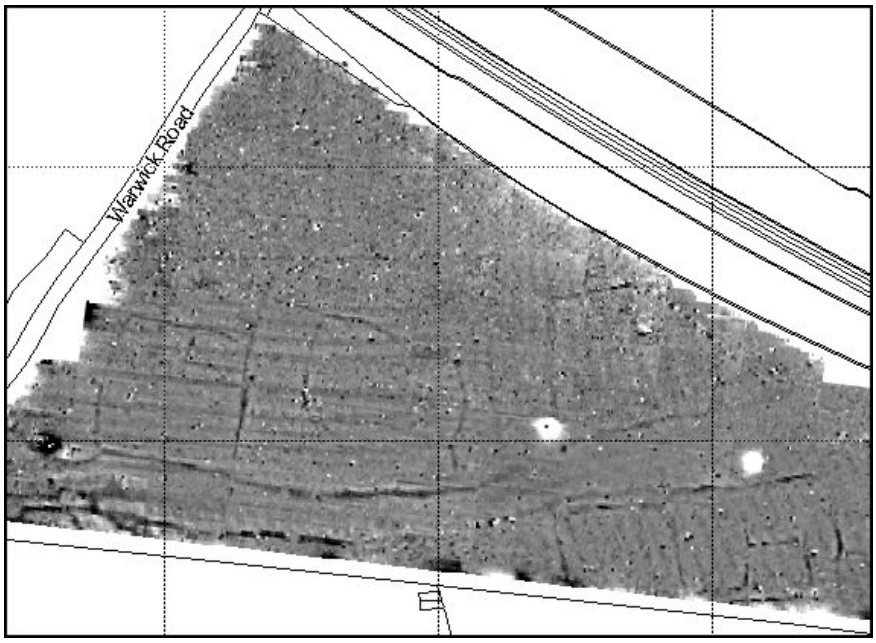

Archaeological geophysical survey of land east of Warwick Road, Kibworth Harcourt Leicestershire February 2015

Report No. 15/34

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Illustrator: Olly Dindol

Project Manager: John Walford
NGR: SP 673 941

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Quality control and sign off**:**

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1	27/02/15	Pat Chapman	Ant Maul	Andy Chapman	Client approval

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OASIS REPORT

PROJECT DETAILS	Oasis No. molanort1-242335	
Project name	Archaeological geophysical survey of land east of Warwick Road, Kibworth Harcourt, Leicestershire.	
Short description	MOLA was commissioned by Manor Oak Homes to carry out a detailed magnetometer survey on land east of Warwick Road, Kibworth Harcourt, Leicestershire. The survey identified a complex of probable Iron Age or Roman archaeological remains, comprising a series of enclosures lying to either side of a track or droveway. These remains are largely overlain by ridge and furrow cultivation of medieval to early post-medieval date.	
Project type	Geophysical survey	
Site status	None	
Previous work	Geophysical survey (HER No. MLE9150)	
Current Land use	Arable	
Future work	To be determined	
Monument type/ period	Iron Age or Roman enclosures and trackway. Medieval to post-medieval ridge and furrow	
Significant finds	None	
PROJECT LOCATION		
County	Leicestershire	
Site address	Warwick Road, Kibworth Harcourt	
Study area	*c* 5.4ha	
OS Easting & Northing	SP 673 941	
Height OD	*c* 130m – 135m aOD	
PROJECT CREATORS		
Organisation	MOLA Northampton	
Project brief originator	William Main, Manor Oak Homes	
Project design originator	MOLA Northampton	
Director/Supervisor	John Walford	
Project Manager	John Walford	
Sponsor or funding body	Manor Oak Homes	
PROJECT DATE		
Start date	18 February 2015	
End date	19 February 2015	
ARCHIVES	Location	Content
Physical	N/A	
Paper	MOLA Northampton	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BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report	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 Warwick Road, Kibworth Harcourt, Leicestershire, February 2015	
Serial title & volume	MOLA Northampton Reports 15/34	
Author(s)	John Walford	
Page numbers	4	
Date	2 March 2015	

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Archaeological geophysical survey of land east of Warwick Road, Kibworth Harcourt, Leicestershire February 2015

ABSTRACT

MOLA was commissioned by Manor Oak Homes to carry out a detailed magnetometer survey on land east of Warwick Road, Kibworth Harcourt, Leicestershire. The survey identified a complex of probable Iron Age or Roman archaeological remains, comprising a series of enclosures lying to either side of a track or droveway. These remains are largely overlain by ridge and furrow cultivation of medieval to early post-medieval date.

1 INTRODUCTION

MOLA was commissioned by Manor Oak Homes to conduct a geophysical survey on *c* 5.4ha of arable land to the north of Warwick Road, Kibworth Harcourt, Leicestershire (NGR SP 673 941; Fig 1). The fieldwork, which comprised a detailed magnetometer survey, was undertaken on 18 - 19 February 2015.

The client requested that the work be undertaken on a private and confidential basis, and that there be no contact with Leicestershire County Council. As a result, there was no curatorial brief for the project and no Leicestershire HER event number has yet been issued.

2 BACKGROUND

2.1 Location and geology

The survey area consists of an almost triangular arable field located on the western edge of Kibworth Harcourt. It is bounded to the west by Warwick Road, to the north by a railway cutting and to the south by pasture fields. At the time of the survey it was under a very low and patchy crop of oilseed rape with some re-growth of potatoes from a previous crop.

The survey area lies across a watershed between the headwaters of two minor streams. Its western half is relatively level at *c* 124m aOD, but its eastern half slopes down to a height of *c* 117m aOD. The far eastern end of the field was flooded at the time of the survey, due to a surface flow of water spilling over from a ditch to the south.

The geology of the survey area is mapped as Charmouth Mudstone overlain by Boulder Clay (BGS 2015).

2.2 Historical and archaeological background

A series of geophysical surveys have previously been undertaken in the fields on the western side of Kibworth Harcourt (Fig 1). These are noted with brief details on the Leicester HER, under event numbers MLE9148 to MLE9151. Survey 9150 covered a small sample area within the present survey area, survey 9148 covered a substantial part of the field to the south-west, and survey 9151 covered a sample area to the north, on the opposite side of the railway line. The fourth survey, 9149, covered a small area further to the south-west, near the junction of Warwick and Fleckney Roads (Fig 1). The brief HER descriptions indicate that possible archaeological features were identified by all four surveys.

MOLA Northampton undertook archaeological works in Kibworth Harcourt previously in 2014. A programme of geophysical survey and trial trench excavation at the junction of Wistow Road with the A6 proved to be minimally informative, identifying nothing other than ridge and furrow (Walford and Meadows 2014, Egan 2014).

An aerial photograph of the survey area (Plate 1) shows two adjacent soil marks, one L-shaped and the latter curving, and also shows a set of ridge and furrow earthworks in the field immediately to the south-east. The curving soil mark coincides with a low, broad bank, resembling a plough headland, which is very evident at ground level (*pers obs*).

Aerial photograph of the survey area (Google Earth, dated 27/09/2011) Plate 1

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 English Heritage and by the Chartered Institute for Archaeologists (EH 2008; CIfA 2011).

The survey data was 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 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 Figure 3. A separate plot of the unprocessed data is presented in Figure 4.

4 SURVEY RESULTS

The survey has detected an arrangement of weakly positive linear and curvilinear anomalies which represent the remains of a track or droveway flanked on both sides by rectilinear ditched enclosures. These anomalies are crossed by other sets of parallel linear anomalies representing traces of medieval to early post-medieval ridge and furrow cultivation. The overall extent of the archaeological remains, excluding the ridge and furrow, is estimated to be around 2.5ha

The line of the track is marked by a pair of almost parallel linear anomalies, spaced *c* 20m apart, which run alongside the southern edge of the field then turn to cross the field on a south-west to north-east alignment. These anomalies represent the ditches which would have bounded the track to either side.

To the north of the trackway, the survey has detected anomalies from three separate ditched enclosures, all more or less square and each around 0.3ha in extent. The western enclosure appears to have a partition in its north-eastern corner, and the central enclosure contains a small C-shaped feature which could potentially mark the site of a roundhouse. A conjoined pair of smaller rectilinear enclosures, also with internal partitions, has been detected to the south of the trackway. The date of these enclosures cannot be established with complete confidence, but their morphology and layout suggests an Iron Age or Roman date to be most likely.

The ridge and furrow anomalies relate to parts of three separate furlongs within the medieval open fields of Kibworth Harcourt. The southern and eastern part of the survey area lie across a furlong with furrows aligned north to south, and much of the south-western quarter of the area lies across a furlong with furrows aligned from east to west. Further furrows aligned north to south belong to the third furlong in the northern part of the survey area. These three furlongs are defined by headlands which correlate to the

soilmarks in Plate 1 and appear in the data as weak linear magnetic anomalies. Notably, one of these headlands appears to preserve the line of the earlier trackway.

Two weak linear anomalies of alternating magnetic polarity occur close to the northern edge of the field. They are diagnostic of modern field drains or other small pipes. The survey has also detected a number of intense dipoles and halos arising from fences, parked vehicles and various small pieces of ferrous debris in the ploughsoil. The four conspicuous negative halos in the eastern half of the field can be attributed to modern bird-scarers (*pers obs*).

5 CONCLUSION

The magnetometer survey has detected a complex of archaeological remains, approximately 2.5ha in extent, comprising a track or droveway flanked on both sides by rectilinear ditched enclosures. These are thought likely to date from the Iron Age or Roman period. Ridge and furrow of medieval to early post-medieval date has also been detected, and clearly overlies the earlier archaeological remains.

It is noteworthy that the line of the droveway appears to have influenced the layout of the medieval fields, being fossilized as boundary between two furlongs of ridge and furrow. A low bank which still survives along the same line (*pers obs*) presumably represents the residual headland associated with this ridge and furrow.

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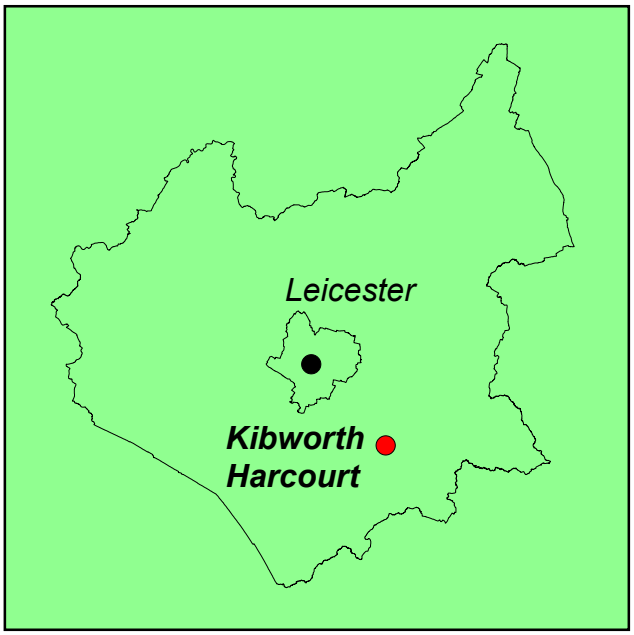
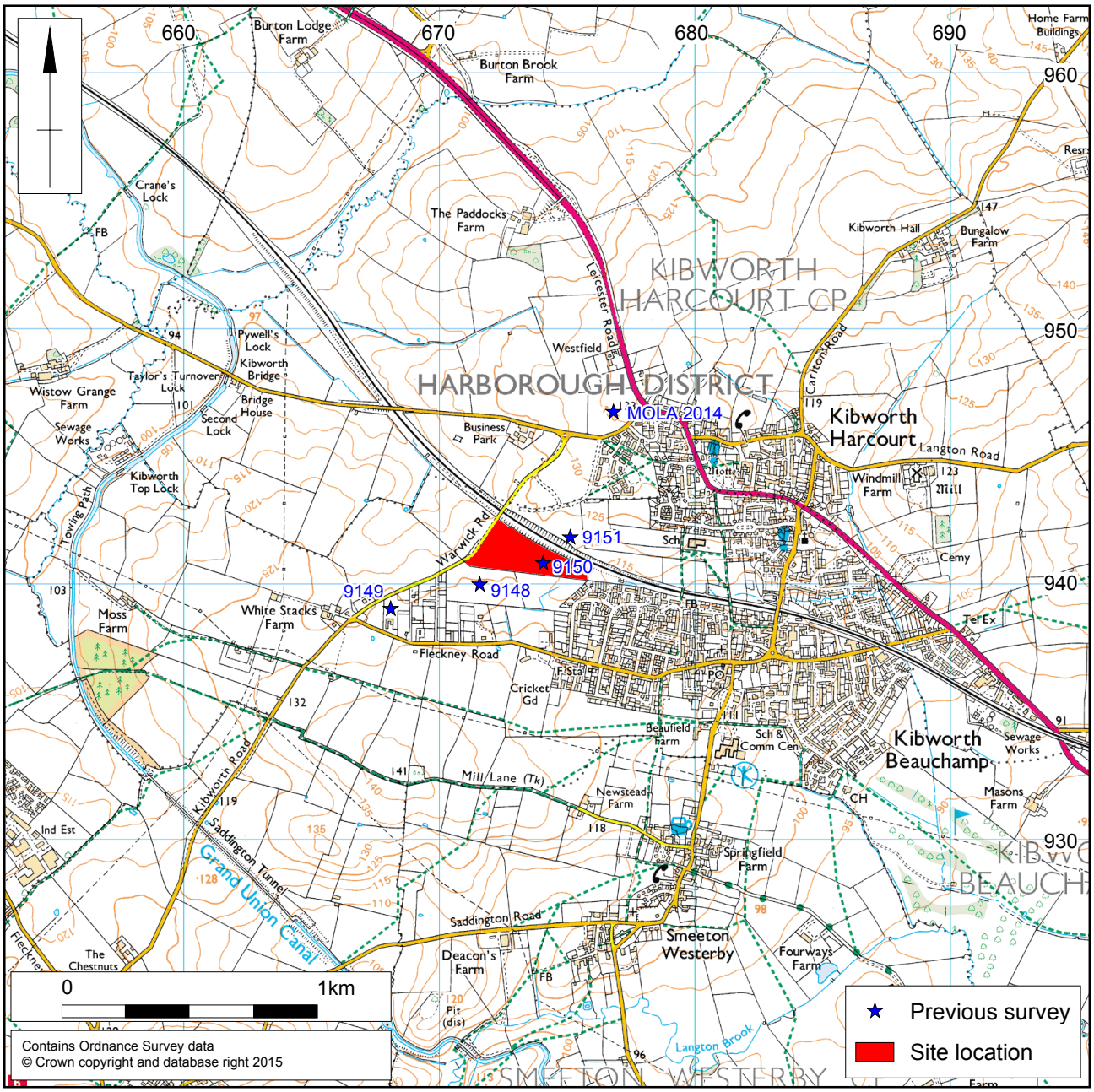
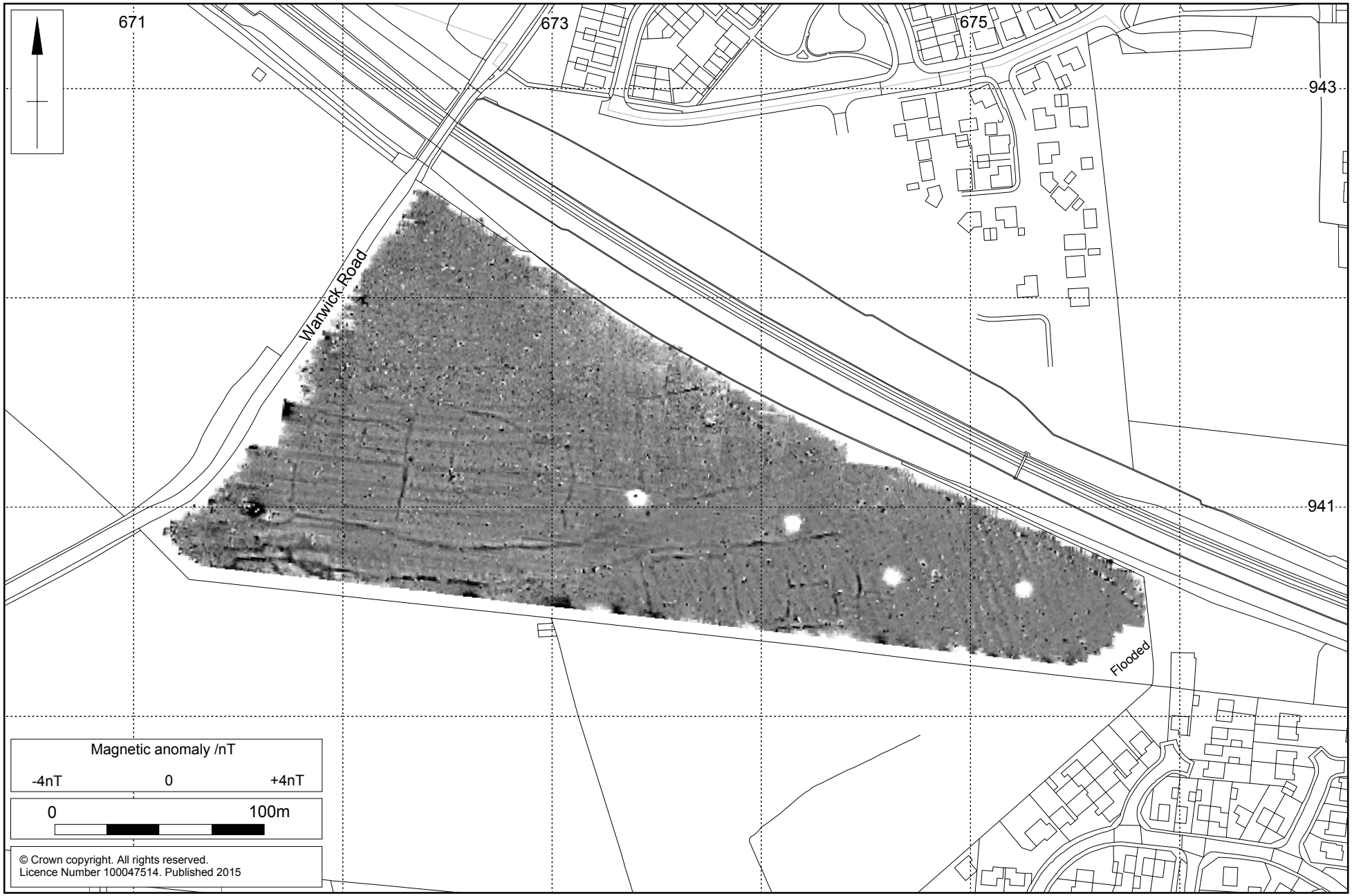
MOLA
2 March 2015





Scale 1:25,000

Site location Fig 1



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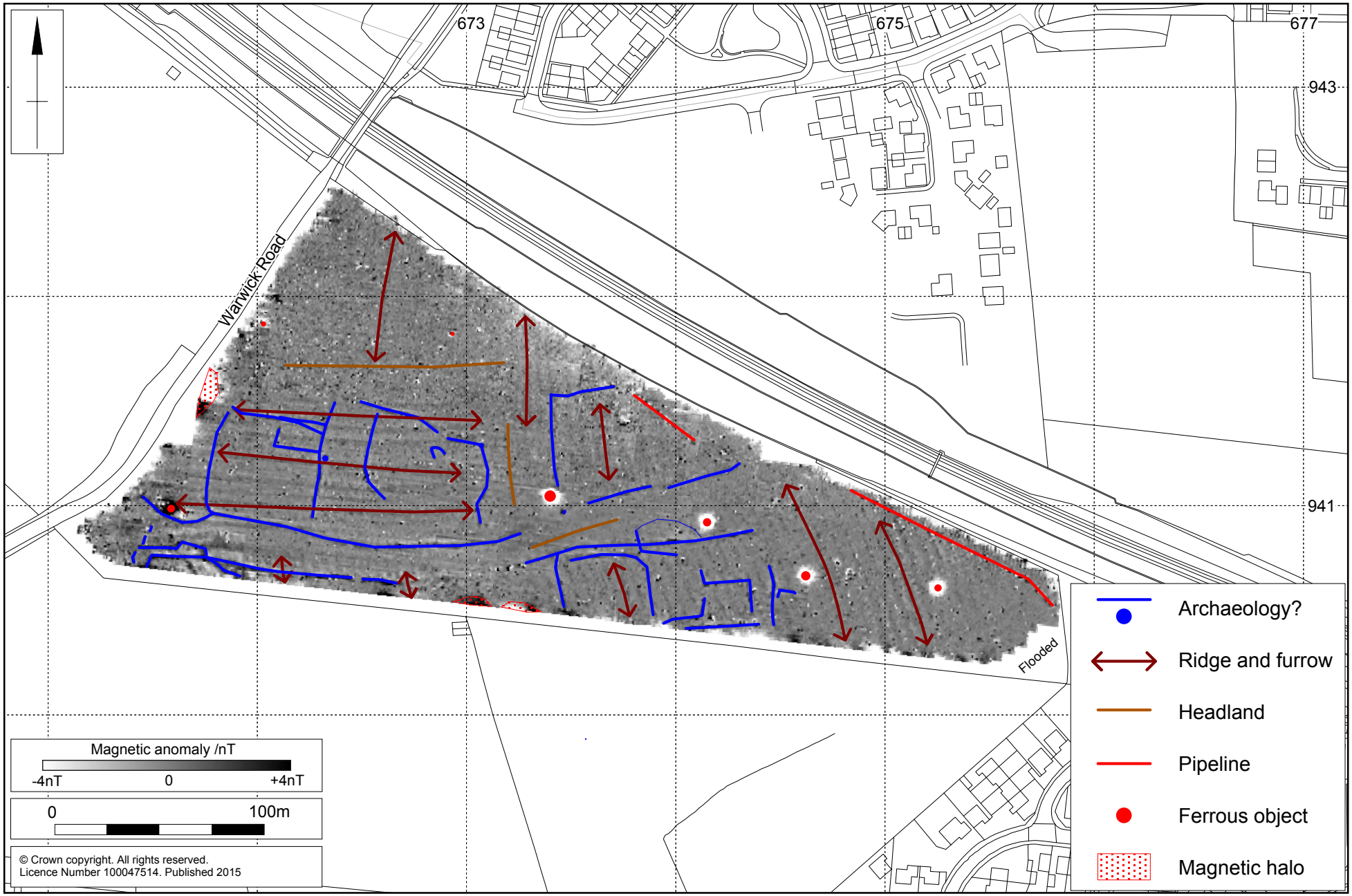
Magnetometer survey results Fig 2



Scale 1:2500

Magnetometer survey interpretation Fig 3

Scale 1:2500

Unprocessed magnetometer survey data Fig 4

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