

**Archaeological geophysical survey of land south of
Willow Road, Great Horwood
Buckinghamshire
November 2014**

Report No. 14/257

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Illustrator: John Walford



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NGR: SP 773 309

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OASIS REPORT

PROJECT DETAILS		Oasis No. molanort1-198038
Project name	Archaeological geophysical survey of land south of Willow Road, Great Horwood, Buckinghamshire	
Short description	MOLA Northampton was commissioned to carry out a detailed magnetometer survey of land south of Willow Road, Great Horwood, Buckinghamshire. The survey identified medieval to early post-medieval ridge and furrow, modern pipelines and a modern track.	
Project type	Geophysical survey	
Site status	None	
Previous work	Desk-based assessment (Muldowney 2014)	
Current Land use	Pasture	
Future work	Unknown	
Monument type/ period	Medieval ridge and furrow.	
Significant finds	None	
PROJECT LOCATION		
County	Buckinghamshire	
Site address	Willow Road, Great Horwood	
Study area	c 2 ha	
OS Easting & Northing	SP 773 309	
Height OD	c 110-125m aOD	
PROJECT CREATORS		
Organisation	MOLA Northampton	
Project brief originator	Eliza Algassar, Buckinghamshire County Council	
Project design originator	MOLA Northampton	
Director/Supervisor	Adam Meadows	
Project Managers	Liz Muldowney and John Walford	
Sponsor or funding body	Talbot Homes	
PROJECT DATE		
Start date	6th November 2014	
End date	6th November 2014	
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BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report	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 south of Willow Road, Great Horwood, Buckinghamshire, November 2014	
Serial title & volume	MOLA Northampton Reports 14/257	
Author(s)	John Walford and Adam Meadows	
Page numbers	3	
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ABSTRACT

MOLA Northampton was commissioned to carry out a detailed magnetometer survey of land south of Willow Road, Great Horwood, Buckinghamshire. The survey identified medieval to early post-medieval ridge and furrow, modern pipelines and a modern track.

1 INTRODUCTION

MOLA Northampton was commissioned by Talbot Homes to undertake a detailed magnetometer survey on c 2ha of land south of Willow Road, Great Horwood, Buckinghamshire (NGR SP 773 309; Fig 1). The purpose of the survey was to contribute towards an assessment of the archaeological impacts of a proposed development scheme. The fieldwork was undertaken on 6 November 2014.

2 BACKGROUND

2.1 Location and geology

The proposed development area lies at the end of Willow Road, a short cul-de-sac which extends south from Little Horwood Road. It encompasses a sub-rectangular pasture field, c 1.7ha in extent, together with a 0.5ha piece of open ground and a small area of gardens. The open ground, which lies alongside Willow Road to north-east of the main field, is under short, mown grass and shows signs of recent levelling. The gardens were not suitable for survey and will not be discussed further in this report.

The main field has a considerable slope to it, running down from 125m aOD in the north to 110m aOD in the south. The open ground is flatter, at around 125m aOD. The geology of both areas is mapped as Stewartby Member Mudstone (formerly termed 'Middle Oxford Clay') overlain by glacial till (BGS 2014).

2.2 Historical and archaeological background

An archaeological desk-based assessment (Muldowney 2014) identified no known archaeological remains other than ridge and furrow within boundaries of the survey area. This ridge and furrow is probably medieval in origin, and survives as upstanding earthworks.

The survey area lies just outside the historic core of Great Horwood, which contains the 13th-century church of St James and a large number of post-medieval listed buildings. However, the presence of ridge and furrow suggests that the survey area itself was arable land in the medieval and early post-medieval periods and was not settled. Similarly, historic maps from the 18th century onwards show the survey area as undeveloped agricultural land.

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).

An independent network of 30m grid squares was established within each of the fields 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 RTK GPS. 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 (EH 2008; IfA 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 greyscale plots at a range of +4nT (black) to -4nT (white). These have been scaled, rotated and resampled (georectified) for display against the Ordnance Survey base mapping (Fig 2). An interpretative overlay is presented in Figures 3, and plots of the unprocessed survey data are presented in Figure 4.

4 SURVEY RESULTS

4.1 Archaeology

The survey data from the main, southern field contains sets of parallel linear anomalies which correspond with the surviving ridge and furrow earthworks. One set, aligned east to west, occupy the south-eastern part of the field. They have a stepped junction with a second set, aligned from north to south through the western half of the field. A third set, less clearly defined, occupy the northern end of the field and are aligned almost parallel to its northern boundary.

The data from the small area of open ground is bisected by a positive linear anomaly. This is aligned in the same direction as the furrows to the south, and possibly represents another plough furrow. Alternative interpretations, including a ditch, a drain or a modern service trench, are also possible.

4.2 Modern features

The survey has detected an intensely positive linear anomaly aligned from north-east to south-west across the northern end of the main field. This represents a modern pipeline. Immediately to its south there is a parallel band of magnetic disturbance which represents the remnant hardcore from a former track which is visible on Google Earth aerial photographic coverage dated 1945. To the north, in the corner of the field, there is another area of magnetic noise which probably represents a deposit of hardcore, ferrous scrap and other modern rubbish.

An indistinct linear anomaly is aligned almost north to south through the centre of the main field. It has three evenly-spaced dipolar anomalies along its length, and this suggests that it represents a non-magnetic pipe or cable with ferrous joints or other

metal fittings. A weak negative linear anomaly extending north-east from the central ferrous anomaly probably represents a branch of the same feature. The position of these features coincides with a slight scar in the field surface, suggestive of a backfilled trench (*pers obs*).

The data from the small area of open ground exhibits intense magnetic disturbance. Some of this may be due to a levelling deposit of made ground, but other causes include magnetic halos from a telegraph pole on its southern edge and a concreted car park encroaching on its northern side.

5 CONCLUSION

The survey has detected no archaeological remains other than the medieval to early post-medieval ridge and furrow which survives as upstanding earthworks in the main part of the survey area. All the other features detected, including pipes, a trackway and possible made ground, are clearly modern in origin.

BIBLIOGRAPHY

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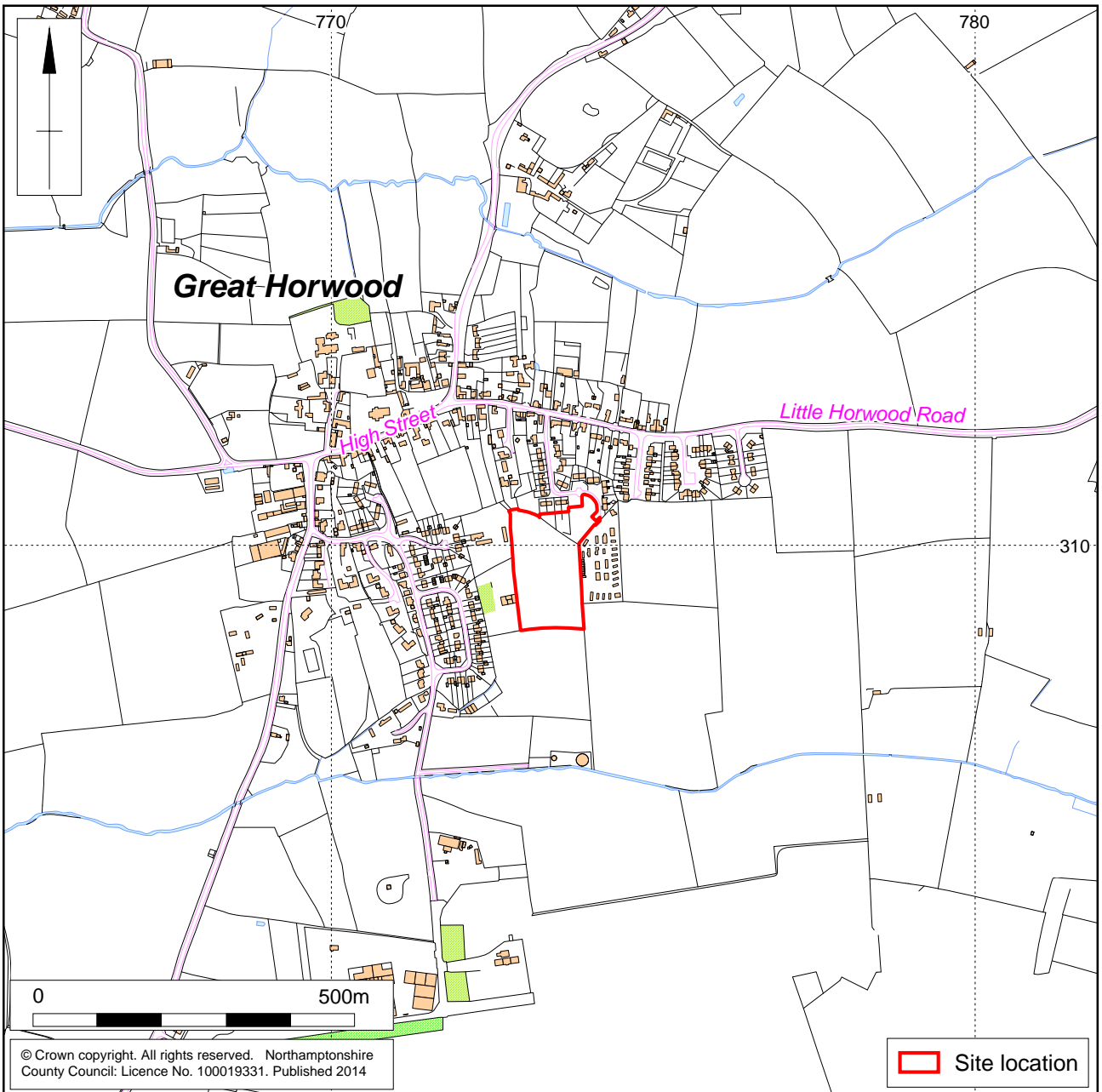
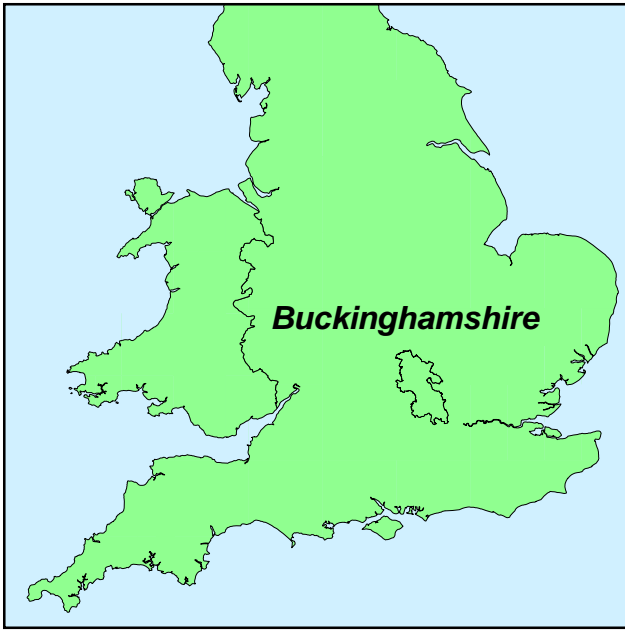
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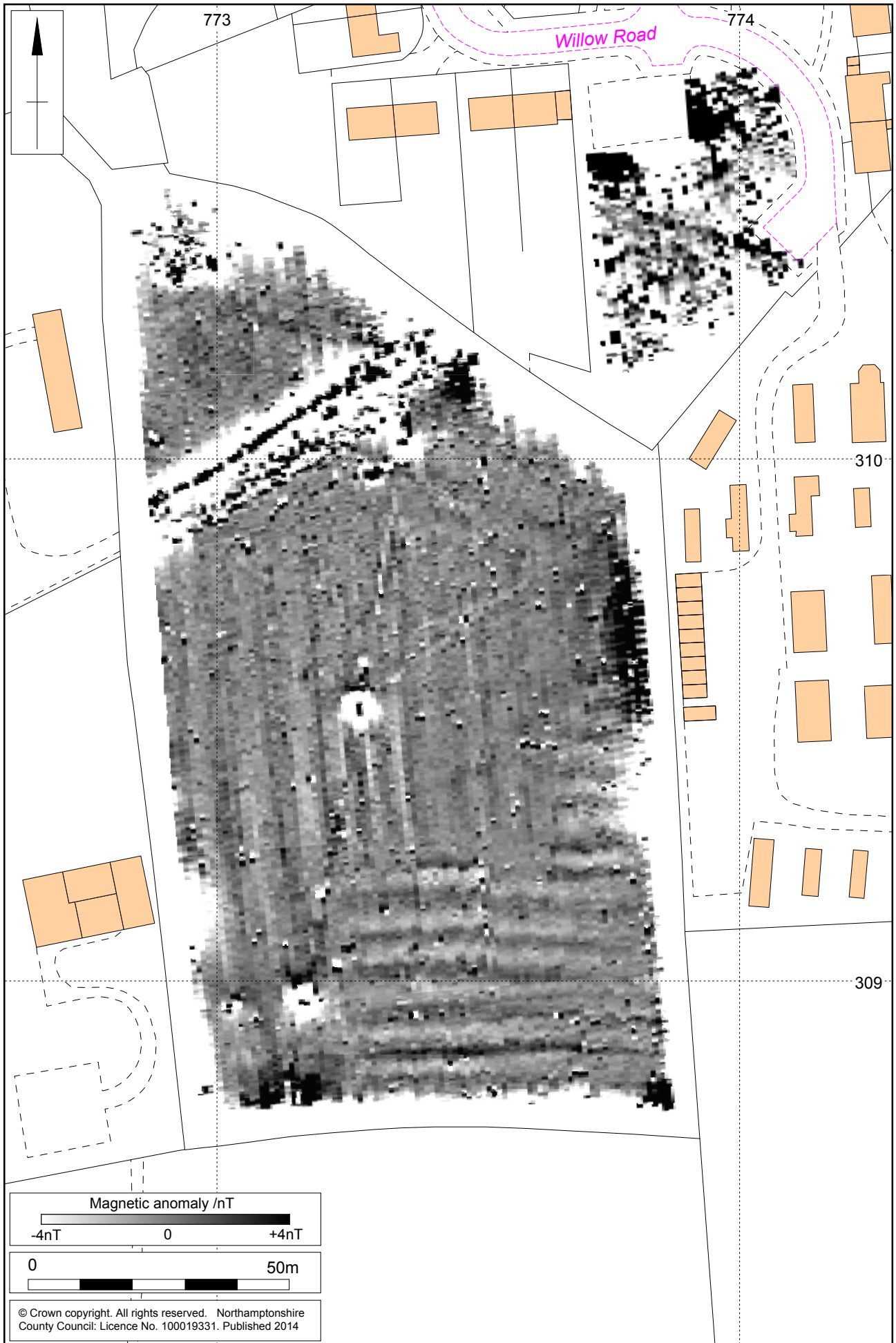
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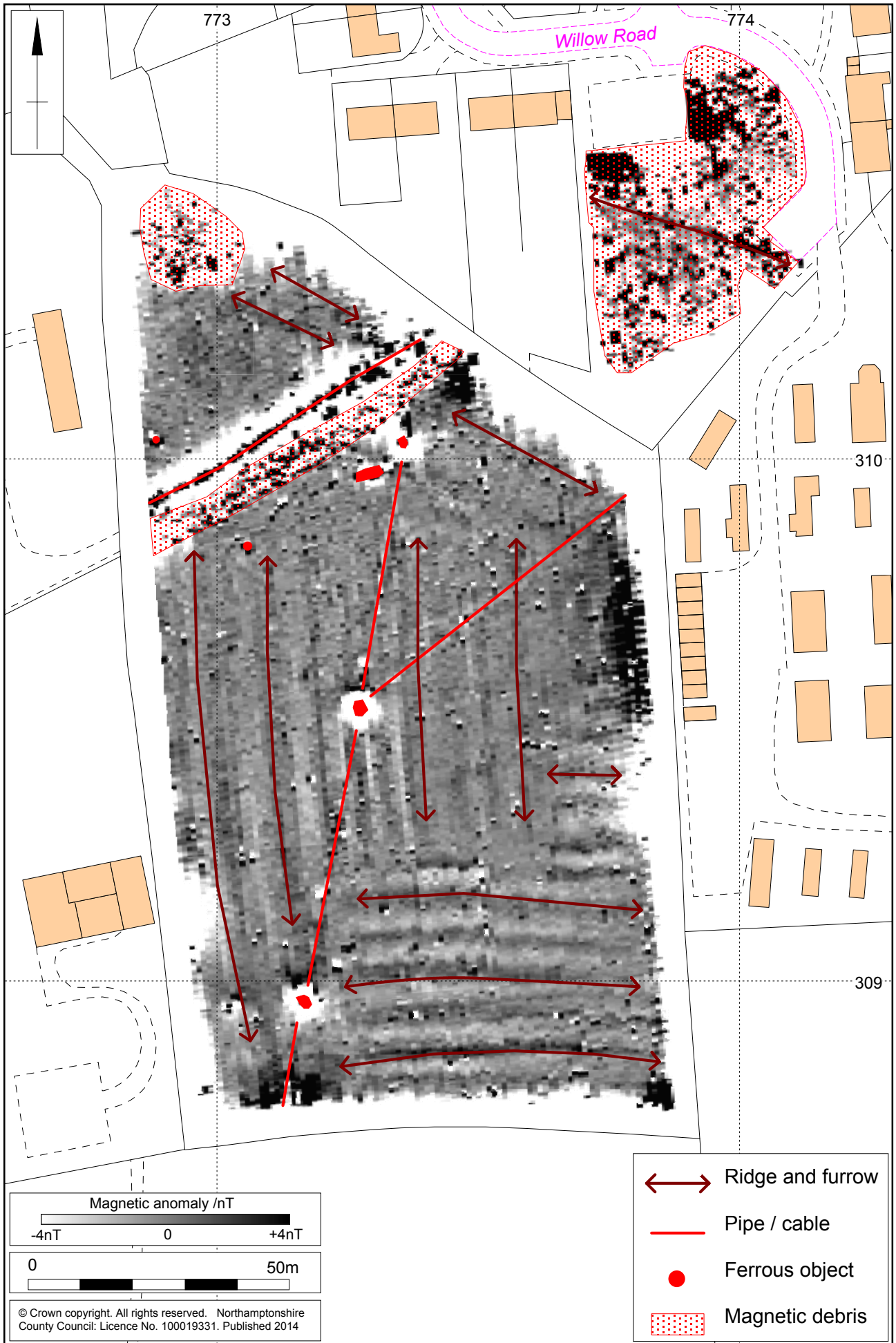
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Scale 1:10,000

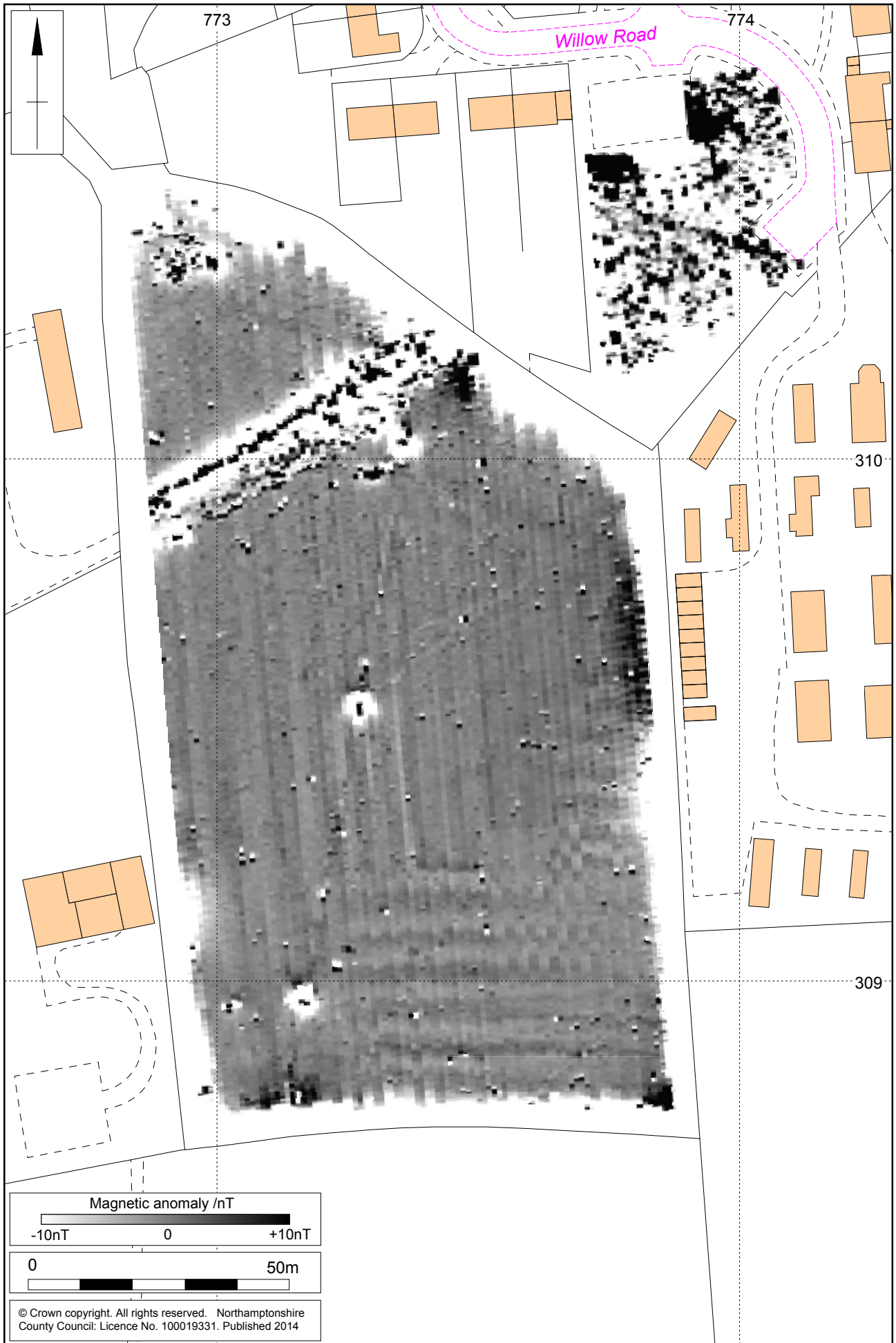
Site Location Fig 1





1:1000

Magnetometer survey interpretation Fig 3



1:1000

Unprocessed magnetometer data Fig 4

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