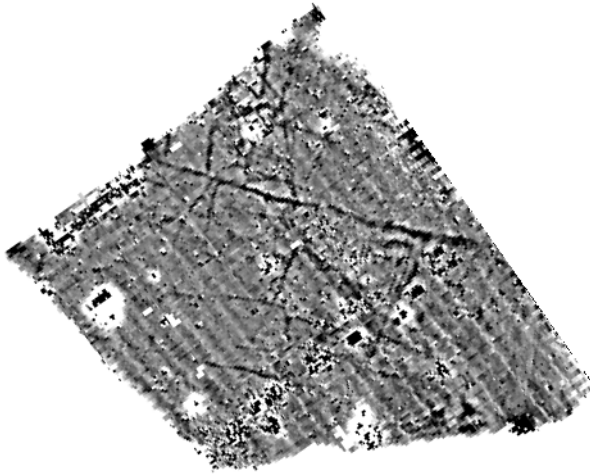




Northamptonshire Archaeology

Archaeological geophysical survey of land
at Gaulby Road, Billesdon, Leicestershire
October 2012



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Report 12/179
October 2012



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QUALITY CONTROL

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Verified by	Mark Holmes	<i>MH</i>	24/10/12
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OASIS REPORT FORM**OASIS No 136296**

PROJECT DETAILS		
Project name	Archaeological geophysical survey of land at Gaulby Road, Billesdon, Leicestershire	
Short description	Northamptonshire Archaeology was commissioned to carry out a detailed magnetometer survey of a proposed development site at Gaulby Road, Billesdon, Leicestershire. The survey identified an area of archaeological remains, believed to represent part of a multi-phased settlement of Iron Age or Romano-British date.	
Project type	Geophysical survey	
Site status	None	
Previous work	None	
Current Land use	Pasture	
Future work	Unknown	
Monument type/ period	Iron Age or Romano-British settlement	
Significant finds		
PROJECT LOCATION		
County	Leicestershire	
Site address	Gaulby Road, Billesdon, Leicestershire	
Study area	c 5.2 ha	
OS grid reference	SK 720 022	
Height OD	c 170-185m aOD	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology (NA)	
Project brief originator	CgMs Consulting	
Project Design originator	NA	
Director/Supervisor	John Walford	
Project Manager	Mark Holmes	
Sponsor or funding body	David Wilson Homes	
PROJECT DATE		
Start date	4 October 2012	
End date	25 October 2012	
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BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report	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 of land at Gaulby Road, Billesdon, Leicestershire	
Serial title & volume	Northamptonshire Archaeology Reports 12/179	
Author(s)	John Walford	
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ARCHAEOLOGICAL GEOPHYSICAL SURVEY OF LAND AT GAULBY ROAD, BILLEDON, LEICESTERSHIRE OCTOBER 2012

ABSTRACT

Northamptonshire Archaeology was commissioned to carry out a detailed magnetometer survey of a proposed development site at Gaulby Road, Billesdon, Leicestershire. The survey identified an area of archaeological remains, believed to represent part of a settlement of Iron Age or Romano-British date.

1 INTRODUCTION

Northamptonshire Archaeology (NA) was commissioned by CgMs Consulting, on behalf of David Wilson Homes, to conduct an archaeological geophysical survey in advance of a proposed development at Gaulby Road, Billesdon, Leicestershire (NGR SK 720 022; Fig 1). The purpose of the survey was to provide information on the likely archaeological impact of the development.

Fieldwork was undertaken from 4 to 5 October 2012, and comprised the detailed magnetometer survey of c 5.2 ha of land.

2 TOPOGRAPHY AND GEOLOGY

The proposed development area comprises two pasture fields and a small disused compound which together form a contiguous block of land to the south of Gaulby Road, and to the south-west of Billesdon village. The fields are bounded to the north and east by modern housing and to the west by a council depot. At the time of the survey, the fields were in a somewhat rough condition, with several dense patches of nettles and thistles. The compound was derelict and not suitable for geophysical survey.

The two pasture fields occupy a south-facing slope at a height of c 170m to 185m aOD. The southern field contains a water-filled hollow, reportedly a spring, and is crossed by a small canalised stream which flows within a slightly boggy floodplain (Fig 2).

The geology of the area is mapped as mudstones and siltstones of the Lias Group (Dyrham and Charmouth Formations), with overlying glacial till, sands and gravels (BGS 2012).

3 ARCHAEOLOGICAL BACKGROUND

A desk-based assessment of the proposed development area concluded that, whilst it contained no known archaeological remains, there was a slight potential for unknown remains of Iron Age or Romano-British date to be present (Dawson 2012). The assessment also noted that a Second World War POW camp had formerly stood to the west of the area, in the area now occupied by the council depot.

Some minor earthworks were observed during the course of the present survey (Fig 2). Traces of ridge and furrow were present, but these were slight, and partially obscured by vegetation.

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).

An independent system of 30m grids was established within each of the fields to be surveyed. The grids were established with a tape measure and optical square and were tied in to the Ordnance Survey National Grid by measurement to the surrounding field boundaries. 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. Striping, caused by slight mismatches in sensor balance, was removed using the 'Zero Mean Traverse' function and destaggering of the data was performed as necessary.

The processed data is presented in this report in the form of grey-tone plots, at a scale of +/- 4nT black/white. These have been scaled, rotated and resampled (georectified) for display against the Ordnance Survey base mapping (Fig 3). An interpretative overlay has been also been produced (Fig 4).

5 SURVEY RESULTS

5.1 Northern field

A mass of intersecting positive linear anomalies extends across the greater part of this field, demonstrating the presence of a dense concentration of intercutting boundary and enclosure ditches. Their form indicates that they almost certainly represent part of a multi-phased settlement of the Iron Age or Romano-British period. At least one of the phases seems to have taken the form of a so-called 'ladder' settlement, as many of the features lie conformably within a west-north-west to east-south-east aligned strip, about 70m wide, which is bounded by two parallel ditches.

The appearance of the archaeological anomalies is slightly confused by an overlying set of parallel negative linear anomalies, aligned from north-west to south east. These indicate the remains of ridge and furrow cultivation, which is likely to have originated in the medieval period.

Further complexity is provided by a broad and ill-defined swathe of magnetic noise which extends north-eastwards across the field from its south-western corner. This noise is associated with several larger and more distinct positive anomalies, which have typical intensities of c 10nT – 50nT. These would be consistent with areas of

burning, and their overall arrangement might suggest a series of bonfires having taken place along the line of a former hedge.

Near the north-western corner of the field there is another area of magnetic noise, forming a fairly well defined linear feature. It may be that this represents the hardcore from a temporary track or hardstanding, associated either with the adjacent POW camp or with the construction of the houses along Gaulby Road. Slightly to its south there is a large discrete positive anomaly which coincides with a dense patch of nettles and which may indicate the site of a recent bonfire.

A broad negative anomaly cuts diagonally across the south-eastern corner of the field, and marks the line of the modern footpath.

Several intense dipolar anomalies, representing pieces of ferrous debris, occur at random across the field. There are also some ferrous halos around the margins of the field, as a result of adjacent fences and buildings.

5.2 Southern field

There are several anomalies of potential archaeological significance in the southern half of this field. Near to the eastern corner there is a positive curvilinear anomaly which seems to represent part of an enclosure ditch of unknown date. To its south-west there are some very slight and fragmentary curvilinear anomalies which, although not certainly archaeological, might represent roundhouse gullies. Further to the west is a more conspicuous penannular anomaly which may also represent a roundhouse.

The possible enclosure ditch anomaly becomes increasingly weak downslope, as it approaches an area of damp and low-lying ground. This weakening would be consistent with an increasing depth of colluvial or alluvial overburden, or with an increased degree of leaching resulting in a magnetic depletion of the ditch fill.

Two sets of parallel linear anomalies, representing two different directions of ridge and furrow, occur in the southern and western parts of the field. There appears to be some overlap between the two sets, which would suggest that more than one phase of ploughing is represented. At the western edge of the field, the furrows terminate against a perpendicular linear anomaly, which coincides with the earthwork bank or headland shown in Figure 2.

The public footpath across the field is represented by a fragmentary linear anomaly of variable magnetic character. Close to where it crosses the ditch in the south of the field, there is a conspicuous dipolar anomaly which probably represents a large piece of debris within the make-up of the path.

Towards the north-eastern corner of the field, and immediately next to the end of Weare Close, there is a small area of magnetic noise. This perhaps represents a spread of hardcore or other debris deposited during the construction of the adjacent housing.

To the south of the modern ditch, there are a couple of small patches of weak magnetic noise. These are of uncertain origin, but perhaps relate to some form of geological or pedological feature.

6 CONCLUSION

The survey has identified large, multi-phased settlement of probable Iron Age to Romano-British date which occupies much of the northern half of the proposed development area. Further archaeological remains occur to the south, where there is a curvilinear ditch, perhaps forming part of an enclosure, and also a group of possible roundhouses.

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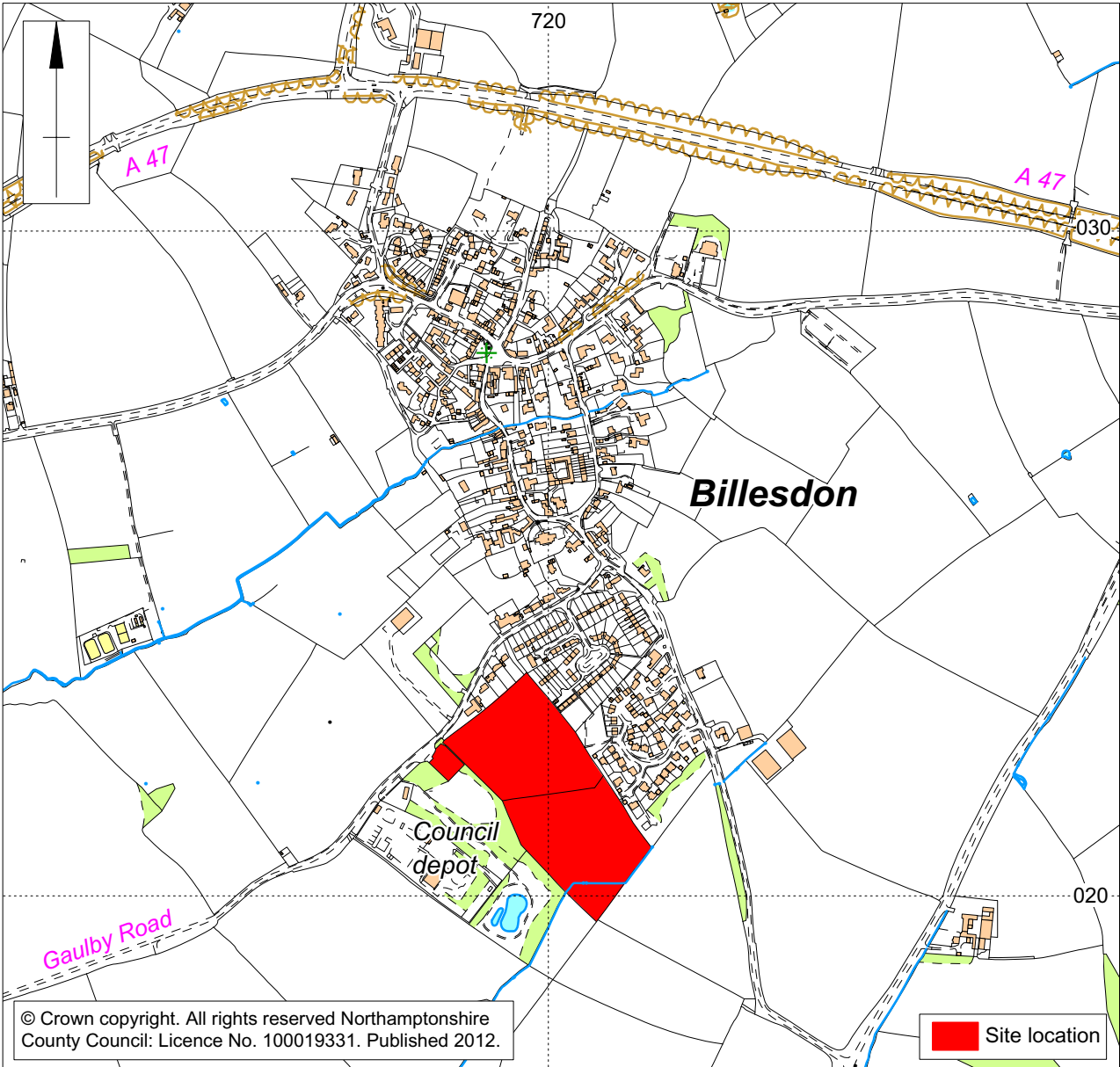
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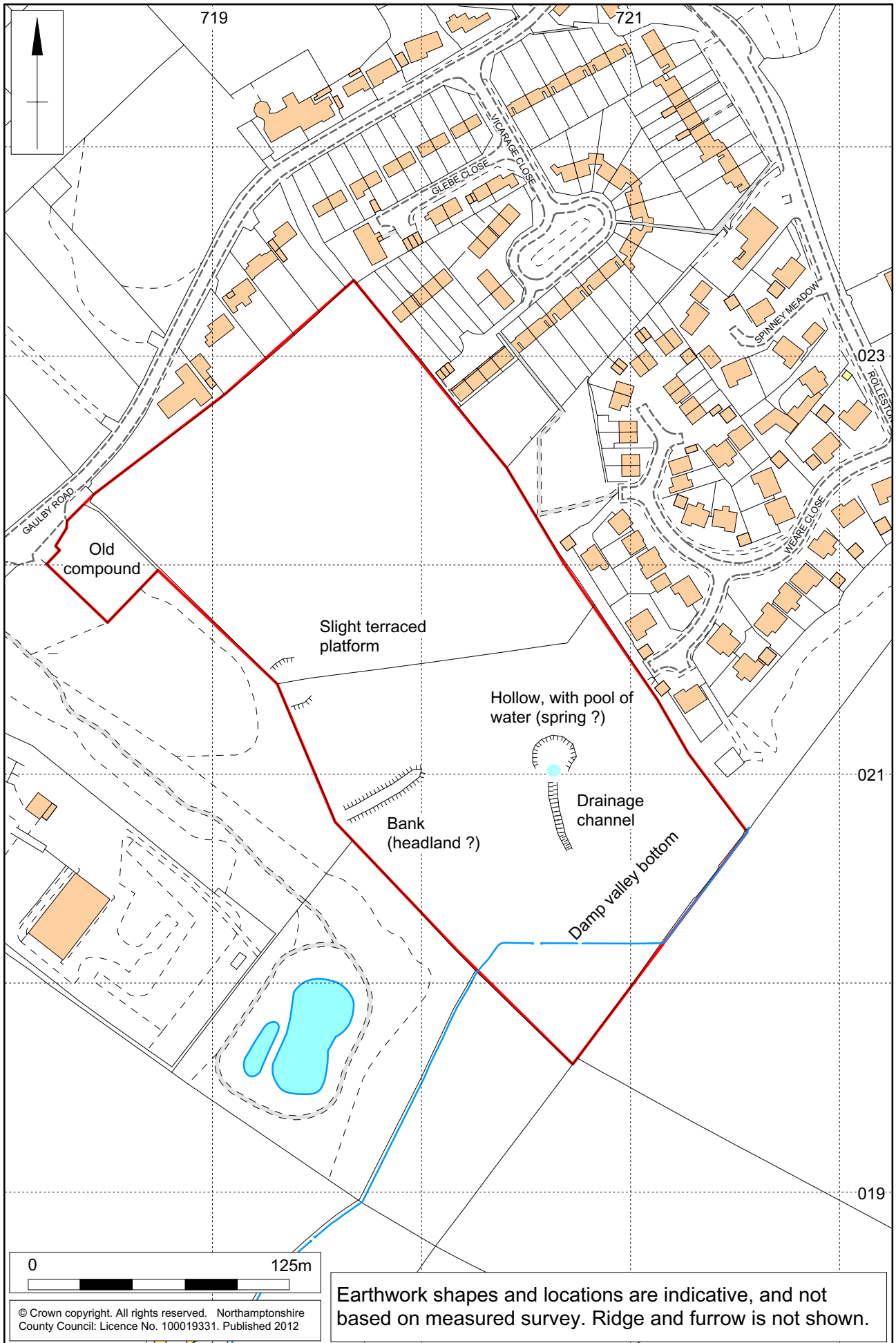
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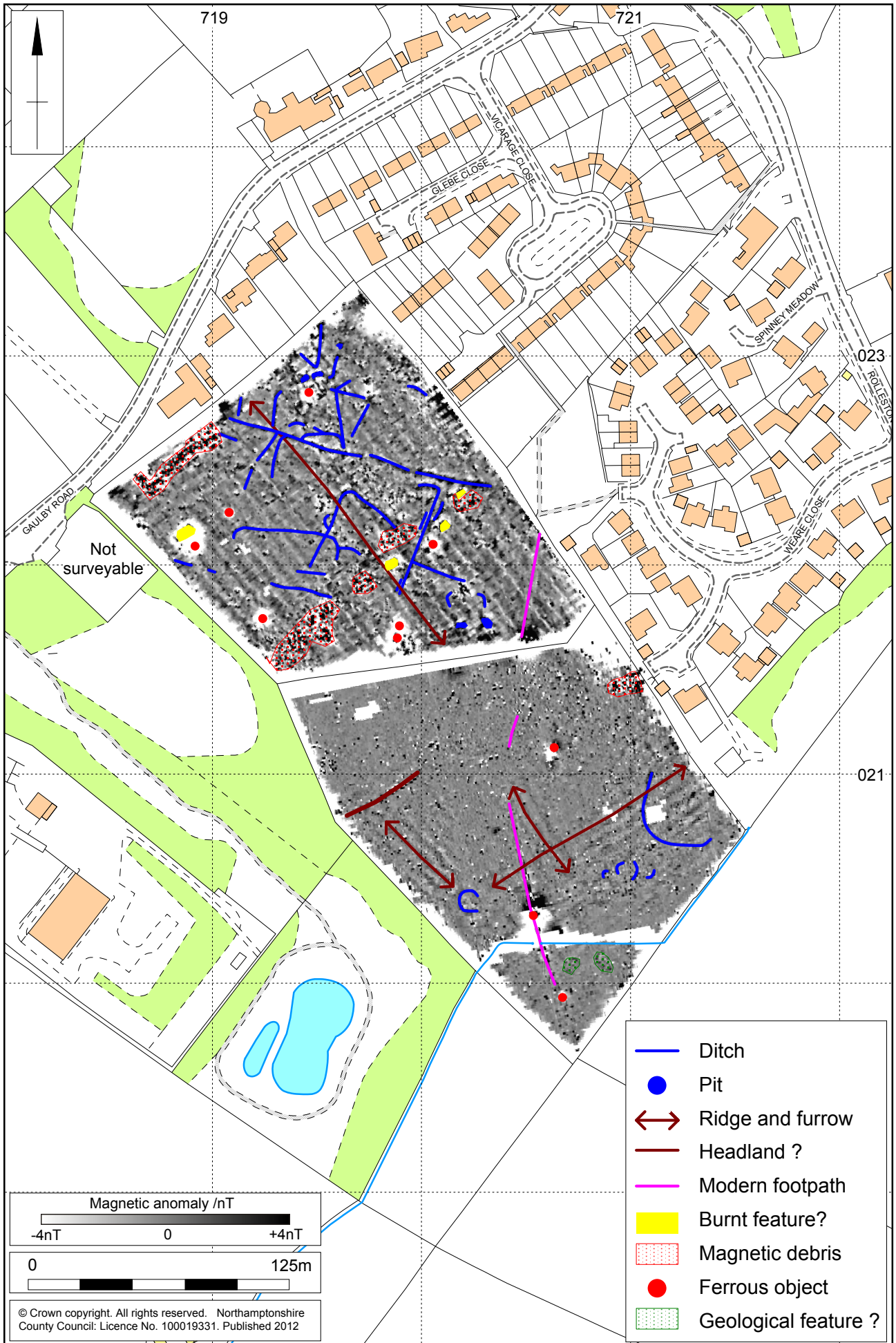
Site location Fig 1





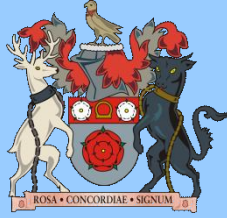
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Magnetometer survey results Fig 3



1:2500

Magnetometer survey interpretation Fig 4



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