

**Archaeological geophysical survey north of
Moulton Lane, Boughton
Northamptonshire
March 2015**

Report No. 15/44

Author: John Walford

Illustrator: Olly Dindol



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OASIS REPORT

PROJECT DETAILS		Oasis No. molanort1-206730
Project name	Archaeological geophysical survey north of Moulton Lane, Boughton, Northamptonshire	
Short description	MOLA was commissioned to carry out a detailed magnetometer survey on c2.4ha of land north of Moulton Lane, Boughton, Northamptonshire. The survey identified a probable prehistoric ring ditch and a few other features of possible archaeological significance. A rectilinear pattern of magnetic anomalies was also detected across the site, but this is thought to represent a set of natural fissures in the underlying ironstone.	
Project type	Geophysical survey	
Site status	None	
Previous work	None known	
Current Land use	Rough grassland	
Future work	To be confirmed	
Monument type/ period	Prehistoric ring ditch, undated ditches	
Significant finds	None	
PROJECT LOCATION		
County	Northamptonshire	
Site address	Moulton Lane, Boughton	
Study area	c 2.4ha	
OS Easting & Northing	SP 755 660	
Height OD	c 100m aOD	
PROJECT CREATORS		
Organisation	MOLA Northampton	
Project brief originator	Lesley-Ann Mather, Northamptonshire Archaeological Advisor	
Project design originator	MOLA Northampton	
Director/Supervisor	John Walford	
Project Manager	John Walford	
Sponsor or funding body	Chandler Comms Ltd	
PROJECT DATE		
Start date	9 March 2015	
End date	9 March 2015	
ARCHIVES	Location	Content
Physical	N/A	
Paper	ENN107936 and ADS	Site survey records
Digital		Geophysical survey & GIS data
BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report	
Title	Archaeological geophysical survey north of Moulton Lane, Boughton, Northamptonshire, March 2015	
Serial title & volume	MOLA Northampton Reports 15/44	
Author(s)	John Walford	
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Contents

1	INTRODUCTION	1
2	BACKGROUND	1
	2.1 Location and geology	
	2.2 Historical and archaeological background	
3	METHODOLOGY	2
4	SURVEY RESULTS	2
5	CONCLUSION	3
	BIBLIOGRAPHY	4

Figures

Cover Magnetometer survey results (extract)

Fig 1	Site location	1:10,000
Fig 2	Magnetometer survey results	1:2000
Fig 3	Magnetometer survey interpretation	1:2000
Fig 4	Unprocessed magnetometer survey data	1:2000

Archaeological geophysical survey north of Moulton Lane, Boughton, Northamptonshire March 2015

ABSTRACT

MOLA was commissioned to carry out a detailed magnetometer survey on c2.4ha of land north of Moulton Lane, Boughton, Northamptonshire. The survey identified a probable prehistoric ring ditch and a few other features of possible archaeological significance. A rectilinear pattern of magnetic anomalies was also detected across the site, but this is thought to represent a set of natural fissures in the underlying ironstone.

1 INTRODUCTION

MOLA was commissioned by Chandler Comms Ltd to undertake a detailed magnetometer survey of c2.4ha of land north of Moulton Lane, Boughton, Northamptonshire (NGR SP 755 660; Fig 1). The purpose of the survey was to contribute towards an assessment of the archaeological impact of a proposed development scheme. The fieldwork was undertaken on 9 March 2015, and is recorded on the Northamptonshire Historic Environment Record (HER) under Event Number ENN107936.

2 BACKGROUND

2.1 Location and geology

The survey area comprises a single field of irregular shape, located north of Moulton Lane and east of Spring Close, Boughton (Fig 1). At the time of the survey it was under a cover of recently mown grass, with bushes and small trees scattered across its northern half and a broad belt of brambles all around its edges.

The survey area lies across the 100m contour line and has a humpbacked form, with the ground dropping away very gently to the south-west and slightly more steeply to the north-east. Geological mapping indicates that it is underlain by Northampton Sand and Ironstone, with no superficial drift deposits (BGS 2015). The ironstone is prone to fissuring, and cropmarks demonstrate that rectilinear patterns of fissures extend widely across the surrounding area (Google Earth aerial photographic coverage, dated 26/06/2005).

2.2 Historical and archaeological background

There are no previously recorded archaeological monuments or findspots within the survey area, but archaeological remains of various dates are known from the surrounding landscape. Cropmarks of a ring ditch and enclosures of prehistoric to Roman date have been recorded approximately 300m to the south east (Foard 1982, 108), and extensive late prehistoric and Roman remains were mapped and investigated 500m to the north during an archaeological evaluation at Pitsford Quarry (NA 2000). Medieval remains are also known in the area, with the main foci around the historic core of Boughton, and at the deserted medieval village site of Boughton Green, 900m to the east (RCHME 1981, 14-16)

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 area 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 and by the Chartered Institute for Archaeologists (EH 2008; CIfA 2014).

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) and are shown with an interpretative overlay in Figure 3. The unprocessed survey data is presented in Figure 4.

4 SURVEY RESULTS

The survey was undertaken across all accessible parts of the field, excluding the overgrown areas around the field margins and the smaller areas obstructed by individual trees and bushes. A complex set of magnetic anomalies was detected, representing a combination of archaeological, geological and modern features as described below.

The most readily discernible archaeological feature is a probable ring ditch, represented by an annular magnetic anomaly c10m in diameter located near the southern end of the field. Ring ditches can relate to several different monument types, including late Neolithic to Early Bronze Age round barrows and henges and Iron Age roundhouses. In this case there appears to be a small, east-facing, entrance gap which would favour an interpretation as a roundhouse, but the evidence is not entirely conclusive.

To the immediate north of the ring ditch there is a cluster of small, moderately intense, magnetic anomalies (c10-20nT) which could represent pits. Further north there are several disjointed and generally weak linear anomalies which are of uncertain significance but possibly represent former ditches. These features could be contemporary with the ring ditch, but the evidence is inconclusive.

A series of mostly very weak linear anomalies cross the field on parallel north-west to south-east alignments. The most pronounced of these coincides with a very subtle linear earthwork which possibly represents a trace of an old field boundary or a former plough headland (*pers obs*). The others perhaps indicate residual furrows of medieval to early post-medieval ridge and furrow cultivation.

The very distinct rectilinear pattern of anomalies which extends across the whole field is superficially reminiscent of a set of conjoined enclosure ditches. However, a geological interpretation is considered more likely to be correct. This is partly due to the form of the

individual anomalies, which are broader and more diffuse than those typically arising from ditches, but it is also due to the comparable scales and configurations of these anomalies and the natural fissures noted above in Section 2.1.

Near the centre of the field there is a very intense positive linear anomaly with a broad negative halo. Anomalies such as this are usually indicative of modern pipes or cables, and it may be that this one represents a buried feature associated with the overhead electricity wires which occur in the same approximate location. A second pipe or cable may be represented by the chain of intense magnetic dipoles close to the northern end of the field, but these could also represent a row of fence-post sockets or other discrete ferrous objects.

A few small but intense magnetic dipoles have been detected at random locations across the field. Most will represent buried pieces of iron or steel debris, but those at the far southern end of the field relate to two heaps of bonfire debris amongst which a large amount of burnt ironstone was present (*pers obs*).

5 CONCLUSION

The survey results indicate the presence of a probable ring ditch, c10m in diameter, in the southern half of the survey area. This has been tentatively interpreted as representing an Iron Age roundhouse, although alternative interpretations as a late Neolithic to early Bronze Age round barrow or henge cannot be entirely excluded. There may be other archaeological ditches and pits to the north of the ring ditch, but these are represented by generally weak and disjointed magnetic anomalies which cannot be interpreted with a high degree of confidence. Similarly weak anomalies which cross the field on parallel north-west to south-east alignments may represent traces of possible medieval to early post-medieval ridge and furrow cultivation.

A rectilinear pattern of broad, positive magnetic anomalies has been detected across the greater part of the survey area. These are thought to be of geological origin, as they are broader and less well defined than typical archaeological anomalies and their layout and orientation is comparable to the natural fissuring evidenced by cropmarks in several nearby fields.

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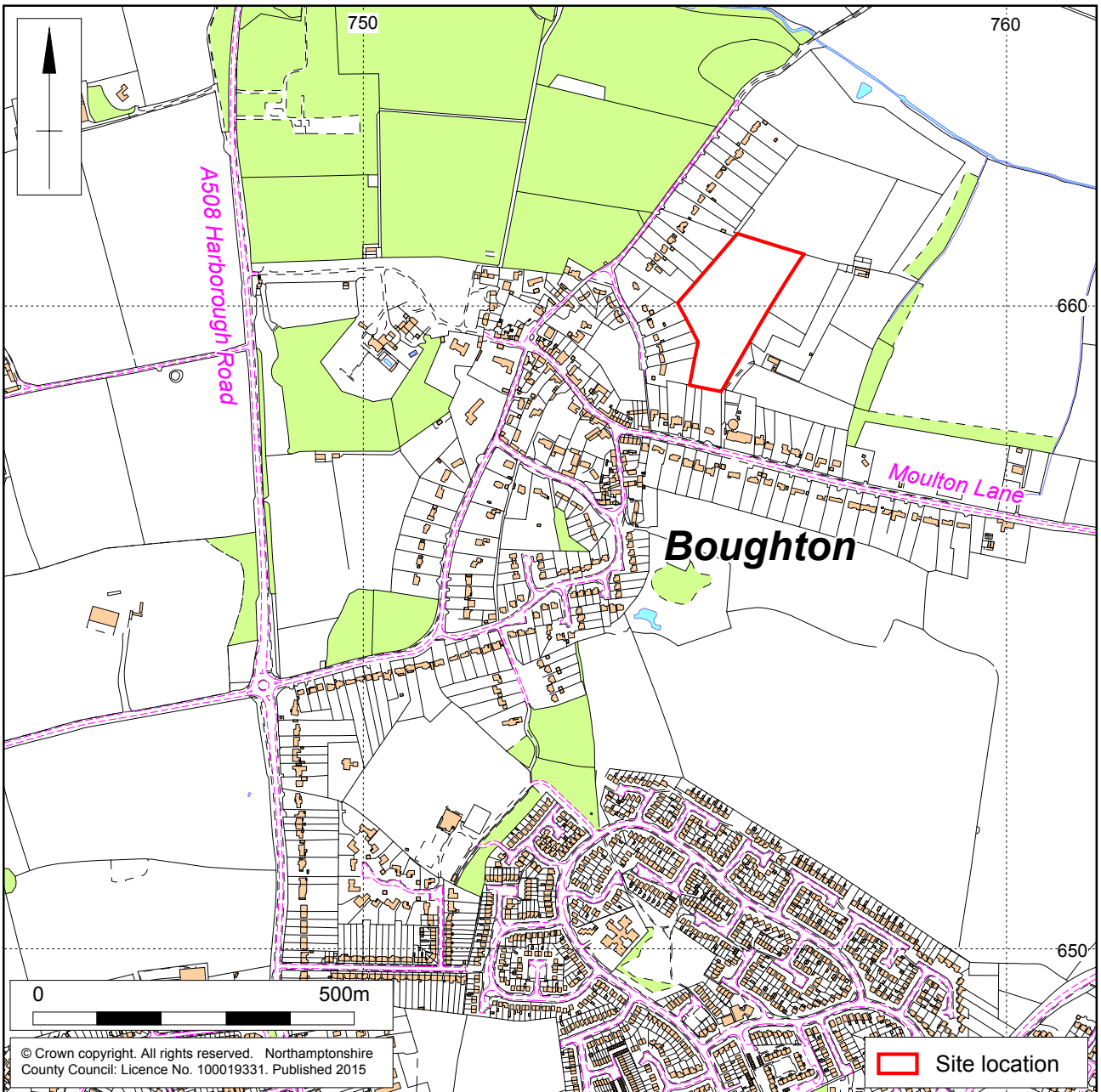
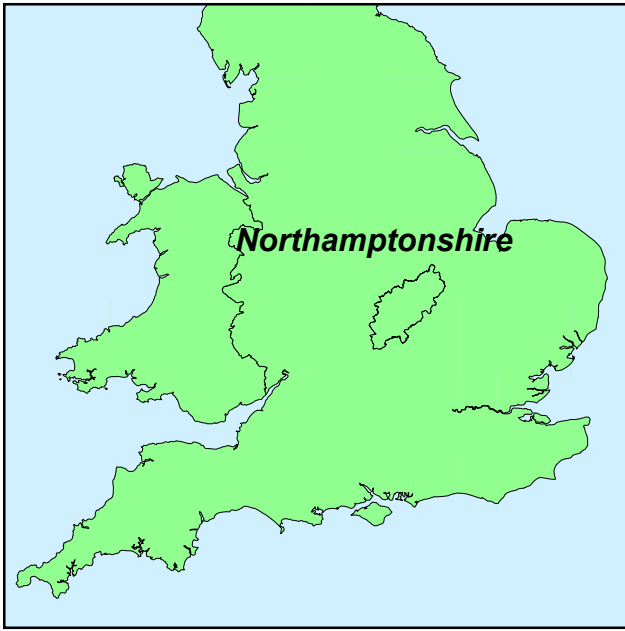
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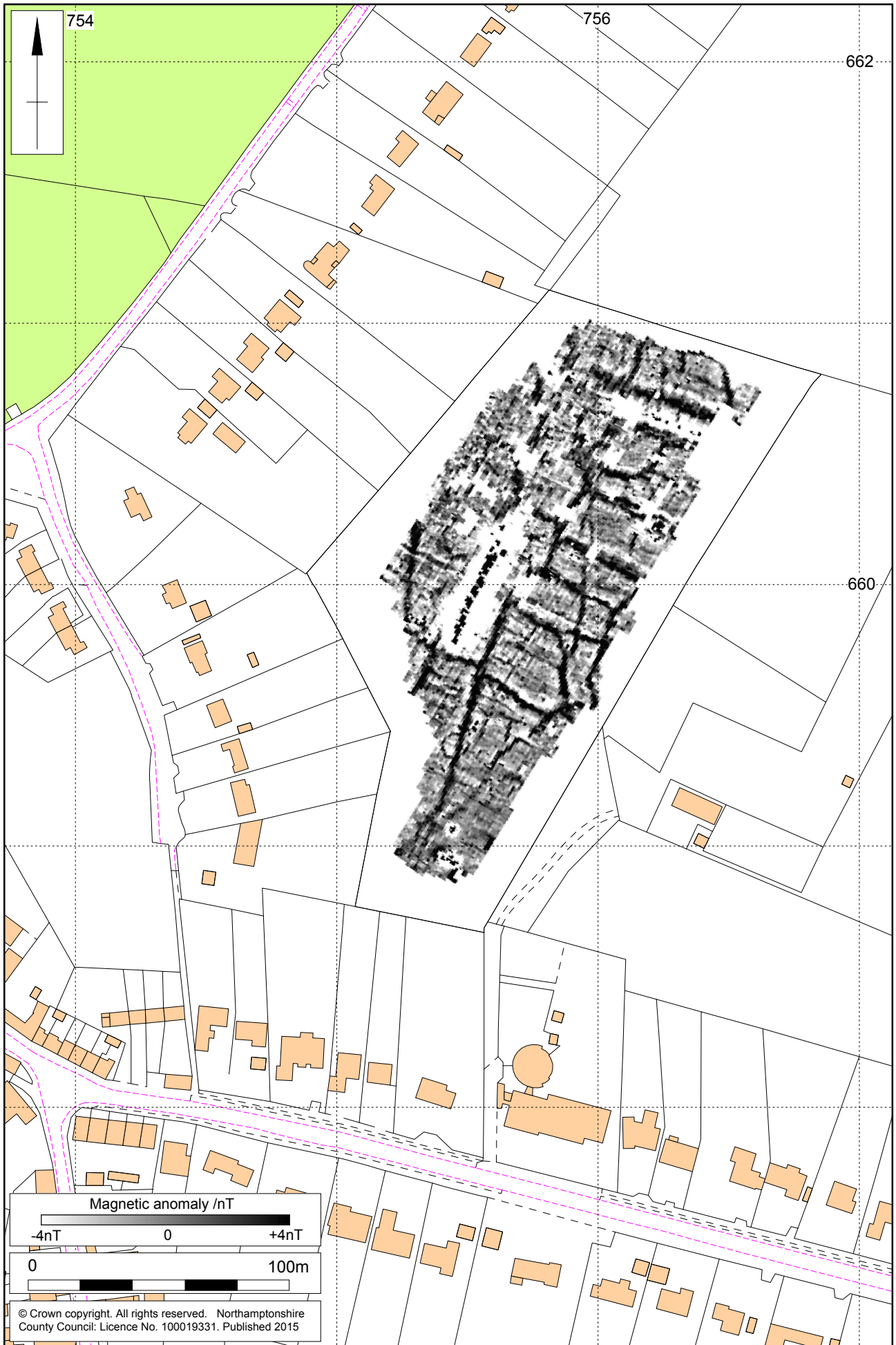
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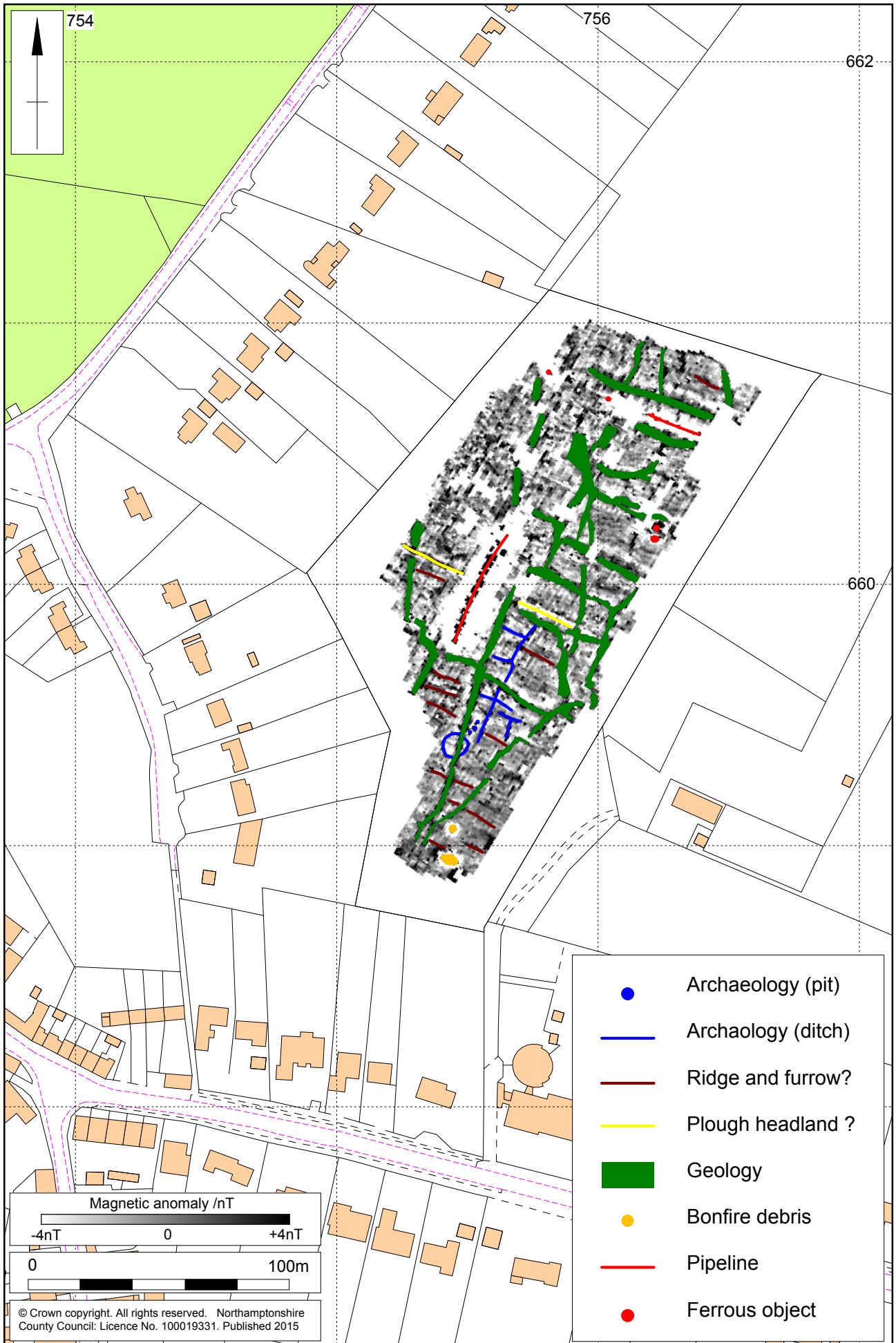
Scale 1:10,000

Site location Fig 1



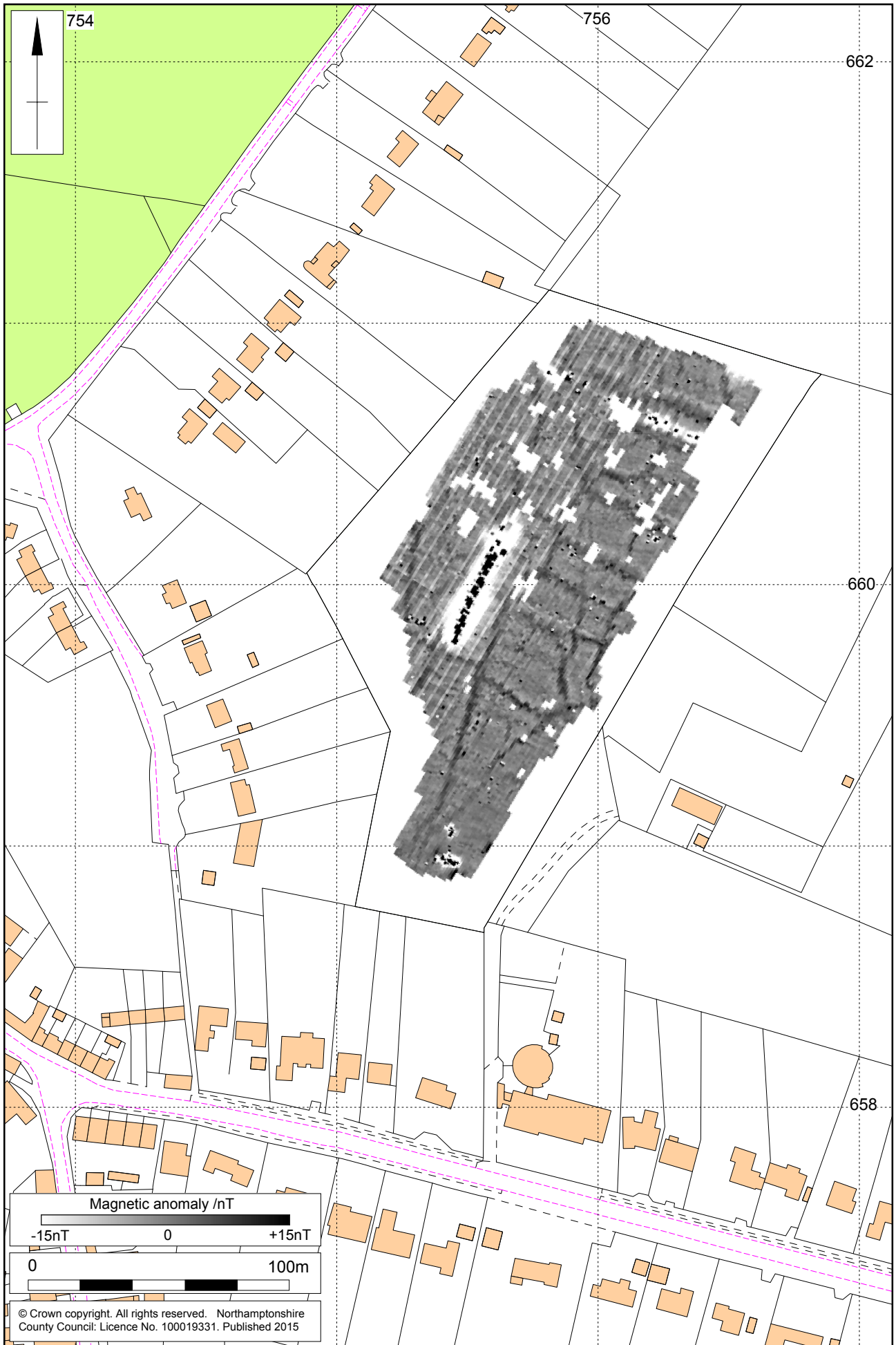
1:2000

Magnetometer survey results Fig 2



1:2000

Magnetometer survey interpretation Fig 3



1:2000

Unprocessed magnetometer data Fig 4

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