



Northamptonshire Archaeology

Archaeological geophysical survey on land
to the south-east of Northampton Road
Wellingborough, Northamptonshire



Northamptonshire Archaeology

2 Bolton House
Wootton Hall Park
Northampton NN4 8BE
t. 01604 700493 f. 01604 702822
e. sparry@northamptonshire.gov.uk
w. www.northantsarchaeology.co.uk



Northamptonshire
County Council

Heather Smith

Report 10/63

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STAFF

Project Manager Adrian Butler BSc MA AlFA
Fieldwork Lazlo Lichtenstein MA
 Heather Smith MA
 John Walford MSc
Text and illustrations Heather Smith
 Ian Fisher BSc

QUALITY CONTROL

	Print name	Signature	Date
Checked by	Pat Chapman		01/04/10
Verified by	Mark Holmes		01/04/10
Approved by	Steve Parry		01/04/10

OASIS REPORT FORM

PROJECT DETAILS		
Project name	Archaeological geophysical survey on land to the south-east of Northampton Road, Wellingborough, Northamptonshire	
Short description	Northamptonshire Archaeology was commissioned by CgMs Consulting to conduct an archaeological geophysical survey on 5.4 ha of land to the immediate south-east of Northampton Road, Wellingborough, Northamptonshire. The gradiometer results show the characteristic pattern of medieval ridge and furrow field cultivation across most of the area, which is also visible as earthworks in the fields. Aside from this there do not appear to be any anomalies of archaeological interest. The main features revealed are strong pipeline anomalies, ferrous responses along the course of a former field boundary, and concentrations of ferrous debris.	
Project type	Geophysical survey	
Site status	None	
Previous work	Desk-Based Assessment (Walker 2009)	
Current Land use	Pasture	
Future work	Unknown	
Monument type/ period	Medieval/post-medieval ridge and furrow cultivation	
Significant finds	None	
PROJECT LOCATION		
County	Northamptonshire	
Site address	Land to the south-east of Northampton Road, Wellingborough	
Study area	5.4ha	
OS Easting & Northing	SP 875 667	
Height OD	c 55 to 70m AOD	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology (NA)	
Project brief originator	CgMs Consulting	
Project Design originator	Mike Dawson (CgMs)	
Director/Supervisor	John Walford	
Project Manager	Adrian Butler	
Sponsor or funding body	CgMs Consulting	
PROJECT DATE		
Start date	08 March 2010	
End date	09 March 2010	
ARCHIVES	Location	Content
Physical	N/A	
Paper	NA	Site survey records
Digital	NA	Geophysical survey & GIS data
BIBLIOGRAPHY		
Title	Journal/monograph, published or forthcoming, or unpublished client report	
Title	Archaeological Geophysical Survey on land to the south-east of Northampton Road, Wellingborough, Northamptonshire	
Serial title & volume	Northamptonshire Archaeology Reports 10/	
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ARCHAEOLOGICAL GEOPHYSICAL SURVEY ON LAND TO THE SOUTH-EAST OF NORTHAMPTON ROAD, WELLINGBOROUGH, NORTHAMPTONSHIRE

MARCH 2010

ABSTRACT

Northamptonshire Archaeology was commissioned by CgMs Consulting to conduct an archaeological geophysical survey on 5.4ha of land to the immediate south-east of Northampton Road, Wellingborough, Northamptonshire. The gradiometer results show the characteristic pattern of medieval ridge and furrow field cultivation across most of the area, which is also visible as earthworks in the fields. Aside from this there do not appear to be any anomalies of archaeological interest. The main features revealed are strong pipeline anomalies, ferrous responses along the course of a former field boundary, and concentrations of ferrous debris.

1 INTRODUCTION

Northamptonshire Archaeology was commissioned by CgMs Consulting to carry out an archaeological geophysical survey on approximately 5.4 hectares of land immediately to the south-east of Northampton Road on the western edge of Wellingborough, Northamptonshire (NGR SP 875 667, Fig 1), ahead of proposed development of the area. The survey was undertaken over two days in March 2010.

2 TOPOGRAPHY AND GEOLOGY

The survey area consists of three small fields totalling approximately 5.4ha, on the western edge of Wellingborough, Northamptonshire (Fig 2). The area is bounded on the south-west by the A509 (Wilby Way) and by Northampton Road on the north-west. The Swanspool Brook runs along the south-eastern edge of all three fields. The north-eastern corner of Field 1 adjoins the gardens of houses along Northampton Road, and the eastern edge of this field runs alongside a strip of woodland, and has an iron four-rail fence. A fenced and surfaced public footpath crossed the site from north-west to south-east between Fields 2 and 3. Outside the survey area, at the north-west of Field 2, next to the Northampton Road, is a fenced Anglian Water compound containing many water utility monitoring points and service covers.

All three fields are currently pasture. Fields 1 and 2 are separated by a small strip of trees and contain some patches of brambles, mainly around the edges, which were not surveyed. Field 3 contains some small shrubs and trees which impeded survey in some areas. All the fields contain the visible remains of ridge and furrow earthworks.

The survey area has a south-easterly aspect, sloping gently from the Northampton Road at c70m AOD down to the brook at c55m AOD.

The underlying geology consists of Upper Lias Clays over the majority of the area, with Northampton Sand with Ironstone at the top of the slope near the road, and alluvium along the brook (BGS 1989).

3 ARCHAEOLOGICAL BACKGROUND

The survey area has been the subject of a desk-based assessment (Walker 2009). This found that there are no nationally designated monuments within the site. There are two entries on the Northamptonshire Historic Environment Record for the survey area. Entry 7206/406 indicates that in 1838 all three fields were known as Wedgebury Brook Close and were pasture. Entry 7206/0/2 records the survival of ridge and furrow from the

medieval or post-medieval open field system of Wellingborough. The DBA also looked at historic map evidence which suggests that the site has been in agricultural use since at least the post-medieval period. The eastern and western fields used to be larger before neighbouring road and residential development, and the creation of the woodland plantation to the east of Field 1.

The DBA also covered a 500m radius zone around the survey area and so lists nearby areas of surviving medieval ridge and furrow, Roman find-spots, prehistoric flint field-walking finds and several undated possible enclosures identified by crop-marks. It also notes that to the south is a large Iron Age settlement, which has been partially excavated. The excavation and geophysical survey indicated that the settlement and its field systems could extend beyond its mapped boundary, so there was the possibility that features related to this could occur in the present survey area (Thomas and Enright 2003, Windell 1981, Walker 2009).

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).

The basic unit of survey was the 30m grid square. A network of grids was established in each field, by means of tape measure and optical square, and was tied in by measurement to the field boundaries. The instruments 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 grid.

All fieldwork complied with the guidelines issued by English Heritage and by the Institute for Archaeology (EH 2008; Gaffney, Gater and Ovendon 2002).

The data was processed using Geoplot 3.00u software. Striping, caused by slight mismatches in sensor balance, was removed using the 'Zero Mean Traverse' function (ZMT). Destaggering of the data was performed as necessary.

The processed data is presented in this report in the form of greyscale plots (scale +4nT to -4nT black ~ white). These have been scaled, rotated and resampled (georectified) for display against the Ordnance Survey base mapping (Fig 2). An interpretative plot has been produced and is shown overlain onto the data (Fig 3).

5 SURVEY RESULTS

Field 1

Field 1 is the most easterly field (Figs 2 & 3). The most striking magnetic anomalies are the parallel positive and negative linear anomalies, orientated from north-west to south-east, which cover most of the field. They are more obvious in the northern part of the field, but do continue in the southern part, although their orientation swings to slightly more north to south. These anomalies are characteristic of medieval ridge and furrow field cultivation, and match the distribution of the visible earthwork remains of ridge and furrow, which are also more pronounced in the northern part of the field. These features continue into the other two fields.

In the north-eastern corner of this field, a series of dipolar anomalies are grouped in a rectilinear L-shaped distribution, these probably represent a combination of ferrous

debris and the remains of fencing of a recent field boundary that still appears on Ordnance Survey mapping of this area, but no longer exists in the field.

In the southern portion of the field is another group of dipolar anomalies. These seem to be clustered within a visible depression in the field, which is marked on the map as a marshy area, but was dry at the time of the survey. These indicate the presence of ferrous material. The background magnetic data appears smoother in this area which is typical of an alluvial floodplain, and probably relates to the closeness of the brook in this area. The ridge and furrow also appears to have ceased in this part of the field.

A more dispersed spread of small discrete ferrous anomalies appears in the north-western corner of the field. This could indicate ferrous debris near the road and houses in this part of the field. Extensive negative magnetic halos along the eastern field margins relate to the iron four-rail fence.

Field 2

Field 2 is the central field. As in Field 1 there is a series of parallel linear anomalies orientated north-west to south-east across most of Field 2, corresponding to ridge and furrow (Figs 2 & 3).

Also similar to Field 1 there is a concentration of dipolar anomalies within an area in the southern part of the field where there is a visible depression. Again these could represent ferrous material in this area.

A strong positive linear anomaly with a negative halo crosses the middle of the field orientated from north-west to south-east. This is presumably caused by a buried water pipe as it runs from the water utility compound to the stream.

There is also a strong anomaly in the north-western corner of the field. This corresponds in location to an inspection cover and indicates another pipeline in this area. The north-western corner of the field was overgrown in patches with brambles and some shrubs, so it was not fully surveyed.

Field 3

This is the smallest of the fields and lies at the south-western end of the survey area (Figs 2 & 3). It was quite overgrown around the edges and also contained a scatter of small trees and shrubs which meant survey was impeded in some places.

A strong linear magnetic anomaly occupies most of this small field, consisting of alternating positive and negative elements with strong magnetic halos. This pattern is characteristic of a ferrous pipeline.

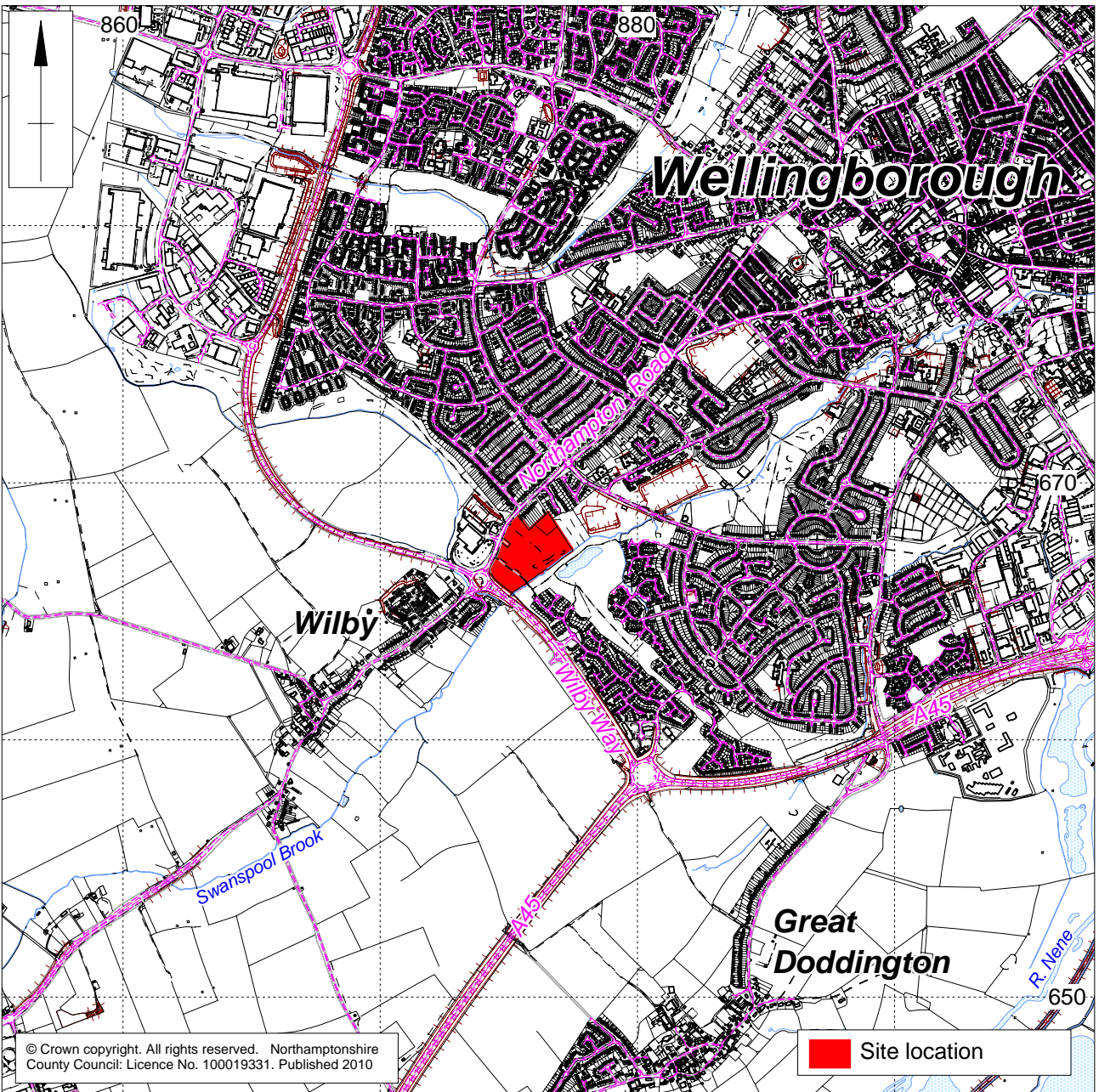
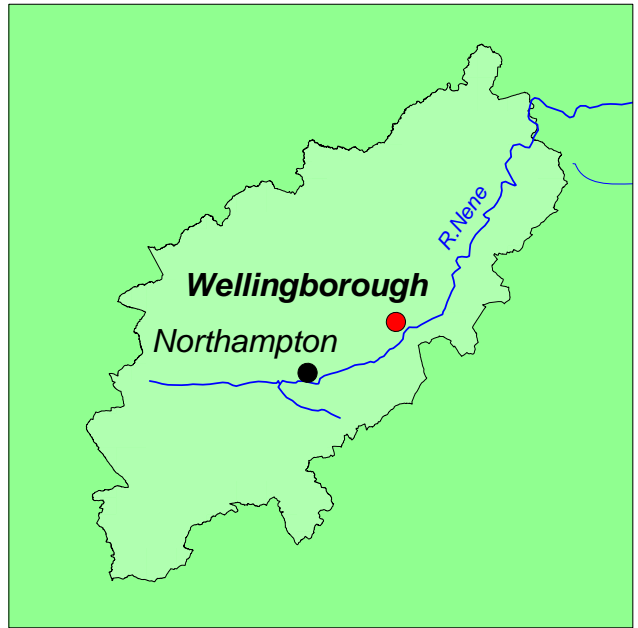
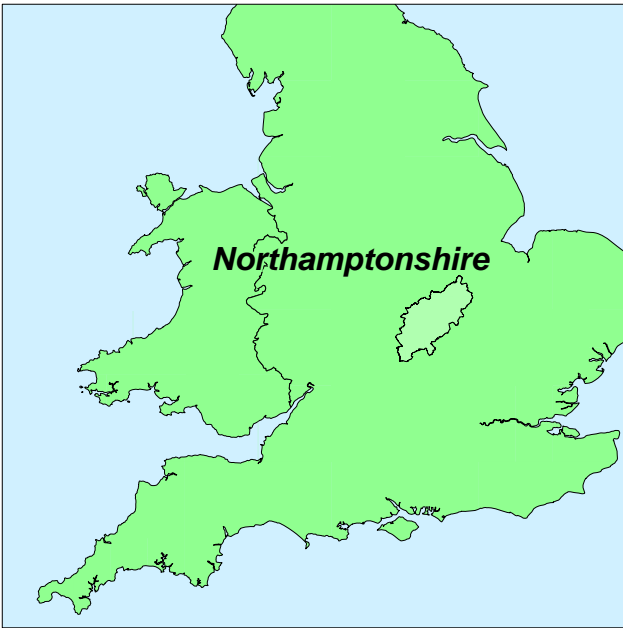
As in the other fields, parallel linear anomalies, representing ridge and furrow, are apparent in the north-western part of this field. They appear to be absent from the remaining area, but any associated anomalies may be masked by the strong magnetic halo from the pipeline.

6 CONCLUSION

The gradiometer survey results show the characteristic pattern of medieval ridge and furrow field cultivation across most of the area, which is also visible as earthworks in the fields. Aside from this there do not appear to be any anomalies of archaeological interest. The main features are the strong pipeline anomalies, the ferrous responses along the course of a former field boundary, and concentrations of ferrous debris.

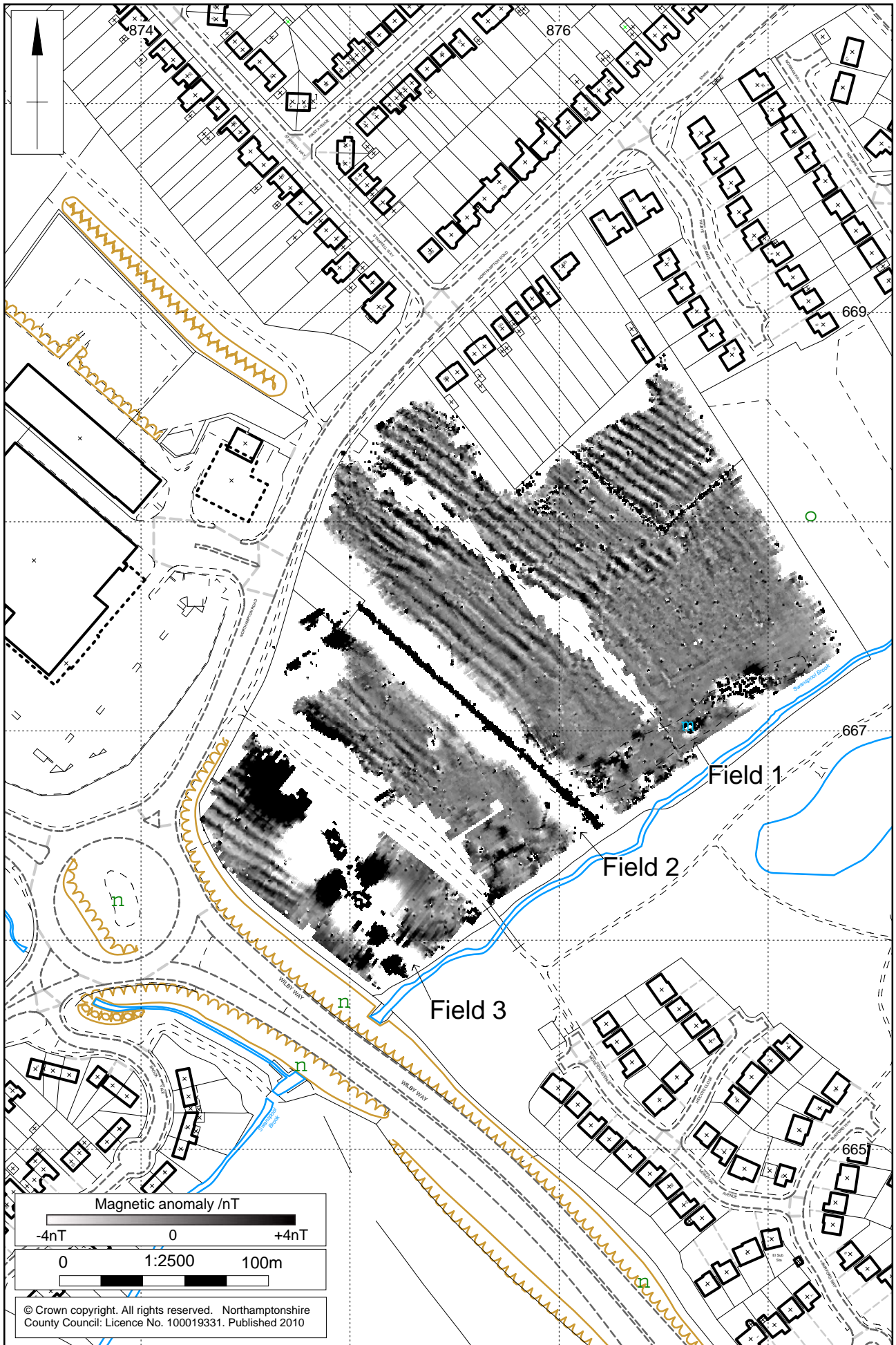
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Scale 1:25,000

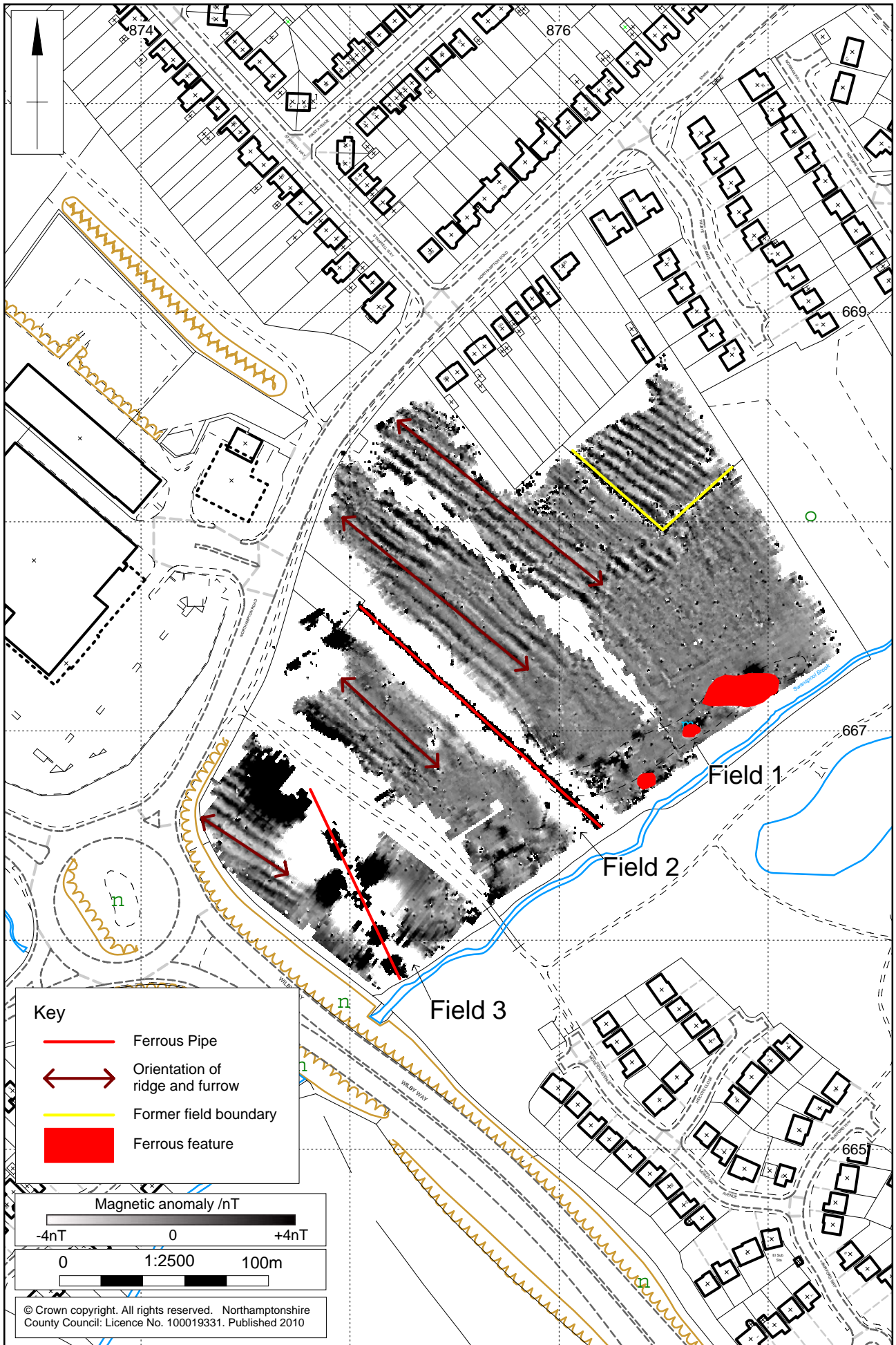
Site Location Fig 1



1:2500

Magnetometer Survey Results, Wellingborough, Northampton Road

Fig 2



1:2500

Magnetometer Survey Interpretation, Wellingborough, Northampton Road

Fig 3



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