



Northamptonshire Archaeology

Archaeological Geophysical Survey of Land off Tingewick Road, Buckingham November 2011



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**

John Walford

Report 11/236

November 2011



STAFF

Project Manager: Adrian Butler MA BSc AIfA

Fieldwork: Ian Fisher BSc
Adam Meadows MSc
Robyn Pelling BA
Pete Townend MA
John Walford MSc

Text: John Walford MSc
Adrian Butler

Illustrations: John Walford
Adrian Butler

QUALITY CONTROL

	Print name	Signed	Date
Checked by	<i>Adrian Butler</i>	<i>AB</i>	17/11/2011
Verified & Approved by	<i>Andy Chapman</i>	<i>AC</i>	17/11/2011

OASIS REPORT FORM

PROJECT DETAILS		
Project title	Archaeological geophysical survey of land off Tingewick Road, Buckingham	
Short description	Northamptonshire Archaeology was commissioned by CgMs Consulting to conduct a magnetometer survey of land off Tingewick Road, Buckingham. The site, which was c 16ha in extent, lay immediately adjacent to St Rumbold's Well, a Scheduled Ancient Monument. The survey identified a ditched enclosure of uncertain date and a number of other ditches and pits. The majority of these features were overlain by medieval or later ridge and furrow.	
Project type	Geophysical survey	
Site Status	None	
Previous work	None known	
Current land use	Arable and pasture fields	
Future work	Unknown	
Monument type and period	Undated enclosures (probably Iron Age to Saxon), medieval holy well, medieval ridge and furrow.	
PROJECT LOCATION		
County	Buckinghamshire	
Site address	Tingewick Road, Buckingham	
Post code		
OS co-ordinates	SP 687 335	
Area	16 ha	
Height aOD	c 105-95m AOD	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology	
Project brief originator	None	
Project Design originator	Northamptonshire Archaeology	
Director/Supervisor	Ian Fisher	
Project Manager	Adrian Butler	
Sponsor or funding body	CgMs Consulting	
PROJECT DATE		
Start date	25 October 2011	
End date	17 November 2011	
ARCHIVES	Location (Accession no.)	Contents
Physical	NA store	Site records
Paper		Client report PDF
Digital		Survey data
BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report (NA report)	
Title	Archaeological geophysical survey of land off Tingewick Road, Buckingham	
Serial title & volume	Northamptonshire Archaeology Reports 11/236	
Author(s)	John Walford	
Page numbers	5	
Date	16 November 2011	

Contents

1	INTRODUCTION	1
2	TOPOGRAPHY AND GEOLOGY	1
3	ARCHAEOLOGICAL BACKGROUND	1
4	METHODOLOGY	2
5	SURVEY RESULTS	2
6	CONCLUSION	3
	BIBLIOGRAPHY	4

Figures

Fig 1: Site location	1:10,000
Fig 2: Magnetometer survey results	1:2500
Fig 3: Magnetometer survey interpretation	1:2500

**ARCHAEOLOGICAL GEOPHYSICAL SURVEY OF LAND OFF
TINGEWICK ROAD, BUCKINGHAM
AUGUST 2011**

Abstract

Northamptonshire Archaeology was commissioned by CgMs Consulting to conduct a magnetometer survey of land off Tingewick Road, Buckingham. The site, which was c 16ha in extent, lay immediately adjacent to St Rumbold's Well, a Scheduled Monument. The survey identified a ditched enclosure of uncertain date and a number of other ditches and pits. The majority of these features were overlain by medieval or later ridge and furrow.

1 INTRODUCTION

Northamptonshire Archaeology was commissioned by CgMs Consulting, to conduct a magnetometer survey of approximately 16ha of land located between Tingewick Road and the A421, on the western side of Buckingham (NGR: SP 687 335, Fig 1). The survey was intended to determine whether the site contained archaeological remains which could be damaged by the proposed development of the site.

2 TOPOGRAPHY AND GEOLOGY

The survey area comprised the major part of a roughly triangular block of land bounded to the south by the A421, to the north by Tingewick Road and to the east by properties fronting on to Gawcott Road. It was divided into two fields (1 and 2), a large arable field in the west and a much smaller pasture field in the east. A broad belt of scrub vegetation extended alongside the A421 and into the western tip of the site, rendering these areas unfit for survey.

The survey area stood at an elevation of approximately 105m to 95m AOD and was undulating in character with a general slope down towards the north. A dry valley extended northwards across the centre of the area and, in the east, the land fell away steeply towards the River Ouse. Several springs emerged from this eastern slope, giving rise to a complex of small channels and damp hollows on its lower flanks.

The geology of the survey area is mapped as boulder clay with minor outcrops of glacial sand and gravel (BGS 2002). Considering the presence of springs and the evident dampness of the ground at the eastern end of the site (*pers obs*), it is possible that minor deposits of peat or tufa may also occur.

3 ARCHAEOLOGICAL BACKGROUND

The archaeological background of the area is detailed in a desk-based assessment which Northamptonshire Archaeology undertook for a site on Gawcott Road, located almost immediately south-east of the present survey area (Walker 2008). In brief, this assessment noted a scarcity of prehistoric or Roman remains and commented that most archaeological records for the area relate to Saxon and later activity in the vicinity of Buckingham town centre.

The only known archaeological site with direct relevance to the survey area is a holy well dedicated to Saint Rumbold. This well, now a Scheduled Monument, lies in the north-western corner of Field 2 and is surrounded by the exposed footings of a seventeenth century conduit house. It has presumably been a site of devotion since middle Saxon times, as Rumbold is reputed to have lived in the seventh century and his remains were apparently translated to Buckingham within a few years of his death (University of Buckingham 2011).

During the medieval and earlier post-medieval periods, the survey area appears to have been tilled as part of the open fields of Buckingham (Walker 2008), and ridge and furrow of this date still survives as low earthworks in Field 2 (*pers obs*). Data from the Buckinghamshire Historic Environment Record data suggests that part of the same field has been disturbed by a gravel pit (Walker 2008, Fig 2), although this is not borne out by the present survey results (see below).

4 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 set of 30m survey grids was established within each field, from base lines oriented along suitable field boundaries. These grids were set out by means of a tape measure and optical square and were tied in to the Ordnance Survey national grid with a Leica System 1200 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 guidelines issued by English Heritage and by the Institute for Archaeologists (EH 2008; *IfA* forthcoming).

Survey data was processed using Geoplot 3.00v software. Striping, caused by slight mismatches in sensor balance, was removed using the 'Zero Mean Traverse' function and the data was destaggered as necessary.

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

5 SURVEY RESULTS (Figs 2-3)

Field 1

The data from this field contains a large number of anomalies, many of which are scattered, disjointed or otherwise difficult to interpret. The most convincingly archaeological of these occurs near the southern edge of the field where a group of curving, magnetically positive anomalies appear to define parts of a ditched enclosure. Other positive linear anomalies elsewhere in the field may indicate further lengths of ditch of indeterminate date and function.

Towards the south-eastern corner of the field is a large discrete anomaly with

moderately elevated magnetism (typical anomaly strength c 10nT). This is of uncertain origin, but most probably represents an infilled pit or pond of indeterminate date. The strength of the anomaly does not suggest the presence of much ferrous debris within the backfill, but would be more consistent with ceramic material, slag or burnt soil. A cluster of other discrete anomalies, lying c 80m to the north-east, may represent further pits

A slightly unusual feature occurs against the northern edge of the survey area. It comprises an irregular, but broadly rectangular, group of strongly positive magnetic anomalies. The western side is extremely magnetic (>3000nT), whilst the other sides are rather more subdued (c 100nT). It is not possible to suggest an entirely convincing interpretation for this feature, but its shape suggests that it may represent an artificial structure or an orderly grouping of industrial remains (kilns, furnaces, etc).

Slightly further to the south-east, a positive anomaly of rather variable strength defines an irregular loop measuring approximately 60m by 40m. This could represent an enclosure but its location, in the floor of a dry valley, would be an unusual one for such a site, and it is more probable that the anomaly has been produced by chance combination of geological and topographical factors. Elsewhere in the field, various irregular, ill defined and magnetically weak anomalies are also thought likely to be of geological origin.

Across much of the field there are closely spaced parallel linear anomalies, representing ridge and furrow cultivation of medieval and later date. Two furrow directions occur, north to south in the western half of the field and east to west in the eastern half. More recent field boundaries are also discernable in the data, represented by weak and sporadic linear anomalies together with linear scatters of ferrous dipoles.

Further ferrous anomalies, scattered at random across the field, probably represent insignificant pieces of iron debris within the ploughsoil. Three very intense linear anomalies with alternating polarities are also present, and these represent ferrous pipelines, adjacent to Tingewick Road in the north-west, aligned northward from the field edge in the west and north-west to south-east across Field 1.

Field 2

The principal set of archaeological anomalies in this field define a sub-rectangular ditched enclosure with a small annex on its south-western side. This is most likely to be of Iron Age or Romano-British date but, considering the close proximity of St Rumbold's well, a Saxon date cannot be entirely excluded.

To the north of the enclosure there are various disjointed linear anomalies which represent an incoherent pattern of ditches. In the same area are several large and discrete positive anomalies which quite probably represent pits. None of these features can be closely dated.

The archaeological anomalies are overlain by sets of parallel linear anomalies which correlate with the surviving ridge and furrow earthworks. Some of these anomalies, and particularly the central, north – south aligned block, exhibit a considerable level of magnetic enhancement where they cut through the earlier archaeological features.

A band of weak magnetic disturbance extends into the field from the south-east corner, along the line of an unmade vehicle track (pers obs). The noise presumably

indicates a sparse scatter of hardcore or other weakly magnetic debris of modern origin. Similar patches of disturbance at points around the field margins, and also the various discrete ferrous anomalies, are also thought to represent small deposits of predominantly modern material.

A weak negative linear anomaly cuts across the field on a north-east to south west heading. This is of uncertain interpretation, but most probably represents either a plastic pipe or else a fairly insubstantial former field boundary.

The ferrous pipeline detected in Field 1 continues along the southern boundary of Field 2 and is joined from the north-west by a second smaller pipe. The latter terminates abruptly at its northern end, close to a damp part of the field where a spring appears to rise (pers obs). Another spring rises a little further to the north and is marked by a ferrous halo caused by its surrounding wire fence.

6 CONCLUSION

The magnetometer survey has identified several features of archaeological interest within the survey area. In Field 1 there is one possible ditched enclosure and some other, less substantial, remains. But the main area of archaeological interest is in the eastern field (Field 2), where an enclosure and a complex of other ditches occupy a plateau immediately above the spring line.

The date of the enclosures and other features cannot be accurately determined. Most often, ditched enclosures prove to be of Iron Age or Romano-British date but, in this case, the nearby presence of St Rumbold's Well raises the possibility that the site may have been a focus of activity in the Saxon period. A post-Saxon date can be confidently excluded as the remains are overlain by ridge and furrow which is unlikely to be later than medieval in origin.

The observation of extensive ridge and furrow earthworks in Field 2, and the detection of underlying remains casts considerable doubt on the reported presence of gravel pit in this area (Walker 2008, Fig 2). If the pit existed at all, it is clear that it must have been closely confined to the north-east field corner and did not extend so far south and west as has been mapped.

BIBLIOGRAPHY

Bartington, G, and Chapman, C, 2003 A high-stability fluxgate magnetic gradiometer for shallow geophysical survey applications, *Archaeological Prospection*, **11**, 19-34

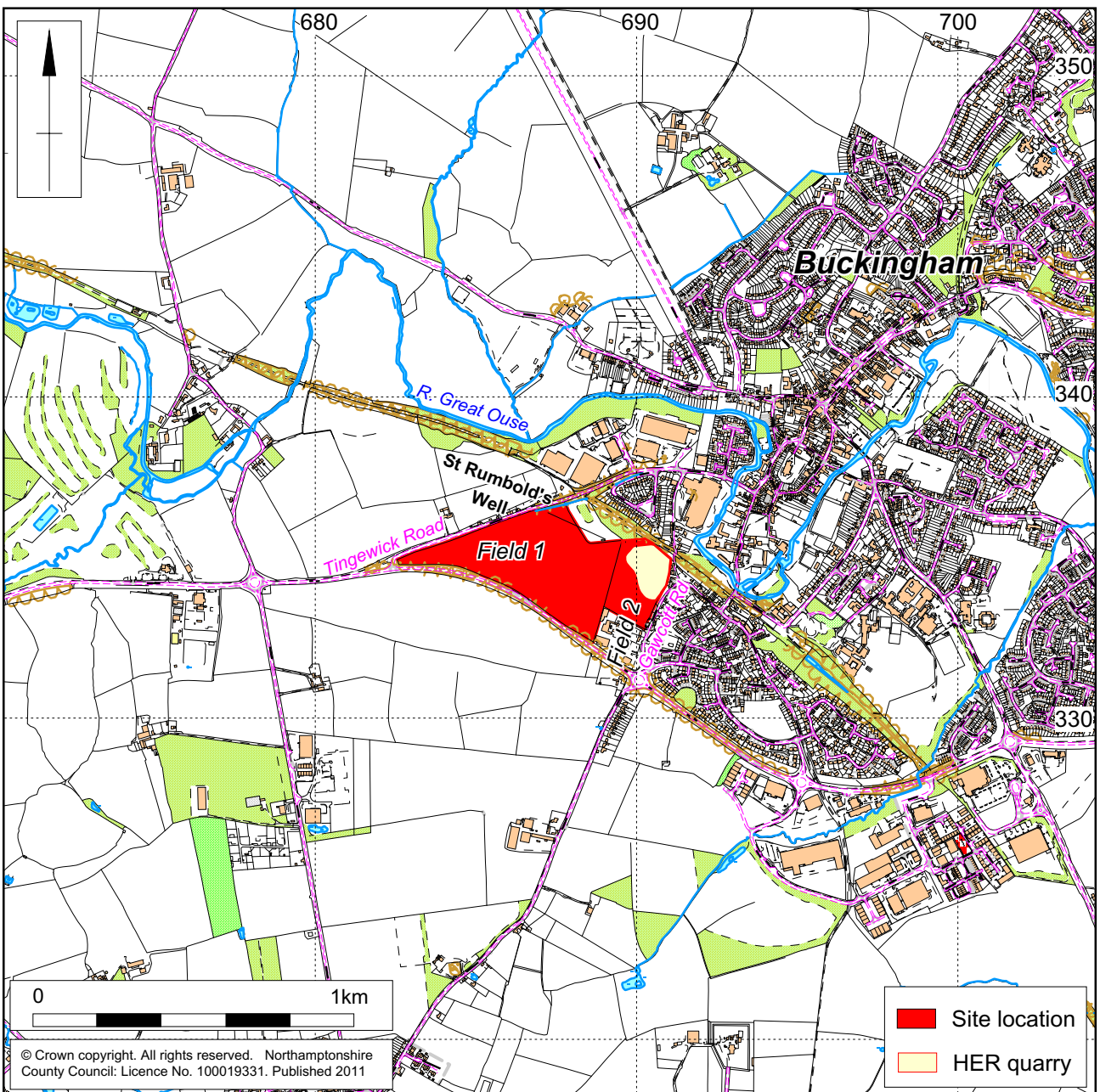
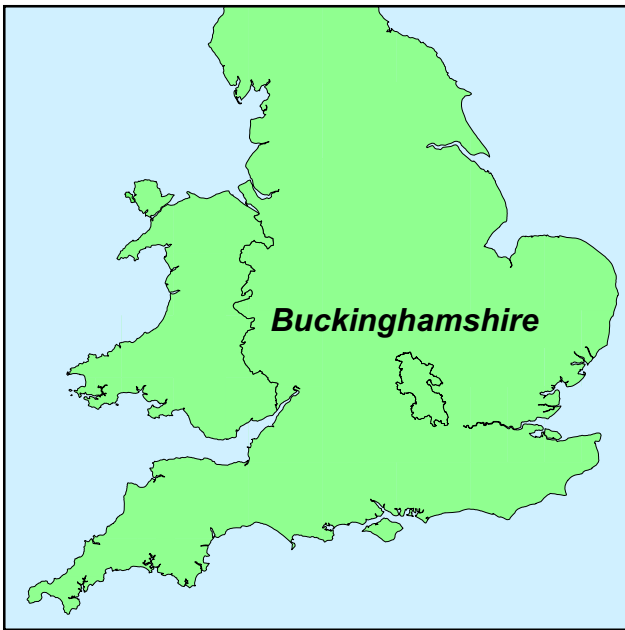
BGS, 2002 *Map sheet 219 (Buckingham)*, 1:50,000 series, British Geological Survey

EH, 2008 *Geophysical Survey in Archaeological Field Evaluation*, English Heritage

IfA, forthcoming *Standard and Guidance for Archaeological Geophysical Survey*, Institute for Archaeologists Technical Paper

University of Buckingham 2011 *St Rumbold of Buckingham*, <http://www.buckingham.ac.uk/about/history/rumbold>, accessed 15/11/11

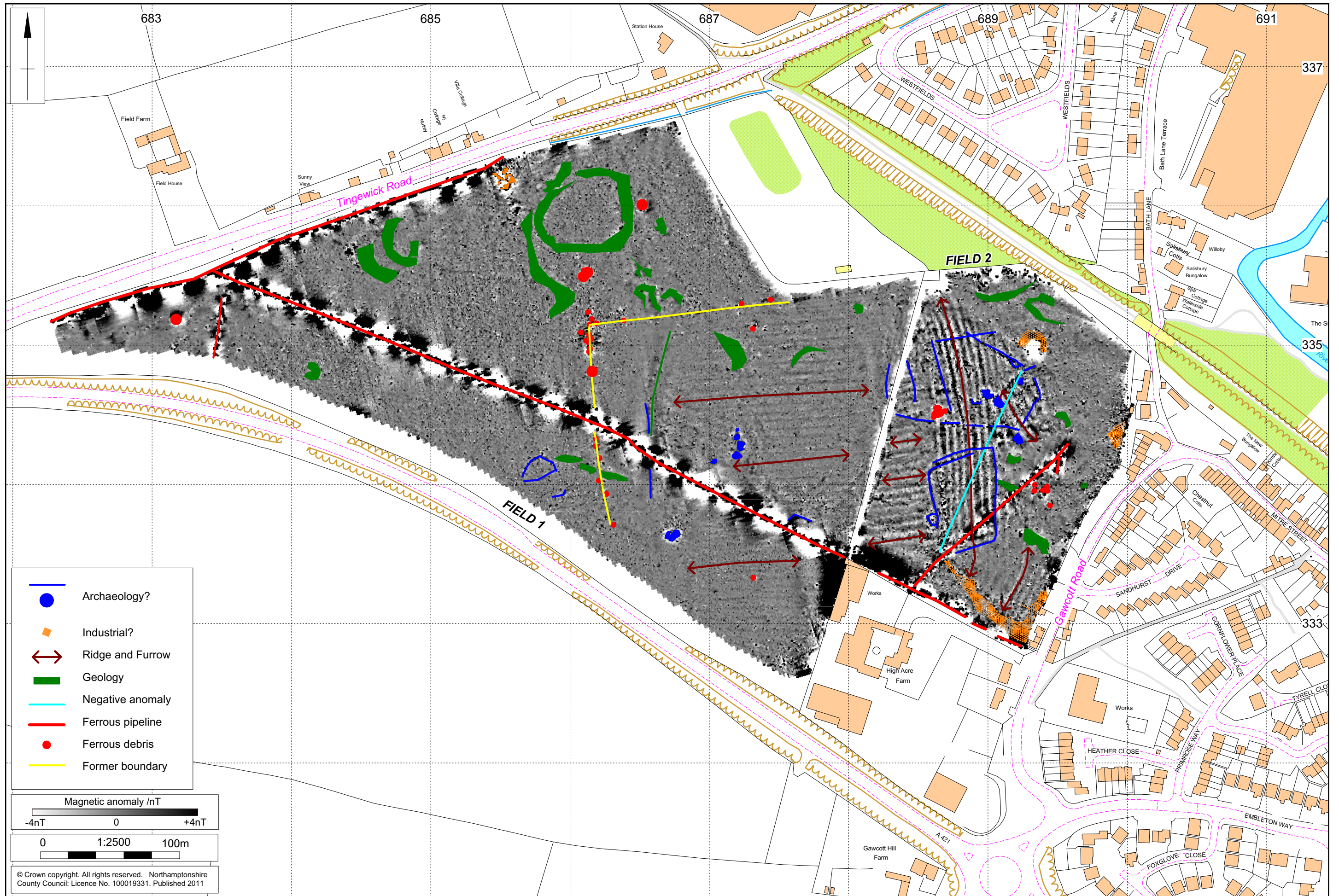
Walker, C 2008 *An archaeological desk-based assessment on land at Gawcott Road, Buckingham, January 2008*, Northamptonshire Archaeology Report, **08/25**



Scale 1:20,000

Site Location Fig 1







Northamptonshire County Council

Northamptonshire Archaeology

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