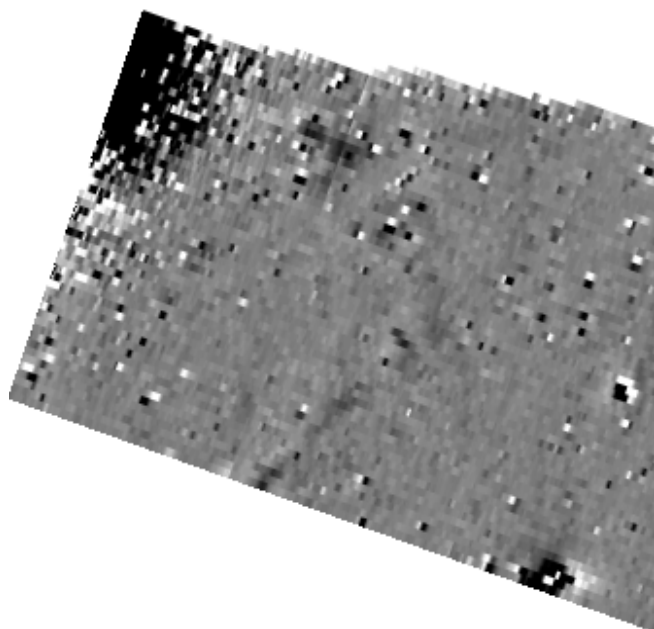




# Northamptonshire Archaeology

Archaeological geophysical survey of land at  
Stuchbury Manor Farm, Greatworth  
Northamptonshire June 2011



## Northamptonshire Archaeology

2 Bolton House  
Wootton Hall Park  
Northampton NN4 8BE  
t. 01604 700493 f. 01604 702822  
e. [sparry@northamptonshire.gov.uk](mailto:sparry@northamptonshire.gov.uk)  
w. [www.northantsarchaeology.co.uk](http://www.northantsarchaeology.co.uk)



Northamptonshire  
County Council

Adrian Butler

Report 11/133

June 2011



**STAFF**

Project Manager: Adrian Butler MA BSc AIfA

Fieldwork: Laszlo Lichtenstein MA  
David Haynes

Text: Adrian Butler

Illustrations: Ian Fisher BSc

**QUALITY CONTROL**

	Print name	Signed	Date
Checked by	<i>Pat Chapman</i>	<i>PC</i>	22/06/2011
Verified & Approved by	<i>Andy Chapman</i>	<i>AC</i>	22/06/2011

**OASIS REPORT FORM**

<b>PROJECT DETAILS</b>		
Project title	Archaeological geophysical survey of land at Stuchbury Manor Farm, Greatworth, Northamptonshire, June 2011	
Short description	Northamptonshire Archaeology (NA) was commissioned by the Marston St Lawrence Estate to conduct a detailed geophysical survey of land proposed for development at Stuchbury Manor Farm, Greatworth, Northamptonshire. Magnetometer survey of fields immediately south-west of the Farm identified a possible ditch orientated south-west to north-east in the south of the development area in Field 1. Another possible ditch is known from the south of that field and possible Romano-British habitation to the south-east, so a connection between this feature and either of those is possible. Approximately half of the area available for survey in Field 2 indicated disturbance by ferrous and/or brick-type material, putatively a hardcore layer or backfill.	
Project type	Geophysical Survey	
Site Status	None	
Previous work	None	
Current land use	Pasture	
Future work	Unknown	
Monument type and period	None	
<b>PROJECT LOCATION</b>		
County	Northamptonshire	
Site address	Stuchbury Manor Farm, Greatworth	
Post code		
OS co-ordinates	SP 55679 43636	
Area	0.8ha of 1.6ha	
Height aOD	160	
<b>PROJECT CREATORS</b>		
Organisation	Northamptonshire Archaeology (NA)	
Project brief originator	Liz Mordue, Northamptonshire County Council Planning (NCCP)	
Project Design originator	Adrian Butler (NA)	
Director/Supervisor	Ian Fisher (NA)	
Project Manager	Simon Carlyle (NA)	
Sponsor or funding body	Marston St Lawrence Estate	
<b>PROJECT DATE</b>		
Start date	20 June 2011	
End date	22 June 2011	
<b>ARCHIVES</b>	<b>Location (Accession no.)</b>	<b>Contents</b>
Physical	NA store	Site records
Paper		Client report PDF
Digital		Survey data
<b>BIBLIOGRAPHY</b>		Journal/monograph, published or forthcoming, or unpublished client report (NA report)
Title	Archaeological geophysical survey of land at Stuchbury Manor Farm, Greatworth, Northamptonshire, June 2011	
Serial title & volume	Northamptonshire Archaeology Reports 11/133	
Author(s)	Adrian Butler	
Page numbers	3	
Date	June 2011	

## Contents

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

### Figures

Fig 1: Site location	1:20,000
Fig 2: Stuchbury Manor Farm Gradiometer Survey Results	1:1250
Fig 3: Stuchbury Manor Farm Gradiometer Survey Interpretation	1:1250
Fig 4: Stuchbury Manor Farm Gradiometer Survey Raw Data	1:1250

**ARCHAEOLOGICAL GEOPHYSICAL SURVEY OF LAND AT  
STUCHBURY MANOR FARM, GREATWORTH, NORTHAMPTONSHIRE  
JUNE 2011**

**Abstract**

*Northamptonshire Archaeology (NA) was commissioned by the Marston St Lawrence Estate to conduct a detailed geophysical survey of land proposed for development at Stuchbury Manor Farm, Greatworth, Northamptonshire. Magnetometer survey of fields immediately south-west of the Farm identified a possible ditch orientated south-west to north-east in the south of the development area in Field 1. Another possible ditch is known from the south of that field and possible Romano-British habitation to the south-east, so a connection between this feature and either of those is possible. Approximately half of the area available for survey in Field 2 indicated disturbance by ferrous and/or brick-type material, putatively a hardcore layer or backfill.*

**1 INTRODUCTION**

Northamptonshire Archaeology (NA) was commissioned by the Marston St Lawrence Estate, to conduct a detailed geophysical survey of land proposed for the construction of an anaerobic digestion facility at Stuchbury Manor Farm, Greatworth, Northamptonshire (NGR: SP 55679 43636, Fig 1). A brief for archaeological works was issued by Northamptonshire County Council Planning (Mordue 2011) and a Written Scheme of Investigation by NA (2011).

**2 TOPOGRAPHY AND GEOLOGY**

The proposed development site comprises c 1.6ha of land located on the eastern side of Stuchbury Manor Farm, approximately 750m north-east of the village of Greatworth (Fig 1).

The development area is contained within three fields immediately east of the farm buildings and slurry pit (Fig 1). The fields are enclosed by fences and thick hedges with cultivated fields to the east and west. The B4525 Welsh Lane bounds Field 1 to the south-west.

At the time of survey the fields were rough pasture. Field 2 was partially covered by thick and inaccessible undergrowth of nettles and thistles within areas that appeared to contain dumps of brick and other refuse. Field 3 was occupied by a herd of cattle. As a result of these obstacles, a total of 0.8ha was surveyed in June 2011.

The site has a gentle slope to the west and at c 165m above Ordnance Datum (aOD). The site slopes down gently towards the Washbrook to the north. The superficial geology consists of boulder clay (Geological Survey of Great Britain (England and Wales) Solid and Drift Sheet 202).

**3 ARCHAEOLOGICAL BACKGROUND**

A scatter of Romano-British pottery (NHER: MNN18291) has been recovered from

the field immediately south-east of the proposed development area. Geophysical survey along the route of an Anglian Water pipeline on the southern boundary of the field detected a possible curving segmented ditch (Clements 2007). A scatter of worked flint found nearby indicates possible prehistoric activity (Mordue 2011).

Recently an archaeological evaluation approximately 1km to the south-east identified two main areas dating to the Roman period. One comprised probable enclosures and boundary systems, as well as a series of quarry pits. The area appeared to be in use throughout the Roman period. A second area to the east comprises the remains of a Romano-British building of modest status and associated activity. Pottery associated with the building dated exclusively to the 2nd century, while some of the peripheral activity may have dated to the later Roman period (Walker 2011).

#### **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).

A tape measure and optical square were used to divide the site into 30m grid squares, which formed the basic units of survey. The grid was then located to permanent landscape features. The gradiometers were carried at a brisk but steady pace through each grid, 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 methods complied with a Brief for the archaeological works issued by Northamptonshire County Council's Assistant Archaeological Advisor (NCCP 2011), Written Scheme of Investigation (NA 2011), and 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.

Both the raw and processed data are 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. Figure 4 displays the raw data plot.

#### **5 SURVEY RESULTS**

A large, highly magnetic area was located in the north-west corner of Field 1 (Figs 2 & 3). This represented a magnetic 'shadow' cast around the adjacent steel barn construction. The field was found to contain numerous small, intense dipolar (paired positive/negative) magnetic anomalies likely to indicate ferrous and ceramic debris, concentrated towards the north-west. Two larger ferrous anomalies were identified in the south-east of the field. A weak positive linear magnetic anomaly was detected orientated south-west to north-east in the south of Field 1, possibly indicating a buried ditch.

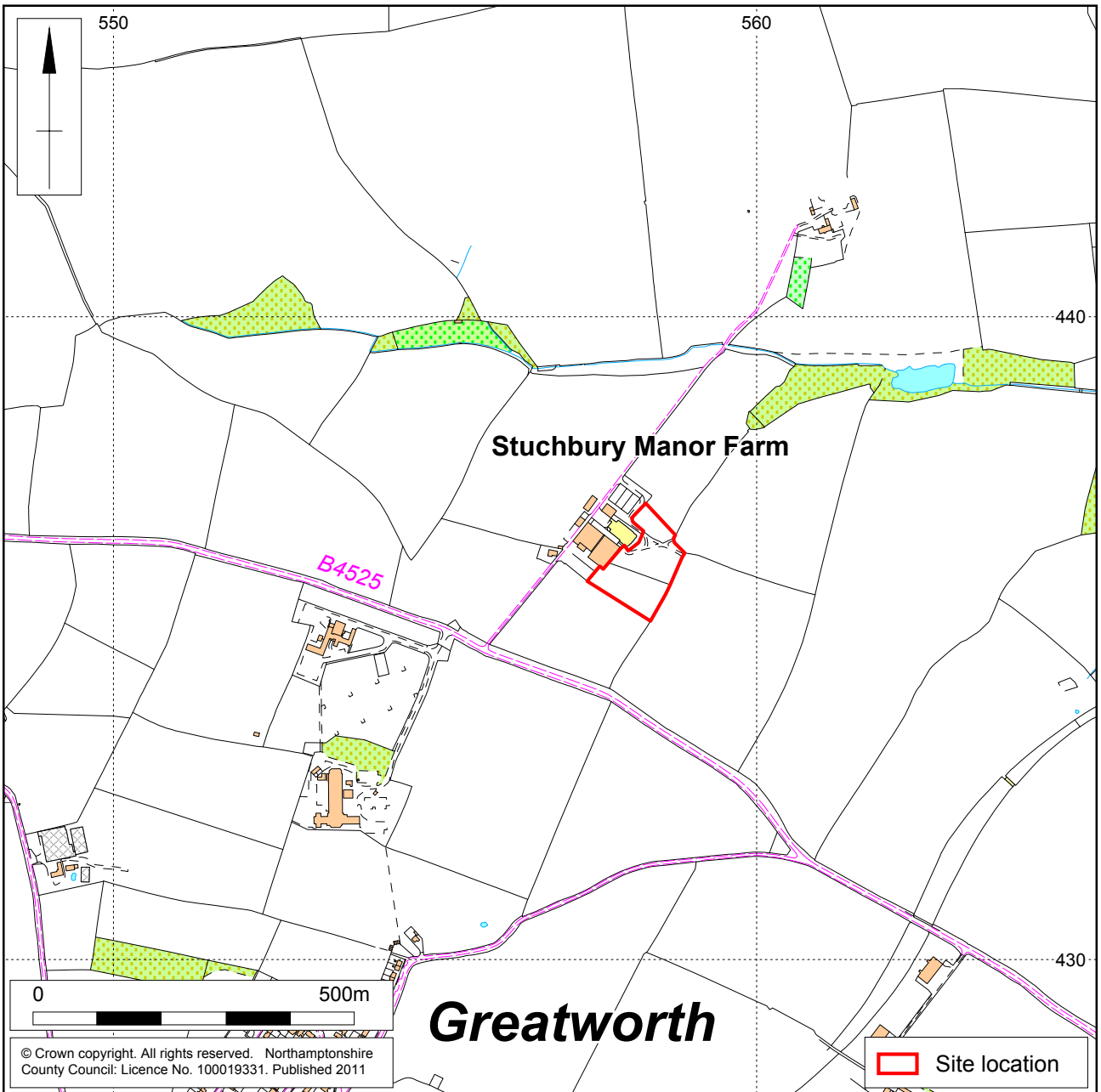
Survey in Field 2 was constricted by impenetrable undergrowth. As experienced in the southern field, the barn caused a magnetic response on the western margin of the field. The vast majority of accessible areas, especially north and north-west were found to contain intense positive dipolar magnetic anomalies of varying dimensions. These were likely to reflect buried ferrous and brick fragments (observed in field). The degree of dipolar activity decreased towards the south-east.

## 6 CONCLUSION

Magnetometer survey of fields immediately south-west of Stuchbury Manor Farm identified a possible ditch orientated south-west to north-east in the south of the development area in Field 1. Another possible ditch is known from the south of that field and possible Romano-British habitation to the south-east, so a connection between this feature and either of those is possible. Approximately half of the area available for survey in Field 2 indicated disturbance by ferrous and/or brick-type material, putatively a hardcore layer or backfill. Field 3 was made unsurveyable by the presence of a cattle herd.

## BIBLIOGRAPHY

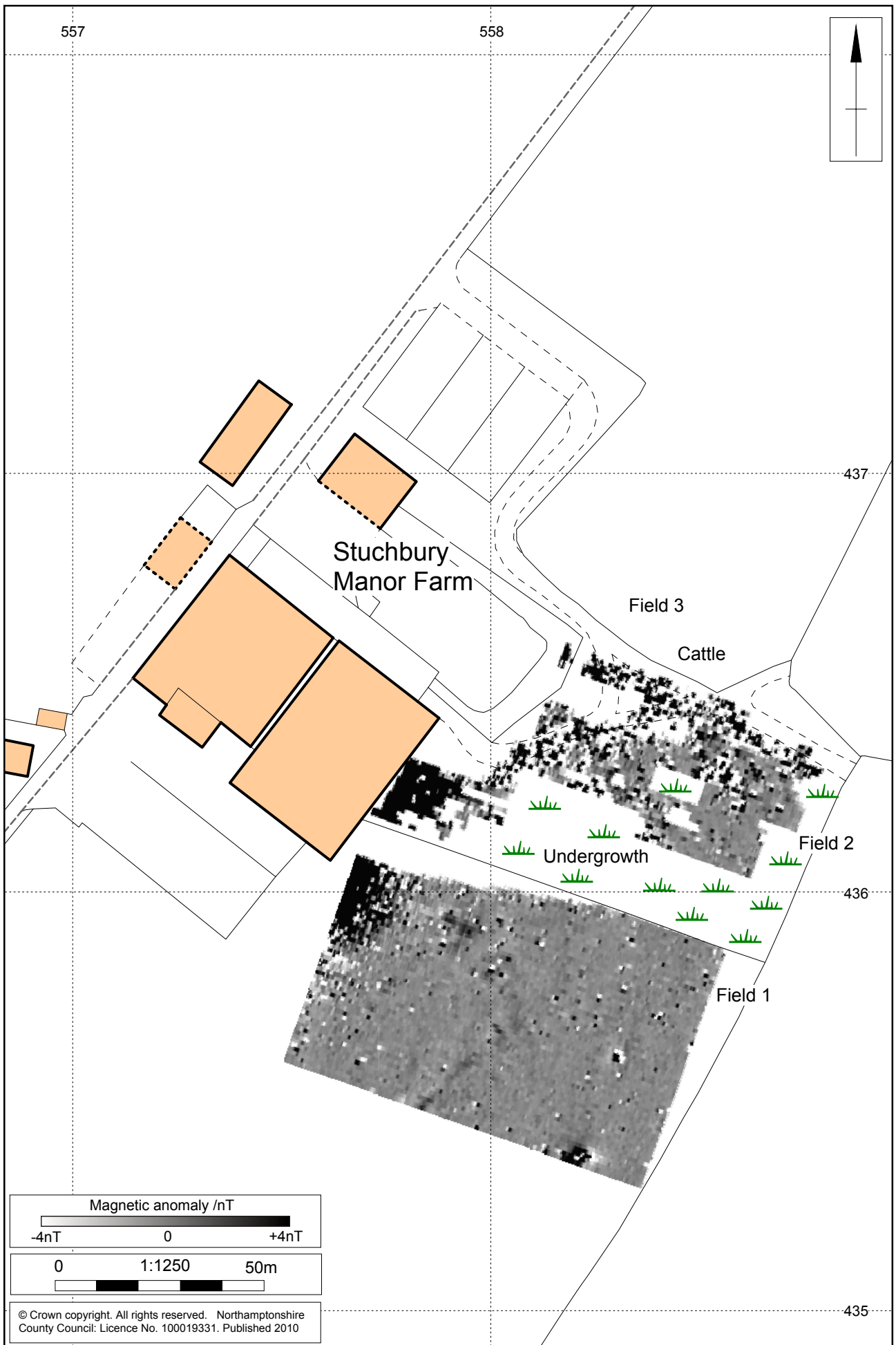
- Bartington, G, and Chapman, C, 2003 A high-stability fluxgate magnetic gradiometer for shallow geophysical survey applications, *Archaeological Prospection*, **11**, 19-34
- Clements, P 2007 *Archaeological Geophysical Survey, Anglian Water Services Thorpe Mandeville to Greatworth Pipeline, Northamptonshire*, Northamptonshire Archaeology Reports 07/200
- Gaffney, C, and Gater, J, 2003 *Revealing the Buried Past*, Tempus
- EH 2008 *Geophysical Survey in Archaeological Field Evaluation, English Heritage*
- IfA forthcoming (2011) *Standard and Guidance for Archaeological Geophysical Survey*, Institute for Archaeologists Technical Paper
- Mordue, L, 2011 *Brief for the Archaeological Field Evaluation of Land at Stuchbury Manor Farm, Greatworth, Northamptonshire*, Northamptonshire County Council Planning
- NA 2011 *Archaeological Evaluation by Geophysical Survey Land at Stuchbury Manor Farm, Greatworth, Northamptonshire, Method Statement*, Northamptonshire Archaeology
- Walker, C, 2011 *Archaeological trial trench excavation at Spring Farm Ridge, Stuchbury, Northamptonshire*, Northamptonshire Archaeology Report 11/79

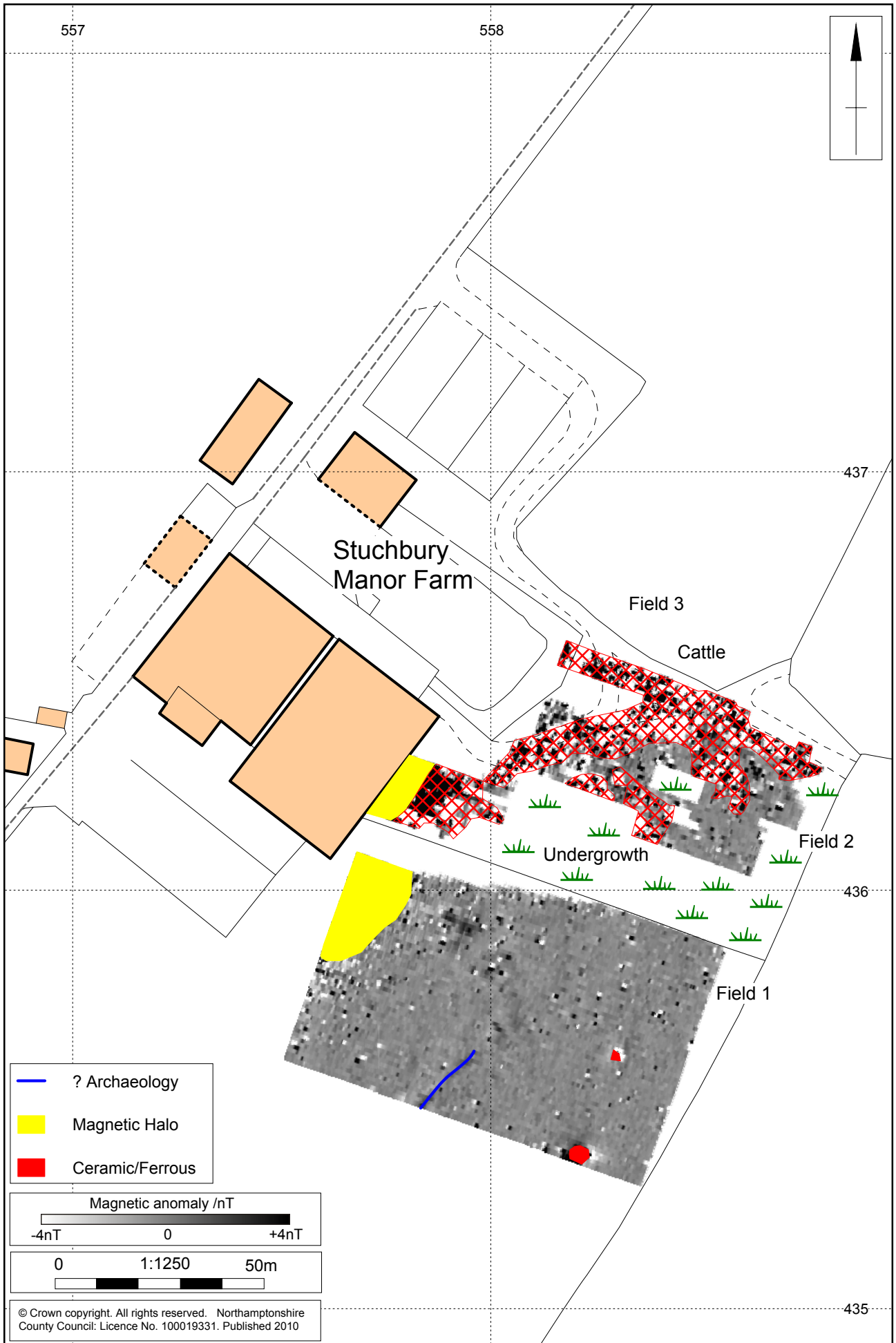


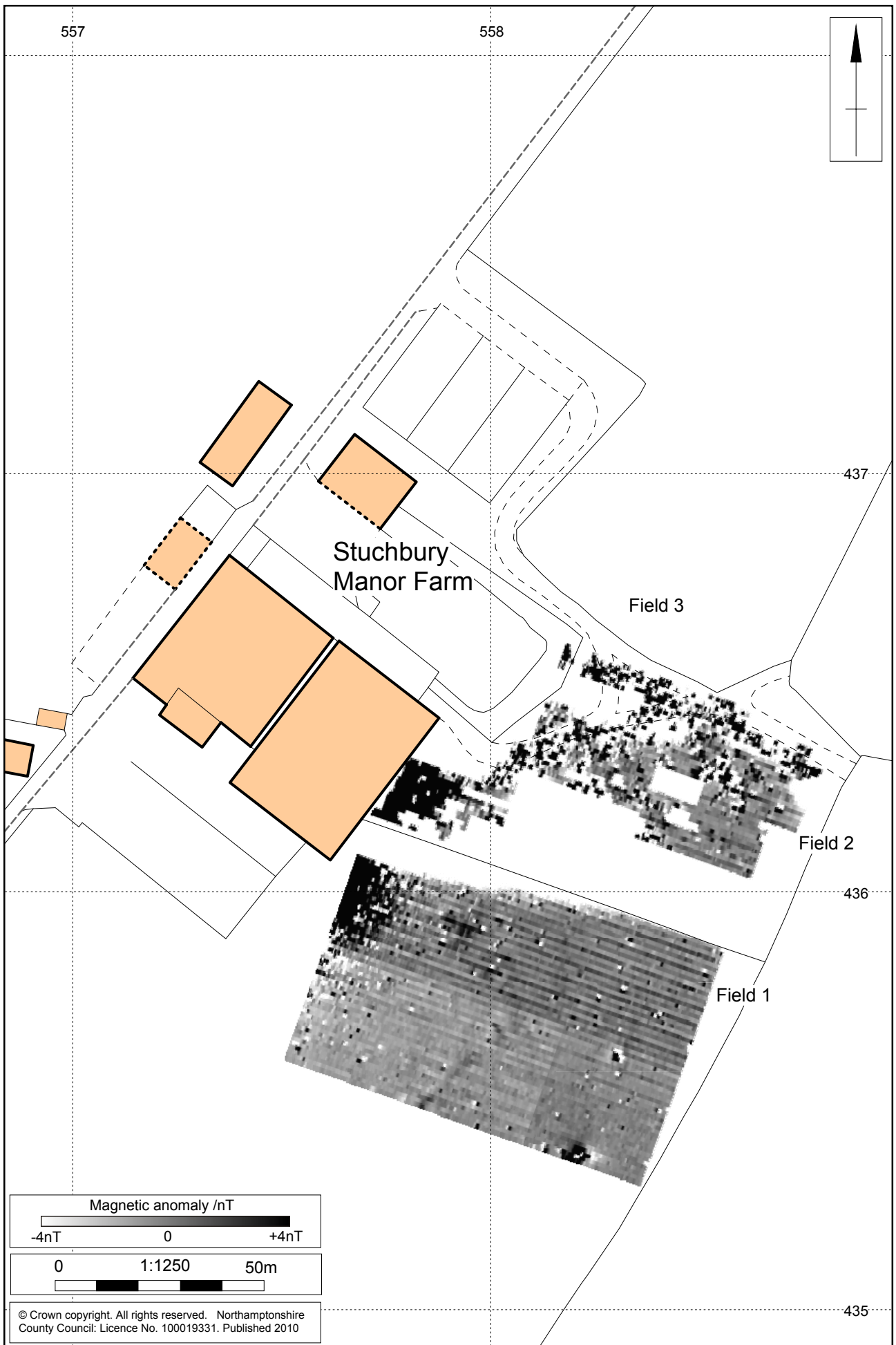
Scale 1:10,000

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](mailto:sparry@northamptonshire.gov.uk)

w. [www.northantsarchaeology.co.uk](http://www.northantsarchaeology.co.uk)



Northamptonshire  
County Council