Northamptonshire County Council

Northamptonshire Archaeology

Tithebarn Farm,

Chatteris, Cambridgeshire

Archaeological Geophysical Survey

April 2008

John Walford

May 2008

Report 08/79

ECB2900

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

REGISTERED IFA ORGANISATION

STAFF

Project Manager	Adrian Butler BSc MA AIFA
Fieldwork	John Walford MSc
	Heather Smith MSc
	Alexandra El-Ab BSc
	Paul Clements BA
	Joshua Seaman
Text	John Walford
Illustrations	John Walford

QUALITY CONTROL

	Print name	Signature	Date
Checked by	Adrian Butler		7/5/08
Verified by	Simon Carlyle		9/5/08
Approved by	Steve Parry		12/5/08

OASIS REPORT FORM

PROJECT DETAILS		
Project name	Tithebarn Farm, Chatteris, Cambridgeshire: Archaeological Geophysical Survey	
Short description (250 words maximum)	Northamptonshire Archaeology was commissioned by CgMs Consulting to conduct a geophysical survey as part of the archaeological evaluation of a proposed development site at Tithebarn Farm, Chatteris. An area of *c* 56ha was investigated by detailed magnetometer survey. This work revealed an area of late prehistoric or Roman settlement, containing two round houses and a small ditched enclosure. Further features of interest were found in an area where a Roman pottery scatter had previously been reported. An extensive area of ridge and furrow cultivation was also detected.	
Project type (eg DBA, evaluation etc)	Geophysical Survey	
Site status (none, NT, SAM etc)	None	
Previous work (SMR numbers etc)	Fieldwalking (Hall 1992, 84-95)	
Current Land use	Arable	
Future work (yes, no, unknown)	Unknown	
Monument type/ period	Iron Age or Roman round houses and enclosure, undated pits and ditches, medieval ridge and furrow cultivation.	
Significant finds (artefact type and period)		
PROJECT LOCATION		
County	Cambridgeshire	
Site address	Tithebarn Farm, Chatteris, Cambridgeshire	
Study area (sq.m or ha)	56ha	
OS Easting & Northing	TL 398 848	
Height OD	*c* 5 m AOD	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology	
Project brief originator	CgMs Consulting	
Project Design originator	Rob Bourn	
Director/Supervisor	John Walford	
Project Manager	Adrian Butler, Northamptonshire Archaeology	
Sponsor or funding body	Hallam Land Management	
PROJECT DATE		
Start date	April 2008	
End date	May 2008	
ARCHIVES	Location (Accession no.)	Content (eg pottery, animal bone etc)
Physical		
Paper	ECB2900	
Digital	Cambs.C.C	Geophysical data, GIS mapping
BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report (NA report)	
Title	Tithebarn Farm, Chatteris, Cambridgeshire: Archaeological Geophysical Survey	
Serial title & volume	NA Reports 08/79	
Author(s)	John Walford	
Page Numbers	5	
Date	May 2008	

CONTENTS

Figures

Cover Photograph: Tithebarn Farm from the east (Joshua Seaman, April 2008)

TITHEBARN FARM, CHATTERIS, CAMBRIDGESHIRE
ARCHAEOLOGICAL GEOPHYSICAL SURVEY
APRIL 2008

ABSTRACT

Northamptonshire Archaeology were commissioned by CgMs Consulting to conduct a geophysical survey as part of the archaeological evaluation of a proposed development site at Tithebarn Farm, Chatteris. An area of c 56ha was investigated by detailed magnetometer survey. This work revealed an area of late prehistoric or Roman settlement, containing two round houses and a small ditched enclosure. Further features of interest were found in an area where a Roman pottery scatter had previously been reported. An extensive area of ridge and furrow cultivation was also detected.

1 INTRODUCTION

Northamptonshire Archaeology was commissioned by CgMs Consulting, on behalf of Hallam Land Management, to conduct a geophysical survey on a proposed development site at Tithebarn Farm, Chatteris, Cambridgeshire. The site comprises *c* 56ha of arable land lying immediately south of the town (Fig 1, NGR TL 398 848).

2 ARCHAEOLOGICAL BACKGROUND

The proposed development area has previously been investigated as part of the Fenland Survey Project (Hall 1992, 84-95). Two areas of interest were identified, one a scatter of Bronze Age flint and 'rough pottery' at TL 3981 8469, and the other a scatter of Roman pottery at TL 4015 8470 (Fig 2). Furthermore, during the course of the present survey, the author was approached by a local resident who claimed to have metal detected across the area and to have recovered a number of Roman coins. He was, however, unwilling to make these available for inspection.

In the medieval period the western half of the site is known to have been under ridge and furrow cultivation, whilst the eastern part was predominantly fen (Hall 1992, fig 56). This field system was subsequently replaced by the modern fields, which probably date from the enclosure of the parish, *c* 1830.

3 TOPOGRAPHY AND GEOLOGY

The town of Chatteris occupies a large gravel island within the Fens. The proposed development area lies upon the southern part of this island, at a typical height of *c* 5m AOD. A tongue of lower land, no more than a metre or two above sea level, protrudes across the eastern half of the site. At present the area is divided into seven arable fields (Fig 1).

The surface geology of the area is composed entirely of recent drift. The higher ground is underlain by terrace gravels whilst a spread of Holocene fen deposits lies within the tongue of lower ground in the east (Fig 2). The latter are of freshwater origin, and are thought to have accumulated since the Roman period (Hall 1992, 84, figs 52-6).

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).

Each field was divided into 30m grid squares which were set out manually by tape measure and optical square. The instruments 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 was carried out in accordance with the guidelines issued by English Heritage and by the Institute of Field Archaeologists (EH 1995 & Gaffney, Gater and Ovendon 2002).

The majority of the data was processed using Geoplot 3.00s software. Striping was removed using the 'Zero Mean Traverse' function (ZMT) and destaggering of the data was performed as necessary. In some cases, however, ZMT was found to remove genuine anomalies aligned with the survey traverse direction. Where this occurred an alternative destriping procedure was employed, using a spreadsheet routine developed in-house.

The processed data is presented in this report in the form of greyscale plots (scale +3nT to -3nT black ~ white). These have been scaled, rotated and resampled (georectified) for display against the Ordnance Survey base mapping (Figs 3, 4 and 6). Interpretation plots have been overlaid onto the greyscales (Figs 5 and 7). Stacked trace plots have not been included as it was considered that they would be illegible at printing scales and uninformative to the non-specialist reader.

5 SURVEY RESULTS

Western area (Fields 1 and 2) (Figs 4 to 7)

The main group of archaeological features in this area comprises two round houses and a linear ditch with an attached enclosure, all lying towards the south-western corner of the survey area, in field 2. The presence of round houses is diagnostic of a late prehistoric or Roman settlement, and the small

enclosure perhaps represents an associated feature such as a garden plot or a livestock pen. The two round houses exhibit magnetic enhancement of the gully terminals on either side of the entrance gaps, suggesting a concentration of archaeological material in these areas.

There are a few features of probable archaeological significance elsewhere in these two fields. Towards the western edge of field 1 there are two weak linear anomalies which appear to represent lengths of ditch, and a parallel pair of linear anomalies which are probably the side ditches of a track or droveway. Elsewhere a number of pit anomalies occur, including some to the north east of the farm buildings where the scatter of Bronze Age material was previously recorded (Fig 2). The largest two of these anomalies may represent small, backfilled gravel pits of uncertain date.

Ridge and furrow occurs across almost the whole of the western part of the development area. It is bounded to the east by a ditch, the location of which coincides approximately with the edge of the medieval fen as mapped by Hall (Fig 2).

A number of linear anomalies can be related to 19th century field boundaries, which were recorded on the Ordnance Survey map of 1888 but have subsequently been removed. Other anomalies, whilst not coinciding with mapped features, are clearly part of the same system. Most of the anomalies indicate ditches, although a few, consisting of linear trends of noise, may represent ploughed out track hardcore or bank material.

Other linear anomalies in the data represent elements of field drain networks. These call for little comment, except to note that at the eastern end of field 2 they seem to lie along the furrows, suggesting that these were still visible earthworks when the drains were put in.

There are two areas of strong magnetic noise to the west of the present farm buildings. These are of uncertain origin, but presumably represent major concentrations of magnetic material, either ferrous debris or substances such as fired clay, slag or clinker. They are unlikely to be of great age, as the northern one butts against the modern farm track and neither seems to have been dispersed along the former plough furrows.

There is considerable magnetic disturbance around the farm buildings and along the field margins, much of which is due to adjacent fences and the steel frames of the barns. The remainder represents a scatter of ferrous and ceramic debris. Further ferrous anomalies occur across the site, indicating the presence of small buried pieces of iron.

The broad, prominent positive anomaly which runs from north to south across fields 1 and 2 is clearly of geological origin, but its exact cause remains uncertain. The most plausible interpretation would be to regard it as, in effect, a 'tide line', marking the maximum westward transgression of fen deposits onto the higher ground. However the possibility that it reflects some feature within the gravel make-up of the island cannot be excluded.

Eastern area (Fields 3-7) (Figs 6 and 7)

There is a small group of archaeological anomalies at the northern end of field 3, where a scatter of Roman pottery had previously been reported (Fig 2). These appear to indicate the corner of a ditched enclosure, several lengths of ditch and a single pit. The anomalies are mostly weak and indistinct, suggesting that they may be masked by an overlying layer of fen deposits.

Field 4 contains three weak linear anomalies, in a dog-leg configuration, and two anomalies which appear to represent pits. Other possible pit anomalies occur in fields 6 and 7. The linear anomalies, which are of uncertain date, probably represent a former set of field boundary ditches.

A chain of irregular anomalies was detected in field 7. This does not resemble any common archaeological feature and is tentatively suggested to be of geological origin. The same field also contains two areas of magnetic noise which probably relate to scatters of modern ceramic material (brick, tile etc) observed on the field surface.

All the fields in this area contain field drain anomalies, with the exception of field 6. The linear anomalies in this latter field are enigmatic, but their spacing resembles tractor tramlines, suggesting that they are of modern agricultural origin.

6 CONCLUSION

This survey has revealed two archaeological sites within the development area, and also some isolated archaeological features. One of the sites comprises a small ditched enclosure and a pair of round houses, all of which are probably of late prehistoric or Roman date. The other site is poorly defined but appears to include at least one ditched enclosure and a number of other features, for which, in the light of the earlier fieldwalking evidence, a Roman date may be suggested. In addition to these discoveries, the layout and extent of the former open field system has been defined.

As is always the case with archaeological geophysical work, it is important to consider the

limitations of the technique employed. In this case the main issues are the difficulty of detecting small or ephemeral features, such as cremation deposits or post built structures, and the possibility that features may be invisible if masked beneath later deposits of peat or alluvium. Hence, whilst the results of this survey will give a broadly accurate impression of the underlying archaeology, they may not be definitive.

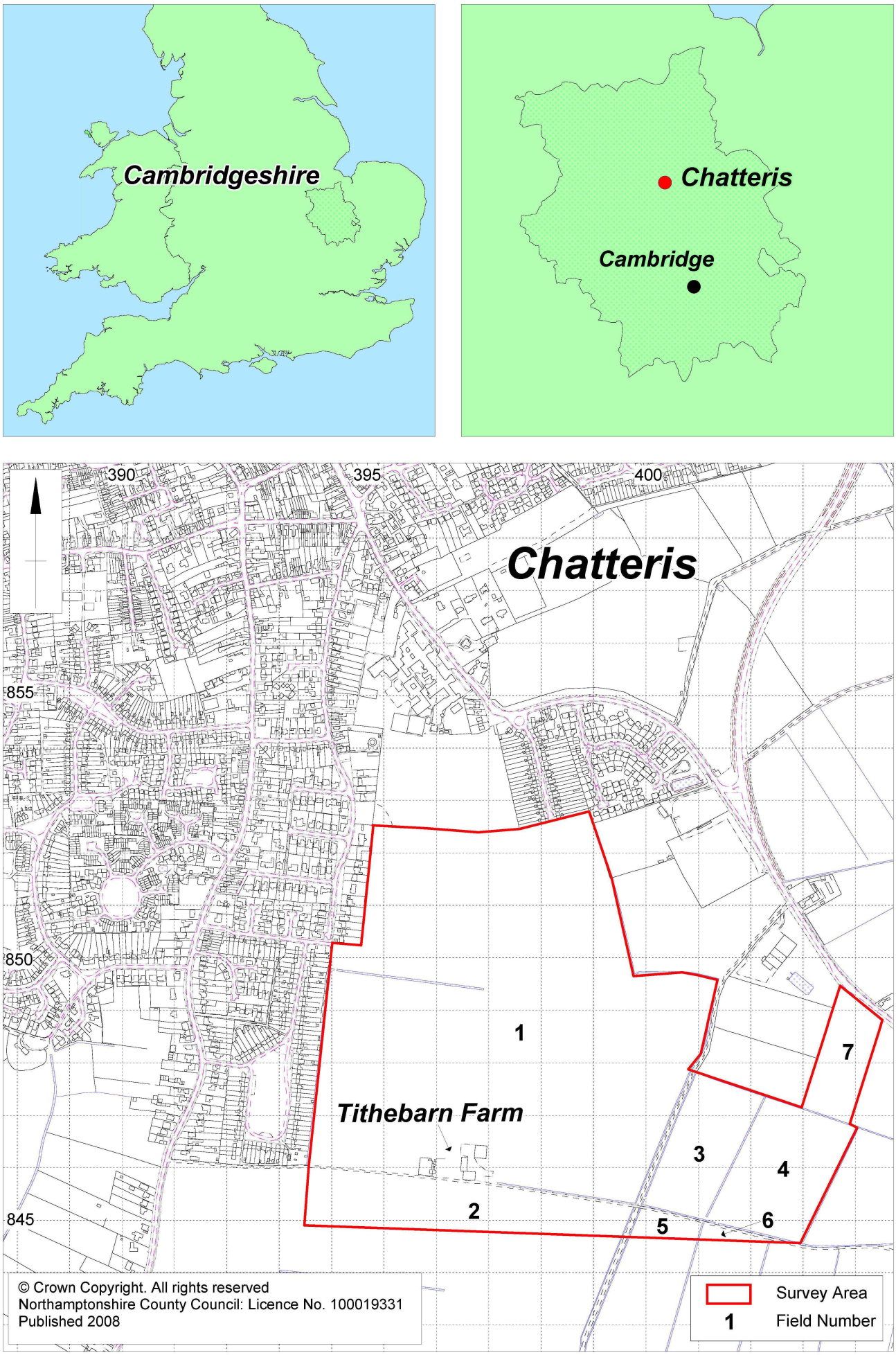
BIBLIOGRAPHY

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

EH, 1995 *Geophysical Survey in Archaeological Field Evaluation*, English Heritage, Research and Professional Services Guideline, **1**

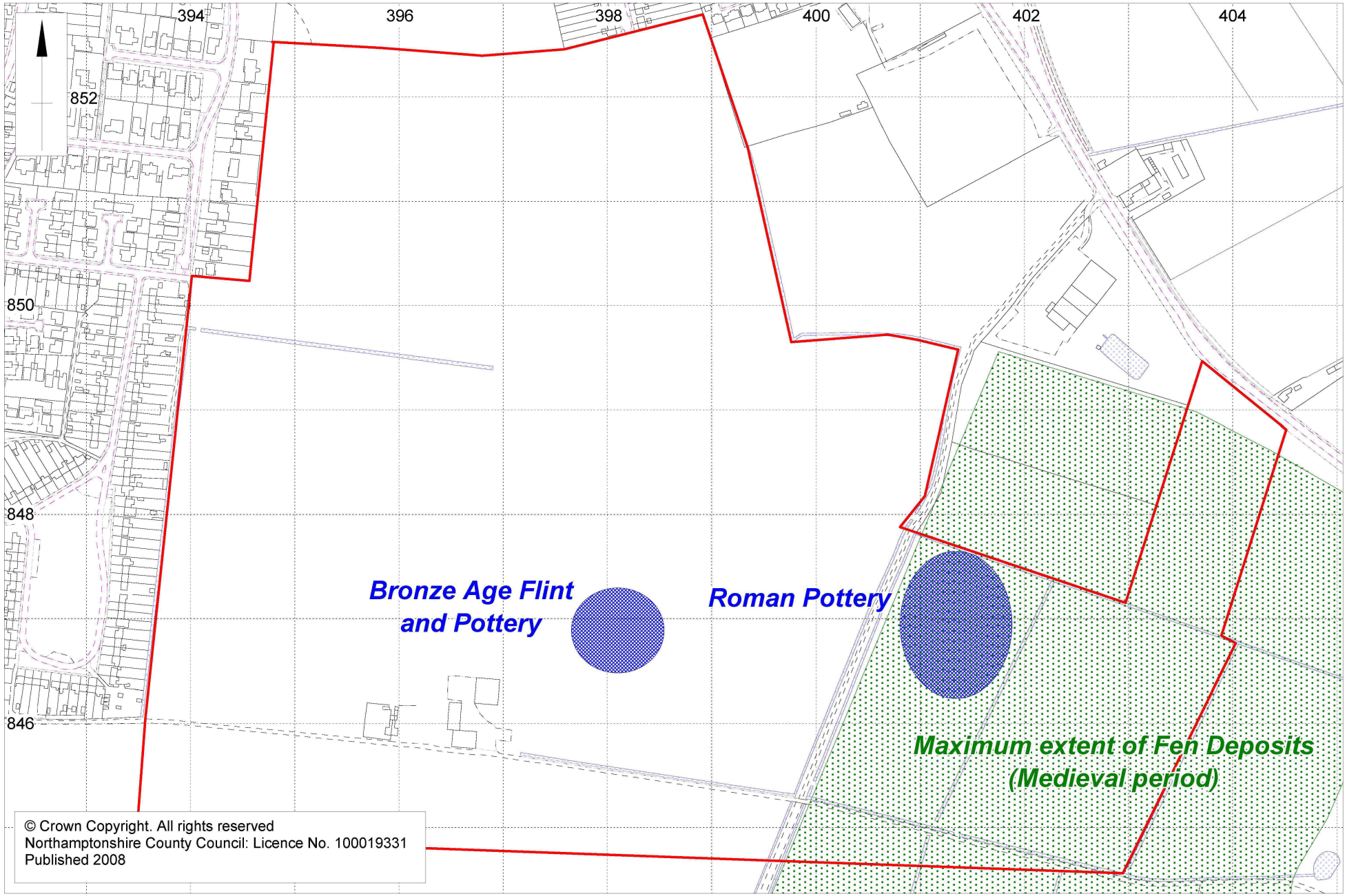
Gaffney, C, Gater, J, and Ovendon, S, 2002 *The Use of Geophysical Techniques in Archaeological Evaluations*, Institute of Field Archaeologists, Technical Paper, **6**

Hall, D, 1992 *The Fenland Project, Number 6: The South-Western Cambridgeshire Fenlands*, East Anglian Archaeology Report, **56**



Scale 1: 10,000

Site location Fig 1



Scale 1: 5000

Previous Archaeological Information, after Hall 1992 Fig 2

Scale 1: 5000

Overview of Magnetometer Data Fig 3

394
396
398
852
850
848
846
844
Field Numbers
1
2
3
4
5
6
7
Magnetic anomaly strength
-3nT
0
3nT

Scale 1: 2500
Magnetometer Data (West) Fig 4

394
396
398
852
850
848
846
844
Field Numbers
1
2
3
4
5
6
7
Archaeological feature (Ditch)
Archaeological feature (Pit)
Recent field boundary
Ridge and Furrow
Field Drain
Geological feature
Magnetic noise
Ferrous object / halo

Scale 1: 2500
Interpretation of Magnetometer Data (West) Fig 5

396
398
400
402
404
850
848
846
Magnetic anomaly strength
-3nT
0
3nT
Field Numbers
1
2
3
4
5
6
7

Scale 1: 2500

Magnetometer Data (East) Fig 6

396
398
400
402
404
850
848
846

Archaeological feature (Ditch)
Archaeological feature (Pit)
Recent field boundary
Ridge and Furrow
Field Drain
Modern agricultural feature
Geological feature
Magnetic noise
Ferrous object / halo

Field Numbers
1
2
3
4
5
6
7

Scale 1: 2500

Interpretation of Magnetometer Data (East) Fig 7