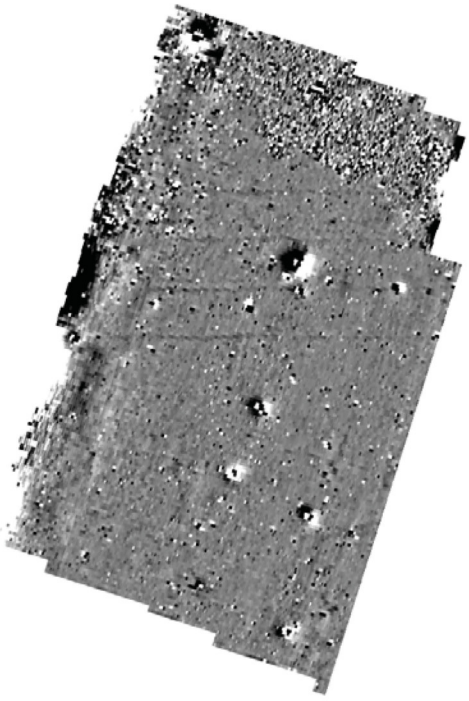
Northamptonshire Archaeology

Archaeological Geophysical Survey of land to the east of Eldernell Lane, Coates, Cambridgeshire



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Report 10/208
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OASIS REPORT FORM

PROJECT DETAILS		
Project name	Archaeological Geophysical Survey of land to the east of Eldernell Lane, Coates, Cambridgeshire	
Short description	Northamptonshire Archaeology was commissioned by CgMs Consulting to carry out a magnetometer survey on 2ha of land to the east of Eldernell Lane, Coates, Cambridgeshire. Four linear features of probable modern agricultural origin were detected as were numerous pieces of buried iron debris. Nothing of archaeological interest was identified by the survey.	
Project type	Geophysical survey	
Site status	None	
Previous work	Unknown	
Current Land use	Arable	
Future work	Unknown	
Monument type/ period		
Significant finds	None	
PROJECT LOCATION		
County	Cambridgeshire	
Site address	PJ Thory Ltd, Eldernell Lane, Coates, near Willingham	
Study area	2ha	
OS Easting & Northing	SK 659 039	
Height OD	1m - 3m AOD	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology (NA)	
Project brief originator	CgMs Consulting	
Project Design originator	NA	
Director/Supervisor	John Walford	
Project Manager	Adrian Butler	
Sponsor or funding body	CgMs Consulting	
PROJECT DATE		
Start date	08 November 2010	
End date	06 December 2010	
ARCHIVES	Location	Content
Physical	N/A	
Paper	NA	Site survey records
Digital	NA	Geophysical survey & GIS data
BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report	
Title	Archaeological Geophysical Survey of land at Eldernell Lane, Coates, Cambridgeshire	
Serial title & volume	Northamptonshire Archaeology Reports 10/208	
Author(s)	Paul Clements & Adrian Butler	
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ARCHAEOLOGICAL GEOPHYSICAL SURVEY OF LAND TO THE EAST OF ELDERNELL LANE, COATES, CAMBRIDGESHIRE

NOVEMBER 2010

ABSTRACT

Northamptonshire Archaeology was commissioned by CgMs Consulting to carry out a magnetometer survey on 2ha of land to the east of Eldernell Lane, Coates, Cambridgeshire. Four linear features of probable modern agricultural origin were detected as were numerous pieces of buried iron debris. Nothing of archaeological interest was identified by the survey.

1 INTRODUCTION

Northamptonshire Archaeology (NA) was commissioned by CgMs Consulting, acting on behalf of PJ Thory Ltd, to carry out an archaeological geophysical survey of 2ha of land to the east of Eldernell Lane, Coates, Cambridgeshire. The fieldwork, which comprised a detailed magnetometer survey, was carried out in November 2010.

2 TOPOGRAPHY AND GEOLOGY

The site is located on the eastern edge of the hamlet of Coates, approximately 1.5km east of Whittlesea, Cambridgeshire (NGR: SP 319 978, Fig 1). Specifically the survey area was on the edge of a fenland island, at an elevation of between 1m and 3m AOD. Open drains surround the west, north and east sides of this arable field. A depot is situated to the west and north and open fields to the east and south. Farm machinery was located in the north-west corner of the site and a bank of soil in the north-east.

The soil is of variable character, with a mix of shells and gravels. In places it appeared very dark and peaty. The geology of the survey area comprises Oxford Clays overlain by March Gravels and Peat. The site is situated close to the boundary of the two. (BGS 2010)

3 ARCHAEOLOGICAL BACKGROUND

The village of Coates occupies a low gravel island which seems to have been a focus of Ppehistoric and Romano-British activity. Several finds of Roman material have been found within the local vicinity of the survey area, including coins, pottery and a quern.

The first edition Ordnance Survey map depicts a small sheepfold in the south-western corner of the survey area. It is also marked with the name “The Lipneas”, which seems to apply to a group of fields, including the present survey area, lying to the east of the Eldernell Lane.

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 survey area was divided into a grid of 30m x 30m squares which were established by means of a tape measure and optical square and were tied into the national grid by measurement to the adjacent field boundaries. The locations of the baselines were subsequently recorded 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 grid.

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

The 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 destaggering of the data was performed as necessary.

The processed data is presented in this report in the form of greyscale plots (+/- 4nT black/white). These have been scaled, rotated and resampled (georectified) for display against the Ordnance Survey base mapping (Fig 2). Interpretative overlays have been produced and are shown in Figure 3.

5 SURVEY RESULTS

The north-east end of the survey contained an area of magnetic noise. It is likely that this is the result of a spoil heap noted in the eastern corner, having been spread across this part of the field. The spread probably contains some ferrous and thermoremnantly magnetised content such as nails and brick debris. The western boundary of the survey area is affected by the large positive and negative magnetic shadows cast by a steel fence and modern buildings in the depot adjacent to the western extent of the survey. A large ferrous anomaly in the north-western corner of the site was caused by interference from parked farm equipment.

Five intense dipolar anomalies were detected south of the noisy area. These exhibit the high central positive and negative halo characteristic of vertically magnetised ferrous anomalies. They are likely to be large pieces of iron debris contained in the topsoil, possibly stemming from farming material. Small dipolar ferrous magnetic anomalies were detected across the entire area.

Four narrow, weakly positive linear anomalies were identified on an east to west alignment across the northern half of the area. They could be the result of modern agricultural disturbance.

6 CONCLUSION

No archaeological features were identified within the survey area. Four linear features likely caused by modern agricultural disturbance were identified as were several large ferrous objects. The area of disturbance towards the north of the survey area is likely a spread of material from either the spoil heap or of a spread of material extracted from the ditch.

Although no archaeological features were identifiable certain types of feature (eg inhumations, post-built structures, etc) rarely produce clear magnetic anomalies at the

sampling used in this survey. Thus the results presented here do not necessarily provide a comprehensive overview of the archaeology of the proposed development area.

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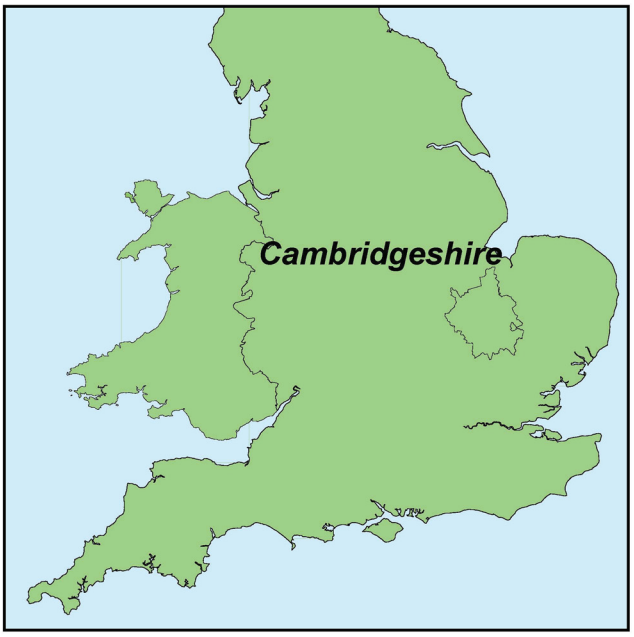
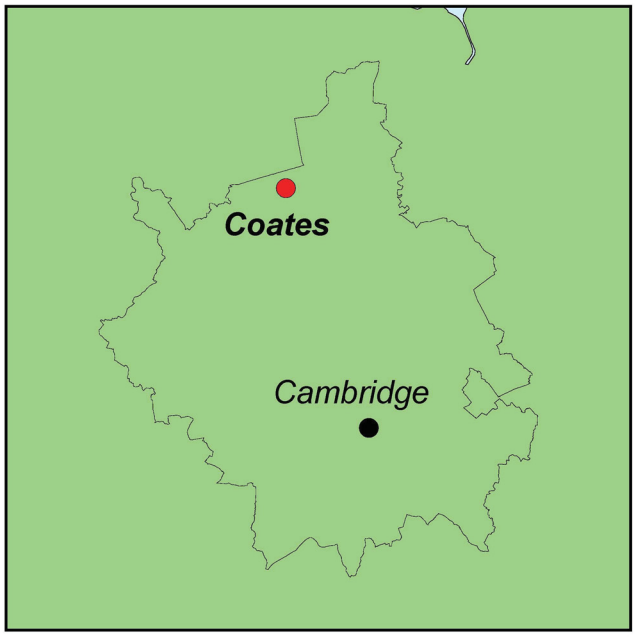
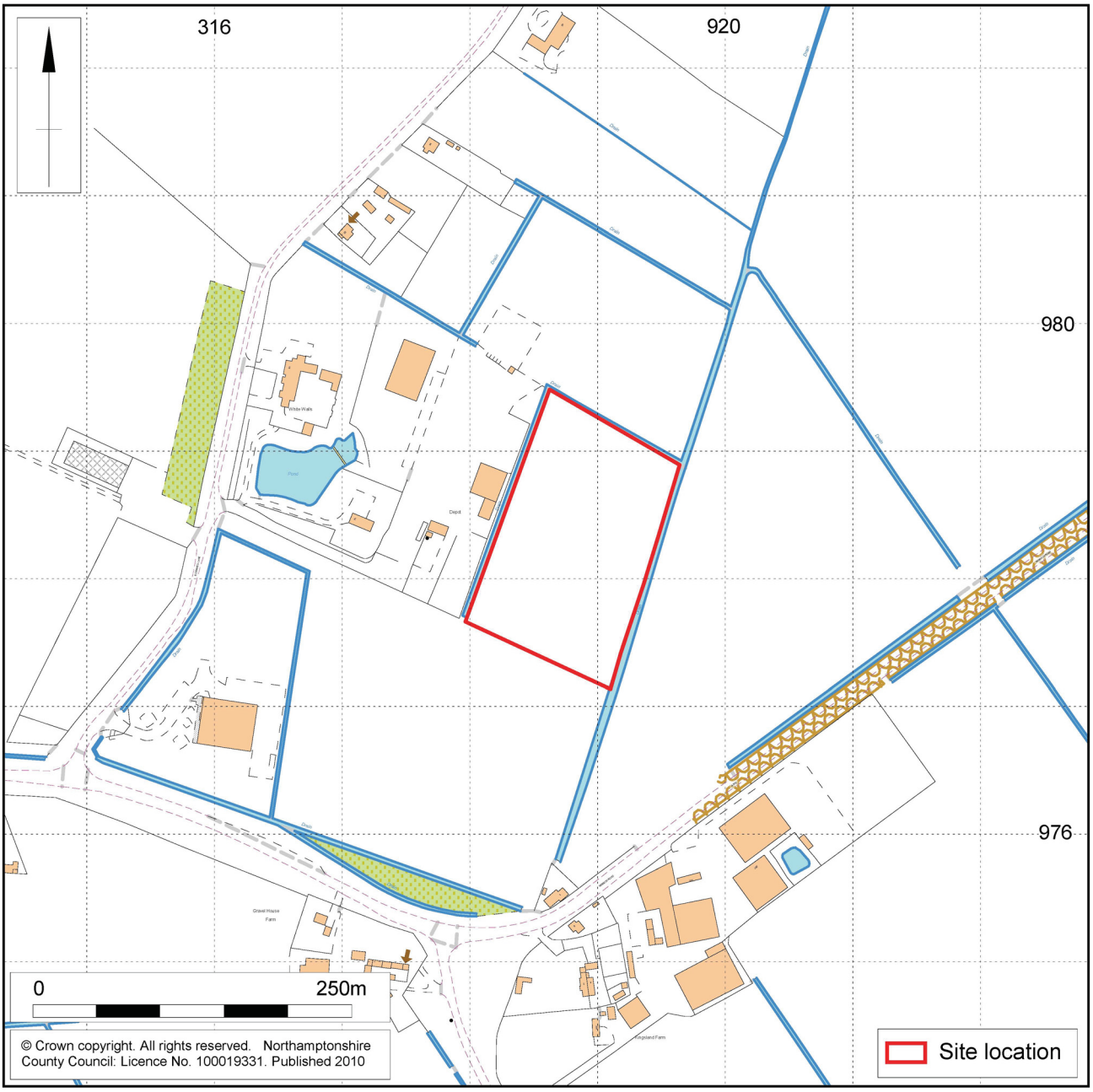
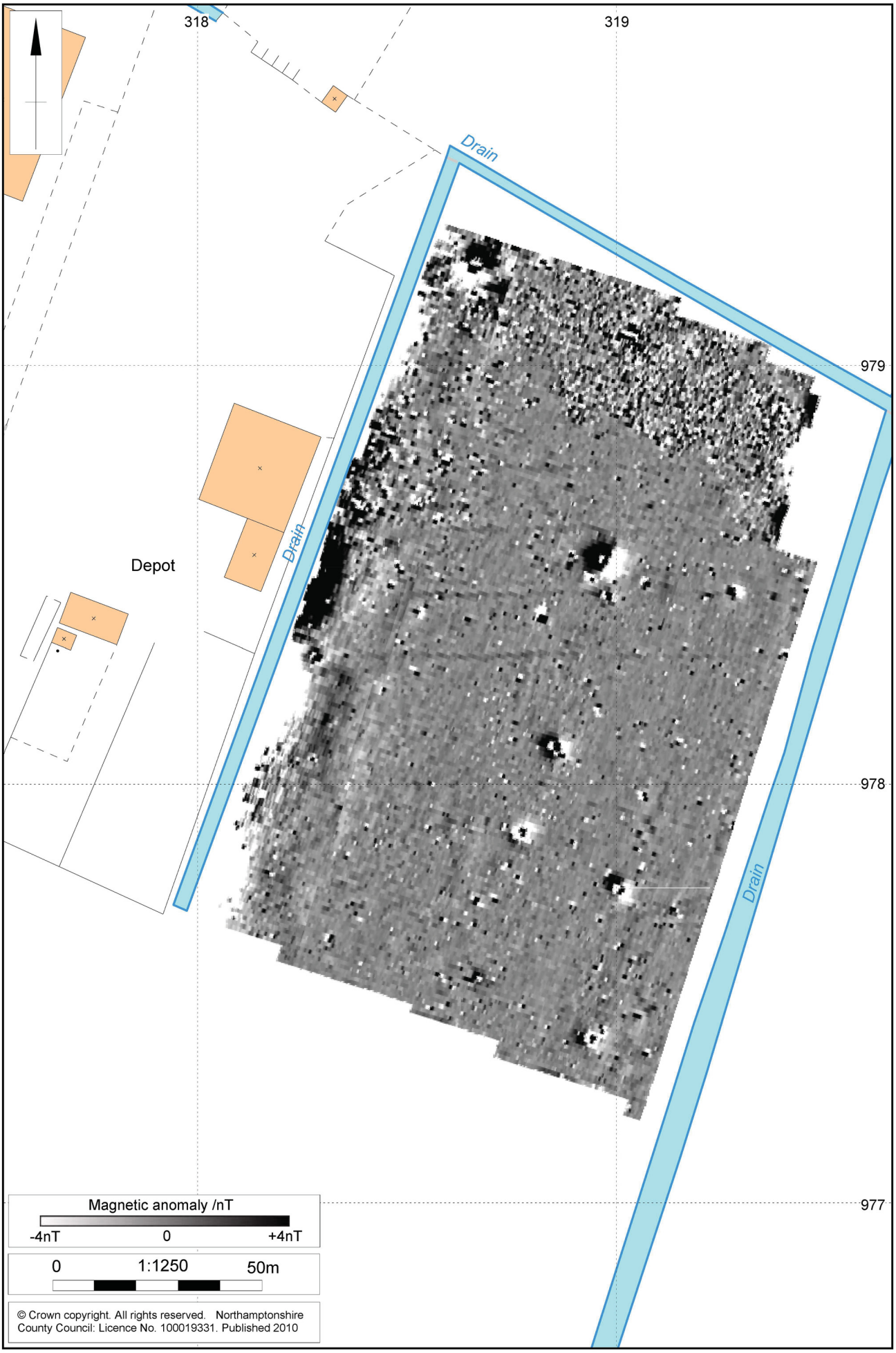






Scale 1:5000

Site location Fig 1



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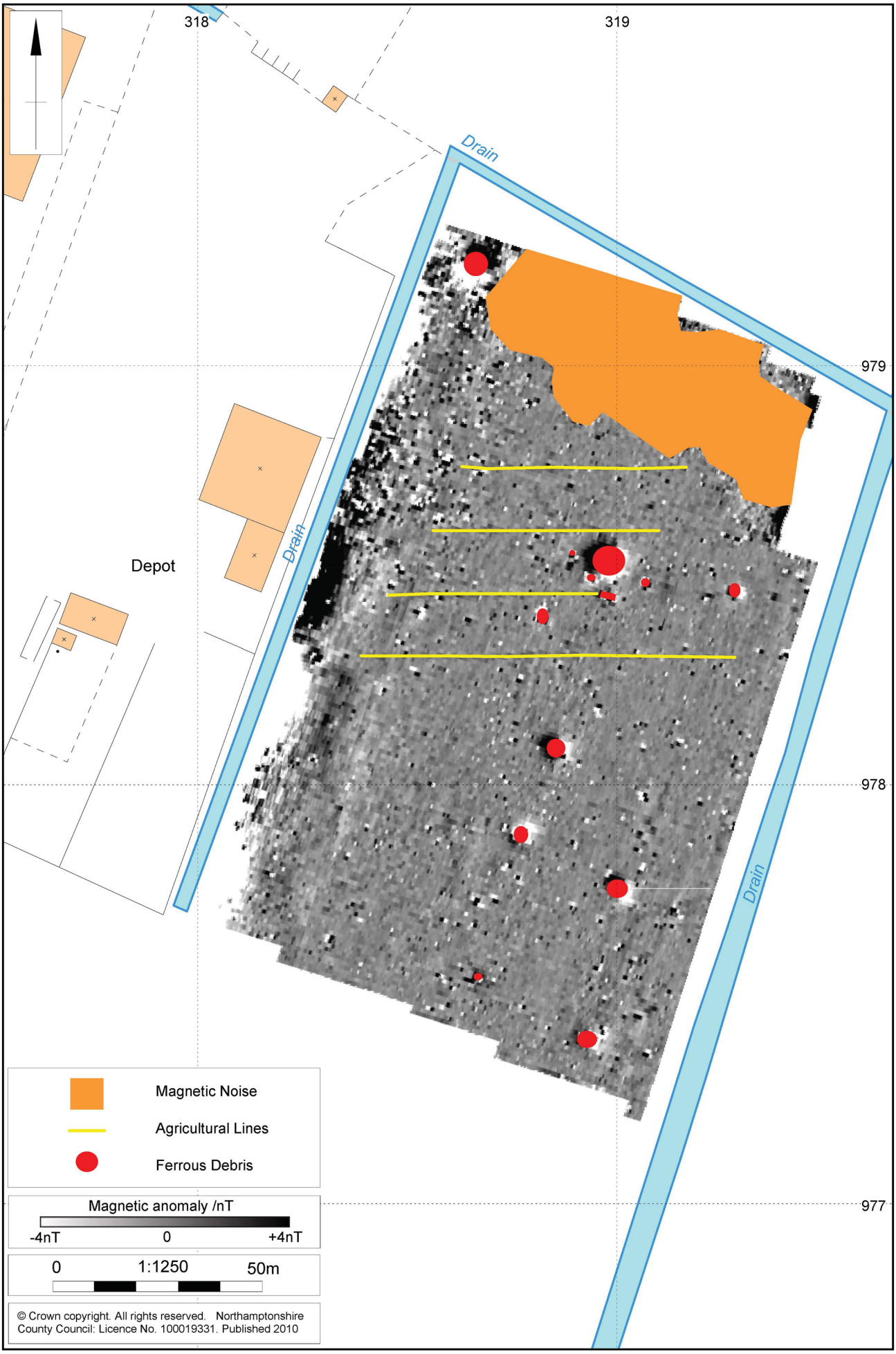
Magnetometer Survey Results Fig 2



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Magnetometer Survey Interpretation Fig 3

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