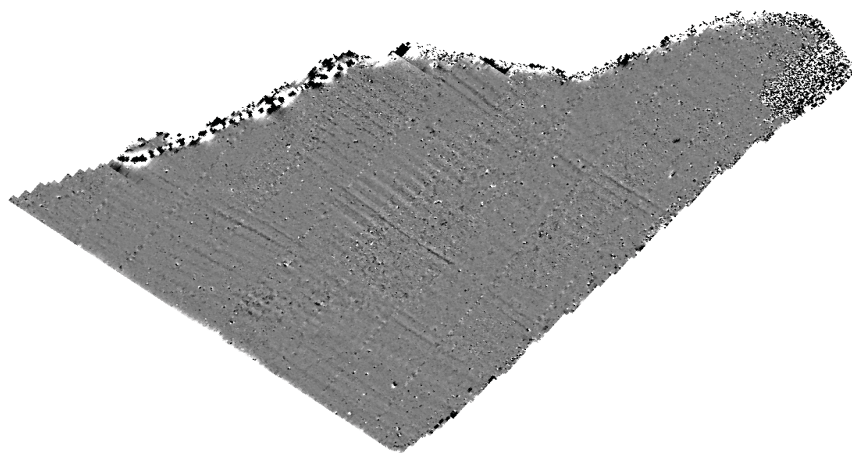




Northamptonshire Archaeology

Archaeological geophysical survey on land at Drayton Road, Newton Leys, Buckinghamshire



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Report 10/57

March 2010



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QUALITY CONTROL

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Checked by	Pat Chapman	<i>PC</i>	01/04/10
Verified & Approved by	Steve Parry	<i>SP</i>	01/04/10

OASIS REPORT FORM

PROJECT DETAILS		
Project name	Archaeological Geophysical Survey on land at Drayton Road, Newton Leys, Buckinghamshire	
Short description	Northamptonshire Archaeology was commissioned by O&H Properties Ltd for Terence O'Rourke Ltd to conduct archaeological geophysical survey on land at Drayton Road, Newton Leys. Magnetometry of a 12.9ha area revealed faint evidence for a curvilinear and an 'L-shaped' ditched feature. There was no evidence of the truncated middle Iron Age drainage ditches identified during the excavation of the adjacent access road. Medieval ridge-and-furrow was present across the entire area and this may be masking the earlier archaeology.	
Project type	Geophysical survey	
Site status	None	
Previous work	Unknown	
Current Land use	Arable and pasture	
Future work	Unknown	
Monument type/ period	Medieval ridge-and-furrow	
Significant finds	None	
PROJECT LOCATION		
County	Buckinghamshire	
Site address	Drayton Road, Newton Leys	
Study area	12.9ha	
OS Easting & Northing	48692 23093	
Height OD	96m AOD	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology (NA)	
Project brief originator	Buckinghamshire County Archaeological Service	
Project Design originator	Northamptonshire Archaeology	
Director/Supervisor	John Walford	
Project Manager	Adrian Butler	
Sponsor or funding body	Terence O'Rourke Ltd	
PROJECT DATE		
Start date	15 March 2010	
End date	18 March 2010	
ARCHIVES	Location	Content
Physical	N/A	
Paper	NA	Site survey records
Digital	NA	Geophysical survey & GIS data
BIBLIOGRAPHY		
Title	Archaeological Geophysical Survey on land at Drayton Road, Newton Leys, Buckinghamshire	
Serial title & volume	Northamptonshire Archaeology Reports 10/57	
Author(s)	Charlotte Walker and Ian Fisher	
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Fig 3 Magnetometer Survey Interpretation: Newton Leys, Drayton Road, 1:2500

**ARCHAEOLOGICAL GEOPHYSICAL SURVEY ON LAND AT
DRAYTON ROAD, NEWTON LEYS, BUCKINGHAMSHIRE
MARCH 2010**

ABSTRACT

Northamptonshire Archaeology was commissioned by O&H Properties Ltd, for Terence O'Rourke Ltd, to conduct archaeological geophysical survey on land at Drayton Road, Newton Leys. Magnetometry of a 12.9ha area revealed faint evidence for a curvilinear and an 'L-shaped' ditched feature. There was no evidence of the truncated middle Iron Age drainage ditches identified during the excavation of the adjacent access road. Medieval ridge-and-furrow was present across the entire area.

1 INTRODUCTION

Northamptonshire Archaeology was commissioned by O&H Properties Ltd (for submission to Terence O'Rourke Ltd for Environmental Impact Assessment), to carry out a geophysical survey on land at Drayton Road, Newton Leys (NGR SP 8692 3093; Fig 1). Buckinghamshire County Archaeological Service advised that a detailed magnetometer survey should be undertaken due to the potential for late Neolithic/early Bronze Age and late Iron Age/Roman deposits (Beckley 2010). The methodology for the geophysical survey was set out in the Written Scheme of Investigation prepared by NA (2010).

The objectives of the geophysical survey were to identify the presence or absence of archaeological remains within the proposed development area. The fieldwork consisted of an area magnetic gradiometer survey in three fields totalling 12.9ha (Fig 2).

2 TOPOGRAPHY AND GEOLOGY

The site is situated to the north of Drayton Road on the south-western edge of Bletchley. The boundary between the county of Buckinghamshire and Milton Keynes Unitary Authority marks the northern boundary of the site. Eaton Brook lies just over a 100m to the north of the area.

The investigation site covers a roughly rectangular area of land and is spread over three fields, subdivided by roads into the new development to the north. The fields are currently in agricultural use.

The underlying geology of the area predominately comprises Chalky Boulder Clay with outcrops of Oxford Clay and Lacustrine deposits (Brown 2009). The site lies at approximately 96m aOD.

3 ARCHAEOLOGICAL BACKGROUND

A staged program of archaeological investigation under the umbrella of Milton Keynes Council was conducted on land immediately to the north of the Drayton Road site. This initially comprised fieldwalking by Buckingham Museum Service in 1995 and a desk-based assessment by Oxford Archaeological Associates (OAA 2002). Following on from this, Northamptonshire Archaeology undertook geophysical survey (Holmes 2006), and trial trenching (Burrow 2006). In light of the findings of the evaluation stage Northamptonshire Archaeology conducted an area excavation on approximately c 1.6ha of land to the north and for the access road through the present application area (Fig 1).

The excavation was undertaken in 2007 and uncovered the remains of a middle Iron Age marginal settlement including a series of roundhouses with associated enclosures (Brown 2009, Brown forthcoming). There were a series of truncated middle Iron Age ditches in the access road corridor probably forming an extension of the drainage pattern found to the north. By the late Iron Age the land had reverted to marshland and the enclosures were abandoned.

It was considered that the land was subject to flooding from the period of Roman occupation until the onset of medieval open field system. A post-medieval ditch marked the boundary between the marginal land next to Eaton Brook and well drained arable land to the south.

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 area was split into Fields 1 to 3, with each of these divided into a network of whole and partial, 30m x 30m grid squares, totalling 165 grids. These 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 for Archaeology (EH 2008; Gaffney, Gater and Ovendon 2002).

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

The processed data is presented in this report in the form of a greyscale plot (scale +4nT to -4nT black ~ white). This has 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 in Figure 3.

5 SURVEY RESULTS

The major detected magnetic anomalies at Drayton Road were alternate linear positive and negative bands. These anomalies represent a ridge and furrow cultivation pattern and are present in all three fields. In Fields 2 and 3 they were orientated north-west to south-east, whereas in Field 1 they were orientated more west-north-west to east-south-east.

There was a weakly positive curvilinear anomaly in Field 1. It is possible that this represents part of a ring ditch. A very weakly positive L-shaped anomaly was detected in the western part of Field 3. It is possible that this reflects a further part of the drainage pattern identified to the north and east.

A strongly dipolar anomaly at the northern boundary of Fields 2 and 3 was caused by Heras fencing and a newt-proof barrier. Areas of magnetic disturbance bordering the access road were a result of its recent construction. An area of magnetic disturbance at the north-eastern corner of Field 3 was caused by a large spread of modern brick rubble. In Field 3 it appears that ceramic field drains, chains of small dipolar anomalies, have been placed perpendicular to the furrows.

6 CONCLUSION

The magnetometer survey at Drayton Road produced very little evidence of archaeological features despite a series of truncated drainage ditches being found during the construction of the access road. It is possible that the medieval ridge and furrow is masking the earlier archaeological deposits. There was some evidence for the presence of a curvilinear ditch in Field 1 and a L-shaped feature in the western part of Field 3.

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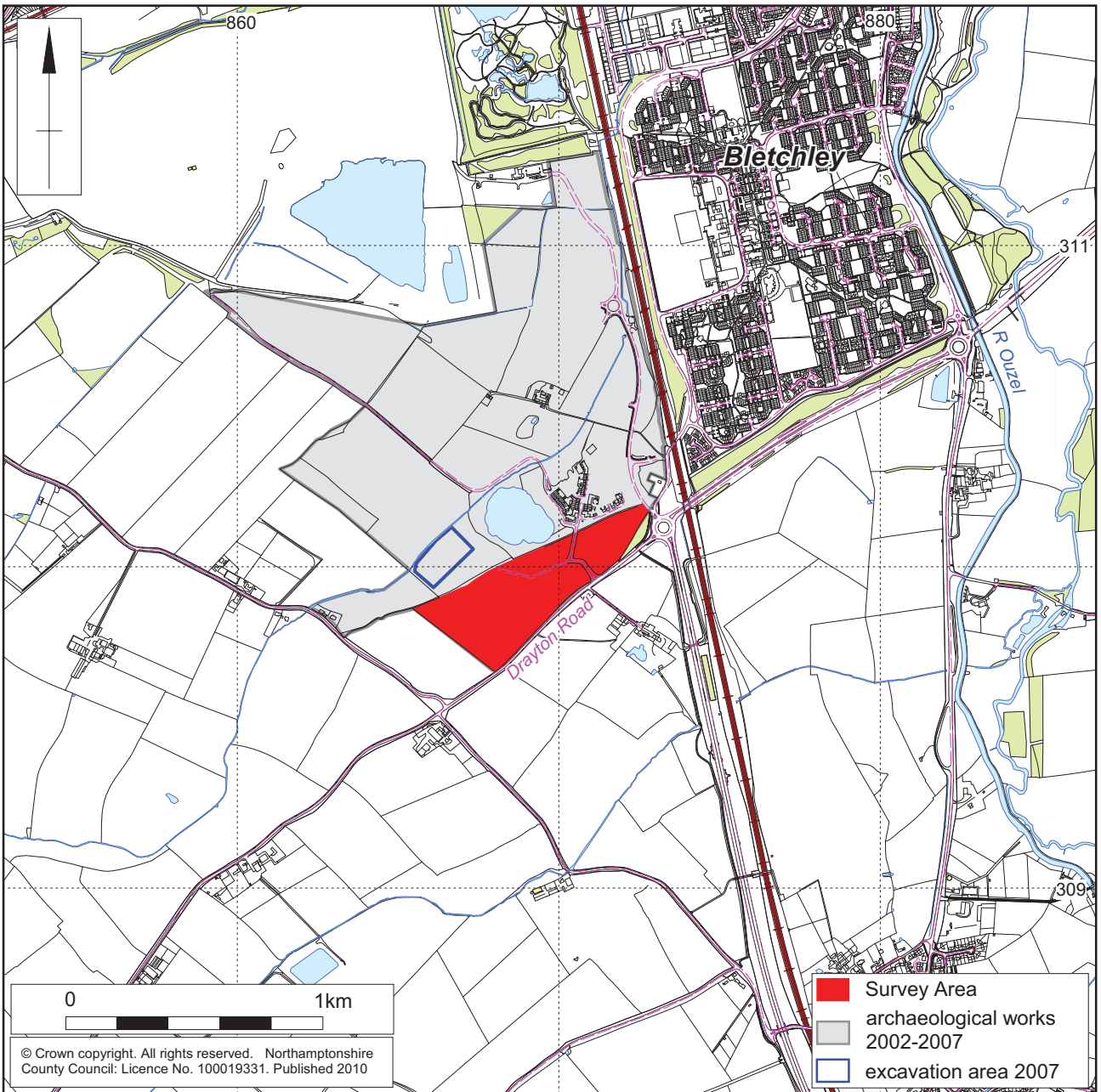
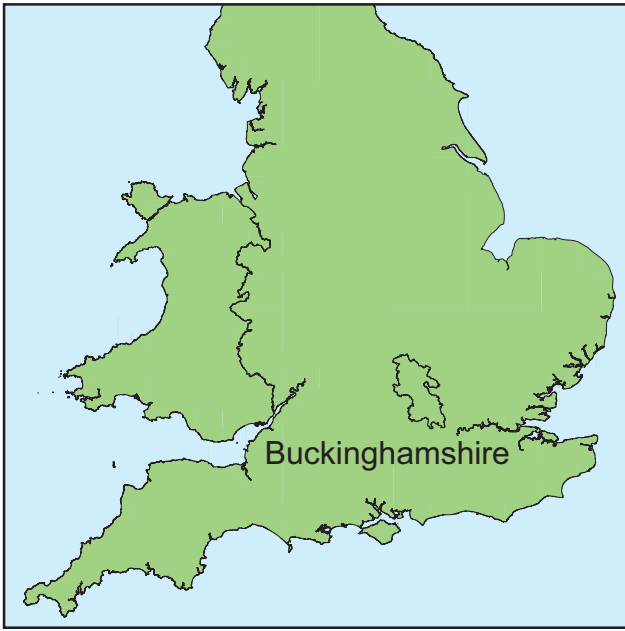
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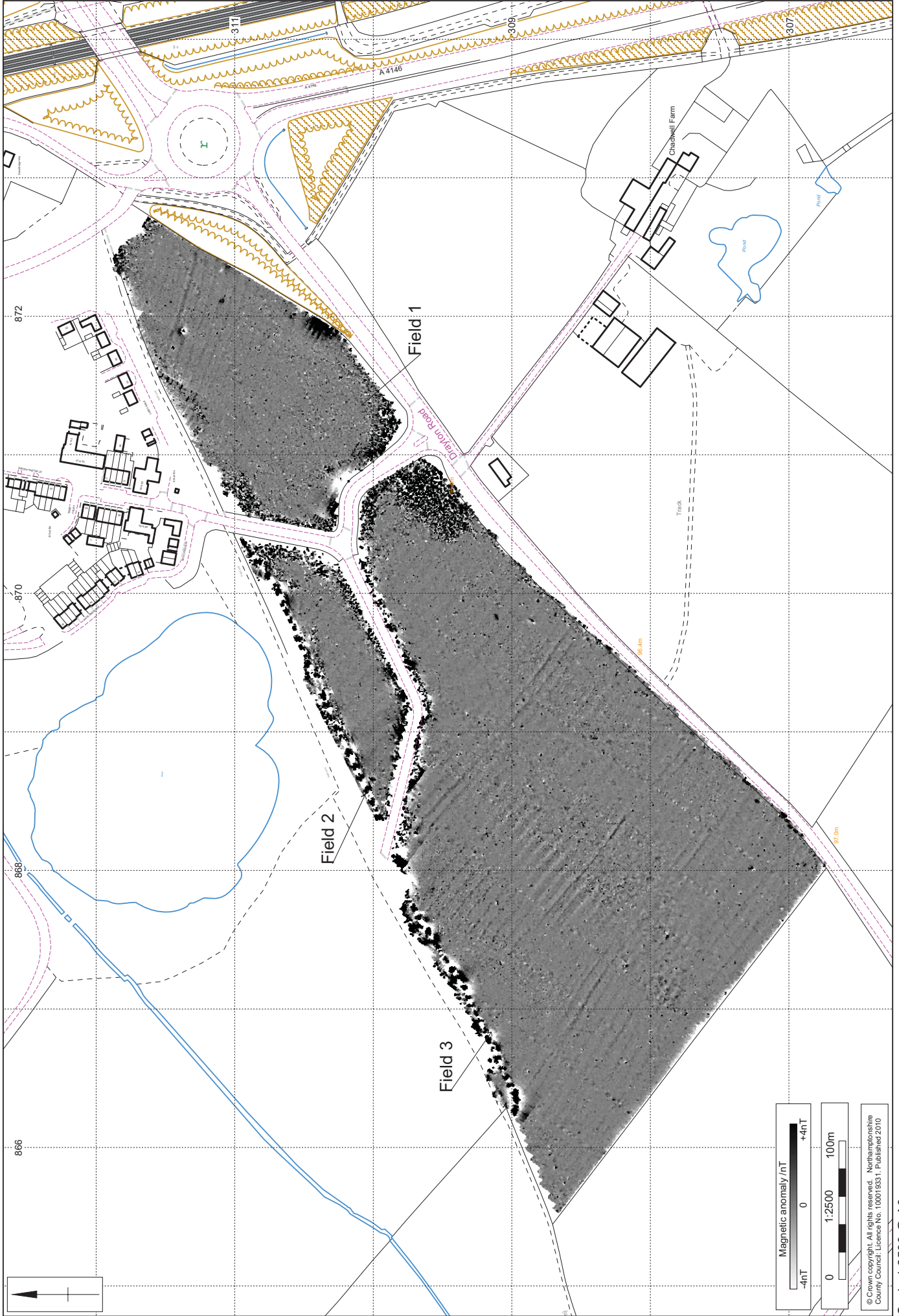
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OAA 2002 *Newton Leys, Environmental Statement Technical Appendix VII Cultural Heritage*, Oxford Archaeological Associates



1:25,000

Site Location Fig 1



Magnetometer Survey Results: Newton Leys, Drayton Road Fig 2

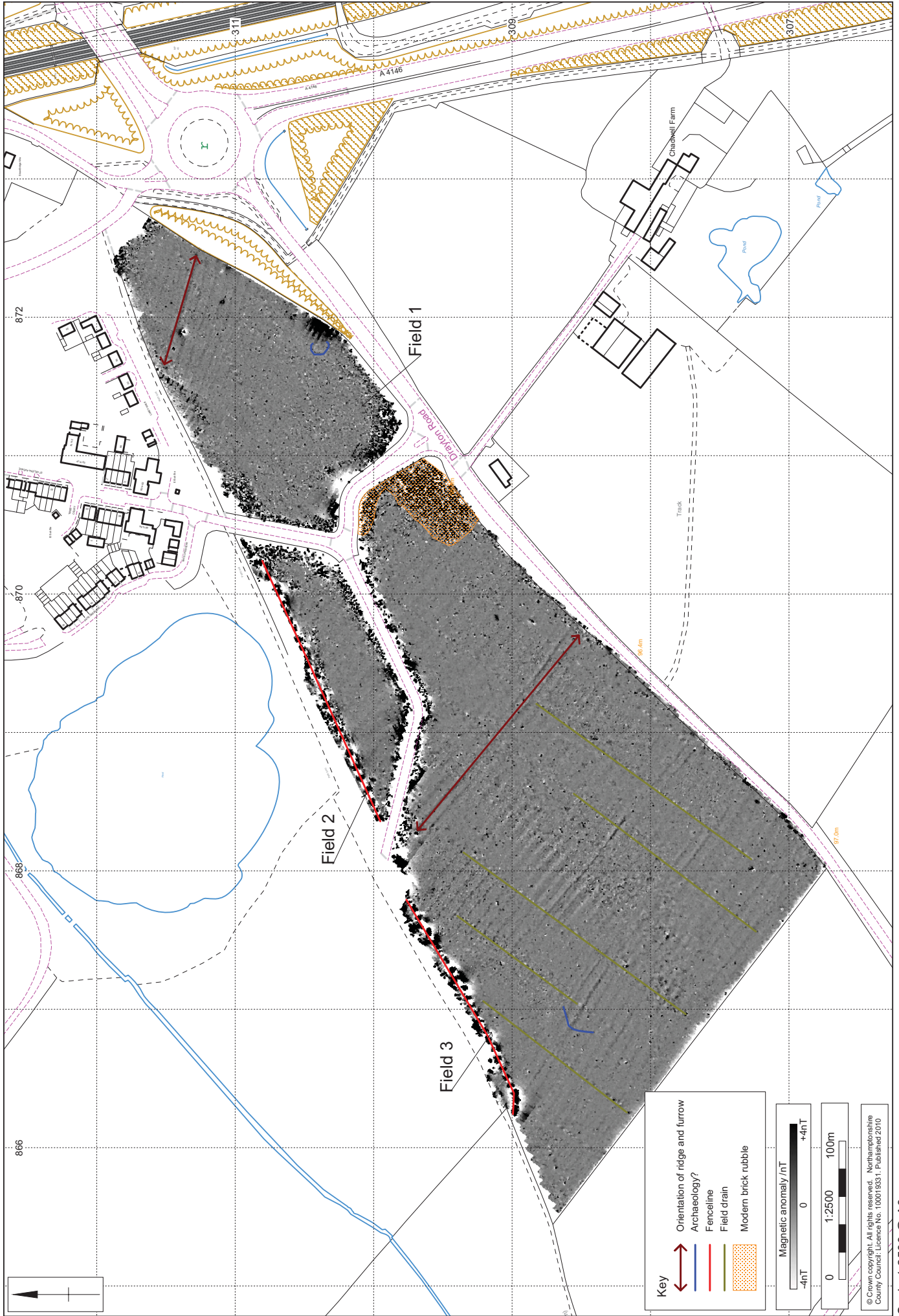
Scale 1:2500 @ A3

Magnetic anomaly/nT

-4nT 0 +4nT

0 1:2500 100m

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Magnetometer Survey Interpretation: Newton Leys, Drayton Road Fig 3



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