



Northamptonshire County Council

Northamptonshire Archaeology

Archaeological Geophysical Survey
at North Kilworth
Leicestershire
November 2009



Paul Clements

November 2009

Report 09/164

Northamptonshire Archaeology

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OASIS REPORT FORM

PROJECT DETAILS		
Project name	Archaeological Geophysical Survey at North Kilworth, Leicestershire	
Short description	CgMs Consulting commissioned Northamptonshire Archaeology to conduct an archaeological geophysical survey on the site of a proposed marina at North Kilworth, Leicestershire in November 2009. Aside from occasional anomalies which might represent pits, and the remnants of ridge and furrow cultivation, no significant archaeological features were discovered by the survey.	
Project type	Geophysical survey	
Site status	None	
Previous work	Unknown	
Current Land use	Arable	
Future work	Unknown	
Monument type/ period	Undated pits; medieval ridge and furrow	
Significant finds	None	
PROJECT LOCATION		
County	Leicestershire	
Site address	Station Road, North Kilworth, Leicestershire LE16	
Study area	6.63ha	
OS Easting & Northing	Centred on 462600 283400	
Height OD	160-185m AOD	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology (NA)	
Project brief originator	Mike Dawson, CgMs Consulting	
Project Design originator	Northamptonshire Archaeology	
Director/Supervisor	Paul Clements	
Project Manager	Adrian Butler	
Sponsor or funding body	CgMs Consulting	
PROJECT DATE		
Start date	2 nd November 2009	
End date	3 rd November 2009	
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Journal/monograph, published or forthcoming, or unpublished client report		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 at North Kilworth, Leicestershire	
Serial title & volume	Northamptonshire Archaeology Reports 09/164	
Author(s)	Paul Clements	
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ARCHAEOLOGICAL GEOPHYSICAL SURVEY AT NORTH KILWORTH

LEICESTERSHIRE

NOVEMBER 2009

ABSTRACT

CgMs Consulting commissioned Northamptonshire Archaeology to conduct an archaeological geophysical survey on the site of a proposed marina at North Kilworth, Leicestershire in November 2009. Aside from occasional anomalies which might represent pits, and the remnants of ridge and furrow cultivation, no significant archaeological features were discovered by the survey.

1 INTRODUCTION

Northamptonshire Archaeology was commissioned by CgMs Consulting to conduct an archaeological geophysical survey on land proposed for a marina to the east of North Kilworth, Leicestershire (centred on NGR SP 62600 83400; Fig 1). Consequently, a magnetic gradiometer survey was carried out on the two of the three fields involved, comprising an area of some 6.63ha. The work was undertaken between 2nd and 3rd November 2009.

2 TOPOGRAPHY AND GEOLOGY

The site lies mostly between the 160m and 185m contours, gently sloping towards south and east to the River Avon. The underlying geology comprises Blue Lias and Charmouth Mudstone formations although at the east of the survey area this is overlain by alluvial deposits from the river (BGS 2009).

Fields 1 and 2 were under arable cultivation and had a newly sown crop when surveyed. The western edge is flanked by a dismantled railway and to the east, beyond the river, is the Grand Union Canal. At the time of survey field 3 was deemed not surveyable. It was overgrown in areas and the ground uneven and slippery due to wet conditions (Fig 5).

3 ARCHAEOLOGICAL BACKGROUND

No prior archaeological fieldwork appears to have been carried out within the survey area or the immediate surrounding fields. About 700m to the north-west an undated rectangular enclosure has been identified through cropmarks. Close to this two ploughed out Bronze Age bowl barrows exist and an unassociated Bronze Age Beaker was found with an inhumation burial to the south of the barrows. About 800m south-east of these

undated square enclosures, have also been identified in cropmarks. A Neolithic interrupted ditch enclosure is known 1.5km to the south-east at Husbands Bosworth.

In 1850 the railway station for North Kilworth was located just west of the northern boundary of the survey area, with the railway running down the western edge. The station went out of use in 1966, and subsequently the railway was dismantled.

Study of the Ordnance Survey 2" map from 1810 shows a field boundary crossing Field 1 west to east (Fig 2). The Ordnance Survey maps of 1886, 1891 and 1901 (www.old-maps.co.uk accessed 4/11/2009) also show a building just to the north of the centre of the field (not illustrated). The Ordnance Survey of the 1950s (Northamptonshire, Sheet 22 NE; Fig 3) shows two further field boundaries within the survey area as well as a building within the field.

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 survey area was divided into 30m grid squares. A tape measure and optical square were used to set out each field. 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 1600 measurements per grid.

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

The survey data was processed using Geoplot 3.00u 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 (scale +3nT to -3nT black ~ white). These have been scaled, rotated and resampled (georectified) for display against the Ordnance Survey base mapping (Fig 4). Interpretative plots have been produced and are shown overlain onto the data in Figure 5.

5 SURVEY RESULTS

Field 1 (Figs 4 & 5, F1)

The centre of this field contains an area of disturbance. This is likely to be debris from a barn which once stood in this location and which is depicted on the 1886, 1891 and 1901 Ordnance Survey maps (www.old-maps.co.uk viewed 4/11/2009). However, there is no clear evidence for the former field boundaries also shown on these maps. A series of linear features, orientated on an east-west alignment show the presence of ridge and furrow cultivation, probable belonging to the medieval open field system. At the east of the field, patches of weaker positive anomalies are likely to be of either geological or other natural origin.

There are also several ferrous anomalies in the data, indicating isolated pieces of ferrous debris. The negative halo at the western edge of the survey area is the result of an existing modern metal fence.

Field 2 (Figs 4 & 5, F2)

On the eastern edge of Field 2 are several positive anomalies that may indicate the presence of pits. Their proximity to the river, however, may suggest that these are associated natural features. A positive anomaly with a slight negative 'halo' located in the centre of the survey area may represent a larger pit. An area of enhanced magnetic noise, possibly representing a spread of ceramic material or small items of ferrous debris, is also located towards the centre of the field. The general spread of further small ferrous anomalies across the whole field is likely to derive from debris associated with farming activity. However, the spread may also be associated with the dismantling of the former railway located on the western edge of the survey area. .

On the north and south edges of the field are two strong positive anomalies with negative 'halos', both of these are coincident with existing access points into the field with the northern anomaly being caused by the presence of extant modern hardcore. On the western edge an area of both positive and negative readings is likely to signify demolition rubble from the dismantled railway.

6 CONCLUSION

The survey has identified north-west to south-east aligned ridge and furrow cultivation in

Field 1 that does not continue northwards into Field 2. In Field 2 several undated pit-like features have also been identified. The location of a former structure, likely to be a barn depicted on Ordnance Survey maps from 1886 to 1901, was confirmed in Field 1. Anomalies representing geological features are evident close to the river and continuing through both fields.

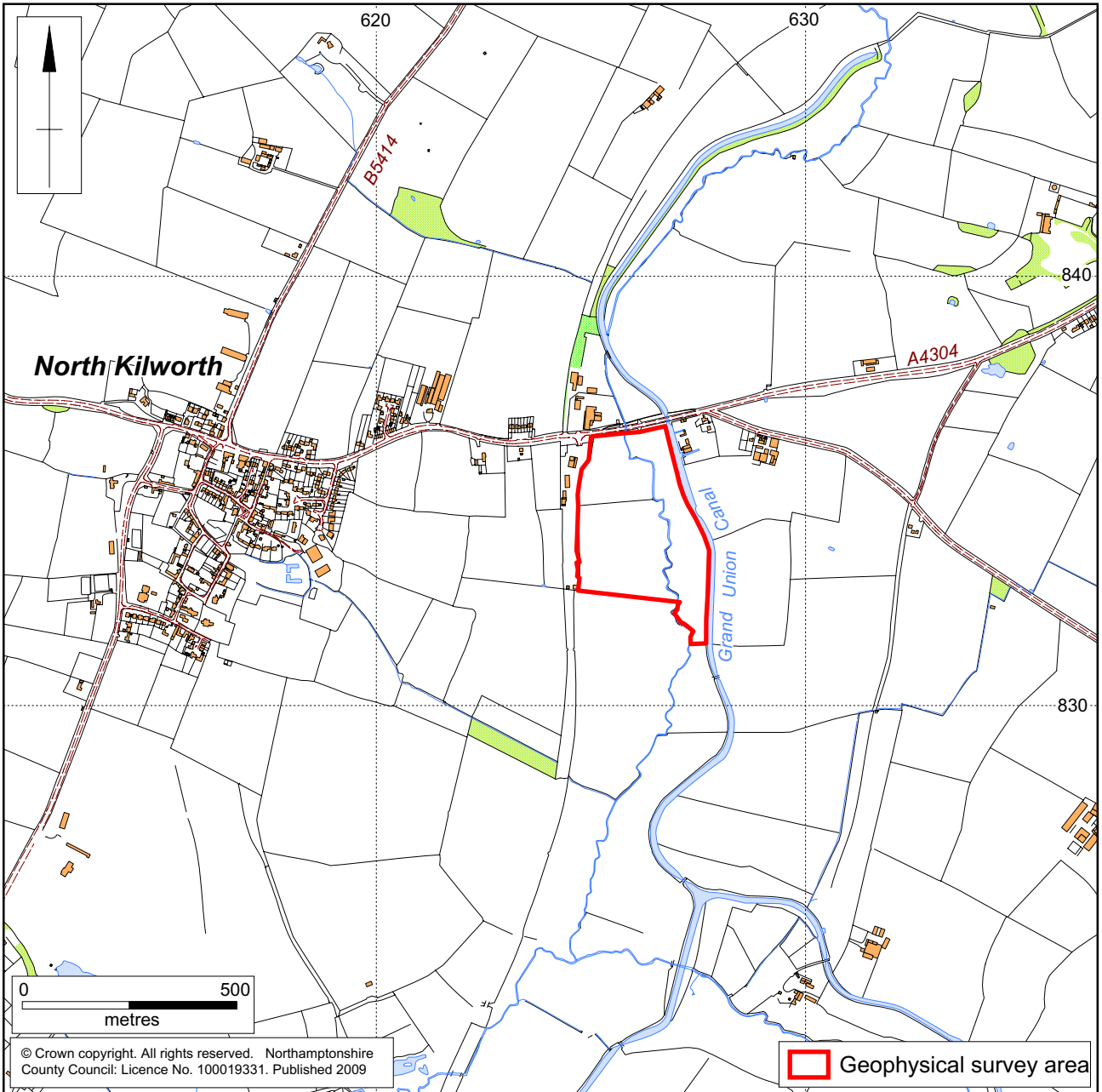
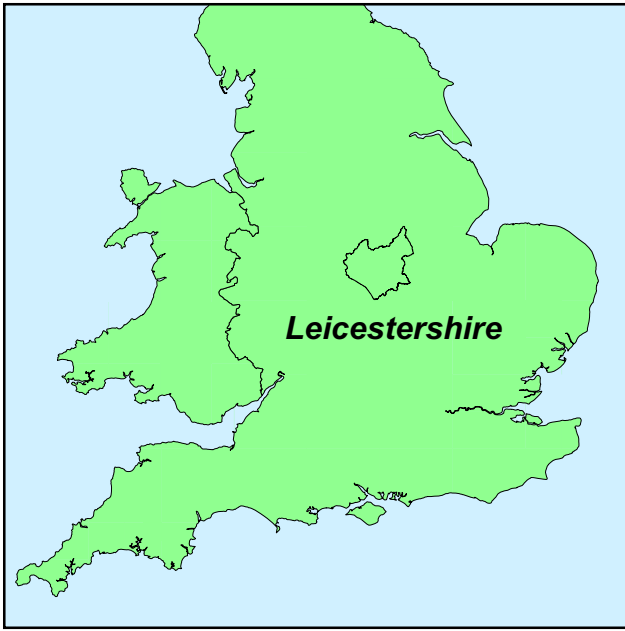
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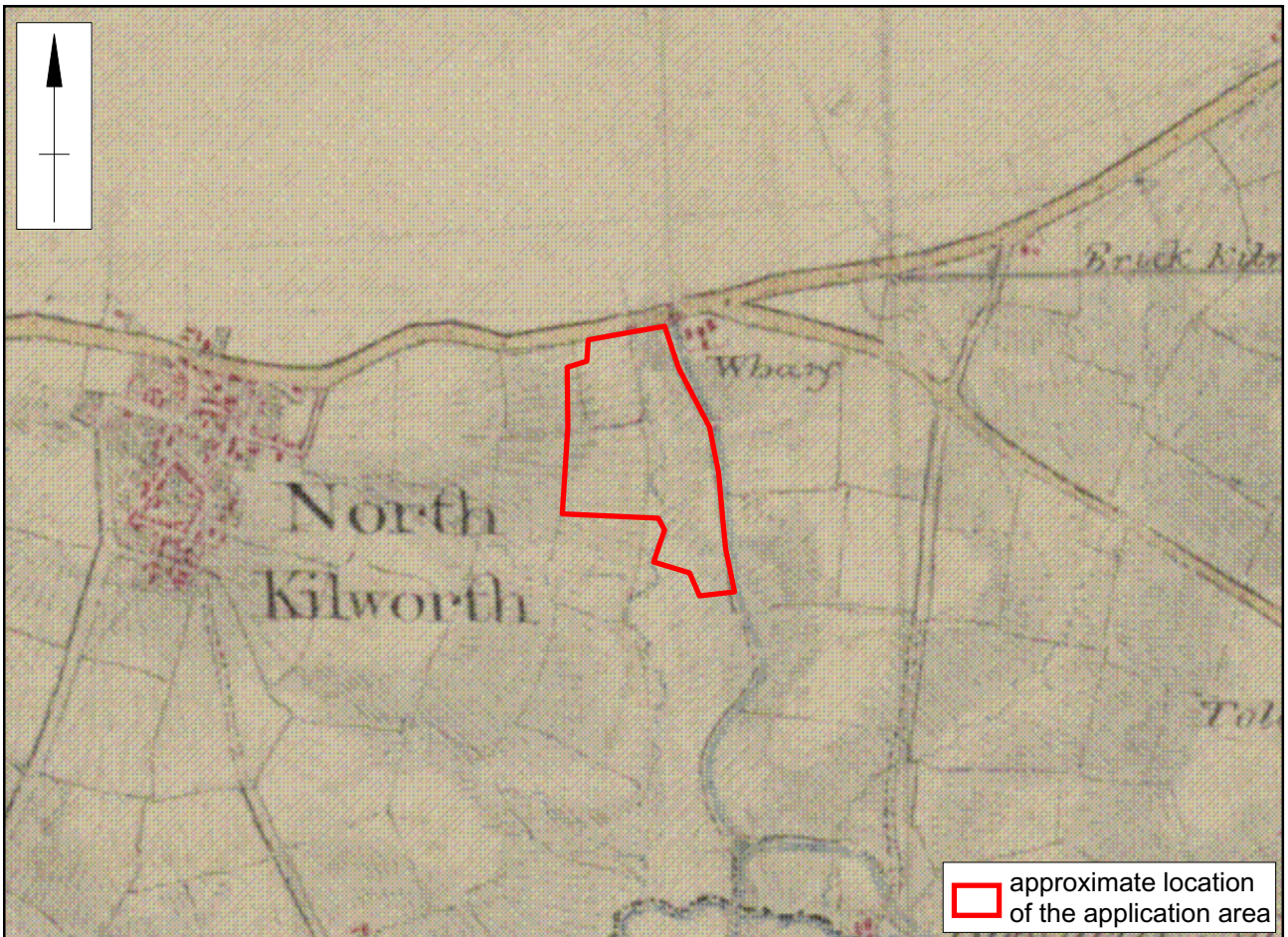
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Gaffney, C, Gater, J, and Ovendon, S, 2002 *The Use of Geophysical Techniques in Archaeological Evaluations*, Institute of Field Archaeologists Technical Paper, **6**



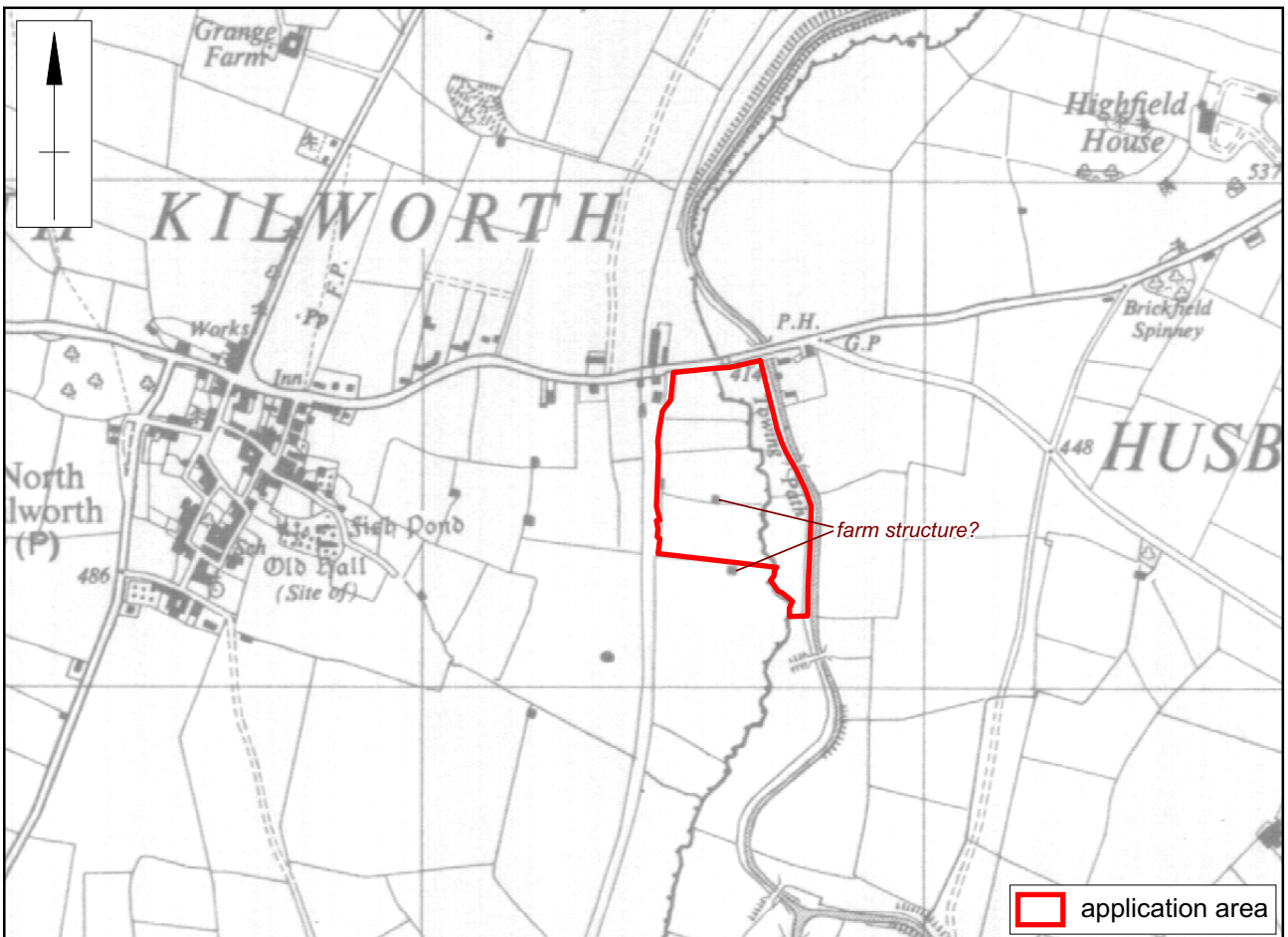
1:15,000

Site Location Fig 1



not to scale

1810 Ordnance Survey 2" provisional surveyor's edition Fig 2



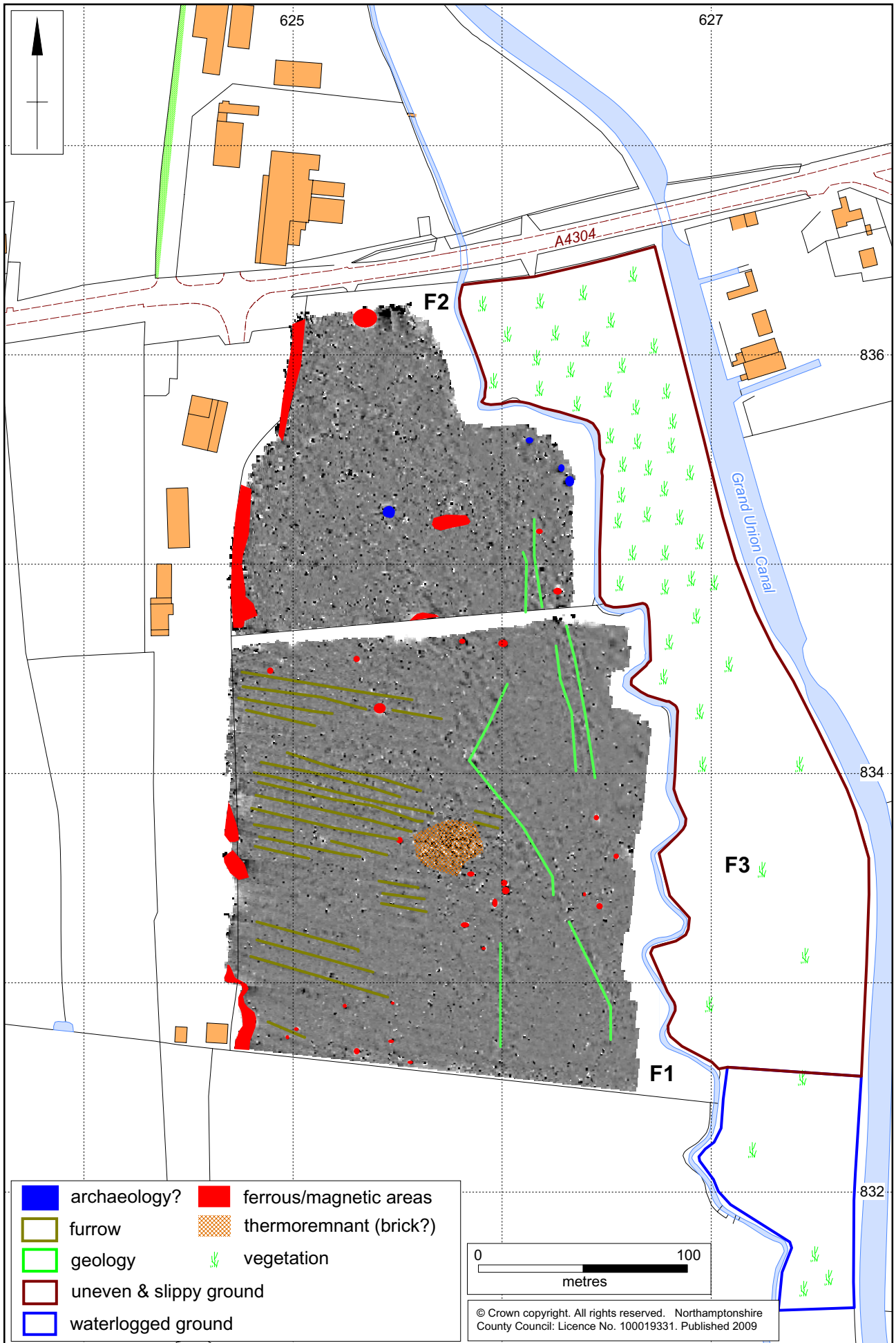
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1950s Ordnance Survey 25000 scale mapping Fig 3



1:2500

Magnetometer survey results, Fields 1 and 2 Fig 4



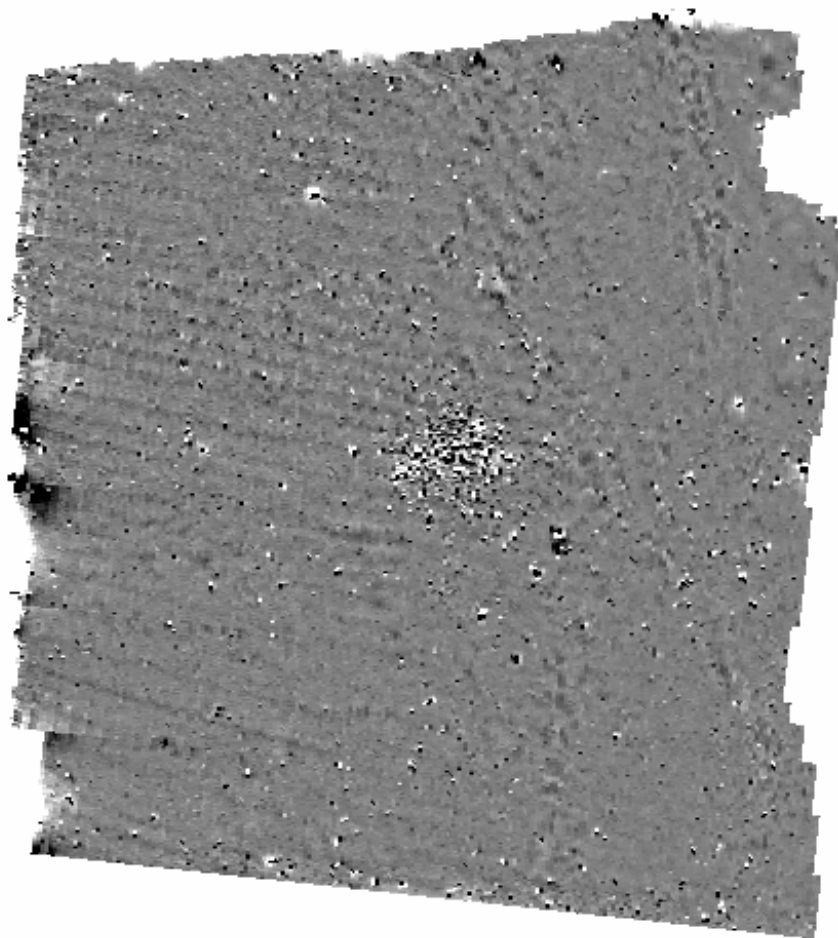
1:2500

Magnetometer survey interpretation of Fields 1 and 2 Fig 5



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