

**Archaeological geophysical survey at
Ratby Lane, Kirby Muxloe
Leicestershire
June 2014**

Report No. 14/135

Author: Ian Fisher

Illustrator: Ian Fisher



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OASIS REPORT

| | | | |
|---------------------------|---|-------------------------------|--|
| PROJECT DETAILS | | Oasis No. molanort1-183964 | |
| Project name | Archaeological geophysical survey at Ratby Lane, Kirby Muxloe, Leicestershire | | |
| Short description | MOLA was commissioned to carry out a detailed magnetometer survey on land at Ratby Lane, Kirby Muxloe, Leicestershire. The survey identified evidence for medieval ridge and furrow cultivation and a modern pipeline and trackway. | | |
| Project type | Geophysical survey | | |
| Site status | None | | |
| Previous work | None | | |
| Current Land use | Pasture | | |
| Future work | Unknown | | |
| Monument type/ period | Medieval ridge and furrow | | |
| Significant finds | None | | |
| PROJECT LOCATION | | | |
| County | Leicestershire | | |
| Site address | Ratby Lane, Kirby Muxloe | | |
| Study area | c 1.6ha | | |
| OS Easting & Northing | SK 522 049 | | |
| Height OD | c 81-84m aOD | | |
| PROJECT CREATORS | | | |
| Organisation | MOLA Northampton | | |
| Project brief originator | CgMs Consulting | | |
| Project design originator | MOLA Northampton | | |
| Director/Supervisor | Ian Fisher | | |
| Project Manager | Mark Holmes | | |
| Sponsor or funding body | CgMs Consulting | | |
| PROJECT DATE | | | |
| Start date | 24 June 2014 | | |
| End date | 24 June 2014 | | |
| ARCHIVES | Location | Content | |
| Physical | N/A | | |
| Paper | MOLA Northampton | Site survey records | |
| Digital | | Geophysical survey & GIS data | |
| BIBLIOGRAPHY | Journal/monograph, published or forthcoming, or unpublished client report | | |
| Title | Archaeological geophysical survey at Ratby Lane, Kirby Muxloe, Leicestershire, June 2014 | | |
| Serial title & volume | MOLA Northampton Reports 14/135 | | |
| Author(s) | Ian Fisher | | |
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Archaeological geophysical survey at Ratby Lane, Kirby Muxloe, Leicestershire June 2014

ABSTRACT

MOLA was commissioned to carry out a detailed magnetometer survey on land at Ratby Lane, Kirby Muxloe, Leicestershire. The survey identified evidence for medieval ridge and furrow cultivation and a modern pipeline and trackway.

1 INTRODUCTION

MOLA was commissioned by CgMs Consulting to conduct a geophysical survey on land at Ratby Lane, Kirby Muxloe, Leicestershire (NGR SK 522 049; Fig 1). A detailed magnetometer survey was undertaken on 24th June 2014, and covered a total area of approximately 1.6ha.

2 BACKGROUND

2.1 Location and geology

The survey area consisted of a single field located on the northern edge of Kirby Muxloe immediately south-west of Ratby Lane. It is bounded to the south-east by Desford Road, a residential property to the south-west and open fields to the north-west. At the time of the survey part of the field was sub-divided into smaller paddocks containing horses and this area was not surveyed.

The survey area lies on a gentle north-west facing slope between 81m and 84m aOD. The geology of the area is recorded as Gunthorpe Member mudstone overlain by glacio-fluvial deposits of sand and gravel (BGS 2014).

2.2 Historical and archaeological background

A desk-based assessment of the survey area has been undertaken and provides the main source for this summary (Gajos 2013).

No previous archaeological works or significant finds are recorded within the survey area nor are there any Listed Buildings, Conservation Areas, Scheduled Monuments, Registered Battlefields or Parks and Gardens.

Evidence for prehistoric, Roman, Saxon/medieval and post-medieval have been found in the surrounding area. The most significant is the Scheduled Monument of Kirby Muxloe Castle, c 300m south-east of the survey area (Fig 1).

3 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 network of 30m grid squares was established across the field. The grid was set out with a tape measure and optical square and was tied in to the Ordnance Survey National Grid by means of a Leica Viva 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 square. All fieldwork methods complied with the guidelines issued by English Heritage and by the Institute for Archaeologists (EH 2008; IfA 2011).

The survey data was processed using Geoplot 3.00v software. The striping was removed using the 'Zero Mean Traverse' function and destaggering of the data was performed where necessary. The processed data is presented in this report in the form of a greyscale plot at a range of +4nT (black) to -4nT (white). This has been scaled, rotated and resampled (georectified) for display against the Ordnance Survey base mapping (Fig 2) and is shown with an interpretative overlay in Figure 3. A raw data plot is presented in Figure 4.

4 SURVEY RESULTS

Remnant medieval ridge and furrow cultivation has been detected across the entire survey area, represented by regularly-spaced parallel positive linear anomalies aligned north-west to south-east. These are visible in the field as low and broad earthworks.

Two parallel positive linear anomalies, aligned east to west, represent a pair of pipelines, the trench of which is visible as a shallow depression in the field cutting through the ridge and furrow.

A metalled track running along the south-eastern and south-western boundaries is recorded as an area of magnetic noise in the data.

Several small areas of the field were unsurveyable. These were either overgrown, contained horses or stables.

5 CONCLUSION

The magnetometer survey has identified the presence of medieval ridge and furrow cultivation. A modern pipe and trackway have also been detected. No archaeologically significant features were identified.

BIBLIOGRAPHY

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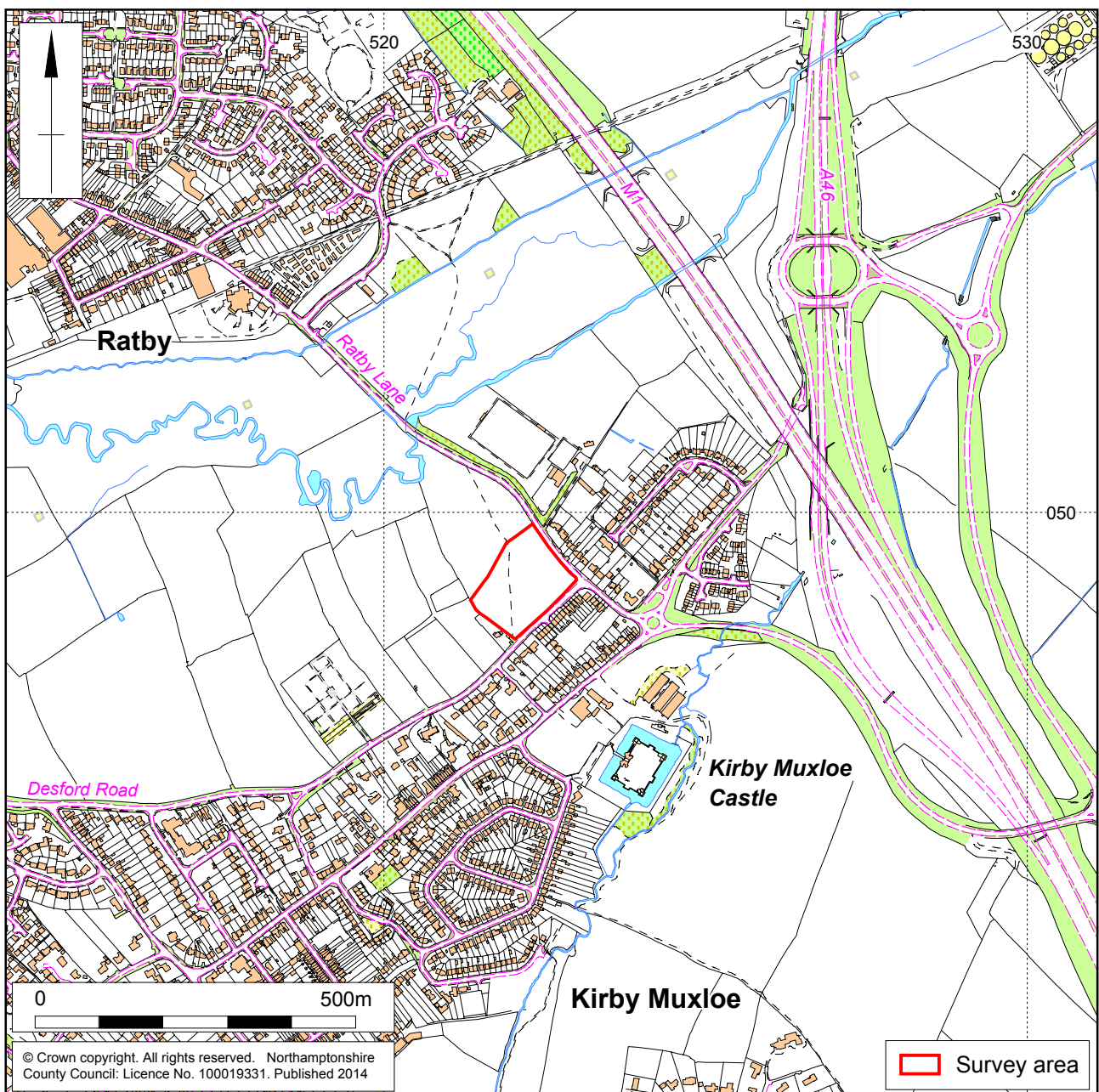
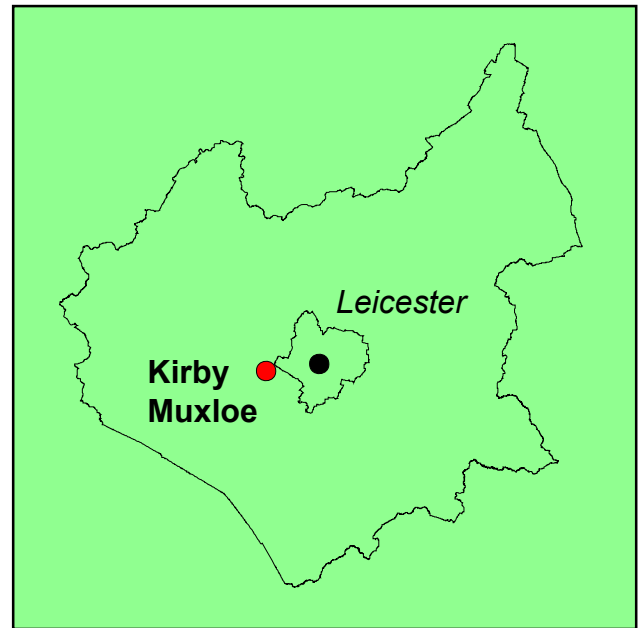
BGS 2014 *Geoindex*, <http://www.bgs.ac.uk/geoindex/home.html>, British Geological Survey, consulted 04 July 2014

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Gajos, P, 2013 *Archaeological Desk-Based Assessment Land at Ratby Lane, Kirby Muxloe, Leicestershire*, CgMs Consulting

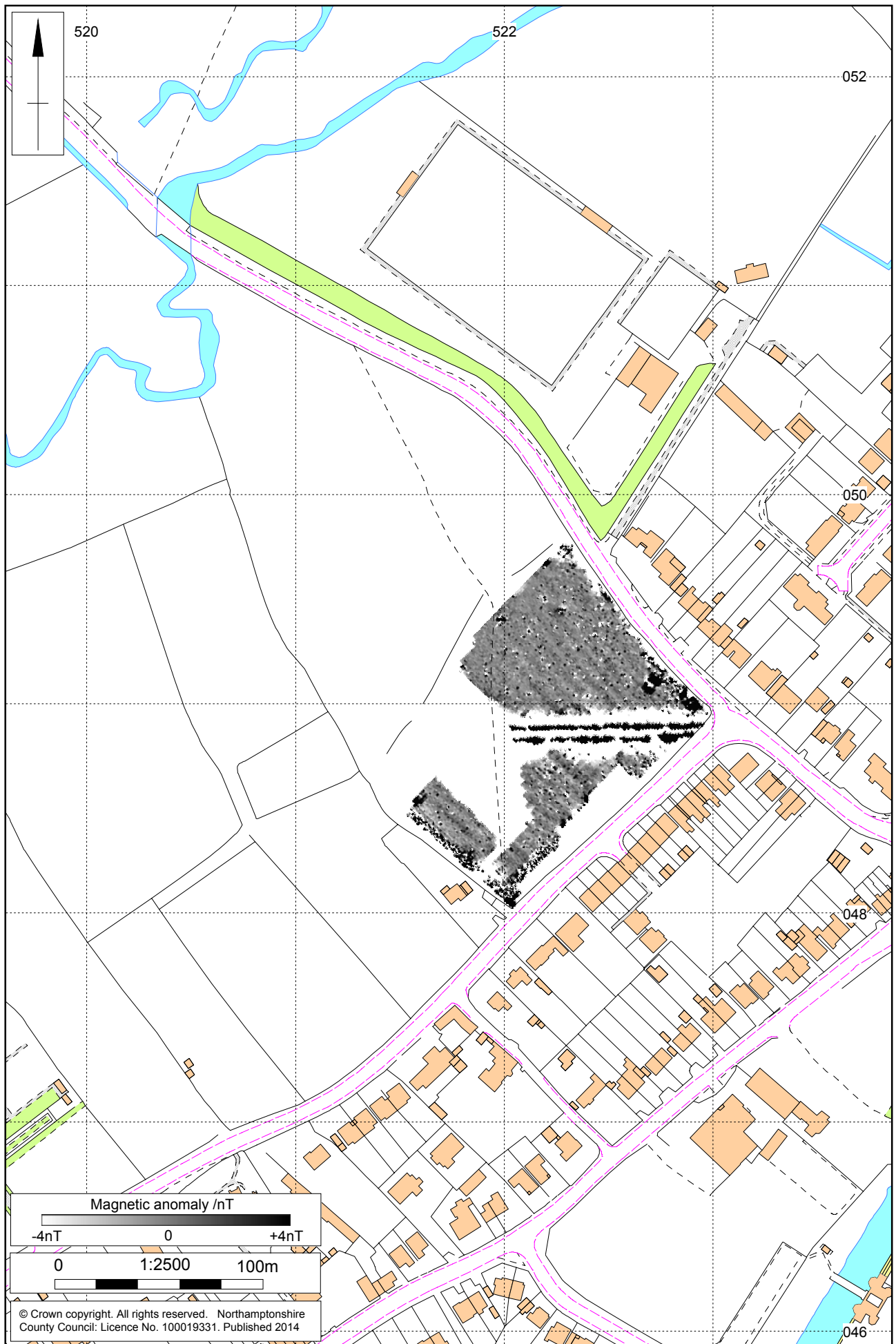
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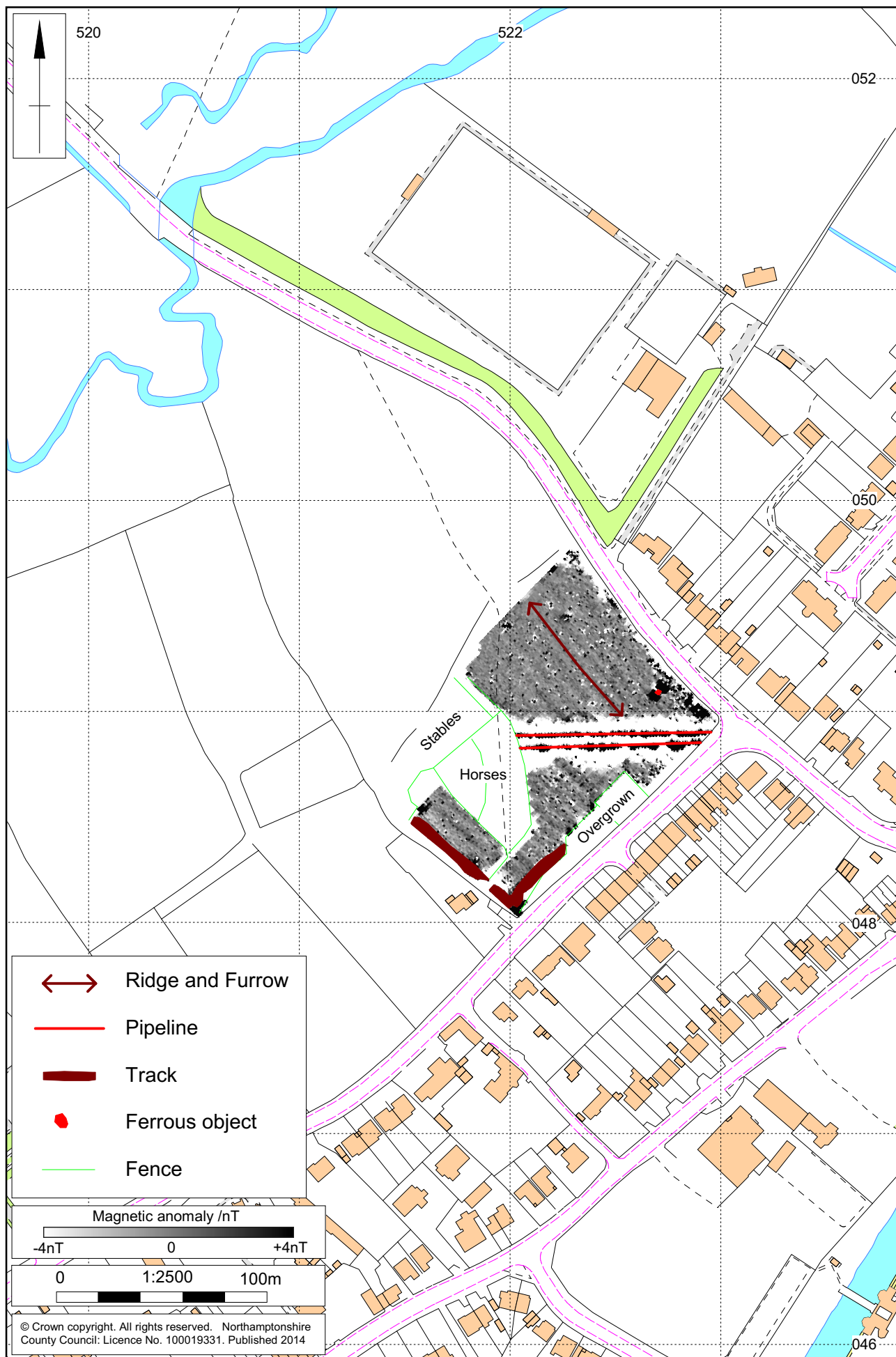
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9 July 2014



Scale 1:10,000

Site Location Fig 1

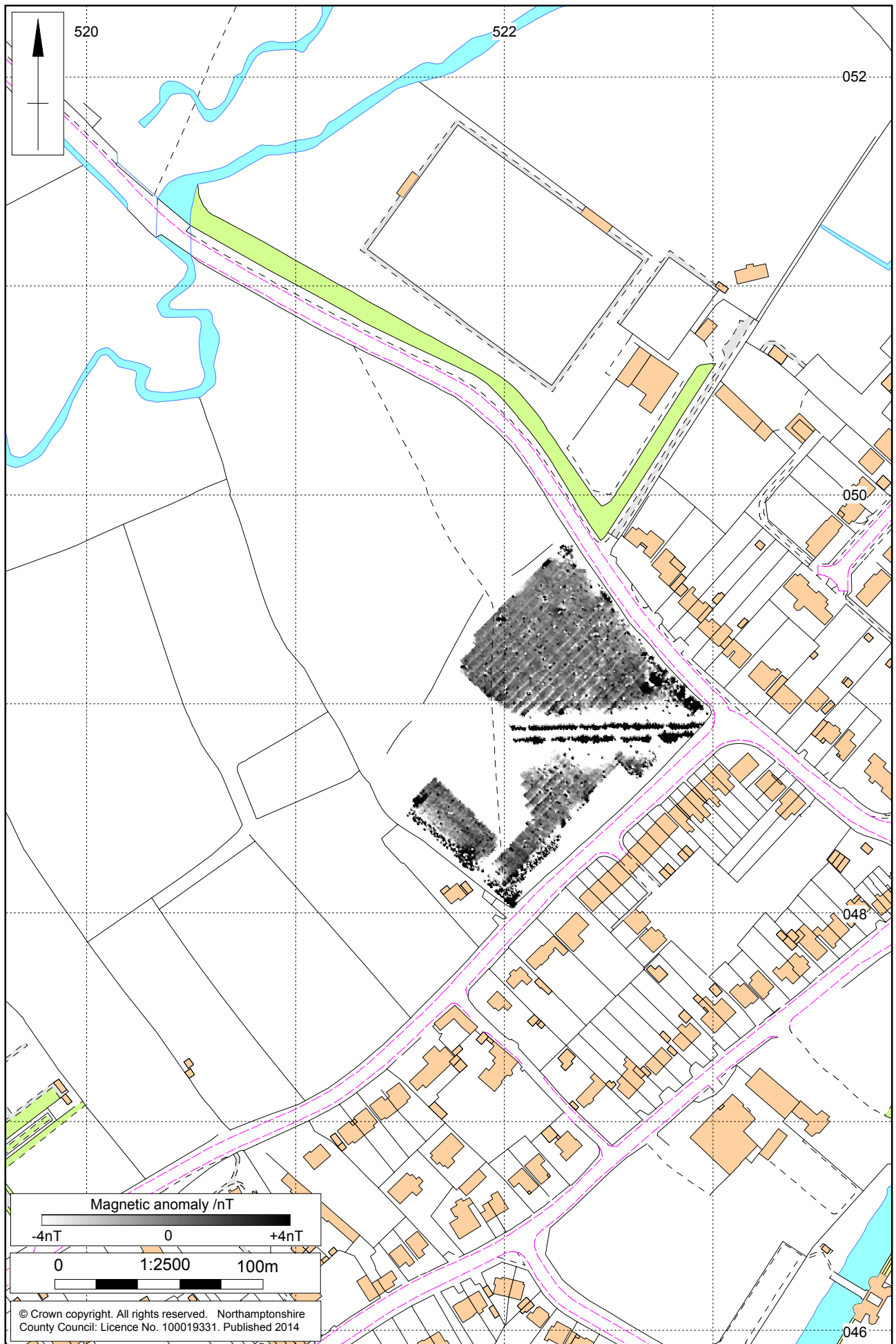




1:2500 (A4)

Magnetometer survey interpretation, Kirby Muxloe

Fig 3



1:2500 (A4)

Magnetometer survey results raw data, Kirby Muxloe

Fig 4



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