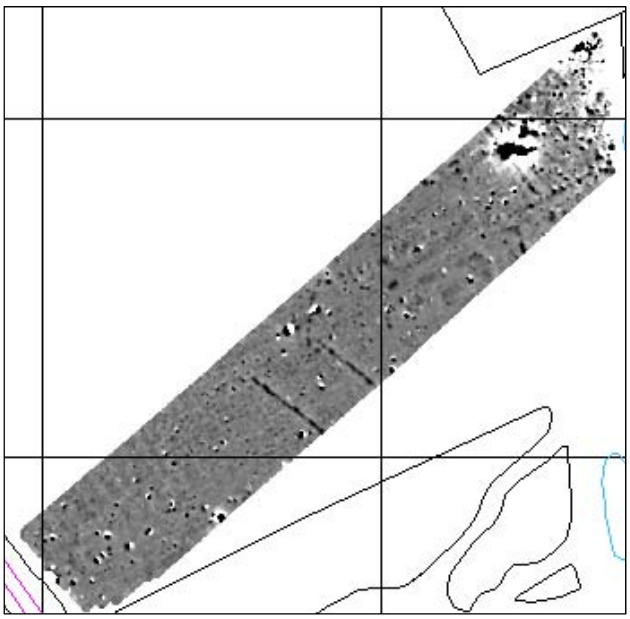

# Archaeological geophysical survey of land at Hargrave, Northamptonshire
# May 2017

Event No. ENN108762

Report No: 17/74

Authors: Ian Fisher
Graham Arkley

Illustrator: Graham Arkley

MOLA
MUSEUM OF LONDON ARCHAEOLOGY

REGISTERED ORGANISATION CIfA


Project Manager: John Walford
Event No. ENN108762
NGR: TL 031 711

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Quality control and sign off**:**

| Issue No. | Date approved: | Checked by: | Verified and approved by: | Reason for Issue: |
|---|---|---|---|---|
| 1 | 22/06/2017 | Rob Atkins | John Walford | Client approval |

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## STAFF

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| Project Manager: | John Walford MSc |
| Fieldwork: | Graham Arkley BSc MSc |
| | Gareth Carmichael BA |
| Text: | Ian Fisher BA |
| | Graham Arkley |
| Illustrations: | Graham Arkley |

## *OASIS* REPORT

| PROJECT DETAILS | **Oasis No. molanort1-288093** | |
|---|---|---|
| Project name | Archaeological geophysical survey of land at Church Street, Hargrave, Northamptonshire | |
| Short description | MOLA (Museum of London Archaeology) was commissioned to undertake an archaeological geophysical survey on land at Hargrave, Northamptonshire. The survey covered *c* 1.6ha of land and detected features which may relate to medieval or post-medieval settlement alongside Brook Street, at the north-eastern end of the site. The remains of medieval ridge and furrow cultivation and a post-medieval pond were also detected. | |
| Project type | Geophysical survey | |
| Site status | None | |
| Previous work | None known | |
| Current land use | Arable | |
| Future work | Unknown | |
| Monument type/ period | Medieval to post-medieval settlement | |
| Significant finds | None | |
| PROJECT LOCATION | | |
| County | Northamptonshire | |
| Site address | Church Street, Hargrave, Northamptonshire | |
| Study area | *c* 1.6ha | |
| OS Easting & Northing | TL 0310 7115 | |
| Height OD | *c*62-73m aOD | |
| PROJECT CREATORS | | |
| Organisation | MOLA | |
| Project brief originator | Northamptonshire County Council | |
| Project design originator | MOLA | |
| Director/Supervisor | Graham Arkley | |
| Project Manager | John Walford | |
| Sponsor or funding body | Western Power Distribution | |
| PROJECT DATE | | |
| Start date | 18th May 2017 | |
| End date | 18th May 2017 | |
| 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 of land at Church Street, Hargrave, Northamptonshire, May 2017 | |
| Serial title & volume | MOLA Northampton Report 17/74 | |
| Author(s) | Graham Arkley & Ian Fisher | |
| Page numbers | 4 | |
| Date | 22nd June 2017 | |

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**Figures**

# Archaeological geophysical survey of land at Church Street, Hargrave, Northamptonshire May 2017


## ABSTRACT

*MOLA (Museum of London Archaeology) was commissioned to undertake an archaeological geophysical survey on land at Hargrave, Northamptonshire. The survey covered c 1.6ha of land and detected features which may relate to medieval or post-medieval settlement alongside Brook Street, at the north-eastern end of the site. The remains of medieval ridge and furrow cultivation and a post-medieval pond were also detected.*


## 1 INTRODUCTION

MOLA (Museum of London Archaeology) was commissioned by Western Power Distribution to undertake an archaeological geophysical survey on land at Hargrave, Northamptonshire (NGR TL 0310 7115; Fig 1). The survey area followed the route of a proposed overhead power line linking Bottom Farm to the existing overhead line west of High House.

The survey was prompted by a requirement from Northamptonshire County Council and was intended to identify whether the insertion of poles for the overhead lines would result in the disturbance of any archaeological remains. The Northamptonshire County Council Historic Environment Record was informed of this work and has recorded it under Event Number ENN108762. The survey fieldwork was conducted on 18th May 2017.

## 2 BACKGROUND

### 2.1 Topography and geology

The survey area comprises a 30m wide corridor of land, totalling *c* 1.6ha, which extends across two arable fields to the north-west of Hargrave village, close to Bottom Farm. The north-eastern edge of the area lies alongside Brook Street and the two fields are separated by Church Street The north-eastern field (Area 1) was clear of vegetation at the time of the survey but the south-western field (Area 2) was under a cereal crop standing approximately 0.8m tall.

The survey area lies between *c* 62m aOD in the north-east and *c* 73m aOD in the south-west, with a generally continuous slope interrupted by a sharp step approximately halfway across Area 2. A small brook flows northwards at the bottom of this slope, alongside Brook Street, defining the north-eastern end of the area.

The British Geological Survey indicates that the solid geology of the area comprises Oxford Clay concealed beneath drift deposit of Oadby Member diamicton (BGS 2017).

### 2.2 Historical and archaeological background

The survey area has previously been investigated as part of the Raunds Area Survey (Parry 2006), to which the reader is directed for a comprehensive background to the

development of Hargrave and the surrounding landscape. After extensive fieldwalking and targeted excavation, the project concluded that the village has grown episodically along the valley of a small tributary of the Great Ouse. Initial Iron Age and Romano-British occupation was abandoned in the late 2nd century AD, before the site was re-populated in the early-middle Saxon period. A separate middle Saxon "bottom" section of the village developed to the north and north-east, before being deserted in the late medieval period.

Three sites of probable Iron Age / Romano-British settlement (Northamptonshire Historic Environment Record MNN644, MNN4313 & MNN4319) have been identified through cropmarks within 500m of the survey area. These sites comprise extensive sets of circular, sub-rectangular and irregular enclosures with sub-dividing ditches, along with roundhouses. Furthermore, the approximate location of a "possible Roman villa north of Hargrave" (MNN16989) is recorded within the field crossed by Area 1.

Across the field containing Area 2, fieldwalking by the Raunds Survey determined a significant early-middle Saxon pottery scatter across the survey area (MNN25596) which, remarkably for the area, included sherds of Ipswich ware. An additional Late Saxon open field system (MNN7488) was identified immediately south of Area 2. A later phase of the project, led by Northamptonshire Archaeology, excavated the remnants of an early-middle Saxon settlement (MN6717) within the same field, which was largely demarcated through small groups of postholes (MNN31114) (Parry 2006). In addition, a separate probable early-middle Saxon settlement (MNN7492) is located north of the survey areas. It is likely that these discrete settlements, located along the tributary of the Great Ouse, are the precursors of the current Hargrave (MNN4316, HER number: 1787) which took its current form, within the topographic confines of the stream valley, towards the end of the Saxon period. Fieldwalking from the Raunds Survey returned a high-density scatter of medieval pottery across the north and north-east of Hargrave, including the survey area, which indicated a medieval sprawl along the bridle-way towards Keyston to the north-east. By the late medieval period this "bottom" development was abandoned and became plough-land, based upon concentrations of medieval pottery suggesting manuring of the arable landscape.

The region has also formerly been investigated by the Midland Open Fields Project, 1995-99, (Hall & Palmer 2001) utilising aerial photography in order to identify and further aid understanding of individual field systems which served the East Midlands' medieval settlements. Two areas of extant medieval ridge and furrow (MNN132654, MNN132655) were identified within 500m north and south-east of the survey area.

Immediately north of Area 1 stands a Grade II listed, mid-18th century house, Hillstone Cottage (MNN108466). A 19th-century brickworks (MNN29301, MNN13516) formerly stood 400m south of Area 2, although historic mapping suggests that the site was disused and then cleared during the first half of the 20th century.

The north-eastern half of Area 1 was formerly woodland, recorded on Ordnance Survey (OS) mapping from the 1885 county series up to 1970/1971. This change in land use may influence the survivability and/or magnetic response of any archaeological remains in this portion of the survey area.

Metal detecting in the field containing Area 2 has yielded unstratified Roman and Saxon coins and other metal artefacts (MNN101242 and MNN101252). However information about the precise find spots is not publicly available.

## 3 METHODOLOGY

The survey fieldwork was conducted according to CIfA and Historic England guidelines (CIfA 2014, EH2008). This survey was conducted with the MOLA magnetometer cart, which is a two-wheeled, lightweight structure designed to be pushed by hand. It incorporates a bank of six vertically-mounted Bartington Grad601 magnetic sensor tubes, spaced at half-metre intervals along a bar aligned crossways to the direction of travel, and also incorporates a Leica Geosystems Viva GPS antenna mounted on the central axis, 0.5m astern of the sensors. The magnetic sensors each output data at a rate of six readings per second and the GPS antenna outputs NMEA format data (GGA messages) at a rate of one position every second. These data streams are fed into a laptop computer where they are compiled into a single raw data file by MultiGrad601 logging software specifically designed for that purpose.

The cart was pushed along straight and parallel traverses across the survey area, with data logging being manually toggled on and off at the start and end of each traverse to avoid the collection of spurious data whilst turning. Traverse ends were marked with ranging poles to aid even coverage, and the evenness of coverage was further checked by monitoring the positional trace plotted in real time by the MultiGrad601 logging software. The average speed of coverage in Area 1 was *c* 1.5m/s and the effective data resolution thus approximated to 0.25m x 0.50m. Owing to physical resistance from the crop the average speed of coverage in Area 2 was *c* 0.5m/s and the effective data resolution thus approximated to 0.1m x 0.50m.

The raw survey data was initially processed with MLGrad601 software, which calculated an actual UTM co-ordinate for each data point by interpolating the GPS readings and applying offset corrections based on the array geometry and calculated heading direction. This produced an output file in XYZ format which could be imported into TerraSurveyor software for data visualisation and further processing.

The raw XYZ data exhibited striping caused by slight mismatches in the calibration of the individual magnetic sensors. This was removed in TerraSurveyor by applying the median de-stripe function to runs of data from each sensor. Once processed, the magnetometer data collected during the survey has been processed to produce greyscale raster plots (range +5nT to -5nT / black to white) which have been rotated and scaled for display against Ordnance Survey Master Map base mapping (Fig 2). An interpretative overlay is presented in Figure 3 and the unprocessed survey data is presented in Figure 4.

## 4 SURVEY RESULTS

The survey has identified a set of magnetically positive linear anomalies in the north-east of Area 1, close to the brook. These include a linear anomaly with a sharp right-angled corner which is abutted by a pair of parallel anomalies spaced *c* 2m apart and aligned north-west to south-east. These anomalies represent a set of ditches which perhaps defined parts of medieval or post-medieval land parcels alongside Brook Street.

In addition the survey has identified a weaker series of magnetically positive linear anomalies, some also with right-angled corners, extending to the south-west of the above plots. These appear to represent the northern corners of a pair of larger enclosures separated by a possible track, with a gap in the anomaly likely to signify an entrance in the south-eastern ditch. These are significantly weaker than the primary archaeology and are not easily distinguishable in the data, which may be due to root activity associated with the former woodland.

In the central part of Area 1, two parallel linear anomalies aligned north-west to south-east have been identified. Their alignment and response are unlike any other in the survey area and do not respect other anomalies or landmarks. Given their parallel nature combined with an oblique alignment across the terrain, it is probable that they relate to land drains. A weaker third magnetic linear anomaly to the north of this pair is possibly a land drain leading from the presumable further oblique land drains outside of the survey area to the brook, although this is less certain.

The data collected from Area 2 is dominated by a series of parallel, magnetically positive and negative linear anomalies, predominantly aligned north-east to south-west, perpendicular to Church Street. These linear anomalies represent the plough-levelled remnants of medieval ridge and furrow cultivation. The south-west of Area 2 exhibits a small set of similar responses on a perpendicular alignment to the main corpus of responses in this field. The data in Area 1 shows six linear anomalies of a similar nature, running parallel with Church Street, although owing to the narrow nature of the survey area it is not possible to determine their extent. This change in direction would have been dictated by the differing topography of the two fields.

Six small amorphous magnetically positive anomalies in Area 2, with a further isolated anomaly in Area 1, may represent the location of pits. Of these the pair along the north-western side of Area 2 are most suggestive of pit responses, while the rest could also be geological in origin. Two faint, magnetically positive north to south linear anomalies are also apparent in Area 2. Their location could suggest that these are the end of ditches contemporary with the Saxon settlement or field system discovered by the RAS. However, as their alignment is congruent with extant arable patterns it is more likely that these are a result of modern wheel ruts or plough scars.

Small dipolar anomalies have been identified scattered throughout the data of both areas. These are positive-negative anomalies, appearing in the data plots as black spots with white halos around them, represent ferrous debris within the soil. Most of this will be relatively insignificant pieces of agricultural debris. Such anomalies are particularly concentrated in the unploughed north-eastern end of Area 1 near Brook Street and these more probably relate to hardcore and ferrous debris associated with the nearby habitation. There is also a negative magnetic halo in this location, partly caused by the large metal gate in the field corner.

A cluster of large, amorphous magnetically positive anomalies within a negative halo in the north-east corner of Area 1 is typical of the response from ponds or quarry pits which have been backfilled with magnetic material. This backfill material may in part be of any ferrous debris, and will commonly also comprise weakly magnetic building rubble or hardcore. This particular cluster of anomalies correlates to a pond visible on Ordnance Survey maps published between 1885 and 1971, and the data would suggest that this pond cuts through, and thus post-dates, the two parallel ditches described previously.

## 5 CONCLUSION

The magnetometer survey has detected anomalies which may relate to medieval or post-medieval boundaries defining land parcels and a trackway on the western side of Brook Street. A post-medieval pond has also been detected in this area and, further to the south-west, there are extensive remains of medieval ridge and furrow cultivation.

In the south west of the site, where previous investigations suggest the presence of Saxon remains, a few possible pits have been detected. However, the interpretation of these features is tentative. The survey results provide no other evidence for possible Saxon remains but it should be noted that most Saxon buildings were timber structures that left only ephemeral archaeological traces and can thus be very hard to detect by geophysical means.

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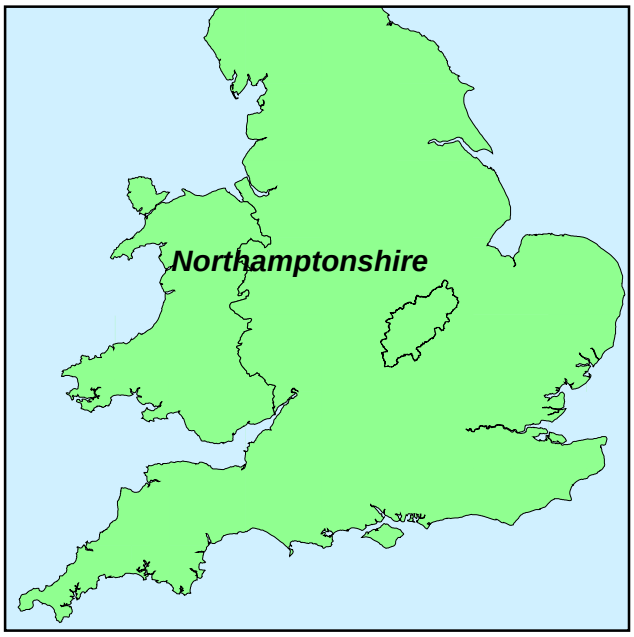
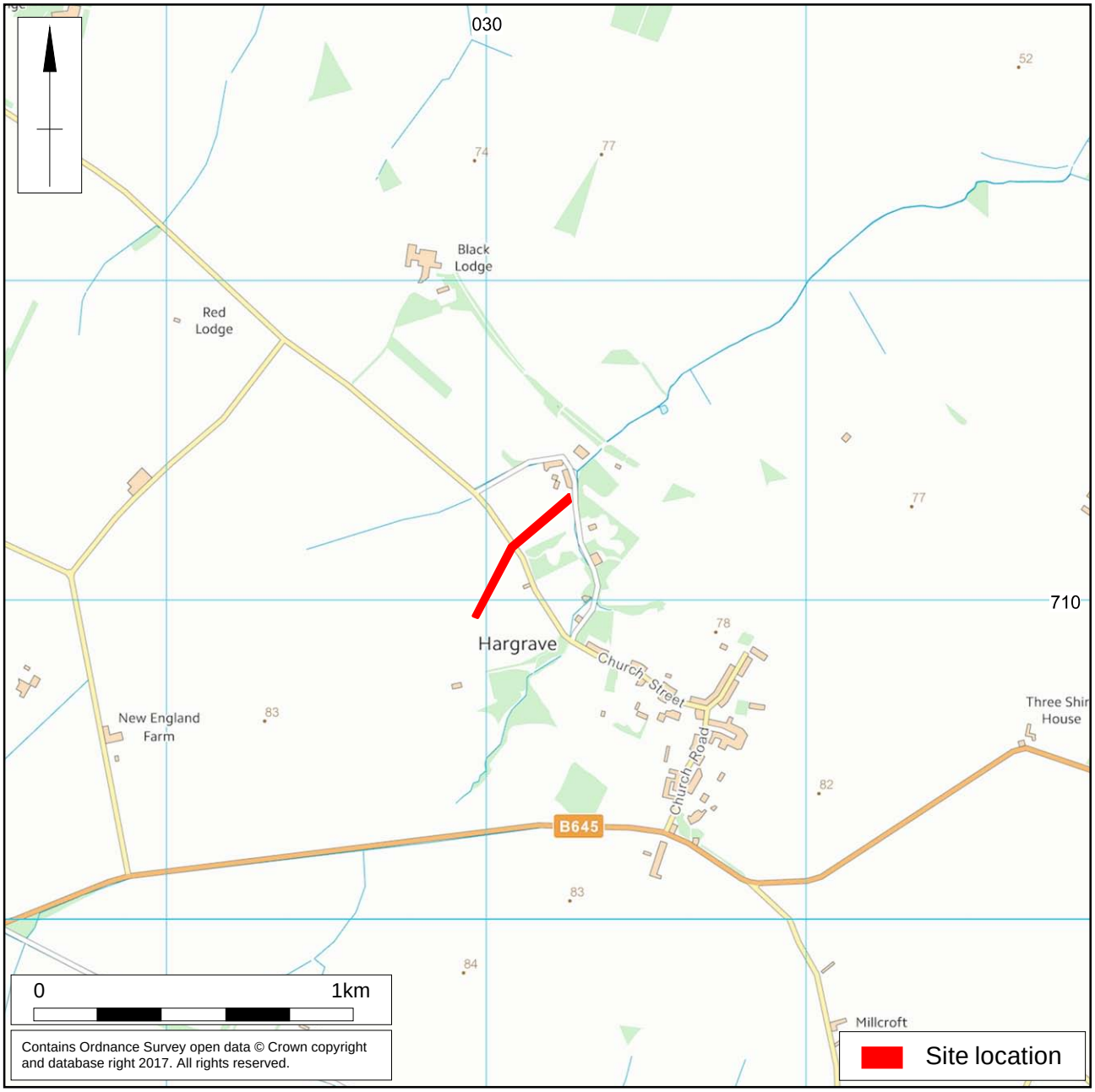
MOLA
22nd June 2017

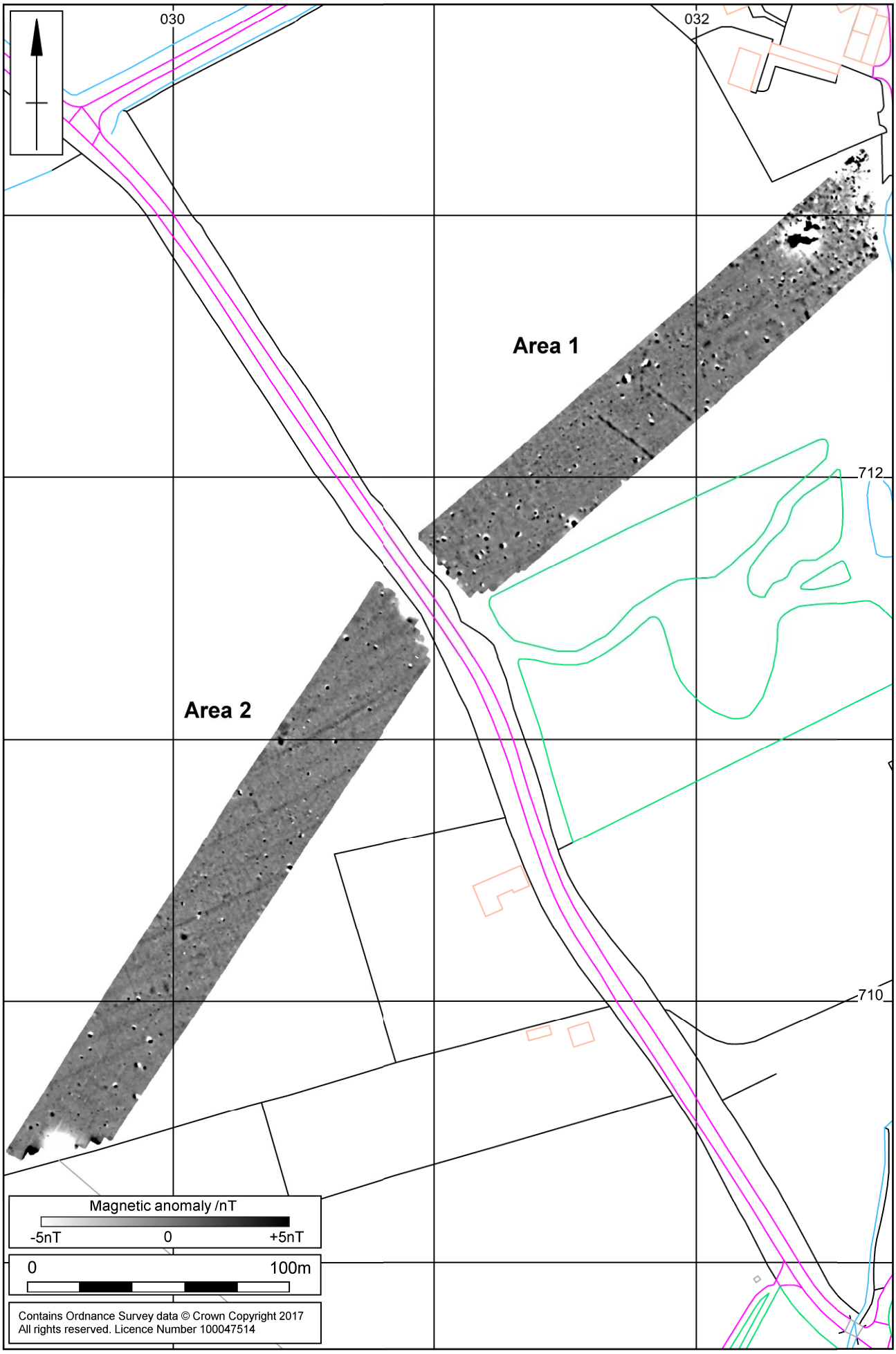







Scale 1:20,000

Site location Fig 1

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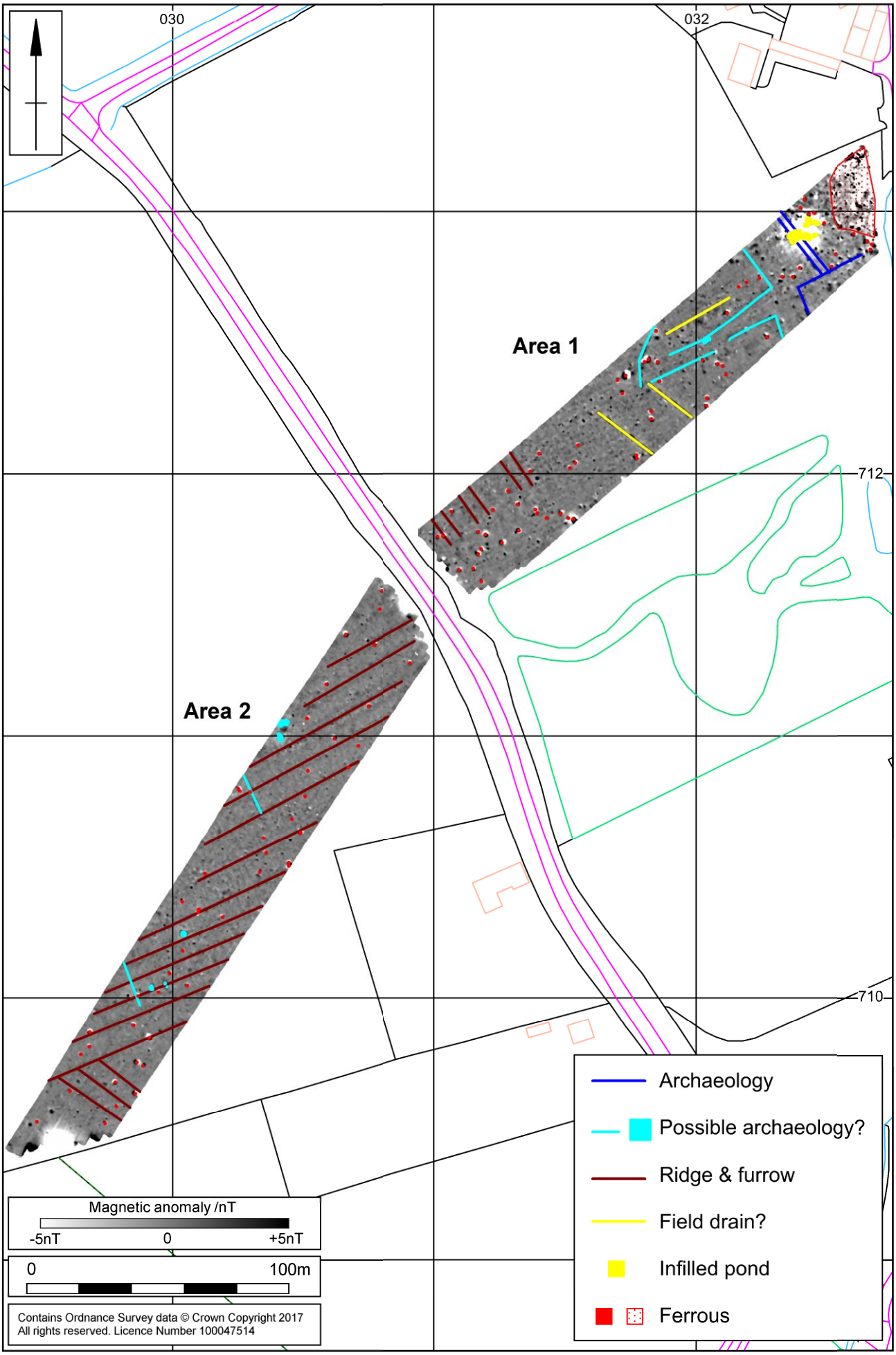
Magnetometer survey results Fig 2

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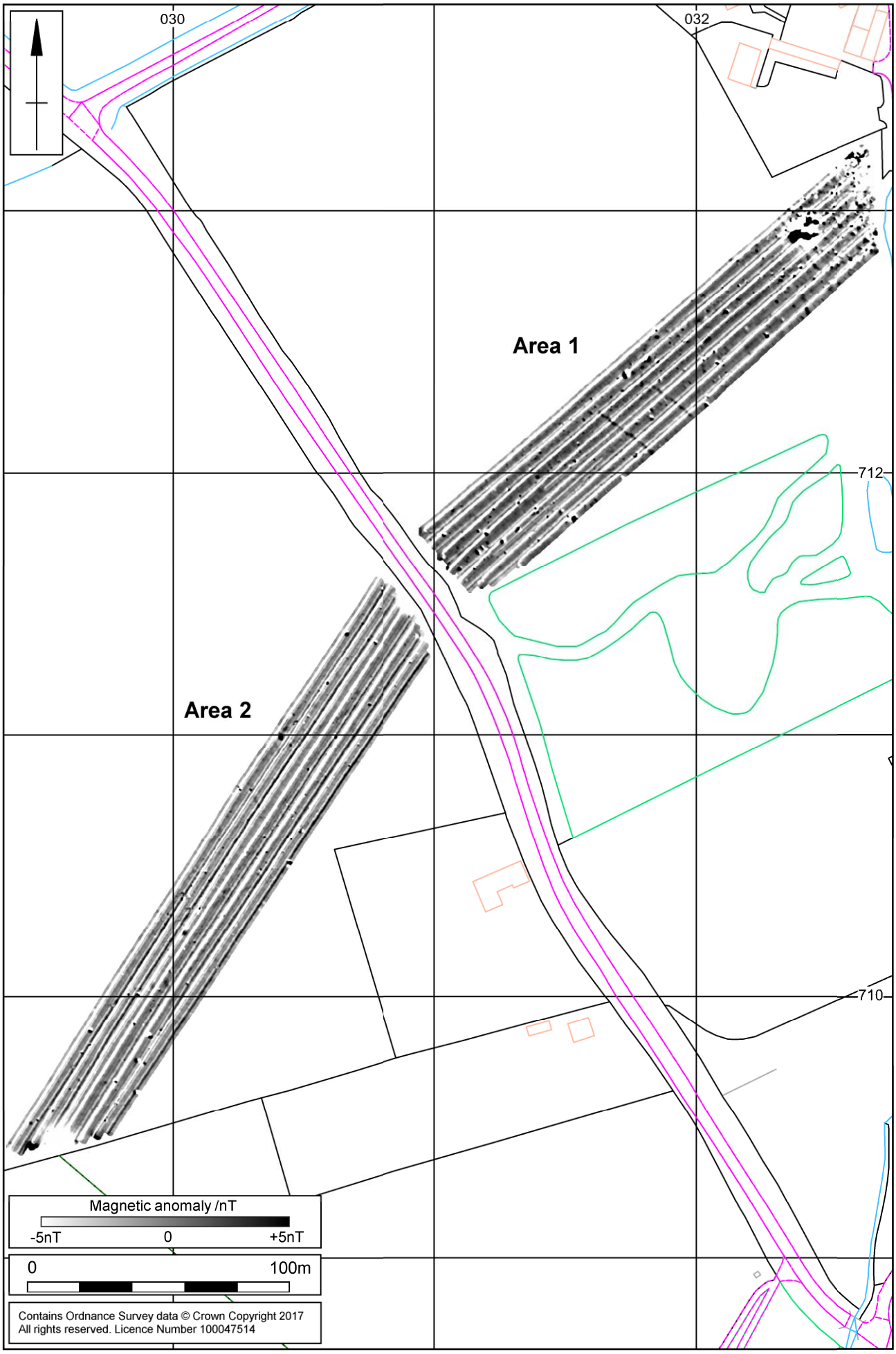
Magnetometer survey interpretation Fig 3




1:2000

Magnetometer survey results - unprocessed Fig 4

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