



**Archaeological geophysical survey at
Nailcote Farm, near Coventry
West Midlands
October 2014**

Report No. 14/252

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OASIS REPORT

PROJECT DETAILS		Oasis No. molanort1-198709	
Project name	Archaeological geophysical survey at Nailcote Farm, Coventry, Warwickshire		
Short description	MOLA was commissioned to carry out a detailed magnetometer survey on the proposed site for a solar farm at Nailcote Farm, Nailcote Lane, Coventry, West Midlands. The survey identified a number of historic field boundaries, extensive ridge and furrow and areas of modern disturbance and pipe lines.		
Project type	Geophysical survey		
Site status	None		
Previous work	Desk-based assessment (Butler 2014)		
Current Land use	Arable and pasture		
Future work	Unknown		
Monument type/ period	Medieval ridge and furrow		
Significant finds	None		
PROJECT LOCATION			
County	Warwickshire		
Site address	Nailcote Farm, Coventry		
Study area	c 27ha		
OS Easting & Northing	SP 270 771		
Height OD	c 112-125m aOD		
PROJECT CREATORS			
Organisation	MOLA Northampton		
Project brief originator	CgMs Consulting		
Project design originator	MOLA Northampton		
Director/Supervisor	Adam Meadows		
Project Manager	John Walford		
Sponsor or funding body	CgMs Consulting		
PROJECT DATE			
Start date	8 October 2014		
End date	17 October 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BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report		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 Nailcote Farm, Coventry, Warwickshire October 2014		
Serial title & volume	MOLA Northampton Reports 14/252		
Author(s)	Adam Meadows		
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Archaeological geophysical survey at Nailcote Farm, Coventry, Warwickshire October 2014

Abstract

MOLA was commissioned to carry out a detailed magnetometer survey on the proposed site for a solar farm at Nailcote Farm, Nailcote Lane, Coventry, West Midlands. The survey identified a number of historic field boundaries, extensive ridge and furrow and areas of modern disturbance and pipe lines.

1 INTRODUCTION

MOLA was commissioned by CgMs Consulting to undertake a detailed magnetometer survey on land at Nailcote Farm, Coventry, West Midlands (NGR; SP 269900 769950 Fig 1). The purpose of the survey was to contribute towards an assessment of the archaeological impacts of a proposed solar park development. The fieldwork was undertaken from 8th October to 17th October 2014 and covered three fields with a combined area of c 27ha.

2 BACKGROUND

2.1 Location and geology

The proposed development area is located to the west of Coventry between Hodgetts Lane and Cromwell Lane and south of Nailcote Hall. It comprises of three fields that surround a copse. Two of these fields are pastoral and the south-eastern field is arable. The total extent of this area is c 27.06ha.

The topography of the survey area generally slopes from the south-east and west towards the centre of the site. The highest point on the site is 125m AOD at the easternmost corner of the survey area with the low ground in the centre at approximately 112m AOD. The geology of the development area consists of members of the Tile Hill Mudstone Formation overlain by Alluvium (BGS 2014).

2.2 Historical and archaeological background

An archaeological desk-based assessment of the survey area identified no known archaeological remains within its boundaries (Butler 2014). Historic maps also show that the site has been used as farmland from as far back as the 1800s.

A search of Heritage gateway does show that to the east of the survey area there is a couple of Grade II listed farm buildings at Arnolds Farm dating from the late 1600's (List Entry Number: 1076674 & 1253076). Another prominent feature in the area is a 19th century water tower that is also west of the survey area, just beyond the 17th century farm house and barn (HER No: MCT29).

The long history of agricultural land use in this area and lack of any finds or known archaeology in the immediate vicinity suggests that the site has a low potential for archaeology being uncovered.

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).

An independent network of 30m grid squares was established within each of the fields to be surveyed. The grids were set out with a tape measure and optical square and were tied in to the Ordnance Survey National Grid by means of a Leica Viva RTK GPS. 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 largely processed using Geoplot 3.00v software. Most of the striping was removed using the 'Zero Mean Traverse' function but some areas had to be de-striped separately, using a spreadsheet based routine, in order to preserve linear anomalies lying parallel to the traverse direction. Destaggering of the data was performed where necessary. The processed data is presented in this report in the form of greyscale plots at a range of +4nT (black) to -4nT (white). These have been scaled, rotated and resampled (georectified) for display against the Ordnance Survey base mapping (Fig 2). An interpretive overlay is presented in Figure 3, and a plot of the unprocessed survey data is presented in Figure 4.

4 SURVEY RESULTS

4.1 Archaeology

The survey has detected linear anomalies in all three fields which represent medieval ridge and furrows. The directions of these vary depending on the area with over lapping occurring in places like the western edge of the survey area. These suggest separate phases of ploughing as well as providing evidence of historic field boundaries.

In the southern part of the western field, just to the east of the large linear anomaly there are some dark lines which appear to faintly turn. This gives it the appearance of a broken ring ditch. To the south of the feature still there is a linear anomaly that appears to run to the south-west through an area of modern disturbance. Unfortunately the proximity of this feature to a couple of modern pipes line obscures the some of the data in this area.

4.2 Field boundaries and drainage

The survey area detected some weak linear anomalies running through all three fields. These correlate with field boundaries that feature in a 1923 Ordnance Survey map. On the ground these old boundaries are preserved though lines of trees still extant in the field, as seen in the north-eastern field. But in the data the boundaries stand out as changes in ridge and furrow as well as linear clusters of magnetic noise resulting of material gathering at the edges of these fields.

In some areas like the westernmost point there are weak linear anomalies with alternating magnetic polarity. These results strongly suggest the presence of field drains following the ridge and furrow heading in a south-easterly direction. Some weak anomalies similar to this appear patchy in the south-eastern field and run in an east-south-easterly direction.

4.3 Ferrous anomalies

The survey has detected a large number of dipolar anomalies distributed randomly across the entire survey area. Most of these will relate to minor pieces of scrap metal within the plough soil, but a few of these in the western field relate to telegraph poles, a trough and an electric fence.

The strongest dipolar anomaly comes from a below ground pipeline running through the western most field and the north-eastern field. This feature originates from the power substation just the other side of Hodgetts Lane to the south-west of the survey area.

5 CONCLUSION

The survey results show changing field boundaries that relate to the modernisation of farming. The presence of medieval ridge and furrow shows how long this area has been used for agriculture.

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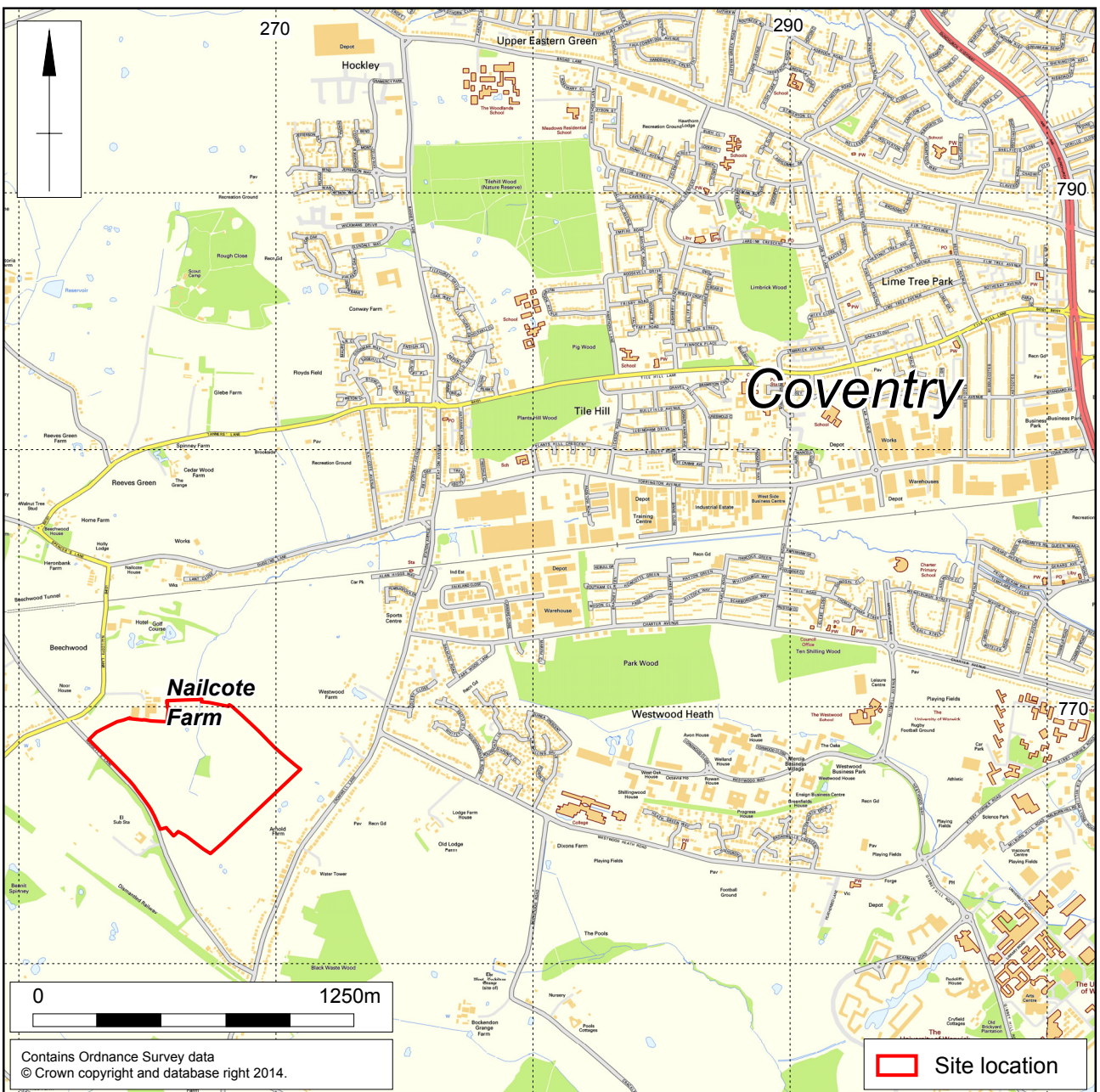
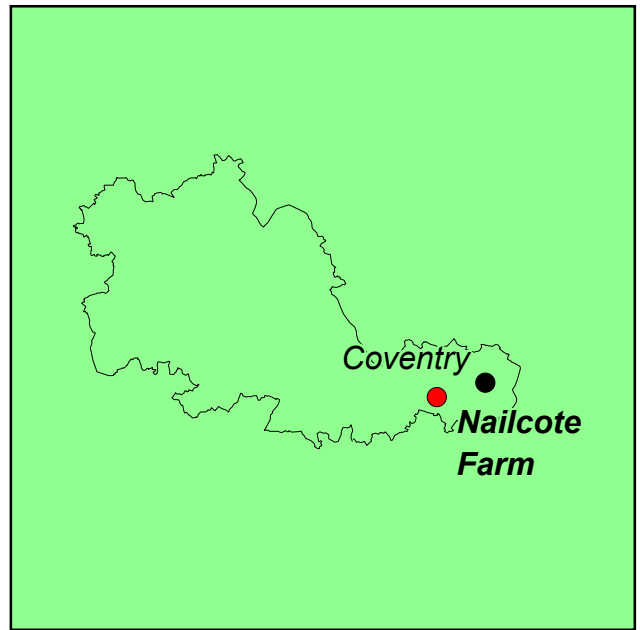
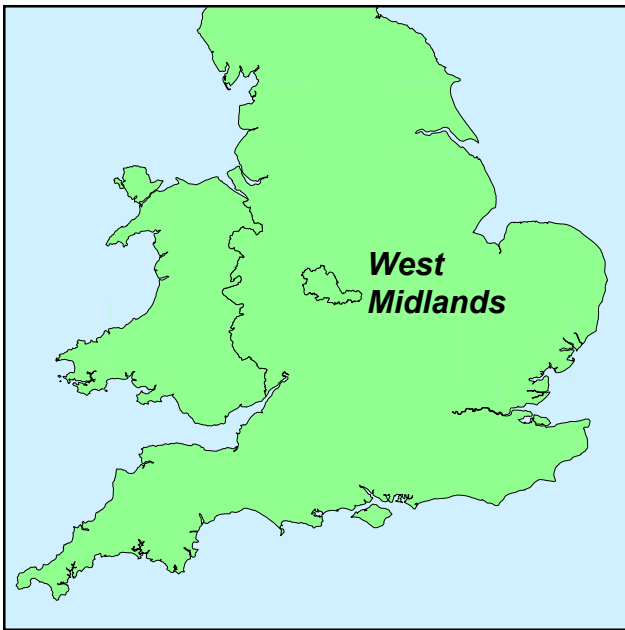
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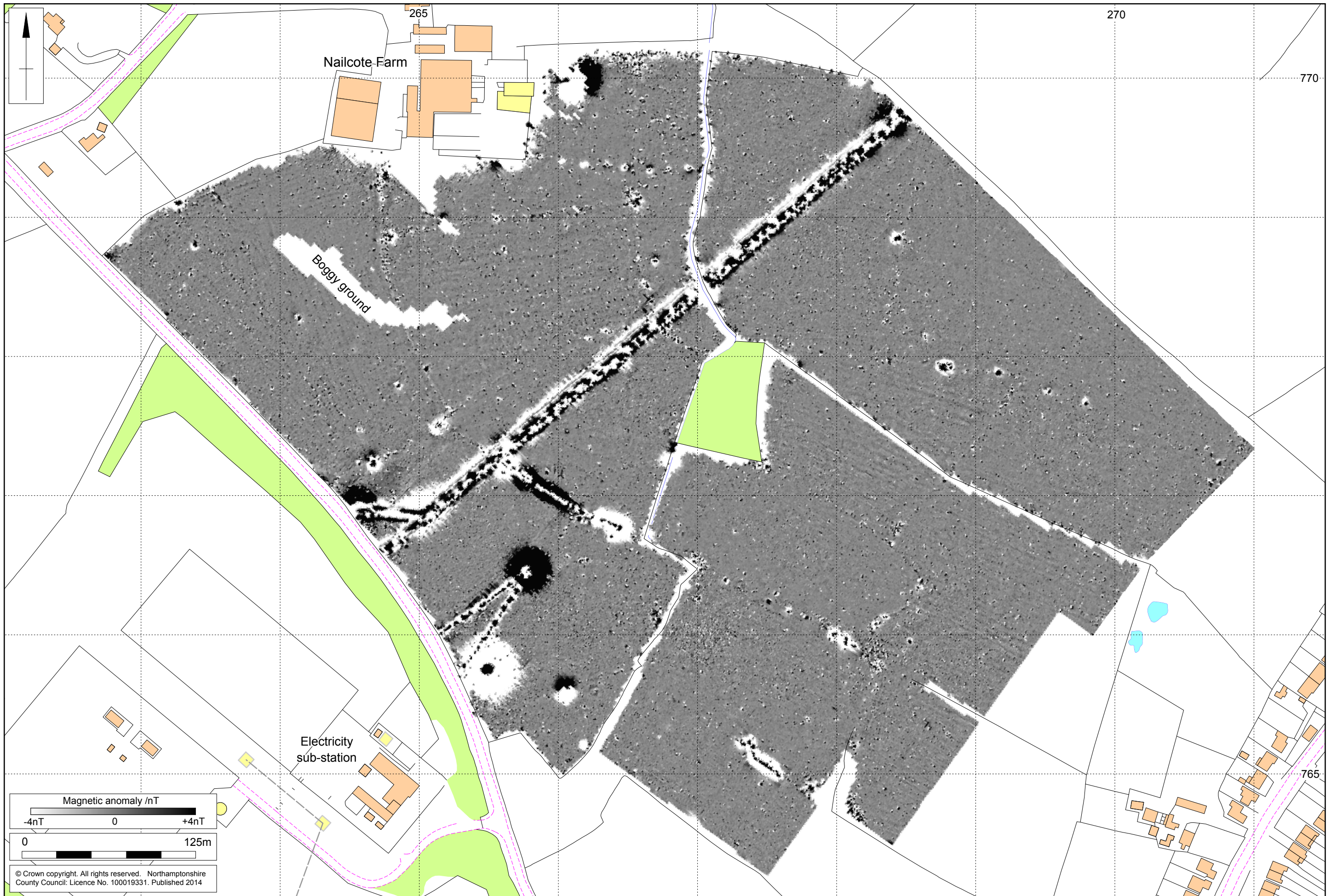
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4 November 2014



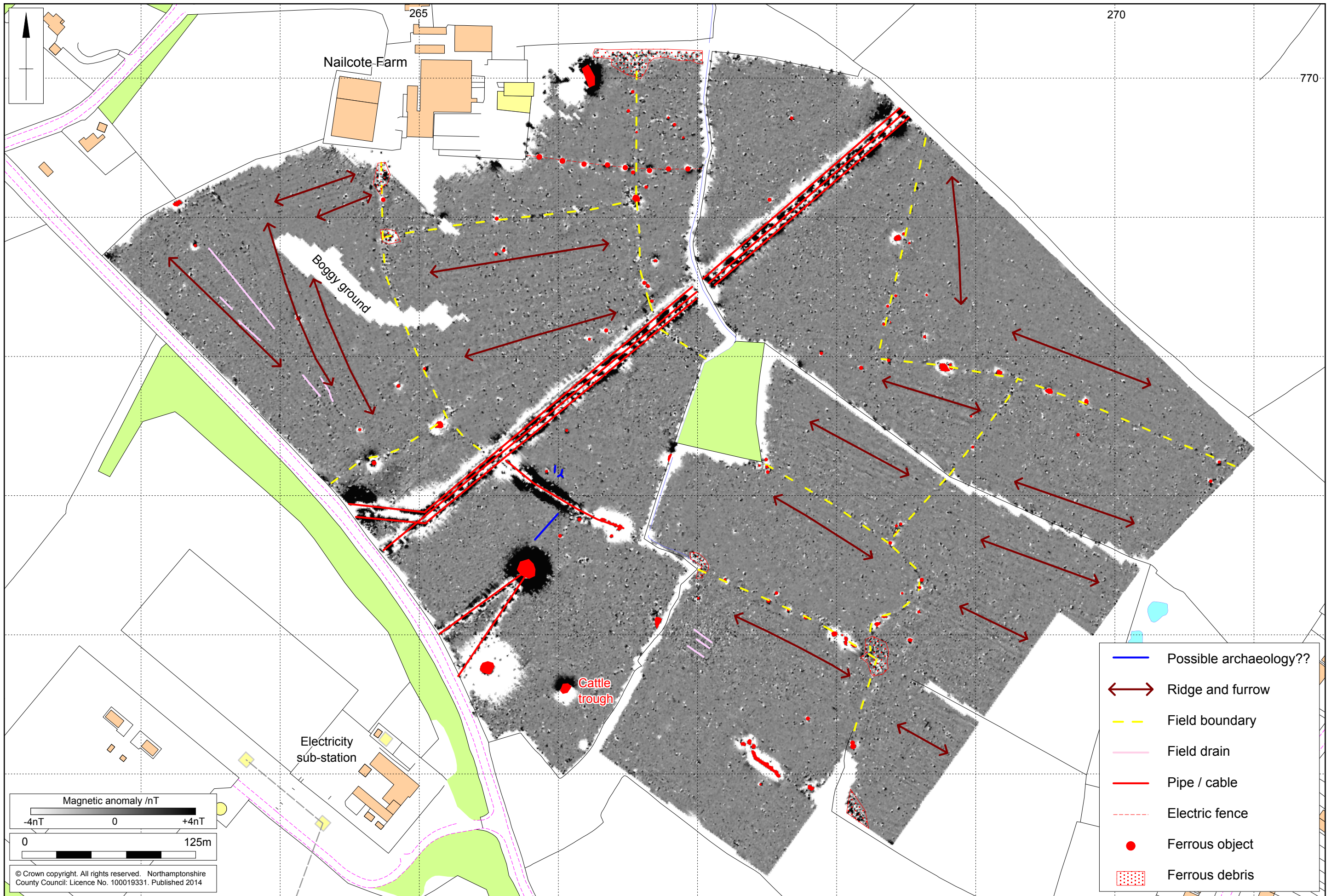
Scale 1:25,000

Site location Fig 1



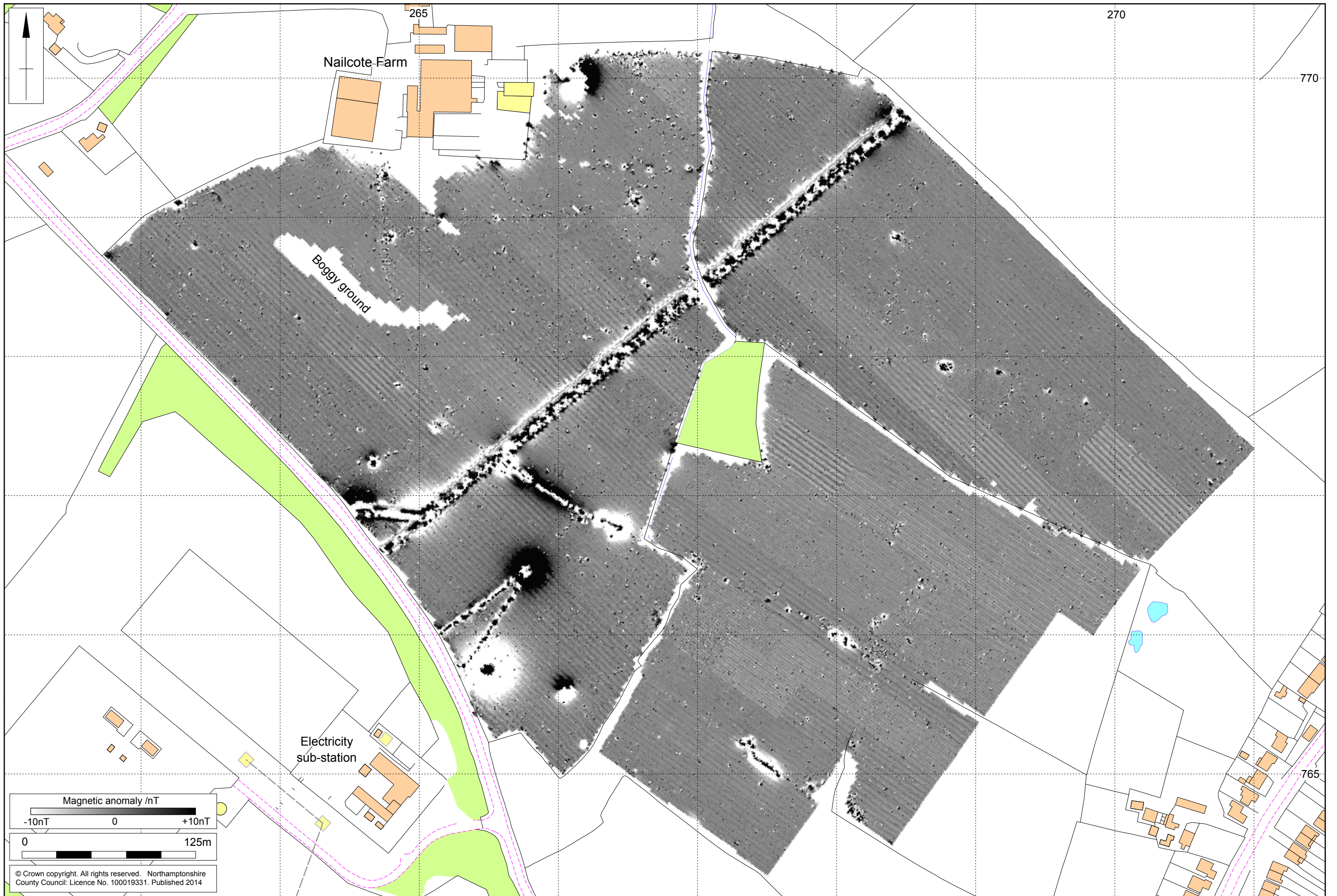
Scale 1:2500

Magnetometer survey results Fig 2



Scale 1:2500

Magnetometer survey interpretation Fig 3



Scale 1:2500

Unprocessed magnetometer data Fig 4



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