



Church Hill Field, Newton Tony, Wiltshire

**Magnetometry Geophysical Surveys
12th and 21st December 2014**

Report Number WAFG 2015.01

Event:	Magnetometry Survey of Church Hill Field, Newton Tony
Event type:	Survey
External Reference:	WAFG 2015.01
Dates:	12.12.2014 and 21.12.2014
Project Details:	
Event/Activity Types – MAGNETOMETRY GEOPHYSICAL SURVEY	
Thesaurus Event Types <ul style="list-style-type: none"> • MAGNETOMETRY GEOPHYSICAL SURVEY 	
Event/Activity References - None recorded	
Organisation: Wiltshire Archaeology Field Group (WAHNS)	
Associated Individuals: Mike McQueen, Dan Miles	
Associated Organisations -	
Grid Reference: Centered NGR SU2095 3983	
Administrative Area - Civil Parish: Newton Tony, Wiltshire	
Address - None recorded	
Description and Sources	
<p>Description: A systematic field walking and metal detecting survey was undertaken by the WAFG in 2010 (see Field Walking & Metal Detecting Survey of Church Hill Field, Newton Tony, WAFG. 2014.02). This survey did not provide conclusive evidence that there is a Romano-British site in Church Hill Field & so it was decided that a geophysical survey be undertaken in this field & surrounding fields.</p> <p>A survey of an area within the southwest corner of Church Hill Field (referred to as the North Field in this report) was undertaken on the 12th December 2014. Based on the results from this survey it was decided to carry out a further survey of the northwest corner of the field to the south (referred to as the South Field in this report) on 21st December 2014.</p>	
Sources: Report: WAFG. 2014.02, CHURCH HILL, NEWTON TONY	
Associated Monument: MWI64310	

Investigation undertaken by: Wiltshire Archaeology & Natural History Society (WANHS) Archaeology Field Group (WAFG)

Site Owner: the Royal Society for the Protection of Birds - who kindly gave permission for the surveys to be undertaken.

Authorship: Mike McQueen (BA, MA), with contributions from Dan Miles.

Disclaimer

This report has been compiled with all reasonable skill, care and attention to detail within the terms of the project design and within the general operating procedures of the Wiltshire Archaeology Field Group and WANHS. No responsibility is accepted whatsoever to third parties to whom this report or any part thereof is made known. Any such party relies upon this report at their own risk.

Acknowledgements

We would like to thank the landowner, the Royal Society for the Protection of Birds for allowing access to the site.

Contents

1	Summary	2
2	Disclaimer and Acknowledgements	3
3	Contents	4
4	List of Figures	4
5	Introduction	5
6	Location	5
7	Topography and Geology	6
8	Archaeological Background	6
9	Aims of the Investigations	6
10	Methodology	6
11	Magnetometry Survey Results	7
12	Interpretation of Results	13
13	Interpretation of the Site	16
14	Discussion and Conclusion	16
15	Recommendations	16
16	Archive Location	16

List of Figures

Figure 1:	Location of the Survey Areas	4
Figure 2:	Location of the Geophysical Survey Areas (© OS).	7
Figure 3:	South Field Magnetometry Results with pipeline removed	12
Figure 4:	The position of the Magnetometry Surveys	13
Figure 5:	Possible archaeological features highlighted	13
Figure 6	Possible archaeological features	14
Figure 7:	Possible archaeological features overlying 1m DTM LIDAR	14
Figure 8:	Analysis of Possible Archeological Features	15

Introduction

The site is in a field, known as Church Hill Field, on the western edge of Newton Tony parish, 5km east of Amesbury in South Wiltshire. It is within the Winterbourne Downs RSPB Reserve, which was established to create an important chalk grassland link between the extensive grasslands of Salisbury Plain & Porton Down.

In September 2010 the field was to be permanently taken out of arable & converted to traditional chalk grassland. This provided a final opportunity to undertake field walking. The RSPB warden, Patrick Cashman, gave permission for a field walking & metal detecting survey.

This survey did not provide conclusive evidence that there is a Romano-British site in Church Hill Field & so it was decided that a magnetometry geophysical survey should be undertaken in this field & surrounding fields.

A survey of an area within the southwest corner of Church Hill Field (referred to as the North Field in this report) was undertaken on the 12th December 2014. Based on the results from this survey it was decided to carry out a further survey of the northwest corner of the field to the south (referred to as the South Field in this report) on 21st December 2014.

Location

The site is located near to Newton Tony which is located 5km to the east of Amesbury to the south of Wiltshire – see Figure 1.

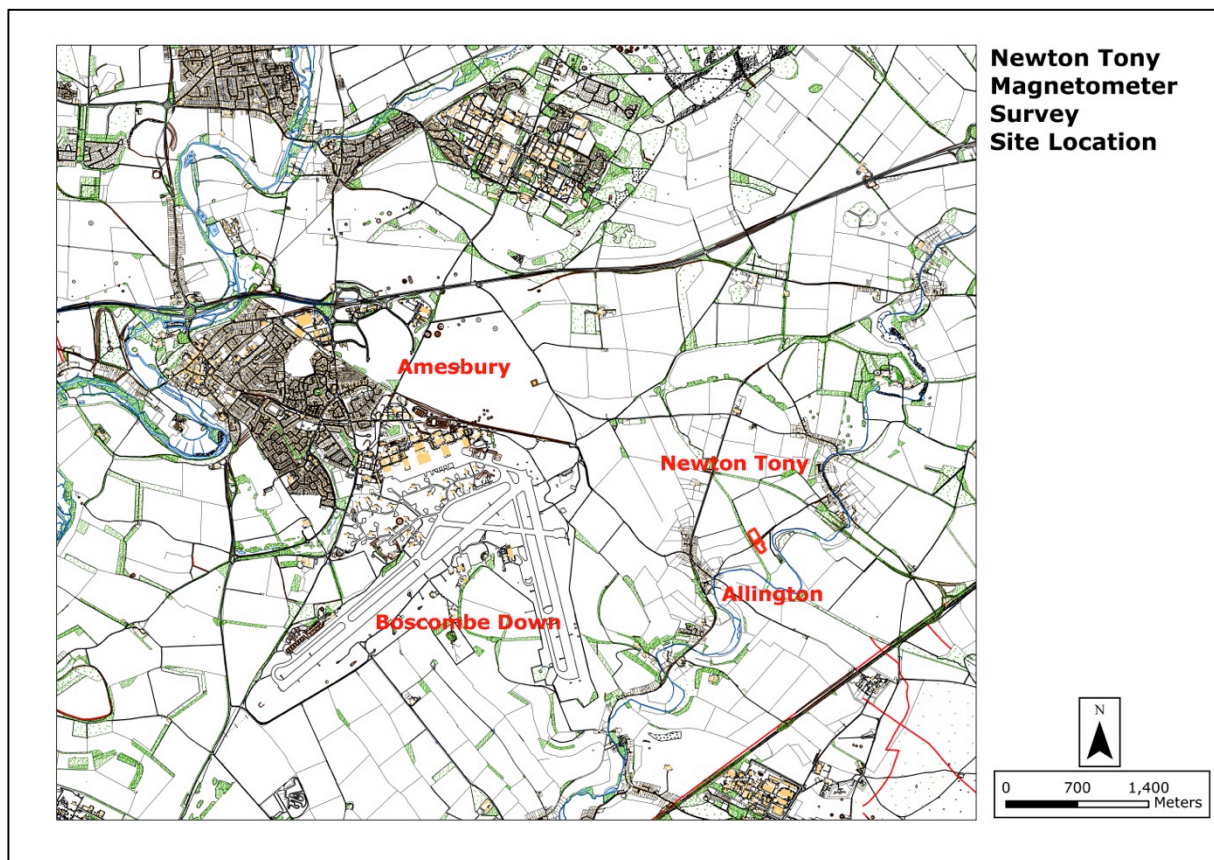


Figure 1: Location of the Survey Areas (© Ordnance Survey (OS))

Topography and Geology

The fields are at a height of c.90-95 metres OD. Both fields slope down to the west, particularly the south field, towards the River Bourne.

The fields are located on Seaford Chalk Formations. There are deposits of Head in the valley floors beneath the fields but not in the areas surveyed.

The fields were both under pasture. Church Hill Field is used as a bird reserve by the RSPB.

Archaeological Background

A Field Walking & Metal Detecting Survey was undertaken in Church Hill Field in 2010 (see Field Walking & Metal Detecting Survey of Church Hill Field, Newton Tony, WAFG. 2014.02). This survey failed to identify the Romano-British settlement thought to be located in the area based on previous pottery and coin finds.

Aims of the Investigations

The project aims were to:

1. To carry out geophysical surveys to see if any archaeological features could be found to explain the finds of coins and pottery in the fields.

All archaeological work was carried out in accordance with English Heritage *Standards for Geophysical Survey 2000* and WAFG standard operating procedures.

Methodology

Magnetometry surveys were undertaken using a Bartington Grad601-2 Dual Sensor Gradiometer. Readings were taken at 80 per 20m traverses. Zigzag traverse intervals were at 1m. Interpretation of results was based on TerraSurveyor software.

In the North Field twenty full and two partial 20m x 20m grids were laid out in a line running parallel with the field edge – see Figure 2 below. In the South Field seventeen full 20m x 20m grids were laid out in a line running parallel with the field edge.

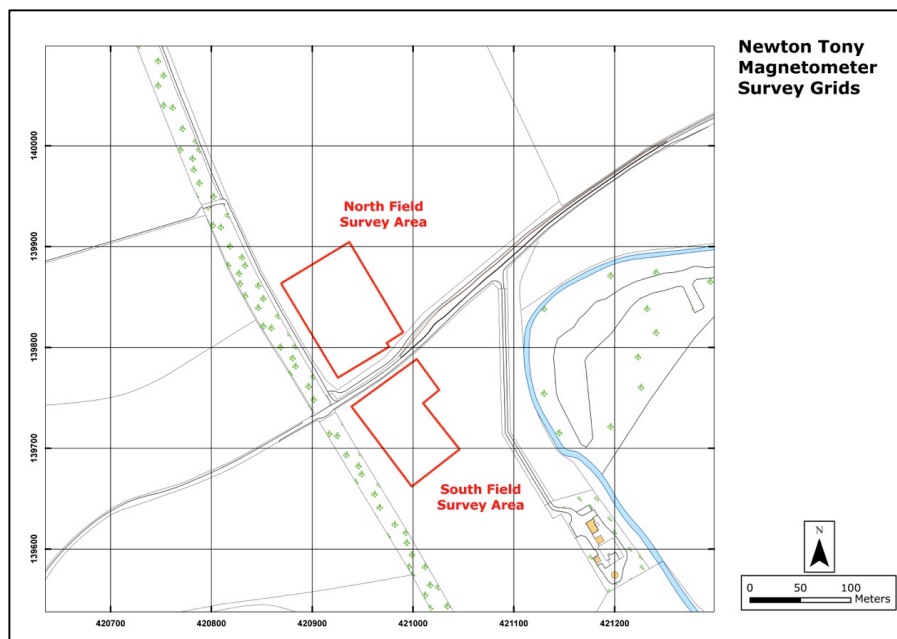


Figure 2: Location of the Geophysical Survey areas. (© OS)

The location of the grids was recorded using a hand-held Garmin GPSmap62stc. The position of the grids was recorded by the GPS as:

North Field

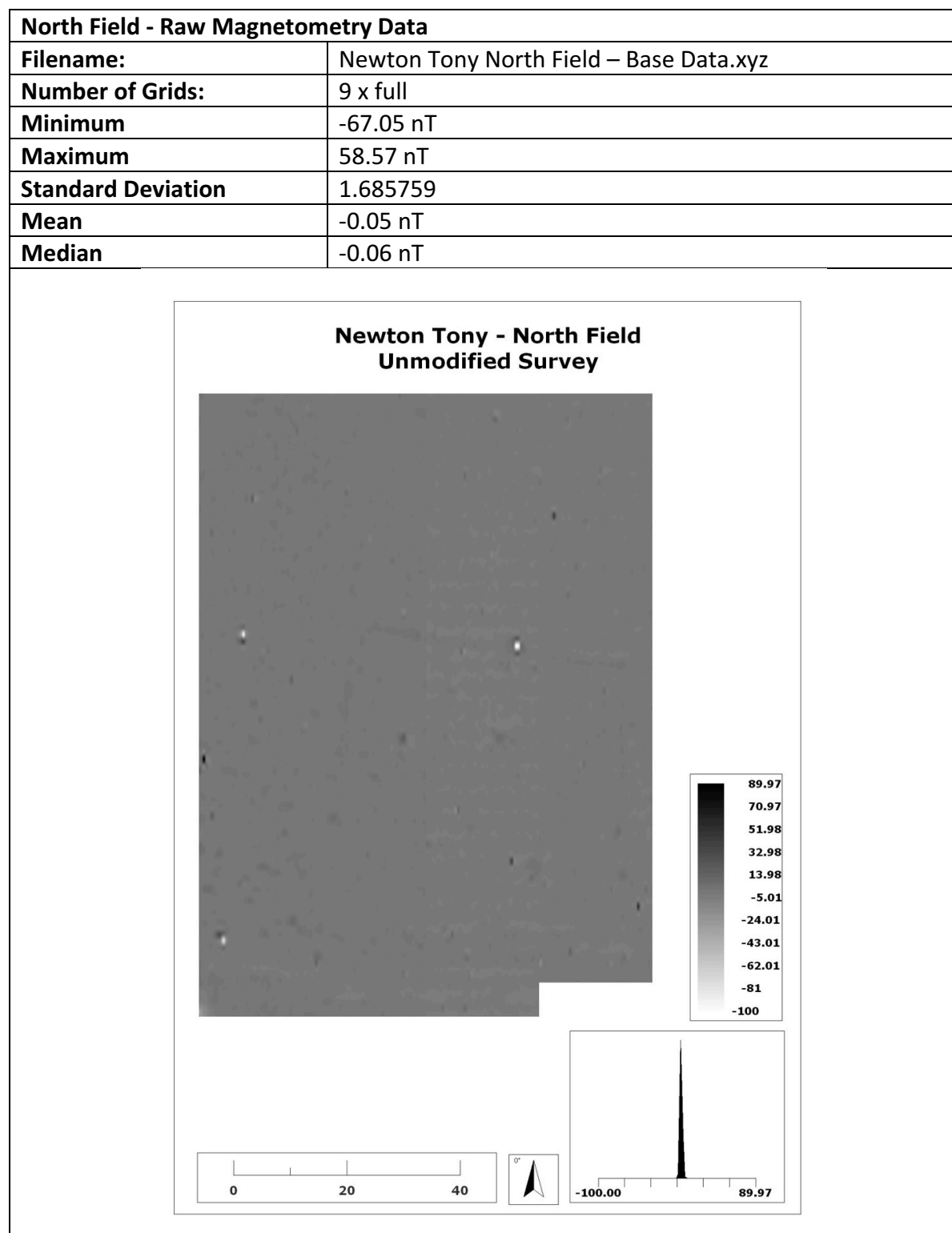
Northwest corner	420869 139863	40m to Northeast	420885 139878
------------------	---------------	------------------	---------------

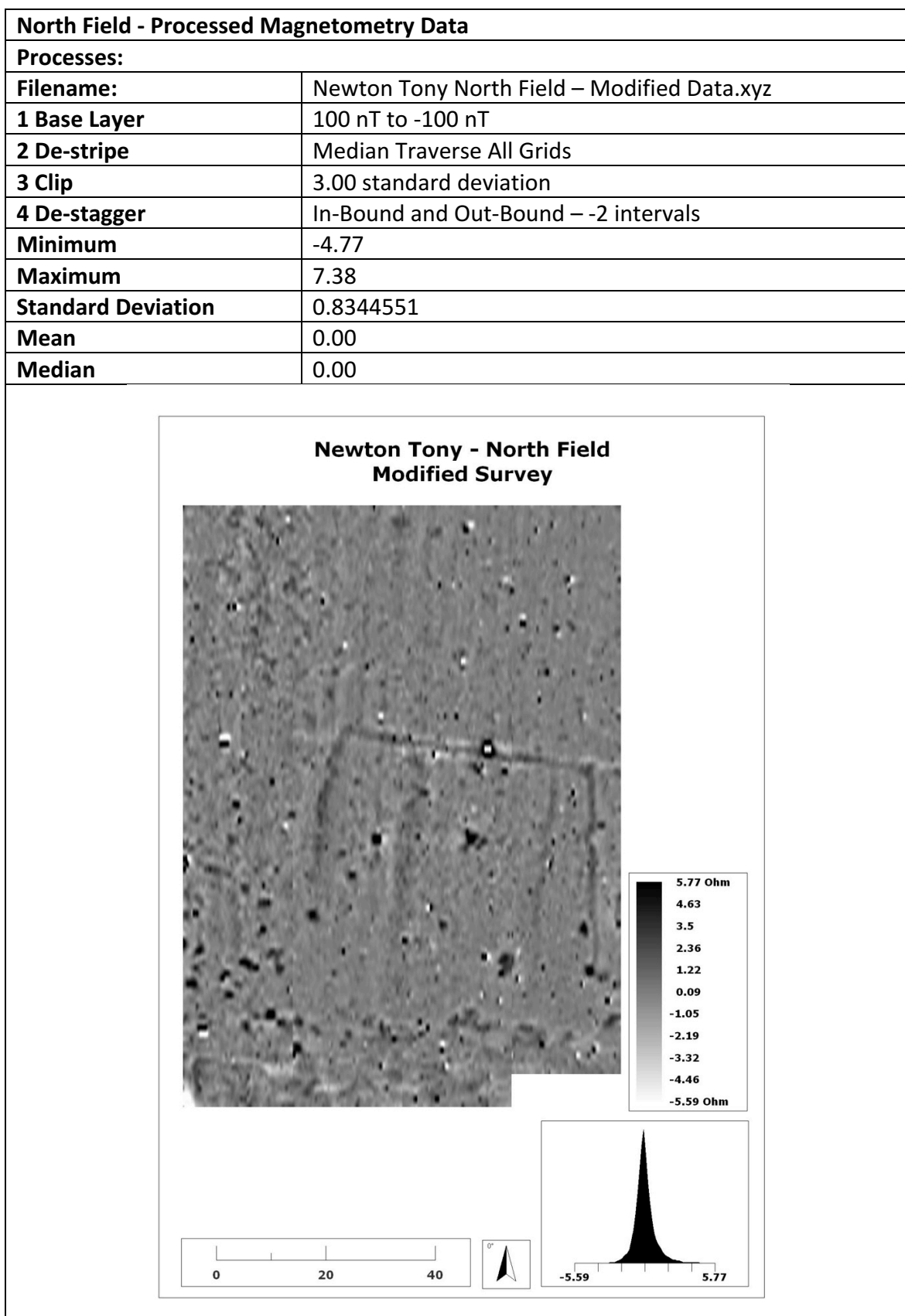
South Field

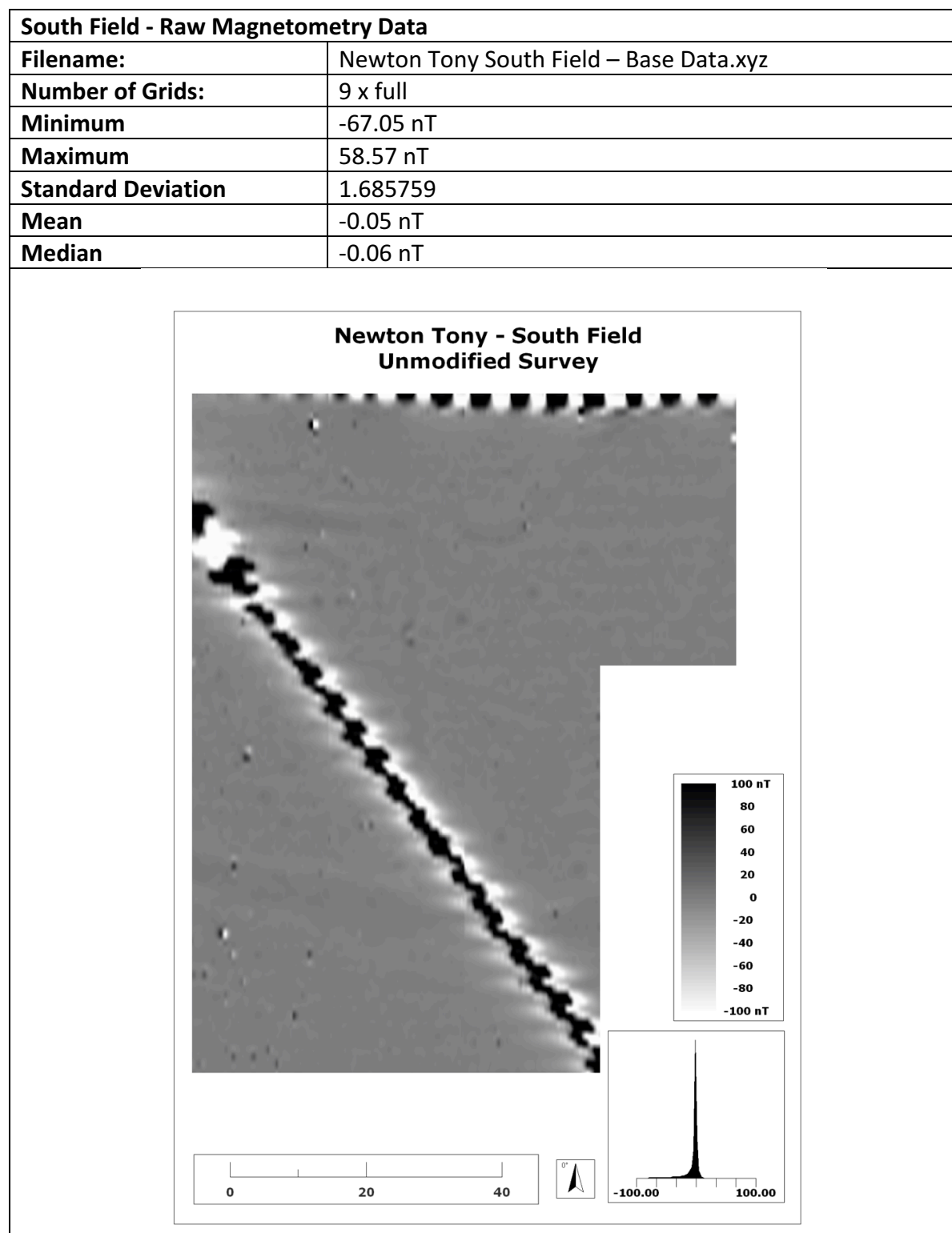
Northwest corner	420940 139742	40m to Northeast	420971 139766
------------------	---------------	------------------	---------------

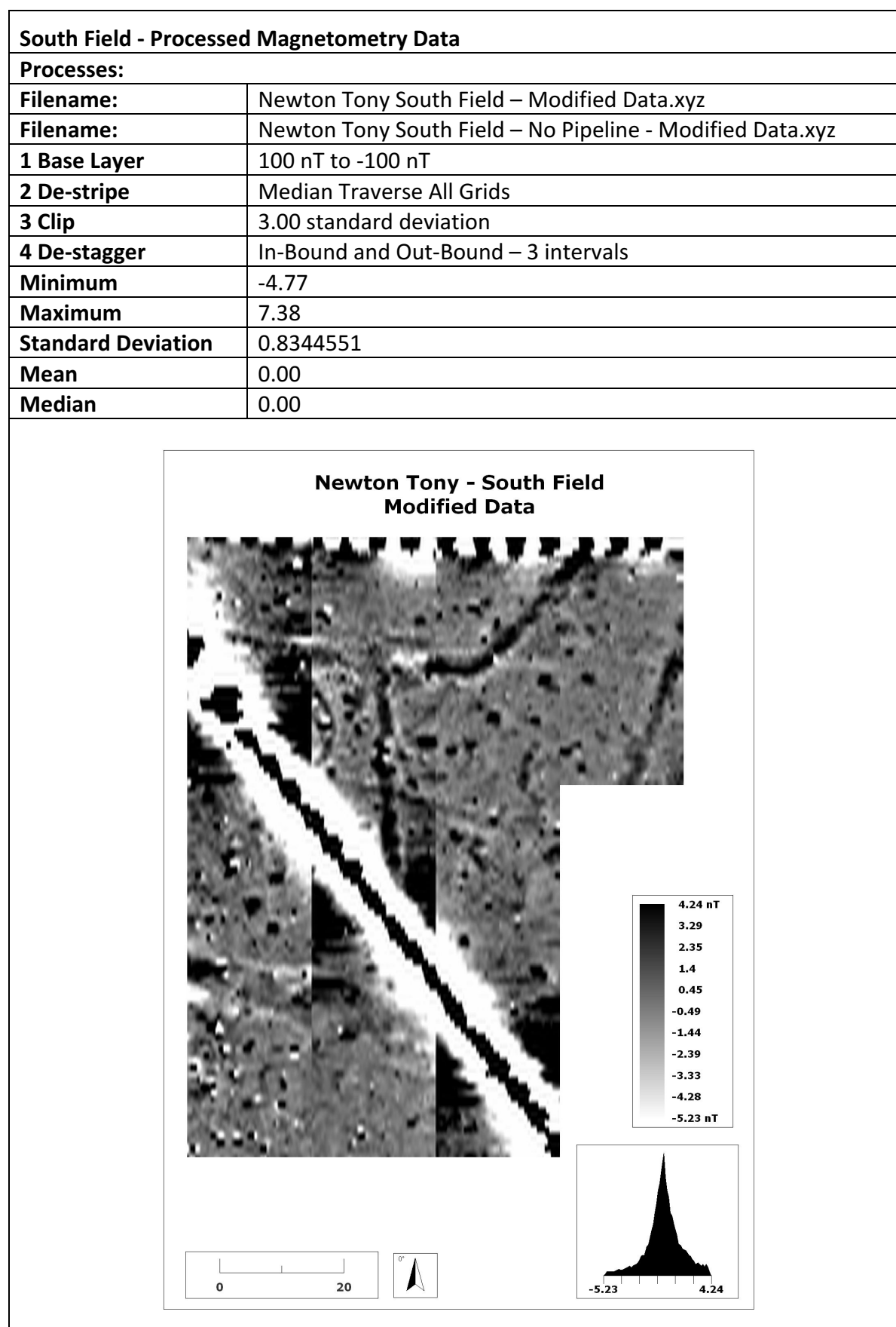
Magnetometry Survey Results.

Bartington (Magnetometry) Set Up	
Instrument Type:	Grad601-2 Dual Sensor Gradiometer
Units:	nT
Surveyed:	9 th January 2015
Collection Method:	Zigzag
Sensors:	2 @ 1.0 m spacing.
Dummy Value	32000
Direction of 1st traverse	90 degrees (East)
Palette	Greyscale









The above results indicate that a pipeline runs across the field from the northwest corner of the survey. There is also an area of disturbance either caused by another buried pipe, the barbed wire fence or by debris from work carried out on the nearby road at sometime in the past. To improve the results of the survey further the high response data in these areas has been removed to produce the following:

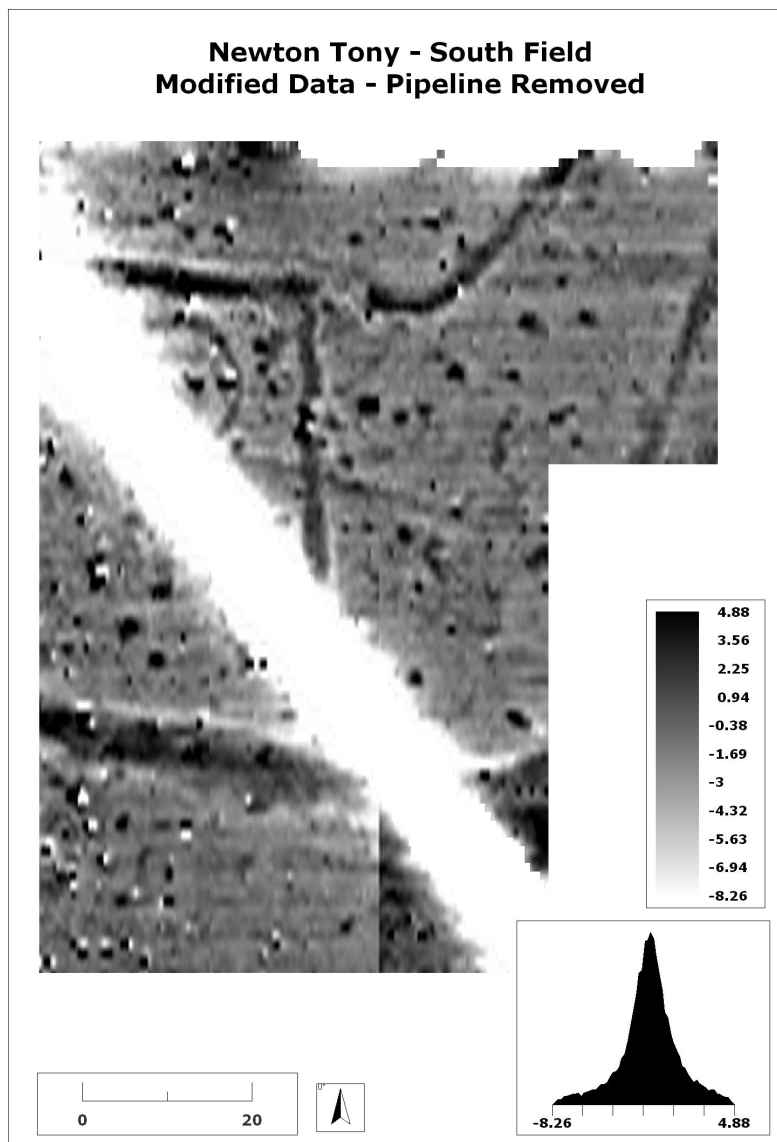


Figure 3 – South Field Magnetometry Results with Pipeline removed

Interpretation

The position of the Magnetometry surveys is shown in Figure 4 below:

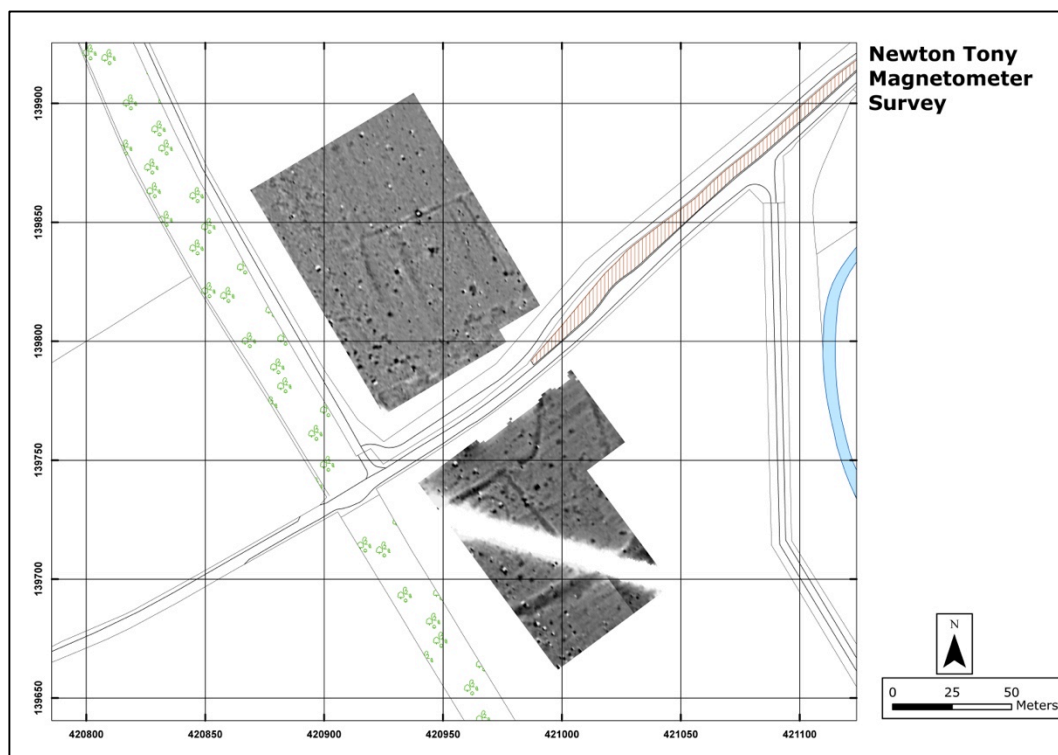


Figure 4: The position of the Magnetometry Surveys. (© OS)

Possible archeological features are highlighted in red and green on Figures 5 & 6 below:

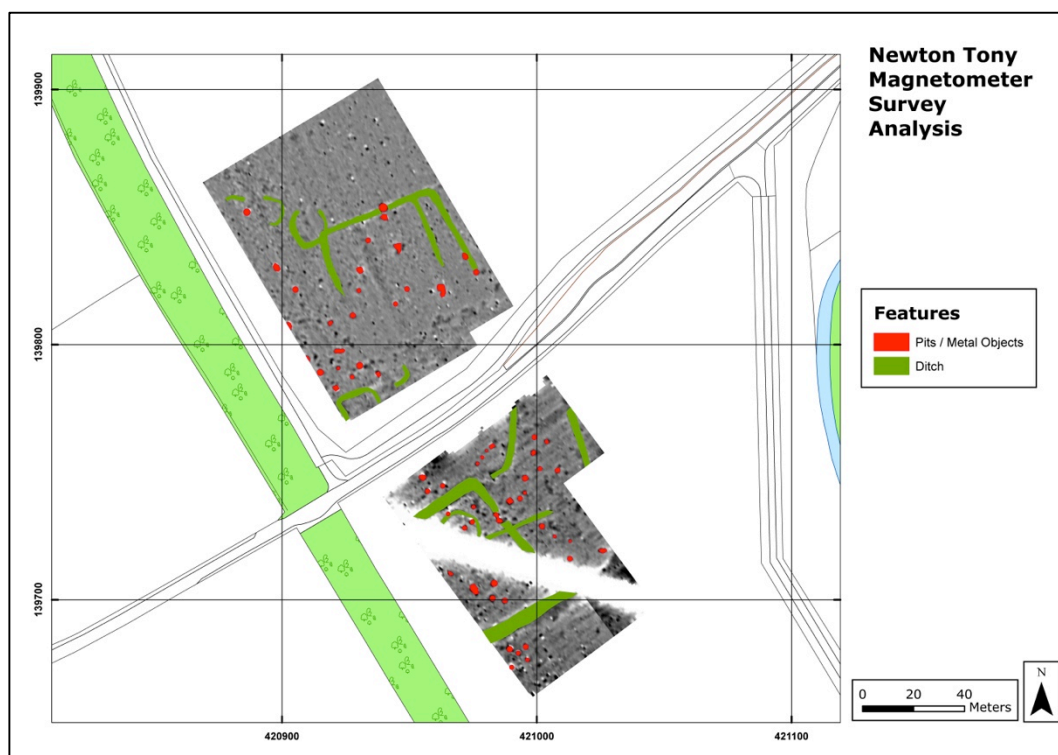


Figure 5: Possible archaeological features highlighted. (© OS)

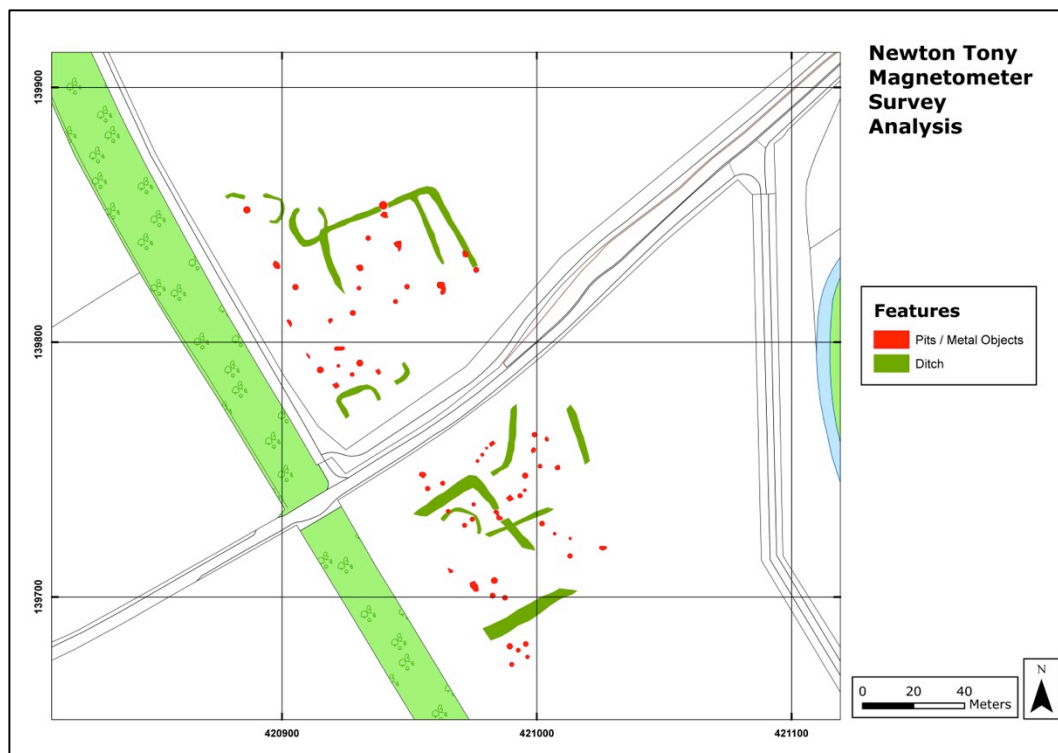


Figure 6: Possible Archaeological Features. (© OS)

The possible archaeological features have been overlaid onto a 1m DTM Lidar map of the area as shown in figure 6 below:

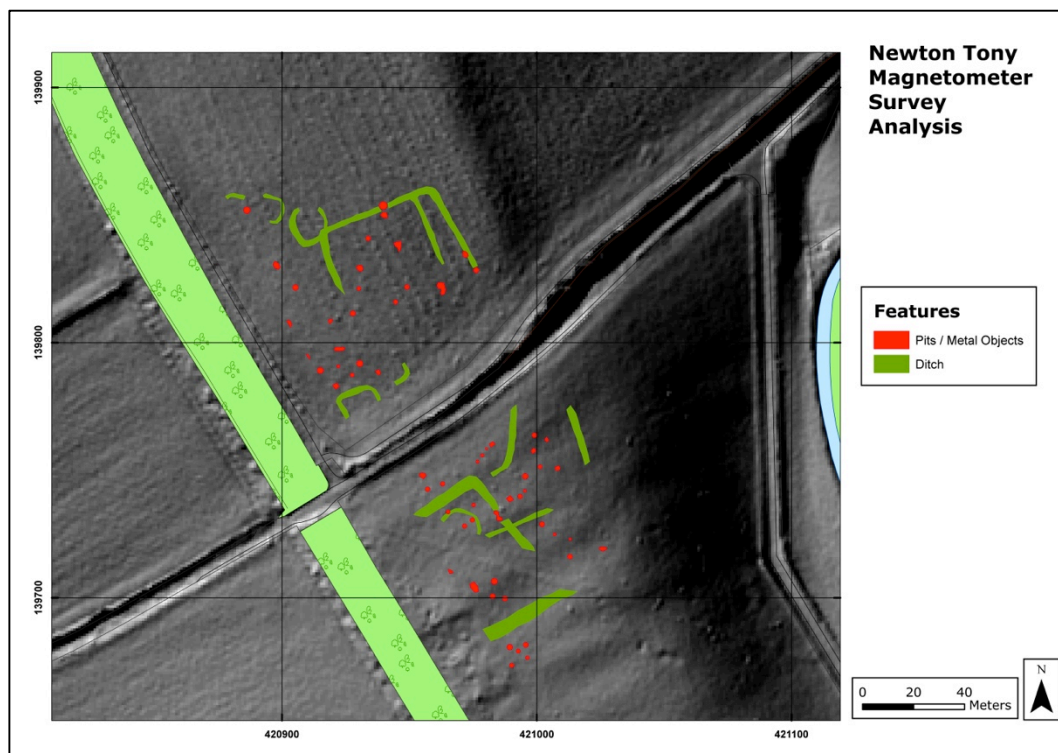


Figure 7: Possible Archaeological Features overlying 1m DTM LIDAR. (© OS and LIDAR SU2039-40 & SU2139-40 ENVIRONMENT AGENCY MAY-2006)

Possible features are highlighted on Figure 8 below:

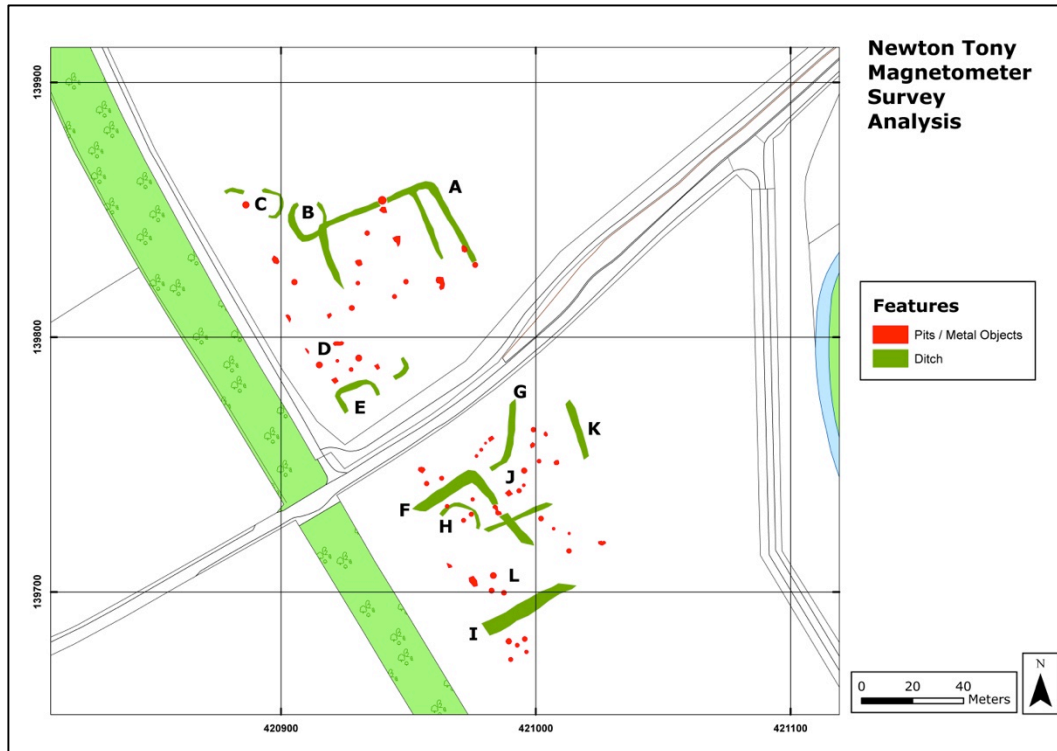


Figure 8: Analysis of Possible Archaeological Features (© OS)

These features could be related to the Romano-British settlement thought to be located in the area.

North Field

- A. Rectangular enclosure with possible internal divisions. The bottom of the enclosure may have been removed when the road was constructed, as the ground appears to be quite disturbed in this area.
- B. Part of a circular feature c.18-20m in diameter, possibly a round house, which underlies the corner of enclosure A.
- C. Part of a small rectangular feature, possibly a house structure.
- D. There appear to be a number of pits and / or metal objects across the site area.
- E. Part of a small rectangular feature similar to C.

South Field

- F. Part of a rectangular enclosure, partially obscured by the pipeline.
- G. Possible extension of enclosure F with an entrance between the two features.
- H. Part of a circular feature c.18-20m in diameter, possibly a round house.
- I. Substantial ditch 4-5m wide.
- J. Partial circle of pits or postholes, possibly indicating the presence of a round house.
- K. Part of another enclosure, possibly an extension of enclosure A from the North Field.

Interpretation of the Site

Taking account of the results of the previous field walking and metal detecting carried out in the fields and the features observed from the geophysical surveys it is suggested that the area contains a long established probably Iron Age through to Roman settlement site. The site may have started as a reasonably high status Iron Age farmstead and continued in use into the Roman period but without turning into a villa.

Discussion and Conclusion

The aim of these geophysical surveys was to find evidence for a possible Romano-British settlement in the area. This aim appears to have been met, as there appear to be a number of enclosures, possible house structures and pits and/or postholes across both the areas surveyed.

Recommendations

Subject to gaining approval from the landowner and avoiding periods when birds may be using the fields, consideration will be given to carrying out limited excavations and test pitting in both fields to try and date and evaluate the features showing up on the geophysical surveys. The excavations will be carried out by members of the Wiltshire Archaeological Field Group under the supervision of Dan Miles.

A further geophysical survey of the fields to the west of the tree line will be considered subject to obtaining permission to gain access.

Archive Location

A copy of this report will be given to the Royal Society for the Protection of Birds.

All archive material (a hard copy of this report, a digital copy of this report and a digital copy of the geophysical data) is deposited with the Wiltshire Heritage Museum, Devizes. A copy of the report has been added to OASIS and has been sent to Wiltshire Archaeological Service.