

Land at Montys Farm, Norton Fitzwarren, Somerset

Geophysical Survey (Magnetic)

by Daniel Bray and Tim Dawson

Site Code: MNF14/250 (ST 1830 2650)

Land at Montys Farm, Norton Fitzwarren, Somerset

Geophysical Survey (Magnetic) Report

For Solar Venture Limited

by Daniel Bray and Tim Dawson

Thames Valley Archaeological Services Ltd

Site Code MNF 14/250

January 2015

Summary

Site name: Land at Montys Farm, Norton Fitzwarren, Somerset

Grid reference: NGR ST 1830 2650

Site activity: Magnetometer survey

Date and duration of project: $18^{th} - 19^{th}$ December 2014 and $5^{th} - 8^{th}$ January 2015

Project manager: Steve Ford

Site supervisor: Daniel Bray

Site code: MNF 14/250

Area of site: 10.9ha

Summary of results: The geophysical survey successfully recorded a series of magnetic anomalies. Those of most archaeological interest were located in the central and eastern fields of what appears to be a complex of small enclosures sub-dividing the site within the central field and encroaching into the western edge of the eastern field.

Location of archive: The archive is presently held at Thames Valley Archaeological Services, Reading in accordance with TVAS digital archiving policies.

This report may be copied for bona fide research or planning purposes without the explicit permission of the copyright holder. All TVAS unpublished fieldwork reports are available on our website: www.tvas.co.uk/reports/reports.asp.

Report edited/checked by:Steve Ford✓ 22.01.15Andrew Mundin✓ 22.01.15

Land at Montys Farm, Norton Fitzwarren, Somerset A Geophysical Survey (Magnetic)

by Daniel Bray and Tim Dawson

Report 14/250

Introduction

This report documents the results of a geophysical survey (magnetic) carried out at on land at Montys Farm, Norton Fitzwarren, Taunton, Somerset (ST 1830 2650) (Fig. 1). The work was commissioned Mr Rob Armour Chelu of Armour Heritage limited, Greystone Cottage, Trudoxhill, Frome, Somerset, BA11 5DP on behalf of Solar Venture Limited.

A planning application (25/14/0028) has been submitted to Taunton Deane Borough Council for the construction of a 5MW Solar PV Array and associated infrastructure. A geophysical survey has been requested in order to further inform the determination of the application. This is in accordance with the Department for Communities and Local Government's *National Planning Policy Framework* (NPPF 2012) and the Boroughs policies on archaeology. The field investigation was carried out to a specification approved by Mr Steven Membery, Senior Historic Environment Officer at Somerset County Council. The work was undertaken by Daniel Bray, Natasha Bennett, Rebecca Constable and Matthew Cano on 18th and 19th December 2014 and 5th to 8th January 2015 with the site code MNF 14/250.

The archive is presently held at Thames Valley Archaeological Services, Reading in accordance with TVAS digital archiving policies.

Location, topography and geology

The site consists of three fields, two roughly rectangular and one triangular, 660m to the northwest of the village of Norton Fitzwarren. The site is located 1km southeast of Cotford St. Luke and 3.2km northwest of Taunton. The site covers a total area of 10.9ha and is at a height of between 28m and 31m above Ordnance Datum. Prior to the fieldwork the entire site had been left fallow (Pls. 1–4). The open fields are bounded by mature hedgerows on all sides and internally except for the eastern and southern edge of the triangular, eastern field which is divided from the West Somerset Railway line by wooden post-and-rail fencing. The southern boundary of the western field has been partially removed. The site is bounded on all sides by farmland. The ground across the whole site is flat with the underlying geology recorded as Mercian Mudstone Group (BGS 1984). The conditions

at the time of survey were overcast with sunny spells although the ground did not fully dry out from heavy overnight rain.

Site history and archaeological background

A desk-based assessment was undertaken for the proposal site (McCann-Downes 2014) which provides an indepth study into the site's history and archaeological potential. The site was thought to have moderate archaeological potential, but is sited close to areas of higher archaeological in regards to prehistoric remains. In summary, Norton Fitzwarren is located on the southern slopes of Norton Camp, a large univallate hillfort, some 900m to the east of the site. Excavation has shown evidence of Neolithic through to Roman occupation at the site, which is a Schedule Monument (SMR1008467). Two late Bronze Age cremation burials within Collared Urns were recovered from excavations at Wick Lane to the east of the survey site along with evidence of $11^{th} - 14^{th}$ medieval settlement, including metal working. Roman pottery has been recovered from the northern corner of the proposal site. The site itself has reference in the local HER to contain several cropmark enclosures, one which possible relates to a Roman marching camp.

Methodology

Sample interval

Data collection required a temporary grid to be established across the survey area using wooden pegs at 20m intervals with further subdivision where necessary. Readings were taken at 0.25m intervals along traverses 1m apart. This provides 1600 sampling points across a full $20m \times 20m$ grid (English Heritage 2008), providing an appropriate methodology balancing cost and time with resolution. Three separate grids were laid out across the three survey fields using a Nikon total station. Each grid was aligned to the long axis of its respective field.

The Grad 601-2 has a typical depth of penetration of 0.5m to 1.0m. This would be increased if strongly magnetic objects have been buried in the site. Under normal operating conditions it can be expected to identify buried features >0.5m in diameter. Features which can be detected include disturbed soil, such as the fill of a ditch, structures that have been heated to high temperatures (magnetic thermoremnance) and objects made from ferro-magnetic materials. The strength of the magnetic field is measured in nano Tesla (nT), equivalent to 10^{-9} Tesla, the SI unit of magnetic flux density.

Equipment

The purpose of the survey was to identify geophysical anomalies that may be archaeological in origin in order to inform a targeted archaeological investigation of the site prior to development. The survey and report generally follow the recommendations and standards set out by both English Heritage (2008) and the Institute *for* Archaeologists (2002, 2011).

Magnetometry was chosen as a survey method as it offers the most rapid ground coverage and responds to a wide range of anomalies caused by past human activity. These properties make it ideal for fast yet detailed survey of an area.

The detailed magnetometry survey was carried out using a dual sensor Bartington Instruments Grad 601-2 fluxgate gradiometer. The instrument consists of two fluxgates mounted 1m vertically apart with a second set positioned at 1m horizontal distance. This enables readings to be taken of both the general background magnetic field and any localised anomalies with the difference being plotted as either positive or negative buried features. All sensors are calibrated to cancel out the local magnetic field and react only to anomalies above or below this base line. On this basis, strong magnetic anomalies such as burnt features (kilns and hearths) will give a high response as will buried ferrous objects. More subtle anomalies such as pits and ditches, can be seem from their infilling soils containing higher proportions of humic material, rich in ferrous oxides, compared to the undisturbed subsoil. This will stand out in relation to the background magnetic readings and appear in plan following the course of a linear feature or within a discrete area.

A Trimble Geo7x handheld GPS system with sub-decimetre real-time accuracy was used to tie the site grid into the Ordnance Survey national grid. This unit offers both real-time correction and post-survey processing; enabling a high level of accuracy to be obtained both in the field and in the final post-processed data.

Data gathered in the field was processed using the TerraSurveyor software package. This allows the survey data to be collated and manipulated to enhance the visibility of anomalies, particularly those likely to be of archaeological origin. The table below lists the processes applied to this survey, full survey and data information is recorded in Appendix 1.

Process	Effect
Clip from -3.00 to 3.00 nT	Enhance the contrast of the image to improve the appearance of possible archaeological anomalies.
De-stripe: median, all sensors	Removes the striping effect caused by differences in sensor calibration, enhancing the visibility of potential archaeological anomalies.
De-spike: threshold 1, window size 3×3	Compresses outlying magnetic points caused by interference of metal objects within the survey area.

Once processed, the results are presented as a greyscale plot shown in relation to the site (Fig. 3), followed by a second plan to present the abstraction and interpretation of the magnetic anomalies (Fig. 4). Anomalies are shown as colour-coded lines, points and polygons. The grid layout and georeferencing information (Fig. 2) is prepared in EasyCAD v.7.58.00, producing a .FC7 file format, and printed as a .PDF for inclusion in the final report.

The greyscale plot of the processed data is exported from TerraSurveyor in a georeferenced portable network graphics (.PNG) format, a raster image format chosen for its lossless data compression and support for transparent pixels, enabling it to easily be overlaid onto an existing site plan. The data plot is combined with grid and site plans in QGIS 2.6.1 Brighton and exported again in .PNG format in order to present them in figure templates in Adobe InDesign CS5.5, creating .INDD file formats. Once the figures are finalised they are exported in .PDF format for inclusion within the finished report.

Results

Western Field (Figs. 5 and 6)

The survey plot of the western field is characterised by a series of positive linear anomalies which are orientated NNE-SSW [Fig. 6: 1]. These represent truncation of subsoil deposits, which, in this case, are most likely to be agricultural furrows as the anomalies are aligned parallel to one another and follow the long axis of the field. At the southern end of the field is a very strong linear positive anomaly [2] which marks the position of a previous field boundary that has since been removed and only remains as a faint earthwork.

Central Field (Figs. 5 and 6)

The geophysical survey of the central field identified a large number of positive linear magnetic anomalies of varying strengths, probably and possibly representing filled in boundary ditches, all of which appear to form a system of enclosures aligned approximately NE-SW. Starting in the north-western corner, **[3]** consists of a strong positive linear anomaly which runs southwards from the northern site boundary before turning sharply to the north-west. Almost immediately to the south of the turn another positive linear anomaly **[4]** continues on a slightly more westerly heading than the original with a second to the west **[5]**, possibly mirroring the turn in anomaly **[3]** to the north. A weaker positive anomaly **[6]** almost abuts **[4]** from which it extends westwards towards the edge of the field. Further south a curvilinear positive anomaly **[7]** continues in a general southerly

direction from [4] and, after a short break, possibly and entrance, a second weaker positive anomaly [8] heads westwards, broadly parallel to [6]. This is linked at its eastern end to a short north-south positive anomaly [9] with a possible pit-type positive anomaly where they join. After a short break and a section of weaker positive anomaly, the linear feature [12] appears to turn to follow a more south-westerly course, extending for *c*.145m before petering out in the south-western corner of the field. As with the northern anomalies, this positive linear has others running perpendicularly from it in a north-westerly direction [10, 13]. There is also a short length of positive linear anomaly [11] running parallel to [12] just beyond the end of perpendicular anomaly [10]. At the point where [13] joins [12] there appears to be a circular linear anomaly [14] with a diameter of *c*.5.5m, possibly representing the footing trench of a round building. A second group of positive linear anomalies appears to follow a similar pattern on the eastern side of the field with six lengths [15, 18, 19, 20, 21 and 22] running broadly parallel to [3, 4, 7, 9 and 12] and six at right-angles [16, 18, 19 and 20]. Also on a similar orientation are two weak positive linear anomalies [17] which sit between [7] and [15], appearing to form a right-angled corner. Of interest is a very weak group of anomalies [19], which seem to form an arc in the eastern set of enclosures.

The field also contains several discreet positive anomalies which may represent buried archaeological pits. Examples can be seen at [5, 9, 10, 14, 20, 22 and 23] with others scattered across the area. There are also three areas of mixed strong positive and negative magnetic anomalies [28, 29 and 30] which are possibly caused by scatters of buried ferromagnetic debris. This is likely in the case of [29] where historic maps reproduced in the desk-based assessment indicate the presence of now removed field boundaries and streams, however the anomalies at [28] may also be interpreted as being an indication of buried thermoremnant features. These include hearths, kilns, and other structures that have heated the ground to a temperature high enough to realign its magnetic field. Other magnetic anomalies plotted include a large number of strong discreet dipolar spikes spread across the field, representing buried ferrous objects of unknown age.

Eastern Field (Figs. 7 and 8)

As with the Central Field, the survey of the Eastern Field detected a series of positive linear anomalies, probably representing backfilled linear features. These appear to continue the pattern of those from the previous field with [25] being an extension of [20] and [26 and 27] extending perpendicular to [25] but parallel to [19]. Anomalies [24, 32 and 35] are also on the same alignment but are separated from the aforementioned cluster by 80-125m. In the centre of the field are a group of three linear positive anomalies [33] which form an open-ended rectangle,

apparently on a slightly different alignment to the others linear anomalies. In the centre of the southern end of the rectangle is a single discreet positive anomaly [34], possibly resulting from a buried pit.

The survey of the Eastern Field also plotted several magnetic spikes scattered across the field and an extensive area of magnetic disturbance along the southern and eastern boundaries. This magnetic interference was caused by the post-and-wire fencing within the boundary hedge. Another patch of magnetic interference was recorded in both the Central and Eastern Fields approximately a quarter of the way down their shared boundary [31]. This strong interference was the result of the ferrous gate affecting the instrument.

Conclusion

The geophysical survey of the three fields that comprise the site at Montys Farm was completed successfully, recording a variety of magnetic anomalies. These are dominated by the series of linear positive anomalies which indicate the presence of buried ditches. Together they appear to reveal the presence of a complex of small enclosures, all on a similar alignment with a scattering of possible pits and a potential circular structure. The archaeological background of the area suggests that the fields may have been the site of Roman activity and pottery observed on the ground surface during the geophysical survey was considered to include Roman, medieval and post-medieval sherds. While there were very few obstructions to the survey, the areas of magnetic disturbance and buried ferromagnetic debris detected may have had a masking effect on further anomalies in these areas which could be archaeological in origin. At least two features can be related to ditches on historic mapping. Even so, based on the survey results, targeted investigation of the anomalies will best date the linear features that seem to exist on the site.

References

BGS, 1984, British Geological Survey, 1:50000, Sheet 295, Solid and Drift Edition, Keyworth

English Heritage, 2008, *Geophysical Survey in Archaeological Field Evaluation*, English Heritage, Portsmouth (2nd edn)

IFA, 2002, *The Use of Geophysical Techniques in Archaeological Evaluation*, IFA Paper No. 6, Reading IFA, 2011, *Standard and Guidance: for archaeological geophysical survey*, Reading

McCann-Downes, P, 2014, 'Montys Farm, Norton Fitzwarren, Somerset: Archaeological Desk Based Assessment & Heritage Asset Impact Assessment', The Magnificent Science Company, Penryn

NPPF, 2012, National Planning Policy Framework, Dept Communities and Local Government, London

Appendix 1. Survey and data information

Programme:

TerraSurveyor 3.0.25.1

West Field

Name: Version:

Raw dataDirection of 1st Traverse: 101.0092 degCollection Method:ZigZagSensors:2 @ 1.00 m spacing.Dummy Value:2047.5

Dimensions

Composite Size (readings): 480 x 240Survey Size (meters): 120 m x 240 mGrid Size: 20 m x 20 mX Interval: 0.25 mY Interval: 1 m

Stats	
Max:	100.00
Min:	-100.00
Std Dev:	6.70
Mean:	0.27
Median:	0.70
Composite Area:	2.88 ha
Surveyed Area:	1.7293 ha

Source Grids: 58

Source Grids: 58
1 Col:0 Row:0 grids\18.xgd
2 Col:0 Row:1 grids\19.xgd
3 Col:0 Row:2 grids\20.xgd
4 Col:0 Row:3 grids\21.xgd
5 Col:1 Row:0 grids\22.xgd
6 Col:1 Row:1 grids\01.xgd
7 Col:1 Row:2 grids\02.xgd
8 Col:1 Row:3 grids\03.xgd
9 Col:1 Row:4 grids\04.xgd
10 Col:1 Row:5 grids\05.xgd
11 Col:1 Row:6 grids\06.xgd
12 Col:1 Row:7 grids\07.xgd
13 Col:1 Row:8 grids\08.xgd
14 Col:1 Row:9 grids\09.xgd
15 Col:1 Row:10 grids\10.xgd
16 Col:1 Row:11 grids\11.xgd
17 Col:2 Row:0 grids\12.xgd
18 Col:2 Row:1 grids\13.xgd
19 Col:2 Row:2 grids\14.xgd
20 Col:2 Row:3 grids\15.xgd
21 Col:2 Row:4 grids\16.xgd
22 Col:2 Row:5 grids\17.xgd
23 Col:2 Row:6 grids\30.xgd
24 Col:2 Row:7 grids\31.xgd
25 Col:2 Row:8 grids\32.xgd
26 Col:2 Row:9 grids\33.xgd
27 Col:2 Row:10 grids\34.xgd
28 Col:2 Row:11 grids\35.xgd
29 Col:3 Row:0 grids\23.xgd
30 Col:3 Row:1 grids\24.xgd
31 Col:3 Row:2 grids\25.xgd
32 Col:3 Row:3 grids\26.xgd
33 Col:3 Row:4 grids\27.xgd
34 Col:3 Row:5 grids\28.xgd
35 Col:3 Row:6 grids\29.xgd
36 Col:3 Row:7 grids\42.xgd
37 Col:3 Row:8 grids\43.xgd
38 Col:3 Row:9 grids\44.xgd
39 Col:3 Row:10 grids\45.xgd
40 Col:3 Row:11 grids\46.xgd
41 Col:4 Row:0 grids\47.xgd
42 Col:4 Row:1 grids\48.xgd
43 Col:4 Row:2 grids\49.xgd
44 Col:4 Row:3 grids\50.xgd
45 Col:4 Row:4 grids\51.xgd

46 Col:4 Row:5 grids\52.xgd 47 Col:4 Row:6 grids\53.xgd 48 Col:4 Row:7 grids\54.xgd 49 Col:4 Row:7 grids\54.xgd 50 Col:4 Row:9 grids\56.xgd 51 Col:4 Row:10 grids\57.xgd 52 Col:4 Row:11 grids\58.xgd 53 Col:5 Row:0 grids\37.xgd 55 Col:5 Row:2 grids\38.xgd 56 Col:5 Row:2 grids\38.xgd 57 Col:5 Row:3 grids\39.xgd 58 Col:5 Row:4 grids\40.xgd

Processed data

Processes: 5

- 1 Base Layer
- 2 De Stagger: Grids: All Mode: Both By: -1 intervals
- 3 DeStripe Median Sensors: All
- 4 Despike Threshold: 1 Window size: 3x3
- 5 Clip from -3.00 to 3.00 nT

Stats	
Max:	3.00
Min:	-3.00
Std Dev:	0.87
Mean:	0.02
Median:	0.00

<u>Central Field</u> Raw data

Direction of 1st Traverse: 111.9786 deg Collection Method: ZigZag Sensors: 2 @ 1.00 m spacing. Dummy Value: 2047.5

Dimensions

Composite Size (readings):800 x 360Survey Size (meters):200 m x 360 mGrid Size:20 m x 20 mX Interval:0.25 mY Interval:1 m

Stats

Max:	100.00
Min:	-100.00
Std Dev:	3.81
Mean:	0.43
Median:	0.30
Composite Area:	7.2 ha
Surveyed Area:	4.7463 ha

Source Grids: 152

		401 102
1	Col:0	Row:0 grids\01.xgd
2	Col:0	Row:1 grids\02.xgd
3	Col:0	Row:2 grids\118.xgd
4	Col:0	Row:3 grids\119.xgd
5	Col:0	Row:4 grids\03.xgd
6	Col:0	Row:5 grids\04.xgd
7	Col:0	Row:6 grids\05.xgd
8	Col:0	Row:7 grids\06.xgd
9	Col:0	Row:8 grids\07.xgd
10	Col:0	Row:9 grids\08.xgd
11	Col:0	Row:10 grids\09.xgd
12	Col:0	Row:11 grids\10.xgd
13	Col:0	Row:12 grids\11.xgd
14	Col:0	Row:13 grids\12.xgd
15	Col:0	Row:14 grids\13.xgd
16	Col:1	Row:0 grids\14.xgd
17	Col:1	Row:1 grids\15.xgd
18	Col:1	Row:2 grids\120.xgd
19	Col:1	Row:3 grids\121.xgd
20	Col:1	Row:4 grids\16.xgd

21	Col:1	Row:5 grids\17.xgd
22	Col:1	Row:6 grids\18.xgd
23	Col:1	Row:7 grids\19.xgd
24	Col:1	Row:8 grids\20.xgd
25	Col:1	Row:9 grids\21.xgd
26	Col:1	Row:10 grids\22.xgd
27	Col:1	Row:11 grids\22.xgd
28	Col:1	Row:12 grids\24.xgd
29	Col:1	Row:13 grids\25.xgd
30	Col:1	Row:14 grids\26.xgd
31	Col:1	Row:15 grids\27.xgd
32	Col:1	Row:16 grids\28.xgd
33	Col:1	Row:17 grids\29.xgd
34	Col:2	Row:1 grids\30.xgd
35	Col:2	Row:2 grids\31.xgd
36	Col:2	Row:3 grids\32.xgd
37	Col:2	Row:4 grids\33.xgd
38	Col:2	Row:5 grids\34.xgd
39	Col:2	Row:6 grids\35.xgd
40	Col:2	Row:7 grids\36.xgd
41	Col:2	Row:8 grids\37.xgd
42	Col:2	Row:9 grids\38.xgd
43	Col:2	Row:10 grids\39.xgd
44	Col:2	Row:11 grids\40.xgd
45	Col:2	Row:12 grids\41.xgd
46	Col:2	Row:13 grids\42.xgd
47	Col:2	Row:14 grids\43.xgd
48	Col:2	Row:15 grids\44.xgd
49	Col:2	Row:16 grids\45.xgd
50	Col:2	Row:17 grids\46.xgd
51	Col:3	Row:1 grids\47.xgd
52	Col:3	Row:2 grids\48.xgd
53	Col:3	Row:3 grids\49.xgd
54	Col:3	Row:4 grids\50.xgd
55	Col:3	Row:5 grids\51.xgd
56	Col:3	Row:6 grids\52.xgd
57	Col:3	Row:7 grids\53.xgd
58	Col:3	
59	Col:3	Row:9 grids\55.xgd
60	Col:3	Row:10 grids\56.xgd
61	Col:3	Row:11 grids\57.xgd
62	Col:3	Row:12 grids\58.xgd
63	Col:3	Row:13 grids\59.xgd
64	Col:3	Row:14 grids\60.xgd
65	Col:3	Row:15 grids\61.xgd
66	Col:3	Row:16 grids\62.xgd
67	Col:3	Row:17 grids\63.xgd
68	Col:4	Row:2 grids\64.xgd
69	Col:4	Row:3 grids\65.xgd
70	Col:4	Row:4 grids\66.xgd
71	Col:4	Row:5 grids\67.xgd
72	Col:4	Row:6 grids\68.xgd
73	Col:4	Row:7 grids\69.xgd
74	Col:4	Row:8 grids\70.xgd
75	Col:4	Row:9 grids\71.xgd
76	Col:4	Row:10 grids\72.xgd
77	Col:4	Row:11 grids\73.xgd
78	Col:4	Row:12 grids\74.xgd
79	Col:4	Row:13 grids\75.xgd
80	Col:4	Row:14 grids\76.xgd
81	Col:4	Row:15 grids\77.xgd
82	Col:4	Row:16 grids\78.xgd
83	Col:4	Row:17 grids\79.xgd
84	Col:5	Row:1 grids\96.xgd
85	Col:5	Row:2 grids\97.xgd
86	Col:5	Row:3 grids\81.xgd
87	Col:5	Row:4 grids\82.xgd
88	Col:5	Row:5 grids\83.xgd
89	Col:5	Row:6 grids\84.xgd
90	Col:5	Row:7 grids\85.xgd
91	Col:5	Row:8 grids\86.xgd
92	Col:5	Row:9 grids\87.xgd
93	Col:5	Row:10 grids\88.xgd
94	Col:5	Row:11 grids\89.xgd
94 95	Col:5 Col:5	Row:11 grids\89.xgd Row:12 grids\90.xgd

	D 11 1100 1
97 Col:5	Row:14 grids\92.xgd
98 Col:5	Row:15 grids\93.xgd
99 Col:5	Row:16 grids\94.xgd
100 Col:6	Row:1 grids\95.xgd
101 Col:6	Row:2 grids\98.xgd
102 Col:6	Row:3 grids\99.xgd
102 Col:6	Row:4 grids\100.xgd
	3
104 Col:6	Row:5 grids\101.xgd
105 Col:6	Row:6 grids\102.xgd
106 Col:6	Row:7 grids\103.xgd
107 Col:6	Row:8 grids\104.xgd
108 Col:6	Row:9 grids\105.xgd
109 Col:6	Row:10 grids\106.xgd
110 Col:6	Row:11 grids\107.xgd
111 Col:6	Row:12 grids\108.xgd
112 Col:6	Row:13 grids\109.xgd
113 Col:6	Row:14 grids\110.xgd
113 Col:6	Row:15 grids\111.xgd
114 Col:6	
116 Col:7	Row:1 grids\122.xgd
117 Col:7	Row:2 grids\123.xgd
118 Col:7	Row:3 grids\124.xgd
119 Col:7	Row:4 grids\125.xgd
120 Col:7	Row:5 grids\126.xgd
121 Col:7	Row:6 grids\127.xgd
122 Col:7	Row:7 grids\128.xgd
123 Col:7	Row:8 grids\129.xgd
124 Col:7	Row:9 grids\130.xgd
125 Col:7	Row:10 grids\131.xgd
125 Col:7	Row:11 grids\132.xgd
	8
127 Col:7	Row:12 grids\133.xgd
128 Col:7	Row:13 grids\134.xgd
129 Col:7	Row:14 grids\135.xgd
130 Col:7	Row:15 grids\136.xgd
131 Col:7	Row:16 grids\137.xgd
132 Col:8	Row:1 grids\113.xgd
133 Col:8	Row:2 grids\114.xgd
134 Col:8	Row:3 grids\115.xgd
135 Col:8	Row:4 grids\116.xgd
136 Col:8	Row:5 grids\117.xgd
137 Col:8	Row:6 grids\139.xgd
138 Col:8	Row:7 grids\140.xgd
130 Col:8	Row:8 grids\141.xgd
140 Col:8	
141 Col:8	Row:10 grids\143.xgd
142 Col:8	Row:11 grids\144.xgd
143 Col:8	Row:12 grids\145.xgd
144 Col:8	Row:13 grids\146.xgd
145 Col:8	Row:14 grids\147.xgd
146 Col:8	Row:15 grids\148.xgd
147 Col:8	Row:16 grids\149.xgd
148 Col:9	Row:1 grids\150.xgd
149 Col:9	Row:2 grids\151.xgd
150 Col:9	Row:3 grids\152.xgd
150 Col.9	Row:4 grids\153.xgd
151 Col:9	Row:5 grids\154.xgd
152 001:9	Kow.5 grius/154.xgd

Processed data

Processes: 6

- Processes: 6
 Base Layer
 De Stagger: Grids: All Mode: Both By: -1 intervals
 DeStripe Median Sensors: All
 Despike Threshold: 1 Window size: 3x3
 De Stagger: Grids: 51.xgd Mode: Both By: -2 intervals
 Clip from -3.00 to 3.00 nT

Stats	
Max:	

Max:	3.00
Min:	-3.00
Std Dev:	0.81
Mean:	0.02
Median:	0.00

<u>East Field</u> Raw data

Direction of 1st Traverse: 123.3775 deg

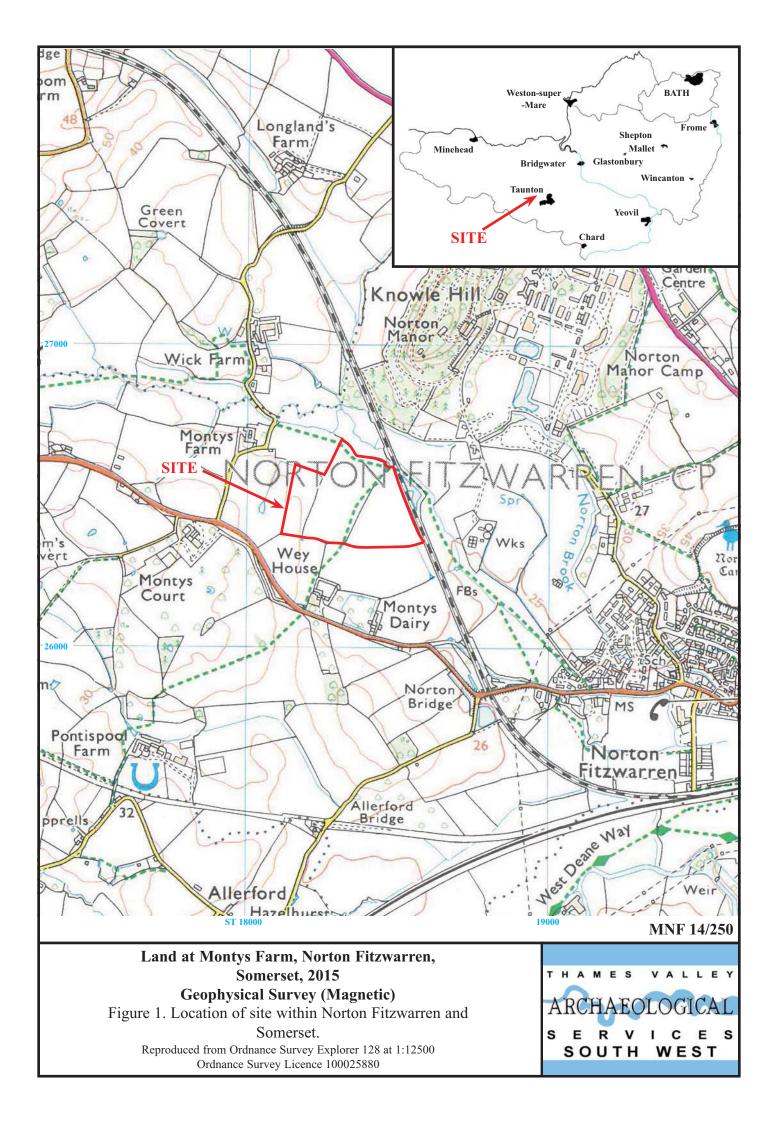
Collection Method:ZigZagSensors:2@1.00 m spacing.Dummy Value:2047.5
Dimensions Composite Size (readings): 960 x 320 Survey Size (meters): 240 m x 320 m Grid Size: 20 m x 20 m
X Interval: 0.25 m Y Interval: 1 m
Stats Max: 100.00 Min: -100.00
Min. -100.00 Std Dev: 11.87 Mean: 0.03
Median: 0.71 Composite Area: 7.68 ha
Surveyed Area: 3.7524 ha
Source Grids: 119 1 Col:0 Row:0 grids\01.xgd
2 Col:0 Row:1 grids\02.xgd 3 Col:0 Row:2 grids\155.xgd
4 Col:0 Row:3 grids\156.xgd 5 Col:0 Row:4 grids\157.xgd
6 Col:0 Row:5 grids\158.xgd 7 Col:0 Row:6 grids\159.xgd 8 Col:0 Row:7 grids\160.xgd
8 Col:0 Row:7 grids\160.xgd 9 Col:0 Row:8 grids\161.xgd 10 Col:0 Row:9 grids\162.xgd
11 Col:0 Row:10 grids\163.xgd 12 Col:1 Row:0 grids\03.xgd
13 Col:1 Row:1 grids\04.xgd 14 Col:1 Row:2 grids\164.xgd
15 Col:1 Row:3 grids\165.xgd 16 Col:1 Row:4 grids\166.xgd
17 Col:1 Row:5 grids\167.xgd 18 Col:1 Row:6 grids\168.xgd
19 Col:1 Row:7 grids\169.xgd 20 Col:1 Row:8 grids\170.xgd
21 Col:1 Row:9 grids\171.xgd 22 Col:1 Row:10 grids\172.xgd 23 Col:1 Row:11 grids\173.xgd
23 Col:1 Row:11 grids\173.xgd 24 Col:1 Row:12 grids\174.xgd 25 Col:1 Row:13 grids\175.xgd
26 Col:1 Row:14 grids\176.xgd 27 Col:2 Row:1 grids\177.xgd
28 Col:2 Row:2 grids\178.xgd 29 Col:2 Row:3 grids\179.xgd
30 Col:2 Row:4 grids\180.xgd 31 Col:2 Row:5 grids\181.xgd
32 Col:2 Row:6 grids\182.xgd 33 Col:2 Row:7 grids\183.xgd
34 Col:2 Row:8 grids/184.xgd 35 Col:2 Row:9 grids/185.xgd
36 Col:2 Row:10 grids\186.xgd 37 Col:2 Row:11 grids\187.xgd
38 Col:2 Row:12 grids\188.xgd 39 Col:2 Row:13 grids\189.xgd 40 Col:2 Row:14 grids\190.xgd
41 Col:2 Row:15 grids\191.xgd 42 Col:3 Row:1 grids\05.xgd
43 Col:3 Row:2 grids\06.xgd 44 Col:3 Row:3 grids\07.xgd
45 Col:3 Row:4 grids\08.xgd 46 Col:3 Row:5 grids\09.xgd
47 Col:3 Row:6 grids\10.xgd 48 Col:3 Row:7 grids\11.xgd
49 Col:3 Row:8 grids\12.xgd 50 Col:3 Row:9 grids\13.xgd
51 Col:3 Row:10 grids\14.xgd 52 Col:3 Row:11 grids\15.xgd 52 Col:2 Row:12 grids\16 yzd
53 Col:3 Row:12 grids\16.xgd 54 Col:3 Row:13 grids\17.xgd 55 Col:3 Row:14 grids\18.xgd
56 Col:4 Row:2 grids\192.xgd

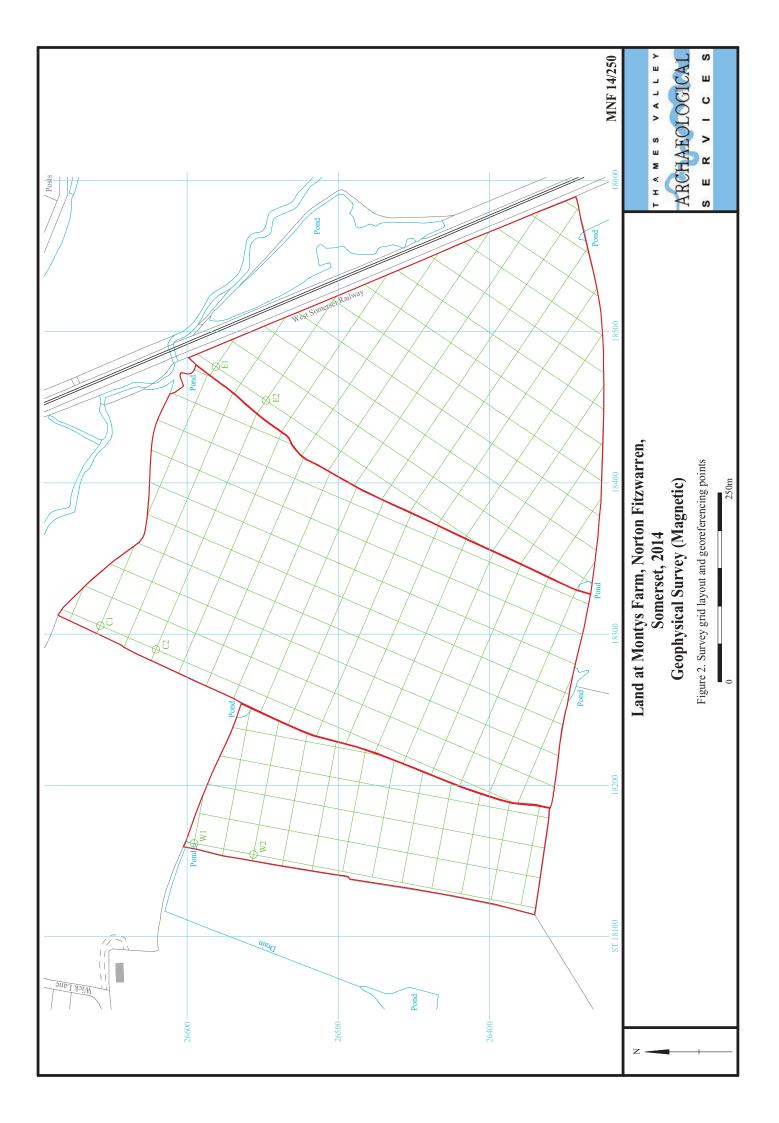
57 Col:4 Row:3 grids\193.xgd	
58 Col:4 Row:4 grids\194.xgd	
59 Col:4 Row:5 grids\195.xgd	
60 Col:4 Row:6 grids\196.xgd	
61 Col:4 Row:7 grids\197.xgd	
62 Col:4 Row:8 grids\198.xgd	
63 Col:4 Row:9 grids $40.xgd$	
64 Col:4 Row:10 grids\41.xgd	
65 Col:4 Row:11 grids\42.xgd 66 Col:4 Row:12 grids\43.xgd	
67 Col:4 Row:12 grids/44.xgd	
68 Col:4 Row:14 grids\45.xgd	
69 Col:5 Row:3 grids\19.xgd	
70 Col:5 Row:4 grids\20.xgd	
71 Col:5 Row:5 grids\21.xgd	
72 Col:5 Row:6 grids\22.xgd	
73 Col:5 Row:7 grids\23.xgd	
74 Col:5 Row:8 grids\24.xgd	
75 Col:5 Row:9 grids\25.xgd	
76 Col:5 Row:10 grids\26.xgd	
77 Col:5 Row:11 grids\27.xgd	
78 Col:5 Row:12 grids\28.xgd	
79 Col:5 Row:13 grids\29.xgd	
80 Col:6 Row:3 grids\30.xgd 81 Col:6 Row:4 grids\31.xgd	
81 Colio Row:4 grids/31.xgd 82 Colio Row:5 grids/32.xgd	
83 Col:6 Row:6 grids\33.xgd	
84 Col:6 Row:7 grids\34.xgd	
85 Col:6 Row:8 grids\35.xgd	
86 Col:6 Row:9 grids\36.xgd	
87 Col:6 Row:10 grids\37.xgd	
88 Col:6 Row:11 grids\38.xgd	
89 Col:6 Row:12 grids\39.xgd	
90 Col:7 Row:4 grids\46.xgd	
91 Col:7 Row:5 grids\47.xgd	
92 Col:7 Row:6 grids\48.xgd	
93 Col:7 Row:7 grids\49.xgd 94 Col:7 Row:8 grids\50.xgd	
95 Col:7 Row:9 grids\50.xgd	
96 Col:7 Row:10 grids\52.xgd	
97 Col:7 Row:10 grids/52.xgd	
98 Col:7 Row:12 grids\54.xgd	
99 Col:8 Row:4 grids\55.xgd	
100 Col:8 Row:5 grids\56.xgd	
101 Col:8 Row:6 grids\57.xgd	
102 Col:8 Row:7 grids\58.xgd	
103 Col:8 Row:8 grids\59.xgd	
104 Col:8 Row:9 grids\60.xgd	
105 Col:8 Row:10 grids\61.xgd	
106 Col:8 Row:11 grids\62.xgd	
107 Col:9 Row:5 grids\63.xgd 108 Col:9 Row:6 grids\64.xgd	
109 Col:9 Row:7 grids\65.xgd	
110 Col:9 Row:8 grids\66.xgd	
111 Col:9 Row:9 grids\67.xgd	
112 Col:9 Row:10 grids\68.xgd	
113 Col:10 Row:6 grids\69.xgd	
114 Col:10 Row:7 grids\70.xgd	
115 Col:10 Row:8 grids\71.xgd	
116 Col:10 Row:9 grids\72.xgd	
117 Col:11 Row:6 grids\73.xgd	
118 Col:11 Row:7 grids\74.xgd	
119 Col:11 Row:8 grids\75.xgd Processed data	
Processes: 5	
1 Base Layer	
2 De Stagger: Grids: All Mode: Both By: -1 interval	s
3 DeStripe Median Sensors: All	
4 Despike Threshold: 1 Window size: 3x3	
5 Clip from -3.00 to 3.00 nT	
Stats	
Max: 3.00	
Min: -3.00 Std Dev: 0.95	
Mean: 0.00	
Median: 0.00	

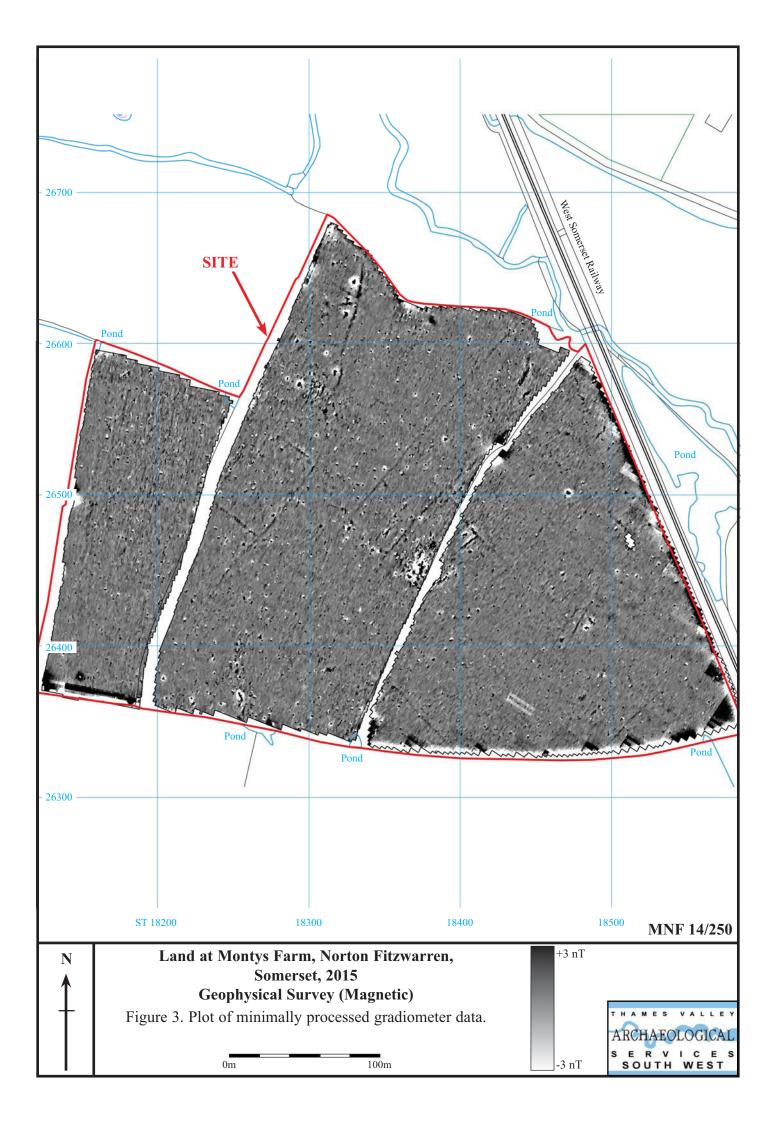
Georeferencing (Fig. 2) West Field W1: E 318161.7, N 126595.4 W2: E 318154.2, N 126556.0

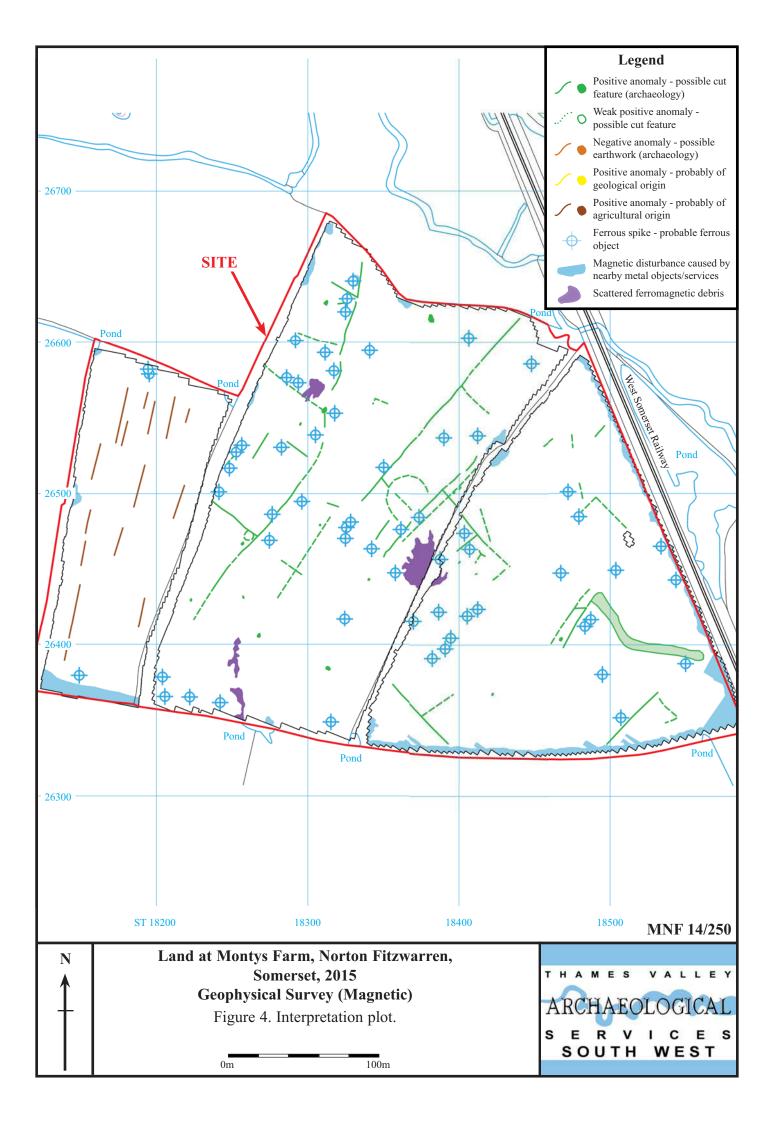
Central Field C1: E 318305.7, N 126657.4 C2: E 318289.9, N 126620.7

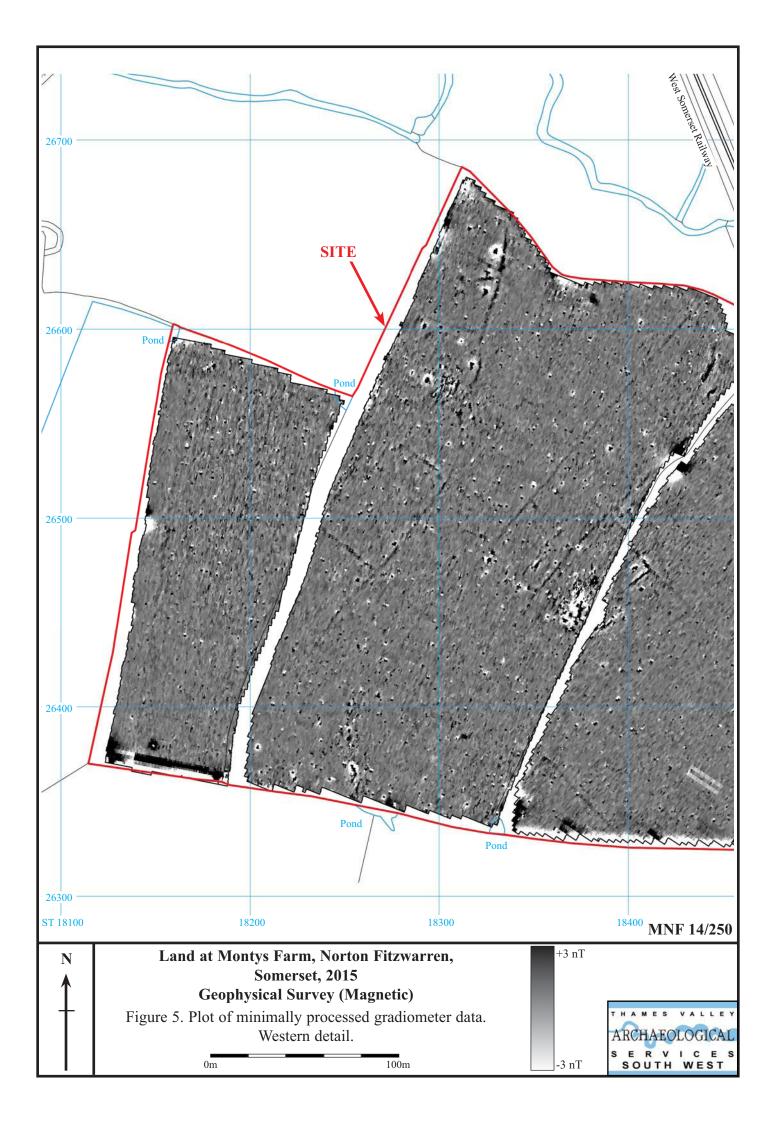
East Field E1: E 318476.9, N 126581.1 E2: E 318454.5, N 126547.9

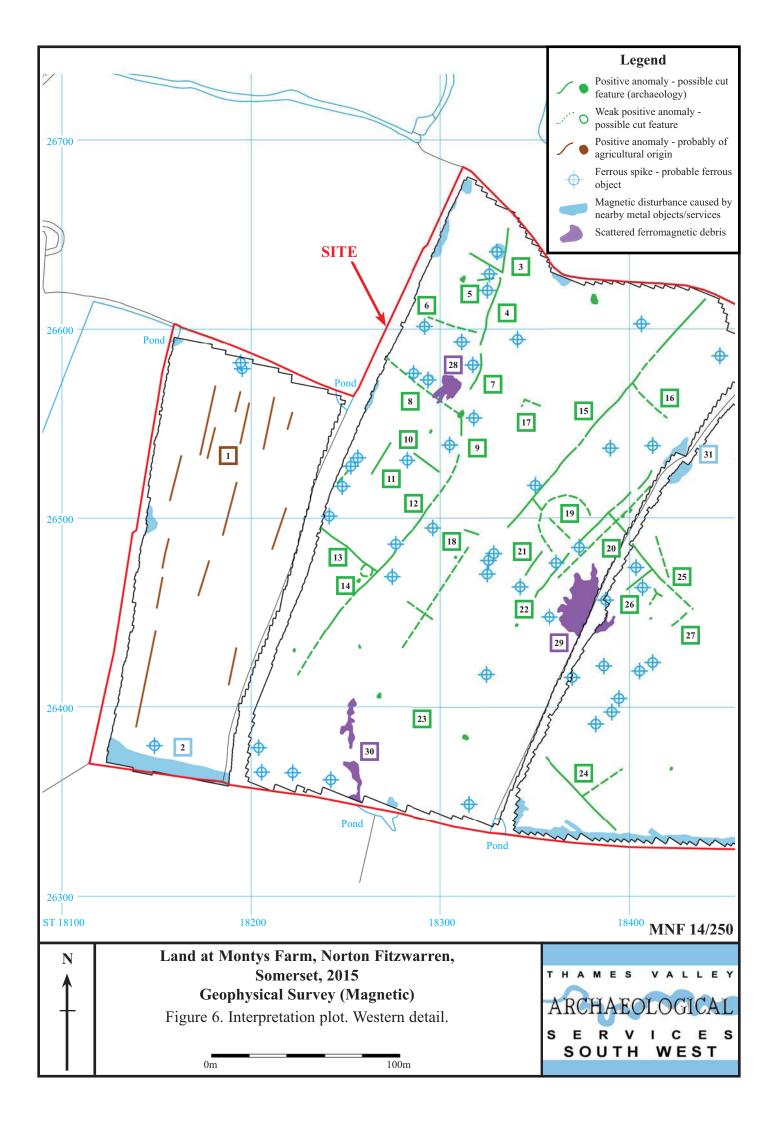


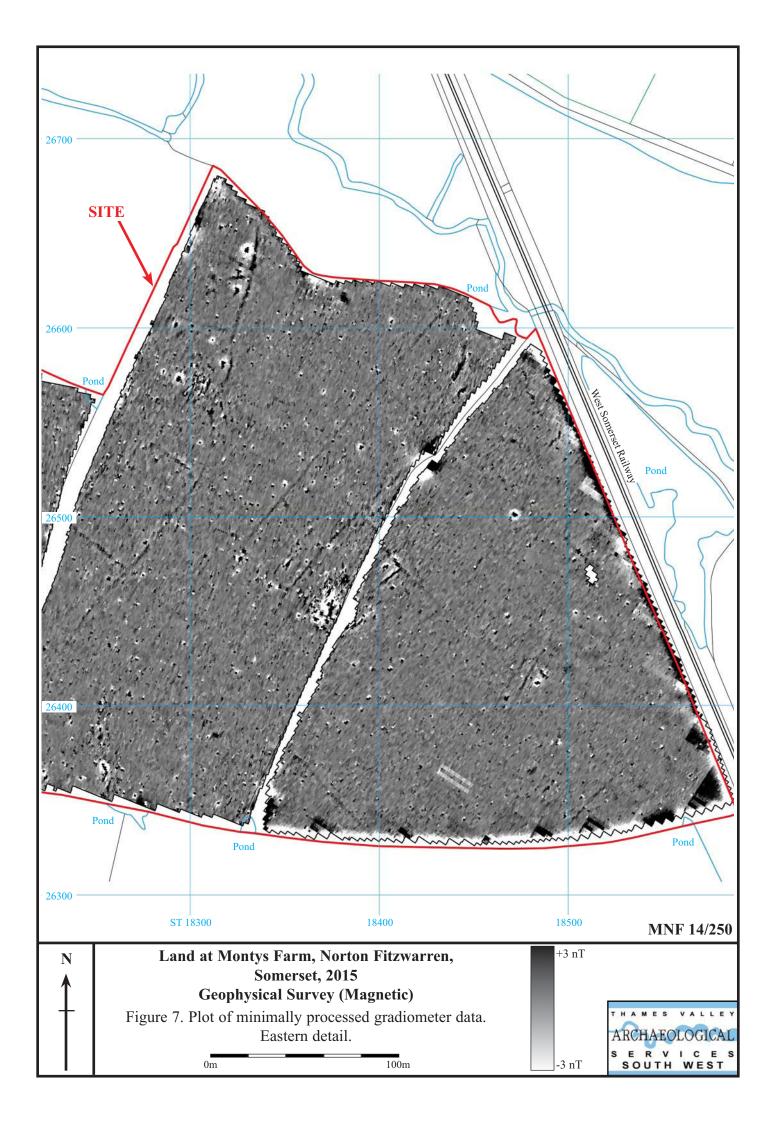












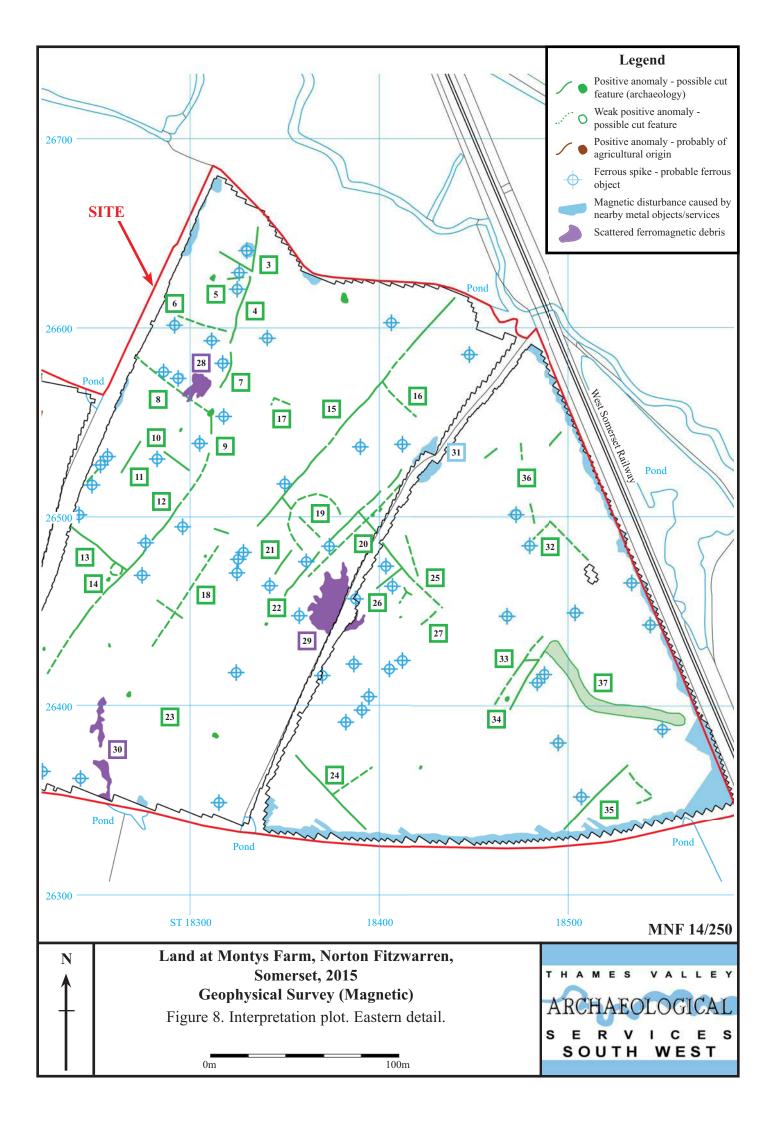




Plate 1. Western field, looking south from the northwestern corner.



Plate 2. Central field, looking south-east from the north-western corner.



Plate 3. Central field, looking north-west from the western edge.



Plate 4. Eastern field, looking north-west along the site's eastern boundary.

Land at Montys Farm, Norton Fitzwarren, Somerset, 2015 Geophysical Survey (Magnetic) Plates 1 - 4.



MNF 14/250

TIME CHART

Calendar Years

Modern	AD 1901
Victorian	AD 1837
Post Medieval	AD 1500
Medieval	AD 1066
Saxon	AD 410
Roman Iron Age	AD 43 BC/AD 750 BC
	1200 DC
Bronze Age: Late	
Bronze Age: Middle	1700 BC
Bronze Age: Early	2100 BC
Neolithic: Late	3300 BC
Neolithic: Early	4300 BC
Mesolithic: Late	6000 BC
Mesolithic: Early	10000 BC
Palaeolithic: Upper	30000 BC
Palaeolithic: Middle	70000 BC
Palaeolithic: Lower	2,000,000 BC ↓



TVAS (South West), Unit 21 Apple Business Centre, Frobisher Way, Taunton, Somerset, TA2 6BB

Tcl: 01823 288 284 Fax: 01823 272 462 Email: southwest@tvas.co.uk Web: www.tvas.co.uk