LAND OFF ELERKEY LANE
VERYAN
CORNWALL

Results of a Geophysical Survey

South West Archaeology Ltd. report no. 190417

ARCHAEOLOGICAL SERVICES & HISTORIC BUILDING RECORDING
SOUTHWEST ARCHAEOLOGY

www.swarch.net

01769 573555
01872 223164

Land off Elerkey Lane, Veryan, Cornwall
Results of a Geophysical Survey

By P. Bonvoisin
Report Version: FINAL
17th April 2019

Work undertaken by SWARCH for Cornwall Archaeological Unit (the Clients)

SUMMARY

South West Archaeology Ltd. (SWARCH) was commissioned by Cornwall Archaeological Unit (the Clients) to undertake a geophysical survey for land off Elerkey Lane, Veryan, Cornwall as part of the pre-development works required for the proposed development.

The proposed site is located on the western edge of the village of Veryan, west of the modern residential zone, and away from the historic core of the village. There is notable prehistoric activity within the surrounding landscape.

The geophysical survey identified multiple features, including a removed historic field boundary visible on the tithe and Ordnance Survey mapping until the early 20th century. A linear anomaly parallel to this boundary might indicate the presence of interior divisions or activity with the field. Anomalies representing a possible bank and ditch towards the eastern edge of the survey area are parallel with the removed historic field boundary and therefore likely also represents a removed former field boundary. These anomalies appear to cut an east to west orientated linear running across between these two removed boundaries, which may belong to an earlier field system, but follows the orientation of Elerkey Lane to the north and closely abuts the corner of the plot surrounding Elerkey Cottage.

Almost all of the identified anomalies therefore appear to be associated with the surviving field pattern and are likely to all be of post-medieval or potentially medieval origins; given their slightly curving nature. It is unlikely that further intrusive archaeological investigation is warranted based upon these results, although the site is located within an area of archaeological potential.

CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

ACKNOWLEDGEMENTS

CORNWALL ARCHAEOLOGICAL UNIT (THE CLIENT)
CORNWALL COUNTY COUNCIL

PROJECT CREDITS

DIRECTOR: DR. SAMUEL WALLS
FIELDWORK: PETER BONVOISIN
REPORT: PETER BONVOISIN
EDITING: DR. SAMUEL WALLS
GRAPHICS: PETER BONVOISIN

1.0 INTRODUCTION

LOCATION: LAND ADJACENT TO VERYAN TENNIS CLUB
PARISH: VERYAN
COUNTY: CORNWALL
NGR: SW 91307 39494
SWARCH REF. KEL19

1.1 PROJECT BACKGROUND

South West Archaeology Ltd. (SWARCH) was commissioned by Cornwall Archaeological Unit (the Client) to undertake a geophysical survey for land adjacent to Veryan Tennis Club prior to the proposed housing development. This work was undertaken in accordance with best practice and CIfA guidelines.

1.2 TOPOGRAPHICAL AND GEOLOGICAL BACKGROUND

The centre of the site is located *c.*166m to the west of the centre of Veryan, *c.*1km south-east of the A3078 and *c.*2.6km roughly north of Nare Head. The site consists of the northern section of a field immediately south of Elerkey Lane and west of the centre of Veryan. Much of the village can be seen from the site, including some of the listed buildings within Veryan's conservation area. The site is currently under pasture, ranging from 63m AOD (Above Ordinance Datum) at the east extent to 68m AOD along the western boundary of the site, the ground rises slightly to the south, with the field containing the site rising to 71m AOD at the southern extent.

The soils of this area are the well drained fine loamy soils of the Denbigh 2 Association (SSEW 1983), which overlie the sedimentary mudstone of the Pendower Formation (BGS 2019).

1.3 HISTORICAL BACKGROUND

The site is located in the parish of Veryan, and on the western outskirts of the village. There are numerous prehistoric features within the surrounding landscape, one of the nearest and most notable being Melinsey enclosure which has been shown as a cropmark *c.*42m to the south-west of the centre of the proposed development. Veryan Castle and Carne Beacon also lie further to the south.

The older parts of Veryan and its conservation area are towards the eastern limits of the settlement and are separated from the proposed development by modern residential areas. Numerous GII* round houses are present within the conservation area as well as the GI church of St Symphoran. The early medieval settlement of Elerkey is located immediately to north-east of the site this is based on documentary evidence with no standing physical remains.

1.4 METHODOLOGY

This work was undertaken in accordance with best practice. The gradiometer survey follows the general guidance as outlined in: *Geophysical Survey in Archaeological Field Evaluation* (English Heritage 2008) and *Standard and Guidance for Archaeological Geophysical Survey* (CIfA 2014b).

FIGURE 1: SITE LOCATION (THE SITE IS INDICATED).

2.0 CARTOGRAPHIC DEVELOPMENT

The earliest cartographic source looked at for this study is the 1841 tithe mapping of Veryan. The approximate location of the site is highlighted. A table with the listings for the tithe apportionments is also listed below.

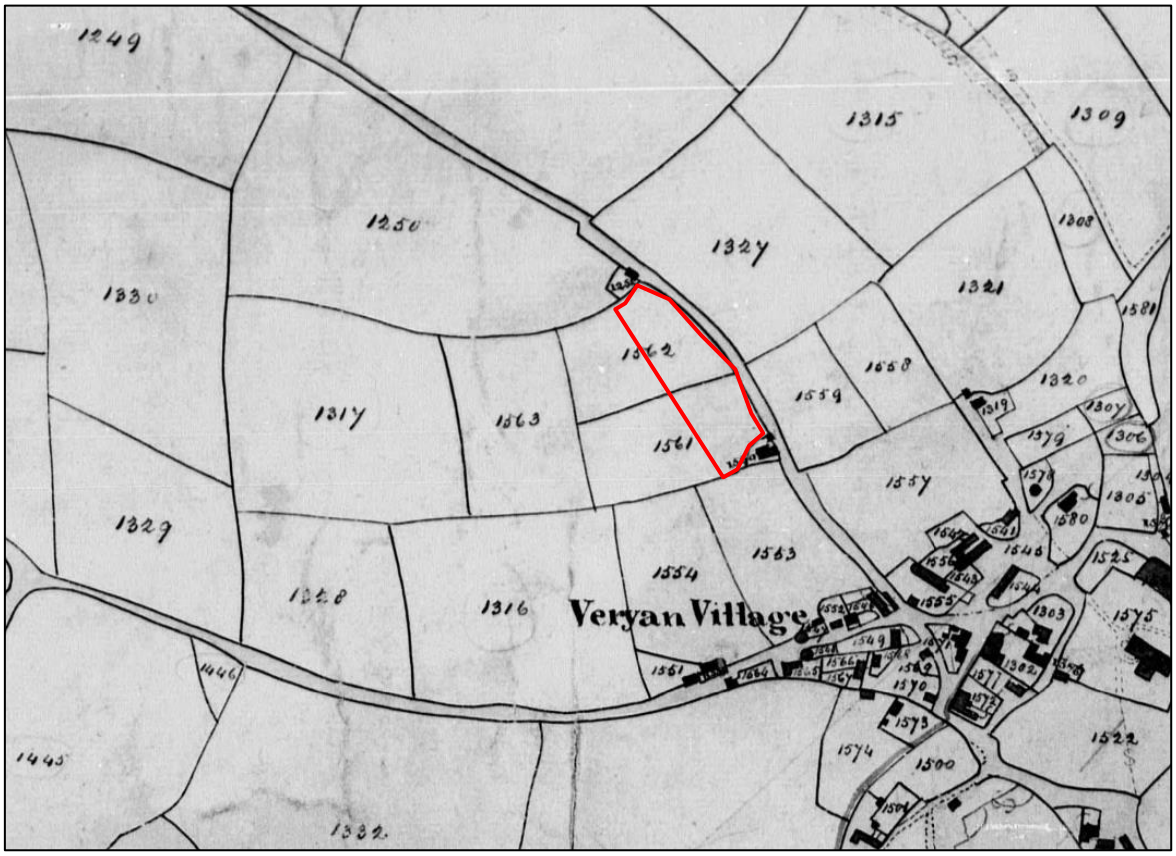

FIGURE 2: EXTRACT FROM THE 1841 VERYAN TITHE MAP, THE APPROXIMATE LOCATION OF THE SITE IS INDICATED (GEN).

TABLE 1: EXTRACT FROM THE VERYAN TITHE APPORTIONMENT OF 1841. THE SITE OCCUPIES THE PLOTS HIGHLIGHTED.

Landowner	Occupier	Farm name	Plot number	Plot name	Usage
Kempe, Reverend John	Clyma, Malachi	Crugsillick	1250	Dry Close	-
			1251	Barn and Mowhay	-
Middlecoat, Edward	Middlecoat, Edward	Cottage at Veryan Green	1316	Four Acres	Arable
Middlecoat, William	Middlecoat, William		1327	Park Bew	Arable
Trist, Rev. Samuel	Cargenven, John	Carne	1553	Middle Meadow	-
			1554	Hill Meadow	-
	Beard, Richard		1559	Homer Garden Rows	-
			1560	House and Yard	-
			1561	Mary Hughes Close	-
			1562		-
			1563		-

The Ordnance Survey (OS) 1st and 2nd edition maps (Figures 4 and 5, respectively) show the boundary between tithe plots 1561 and 1562 as still standing, meaning that it was removed post the early 20th century. Little expansion within Veryan appears to have taken place until the 20th century, these developments include the residential area constructed immediately east of the site.

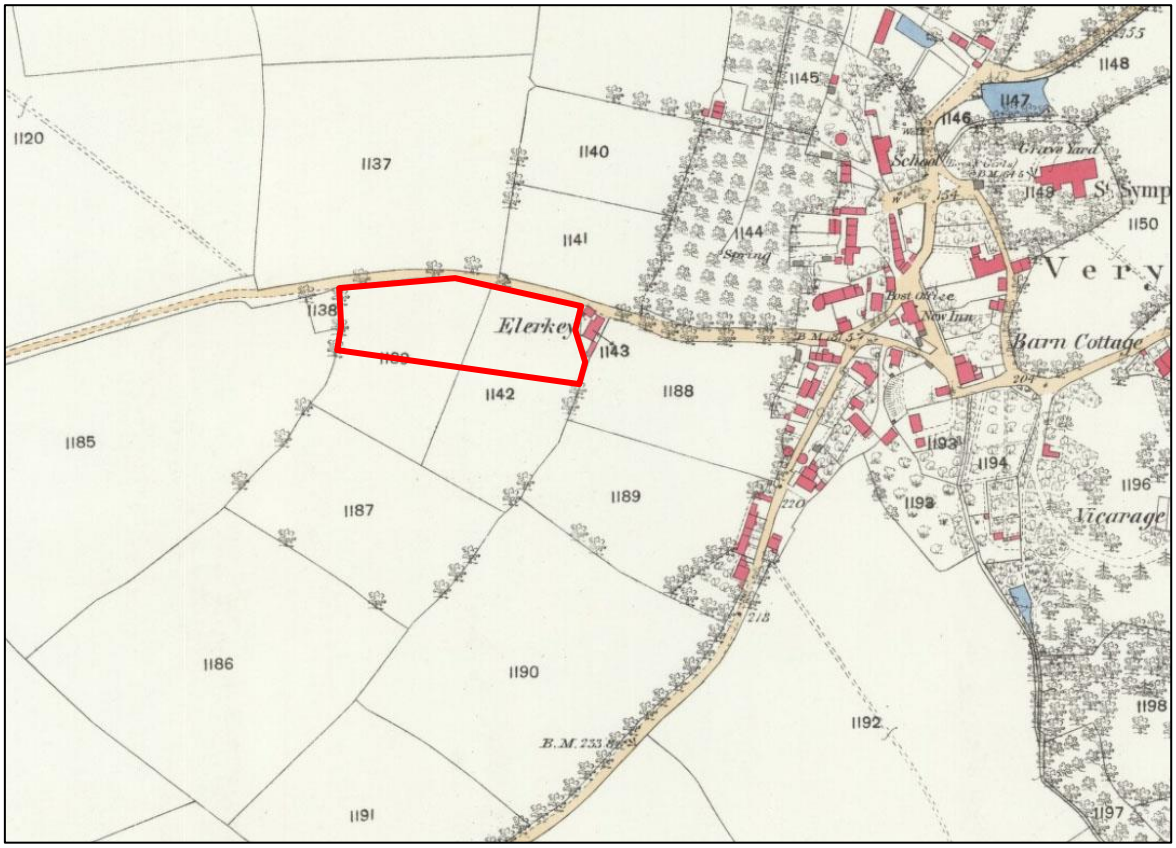

FIGURE 3: EXTRACT FROM THE OS 25 INCH MAP, PUBLISHED 1880 (SURVEYED 1879). THE LOCATION OF THE SITE IS INDICATED.

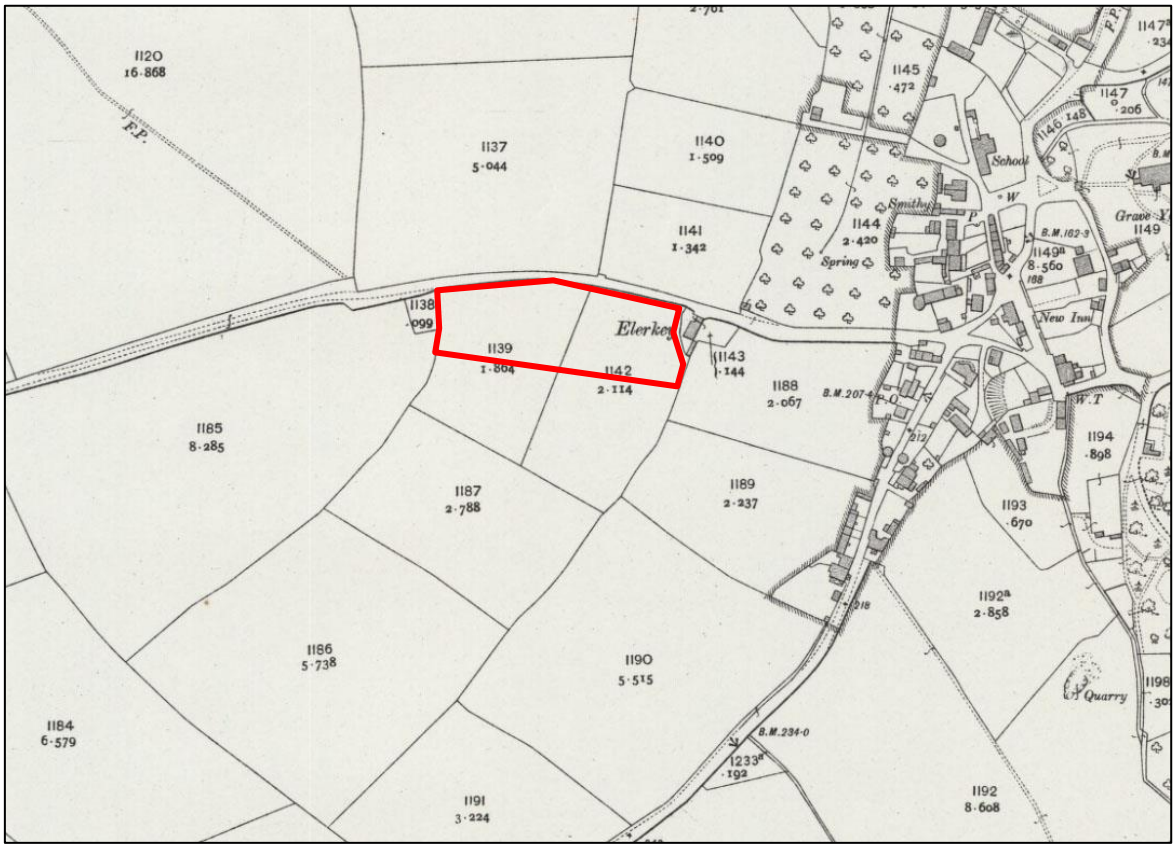

FIGURE 4: EXTRACT FROM THE OS 25 INCH MAP, PUBLISHED 1907 (SURVEYED 1906). THE LOCATION OF THE SITE IS INDICATED.

3.0 GEOPHYSICAL SURVEY

3.1 INTRODUCTION

An area of *c.*0.7ha was the subject of a magnetometry (gradiometer) survey. The purpose of this survey was to identify and record magnetic anomalies within the proposed site. While identified anomalies may relate to archaeological deposits and structures, the dimensions of recorded anomalies may not correspond directly with any associated features. The following discussion attempts to clarify and characterise the identified anomalies. The survey was undertaken on the 5th of April 2019 by P. Bonvoisin; the survey data was processed by P. Bonvoisin.

3.2 METHODOLOGY

The gradiometer survey follows the general guidance as outlined in: *Geophysical Survey in Archaeological Field Evaluation* (English Heritage 2008) and *Standard and Guidance for Archaeological Geophysical Survey* (CIfA 2014b).

The survey was carried out using a twin-sensor fluxgate gradiometer (Bartington Grad601). These machines are sensitive to depths of up to 1.50m. The survey parameters were: sample intervals of 0.25m, traverse intervals of 1m, a zigzag traverse pattern, traverse orientation was circumstantial, grid squares of 30×30m. The gradiometer was adjusted ('zeroed') every 0.5-1ha. The survey grid was tied into the Ordnance Survey National Grid. The data was downloaded onto *Grad601 Version 3.16* and processed using *TerraSurveyor Version 3.0.25.0*. The primary data plots and analytical tools used in this analysis were *Shade* and *Metadata*. The details of the data processing are as follows:

Processes: Clip +/- 3SD; DeStripe all traverses, median. DeStagger of particular grids.
Area Details: 0.73225ha surveyed; Max. 99.26nT, Min. -101.50nT; Standard Deviation 7.90, mean 0.19nT, median 0.00nT.

3.3 SITE INSPECTION

The proposed development site and survey area covers the northern part of a larger field. The site lies immediately south of Elerkey Lane and west of the houses along Roseland Gardens. The northern boundary of the site is comprised of a hedgebank, with the eastern boundary comprised of metallic fencing, and the western boundary metallic fencing and a hedge; the southern boundary of the survey area remains open to the rest of the field. During the time of the survey the site was under pasture, geotechnical trenching has taken place prior to the site visit, but has been backfilled and is unlikely to present a notable response on the geophysical survey response. Overhead cables run across the field, with one pylon being present within the proposed development area. A full complement of site photographs can be found in Appendix 2.

FIGURE 5: VIEW OF THE NORTH-EASTERN EXTENT OF THE SURVEYED AREA; VIEWED FROM THE SOUTH-EAST (NO SCALE).

FIGURE 6: VIEW ACROSS THE SITE TOWARDS THE NORTHERN BOUNDARY AND NORTH-WESTERN CORNER OF THE SITE; VIEWED FROM THE SOUTH (NO SCALE).

3.4 RESULTS

Table 2 with the accompanying Figures 7, 8 and 9 shows the analysis and interpretation of the geophysical survey data. Additional graphic images of the survey data can be found in Appendix 1.

TABLE 2: INTERPRETATION OF GRADIOMETER SURVEY DATA.

Anomaly Group	Class and Certainty	Form	Archaeological Characterisation	Comments
1	Strong positive, probable	Linear	Historic field boundary	Indicative of a ditch or similar boundary. Matches up with a field boundary shown on the 25 inch Ordinance Survey and tithe mapping. Responses of *c.*+54.60nT to *c.*+7.54nT.
2	Moderate positive, probable	Linear	Ditch or cut feature	Indicative of a cut feature, such as a ditch. Runs parallel to anomaly group 1, may be related to anomaly groups 1 and 3. Responses of *c.*+17.81nT to *c.*+4.37nT.
3	Moderate positive, probable	Curvi-linear	Ditch or cut feature	Indicative of a cut feature such as a ditch. May be related to anomaly group 2. Responses of *c.*+13.13nT to *c.*+5.40nT.
4	Strong to moderate positive, probable	Linear	Ditch or cut feature	Indicative of a discrete cut feature such as a ditch. Fragmentary survey response is not accurately representative of actual form. Responses of *c.*+24.80nT to *c.*+12.00nT.
5	Strong positive, probable	Parallel amorphous linear	Possible ditch and bank	Indicative of a cut feature, such as a ditch. Likely associated with anomaly group 10, may be associated with anomaly group 6. Responses of *c.*+26.18nT to *c.*+4.26nT.
6	Moderate positive, probable/possible	Amorphous linear	Cut feature	Indicative of a cut feature, may be related to anomaly groups 5 and 10. Responses of *c.*+15.58nT to *c.*+5.38nT.
7	Moderate positive, possible	Amorphous linear	Possible ditch or cut feature	Indicative of a cut feature, possible continuation of anomaly group 5. Responses of *c.*+12.16nT to *c.*+3.86nT.
8	Moderate positive, possible	Amorphous area	Possible cut feature	Indicative of a cut feature, may be associated with anomaly group 7. Responses of *c.*+13.45nT to *c.*+2.43nT.
9	Moderate positive, possible	Linear	Possible ditch	Indicative of a discrete cut feature. May be a continuation of anomaly group 4. Responses of *c.*+10.29nT to *c.*+6.24nT.
10	Strong to moderate negative, probable	Amorphous linear	Possible bank	Indicative of a raised feature, such as a bank. Likely associated with anomaly group 5. Responses of *c.*-2.83nT to *c.*-18.55nT.
11	Moderate negative, probable	Amorphous linear	Possible bank	Indicative of a raised feature such as a bank. May be associated with anomaly groups 8 and 10. Responses of *c.*-2.26nT to *c.*-16.60nT.

3.5 DISCUSSION

The survey identified 11 groups of anomalies showing features of variable interest within the survey area. The survey and cartographic resources indicate a historic field boundary bisects the proposed development site on a rough north-south axis. The other anomaly groups visible within the survey results may correspond to previous boundaries or field divisions.

Group 1 (+54nT to +8nT), is a strong positive linear, which overlies and likely represents a boundary visible on the 25 inch ordinance survey mapping as well as the Veryan tithe map.

Groups 2 (+18nT to +4nT) and 3 (+13nT to +5nT), are moderate positive linears to the west of anomaly group 1. Group 2 runs parallel to group 1, due to its location is likely associated, possibly representing a ditch or similar feature related to the historic field boundary.

Groups 4 (+25nT to +12nT) and 9 (+10nT to +6nT), are strong and moderate positive linears indicative of cut features. Groups 4 and 9 likely represent a continuation of the same feature but have been cut by anomaly group 11.

Groups 5 (+26nT to +5nT), 6 (+16nT to +5nT), 10 (-3nT to -19nT) and 11 (-2nT to -17nT) range from strong positive to moderate negative responses and likely represent associated features or a single feature. Anomaly groups 5, 6, 10 and 11 may represent a linear bank feature with ditches on either side, such as a hedgebank or field boundary.

Groups 7 (+12nT to +4nT) and 8 (+13nT to +2nT), are moderate positive linears, with anomaly group 8 displaying as a positive area with a stronger positive line parallel to anomaly group 7. Anomaly group 7 may be a continuation or of, or associated with anomaly group 5.

Di-Polar anomalies and magnetic disturbance is present across the site, with Di-Polar anomalies present in no particular pattern. Magnetic disturbance across the site is mostly associated with metallic fencing and current field boundaries. However, and area of magnetic disturbance located to the northern end of anomaly group 1 represents the overhead pylon which was present within the survey area.

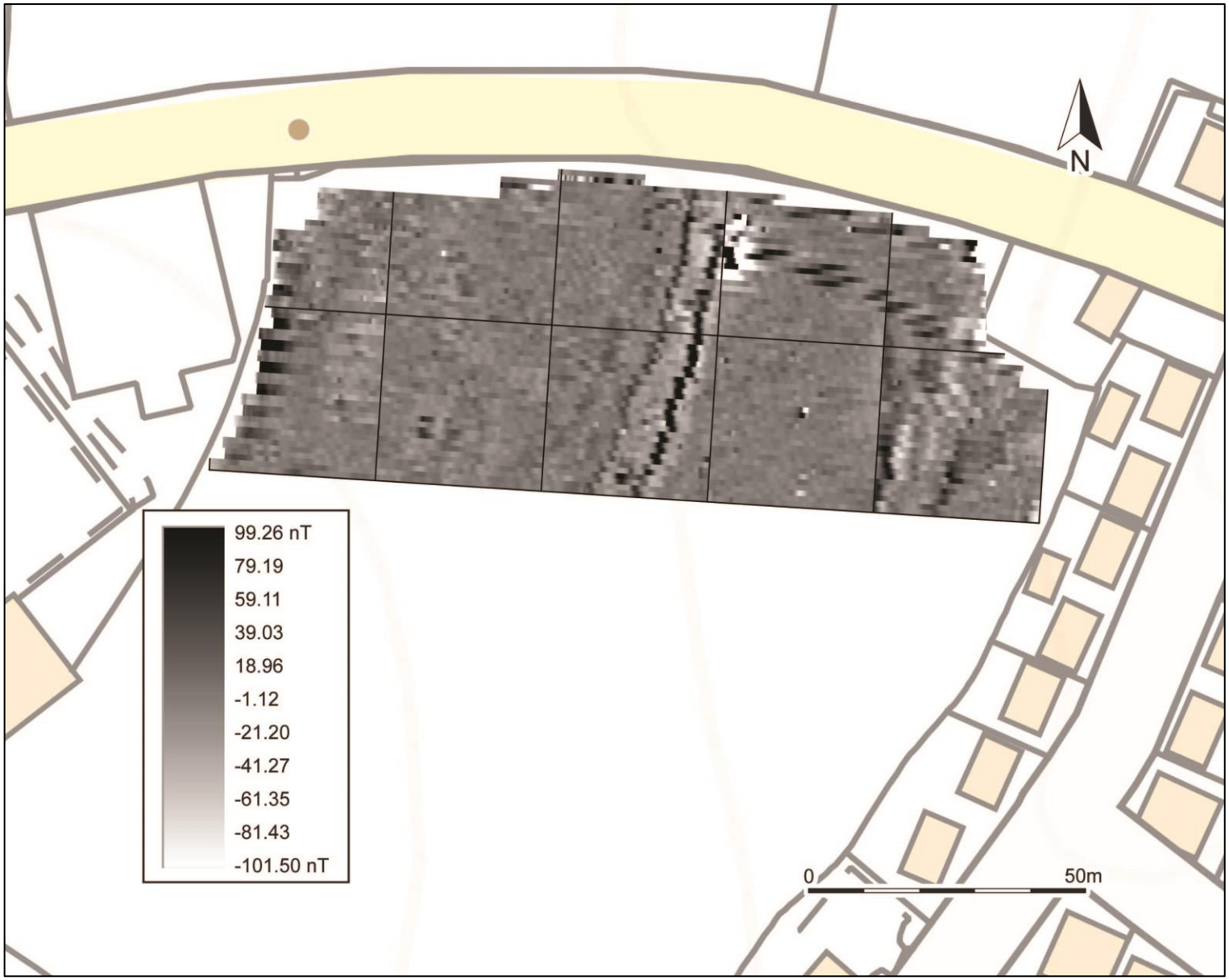

FIGURE 7: SHADE PLOT OF GRADIOMETER SURVEY DATA; GREYSCALE.

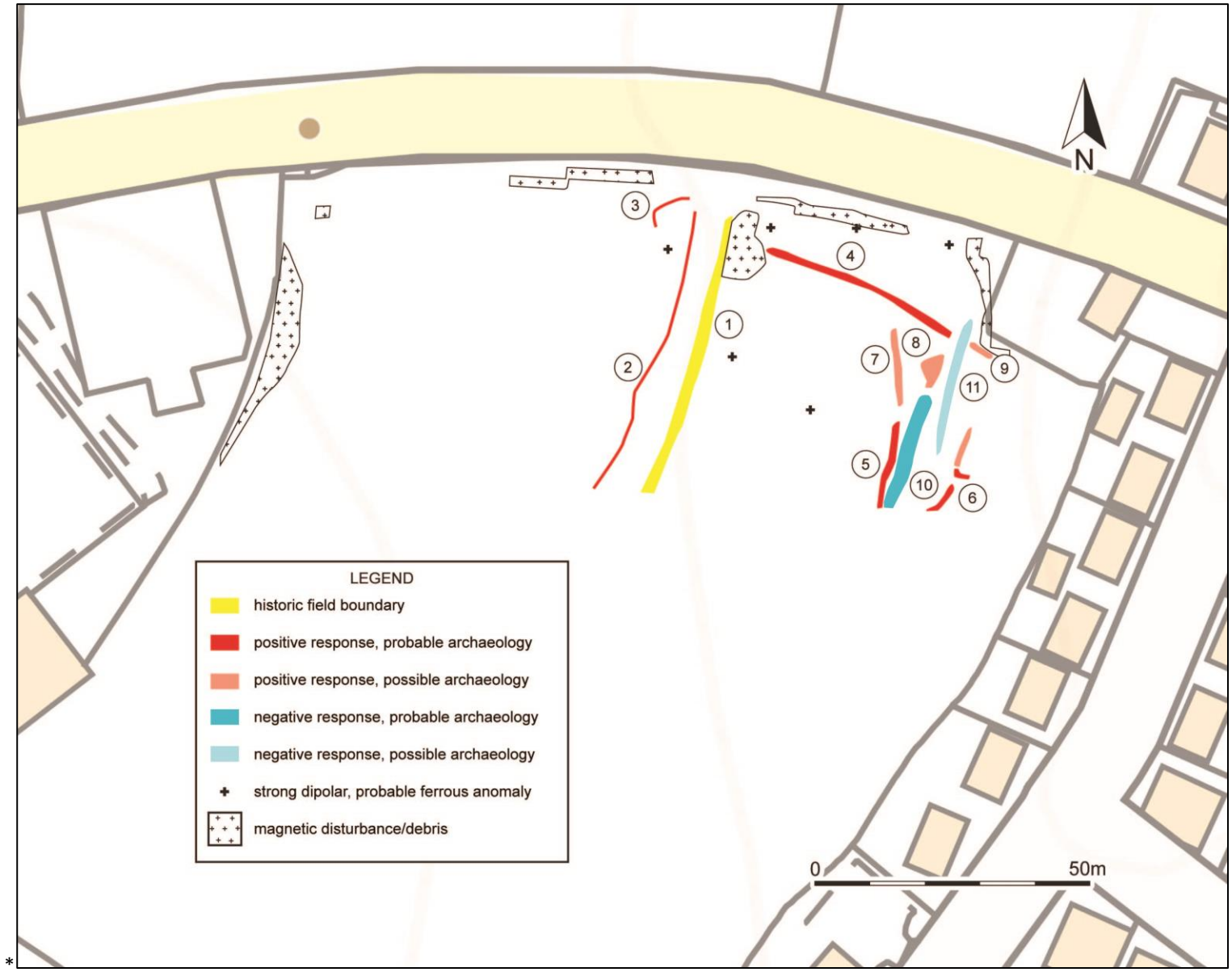

FIGURE 8: INTERPRETATION OF GRADIOMETER SURVEY DATA.

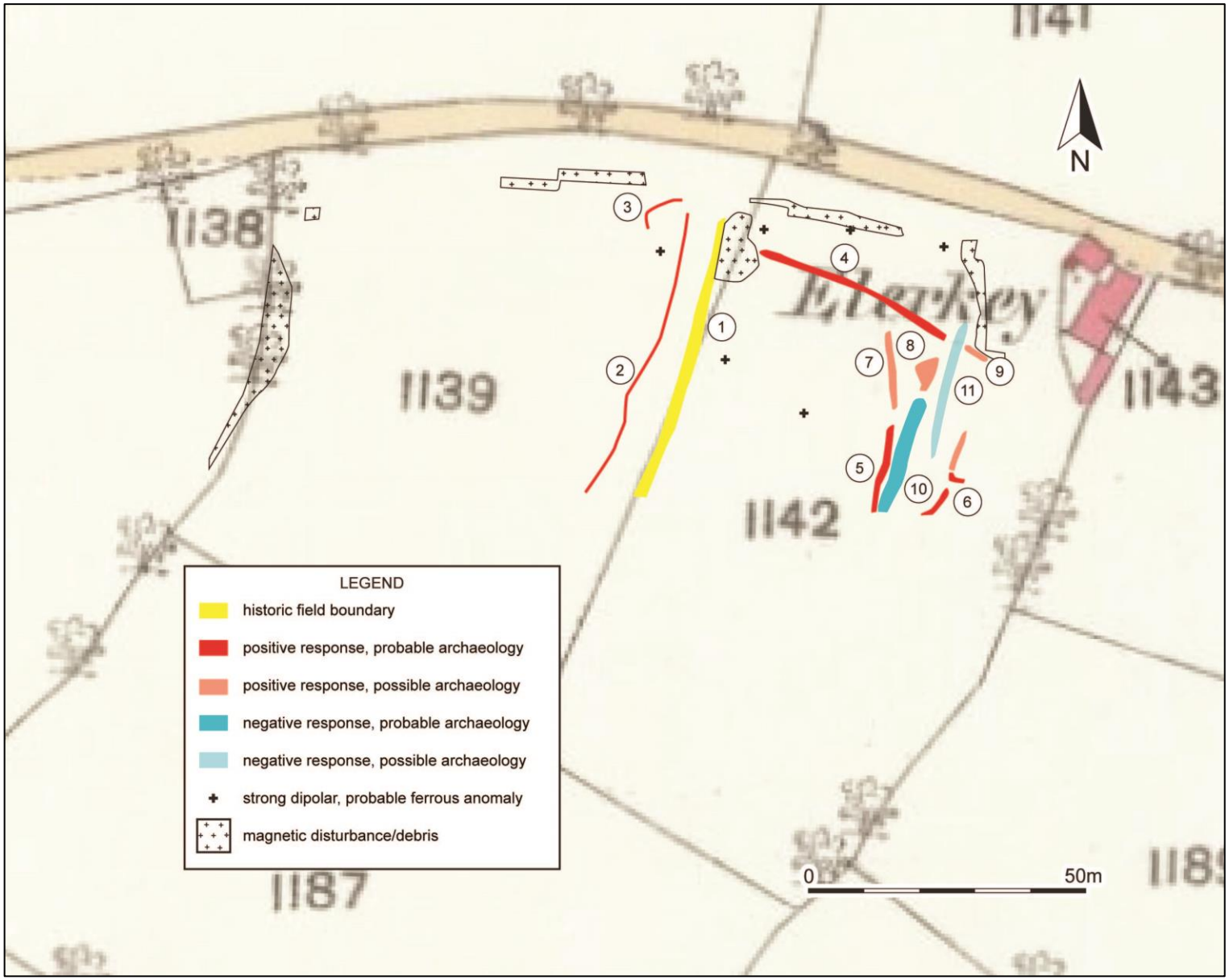

FIGURE 9: INTERPRETATION OF GRADIOMETER SURVEY DATA, OVERLAID ON 1880 25 INCH ORDINANCE SURVEY MAPPING.

4.0 CONCLUSION

The proposed site is located on the western edge of the village of Veryan, west of the modern residential zone, and away from the historic core of the village. There is notable prehistoric activity within the surrounding landscape.

The geophysical survey identified multiple features, including a removed historic field boundary visible on the tithe and Ordnance Survey mapping until the early 20th century. A linear (Anomaly 2) parallel to this boundary might indicate the presence of interior divisions or activity with the field systems. A possible bank and ditch (anomalies 5, 6, 10 and 11) towards the eastern edge of the survey area, are parallel with the removed historic field boundary and likely also represents a former field boundary. This feature appear to cut an east to west orientated linear running between these two removed boundaries which may belong to an earlier field system, but follows the orientation of Elerkey lane to the north and closely abuts the corner of the plot surrounding Elerkey Cottage.

Almost all of the identified anomalies appear to be associated with the surviving field pattern and are likely to all to have post-medieval, or potentially medieval origins given their slightly curving nature. It is unlikely that further intrusive archaeological investigation is warranted based upon these results, although the site is located within an area of archaeological potential.

5.0 BIBLIOGRAPHY & REFERENCES

Published Sources:

Chartered Institute of Field Archaeologists 2014a (Revised 2017): *Standard and Guidance for Historic Environment Desk-based Assessment*.

Chartered Institute for Archaeologists 2014b (Revised 2017): *Standard and Guidance for Archaeological Geophysical Survey*.

English Heritage 2008: *Geophysical Survey in Archaeological Field Evaluation*.

Heritage 2012: *Understanding Place: historic area assessments in a planning and development context***.**

Soil Survey of England and Wales 1983: *Legend for the 1:250,000 Soil Map of England and Wales (a brief explanation of the constituent soil associations)*.

Websites:

British Geological Survey 2019: *Geology of Britain Viewer*.
www.bgs.ac.uk

Unpublished Sources:

NLS

1880 OS 25" map (surveyed 1879), Cornwall sheet LXV.12

1907 OS 25" map (surveyed 1906), Cornwall sheet LXV.12

APPENDIX 1: ADDITIONAL GRAPHICAL IMAGES OF THE GRADIOMETER SURVEY

FIGURE 10: LOCATION AND NUMBERS OF THE SURVEY GRIDS.

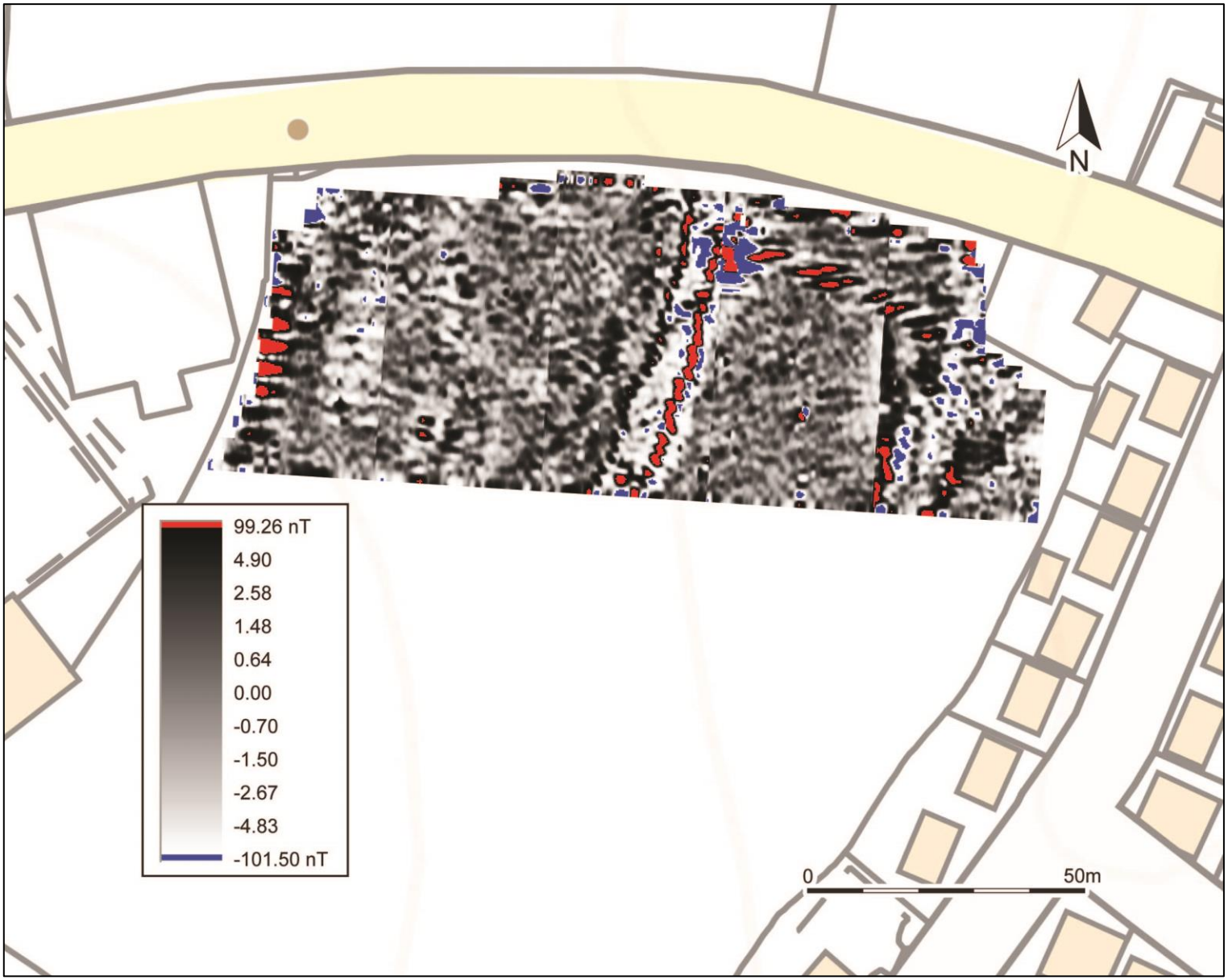

FIGURE 11: RED GREYSCALE BLUE SHADE PLOT OF GRADIOMETER SURVEY DATA; BAND WEIGHT EQUALISED; GRADIATED SHADING.

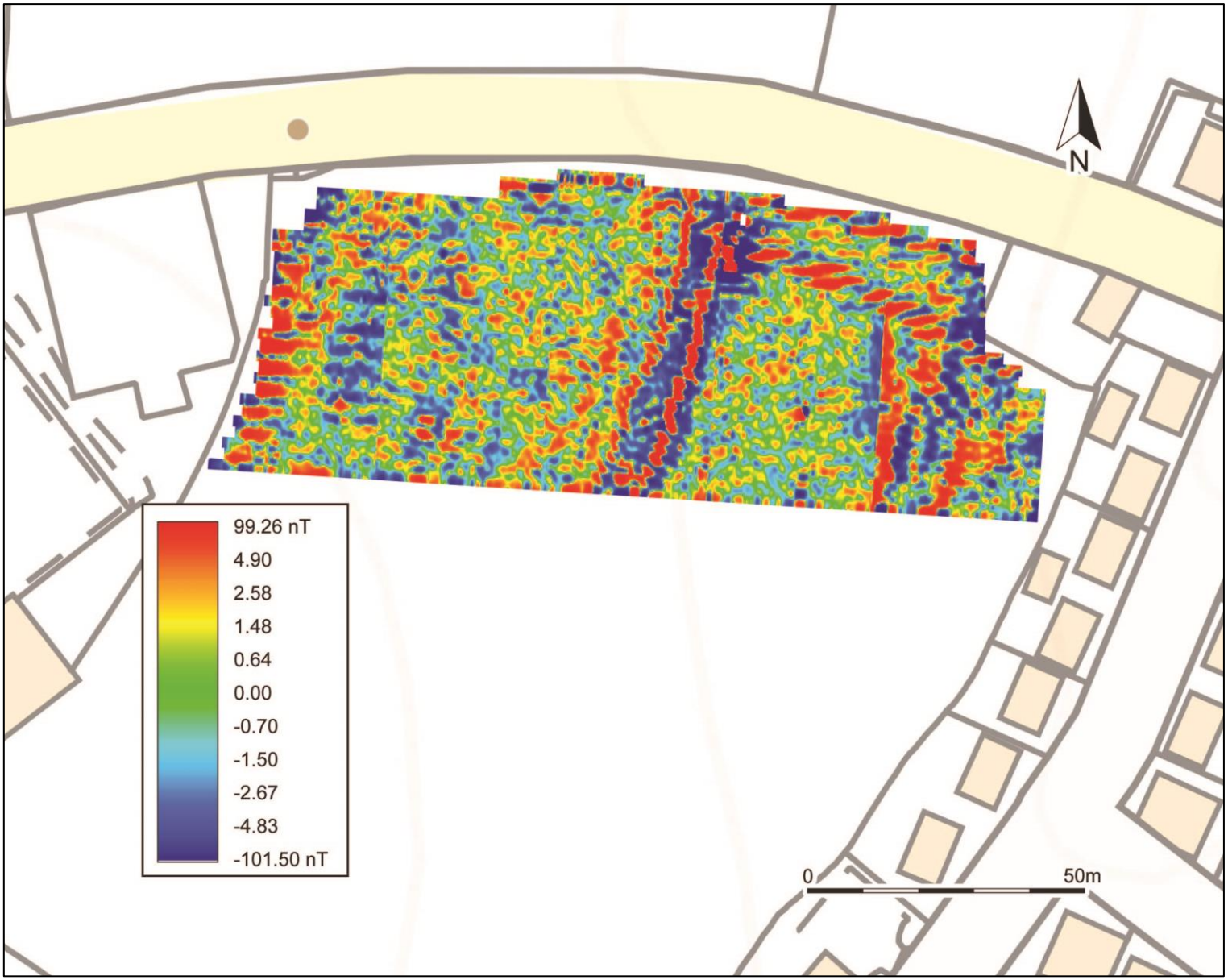

FIGURE 12: RED-BLUE-GREEN (2) SHADE PLOT OF GRADIOMETER SURVEY DATA; BAND WEIGHT EQUALISED; GRADIATED SHADING.

APPENDIX 2: SUPPORTING PHOTOGRAPHS: SITE INSPECTION

1. THE WESTERN BOUNDARY OF THE SITE; VIEWED FROM THE EAST (NO SCALE).

2. THE NORTHERN BOUNDARY OF THE SITE; VIEWED FROM THE WEST (NO SCALE).

3. THE EASTERN BOUNDARY OF THE SITE; VIEWED FROM THE SOUTH-WEST (NO SCALE).

ARCHAEOLOGICAL SERVICES & HISTORIC BUILDING RECORDING
SOUTHWEST ARCHAEOLOGY

THE OLD DAIRY
HACCHE LANE BUSINESS PARK
PATHFIELDS BUSINESS PARK
SOUTH MOLTON
DEVON
EX36 3LH

01769 573555
01872 223164
EMAIL: MAIL@SWARCH.NET