

# LAND AT ATLANTIC VIEW POUNDSTOCK CORNWALL

Results of a Geophysical Survey



South West Archaeology Ltd. Report no 200622

## Land at Atlantic View, Poundstock, Cornwall Results of a Geophysical Survey

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Report Version: FINAL  
Issued: 22<sup>nd</sup> June 2020

Work undertaken by SWARCH for CAU

### SUMMARY

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*South West Archaeology Ltd. was commissioned by CAU to undertake a geophysical survey and for related off-site analysis and reporting on land at Atlantic View, Poundstock, Cornwall. The work was carried out in advance of a proposed development.*

*The site is located north of Poundstock and immediately to the west of the A39. The surrounding landscape contains evidence for Prehistoric, medieval, and post-medieval settlement and farming activity. The site itself appears to have remained undeveloped, and historically used as farmland.*

*The survey identified a geophysical anomaly that corresponds to a known historic field boundary, and numerous linears anomalies likely to represent the remnants of strip field or ridge and furrow cultivation. No other features were visible within the survey results, although metallic magnetic material (and overhead power cables) within the site is likely to have affected the visibility of some features. On the basis of this survey the archaeological potential of the site appears to be moderate to low.*

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THE CORNWALL ARCHAEOLOGICAL UNIT (CAU)  
THE LANDOWNER, FOR ACCESS  
THE STAFF AT THE CORNWALL RECORD OFFICE (CRO)

## PROJECT CREDITS

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REPORT: PETER BONVOISIN  
EDITING: DR. BRYN MORRIS  
GRAPHICS: PETER BONVOISIN

## 1.0 INTRODUCTION

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<b>LOCATION:</b>	LAND AT ATLANTIC VIEW
<b>PARISH:</b>	POUNDSTOCK
<b>COUNTY:</b>	CORNWALL
<b>NGR:</b>	SS 20940 00827
<b>Planning no.:</b>	PA19/01632/PREAPP
<b>SWARCH REF:</b>	PAV20

### 1.1 PROJECT BACKGROUND

South West Archaeology Ltd. (SWARCH) was commissioned by CAU (the Agent) to undertake a geophysical (gradiometer) survey on land at Atlantic View, Poundstock, Cornwall, in advance of a proposed new crematorium. This work was carried out in accordance with ClfA guidelines.

### 1.2 TOPOGRAPHICAL AND GEOLOGICAL BACKGROUND

The site lies c.1.7km directly east of the coast; c.1.35km north of Bangors and c.1.6km north-north-east of St Winwaloe's Church in Poundstock (Figure 1). The site consists of three fields immediately to the west of the A39; there is one sub-rectangular field in the south and two more irregular fields to the north. The three fields lie on a gentle north-facing slope, ranging from c.76m AOD in the south to c.57m AOD at the northern end of the site.

The soils across most of the site are the slowly permeable and seasonally waterlogged clayey soils of the Hallsworth Association; the soils of the southern tip of the site are the slowly permeable clayey soils over shale, with some well-drained fine loamy soils, of the Halstow Association (SSEW 1983). These overlie the mudstones and siltstones of the Crackington Formation; a band of sandstone within the same formation crosses the northern field (BGS 2020).

### 1.3 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The parish of Poundstock lies within the Hundred of Lesnewth and in the deanery of Trigg Major. The manor of *West Widemouth* was previously the property of the Grenville family; the fields are listed as part of *Little Widemouth* in the tithe apportionment. The settlement of Coppathorne lies c.350m to the south and is first documented in c.1360; Coppathorne Cottage is Grade II Listed. No archaeological works have been undertaken in the immediate vicinity of the survey area.

The two northern fields lie within *medieval farmland* (part of *anciently enclosed land*) as per the Cornwall and Scilly HLC; the southern field lies *modern enclosed land*.

The Cornwall and Scilly HER records several heritage assets within 1km of the proposed site. The most notable are: the Grade II Coppathorne Cottage (DCO9819); and the Widemouth medieval fieldsystem (MCO39088) visible as cropmarks in the fields to the north of the site. Documentary evidence exists for numerous medieval and post medieval settlements and structures in the surrounding landscape, as well as some Prehistoric features; Quinceborough (MCO3375) is the possible location of a barrow to the north-west of the site.

### 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* (ClfA 2014).



FIGURE 1: SITE LOCATION.



## 2.0 GRADIOMETER SURVEY

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### 2.1 INTRODUCTION

An area of c.5.5ha 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 between the 27<sup>th</sup> of May and the 3<sup>rd</sup> of June 2020 by P. Bonvoisin; the survey data was processed by P. Bonvoisin.

### 2.2 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 2014).

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: 5.052ha surveyed; Max. 104.01nT, Min. -107.99nT; Standard Deviation 7.01nT, mean -0.48nT, median 0.00nT.

### 2.3 SITE INSPECTION

The site comprises three fields next to the A39; the south field is sub-rectangular, and the middle and north fields are more irregular in form. The boundaries between the fields consist of low hedgebanks with accompanying drainage ditches. At the time of the survey the fields were under pasture, although this was a new grass ley. Some plough marks/ruts from previous agricultural activity were observed within the site. Access to the site was via a gate off the A39 into the south field. The site was bounded by hedgebanks to the south and west, with the eastern boundary being a hedge grown around and over a fence along the two southern fields, becoming more substantial in the northern field. The northern boundary of the site comprised of a hedgebank with occasional trees. The site is located within a largely pastoral landscape. No earthworks were visible on the ground; all visible features relate to modern disturbance. Overhead power cables run across the site roughly north-to-south. Further supporting photographs can be found in Appendix 1.





FIGURE 3: VIEW ACROSS THE SITE TOWARDS THE SEA; VIEWED FROM THE SOUTH.



FIGURE 4: VIEW ACROSS THE SITE; VIEWED FROM THE NORTH.

## 2.4 RESULTS

Table 1 with the accompanying Figures 5 and 6 show the analyses and interpretation of the geophysical survey data. Additional graphic images of the survey data and numbered grid locations can be found in Appendix 2.

TABLE 1: INTERPRETATION OF GRADIOMETER SURVEY DATA.

Anomaly group	Class and Certainty	Form	Archaeological Characterisation	Comments
1	Very strong positive to negative, probable	Amorphous linear	Removed historic field boundary	Indicative of a removed Cornish hedgebank, appears to relate to a boundary visible on the later 25" OS mapping. Responses of c.-100nT to +100nT.
2	Weak positive, probable	Linear	Strip field farming	Indicative of a strip field farming system or other interior field divisions from an earlier farming system, likely associated with anomaly group 4. Responses of c.+1.2nT to +3.78nT.
3	Weak positive, probable	Linear	Cut feature	Indicative of a cut feature or ditch, runs along the same orientation as anomaly groups 1 and 8/9, may be related. Responses of c.+0.7nT to +1.9nT.
4	Weak positive, possible	Linears	Ditches/strip field	Indicative of an earlier agricultural system, likely related to anomaly groups 2, 5 and 6. Responses of <+3nT.
5	Weak positive, possible	Linears	Ditches/strip field	Indicative of an earlier agricultural system, likely related to anomaly group 2, 4 and 6. Responses of <+3.2nT.
6	Weak positive, possible	Linears	Ditches/strip field	Indicative of an earlier agricultural system, likely related to anomaly group 2, 4 and 5. Responses of <+3nT.
7	Moderate positive to negative, possible	Amorphous ovoid	Possible pit	Indicative of a cut feature, the unclear form may represent a background response. Responses of c.-9.8nT to +14.4nT.
8	Moderate positive to negative, probable	Amorphous linear	Possible linear	Spread spot responses in a linear pattern are indicative of a destroyed feature/boundary or infilled ditch, proximity and similar orientation to anomaly group 1 may suggest a relationship, likely continues into anomaly group 9. Responses of c.-14.3nT to +19.5nT.
9	High moderate positive to moderate negative, probable	Amorphous area	Possible dispersed linear	Displays a similar response to anomaly group 8 but has a more dispersed response. Responses of c.-12.7nT to +20.2nT.
10	Weak positive to negative, possible	Amorphous area	Possible disturbed ground	May correspond to more waterlogged/reedy ground in the northern field and lower end of the site, form of anomaly is unclear. Responses of c.-4.1nT to +4.5nT.
11	Very strong positive to negative, probable	Amorphous ovoid	Overhead cable pole.	Corresponds to a telegraph pole for the overhead cabling running across the site. Responses of c.-100nT to +100nT.

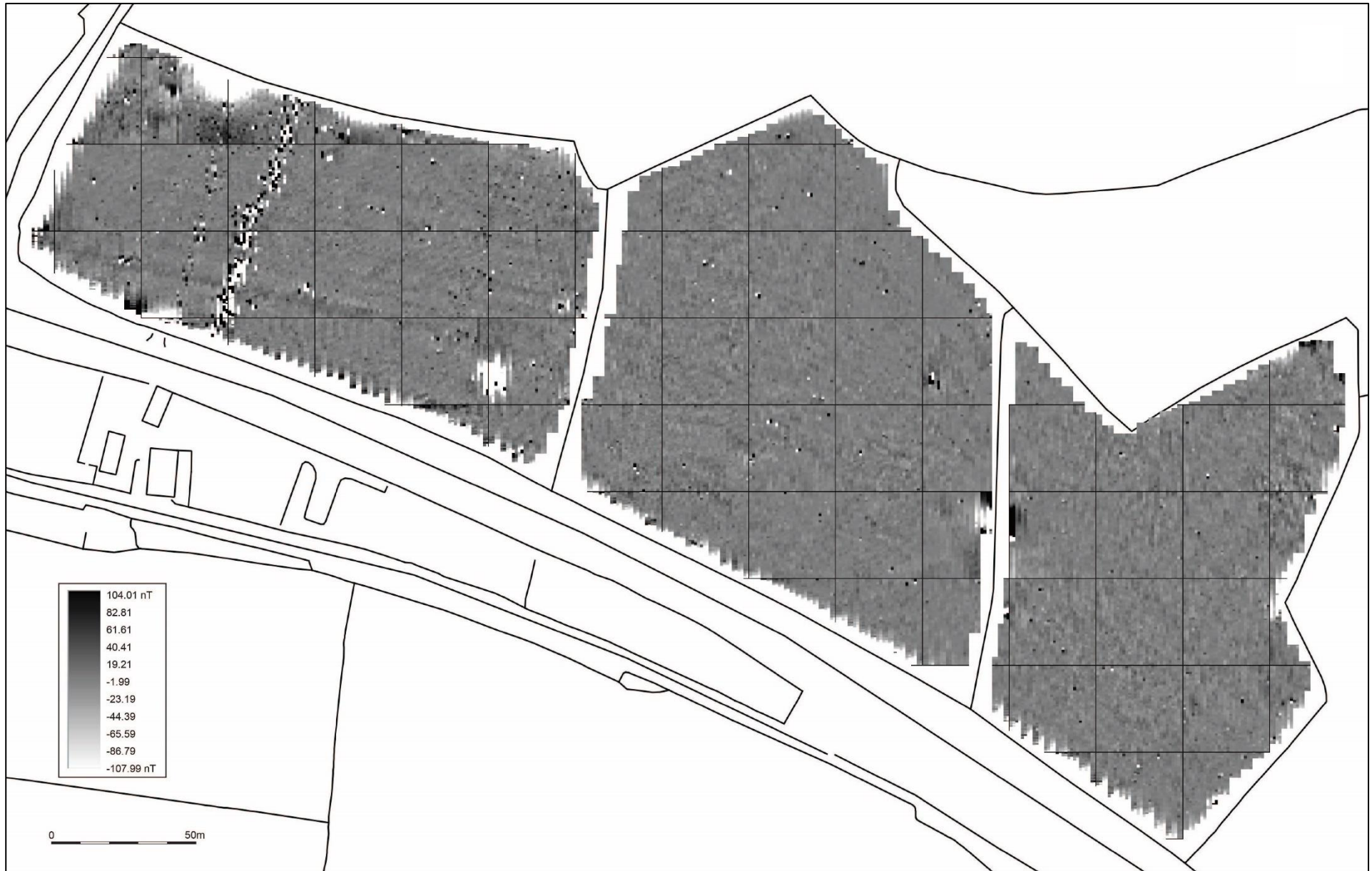


FIGURE 5: SHADE PLOT OF GRADIOMETER SURVEY DATA; MINIMAL PROCESSING.

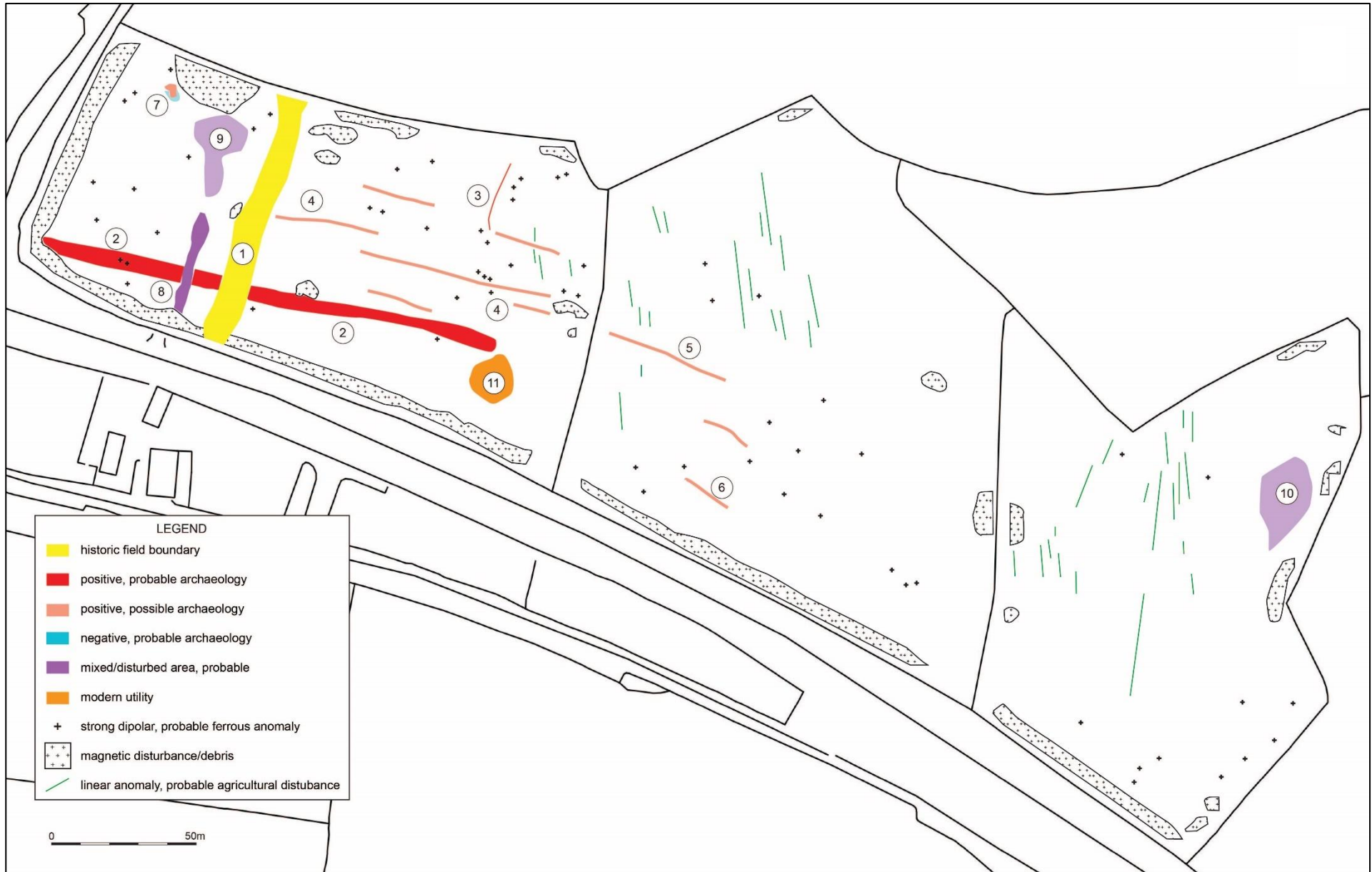


FIGURE 6: INTERPRETATION OF GRADIOMETER SURVEY DATA.

## 2.5 DISCUSSION

The survey identified 11 groups of anomalies within the survey area. These appear to correspond to agricultural activity on the site or historic boundaries. Anomaly group 1 is the only one that corresponds to features visible on the historic mapping, but anomaly group 2 is likely to be a contemporary field boundary. Cartographic sources supporting the discussion and comments can be found in Appendix 3.

Group 1 (-100nT to +100nT) is a very strong amorphous linear, comprising of mixed positive and negative responses; this is indicative of a destroyed field boundary. Anomaly group 1 appears to correspond to a boundary visible on the 2<sup>nd</sup> edition OS map (Figure 2).

Groups 2 (+1.2nT to +3.8nT), 4 (<+3nT), 5 (<+3.2nT) and 6 (<+3nT) are indicative of a previous agricultural system such a strip field system. Anomaly groups 2 and 4 run roughly parallel with the western and (former) eastern boundaries of the south field. Anomaly group 2 is larger and clearer in form and response, and is likely to represent a relict field boundary that once divided the south field into two roughly equal parts (the A39 was re-routed to its present course in the late 20<sup>th</sup> century). A medieval field system (MCO39088) is noted in the HER as a cropmark to the north of the site and there are the remains of ridge and furrow to the west of the site (MCO39093).

Group 3 (+0.7nT to +1.9nT) is a weak positive linear that runs on a similar axis to anomaly group 1, and also has a dispersed pattern of high response points associated with it.

Group 7 (-9.8nT to +14.4nT) is a moderate positive amorphous ovoid with a partial negative border, indicative of a cut feature. The higher background response within the surrounding area could suggest that this group is representative of a background response or cut feature.

Groups 8 (-14.3nT to +19.5nT) and 9 (-12.7nT to +20.2nT) are groupings of higher response points in a linear form, with group 9 likely being a continuation of anomaly group 8. Anomaly group 9 has a higher background response and less clear form. Anomaly groups 8 and 9 appear to run roughly parallel to anomaly group 1, and may be related.

Group 10 (-4.1nT to +4.5nT) is an amorphous area with a mixed response, possibly being an area of higher background response due to waterlogging, although this remains unclear.

Group 11 (-100nT to +100nT) corresponds to a modern telegraph pole for the overhead power cables running across the site.

Multiple ephemeral linears can be seen across the site. These are likely to represent recent agricultural activity such as plough scarring; these are clearer within the middle field. Magnetic disturbance and di-polar anomalies also appear across the site. The areas of magnetic disturbance can mostly be attributed to modern debris of metallic gates and fencing; di-polar anomalies appear across the site in a mostly amorphous pattern, with some being concentrated near anomaly groups 8 and 9.

### 3.0 CONCLUSION

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The site is located north of Poundstock and immediately to the west of the A39. The surrounding landscape contains evidence for Prehistoric, medieval, and post-medieval settlement and farming activity. The site itself appears to have remained undeveloped, and historically used as farmland.

The survey identified a geophysical anomaly that corresponds to a known historic field boundary, and numerous linear anomalies likely to represent the remnants of strip-field or ridge-and-furrow cultivation. No other features were visible within the survey results, although metallic magnetic material (and overhead power cables) within the site is likely to have affected the visibility of some features. On the basis of this survey the archaeological potential of the site appears to be moderate to low.

### 4.0 BIBLIOGRAPHY

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<http://archaeologydataservice.ac.uk>

**British Geological Survey** 2020: *Geology of Britain Viewer*.

[http://maps.bgs.ac.uk/geologyviewer\\_google/googleviewer.html](http://maps.bgs.ac.uk/geologyviewer_google/googleviewer.html)

**Cornwall Council Interactive Map** 2020: *HER and HLC*

<https://map.cornwall.gov.uk>

#### *PRO/NLS:*

Poundstock Tithe Map, 1840

Poundstock Tithe Apportionment, 1840

Ordnance Survey 1st Series Edition, 1875-1901

Ordnance Survey 2nd Series Edition, 1906-1908

APPENDIX 1: SUPPORTING PHOTOGRAPHS: SITE INSPECTION



FIGURE 7: VIEW ACROSS THE NORTHERN FIELD; VIEWED FROM THE NORTH-NORTH-EAST.



FIGURE 8: VIEW OF THE OVERGROWN HEDGEBANK AND DITCH BETWEEN THE MIDDLE AND SOUTHERN FIELDS; VIEWED FROM THE EAST.



FIGURE 9: VIEW ACROSS THE MIDDLE FIELD TOWARDS THE SEA; VIEWED FROM THE EAST.



FIGURE 10: VIEW ALONG THE NORTHERN BOUNDARY OF THE SITE TOWARDS THE A39; VIEWED FROM THE WEST.



APPENDIX 2: ADDITIONAL GRAPHICAL IMAGES OF THE GRADIOMETER SURVEY

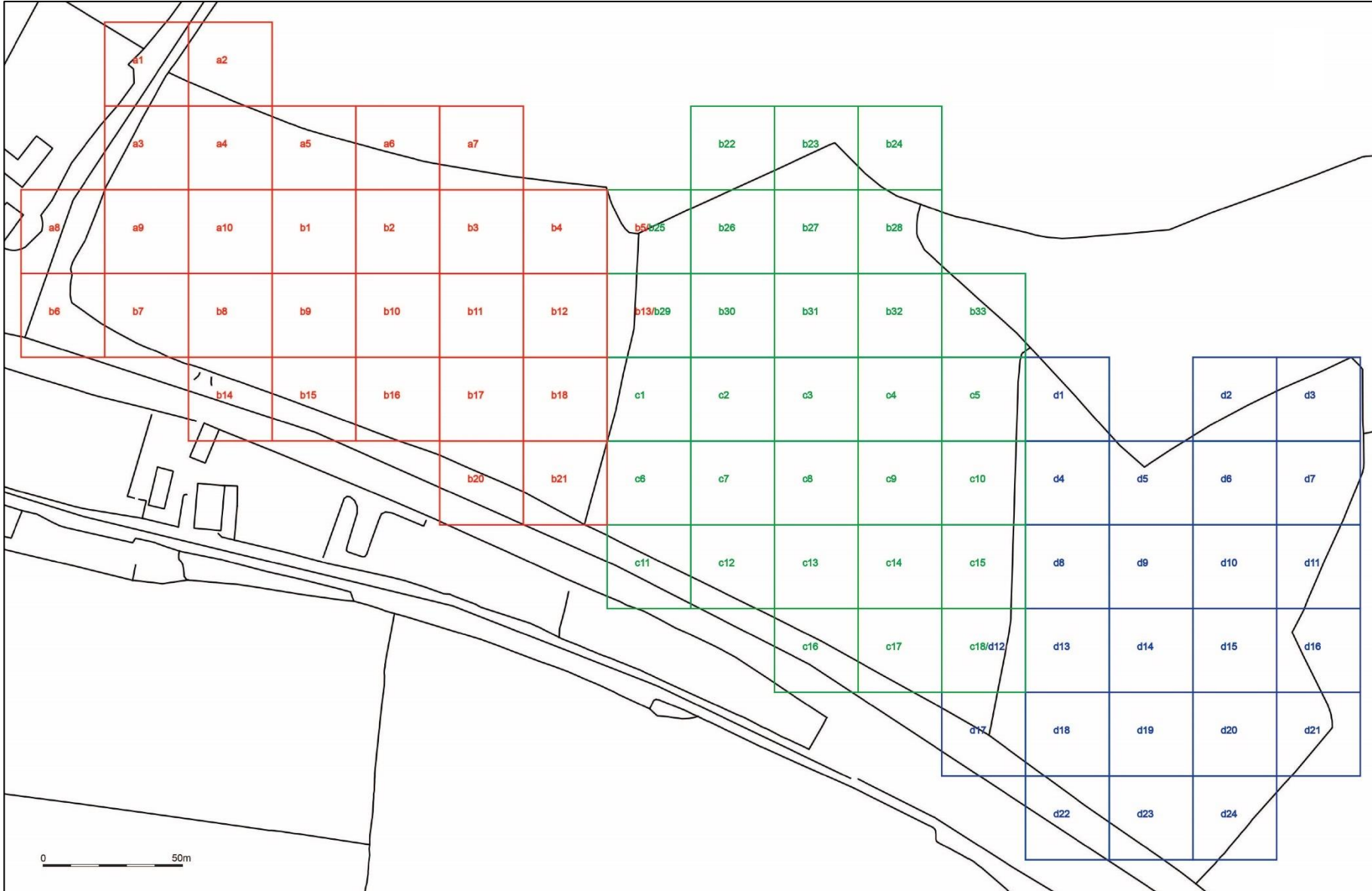


FIGURE 11: SITE GRID LOCATION AND NUMBERING.



FIGURE 12: SHADE PLOT OF GRADIOMETER SURVEY DATA; BAND WEIGHT EQUALISED; GRADIATED SHADING.



FIGURE 13: SHADE PLOT OF GRADIOMETER SURVEY DATA; BAND WEIGHT EQUALISED; GRADIATED SHADING.

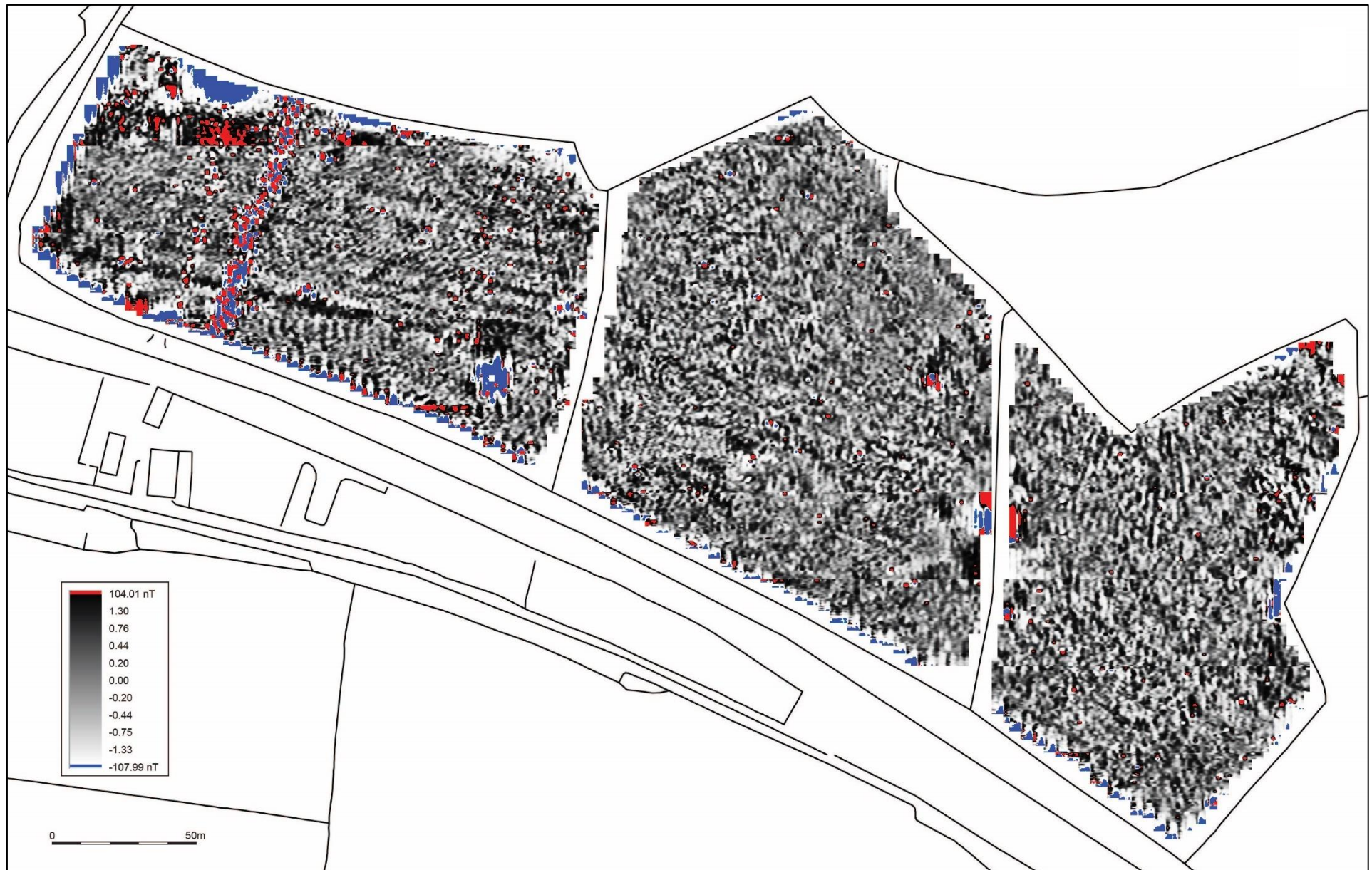


FIGURE 14: RED-GREY-BLUE SHADE PLOT OF GRADIOMETER SURVEY DATA; BAND WEIGHT EQUALISED; GRADIATED SHADING.

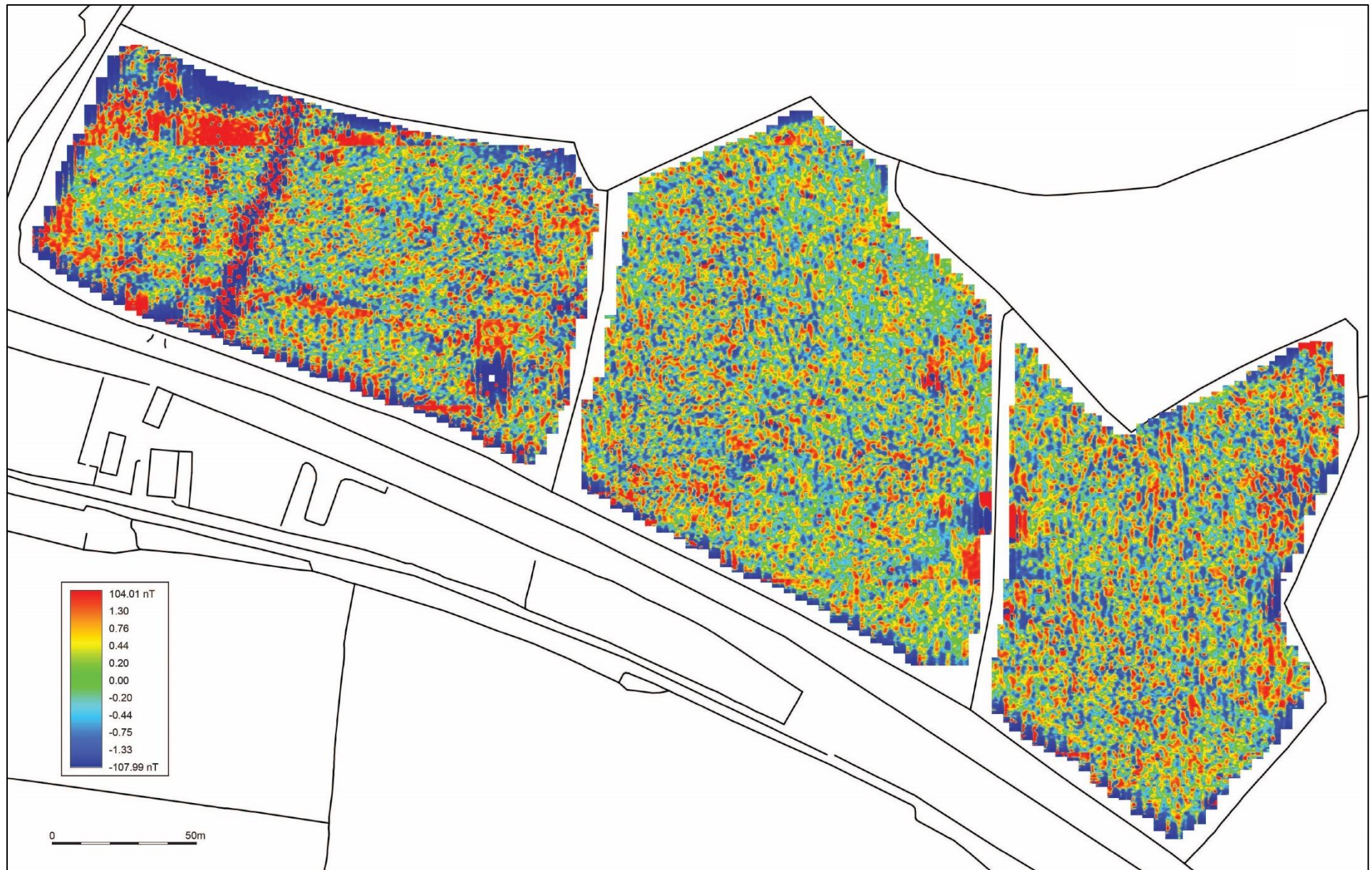


FIGURE 15: RED-BLUE-GREEN(2) SHADE PLOT OF GRADIOMETER SURVEY DATA; BAND WEIGHT EQUALISED; GRADIATED SHADING.

APPENDIX 3: CARTOGRAPHIC SOURCES



FIGURE 16: POUNDSTOCK TITHE MAP, 1840; THE SITE IS INDICATED (PRO).

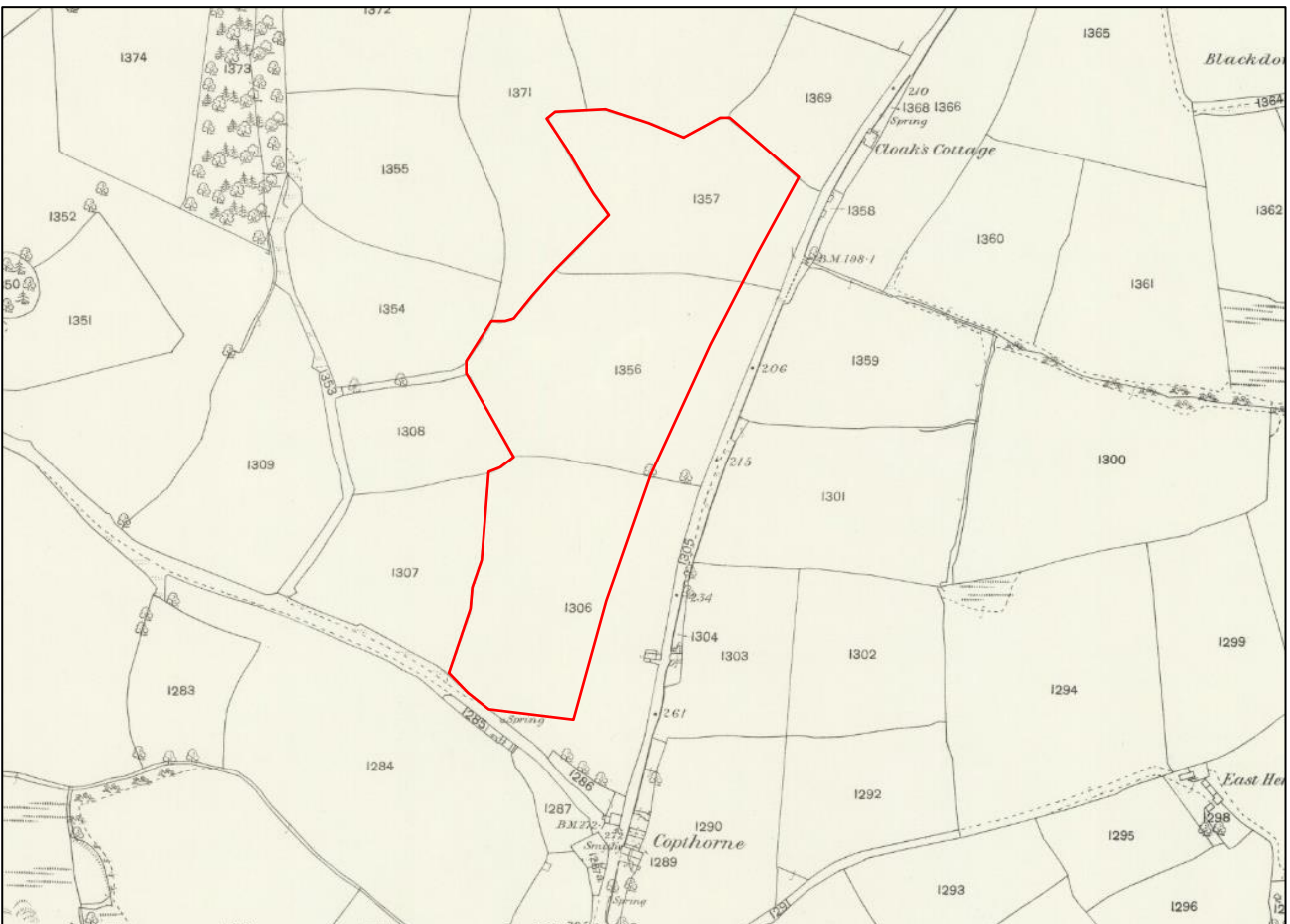


FIGURE 17: OS 1<sup>ST</sup> EDITION, 25 INCH SERIES, PUBLISHED 1884; THE SITE IS INDICATED (NLS).



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