

LAND SOUTH OF TREHANNICK CLOSE ST TEATH CORNWALL

Results of a Geophysical Survey



South West Archaeology Ltd. report no. 190311



ARCHAEOLOGICAL SERVICES &
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Land South of Trehannick Close, St Teath, Cornwall Results of a Geophysical Survey

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Work undertaken by SWARCH for a Private Client (the Client)

Summary

This report presents the results of a geophysical survey carried out by South West Archaeology Ltd. (SWARCH) on land south of Trehannick Close, St. Teath, Cornwall. The site is located on the southern edge of 20th century expansion of the current settlement, away from the historic core of the village.

The site is located in a landscape based upon medieval field patterns, previous desk-based assessment suggesting that the site has formed a single large agricultural field since at least the start of the 19th century. HER data for the local area shows very few assets, the name of the farm Carkeen may be suggestive of a round, but no physical evidence survives. A few assets are located in the village including the church and a medieval wheelheaded cross, but none of these have any bearing on the proposed development.

The geophysical survey (in association with additional survey work carried out in 2017) identified eleven groups of probable or possible anomalies that relate to archaeological activity. The majority of the anomalies appear to relate to historic and recent agricultural activity, although there are a small number of features of unknown archaeological origin or date which suggest former field boundaries and possible pits.

Significant probable archaeological anomalies were sparse across the site, and whilst the archaeological potential of the site is unproven many of the features are likely to be post-medieval or modern in date, and taking into consideration the recorded heritage assets of the wider area, the archaeological potential of the site is low. Based on the results of the walkover and geophysical surveys, further archaeological works on this site are unlikely to add significant additional detail to the archaeological record.



March 2019

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ACKNOWLEDGEMENTS

THE CLIENT

PROJECT CREDITS

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1.0 INTRODUCTION

LOCATION:	LAND SOUTH OF TREHANNICK CLOSE, ST TEATH
PARISH:	ST TEATH
COUNTY:	CORNWALL
NGR:	SX 06401 80242
PLANNING NO.	PA17/02529
SWARCH REF.	STC19

1.1 PROJECT BACKGROUND

South West Archaeology Ltd. (SWARCH) was commissioned by a Private Client (the Client) to undertake a geophysical survey for land south of Trehannick Close, St. Teath, Cornwall, in advance of a proposed residential development. This work was undertaken in accordance with best practice and CifA guidelines and follows on from previous phases of desk-based assessment and geophysical survey carried out over the western portion of the site in 2017 (Bonvoisin & Boyd 2017).

1.2 TOPOGRAPHICAL AND GEOLOGICAL BACKGROUND

St. Teath is situated approximately 5km south-west of Camelford and 11km north-west of Wadebridge, between the two river valleys of the Allen and one of its tributaries. The site is located c.0.4km to the south of the centre of the village, on the southern limit of 20th century development, and c.0.6km to the north-west of the A39. The site comprises the eastern end of a large sub-rectangular field, and is on a north-west facing slight slope at an altitude of c.120-128m AOD. The field is to the South of Trehannick Close (Figure 1). The soils of this area are the well-drained fine loamy and fine silty soils of the Denbigh 1 Association (SSEEW 1983), which overlie the slate and siltstone of the Trevoise Slate Formation and Rosenum Formation (BGS 2017).

1.3 HISTORICAL & ARCHAEOLOGICAL BACKGROUND

St. Teath is a village and parish which lies in the hundred of Trigg and the deanery of Trigg-Minor. There are 22 Listed buildings in St. Teath, including the Grade I church, Grade II* Community Centre and a Grade II Listed medieval wheelheaded cross, which is the only Scheduled Monument in the village. The majority of these assets lie within the St. Teath Conservation Area, the southern edge of which is approximately 300m north of the site. The site lies within an area characterised as post-medieval enclosed land (Cornwall HLC), which forms a corridor leading south from the village, bordered either side by large areas of medieval farmland. The site and the village lie within an Area of Great Landscape Value. No archaeological fieldwork appears to have taken place in the local area.

1.4 METHODOLOGY

This work was undertaken in accordance with best practice and 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).

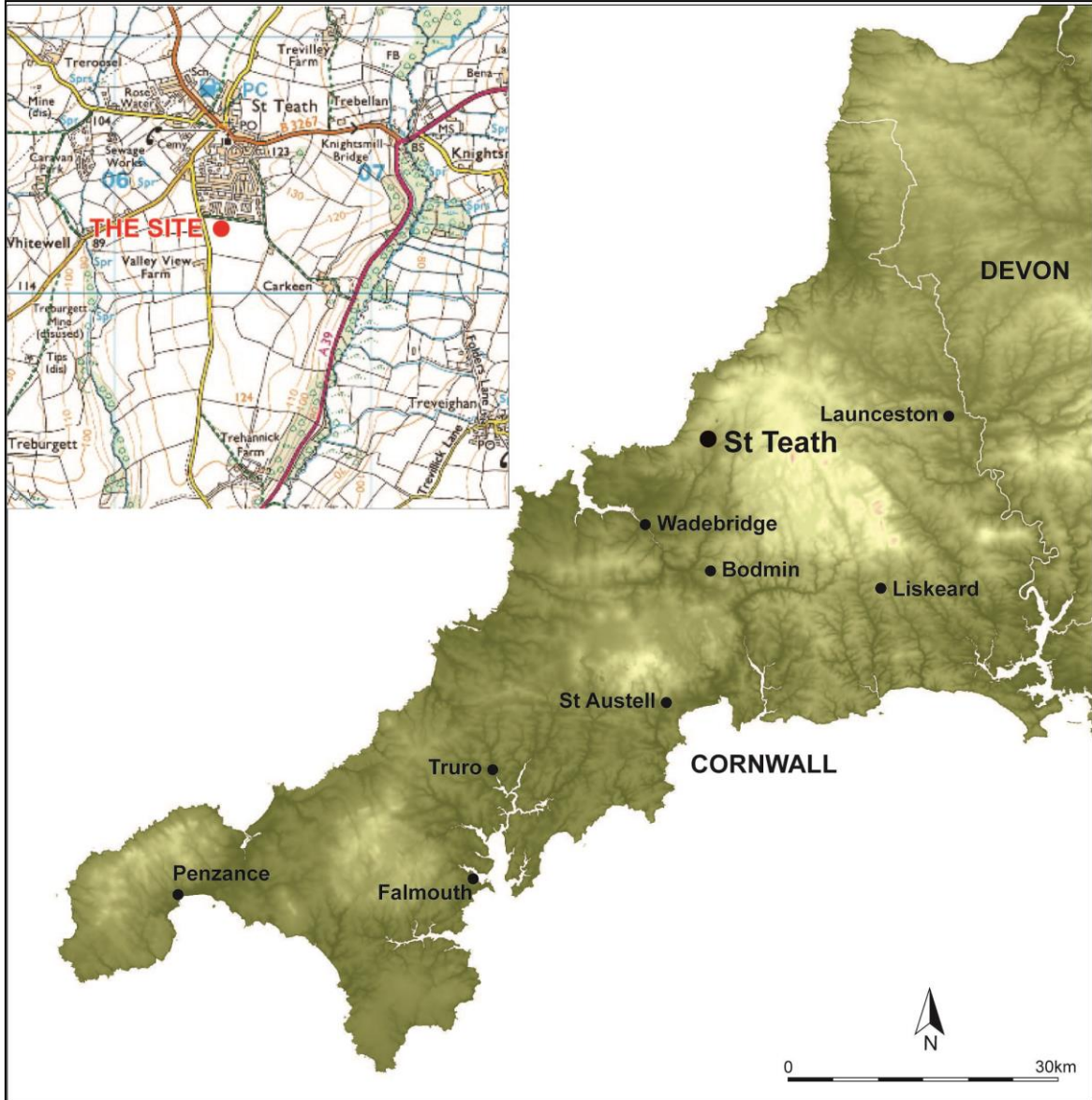


FIGURE 1: SITE LOCATION (THE SITE IS INDICATED).

2.0 GEOPHYSICAL SURVEY

2.1 INTRODUCTION

An area of c.2ha 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 8th of March 2019 by P. Webb; the survey data was processed by P. Webb.

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 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.

Details: 2.0173ha surveyed; Max. 119.00nT, Min. -137.35nT; Standard Deviation 12.37nT, mean - 0.03nT, median 0.00nT.

2.3 SITE INSPECTION

The site comprises the bulk a large sub-rectangular field orientated approximately east to west to the south of Trehannick Close, and north-east of Valley View Farm. The site slopes gently down to the south and south-east; and is bounded on all sides by Cornish hedgebanks between c.1.20 and 1.50m high overgrown with scrub and brambles, the northern boundary also containing a mature deciduous tree-line. The site had been recently ploughed. There were no visible earthworks or archaeological features and no finds were recovered. A full complement of site photographs can be found in Appendix 2.



FIGURE 2: VIEW ACROSS SITE; VIEWED FROM THE SOUTH-EAST.



FIGURE 3: DETAIL OF THE SOUTHERN HEDGEBANK; VIEWED FROM THE NORTH (1M SCALE).

2.4 RESULTS

Table 1 with the accompanying Figures 4 and 5 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 1.

Anomaly Group	Class and Certainty	Form	Archaeological Characterisation	Comments
1	Moderate/strong positive, probable	Linear	Historic field boundaries	Likely associated with the Cornish hedgebanks boundary to the south, forming an internal ditch/drain to the field. Responses of c.+20nT to +50nT.
2	Moderate/strong positive with associated negative, probable	Linear	Historic field boundaries	Indicative of Cornish hedgebanks, a central bank flanked by linear ditches. Boundaries are not present on historic mapping. It is, however, broadly aligned with older elements of the existing field system and is likely associated. Responses of between c.-22nT and +41nT.
3	Weak/moderate positive with associated negative, possible	Linear	Historic field boundaries	Appear similar to Group 2 anomalies but with weaker responses. Most likely associated as part of the same field system. Responses of c.-25nT to +16nT.
4	Weak/moderate positive, possible	Irregular linear	Possible ditch	Indicative of infilled deposit that may indicate a ditch, perhaps trace remains of historic boundaries. Responses of c.+13nT to +28nT.
5	Moderate/strong negative, probable	Linear	Possible boundary	A linear negative anomaly indicative of a bank. Responses of c.-56nT to -17nT.
6	Moderate/strong positive, probable	Ovoid	Possible pits/tree-throws	Indicative of discrete anomalies such as pits/tree-throws. Responses of c.+24nT +97nT.
7	Weak positive, possible	Ovoid	Possible pits/tree-throws	Indicative of discrete anomalies such as pits or tree-throws, such as anomaly group 6. Responses of c.+17nT to +25nT.
8	Weak/moderate positive and negative, possible	Linear	Possible agricultural activity	Indicative of cut features with banked material to the side such as ditches, but weaker responses and regularity of spacing suggests probable agricultural activity such as deeper cut ploughing. Responses of c.-18nT to +25nT.
9	Strong bipolar (mixed response)	Ovoid/sub-rectangular	Modern disturbance / ferrous anomaly	Indicative of a large modern metallic object. Responses of between -107nT and 113nT.
10	Strong negative, possible	Ovoid	Possible stone	Indicative of stone, especially given proximity of stone-built hedgebank and identification of large stones against this boundary.
11	Weak positive and negative	Linear	Agricultural activity	Linear striations covering the entire site with regularity. Weak mixed positive and negative responses suggest shallow ploughing. Responses between -5nT and +20nT.

TABLE 1: INTERPRETATION OF GRADIOMETER SURVEY DATA.

2.5 DISCUSSION

The survey identified eleven groups of anomalies. These were predominantly linear anomalies likely associated with historic boundaries and agricultural features. The general geological variation across the site was between +/-5nT. The identified anomaly groups include: historic field

boundaries; a possible ditch feature; a small possible enclosure; a number of possible pits or tree-throws; and possible buried large ferrous/metallic items. The bulk of the responses, however, reflect various episodes of ploughing and agricultural practices. Cartographic and visual sources supporting the discussion and comments can be seen in Appendix 2 and the previous desk-based assessment.

Anomaly Group 1 consists of a moderate-strong (+20nT to +50nT) positive linear response along the southern boundary of the site. Given its position in proximity to the Cornish hedgebank boundary, and matching alignment, it is most likely an associated internal boundary drainage ditch.

Anomaly Group 2 consists of a series of moderate-strong (+18nT to +41nT) positive linear responses with associated moderate (-22nT to -12nT) negative linear responses which suggest a central bank with flanking ditches. These anomalies align with various elements of the existing field-system, particularly the north-eastern corner of the site, which is likely to pre-date the straighter, more regular boundaries to the north and south. It is likely therefore that these features pre-date the post-medieval enclosure of the area, and may be of late medieval date.

Anomaly Group 3 consists of a series of weak-moderate (+10nT to +16nT) positive linear responses with associated weak (-10nT to -25nT) negative linear responses. They appear to be weaker versions of the Group 2 anomalies and are therefore likely moderately poorly surviving elements of the same possible medieval field-system.

Anomaly Group 4 consists of a weak-moderate (+13nT to +28nT) positive linear anomalies indicative of cut features. It is possible that they form the intermittent remains of small sections of shallow linear ditch and are of unknown date or origin.

Anomaly Group 5 consists of a moderate-strong (-56nT to -17nT) linear negative anomaly orientated east to west along the line of ploughing. The strong nature of the response suggests that it is a small section of bank, its regimented linearity indicating that it formed part of the later historic field-system.

Anomaly Group 6 consists of a number of moderate-strong (+24nT to +97nT) positive ovoid responses indicative of cut and filled discrete features such as pits or tree-throws. The overall strength of these responses indicates that they are more likely pits than natural features.

Anomaly Group 7 consists of a number of moderate (+13nT to +23nT) positive ovoid responses indicative of cut and filled discrete features similar to the Group 6 anomalies; their weaker response perhaps indicating that they are more likely tree-throws or other natural features.

Anomaly Group 8 consists of a series of weak-moderate (+25nT to +43nT) positive with associated weak-moderate (-22nT to -10nT) negative linear anomalies. The alignment and closeness of the grouping indicates that they likely represent ploughing activity, their relative strength to the Group 11 anomalies perhaps suggesting an episode of deeper cut ploughing.

Anomaly Group 9 consists of a pair of strong mixed (bipolar) (-107nT to +113nT) sub-rectangular anomalies both aligned approximately north to south near the eastern site boundary. These are indicative of large metallic items, and are likely modern.

Anomaly Group 10 comprises a small strong (c.-40nT) negative ovoid response indicative of a compacted dump of material or a geological anomaly. It is an isolated response, and its position in proximity to a stone-built hedgebank suggests that it is likely a large discrete stone.

Anomaly Group 11 comprises a series of weak-moderate (-5nT to +20nT) mixed positive and negative linear responses orientated broadly east to west across the site. They correspond with the observed direction of ploughing across the site and are likely to represent the most recent episode of such. They appear as weaker, and shallower responses of a similar nature to those of anomaly Group 8.

Modern disturbance, Di-Polar anomalies and magnetic disturbance are also located across the site, particularly around the site boundaries. This is likely due to modern or metallic debris and metallic components along the boundaries of the field.

LAND SOUTH OF TREHANNICK CLOSE, ST TEATH, CORNWALL



FIGURE 4: SHADE PLOT OF GRADIOMETER SURVEY DATA; MINIMAL PROCESSING (2017 SURVEY OUTLINED IN RED AND MASKED; 2019 SURVEY OUTLINED IN BLUE).

LAND SOUTH OF TREHANNICK CLOSE, ST TEATH, CORNWALL

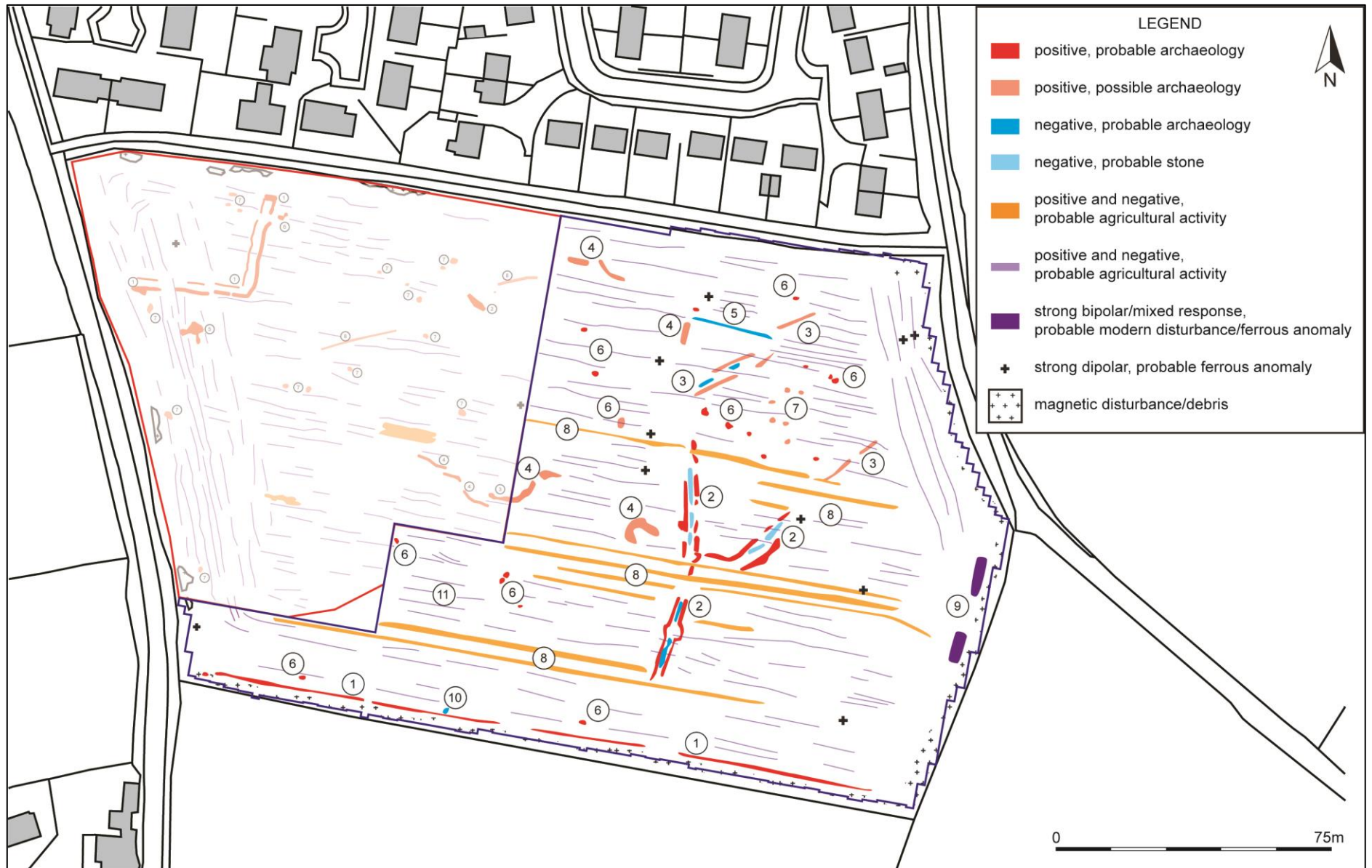


FIGURE 5: INTERPRETATION OF GRADIOMETER SURVEY DATA (2017 SURVEY AREA OUTLINED IN RED AND INTERPRETATION MASKED; 2019 SURVEY AREA OUTLINED IN BLUE).

3.0 CONCLUSION

The site is located in the parish of St. Teath a short distance south of the medieval core of the village and south of its 20th century expansion. Historic sources and the HER indicate that the site has been a single field since at least the start of the 19th century; and whilst prehistoric settlement is suggested as being located nearby, no direct archaeological evidence has been recorded.

The geophysical survey identified a series of anomalies across the site, including: linear bank and ditch features probably relating to historic (medieval?) field system; a small number of small linear anomalies which may reflect additional short shallow sections of possible ditch features; a possible short section of bank; and a series of discrete ovoid features associated with either pits or tree-throws. Ploughing evident on the ground and in the survey results will have truncated any buried potential archaeological resource to some extent.

In general archaeological anomalies were sparse on the site, many of the features likely reflecting medieval or later field-systems; the other anomalies being undated (such as the possible pits) or reflecting recent agricultural activity across the site. The results of the geophysical survey would suggest that the archaeological potential of the site is *low*.

4.0 BIBLIOGRAPHY & REFERENCES

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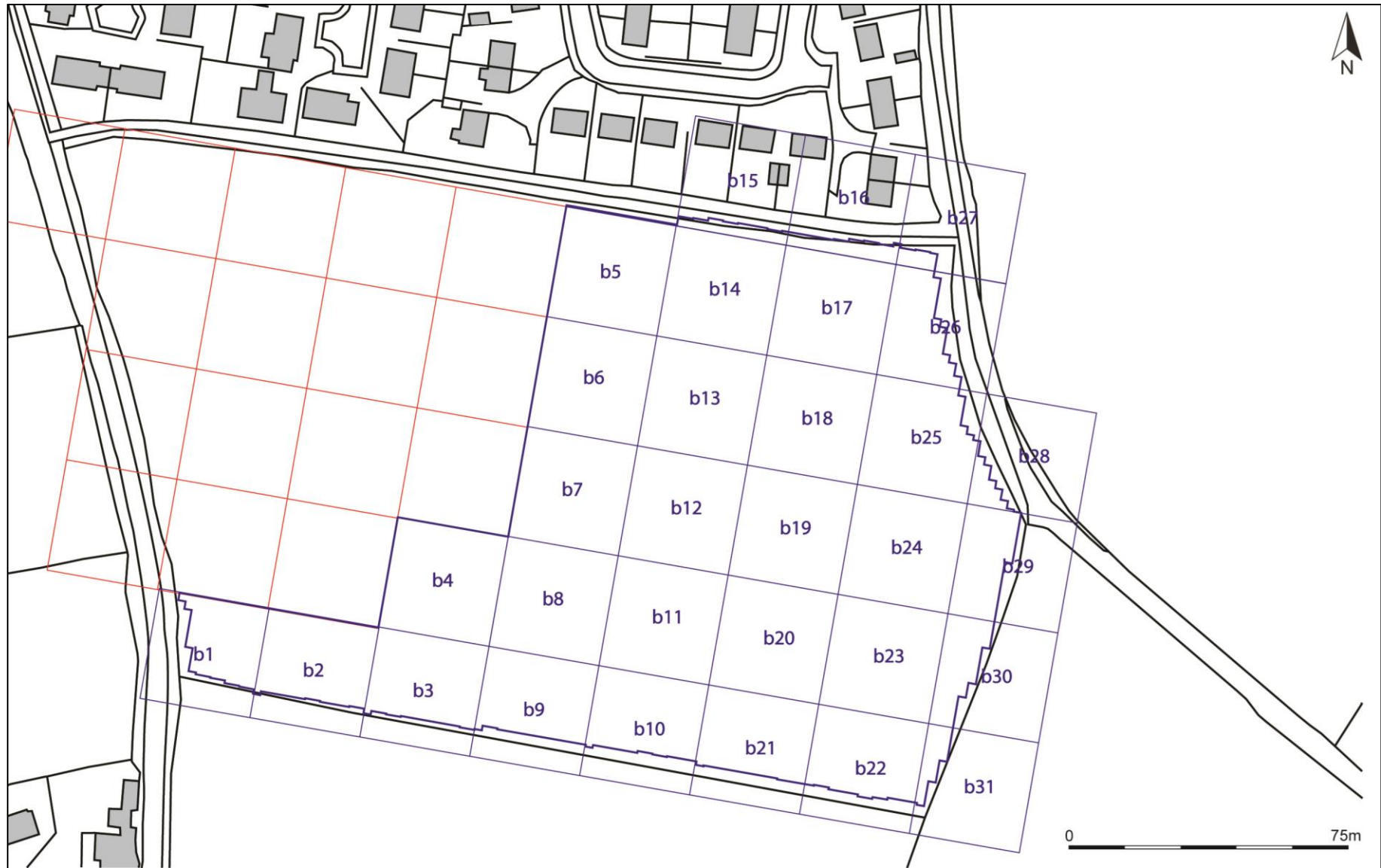
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APPENDIX 1: ADDITIONAL GRAPHICAL IMAGES OF THE GRADIOMETER SURVEY



GEOPHYSICAL SURVEY GRID LOCATION AND NUMBERING (2017 SURVEY IN RED; 2019 SURVEY IN BLUE).

LAND SOUTH OF TREHANNICK CLOSE, ST TEATH, CORNWALL



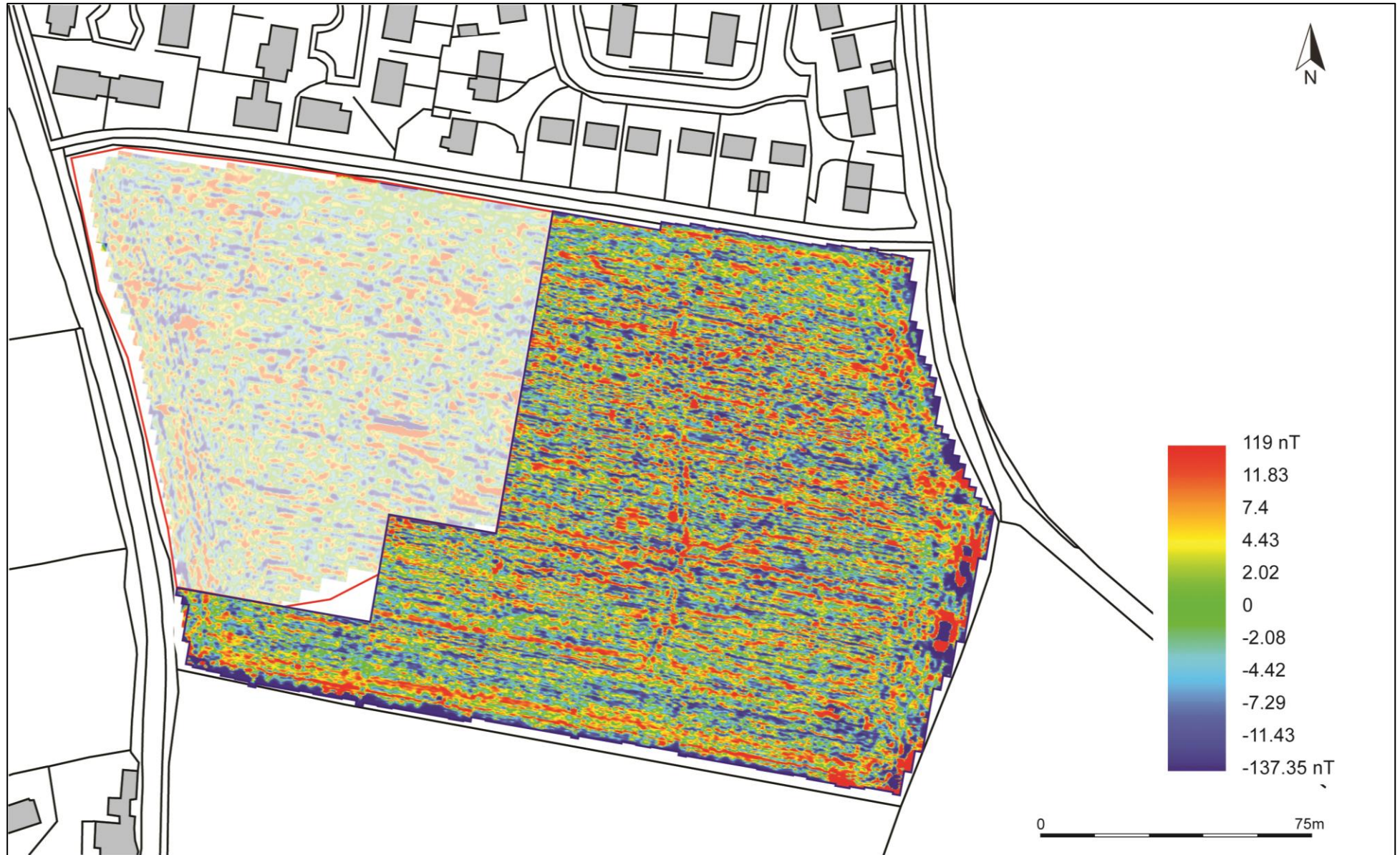
SHADE PLOT OF GRADIOMETER SURVEY DATA; GRADIATED SHADING, BAND WEIGHT EQUALISED (2017 SURVEY OUTLINED IN RED; 2019 SURVEY OUTLINED IN BLUE).

LAND SOUTH OF TREHANNICK CLOSE, ST TEATH, CORNWALL



RED GREYSCALE BLUE SHADE PLOT OF GRADIOMETER SURVEY DATA; GRADIATED SHADING, BAND WEIGHT EQUALISED (2017 SURVEY OUTLINED IN RED; 2019 SURVEY OUTLINED IN BLUE).

LAND SOUTH OF TREHANNICK CLOSE, ST TEATH, CORNWALL



RED-BLUE-GREEN(2) SHADE PLOT OF GRADIOMETER SURVEY DATA; GRADIATED SHADING, BAND WEIGHT EQUALISED; GRADIATED SHADING (2017 SURVEY OUTLINED IN RED; 2019 SURVEY OUTLINED IN BLUE).

APPENDIX 2: SUPPORTING PHOTOGRAPHS: SITE INSPECTION



DETAIL OF EASTERN HEDGEBANK BOUNDARY; VIEWED FROM THE NORTH-WEST (1M SCALE).



DETAIL OF GRANITE GATEPOST IN THE EASTERN SITE BOUNDARY; VIEWED FROM THE WEST (1M SCALE).



DETAIL OF EASTERN HEDGEBANK; VIEWED FROM THE NORTH-WEST (1M SCALE).



DETAIL OF GRANITE GATEPOST IN THE WOUTH-EAST CORNER OF THE SITE; VIEWED FROM THE EAST (1M SCALE).



VIEW ALONG THE EASTERN SITE BOUNDARY; VIEWED FROM THE SOUTH (NO SCALE).



VIEW ACROSS THE SITE, FROM THE SOUTH-EAST CORNER; VIEWED FROM THE SOUTH-EAST (NO SCALE).



VIEW ALONG THE SOUTHERN SITE BOUNDARY; VIEWED FROM THE EAST (NO SCALE).



DETAIL OF SOUTHERN SITE BOUNDARY, SHOWING DETAIL OF STONE CONSTRUCTION OF HEDGEBANK; VIEWED FROM THE NORTH-EAST (1M SCALE).



DETAIL METAL TROUGH IN SOUTHERN SITE BOUNDARY; VIEWED FROM THE NORTH-EAST (1M SCALE).



VIEW ALONG SOUTHERN SITE BOUNDARY; VIEWED FROM THE WEST (NO SCALE).



VIEW ACROSS SITE, FROM THE SOUTH-WEST CORNER; VIEWED FROM THE SOUTH-WEST (NO SCALE).



VIEW ALONG EASTERN SITE BOUNDARY; VIEWED FROM THE SOUTH (NO SCALE).



VIEW ALONG THE WESTERN SITE BOUNDARY; VIEWED FROM THE NORTH (NO SCALE).



VIEW ACROSS THE SITE, FROM THE NORTH-WEST CORNER; VIEWED FROM THE NORTH-WEST (NO SCALE).



VIEW ALONG THE NORTHERN SITE BOUNDARY; VIEWED FROM THE WEST (NO SCALE).



DETAIL OF NORTHERN SITE BOUNDARY, SHOWING DETAIL OF STONE CONSTRUCTION OF HEDGEBANK; VIEWED FROM THE SOUTH (1M SCALE).



VIEW ACROSS THE AREA OF THE 2017 SURVEY AREA; VIEWED FROM THE NORTH-EAST (NO SCALE).



VIEW ACROSS THE SITE; VIEWED FROM THE NORTH (NO SCALE).



VIEW ACROSS THE EASTERN END OF THE SITE; VIEWED FROM THE NORTH-WEST (NO SCALE).



DETAIL OF NORTHERN SITE BOUNDARY, SHOWING DETAIL OF STONE CONSTRUCTION OF HEDGEBANK; VIEWED FROM THE SOUTH (1M SCALE).



VIEW ALONG NORTHERN SITE BOUNDARY; VIEWED FROM THE EAST (NO SCALE).



VIEW ACROSS THE SITE, FROM THE NORTH-EAST CORNER; VIEWED FROM THE NORTH-EAST (NO SCALE).



VIEW ALONG THE WESTERN SITE BOUNDARY; VIEWED FROM THE NORTH (NO SCALE).



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