

# LAND OFF HENDRAWNA MEADOWS

LISKEY HILL

PERRANPORTH

CORNWALL

Results of a Desk-Based Appraisal, Walkover Survey  
& Geophysical Survey



South West Archaeology Ltd. report no. 190325



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# Land off Hendrawna Meadows, Liskey Hill, Perranporth, Cornwall

## Results of a Desk-Based Appraisal, Walkover Survey & Geophysical Survey

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Work undertaken by SWARCH for Cornwall Fine Homes.

### SUMMARY

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*This report presents the results of a desk-based appraisal, walkover survey and geophysical survey undertaken on land off Hendrawna Meadows, Liskey Hill, Perranporth, Cornwall. This work was undertaken by South West Archaeology Ltd. at the request of Cornwall Fine Homes. (the Client), in order to inform the future use and/or development of the site.*

*The site is located on the southern edge of the expanding settlement of Perranporth. It lay within the medieval Manor of Tywarnhaile, close to the contemporary settlement of Bolingey. The morphology of the fields here would imply they are post-medieval enclosures, but they remained largely unchanged during the period 1840-1950. Part of the Perranporth area lies within the St Agnes District World Heritage Site, and the mining here was clearly significant; however, there is no evidence that any mining, or mining-related activity, took place on this site. Work carried out in advance of an adjacent development identified a ring ditch (probably a roundhouse) associated with Iron Age pottery.*

*The geophysical survey carried out on the site identified a series of geophysical anomalies, most of which can be associated with recent developments around the site. The most convincing feature is a linear anomaly with a rounded corner that defines either an enclosure or a track, but even this could still be fairly recent in origin. However, given the results of fieldwork in the wider area, there is moderate potential for encountering Prehistoric remains on the site, and a limited programme of intrusive archaeological investigation may be warranted.*

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March 2019

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## ACKNOWLEDGEMENTS

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CORNWALL FINE HOMES (THE CLIENT)  
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## PROJECT CREDITS

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## 1.0 INTRODUCTION

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<b>LOCATION:</b>	LAND OFF HENDRAWNA MEADOWS
<b>PARISH:</b>	PERRANPORTH
<b>COUNTY:</b>	CORNWALL
<b>NGR:</b>	CENTRED ON SW 76024 53592
<b>PLANNING No.</b>	PA18/02473/PREAPP
<b>SWARCH REF.</b>	PHM19

### 1.1 PROJECT BACKGROUND

This report presents the results of a desk-based appraisal, walkover survey and geophysical survey carried out by South West Archaeology Ltd. (SWARCH) on land off Hendrawna Meadows, Liskey Hill, Perranporth, Cornwall (Figure 1). The work was commissioned by Cornwall Fine Homes in order to identify any archaeological impacts that might arise from the future use or development of the site. The work was carried out in accordance with best practice and ClfA guidelines.

### 1.2 TOPOGRAPHICAL AND GEOLOGICAL BACKGROUND

The site is located to the south-east of the village of Perranporth, just north of Bolingey. The site lies on a north-east facing slope towards the end of a long hill spur at the confluence of several valleys, at an altitude of c.55-60m AOD. It is bounded to the north by a new housing development, to the west by housing along a private road, and to the east and south by enclosed fields.

The soils of this area are the well-drained fine loamy and fine silty soils of the Denbigh 1 Association (SSEW 1983), which overlie mudstones and siltstones of the Grampound formation (BGS 2019).

### 1.3 HISTORICAL BACKGROUND

A settlement is first recorded at Hendrawna in AD 1337 as 'Hendregavena', containing the Cornish place name element 'hendre' meaning home/summer farm. Settlement at Perranporth is first recorded in AD 960 as part of the Manor of Tywarnhayle. This was a large manor, extending as far as St Agnes. It lies in the Hundred and Deanery of Pydar. Lysons records that Tywarnhayle was granted to Edward the Black Prince in 1337 and was later annexed to the Duchy of Cornwall. St Piran is said to have been buried in the parish (Lysons 1814).

### 1.4 ARCHAEOLOGICAL BACKGROUND

The Cornwall and Scilly Historic Landscape Characterisation records the site and the surrounding area as *Post-Medieval Enclosed Land*, with adjacent areas of *20<sup>th</sup> century settlement*. There are no sites on the Cornwall and Scilly HER in the immediate vicinity of the site. However, a series of archaeological investigations have been carried out in the area, including a geophysical survey and archaeological monitoring on land to the north (Manning 2010; Substrata 2014; AC Archaeology 2016) and a walkover and geophysical survey on land to the west (SWARCH 2015). Archaeological monitoring of the development to the north recorded the remains of a roundhouse drip gully and a hollow, posthole and ditches of post-medieval date. Finds of Iron Age and medieval pottery were recovered (AC Archaeology 2016). The gradiometer survey of a site to the west indicated that very few features of probable archaeological origin were present (SWARCH 2015).

## 1.5 METHODOLOGY

This work was undertaken in accordance with recognised best practice. The desk-based assessment follows the guidance as outlined in: *Standard and Guidance for Archaeological Desk-Based Assessment* (CIfA 2014a) and *Understanding Place: historic area assessments in a planning and development context* (English Heritage 2012). The geophysical (gradiometer) survey follows the general guidance as outlined in: *Geophysical Survey in Archaeological Field Evaluation* (English Heritage 2008b) and *Standard and Guidance for Archaeological Geophysical Survey* (CIfA 2014b).

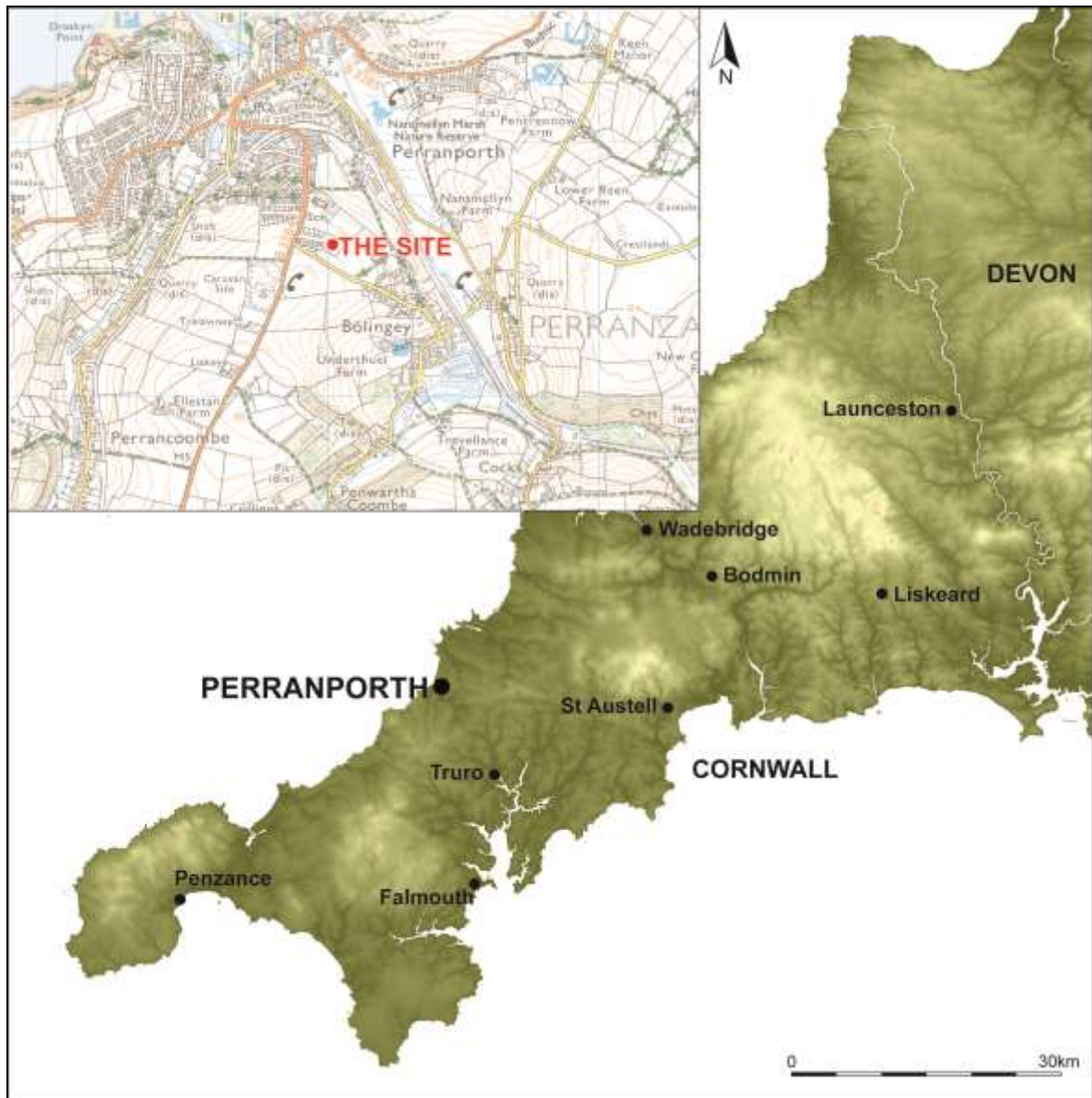


FIGURE 1: SITE LOCATION; THE SITE IS INDICATED.

## 2.0 DESK BASED ASSESSMENT

### 2.1 DOCUMENTARY HISTORY

The site lies on the western edge of the parish of Perranzubaloe, on the south-eastern edge of Perranporth. The parish of Perranzubaloe, or *St Piran in the Sands*, lies within the Hundred and Deanery of Pyder. The principal manor of St. Piran (*Lanpiran* meaning 'church of St Piran', from the saint's name and Cornish *lann* meaning 'church site/enclosure') belonged to a college of the canons at St Pirans, and was partly usurped by the Count of Mortain, who also held the Manor of Tywarnhayle from St Petroc at Bodmin. At one point the Manor of St Pirans was the seat of the family of the same name, from whom it passed via female heirs to the Kendalls and Vincents. Callestick, Halwyn and Tywarnhayle, within the parish, were all Domesday manors. The place name of Tywarnhayle is derived from the Cornish for 'house on the salt river/estuary' or 'higher house'. Tywarnhayle (*Tiwarthel* in Domesday) was located to the east of the current town of Perranporth. It was held by Algar prior to the conquest and it was a relatively large estate taxed for seven hides but with land to 20 ploughs. A moiety of that manor was granted in 1337 to Edward the Black Prince, who gave it to Sir Walter de Woodland. It was later annexed to the Duchy of Cornwall until 1798, when it was purchased by John Thomas, Esq., of Chiverton. Tywarnhayle Barton was occupied as a farm in the 19<sup>th</sup> century.

The parish church was subsumed by the sands and in the late 18<sup>th</sup> to early 19<sup>th</sup> century and a new church was constructed near the centre of the parish, and consecrated by the Bishop of Exeter in 1805. It is possible the new church site occupied the site of an earlier chapel of ease.

Perranporth was referred to in 1577 as *St Perins Creek* and by 1720 as Perranporth; derived from the name of the saint and the Cornish *porth* meaning 'harbour' or 'cove', and occasionally 'gateway'. In the early 19<sup>th</sup> century Perranporth was a popular bathing place for the local gentry, who procured lodgings and cottages on the beach. The inland part of the parish area was populated by miners dwelling in small detached cottages erected on common land (Lysons 1814).



FIGURE 2: EXTRACT FROM THE ORDNANCE SURVEY SURVEYOR'S DRAFT MAP OF 1810 (BL); THE APPROXIMATE LOCATION OF THE SITE IS INDICATED.

## 2.2 CARTOGRAPHIC DEVELOPMENT

### 2.2.1 EARLY CARTOGRAPHIC DEVELOPMENT

The first cartographic source available to this study is the Ordnance Survey surveyor's draft map of 1810 for St Columb Major (Figure 2). The scale of this map makes it difficult to discern any real detail, but a number of small farmsteads and settlements around Perranporth are visible. Perranporth itself is not named on this map. The site lies within a cluster of enclosed fields.

### 2.2.2 PERRANZUBALOE TITHE MAP OF 1840

The 1840 tithe map (Figure 3) is the first detailed cartographic source available to this study. It depicts a very familiar layout of fields, virtually identical to those of the modern landscape with only a few notable exceptions (e.g. railway). The fieldscape is comprised of a series of regular rectangular or sub-rectangular enclosures, and the general lack of more irregular or curving boundaries indicates this was land enclosed in the post-medieval period. The field boundaries typically run perpendicular to the slope and along its contour. The site occupies one field within the landholding of Hendrawna, identified in the tithe apportionment as owned by John Samuel Enys and occupied by John Cowling. It is listed as *Close by Common* under arable cultivation.

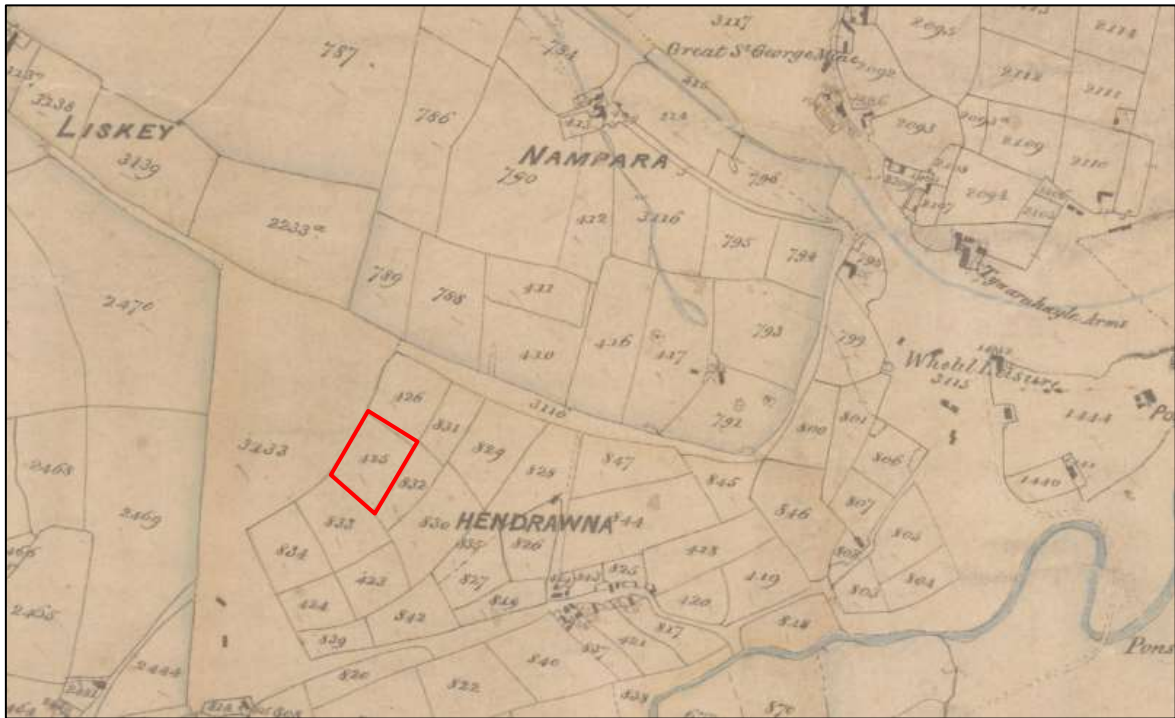


FIGURE 3: EXTRACT FROM THE 1840 PERRANZUBALOE TITHE MAP (CRO); THE LOCATION OF THE SITE IS INDICATED.

TABLE 1: EXTRACT FROM THE 1841 PERRANZUBALOE TITHE APPORTIONMENT.

No.	Landowner	Tenant	Field Name	Landuse
HENDRAWNA				
418	John Samuel Enys	John Cowling	Janes Close	Arable
419			Close	Arable
420			Curved Meadow	Arable
421			Field behind house	Arable
422			Cottage and Courtlage	Homestead
423			New Way Field	Arable
424			Way Field	Arable
425			Close by Common	Arable
426			Western Close	Arable
COMMONS, ROADS AND WASTES EXEMPT FROM TITHES				
3133			Hendrawna Common	



### 2.2.3 THE 1869 CHIVERTON MINING DISTRICT

The 1869 map of the Chiverton mining district (Figure 4) shows a lode (no.4 – tin) running east-north-east by west-south-west just to the north of the site. There are no lodes shown crossing the site itself. Lead, tin, zinc, iron, copper and silver were mined in the area. The site lies to the south of Wheal Leisure, a copper mine in operation 1812-1864, with the largest amounts of copper metal generated in 1830 (759 tonnes) and in decline thereafter (Burt 2015). Most of these mining areas, including this site, were owned by the Earl of Falmouth in the 19<sup>th</sup> century.

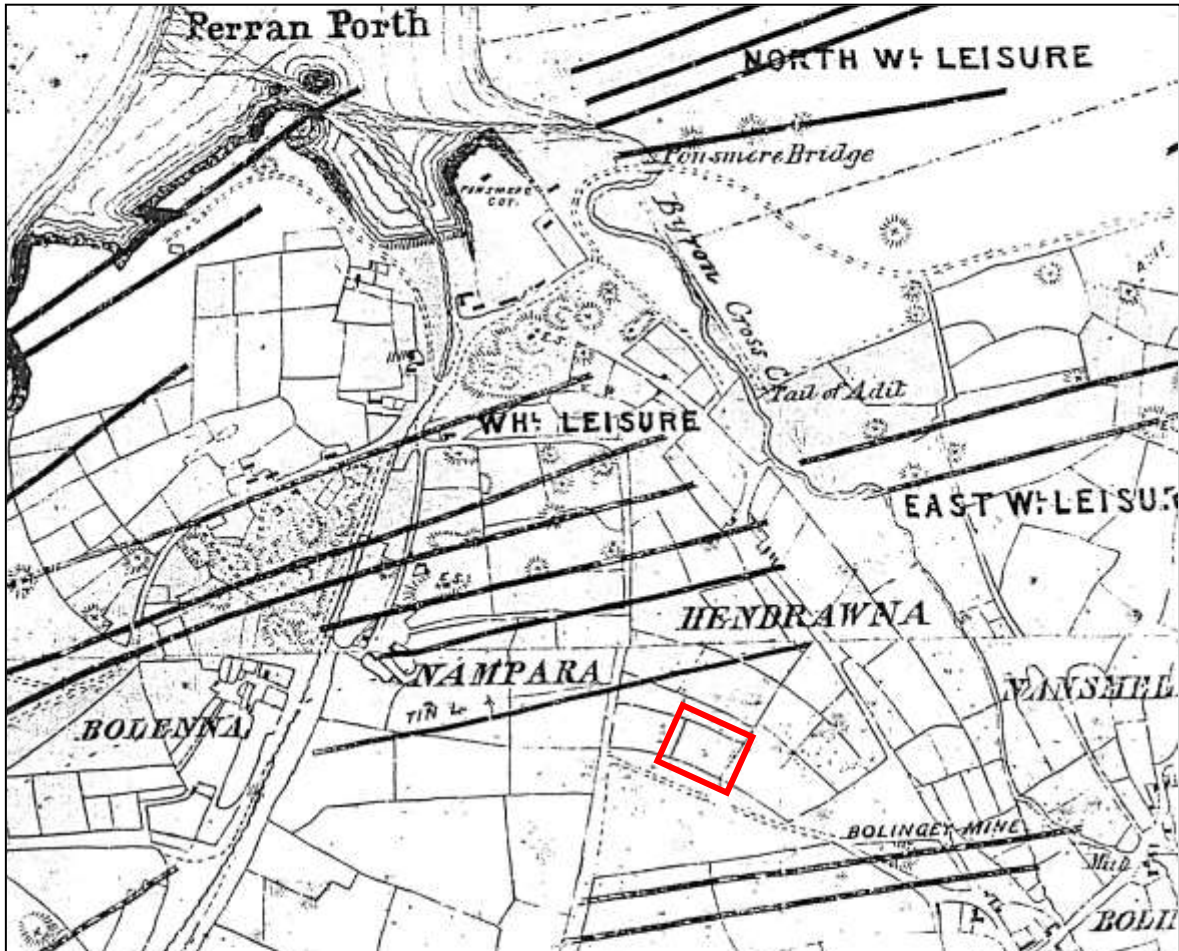


FIGURE 4: MAP OF THE CHIVERTON MINING DISTRICT BY E.H. BRENTON, 1869 (CRO) (THE SITE IS INDICATED).



FIGURE 5: EXTRACT FROM THE ORDNANCE SURVEY 1ST EDITION MAP, 1888 (CRO) (THE SITE IS INDICATED).

#### 2.2.4 THE 1<sup>ST</sup> EDITION OS MAP OF 1888

The fieldscape did not change drastically between 1840 and 1888, although a number of field boundaries were removed including some close to the site. The access track to Bolingey had been formalised as a road by this date.

#### 2.2.5 20<sup>TH</sup> CENTURY OS MAPS

By 1908 two major changes had occurred: the Truro and Newquay branch of the Great Western Railway had been constructed (built c.1903), looping around Liskey Hill, with the addition of Perranporth Station north-east of the site; and the growth of Perranporth, which had swelled to encompass Tywarnhayle. The site itself was unchanged, although a possible small structure is shown in the north-western corner.



FIGURE 6: EXTRACT FROM THE ORDNANCE SURVEY 2ND EDITION MAP, 1908 (CRO) (THE SITE IS INDICATED).

The 1933 Ordnance Survey map shows the beginning of housing development to the east of the proposed site as well as the further growth of residential development at Perranporth. A reservoir is shown just to the south-west of the site.



FIGURE 7: EXTRACT FROM ORDNANCE SURVEY MAPPING, 1933 (CRO) (THE SITE IS INDICATED).

## 2.3 ARCHAEOLOGICAL BACKGROUND

The Cornwall and Scilly Historic Landscape Characterisation records the site and the surrounding area as *Post-Medieval Enclosed Land*, with adjacent areas of *20<sup>th</sup> century settlement*. There are no sites on the Cornwall and Scilly HER in the immediate vicinity of the site. However, a series of archaeological investigations have been carried out in the area, including a geophysical survey and archaeological monitoring on land to the north (Manning 2010; Substrata 2014; AC Archaeology 2016) and a walkover and geophysical survey on land to the east (SWARCH 2015). Archaeological monitoring of the development to the north recorded the remains of a roundhouse drip gully and a hollow, posthole and ditches of post-medieval date. Finds of Iron Age and medieval pottery were recovered (AC Archaeology 2016). The gradiometer survey of a site to the east indicated that very few features of probable archaeological origin were present (SWARCH 2015).

In terms of the wider area, there are Bronze Age barrows to the south at Liskey Hill, and a number of possible rounds to the south and west. There are a large number of medieval settlements in this landscape, particularly to the north and east, the nearest of which being Hendrawna to the east and Nampara to the west. The early medieval settlement of Tywarnhayle was first recorded in AD960. Many of the medieval settlements contain post-medieval Grade II Listed buildings. East of Bolingey the cropmarks of medieval fieldsystems have been observed. Mining was common across this area, with the St Agnes Mining District section of the WHS along the coast to the west.

### 2.3.1 PREHISTORIC AND ROMANO – BRITISH 4000BC – AD410

The evidence for Prehistoric activity and occupation in the immediate area is limited, with no Prehistoric or Romano-British sites within the vicinity of the proposed site. There are a number of Bronze Age barrows further to the south at Liskey Hill. A number of possible rounds are located to the south and west. Monitoring works to the north exposed a penannular gully associated with Iron Age pottery (AC Archaeology 2015).

### 2.3.2 EARLY MEDIEVAL AD410 - AD1066

Evidence for early medieval activity in the area surrounding the site is lacking. The closest site is the settlement at Tywarnhayle to the north, with St Piran's Oratory on the Sands to the north.

### 2.3.3 MEDIEVAL AD1066 - AD1540

Much of the settlement pattern and surviving fieldsystems in the wider area were established during the medieval period, although the proposed site itself lies within post-medieval enclosed land. The settlement at Hendrawna (MCO14856) dates to the medieval period, along with that of Nansmellyn (MCO15851); a fieldsystem at Nansmellyn may also date to this period (MCO32542).

### 2.3.4 POST-MEDIEVAL AD1540 - AD1900

There are a number of features of post-medieval date in the landscape surrounding the proposed site. These include a 19<sup>th</sup> century convalescent home (MCO58802), a Non-conformist chapel at Bolingey (MCO32303), spoil heaps to the south of Bolingey Mine (MCO32541), and the Grade II listed Hendrawna Farmhouse (DCO4425).

### 2.3.5 MODERN AD1900- PRESENT

A few features of modern date are recorded on the Cornwall and Scilly HER, including a signpost at the junction of Liskey Hill and Chapel Hill (MCO56743); Perranporth Railway Station (MCO53885); the GWR branch line from Blackwater Junction to Newquay (MCO55865), and New Leisure Mine (MCO12294).

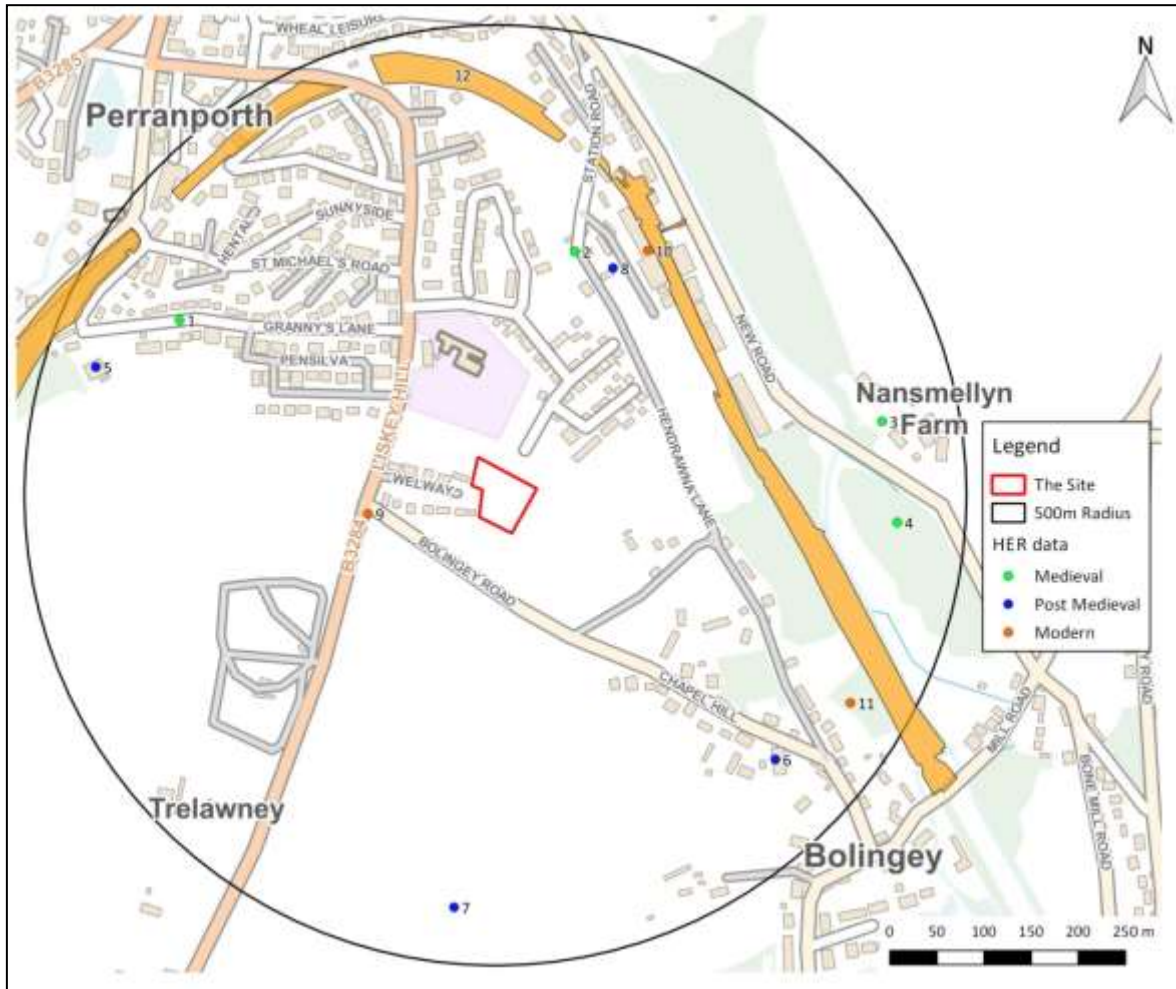


FIGURE 8: NEARBY HERITAGE ASSETS (SOURCE: CORNWALL HER) (THE SITE IS INDICATED IN RED). CONTAINS ORDNANCE SURVEY DATA © CROWN COPYRIGHT AND DATABASE RIGHT 2019.

TABLE 2: TABLE OF NEARBY HERITAGE ASSETS (CORNWALL HER).

No.	Mon ID.	Name	Record Type	Description
1	MCO15783	NAMPARA - Medieval settlement	Documentary	The settlement of Nampara is first recorded in 1293 when it is spelt <i>Nanspara</i> .
2	MCO14856	HENDRAWNA - Medieval settlement	Documentary	The settlement of Hendrawna is first recorded in 1337 when it is spelt <i>Hendregavena</i> .
3	MCO15851	NANSMELLYN - Medieval settlement, Medieval corn mill	Documentary	Nansmellyn is first recorded in 1337.
4	MCO32542	NANSMELLYN - Medieval field system, Post Medieval field system	Extant Structure	Banked and ditched field boundaries are visible on vertical aerial photograph on the valley floor to the south of Nansmellyn. They are considered likely to be the remains of a fieldsystem of medieval or later date.
5	MCO58802	PERRANPORTH - C19 Convalescent Home	Extant Structure	C19 extant convalescent home built on bequest of John Passmore Edwards, now converted into residential apartments and called Nampara Court.
6	MCO32303	BOLINGEY - Post Medieval nonconformist chapel	Extant Structure	Wesleyan Chapel and attached Sunday Cchool, now converted to flats. Mid/late C19.
7	MCO32541	BOLINGEY - Post Medieval spoil heap	Extant Structure	A small tip is visible on vertical aerial photographs (p1, p2) on the hill-slope to the west of Bolingey. This mound is marked on Brentons 1869 map (b1) although no mine name is given. The site lies to the south of Bolingey mine and may form part of it.
8	DCO4425	Hendrawna Farmhouse	Extant Structure	Grade II listed Farmhouse. C18 and C19 additions. Shale rubble with dressed elvan front wall. Asbestos tile roof with gable ends.
9	MCO56743	PERRANPORTH - C20 signpost	Documentary	The site of a signpost on the junction of Bolingey Road and B3284 south of Perranporth.
10	MCO53885	PERRANPORTH STATION - Modern railway station	Demolished Structure	The site of Perranporth station

No.	Mon ID.	Name	Record Type	Description
11	MCO12294	NEW LEISURE - Modern mine	Extant Structure	New Leisure mine was a small mine which worked for zinc from 1907 to 1911 although Collins gives a closure date of 1909. The mine is noted on Hamilton Jenkin's map and is shown on the OS map of 1976.
12	MCO55865	CHACEWATER & NEWQUAY BRANCH - Post Medieval railway	Extant Structure	The GWR branch line from Blackwater Junction to Newquay, opened in 1905. The Perranporth section opened in 1903.

## 2.4 AERIAL PHOTOGRAPHY AND LIDAR

A review of readily-available aerial photography for the site and Environment Agency LiDAR data shows little further detail of the site.

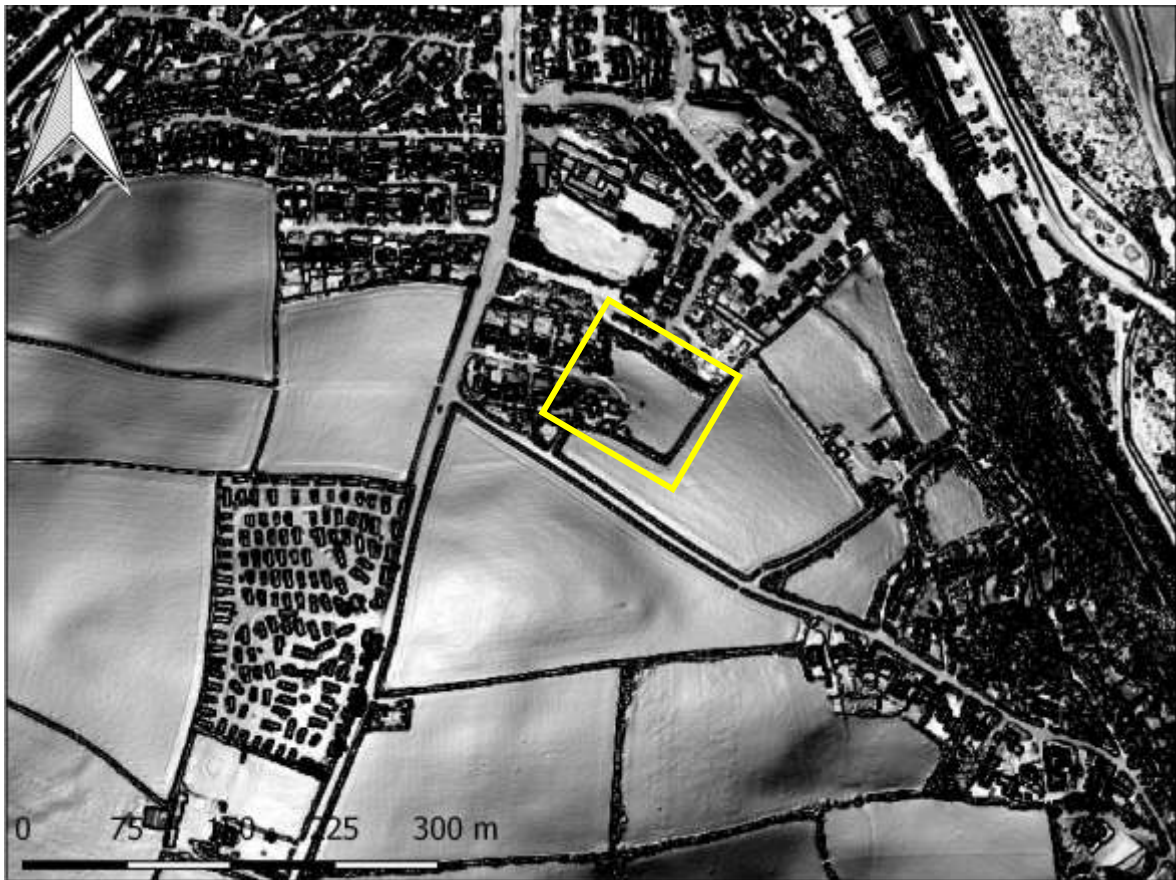


FIGURE 9: IMAGERY DERIVED FROM ENVIRONMENT AGENCY 1M LiDAR DSM DATA (PROCESSED USING QGIS 2.18 TERRAIN ANALYSIS>SLOPE VERTICAL EXAGGERATION 3). CONTAINS PUBLIC SECTOR INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE V3.0. THE SITE IS INDICATED.

## 2.5 WALKOVER SURVEY

### 2.5.1 INTRODUCTION

The site was the subject of a rapid walkover assessment as part of this programme of works. This survey took place on 5<sup>th</sup> February 2019; the weather was cloudy and overcast. The following general observations can be made; supporting photographs can be found in Appendix 1.

### 2.5.2 SITE INSPECTION

The site comprises a single L-shaped field, enclosed to the south-west, south-east and north-east by traditional stone-faced Cornish hedgebanks, grassed over and topped by low shrubs. The hedgebank to the south is taller and more solid than the rest, its stone facing clearly laid in a

herringbone pattern; the hedgebanks to the east and north are lower earthen banks, lacking clear structure. To the north-west the site is partly open to a cul-de-sac of 1950s/60s bungalows; several of these to the south side, adjacent to the site, have been developed into houses. A wooden gate and timber picket fence forms the entrance to the site, with a hedge of bushy conifer trees to the north-west, currently being cut back, with a tall wooden fence beyond. The crudely-tarmaced and partly-stoned private road 'Welway' ends in a curving track that runs into the field. Within the field the track curves up towards a terraced garden area and a garage; there is a short spur from the track leading east into the field and towards the south-east corner a dip or hollow indicates deep vehicle tracks.



FIGURE 10: VIEW ACROSS THE FIELD FROM THE NORTH-EAST CORNER; VIEWED FROM THE NORTH-EAST.

The site is laid to a mature grass sward, with various weeds, such as docks, nettles and brambles as well as daisies and dandelions. There is a marked downward slope to the north-east corner and north of the site. The northern boundary is overgrown with hazel, elder/alder and other hedgerow shrub trees with brambles. There are open views to the east, north-east and north down the valley towards Perranporth Beach. The historic mapping indicates a small building to the north-west corner of the site and while there is no visible trace of this structure, the hedgebank is slightly higher in this location.

### 2.5.3 SETTING

To the north and north-north-west of the site is a large new development known as Perran View and Hendrawna Meadows. Further north-west and just down the hill is the local primary school. To the east on Chapel Hill is a large caravan site, Perranporth Caravan Holidays; to the south-west another caravan site, Liskey Hill Holiday Park. To the west and directly opposite is another large development site, the 'Coast at Perranporth' site by Linden homes. Further north along Liskey Hill, heading back into Perranporth, there are numerous roads and cul-de-sacs of early to mid 20<sup>th</sup> century bungalows and smaller detached or semi-detached houses. Further south, beyond Bolingey and Liskey Hills there are large open agricultural arable fields, ploughed and seeded for the new growing season.

The site forms part of a 20<sup>th</sup> century suburb of the historic settlement, with a mix of domestic housing with smallholdings or amenity land, such as pony paddocks, blending gently into agricultural land beyond. Early 20<sup>th</sup> century mapping shows the caravan site across Liskey Road used to be a football ground. Welway was already an established development and directly to the south-west, just above Bolingey Road, was the former waterworks and Liskey reservoir. The character of the area is changing as the modern developments infill between earlier intakes.



FIGURE 11: SATELLITE IMAGE OF THE SITE FROM 2009, SHOWING TRACKS AND WORKING AREAS WITHIN THE FIELD (SOURCE: GOOGLE EARTH ©2019 INFOTERRA LTD. & BLUESKY)

Most housing in this area takes the form of bungalows, or houses, both smaller detached or semi-detached, with lots of pastel-coloured render or pebbled-dashed render and slate roofing. There is the localised and modern use of slate/shale-effect feature walls, as well as the generous use of glass on the newer developments. The historic buildings of the settlement are of massive rough-cut granite or shale rubble with slate roofing, many of the later buildings being rendered and painted in bright 'beachside' colours. The historic town has a harbour and expansive beach, with canalised leats running in to the Wheal Leisure mine in the valley near Bolingey.

#### 2.5.4 CONSIDERATION OF THE PROPOSALS

The site is being considered as an extension of the large modern development to the north, with an access road sweeping in though the north boundary (a continuation of Hendrawna Meadows). It appears from the current plans that the traditional hedgebanks will be retained, which would shield the site of and any remains of the small building noted on historic mapping to the north-west corner. One block of three dwellings is proposed for the north-east side by the entrance. A short east-west road further to the south, with three blocks of attached houses to the north and four blocks, including detached and link-detached houses, to the south. Parking spaces would be located in front of buildings, with long garden plots to the rear and an area of POS alongside the former entrance from Welway. The proposed development appears fairly low density.

## 3.0 GEOPHYSICAL SURVEY

### 3.1 INTRODUCTION

An area of c.0.35ha 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 14<sup>th</sup> of March 2019 by P. Bonvoisin; the survey data was processed by P. Bonvoisin and J. Bampton.

### 3.2 METHODOLOGY

The gradiometer survey follows the general guidance as outlined in: *Geophysical Survey in Archaeological Field Evaluation* (English Heritage 2008b) and *Standard and Guidance for Archaeological Geophysical Survey* (ClfA 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 30x30m. 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 all traverses out- and inbound by +1 interval.

Details: 0.3395ha surveyed; Max. 108.62nT, Min. -192.20nT; Standard Deviation 19.60nT, mean 0.29nT, median 0.00nT.

### 3.3 RESULTS

Table 3 with the accompanying Figure 12 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 3: INTERPRETATION OF GRADIOMETER SURVEY DATA.

Anomaly Group	Class and Certainty	Form	Archaeological Characterisation	Comments
1	Weak-moderate positive, probable	Curvi-Linear	Enclosure ditch or trackway	Indicative of a ditch defining a possible enclosure in the south-west corner of the site. Coincides with the edge of a working yard and track visible on satellite imagery. Undated but probable modern feature associated with visible working area. Response of <+10nT to +20nT.
2	Weak positive, possible	Linear	Possible trackway or boundary ditch	Ephemeral and intermittent responses indicative of a possible ditch or cut and filled feature associated with a track that is visible on satellite imagery and also therefore Group 1. Probably modern, although may represent an undated boundary, approximately dividing the field in two. Response of <+8nT to +16nT.
3	Weak-moderate positive, possible	Linear with Ovoid	Ditch with treethrow or pit	A weak response, similar to Group 2 with a possible pit or tree-throw. Possibly associated with other signs of modern ground disturbance visible on the site. Responses between +7nT to +12nT and <+35nT.
4	Weak-moderate negative and	Linear Spread	Trackway	Indicative of an earth and formally gravelled track running across the site to an area of bonfires and modern



Anomaly Group	Class and Certainty	Form	Archaeological Characterisation	Comments
	positive, probable			ground disturbance in the middle southern part of the site. Still visible during survey. Extant. Responses of between -16nT to +22nT.
5	Strong bipolar, probable	Linear	Modern Service	Indicative of a modern metallic service pipe. Response of between +/-100nT.

### 3.4 DISCUSSION

The survey identified five groups of anomalies. Geological variation in readings across the site was between +/-5nT, and areas of magnetic interference and ground disturbance were noted close to the boundaries and particularly the south-west part of the site. Some of the identified anomalies may represent undated ditches associated with boundaries or enclosures, but their alignment with identifiable modern tracks indicate that they are probably the remains of relatively recent ground disturbance associated with a working area across the southern half of the site. All the geophysical surveys carried out in this area (Substrata 2014; Bampton 2015) indicate a degree of ground disturbance. Some truncation is likely to have occurred. Although clear archaeological anomalies are absent from this site, the presence of discrete Iron Age features to the north (Manning 2010; AC Archaeology 2016) indicates there remains some archaeological potential, as small discrete archaeological features are rarely identified through gradiometry. Cartographic sources that support the following discussion and interpretation can be found in Section 2; photographs and additional images of the geophysical survey data can be found in Appendices 1 and 2. Five groups of geophysical anomalies were identified:

Anomaly Group 1 consists of a weak-moderate (<+10nT and +20nT) positive curving linear response in the south part of the site. It is aligned south-west by north-east, and at its north-east end turns north-west towards the site entrance and track. It is associated with Group 2 and is at the far end of a working area and a track, both visible on the ground and in satellite imagery from the 21<sup>st</sup> century (see Figure 10). It is ostensibly a ditch associated with these features, defining the track or a working area.

Anomaly Group 2 consists of a series of weak (+8nT to +16nT) positive linear responses aligned north-west by south-east indicative of the, now grassed-over, track as mentioned above (Group 1) visible on the ground and in satellite imagery. Although it is probably part of a track used until recently, that its response may continue to the south-east would imply that it followed a former field boundary that once divided the field in two. Such a boundary is not represented within the cartographic record, and as it is associated with modern activity it may have been a modern fence or other short-lived boundary.

Anomaly Group 3 consists of a weak-moderate (+7nT to +12nT and <+35nT) positive linear response with an ovoid response within it, indicative of a ditch similar to Groups 1 and 2 and of a pit or tree-throw. The linear response in the southern corner of the site, aligned approximately north-west by south-east, may be the result of shallow ground disturbance as its result is weak and similar to other responses of modern activity. The pit/tree-throw type anomaly is likely to be associated with the modern ground disturbance evident in the south of the site, given the lack of other discernibly-archaeological anomalies and the presence of modern disturbance.

Anomaly Group 4 consists of a weak-moderate (-8nT to -16nT and c.+21nT) negative and positive linear response arising from the extant track that runs across the site from its eastern entrance and curves to an area of bonfires and ground disturbance in the middle southern/south-west part of the site. This track was visible during the time of surveying.

Anomaly Group 5 consists of a strong (c.+/-100nT) bipolar linear response indicative of a modern service. It is aligned approximately east-west across the southern corner of the site.

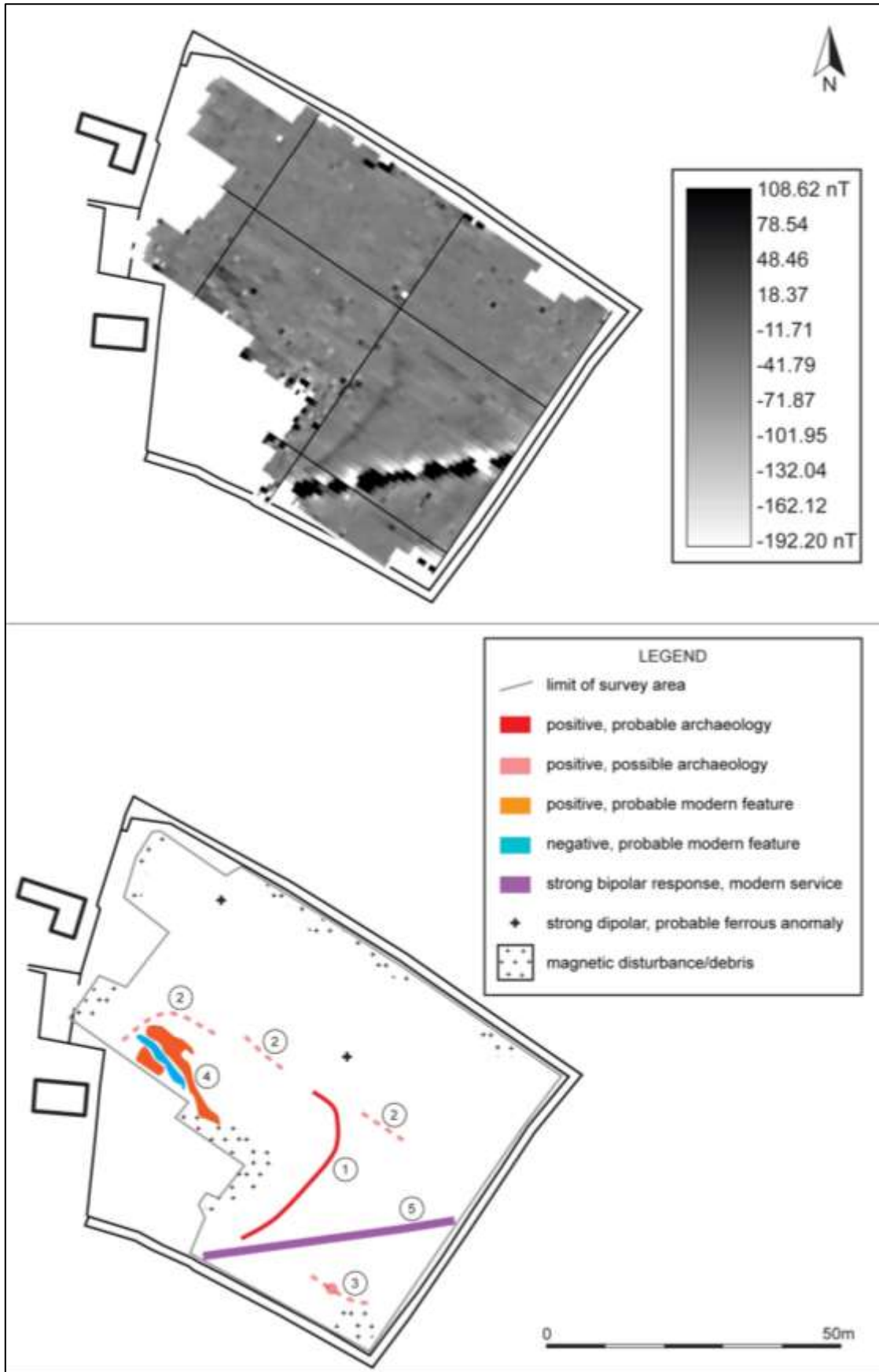


FIGURE 12: (ABOVE) SHADE PLOT OF GRADIOMETER SURVEY DATA, MINIMAL PROCESSING; (BELOW) INTERPRETATION OF GRADIOMETER SURVEY DATA.

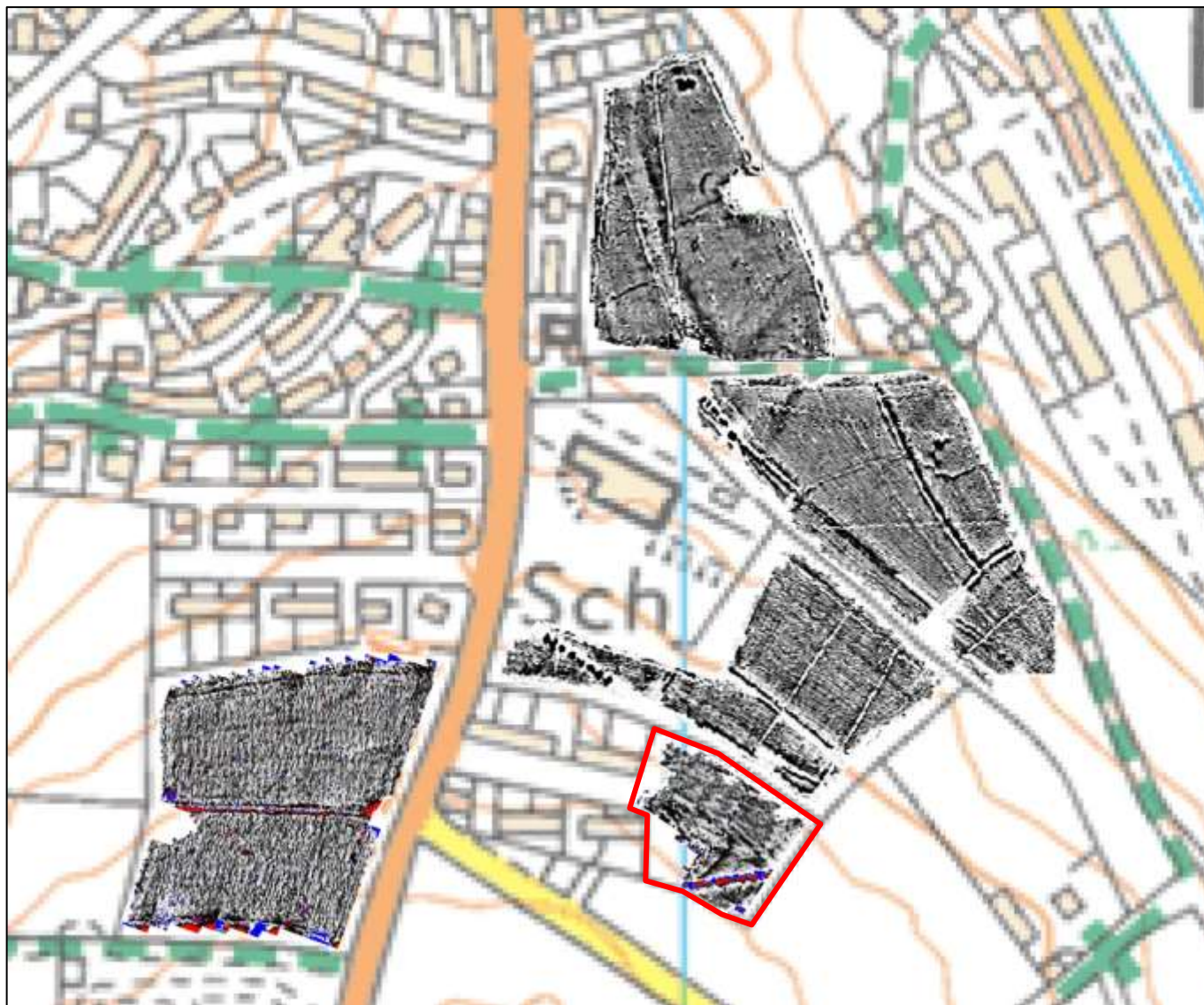


FIGURE 13: GREYSCALE RESULTS OF GRADIOMETER SURVEY DATA IN RELATION TO OTHER LOCAL GEOPHYSICAL SURVEYS; DEAN 2014 TO THE NORTH, AND BAMPTON 2015 TO THE WEST (THE SITE IS INDICATED).

## 4.0 CONCLUSION

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The site is located on the southern edge of the expanding settlement of Perranporth. It lay within the medieval Manor of Tywarnhaile, close to the contemporary settlement of Bolingey. The morphology of the fields here would imply they are post-medieval enclosures, but they remained largely unchanged during the period 1840-1950. Part of the Perranporth area lies within the St Agnes District World Heritage Site, and the mining here was clearly significant; however, there is no evidence that any mining, or mining-related activity, took place on this site. Work carried out in advance of an adjacent development identified a ring ditch (probably a roundhouse) associated with Iron Age pottery.

The geophysical survey carried out on the site identified a series of geophysical anomalies, most of which can be associated with recent developments around the site. The most convincing feature is a linear anomaly with a rounded corner that defines either an enclosure or a track, but even this could still be fairly recent in origin. However, given the results of fieldwork in the wider area, there is *moderate* potential for encountering Prehistoric remains on the site, and a limited programme of intrusive archaeological investigation may be warranted.

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### *Cornwall Record Office:*

- Perranzabuloe Tithe Map 1840
- Perranzabuloe Tithe Apportionment 1841
- 1<sup>st</sup> Edition Ordnance Survey, 1888, six-inch series
- 2<sup>nd</sup> Edition Ordnance Survey, 1908, six-inch series
- Ordnance Survey map, 1933 Revision, six-inch series
- E.H. Brenton's 1869 'Map of the Chiverton Mining District, Perranzabuloe, Cornwall, showing relative positions of the Mines, ...'

APPENDIX 1: WALKOVER SUPPORTING PHOTOGRAPHS



1. VIEW BACK ALONG WELWAY CUL-DE-SAC, SHOWING THE CHARACTER OF THE APPROACH, A MIX OF 20<sup>TH</sup> CENTURY BUNGALOWS AND HOUSES; VIEWED FROM THE EAST-SOUTH-EAST.



2. THE PICKET FENCE AND FIVE-BAR WOODEN GATE THAT CLOSES THE ENTRANCE TO THE FIELD; VIEWED FROM THE NORTH-WEST.



3. THE CURVING TRACK LEADING INTO THE FIELD, TERRACED INTO THE SLOPE; VIEWED FROM THE WEST-NORTH-WEST.



4. VIEW UP AND ACROSS THE FIELD, SHOWING THE MARKED SLOPE TO THE NORTH AND NORTH-EAST; VIEWED FROM THE WEST.



5. STANDING IN THE MIDDLE OF THE FIELD, LOOKING TOWARDS THE WEST BOUNDARY AND NORTH-WEST CORNER; VIEWED FROM THE SOUTH-EAST.



6. THE WEST BOUNDARY WITH CONIFER HEDGE, OVERGROWN AND NOW BEING CUT BACK, WITH TALL FENCE BEYOND; VIEWED FROM THE EAST.





7. VIEW FROM THE FIELD OUT TOWARDS PERRANPORTH BEACH; VIEWED FROM THE SOUTH-EAST.



8. THE NORTH-WEST CORNER OF THE FIELD, FORMERLY OVERGROWN WITH BRAMBLES, WHERE THE HISTORIC BUILDING ONCE STOOD; VIEWED FROM THE SOUTH-EAST.



9. VIEW TO THE SOUTH, LOOKING TOWARDS WHITE HORSES HOUSE, WITH GARAGE TO EAST AND TERRACE GARDENS AREAS; VIEWED FROM THE NORTH.



10. THE TALL NORTHERN HEDGE BOUNDARY, WITH SCOTS PINE TREE, SMALLER CONIFERS, BRAMBLES AND BLACKTHORN BUSHES; VIEWED FROM THE WEST-SOUTH-WEST.



11. LEVELLED AND MOWN AREA, MARKED BY BOLLARDS, IN THE MIDDLE OF THE FIELD ADJACENT TO THE NORTHERN BOUNDARY; VIEWED FROM THE WEST-NORTH-WEST.



12. VIEW UP THE FIELD, FROM THE NORTH-EAST CORNER.



13. THE NORTHERN BOUNDARY, SHOWING THE MODERN HOUSING ESTATE HENDRAWNA MEADOWS TO THE NORTH AND NORTH-WEST; VIEWED FROM THE EAST-SOUTH-EAST.



14. VIEW UP THE HEDGEBANK BOUNDARY TO THE EAST; VIEWED FROM THE NORTH.



15. VIEW DOWN THE HEDGEBANK BOUNDARY TO THE EAST; VIEWED FROM THE SOUTH-SOUTH-WEST.



16. THE SOUTHERN HEDGEBANK; VIEWED FROM THE EAST.



17. VIEW DOWN THE FIELD FROM THE SOUTH-EAST CORNER, SHOWING THE OPEN VIEWS OUT AND ACROSS TO PERRANPORTH.



18. VIEW TO THE STONE STRUCTURE OF THE TALLER SOUTHERN HEDGEBANK; VIEWED FROM THE NORTH.



19. VIEW ALONG THE SOUTHERN BOUNDARY, LOOKING TO THE EAST BOUNDARY; VIEWED FROM THE WEST.



20. VIEW DOWN THE FIELD; FROM THE SOUTH-WEST CORNER.



21. VIEW TO WHITE HORSES AND ITS DETACHED GARAGE; VIEWED FROM THE EAST-SOUTH-EAST.



22. OIL TANK AND REAR HEDGEBANK ENCLOSURE TO THE REAR OF WHITE HORSES HOUSE; VIEWED FROM THE EAST.





23. THE DUMPS OF RUBBISH AND BURNT BUILDING RUBBLE TO THE SOUTH-WEST PART OF THE FIELD; VIEWED FROM THE SOUTH-SOUTH-EAST.



24. VIEW DOWN TO HENDRAWNA MEADOWS; VIEWED FROM THE SOUTH.

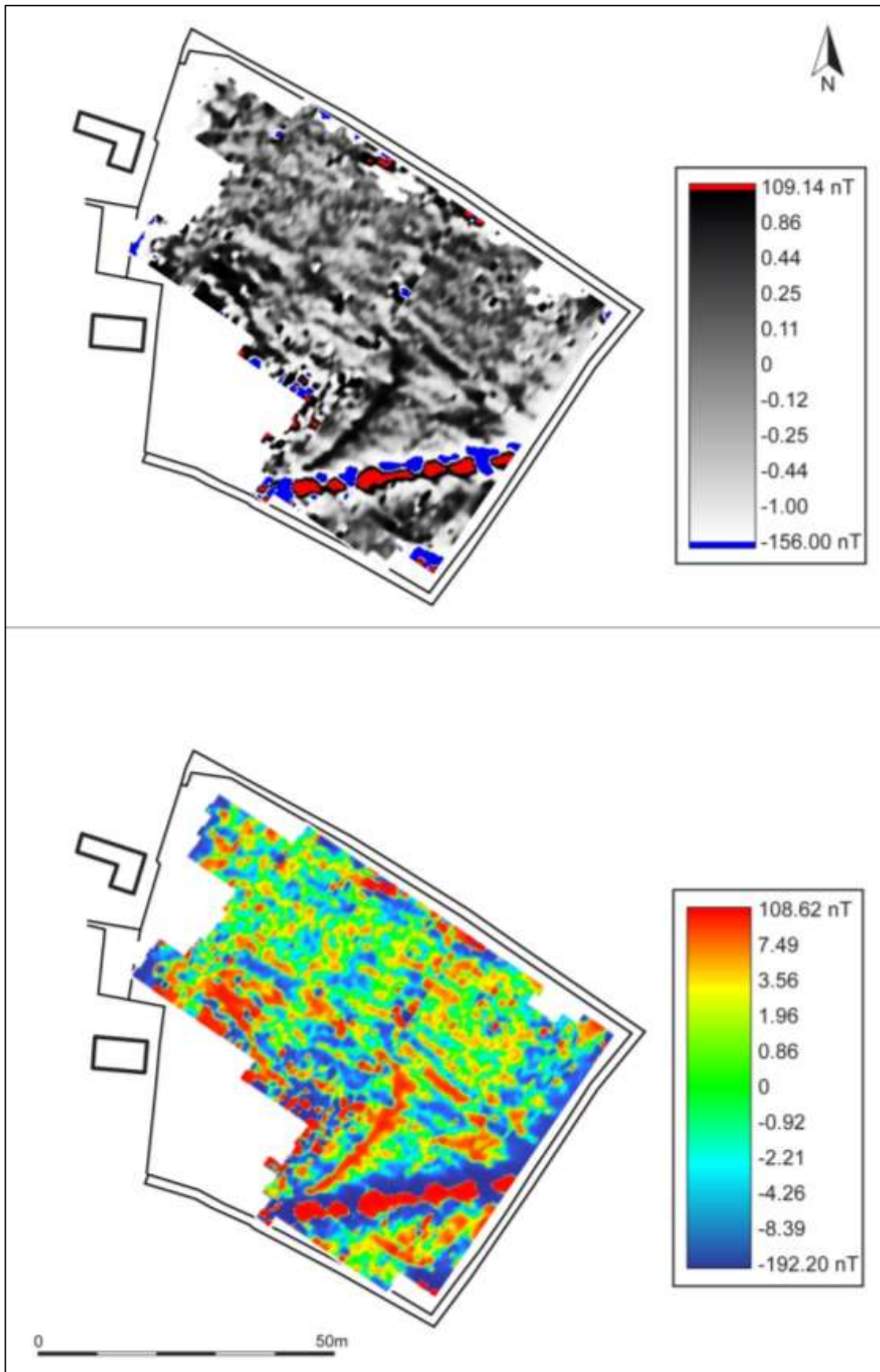


25. VIEW ACROSS THE FIELD FROM THE SOUTH-WEST CORNER, SHOWING A CURVING HOLLOW, EVIDENCE OF ANOTHER TRACK; VIEWED FROM THE WEST-SOUTH-WEST.

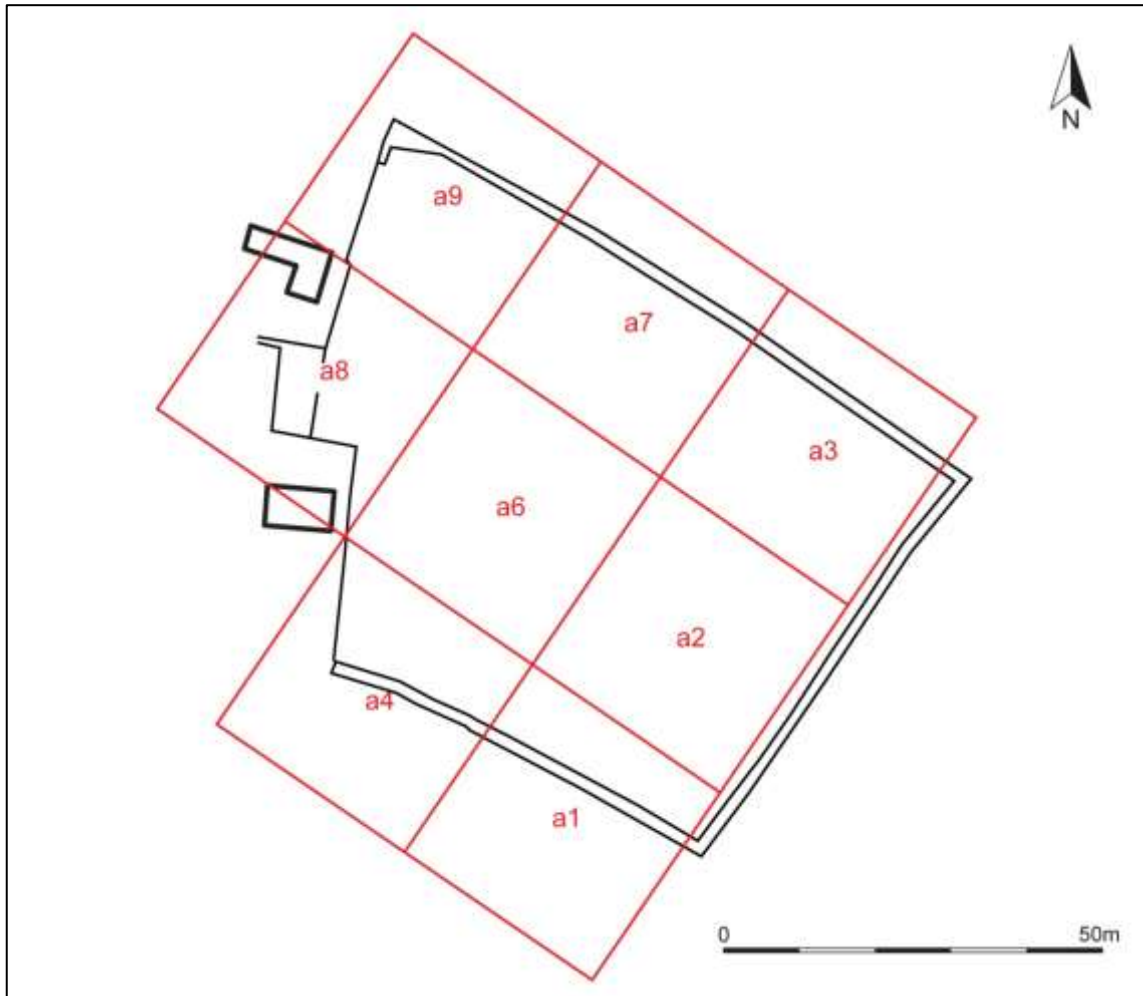


26. THE TRACK AT THE TOP, WHERE IT RUNS UP TO THE GARAGE AND WHERE ANOTHER RUNS OFF INTO THE FIELD; VIEWED FROM THE WEST.

APPENDIX 2: ADDITIONAL GRAPHICAL IMAGES OF THE GRADIOMETER SURVEY



1. (ABOVE) RED-GREY-BLUE SHADE PLOT OF GRADIOMETER SURVEY DATA, BAND WEIGHT EQUALISED, GRADIATED SHADING;  
(BELOW) RED-GREEN-BLUE2 SHADE PLOT OF GRADIOMETER SURVEY DATA, GRADIATED BAND WEIGHT EQUALISED, SHADING.



2. GEOPHYSICAL SURVEY GRID LOCATION AND NUMBERING.



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