

LAND AT KINGLSEY VILLAGE PENHALE, ST ENODER CORNWALL

Results of a Walkover Survey and an
Archaeological Gradiometer Survey



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For

Nia Russell of Mango Planning (the Agent)

On behalf of

Consolidated Property Group (the Client)

By



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Summary

This report presents the results of a walkover survey and geophysical (gradiometer) survey carried out by South West Archaeology Ltd. (SWARCH) on land at Kingsley Village, Penhale, St Enoder, Cornwall, prior to the redevelopment of the site.

The walkover survey did not identify any significant earthworks or severe disturbance within the field subject to geophysical survey. The area to the east has already been developed and would have been differentially subject to truncation through terracing, topsoil stripping and modern services trenching; however, it is possible some archaeological deposits may survive where there is made ground. Most of this area was subject to archaeological investigation during the dualling of the A30 and in relation to the motel. These works investigated part of a large multivallate enclosure (Penhale Round) dated to the Late Iron Age and Romano-British periods. There is documentary evidence that a medieval and later fair was held on the site until c.1800.

The geophysical survey indicates that there are features of archaeological origin present within the area of the proposed development, associated with two phases of Prehistoric fieldsystem. This includes a co-axial field boundary that may pre-date the round, and a Late Iron Age fieldsystem associated with the round. In addition, a post-medieval field boundary, historic boundaries associated with Penhale Cottage, and other undated linear anomalies and possible pits or tree-throws were also identified.

Development is likely to disturb surviving archaeological deposits or remains in the surveyed area; archaeological deposits or remains within the footprint of the existing retail park will already have been subject to truncation and disturbance.

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1.0 Introduction

Location: Land at Kingsley Village, Penhale
Parish: St Enoder
County: Cornwall
NGR: SW 90674 57291
Type of survey: Gradiometer
Date of survey: 23.12.2015
Area surveyed: 0.65ha

1.1 Project Background

This report presents the results of a geophysical survey carried out by South West Archaeology Ltd. (SWARCH) on land at Kingsley Village, Penhale (near Fraddon), St Enoder, Cornwall (Figure 1). This work was commissioned by Nia Russell of Mango Planning (the Agent) on behalf of Consolidated Property Group (the Client) in order to identify any archaeological sites or features that might be affected by redevelopment of the site, and inform mitigation strategies.

1.2 Topographical and Geological Background

The site at Penhale is located just off of the A30, 1.4km east of St Enoder and 800m south-west of Fraddon, on a west-facing slope at an altitude of c.108m AOD. The area subject to geophysical survey forms a roughly-triangular piece of land between the B3275 (formerly the A30) and an unnamed road (formerly the B3275). The soils of this area are the well-drained fine loamy soils of the Denbigh 2 Association with localised pockets of fine loamy permeable soils variably affected by groundwater of the Yeollandpark Association (SSEW 1983). These overlie the mudstones and siltstones of the Trendrean Mudstone Formation (BGS 2015).

1.3 Historical Background

St Enoder is located in the Hundreds of Pyder and Powder, and in the deanery of Pyder. St Enoder (*Heglosenuder* in the Domesday Survey) was held by Godric before the Norman Conquest and in 1086 was held by Robert, the Count Mortain from the monastery of St Petroc at Bodmin (Martin & Williams 2002). In the late 13th and early 14th century St Enoder belonged to John le Seneschall and in the 15th century passed to the de Veres of Oxford. An ancient fair was formerly held at Penhale on the 25th of September, although it was moved to Summercourt prior to 1814. The de Veres also held two of the three annual fairs held in the parish; in the 18th century these were purchased from the Rev. Dr. Luttrell Wynne by Sir Christopher Hawkins (Lysons 1814). Penhale (first recorded 1327) is now a large village located at the junction of the A30 and the former Truro turnpike (B3275). Approximately 360m south-east of the site lies the manor of Trehwela (now Trehwela Farm). Once a seat of a younger branch of the Hoblyn family, it was the property of Mr John Basset of Chytane in 1814 (Lysons 1814). The settlement at Penhale only began to develop in the mid 20th century (with Westbourne Terrace), and Fernside Farm was established after 1880; most of the modern settlement was built after 1980. The dualling of this stretch of the A30 occurred in the early 1990s; the petrol station, services and hotel were built in the mid 1990s, and the retail park was built after 2001.

The 1842 tithe apportionment lists the field subject to geophysical survey as *Homer Fair Close* and the field to the south as *Fair Close*. While not wholly accurate, the 1811 Ordnance Survey surveyor's draft map shows these two fields as a single unit, and it is possible they were the site of the ancient fair discussed above. The tithe apportionment also shows that these fields were in the ownership of Rev. William Stackhouse, a maternal relation (cousin or second cousin once

removed) of Rev. Dr Luttrell Wynne, from whom the right to hold the fair was bought by Sir Christopher Hawkins (Lysons 1814). Hawkins was the uncle of Christopher Henry Thomas Hawkins, to whom the estate eventually passed via his brother John (Burke 2015). It is probable therefore that the fair was moved to Summercourt in the late 18th or early 19th century following the sale. The heirs of these two men are the main landowners in c.1840. The daughter of Sir Christopher Hawkins married Sir Richard Vyvyan (Burke 2015), who is also listed on the tithe apportionment as holding land at Penhale. Judging from the cartographic sources, the Truro turnpike (B3275) was built between 1811 and 1840.

St Enoder (*Heglosenuder* in 1086) takes its name from the dedication of the church (Saint Enoder), with the Cornish *eglos* meaning 'church'. Penhale is derived from the Cornish elements *pen* and *hal* ('head of the marsh'), and this toponym probably relates to the marshy area that still extends across the gentle slope/small plateau on the northern side of the ridge occupied by Penhale Farm.

1.4 Archaeological Background

The historic fieldscape in this area is characterised by the Cornwall and Scilly Historic Landscape Characterisation (HLC) as *Farmland: Medieval (the agricultural heartland, with farming settlement documented before the 17th century AD and whose field patterns are morphologically distinct from the generally straight-sided fields of later enclosure)* (HLC). This is considered part of the wider category of *Anciently Enclosed Land* (AEL).

Extensive area excavations have been undertaken adjacent to the site. These include twelve event records associated with the development of the A30 (the A30 Project from Fraddon to Indian Queens) and Kingsley Village, comprising assessment, geophysical survey, watching briefs and excavation (Cornwall Council Event Record: ECO598, ECO725, ECO726, ECO727, ECO728, ECO1210, ECO1211, ECO1212, ECO1816, ECO1817, ECO1912 and ECO3641). The geophysical surveys carried out by English Heritage were only published in 2011 (Payne 2001), and the main A30 excavation was published in 2015 (Nowakowski & Johns 2015). The geophysical survey and excavations at Penhale identified two Early Neolithic buildings and a cache of Neolithic Carinated bowls. Related flintwork was also found nearby at Halloon Farm and Penhale Moor. Early Bronze Age material was excavated at Penhale round, and Middle to Late Bronze Age buildings producing Trevisker and Late Bronze Age plain wares were excavated at Penhale and Penhale Moor. The Late Iron Age is represented by the round at Penhale and its associated fieldsystem, Romano-British and locally-imported pottery types, and a fogou (subterranean structure) excavated in 2006. The variety of imported material implies elevated status (Nowakowski & Johns 2015). The wider landscape provides evidence of early medieval and later enclosure and settlement.

The Cornwall HER records fifteen heritage assets and a Listed building within 500m of the site. Post-medieval assets include: an 18th century milestone (MCO48954) to the north-west at Penhale Farm; and a mine (MCO11831) to the south at Benalleck and Trewheela that was operational c.1860. Medieval assets include: ridge and furrow (MCO49307) identified on aerial photography to the south-west; documentary evidence from 1286 for a settlement at 'Trewhyla' (MCO18036) to the south-east, which can be associated with MCO11786 and DCO13890, the Grade II Listed 17th century Farmhouse at Trewheela; documentary evidence for a settlement at 'Penhal' from 1327 (MCO16122); field-name evidence for a possible medieval pound to the east (*Mill Lane Pound* MCO25657); and field-name evidence for a possible medieval cross to the west, at *Cross Morvish* (MCO2633). Prehistoric assets include: a Bronze Age copper alloy axe head to the south-west (MCO56466); a Middle Bronze Age round house demolished during the construction of the A30 to the west (MCO47679); and the cropmarks of two Iron Age/Romano-British 'rounds', one to the south (MCO55990) and another to the east (MCO49303). Other Bronze Age features occur in the wider landscape, including a barrow at Little Gaverigan to the north-east.

Land at Kingsley Village, Penhale, St Enoder, Cornwall

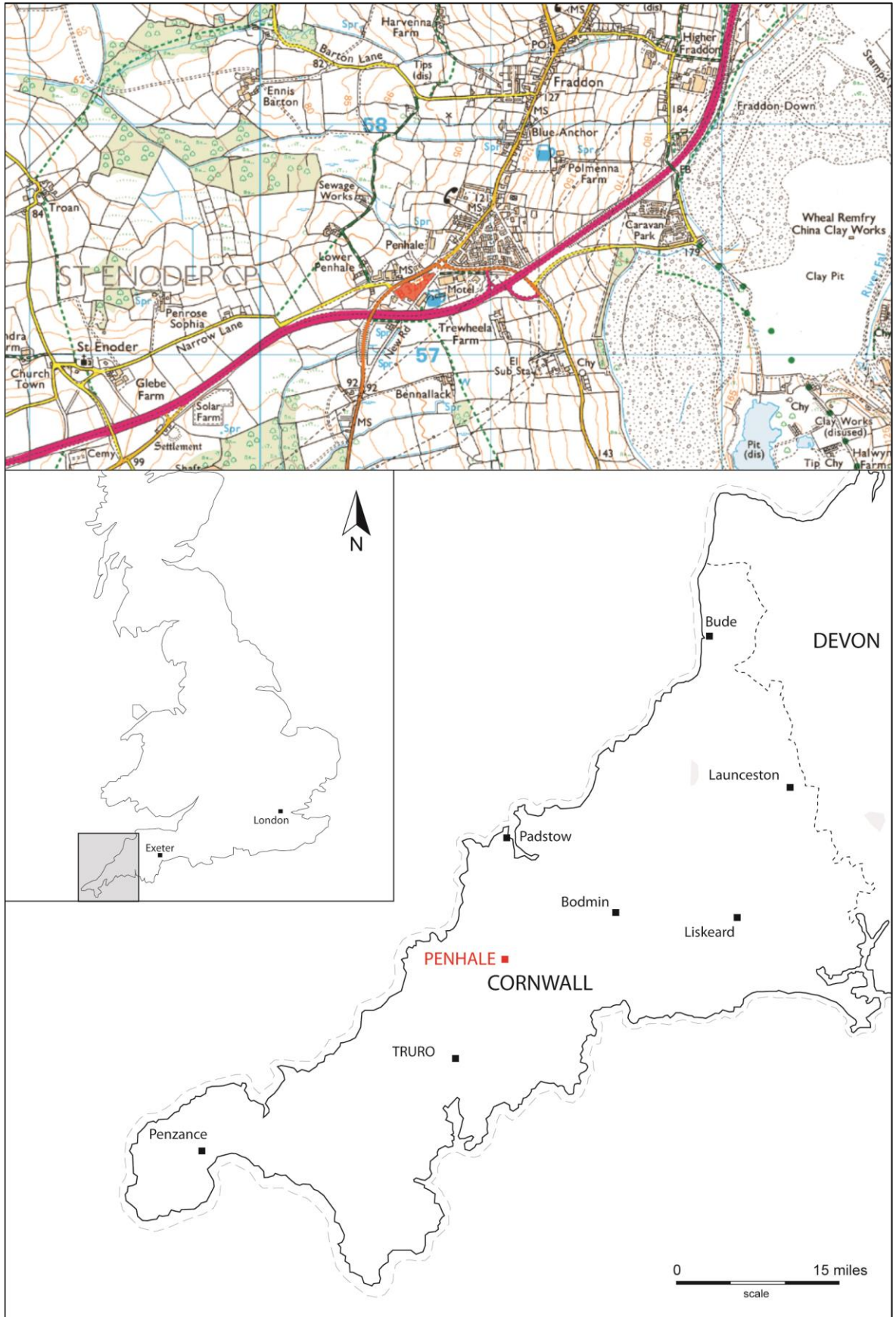


Figure 1: Site location (the site is indicated).

1.5 Methodology

This document follows the methodology outlined in the Written Scheme of Investigation (Appendix 1).

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

'Archaeological geophysical survey uses non-intrusive and non-destructive techniques to determine the presence or absence of anomalies likely to be caused by archaeological features, structures or deposits, as far as reasonably possible, within a specified area or site on land, in the inter-tidal zone or underwater. Geophysical survey determines the presence of anomalies of archaeological potential through measurement of one or more physical properties of the subsurface' (Standard and Guidance for Archaeological Geophysical Survey 2014).

The results of the survey will, as far as is possible, inform on the presence or absence, character, extent and in some cases, apparent relative phasing of buried archaeology leading to the formulation of a strategy to mitigate threat to the archaeological resource.

2.0 Walkover Survey

A walkover survey was conducted on the 23rd of December 2015. The site comprises the single pasture field subject to geophysical survey (A), three areas to the east of the field currently used as car parks (B, C and D) and a modern building (E) (see Figure 2). A complete set of supporting photographs can be found in Appendix 5.

Field (A) is roughly triangular in shape and lies between an unnamed road (former B3275) to the south-east, and the current B3275 (former A30) along its north-west border. Six buildings (Penhale Cottages) are located within an outlier along the north-western edge of the site. April Cottage is located beyond the south-eastern corner of the site. There is a roundabout at the north-eastern tip of the field, the Kingsley Village commercial estate is located immediately to the east, and Penhale Farm lies immediately to the north-west. Field (A) occupies a shallow declivity in the ridge that runs north-east by south-west, and slopes from north-east to south-west.

The south-eastern boundary of Field (A) is a stone-faced Cornish hedgebank with a post-and-wire fence along its inside edge. It is overgrown with coppiced hedge shrubs and bushes. The northern tip of the site had been used for dumping rubble, and an earth bank has been constructed to separate this area from the rest of the field. An electric fence had been used to keep livestock away from this bank. The northern half of the north-west boundary, around Penhale Cottages, had modern fencing including HERAS panels and post-and-wire fencing accompanied by a plantation of trees and bushes. There is a gateway into the site at its northern end. The southern half of the north-west boundary comprises a slightly curving Cornish hedgebank, with a post-and-wire fence with a gateway to the south-west. An overgrown post-and-wire fence forms most of the south-west boundary, with a concrete-block wall defining the boundary with April Cottage.

At the time of the survey the field was under pasture and waterlogged; the south-western end of the site, at the boundary with April Cottage, was particularly wet. There were no discernible earthworks in the field. There is a water trough close to the south-west corner of the site.

Area (B) is a car park associated with Kingsley Village. While some ground reduction will have taken place when the topsoil was removed, deeper archaeological features may survive. The manholes for various buried services were noted running across the area between the northern tip of Area (B) and the area between Building (E) and Area (D). There buried services will have damaged any archaeological remains in those areas. Similarly, roadside drains will also have damaged archaeological remains flanking the roads.

Area (C) is also a car park. The ground is fairly level and there is a manhole cover toward its centre; as this area lies on sloping ground this implies a degree of terracing on its northern side, with made ground to the west. However, it is equally possible levels to the west have themselves been reduced and partly terraced away.

Area (D) is another car park, and seals the greater part of the unexcavated round. The ground is fairly level and appears to have been made up. It appears probable that the upslope side (to the east and beneath the extant buildings) was terraced to the level of its car park to the west. Manhole covers were observed to the north of the area. Buried services may therefore have damaged buried archaeological remains. This area falls outside the red line boundary.

Building (E) stands within an area that appears to have been terraced into the slope. It is possible that archaeological deposits may survive within the western part of this area, where truncation would have been less severe, but these would still have been subject to damage from foundation and service trenching.

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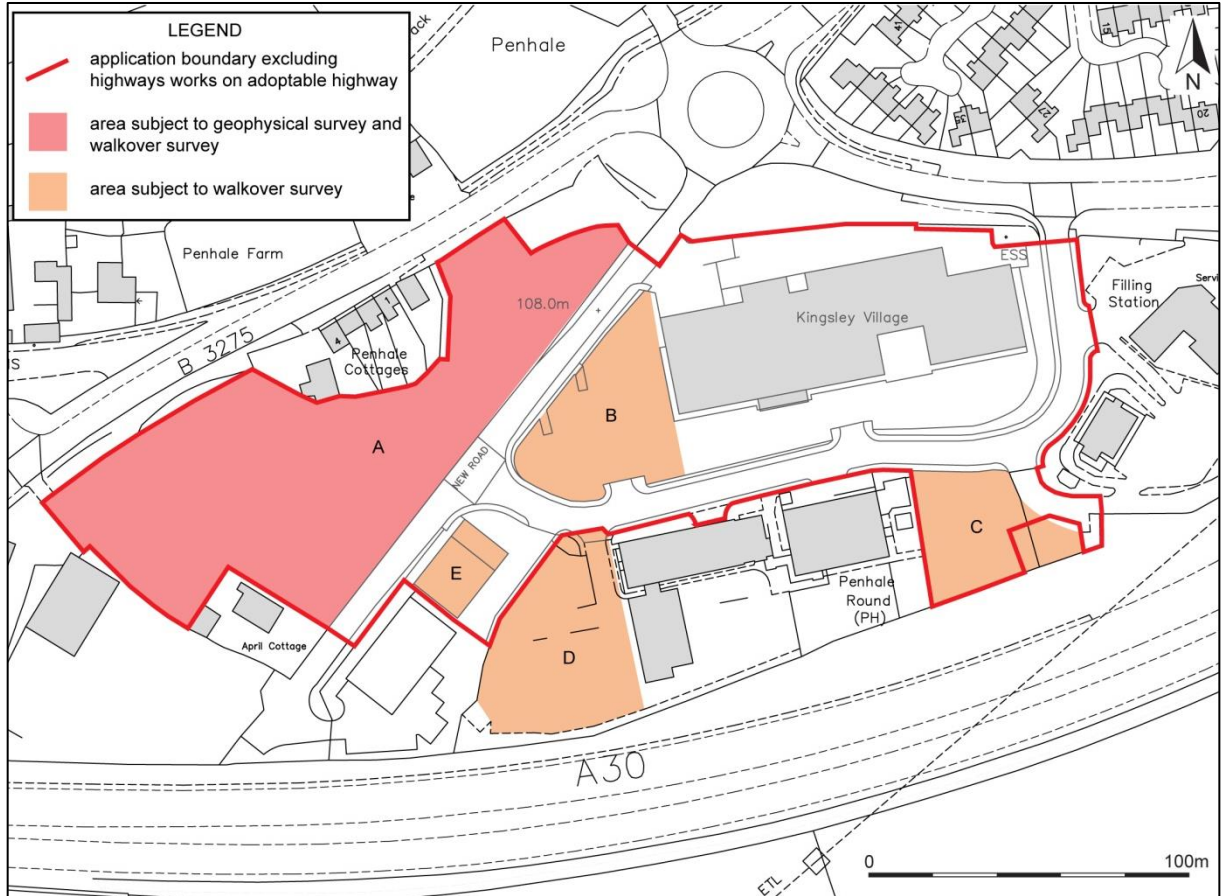


Figure 2: Site survey areas.

3.0 Gradiometer Survey

3.1 Introduction

The purpose of this survey was to identify and record magnetic anomalies. While anomalies may relate to archaeological deposits and structures, the dimensions of recorded anomalies may not correspond directly with any associated archaeological features. The following discussion attempts to clarify and characterise the anomalies identified. The survey took place on the 23rd of December 2015 and was undertaken by SWARCH personnel in overcast and showery conditions. The site comprises a single field under short waterlogged pasture. The land was relatively flat, although the turf had been poached by livestock.

The survey identified ten groups of anomalies: Groups 1, 3, 4 and 5 are linear anomalies of probable archaeological origin, such as ditches and bank material associated with boundaries or drainage; Groups 2, 6, 8, 9 and 10 are linear anomalies that either are, or are associated with, historic boundaries, including a possible trackway; Group 7 are discrete anomalies that may possibly represent pits or tree-throws. Occasional instances of magnetic debris/disturbance associated with modern boundaries, ferrous debris and ephemeral striations associated with geological variation/features, or shallow ground disturbance (potentially including ploughing activity) were also encountered; these are depicted on Figure 4.

3.2 Methodology

The gradiometer survey follows the guidance outlined in *Geophysical Survey in Archaeological Field Evaluation* (English Heritage 2008) and *Standard and Guidance for Archaeological Geophysical Survey* (ClfA 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, offset in- and outbound by -1 intervals (grids 1, 2, 3, 4, 5, 7, 8, 10, 11 and 12), -2 intervals (grid 6); Interpolate X and Y, double resolution.

Details: 0.65ha surveyed; Max. 104.64nT, Min. -92.40nT; Standard Deviation 7.50nT, mean - 0.10nT, median 0.00nT.

3.3 Results

Figures 3, 4 and 5, with the accompanying Table 1, show the analyses and interpretation of the geophysical survey data. Additional graphic images of the survey data can be seen in Appendix 2. Supporting evidence for the interpretations of geophysical data can be found in Appendix 3.

Anomaly group	Class and Certainty	Form	Archaeological characterisation	Comments
1	Positive, probable	Linear	Pre-round (?) field boundary	Appears to be a right-angled bend turning north the main pre-round co-axial field boundary identified to the east (Ditch [6011/6017/6018] (Nowakowski & Johns 2015)).
2	Weak positive, probable	Curving linear	Post-medieval (?) trackway	Flanking ditches to a probable trackway that runs parallel to the historic field boundary represented by Group 6.
3	Weak positive, probable	Curving linear	Late Iron Age (?) ditched field boundary	Possibly examples of the Late Iron Age field boundary (contemporary with Penhale round) identified on the south side of the road (Ditch [2042] (Nowakowski & Johns 2015)).
4	Weak positive, probable	Linear	Ditch	Very weak response that may equate to Group 3. Otherwise, an undated ditch associated with drainage or field divisions.
5	Weak negative with flanking positive, probable	Linear	Post-medieval (?) field boundary	A banked linear anomaly with flanking ditches identified on the south side of the road as a post-medieval hedgebank (Cole & Thorpe 1996; Nowakowski & Johns 2015).
6	Weak negative, probable	Curving linear	Historic boundary	Probable bank material associated with the original western boundary of the site as depicted on the 1840 tithe map and OS 1 st and 2 nd ed. maps, 1888 and 1908 respectively. Group 2 seems to define a trackway that ran along the southern side of this boundary, although not depicted on the historic maps.
7	Positive, possible	Discrete point	Pit or tree-throw	Definable areas of a response indicative of a possible cut feature (<10nT). Possibly natural, non-existent or man-made feature.
8	Negative with flanking positive, probable	Linear	Historic field boundary	Probable boundary associated with the original north-eastern boundary of the site as depicted on the 1840 tithe map and removed boundary on the OS 1 st and 2 nd ed. maps, 1888 and 1908 respectively.
9	Strong negative and positive, probable	Rectilinear	Historic tenement boundary?	Strong response that appears to define part of a rectilinear enclosure adjacent to Penhale Cottages. This may be a former tenement boundary relating to an earlier iteration of the cottages, or define an earlier enclosure.
10	Strong negative and positive, probable	Linear/ Rectilinear	Boundary	These responses are comparable to Group 9, although are on the periphery of an area of magnetic disturbance, which has clearly been disturbed, most likely in recent history associated with the post-medieval and modern developments to the area around Penhale Cottages.

Table 1: Interpretation of gradiometer survey data.

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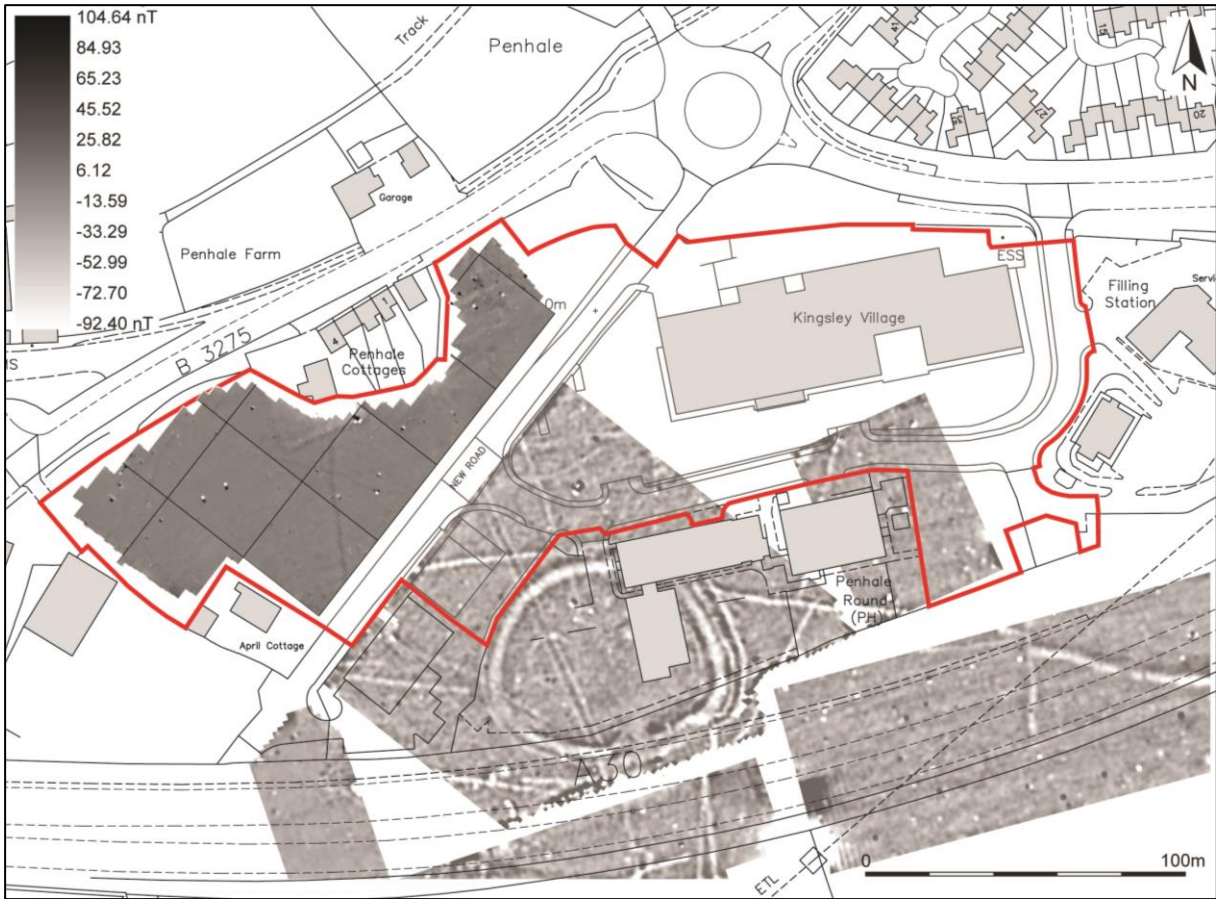


Figure 3: Greyscale shade plot of the gradiometer survey data, with minimal processing.

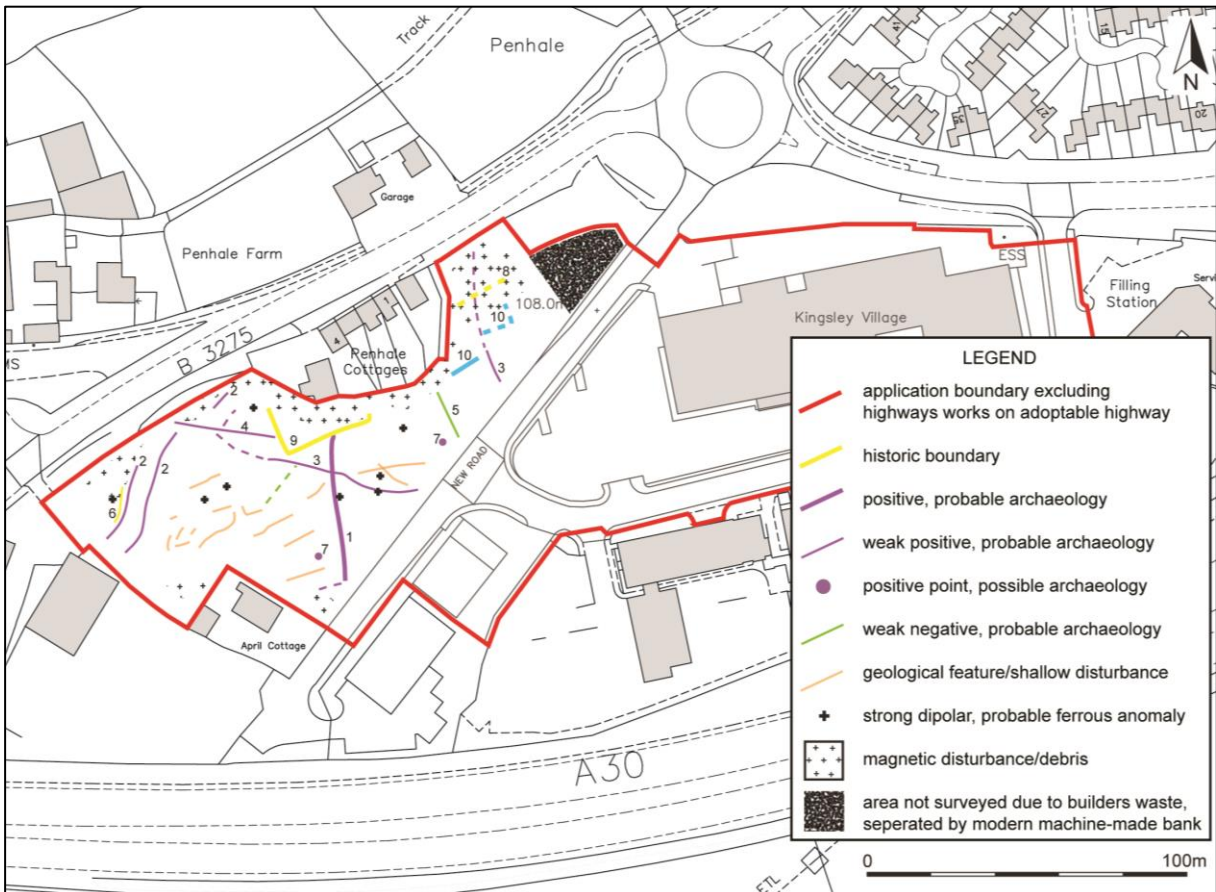


Figure 4: Interpretation of the gradiometer data; dashed lines indicate magnetic disturbance or ephemeral responses.

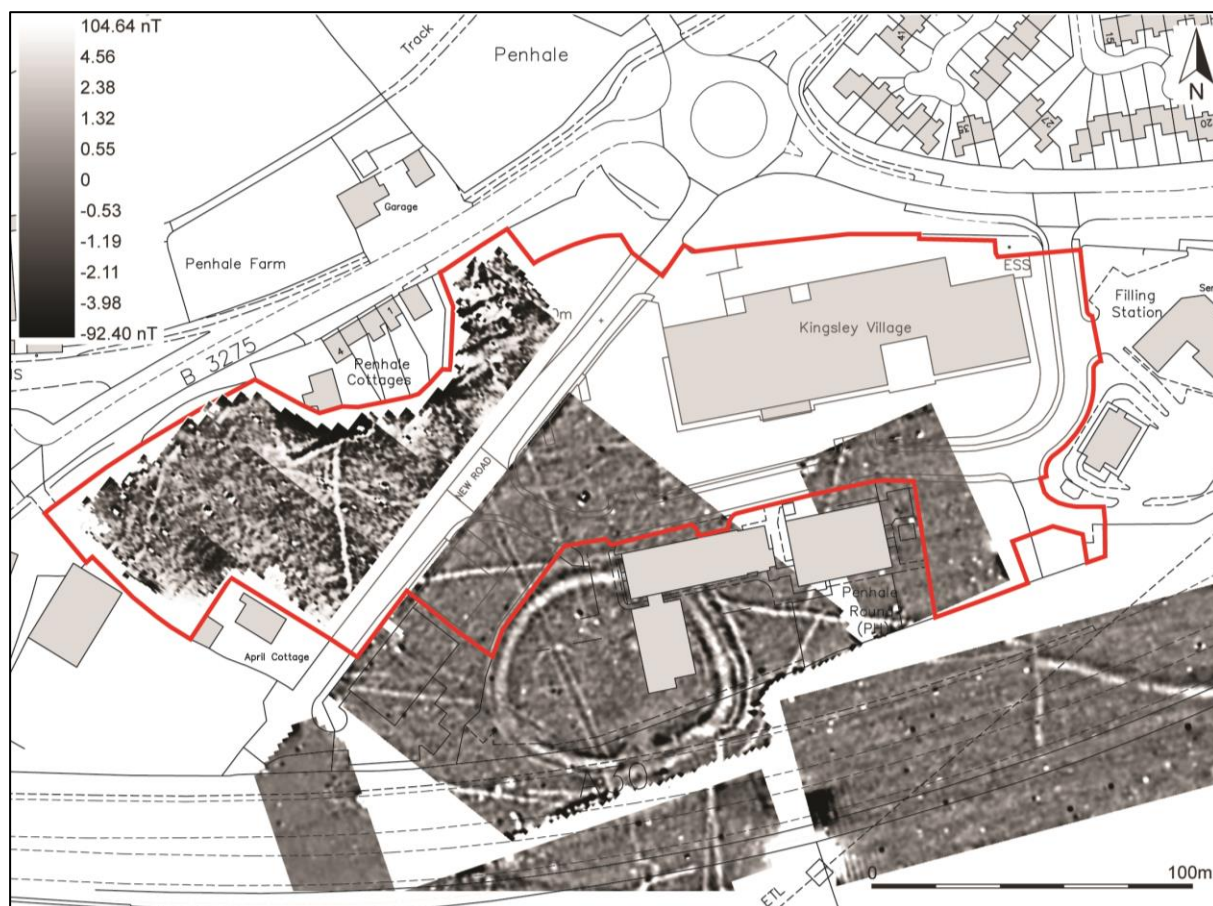


Figure 5: Greyscale shape plot of geophysical survey data and adjacent geophysical survey (source: Payne 2011).

3.4 Discussion

The survey identified ten groups of anomalies: Groups 1, 3, 4 and 5 are linear anomalies of probable archaeological origin such as ditches and bank material associated with boundaries or drainage; Groups 2, 6, 8, 9 and 10 are linear anomalies that either are, or are associated with, historic boundaries, including a possible trackway; Group 7 are discrete anomalies that may possibly represent pits or tree-throws. Typical response strengths of anomalies were comparable to those encountered by the surveys carried out to the east; approximately between +/-9nT (see Payne 2011). Supporting evidence, including cartographic sources, can be found in Appendix 3.

Occasional instances of magnetic debris or disturbance associated with modern boundaries or ferrous debris, ephemeral striations associated with geological variation/features, or examples of shallow ground disturbance (potentially including ploughing activity) were also encountered. These are depicted on Figure 4.

Anomaly Group 1 is a moderate (<+15nT) positive linear response that is indicative of a cut feature such as a boundary ditch. It probably equates to a right-angled bend turning north from the main pre-round co-axial field boundary identified to the south (Ditch [6011/6017/6018] in Nowakowski & Johns 2015, see Figure 5). Although phased as pre-round, it may be contemporary as it seems to be respected by and/or respect the curve of the round. Group 1 is similar in response and character to this co-axial boundary, and it is possible that it is similar in both date and form. The southern corner of the survey area was obscured by magnetic disturbance from the adjacent boundaries, and the projected course of the linear anomaly as depicted (dashed line on Figure 4) may not be wholly accurate.

Group 2 is comprised of two parallel curving linears with weak positive responses indicative of cut features. They probably equate to flanking ditches that define a trackway that runs parallel to the historic field boundary represented by Group 6. That boundary is represented in the cartographic record between 1840 and 1908, before the development of the B3275 along part of the existing road in the 20th century. No trackway is depicted in the cartographic record, but this remains the most logical interpretation.

Group 3 comprises are two curving linear positive responses indicative of cut features. They equate to examples of the Late Iron Age ditched field boundaries identified and explored in the adjacent archaeological works. An example of these boundary types is Ditch [2045], which occurs on the south side of the Penhale Round (Nowakowski & Johns 2015; see Figure 5).

Group 4 is a positive linear response indicative of a cut feature. It has a comparable response to the Group 3 anomalies and may equate to the curving linears of the Group 3.

Group 5 is a negative linear response with flanking positive responses indicative of a banked field boundary. It equates to a post-medieval hedgebank identified in excavations to the south (Nowakowski & Johns 2015).

Group 6 is a negative curving linear response that is indicative of a banked boundary. It equates to a historic field boundary shown on the 1840 tithe map and the OS 1st and 2nd ed. maps, 1888 and 1908 respectively. It is associated with Group 2, a probable trackway. The boundary was shifted in the 20th century during the development of the B3275 along part of the existing road.

Group 7 comprises two discrete points/areas of a positive response indicative of a cut feature. These may equate to natural features such as tree-throws, geological anomalies or pits. With such a long period of activity on and near the site, any discrete features could be of any date. Given that the site may have been the location of a medieval and post-medieval fair, there could be finds or features associated with that periodical use.

Group 8 is a linear negative with a positive response indicative of a banked boundary. It equates to a historic boundary at the north-east end of the field, most probably to an original section of the north-east boundary as shown on the 1840 tithe map. It was removed in the 20th century, although a kink in the northern boundary of the site relates to this feature.

Group 9 is a strong negative and positive rectilinear response indicative of a boundary. It is located close to Penhale Cottages and may represent an earlier tenement boundary (i.e. similar to the roughly-rectangular enclosure shown on the 1840 tithe map and the 1st and 2nd ed. OS maps); however, it could easily be earlier.

Group 10 is a strong positive and negative rectilinear and linear response indicative of a boundary. Group 10 is comparable to Group 9, although they lie within an area of magnetic disturbance that partly obscures them. The historic mapping shows a step in the rectilinear boundary around Penhale Cottages; it is probable that these responses are also associated with changing boundaries, altered in recent history by the post-medieval and modern developments to the area around Penhale Cottages. The ground here may have been disturbed and truncated/redeposited during the construction of the modern earth bank that now separates the dump of rubble in the north-east corner of the field from the rest of the site.

4.0 Conclusion

The walkover survey did not identify any significant earthworks or severe ground disturbance within the field subject to the geophysical survey. The other areas – mainly car parks and modern buildings – showed indications of both terracing (which would have severely or fully truncated any archaeological features and deposits) and made ground (which may have buried them). There is evidence for modern services and drains across all of these areas.

The geophysical survey indicates that there are features of archaeological origin present within the area of the proposed development associated with – potentially – two phases of Prehistoric fieldsystem. These consist of a co-axial field boundary that may pre-date Penhale Round, and a Late Iron Age field system that could be associated with the round. Probable post-medieval field boundaries and other historic boundaries associated with Penhale Cottages were also identified. Anomaly Group 9 may relate to a former tenement boundary, or perhaps an earlier structure. Other linear anomalies and possible pits or tree-throws that cannot be phased or dated, and anomalies that may be indicative of natural features, were also encountered.

Historical sources indicate that a medieval and later fair may have been conducted on the site. Excavations at Penhale Round produced some medieval and post-medieval pottery, and the site is located on a natural routeway along the spine of Cornwall, apparently only superseded by Summercourt in the early modern period. It is therefore possible that there was some continuity of function at the site that is of some considerable antiquity.

The footprint of the existing buildings on the site, and the areas immediately adjacent, are likely to have been heavily disturbed during earlier development/construction. It is possible that archaeological features or deposits, where they are present, may survive beneath the associated car parks. Indeed, a significant proportion of the round is preserved *in situ* beneath Area (D). Field (A) is largely undisturbed, but the geophysical survey demonstrates that large and complex archaeological remains/structures are not present. However, it does contain a number of linear features that extend from the east, a scatter of small pits, and relict field boundaries shown on historic mapping. In addition, the corner of a rectangular enclosure was identified next to Penhale Cottages; this may simply correspond with a relatively-recent tenement boundary, but could possibly be earlier. In any of these areas, development is likely to disturb surviving archaeological deposits or remains; however, much of Field (A) is set aside as car parking under the current proposals, and thus preservation *in situ* must clearly be a preferred option in this instance.

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<http://cornwallartists.org/cornwall-artists/luttrell-wynne>
- Burkes Peerage established 1826 (Burke)** 2015: *Online Depository*
<https://www.burkespeerage.com>

Unpublished Sources:

- CAU** (multiple authors) 1994: *Penhale Round Excavation – PR93 – Archive Report* (2 volumes). CAU 1994R044-5.
- Cole, D. & Thorpe, C.** 1996: *Penhale Round/SWEB5: An Archaeological Watching Brief at Fraddon, Cornwall*. Cornwall Archaeology Unit (CAU).
- Hood, A.** 2007: *Penhale Round, Fraddon, Cornwall: archaeological excavation post-excavation assessment*. Foundations Archaeology report 541.
- Nowakowski, J.A.** 1994: *Bypassing Indian Queens – The Hidden Archaeological Story. The A30 Project – a summary report on the archaeological investigations carried out on the route of the Indian Queens – Fraddon road improvement scheme 1992-1994*. CAU 1994R057.

Cornwall Record Office:

- St Enoder tithe map 1840
- St Enoder tithe apportionment 1842
- Ordnance Survey 1st edition map, published 1888
- Ordnance Survey 2nd edition map, published 1906

Appendix 1

WRITTEN SCHEME OF INVESTIGATION FOR WALKOVER AND GEOPHYSICAL SURVEYS ON LAND AT PENHALE FARM, FRADDON, ST. ENODER, CORNWALL

Location: Land at Penhale Farm
Parish: St Enoder
County: Cornwall
NGR: SW 90674 57291
Proposal: Commercial redevelopment
Date: 21st December 2015

1.0 INTRODUCTION

1.1 This document forms a Written Scheme of Investigation (WSI) which has been produced by South West Archaeology Ltd. (SWARCH) at the request of Nia Russell of Mango Planning (the Agent), on behalf of Consolidated Property Group (the Client). It sets out the methodology for a walkover survey and a geophysical survey to be undertaken in advance of the planning application for the above development and for related off-site analysis and reporting. The WSI and the schedule of work it proposes were drawn up in line with best practice. This survey may form the first part of a staged programme of works. Dependent on the results further mitigation, such as evaluation trenching, may be required. Any further work will be detailed in a separate WSI.

1.2 In accordance with paragraph 141 of the *National Planning Policy Framework* (2012), and the Local Development Framework Policy on archaeology, it has been advised that consent will be granted, conditional upon a programme of archaeological work being undertaken. Condition 21 requires that:

‘No development shall commence (including demolition) until a programme of archaeological work including a Written Scheme of Investigation has been submitted to and approved by the local planning authority in writing. The scheme shall include an assessment of significance and research questions; and:

1. The programme and methodology of site investigation and recording
2. The programme for post investigation assessment
3. Provision to be made for analysis of the site investigation and recording
4. Provision to be made for publication and dissemination of the analysis and records of the site investigation
5. Provision to be made for archive deposition of the analysis and records of the site investigation
6. Nomination of a competent person or persons/organisation to undertake the works set out within the Written Scheme of Investigation.

No development shall take place (including demolition) other than in accordance with the Written Scheme of Investigation approved. The development shall not be occupied until the site investigation and post investigation assessment has been completed in accordance with the programme set out in the Written Scheme of Investigation and the provision made for analysis, publication and dissemination of results and archive deposition has been secured.

Reason: To ensure that an appropriate programme of recording is in place to ensure proper records are made of archaeological remains destroyed by the development in the interests of public understanding and in accordance with NPPF P141.’

2.0 ARCHAEOLOGICAL BACKGROUND

A large amount of archaeological fieldwork has been conducted to the east of the site. This includes twelve event records associated with the development of the A30 (the A30 Project from Fraddon to Indian Queens) and Kingsley Village, composed of assessment, geophysical survey, watching briefs and excavation. This includes geophysical survey (Payne 2011) and extensive excavation (Nowakowski & Johns 2015; Hood 2007; Johnston *et al.* 1998-9). The fieldwork at identified two Early Neolithic buildings and a cache of Neolithic Carinated bowls. Related flintwork was also found nearby at Halloon Farm and Penhale Moor. Early Bronze Age material and Middle Bronze Age houses were excavated at Penhale Round and Penhale Moor. Early farming practices may also be represented by an axial boundary discovered at Penhale Round. The Late Iron Age was represented by the round at Penhale Round; Romano-British and locally imported pottery types and a small field system in the vicinity of the round, and potentially a fogou (subterranean structure) discovered in 2006. The variety of imported material implies some degree of social standing associated with the site (Nowakowski & Johns 2015). The wider landscape provides evidence of early medieval and later enclosure and settlement in the area.

3.0 AIMS

3.1 The principal objectives of the work will be to:

- 3.1.1 To observe and identify archaeological features through walkover survey.
- 3.1.2 To observe and identify archaeological features through geophysical survey.
- 3.1.3 To analyse and report on the results of the project as appropriate.

4.0 METHOD

4.1 Walkover Survey:

The site of the proposed development will be examined for evidence of archaeological remains i.e. unrecorded earthworks or artefactual material identified in the topsoil.

4.2 Geophysical Survey:

The programme of work shall include a magnetometer survey of c.0.65 hectares, covering the proposed track and base location in the field in which the proposed development would be located. The results of this survey will inform whether an archaeological evaluation or further archaeological recording of any potential buried remains or other mitigation is required.

4.3 The Client will provide SWARCH with details of the location of existing services and of proposed groundworks within the site area, and of the proposed construction programme.

4.4 Health and Safety requirements will be observed at all times by any archaeological staff working on site, particularly when working with machinery. As a minimum: high-visibility jackets, safety helmets and protective footwear will be worn.

4.4.1 Appropriate PPE will be employed at all times.

4.4.2 The site archaeologist will undertake any site safety induction course provided by the Client.

5.0 REPORTING

Land at Kingsley Village, Penhale, St Enoder, Cornwall

- 5.1 The type of report produced will be agreed with Charles Johns, Cornwall Council Development Officer, Historic Environment (CCDOHE) in view of the results:
- 5.1.1 A report number, date and the OASIS record number;
 - 5.1.2 A copy of this WSI;
 - 5.1.3 A summary of the project background;
 - 5.1.4 A description and illustration of the site location;
 - 5.1.5 A methodology of the works undertaken, and an evaluation of that methodology;
 - 5.1.6 Plans and reports of all documentary and other research undertaken;
 - 5.1.7 A summary of the results;
 - 5.1.8 An interpretation of the results in the appropriate context;
 - 5.1.9 A summary of the contents of the project archive and its location;
 - 5.1.10 A location plan and overall site plan including the location of areas subject to survey;
 - 5.1.11 A consideration of the evidence within its wider context;
- 5.2 CCDOHE will receive the report within three months of completion of fieldwork.
- 5.3 A copy of the report detailing the results of these investigations will be submitted to the OASIS (*Online Access to the Index of Archaeological Investigations*) database under reference Southwes1-236890 within 3 months of completion of fieldwork.
- 6.0 MONITORING**
- 6.1 SWARCH shall agree monitoring arrangements with the CCDOHE and give two weeks notice, unless a shorter period is agreed, of commencement of the fieldwork. Details will be agreed of any monitoring points where decisions on options within the programme are to be made.
- 6.2 Monitoring will continue until the deposition of the site archive and finds, and the satisfactory completion of an OASIS report.
- 6.3 SWARCH will notify the CCDOHE upon completion of the fieldwork stage of these works.
- 7.0 ARCHIVE**
- 7.1 On completion of the project an ordered and integrated site archive will be prepared in accordance with the Management of Research Projects in the Historic Environment (MoRPHE) (<http://www.english-heritage.org.uk/publications/morphe-project-managers-guide/>).
- 7.2 SWARCH will notify the CCDOHE upon the completion of deposition of the archive.
- 7.3 The condition placed upon this development will not be regarded as discharged until the report has been produced and submitted to the HET and the LPA, the site archive deposited and the OASIS form completed.
- 7.4 The archive will be completed within 3 months of the completion of the final report.
- 8.0 PERSONNEL & MONITORING**
- 8.1 The project will be managed by Dr. Brynmor Morris; the geophysical survey will be undertaken by SWARCH personnel with appropriate expertise and experience. Where necessary, appropriate specialist advice will be sought (see list of consultant specialists in Appendix 1 below).

Natalie Boyd

South West Archaeology

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email: mail@swarch.net

List of specialists

Building recording

Richard Parker 11 Toronto Road, St James, Exeter. EX4 6LE. Tel: 07763 248241

Conservation

Alison Hopper Bishop the Royal Albert Memorial Museum Conservation service a.hopperbishop@exeter.gov.uk

Richard and Helena Jaeschke 2 Bydown Cottages, Swimbridge, Barnstaple EX32 0QD mrshjaeschke@email.msn.com

Tel: 01271 830891

Curatorial

Thomas Cadbury Curator of Antiquities Royal Albert Memorial Museum, Bradninch Offices, Bradninch Place, Gandy Street, Exeter EX4 3LS Tel: 01392 665356

Bone

Human & Animal Wendy Howard Department of Archaeology, Laver Building, University of Exeter, North Park Road, Exeter EX4 4QE

w.j.howard@exeter.ac.uk

Tel: 01392 269330

Lithics

Martin Tingle Higher Brownston, Brownston, Modbury, Devon, PL21 OSQ martin@mtingle.freemove.co.uk

Palaeoenvironmental/Organic

Wood identification Dana Challinor Tel: 01869 810150 dana.challinor@tiscali.co.uk

Plant macro-fossils Julie Jones juliedjones@blueyonder.co.uk

Pollen analysis Ralph Fyfe Room 211, 8 Kirkby Place, Drake Circus, Plymouth, Devon, PL4 8AA

Pottery

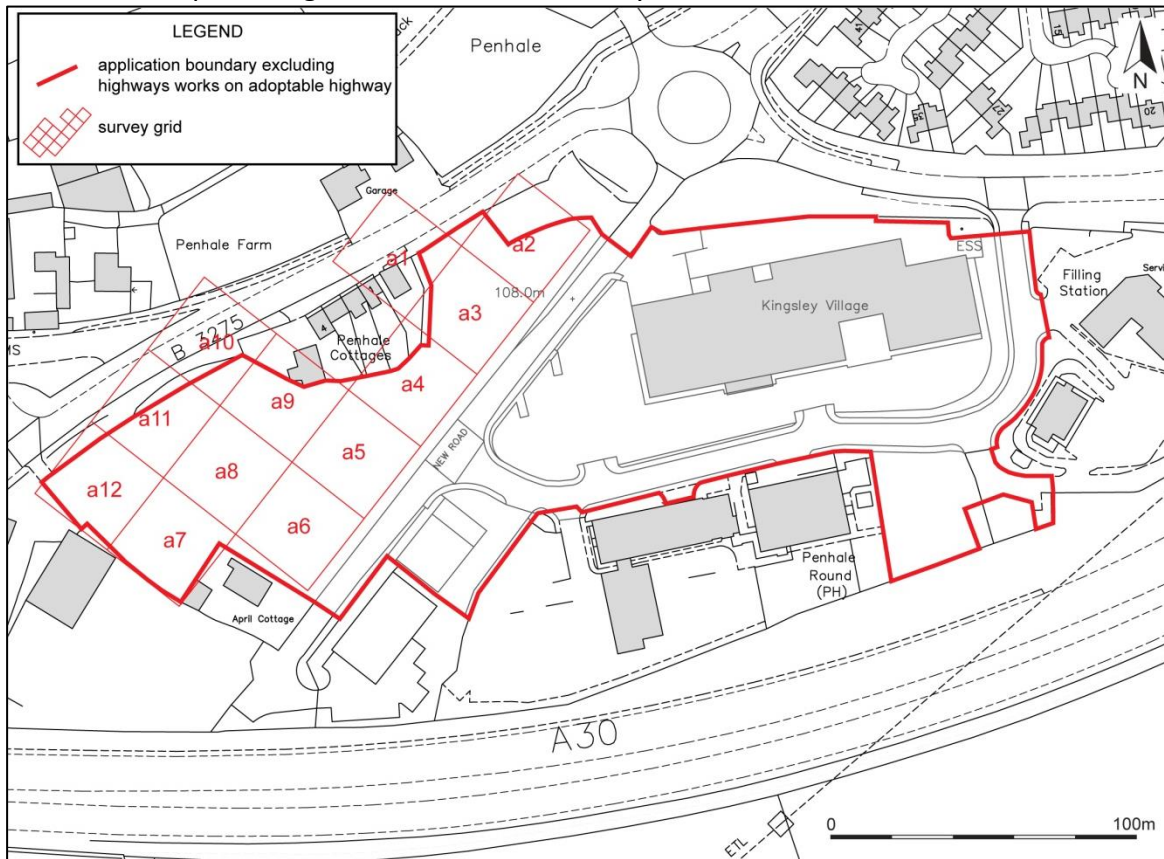
Prehistoric Henrietta Quinell 39D Polsloe Road, Exeter EX1 2DN Tel: 01392 433214

Roman Alex Croom, Keeper of Archaeology Tyne & Wear Archives & Museums, Arbeia Roman Fort and Museum, Baring Street, South Shields, Tyne and Wear NE332BB Tel: (0191) 454 4093 alex.croom@twmuseums.org.uk

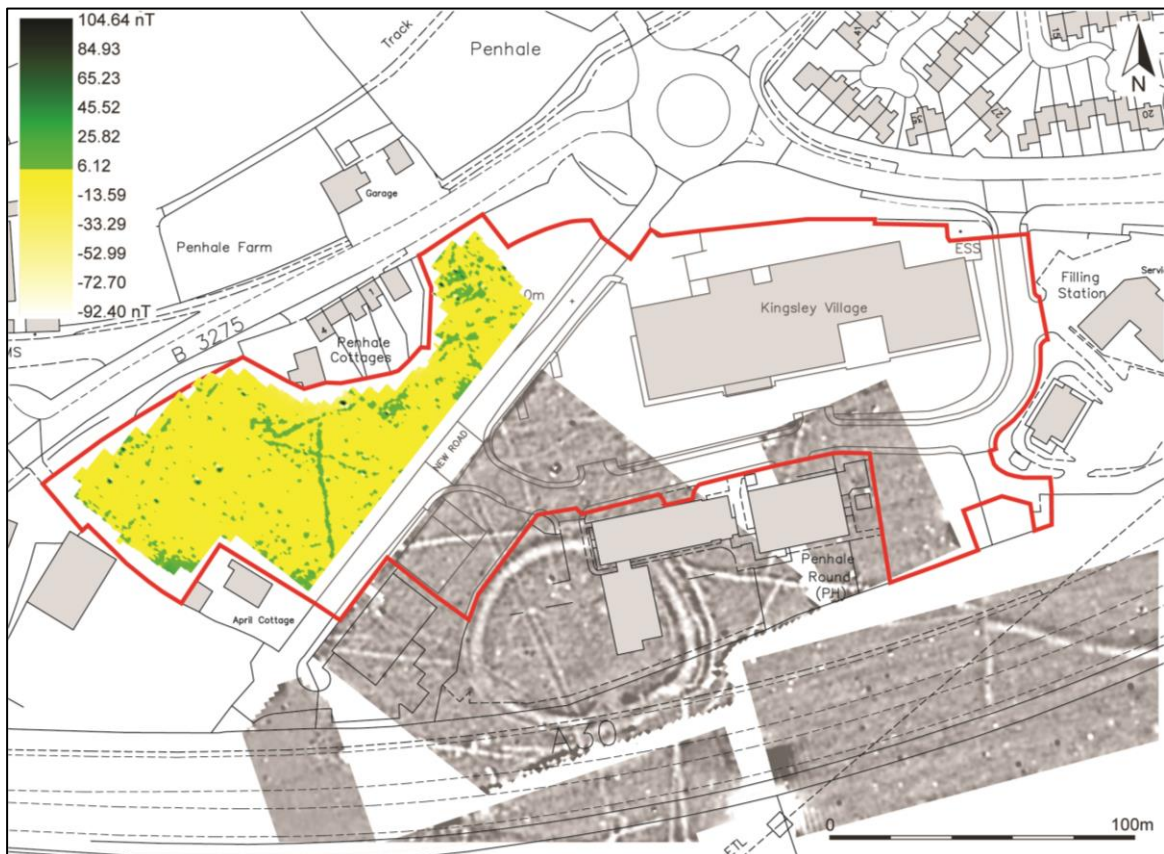
Medieval John Allan 22, Rivermead Road Exeter EX2 4RL Tel: 01392 256154 john.p.allan@btinternet.com

Post Medieval Graham Langman Exeter, EX1 2UF Tel: 01392 215900 email: su1429@eclipse.co.uk

Appendix 2 Additional Graphic Images of Gradiometer Survey Data

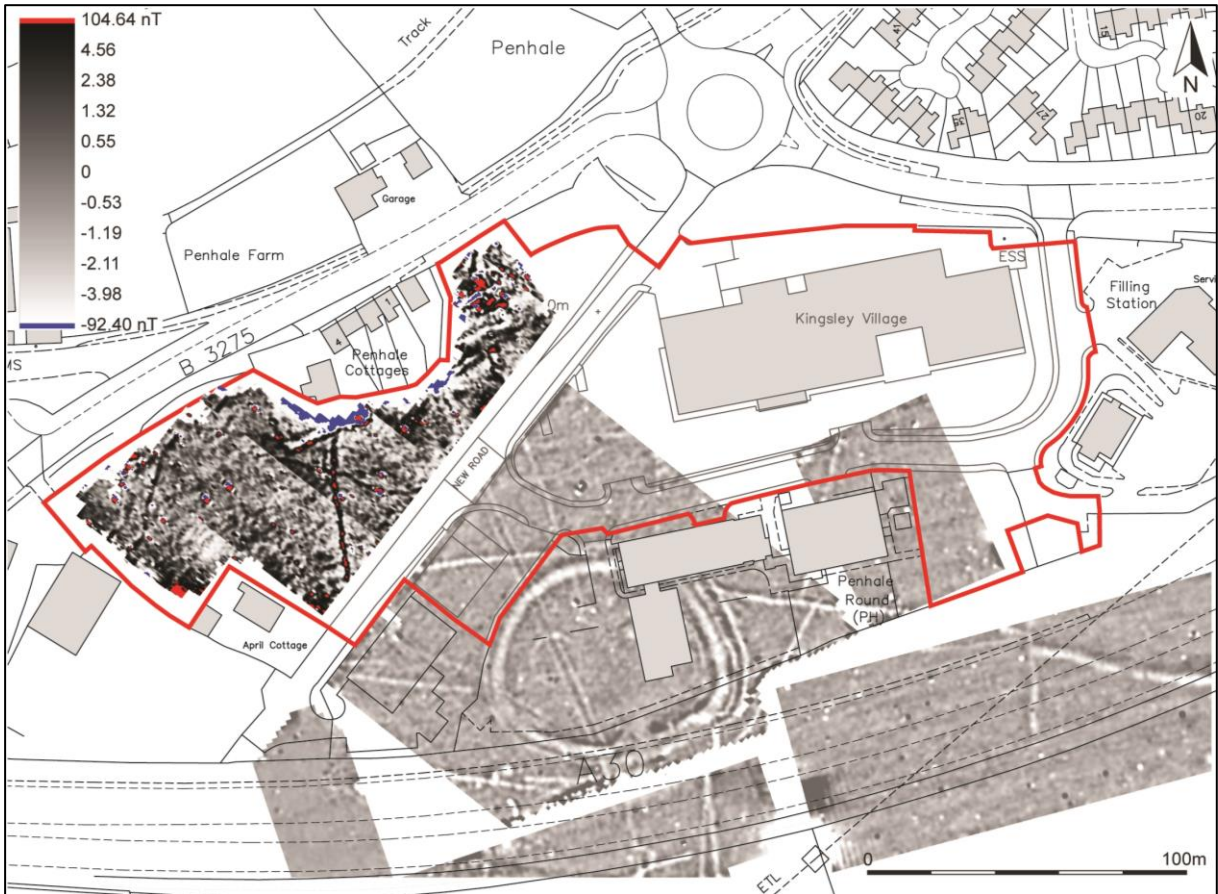


Location and numbering system of geophysical survey grid.



Black-green-yellow-white shade plot of gradiometer survey data; gradiated shading.

Land at Kingsley Village, Penhale, St Enoder, Cornwall



Red-grey-blue shade plot of gradiometer survey data; band weight equalised, and gradiated shading.



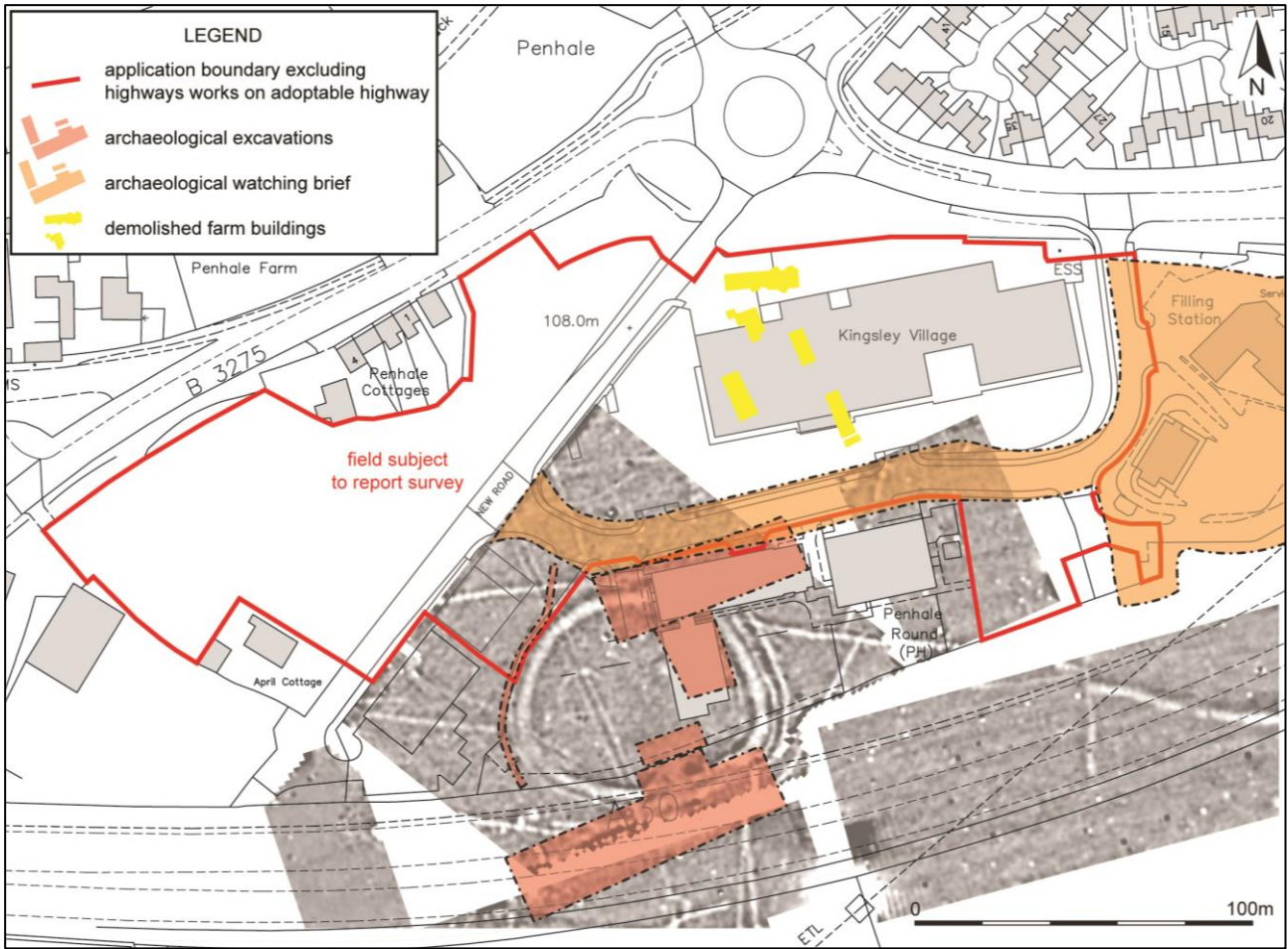
Red-Blue-Green(2) shade plot of gradiometer survey data; band weight equalised, and gradiated shading.

Land at Kingsley Village, Penhale, St Enoder, Cornwall



Larger scale red-grey-blue shade plot of gradiometer survey data; band weight equalised, and gradiated shading.

Appendix 3 Supporting Evidence/Cartographic Sources

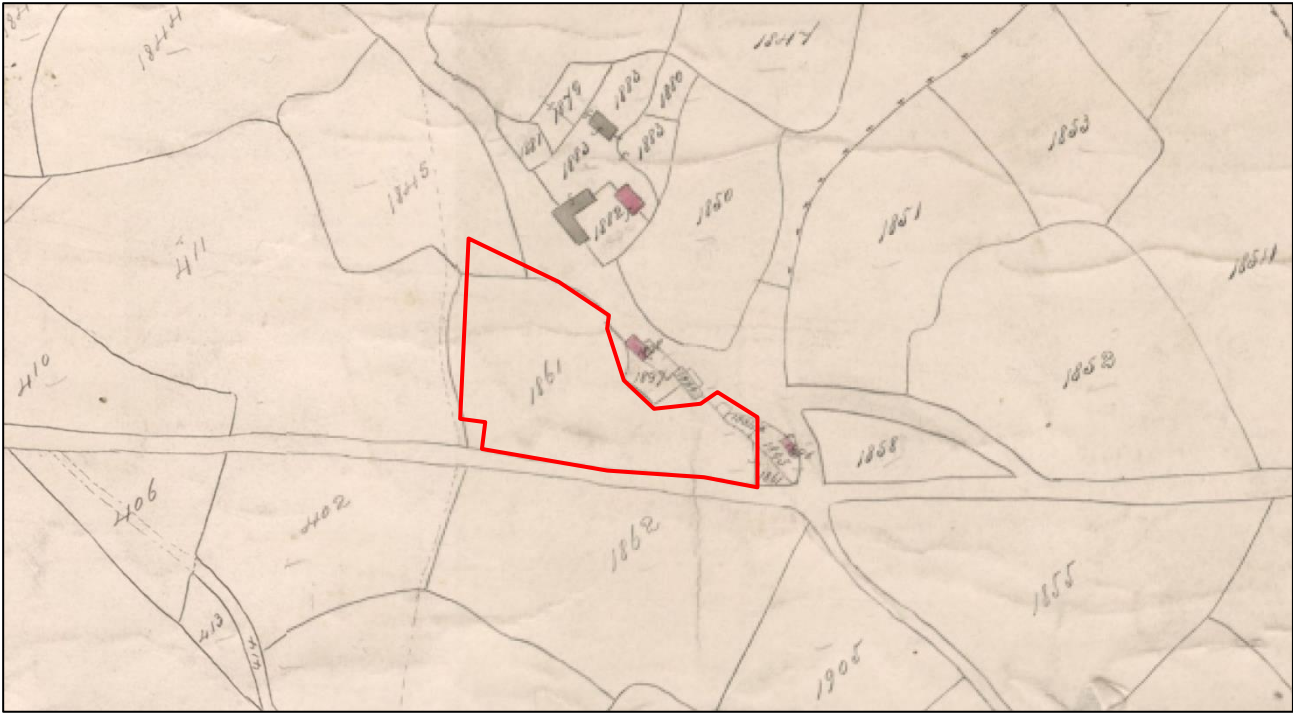


Previous archaeological works associated with the A30 Project (after Nowakowski & Johns 2015).

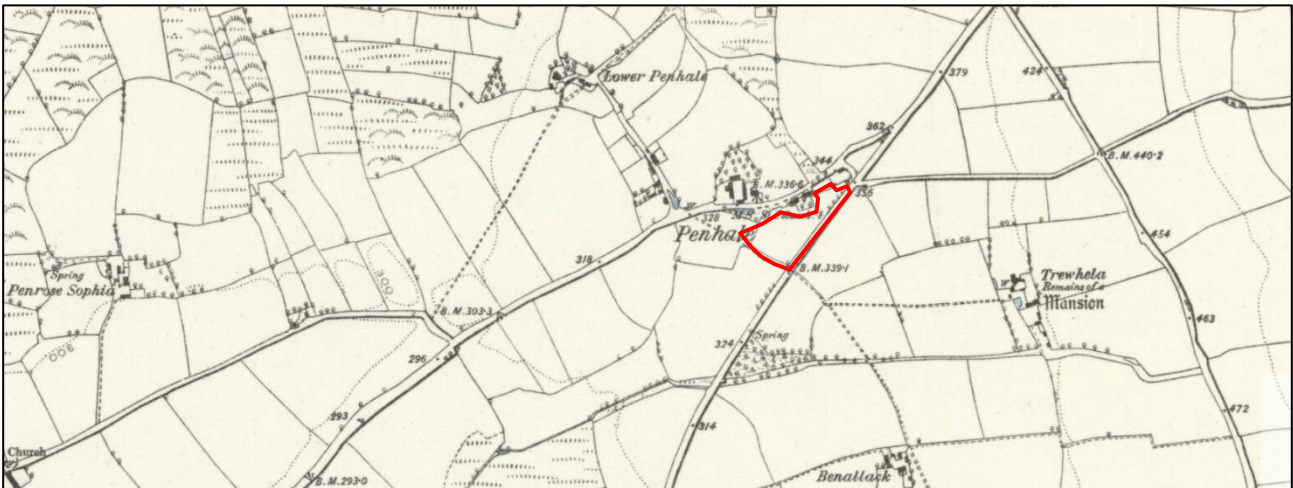


Ordnance Survey surveyor's draft map for St Columb Major (1810) and Grampound (1811) (the approximate location of the site is indicated).

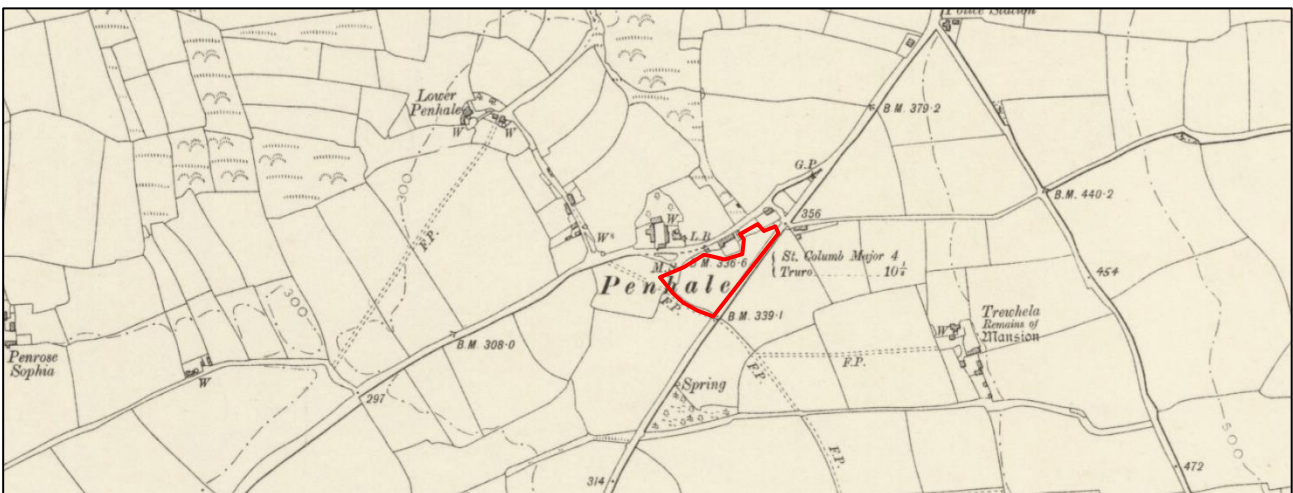
Land at Kingsley Village, Penhale, St Enoder, Cornwall



Extract from the 1840 St Enoder tithe map (the approximate location of the surveyed area is shown in red) (CRO).



Ordnance Survey 1st edition 1:10,560 scale map, published 1888 (the site is shown in red).



Ordnance Survey 2nd edition 1:10,560 scale map, published 1908 (the site is shown in red).

Land at Kingsley Village, Penhale, St Enoder, Cornwall

Field No.	Owner	Tenant	Field Name	Field Use
Trewheela Estate				
401	Nicholas Francis Bassett	Elizabeth Francis	Little Undertown	Arable
402			Undertown Moor	Arable
411			Trewheela Moor	Arable
Penhale Estate				
1845	Rev. William Stackhouse	Nicholas Francis	Green	Arable
1850			Parlour Moor	Arable
1851			Courtney's Moor	Pasture
1852			Pit Meadow	Arable
1855			Lower Pound Close	Arable
1860			Baccas Meadow Moor	Pasture
1861			Homer Fair Close	Arable
1862			Fair Close	Arable
1858		Henry Harris	Three Corner Meadow	Arable
1859			House & Garden	House & Garden
1884		Charles Luxton	House & Garden	House & Garden
1884a			House & Garden	House & Garden
1885		Charles Harris	House & Garden	House & Garden
1885a			House & Garden	House & Garden
1886	Sampson Rowe	Garden	Arable	
1897	Rev. William Stackhouse & Thomas Courtney (his lessee)	Thomas Courtney	Orchard	Orchard
1898			House & Garden	House & Garden
1899		Francis Stephens	House & Garden	
1906	1/6 Phillipa Cock; 1/6 Christopher Henry Thomas Hawkins Esq.; 1/6 Sir Richard Rawlinson Vyvyan Bart.; 3/6 Rev. William Stackhouse	Tenants of Penhale	Penhale Moor	Pasture
Penhale				
1905	Christopher Henry Thomas Hawkins Esq. & Thomas Andrew (his lessee)	Thomas Andrew	Lower Moor	Pasture

Table 2: Extract from the 1842 St Enoder title apportionment; the geophysical survey was undertaken in the field shown in red.

Appendix 4
Walkover Survey, Baseline Photographs



The south-western boundary from the entrance in the west corner; viewed from the west.



The north-western boundary from the entrance in the west corner; viewed from the south-west.



The trough in the kink of the south-western boundary; viewed from the north.



The point in the north-western boundary where the curving Cornish hedgebank ends and the post-and-wire fence begins; viewed from the south-west (2m scale).



The south-western boundary of the properties at Penhale Cottages; viewed from the south.



The south-western half of Field (A); viewed from the north-east.



The southern half of Field (A); viewed from the north.



Kingsley Village, from close to the middle of Field (A); viewed from the west.



Building (E) from close to the middle of the Field (A); viewed from the north-west.



The north-eastern end of Field (A), showing the gateway in the north-western boundary; viewed from the south.



View to Penhale Cottages from the northern corner of Field (A); viewed from the north-east.



Field (A) with Building (E) in the background, from the northern corner of Field (A); viewed from the north.



The north-eastern boundary of Field (A) from the north corner of Field (A) showing the modern bank; viewed from the north-west.



The south-eastern boundary from the eastern corner of Field (A); viewed from the north-east (2m scale).



The north-eastern boundary of Field (A) from the eastern corner of the site, showing the modern bank; viewed from the south-east (2m scale).



As above, showing dumped builder's rubble.



As above; viewed from the south-west.



The south-eastern boundary from the southern corner of Field (A); viewed from the south-west (2m scale).



Field (A) from the southern corner of the field; viewed from the south.



The south-western boundary of the Field (A) from the southern corner of the field; viewed from the south-east.



April Cottage from close to the southern corner of Field (A); viewed from the east (2m scale).



Field (A) from the northern corner of April Cottage; viewed from the south-west.



The northern side of the Kingsley Village building (manhole covers indicated); viewed from the west.



The south-eastern boundary of Field (A), the field entrance in north-eastern corner; viewed from the north-west.



Building (E) from the north.



Kingsley Village and Area (B), viewed from the south-west.



Area (D) and the entrance to Building (E) (manhole cover indicated); viewed from the north.



Building (E) from the east (manhole covers indicated).



Area (D) from the north.



Area (B) from the south (roadside drain indicated).



Building (E) from the east.



Area (B) from the east.



The western boundary of Area (C); viewed from the north.



Area (C). Note the manhole cover in the centre of the car park (indicated) and the A30 embankment; viewed from the north-east.



The south-east side of the building south of Building (E); viewed from the north-east.



As above, viewed from the south-west.

Land at Kingsley Village, Penhale, St Enoder, Cornwall



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