

Land north of Ennor Castle, Old Town, St Mary's, Isles of Scilly; Geophysical survey statement



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Geophysical survey statement

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The views and recommendations expressed in this report are those of Cornwall Archaeological Unit and are presented in good faith on the basis of professional judgement and on information currently available.

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Abbreviations

CAU	Cornwall Archaeological Unit
CIfA	Chartered Institute for Archaeologists
HE	Historic England
HIA	Heritage Impact Assessment
LPA	Local Planning Authority
NGR	National Grid Reference
OD	Ordnance Datum – height above mean sea level at Newlyn
OS	Ordnance Survey

1 Summary

In June 2019 Cornwall Archaeological Unit undertook a geophysical survey project for the Council of the Isles of Scilly. The survey was required to inform a proposal to allocate for residential development a field north of a Scheduled Monument, the medieval Ennor Castle, at Old Town, St Mary's, Scilly. The site was previously the subject of a Heritage Impact Assessment by CAU which identified geophysical survey as an option to allow further assessment of the potential direct impact of development.

The geophysical survey was aimed at investigating the potential physical impact of development on any buried heritage resource in the setting of Ennor Castle, including;

- Settlement-related remains of the prehistoric or Roman periods, particularly as the site is near a natural landing and the prominent outcrop of Castle Rocks.
- Traces of medieval activity associated with Ennor Castle; the castle may have had an ancillary area on a low ridge to the north of its known extent, west of the geophysical survey area.
- Remains relating to medieval occupation of Old Town.

Another aim was to test the possibility suggested in the HIA that development could be limited to the east side of the field, potentially defined on the west by re-instating a secondary north-south boundary removed in the 20th century.

Overall, the results of the geophysical survey do not provide supporting evidence for the site having high potential for significant buried archaeology, but also do not demonstrate conclusively that this is not present.

There are several substantial geophysical anomalies. These are not readily identifiable (from their shapes or associations, for example) as remains of buried early settlement-related activity. Some on the east are likely to represent recent utilities, and others, more central, may be similar. However, this is an interpretation based on location of those on the east, in alignment with, or near, a road and a well beyond the site.

There is a scattering of small anomalies across the surveyed area, which may be significant. Early Neolithic pits, for example, have geophysical signatures not dissimilar to these – and recent work on Scilly has revealed scatters of pits found by excavation to be Neolithic and Bronze Age in date. Also, the site as a whole has potential for important buried remains such as artefacts or pits or other small features not detected by the geophysical survey.

The former sub-dividing boundary, known from historic mapping dating it to the later 19th or early 20th century, has left no traces detectable by geophysical survey. This means that while the site was included in the reorganisation of field systems to produce flowers and other market crops, a significant aspect of Scilly at that date, it does not preserve archaeological evidence of that stage in its development.

The site is also sensitive to development because of its currently open, rural landscape contributing to the setting of Ennor Castle - the central place of medieval Scilly. To avoid potential adverse visual impact, assessed in 2018 as a moderate adverse effect (less than substantial harm), and to restore an aspect of historic landscape character, building a screening hedge on the lost north-south boundary was suggested as an option in the previous HIA. This might be considered, using a planted hedge of the kind found locally, since the geophysical survey indicates no ditched hedge bank. However, the geophysical results do not show clearly whether there is any difference in archaeological sensitivity either side of the former boundary, other than the possible concentration of disturbance by utilities to the east of that line.

The report identifies appropriate measures to address potential for direct impact, should development proceed, and subject to the requirements of the LPA. These include evaluation trenching over geophysical anomalies and a selection of areas appearing blank on the geophysical survey, to test or sample the presence/absence and significance of features; and watching brief to monitor groundworks and allow recording of smaller features or deposits.

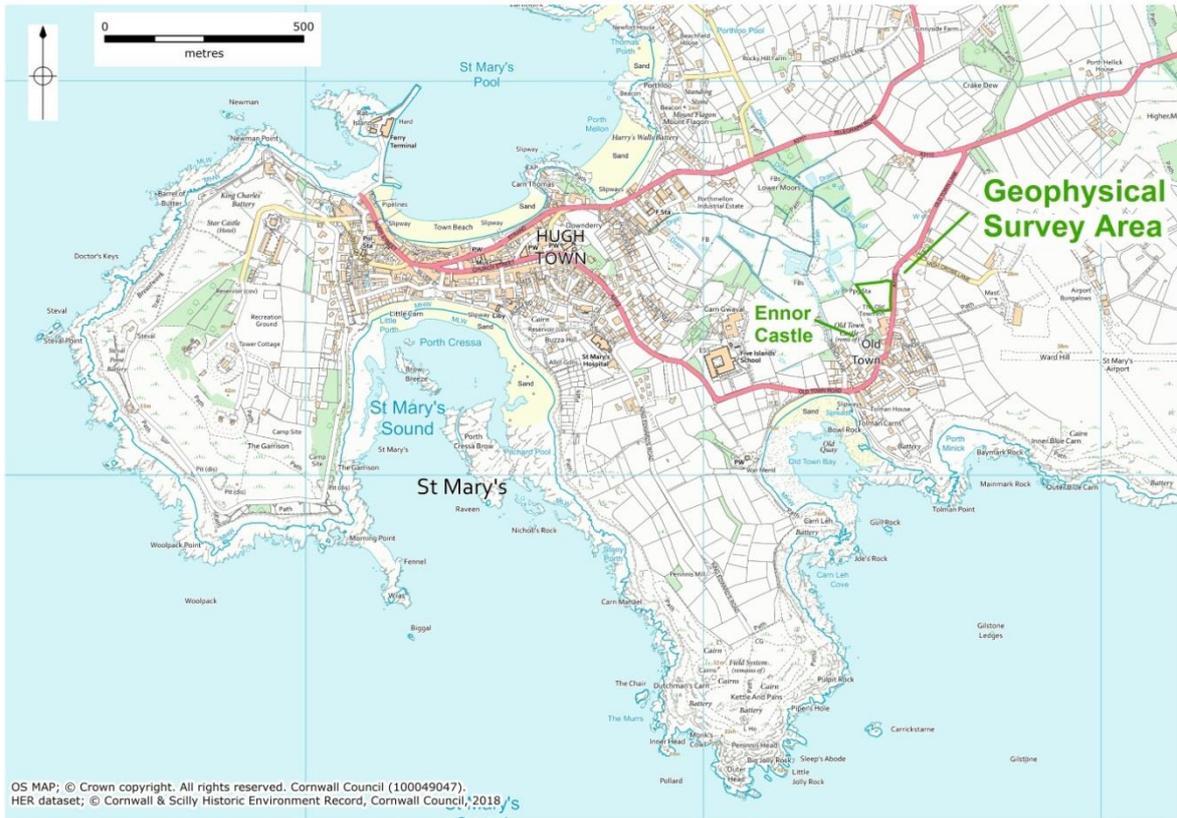


Fig 1 Map locating the geophysical survey site at Old Town on St Mary's, Isles of Scilly.

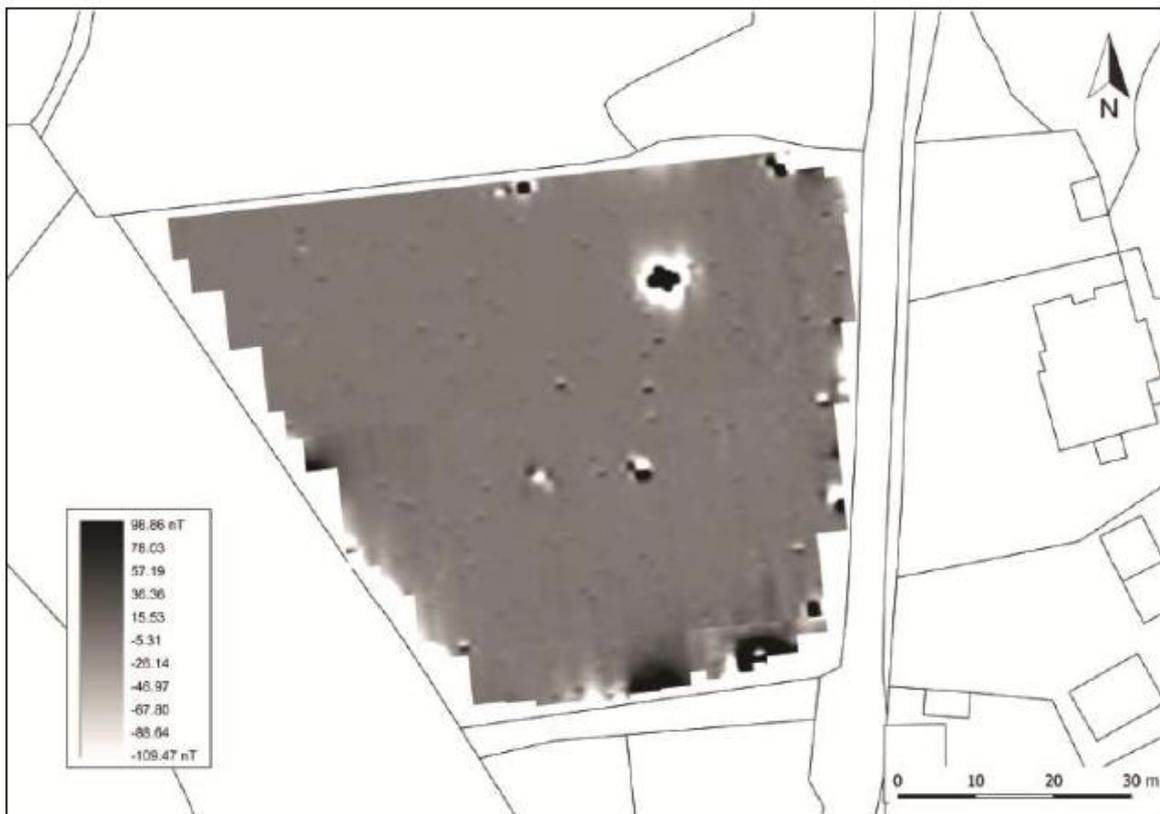


Fig 2 Surveyor's greyscale shade plot indicating extent and grid orientation of geophysical survey and distribution, scale and strength of anomalies identified.

2 Introduction

2.1 Project background

This geophysical survey and statement project was commissioned by the Council of the Isles of Scilly, to inform a proposal to allocate land for residential development at Old Town, St Mary's, Isles of Scilly (Fig 1).

The proposed development land is a field c0.5ha in extent and around 6m OD, situated north of Ennor Castle, Old Town, near the south coast of St Mary's Island (centred at NGR SV 91445 10455) (Figs 1 and 2). The medieval castle is a Scheduled Monument (SM), with the Historic England (HE) List Entry No. 1014994, and a Heritage Impact Assessment (HIA) for the field was previously required by HE and carried out by CAU (Parkes 2018).

Geophysical survey was an option identified in the HIA to allow the scale of overall potential impact to be understood as fully as possible, and weighed against the public benefits.

2.2 Methodology

2.2.1 Aims

The earlier HIA indicates high potential for buried significant medieval or earlier remains in the study area, in the setting of the Scheduled castle (Parkes 2018, 8). The site is only around 30m from the SM on the tall, sudden outcrop of Castle Rocks to the south southwest, and is close also to the associated settlement of Old Town known to have been more extensive in medieval times, and the ancient landing in Old Town Bay beyond.

This further assessment based on geophysical survey was aimed at investigating the potential physical impact of development on any buried heritage resource in the setting of Ennor Castle, including the following:

- Settlement-related remains of the prehistoric or Roman periods, such as pits, or artefacts, particularly as the site is near a natural landing and prominent rock outcrop.
- Traces of medieval activity associated with Ennor Castle; the castle may have had an ancillary area (though no early enclosure is apparent) on a low ridge to the north of its known extent, which would then adjoin the geophysical survey area.
- Remains relating to medieval occupation of Old Town.

Another aim was to test the appropriateness of an option suggested in the HIA that development could be limited to the eastern, 'road' side of the study area, potentially defined on the west by re-instating a secondary north-south boundary removed in the 20th century.

2.2.2 Geophysical survey

A geophysical survey was carried out across the site on 4th June 2019. A magnetometer (Bartington Grad601 twin-sensor fluxgate gradiometer, sensitive to depths of up to 1.50m) was used. The survey grid was tied into the OS National Grid. Resulting data was processed to clarify and characterise identified anomalies (Bonvoisin 2019, 7).

Conditions for the survey work were good, the ground being covered in grass, recently cut.

2.2.3 Desk-based assessment

The results of the geophysical survey were assessed together with those of the earlier HIA to produce this report.

3 Geophysical survey results

Overall, the magnetometer survey identified few features or clusters of strong or likely responses, or 'anomalies', within the survey area, and found none of clear archaeological significance (Bonvoisin 2019, 9, 11). The surveyor's greyscale data and interpretative plans of the results are reproduced in this report as Figures 2 and 3. No anomaly groups relate directly to the only previously known feature within the field – a former boundary dating to the period c1880-1907 – indicating that this was not a built bank with quarry ditch. Anomalies found are characterised as follows:

Probable remains of modern services. Several anomalies are attributed to modern services for Old Town. They lie in the eastern side of the field, near the road frontage, and downslope of a water source, Castle Rocks Well, marked on the map of c1880;

- **Group 1.** A very weak response of a type likely to represent a cut feature, possibly corresponding to a utility pipe said to lie near the eastern boundary of the site, south of anomaly group 5. This may be remains of the new piping to supply water from the well 'near Ennor Castle' to Old Town, recommended by the Council in 1905 (*Cornishman* newspaper, May 18th 1905, 6).
- **Groups 3, 4 and 5.** These very strong responses were interpreted by the surveyor as indicative of modern utilities. Anomaly group 4 is visible above ground and corresponds to water management for a house to the east. Anomaly group 5 lies directly north of anomaly group 1 and like this may correspond to a known utility running along the eastern boundary of the site.
- **Group 6** was attributed to similar activity due to the strength of the response, but may be of different origin.

Possible ferrous object.

- **Group 2.** This strong response is attributed to magnetic disturbance, possibly a ferrous object.

Small anomalies. A scatter of unnumbered smaller anomalies is marked on the interpretative plan Figure 3 and others are visible on the greyscale plot Figure 2. These may be insignificant features such as stone holes, but they also have the same type of signature that would be produced by Neolithic or Bronze Age pits, such as those found recently on excavation at Old Quay, St Martin's (Garrow and Sturt 2017).

4 Review of Significance and Sensitivity

The results of the geophysical survey do not provide supporting evidence for the assessment of the site in the previous HIA (Parkes 2018) as having high 'archaeological potential' for significant remains below ground, associated with its proximity to the shrunken medieval settlement of Old Town, to Ennor Castle on its landmark outcrop – the central place of medieval Scilly – and to the landing place in Old Town Bay. However, the survey does not demonstrate conclusively that significant buried archaeology is not present.

Features on the east of the site may be traces of utilities, relatively recent in date, though this is an interpretation based on their alignment relative to and/or location near a road and a well beyond the site, and on the strength of the magnetometer response.

However, a number of small pit-like anomalies were identified by the survey, and there is potential for significant buried remains such as artefacts or pits or other small features not detected by the geophysical survey.

The former sub-dividing boundary, known from historic mapping which dates it to the later 19th or early 20th century, has left no traces detectable by geophysical survey. This means that while the land here was included in the re-organisation of field systems, generally driven by production of flowers and other market crops, significant on Scilly at that date, it does not preserve archaeological evidence of this.

5 Concluding remarks

This section reconsiders options to reduce or mitigate potential adverse impacts on the archaeological resource from the proposed allocation for development. These options are provided for guidance and any actual requirements will be set by the LPA.

The geophysical survey does not indicate any clear difference in archaeological sensitivity across the site, including to one side or the other of the former north-south sub-dividing boundary, although there is evidence to suggest that the east side of the field is more affected by buried modern services.

This former hedge line, referred to in the HIA (Parkes 2018) as having potential for reinstatement to screen development and restore an aspect of historic landscape character, was not detected, and therefore its original form is open to interpretation. It may have been a fence or a living, planted hedge, or potentially an unditched built boundary – none of which if removed would have left a detectable trace below ground.

The several unidentified or uncertain anomalies and the scattering of potential small features on the greyscale does suggest some potential for significant buried archaeological features to be encountered, which subject to the requirements of the LPA could be mitigated in the following ways.

5.1.1 Evaluation trenching

The geophysical survey identified anomaly groups attributed to modern services but not positively identified as such, and identified a series of unnumbered small anomalies, which could be archaeological. Elsewhere, the survey suggests areas which are apparently without buried archaeology but it is possible that smaller features may exist. A series of evaluation trenching over geophysical anomalies and a selection of areas between these would test the presence/absence and significance of these features.

5.1.2 Watching brief

Archaeological watching brief is likely to be required should development proceed, to monitor groundworks and allow recording of smaller features or deposits. Time should be allowed for the archaeologist to carry out excavation, record as appropriate (by description, photography, drawing in plan or section, etc), recover any artefacts or samples, and identify any further investigation needed.

6 References

6.1 Primary sources (in chronological order)

Ordnance Survey, c1880. 25 Inch Map First Edition (licensed digital copy at CAU)

Ordnance Survey, c1907. 25 Inch Map Second Edition (licensed digital copy at CAU)

Ordnance Survey, MasterMap Topography

6.2 Publications

Bonvoisin, P, 2019. *Land North of Ennor Castle, St Mary's, Isles of Scilly, Cornwall Results of a Geophysical Survey* Southwest Archaeology: South Molton (SWA report no. 190507)

Parkes, C, 2018. *Land north of Ennor Castle, St Mary's, Isles of Scilly; Heritage Impact Assessment* Cornwall Archaeological Unit, Cornwall Council: Truro (CAU report no. 2018RR046)

Garrow, D, and Sturt, F, 2017. *Neolithic Stepping Stones* Oxbow Books: Oxford

6.3 Websites

British Newspaper Archive



Fig 3 Surveyor's plan presenting interpretation of gradiometer survey data, with numbered anomalies.

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