

A Geophysical Survey at Carwynnen Quoit-2009



2009



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Summary

Carwynnen Quoit has been acquired by the Sustainable Trust (<http://www.sustrust.co.uk/>) and plans are progressing to re-erect the stones that collapsed (for the second time!) in 1967. This survey was carried out as a part of the planning for the work.

The site was surveyed over the weekend of the 21st and 22nd March 2009 by members of both the Cornwall Archaeological Society and Tamarside Archaeological survey groups.

Acknowledgements

I would like to thank Pip Richards from the Sustainable trust for inviting us to come and survey the Quoit and Ann Preston-Jones for advice and encouragement to get on with it! Jacky Nowakowski provided several suggestions to improve the draft.

Cover photograph credit: Pip Richards.

Introduction

Carwynnen Quoit (also known as the Giants Quoit) is located near to Camborne in Cornwall (OS grid reference SW 65014 37213) it is number 35111 in Cornwall County Council's Historic Environment record (HER) and is a Scheduled Monument, Cornwall 396.

William Borlase wrote about the quoit in the 1700's (Borlase, 1769, p. 273) and describes it as so:-

"In a tenement called Carwynnen, in the parish of Camborn (Cornwall), stands a very entire, and plain Cromlêh.; it is called the Giants Quoit: the three supporters inclose an area five feet three inches wide, and seven feet long: the Covering-stone is twelve feet three inches long, by eleven feet six wide, and no more than one foot thick at a medium."

He appears to have dug the chamber as he complains that he hadn't been able to find any "...Bones or Urns..." while others digging their own had. Also included is a small sketch of the quoit



Figure 1 – Carwynnen Quoit - From Borlase 1769

The land surrounding the quoit was incorporated into formal parkland around Pendarves House (see figure 2). The structure collapsed in 1842 and was re-erected by Pendarves estate workers and local people. It seems that a part of the capstone was broken off and the supporting stones arrangement changed at this time. The quoit fell again in 1967 and is now reduced to a sad pile of stones.

Recently the area to the western side of the quoit has been under cultivation, the area to the east has been under 'set aside'. Aerial photography from 2005 (Preston-Jones, 2009, p. 11) shows a track running north-south immediately to the east of the quoit separating the cultivated area from the set-aside land.

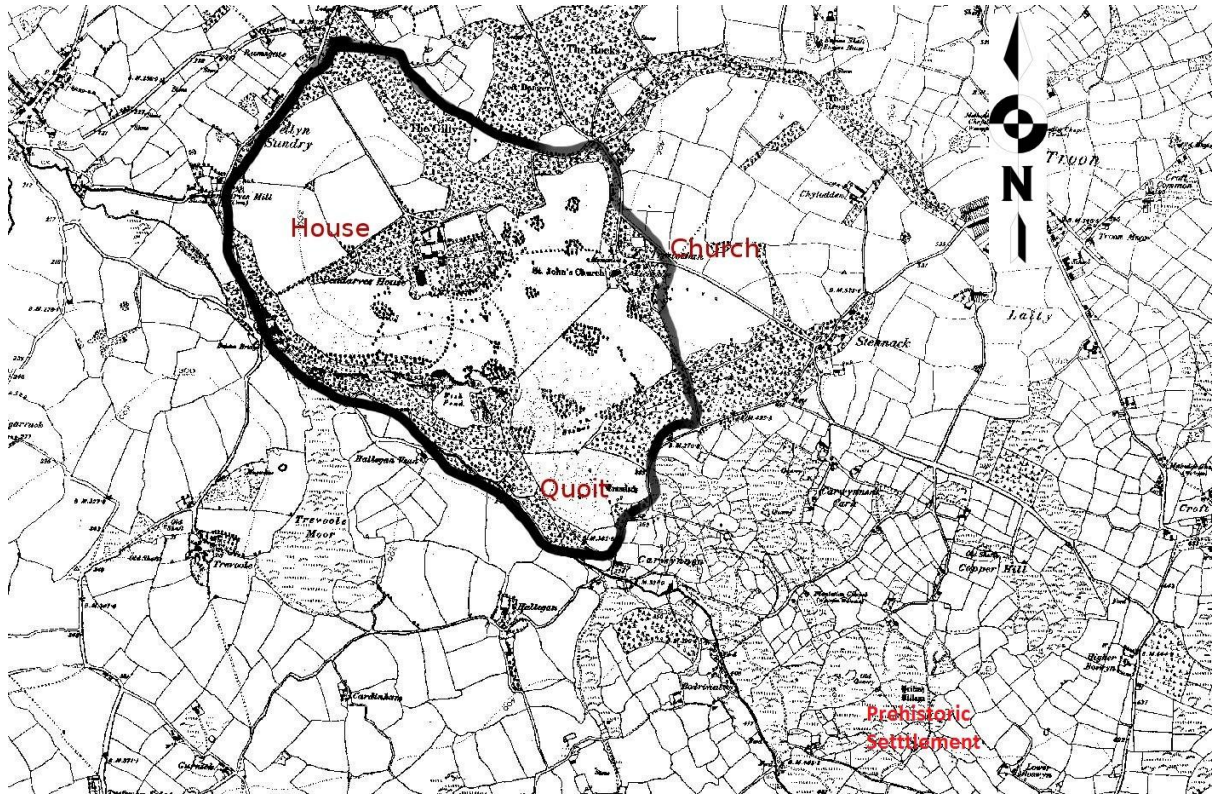


Figure 2 – Pendarves House, house, church and the probable parkland boundaries
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Aims

The primary aim was to execute a magnetometer survey in advance of work to fence off the area of land recently purchased by the Sustainable Trust. This was needed as metallic fencing parts would interfere with such a survey. The object was to provide information on possible sub-surface archaeological features so that any tree planting or other work carried out by the Sustainable Trust would avoid damaging any surviving archaeology.

Survey Method

The survey method was magnetic gradiometry using a Geoscan FM256. This was chosen because it is a rapid prospection method.

The area was divided into 20 metre grids using surveying tapes. A total of 29 20m x 20m squares (1.1 hectares) were completed over the two days by survey team members and volunteers.

The FM256 was set to collect readings at 0.25 metre intervals and the collection grid used was a 1 metre separation. The instrument was used on the 1nT range. The data was minimally processed to remove collection errors (de-stagger and zero-mean traverse). A "zig-zag" survey method was used.

As a part of the exercise a total station survey was performed by HES this was used to topographically survey the area and the survey grid used. Figure 3 shows the survey grid superimposed on the Ordnance Survey 1st edition map.

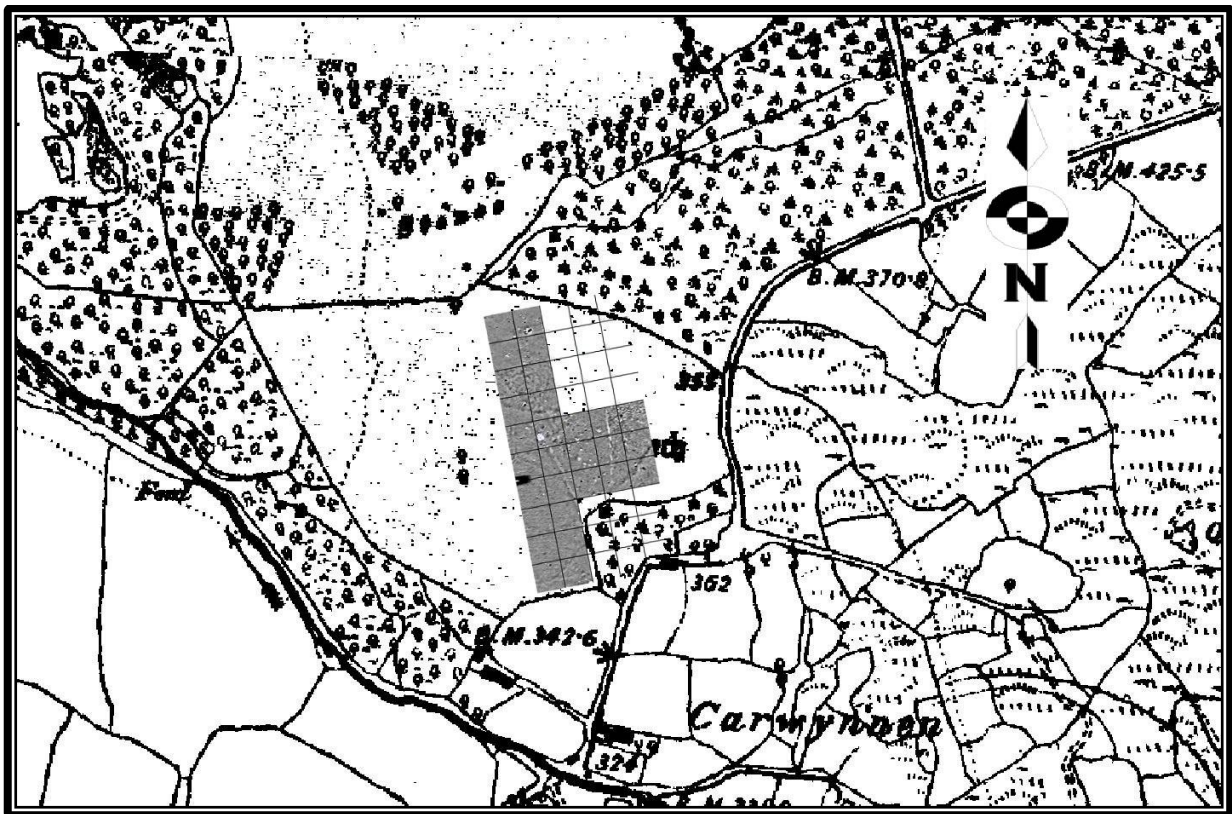


Figure 3 – Survey grid shown on OS 1st Edition map (North at top)
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Results

The survey data has been processed to correct survey error (de-stagger) and the different grid levels corrected for (zero-mean traverse). This is displayed in figure 4.

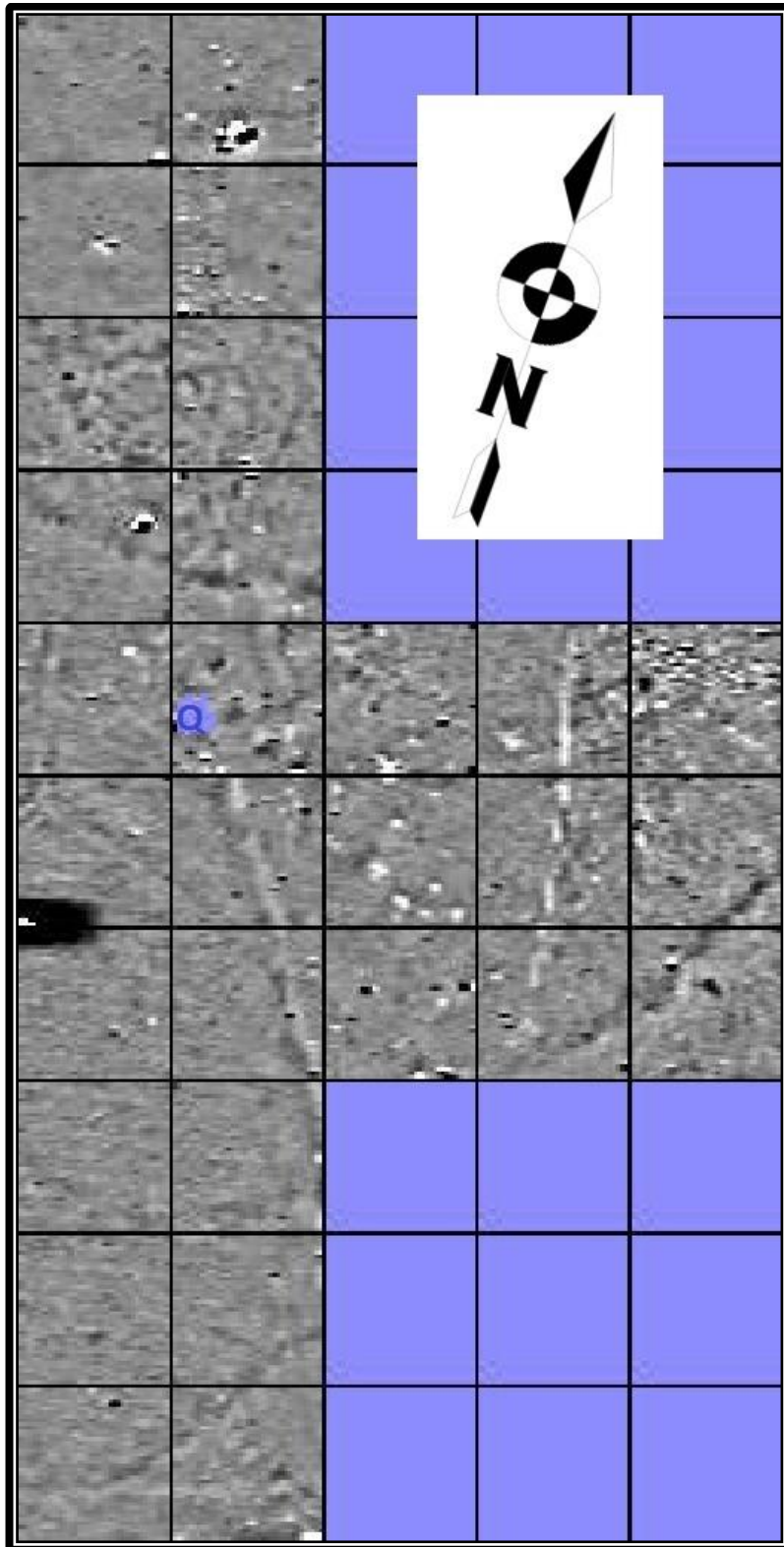


Figure 4 - Minimally processed survey results (The 'Q' marks the quoit)

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The results match with field observations at the site that the two areas of the site, cultivated and set aside are different. The western part of the survey, the cultivated area, exhibits lower magnetic responses than the set-aside portion. The eastern survey area does not seem to have cleared of stone in the way that the western area has. There is still much surface rock visible spread liberally over the whole area. Also a part of this area is also a steep slope into a gully that runs roughly east-west ploughing this part would be difficult. These facts make it likely that this area has always been rough grazing.

Interpretation

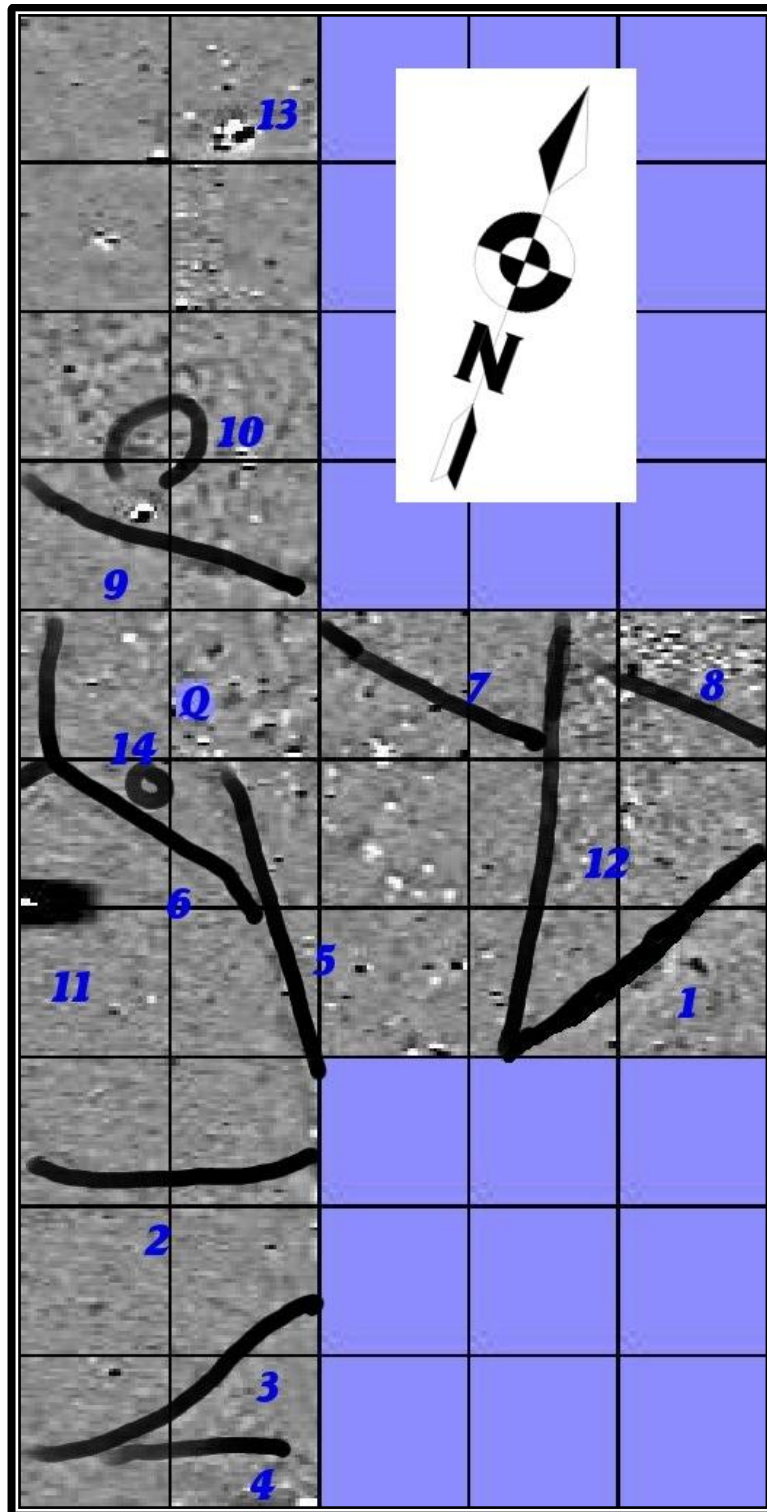


Figure 5 - Interpretation of the results (The 'Q' marks the quoit)

Some of the features give stronger responses than others. In some cases this is due to relative size and/or depth, but it can also be caused by ploughing spreading the structures. In figure 5 the 'Q' marks the quoit.-

1. The feature that is the only one actually visible on the ground is feature 12; this is visible as a small, intermittent ditch running from the Guide campground on the south to the field boundary on the north beyond the survey area. I suspect that this is a plastic water supply or drainage line.
2. Feature 11 is a strong response; this is probably a piece of metal in the field (an iron fence post 1.5m long and 45mm round was removed from near to the quoit before the survey).
3. Feature 13 is another very strong response. The anomaly shows as 4m to 5m across. It could be the remains of burning or a metallic object.
HES have a record of a 'walled barrow' 100 yards to the north of the quoit (Preston-Jones, 2009, p. 4), this feature is about 60-70 yards north of the quoit. However it's hard to see how this feature could be the remains of such a structure due to the nature of the response.
4. There a number of linear features (1 through 9) that appears to be the remains of field boundaries, some of the features (1, 2 & 5) exhibit a clear positive and negative magnetic response that may indicate the footprint of a bank or wall and associated ditch. Feature 5 could have originally incorporated the quoit as a corner of an enclosure. The area immediately around the quoit is disturbed and does not show a clear indication of whether feature 5 continues to the north, turns west at the quoit or terminates. This feature exhibits the highest response of these linears. Given that this is within the ploughed area (and will have suffered disturbance) this could indicate that this was more substantial than the other features. This would be consistent with other examples of field systems from prehistoric through to medieval, that used landscape features such as tombs and standing stones as boundary markers for later land divisions.
Features 1 and 2 would appear to be the same boundary feature; the difference in response is probably due to plough damage in cultivated area. This would indicate that these features are not very deep.
5. The area to the south west of the quoit appears to have a boundary (6) and circular structure (14). This could have been a stock enclosure in the corner of a larger field or enclosure
6. To the north of the quoit is an area of very slight anomalies. There are features that could be enclosure boundaries (9) and a circular/curved structure (10) that is approximately 10m across. Around the curved feature is a disturbed area that could be other features but the low level of response makes interpretation difficult.

Overall the survey results show a field system that post dates the quoit and probably incorporated it in some way. This was later erased by the construction of the formal parkland surrounding Pendarves House. In the area to the east and south-east of the quoit has existing field boundaries that are at least medieval in date if not much earlier(see figure 2). Within that field system there are prehistoric houses (Thomas, 1955) and it's probable that at least some of the enclosures are of the same date.

Next steps

1. The area to the east and north of the surveyed area needs to be expanded; this may show more of the boundary system. This will ensure that any plantings or construction work can avoid or minimise any damage to surviving archaeology.
2. If the plan to re-erect the quoit goes ahead the area underneath the current pile of stones can be surveyed in a much more detailed manner. The suggested approach is to remove the stones and perform a more detailed magnetometer and resistivity survey over the area under the current pile of stones. This magnetometer survey could be implemented at 0.5m traverse spacing and 8 readings per meter, this combined with a resistivity survey utilising multiple probe spacing's to investigate at differing depths . This combination of techniques should provide a clear image of the archaeology. Based on previous work this should enable any socket holes to be detected.

Archiving

Copies of this report will be lodged with the Cornwall HES and the Open Archive project (<http://www.openarchive.co.uk/>). It will be available on the Cornwall Archaeological Society website (<http://www.cornisharchaeology.org.uk/>)

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