



Chichester and District Archaeology Society

Geophysical Survey

Westerlands Farm, East Lavington – June 2014



1. Summary

During June 2014, Chichester and District Archaeology Society conducted magnetometry and resistivity surveys at Westerlands Farm and Stud, East Lavington. The site itself is in Graffham parish. This area had been selected because aerial photographs taken over the years, most recently in 2007 and in 2012, showed indications of an apparent ditched enclosure. The objective was to establish whether such an enclosure was apparent from magnetometry and resistivity surveys.

The survey showed clearly that the ditched enclosure was present, together with ditches that may have defined the approach to the enclosure. There is also a feature that could be a hut platform. An informal field walk of the ploughed area produced a range of interesting pottery dating from the early to mid. Iron Age to the early part of the Roman period.

The combination of evidence from the survey, and the pottery found on the site shows that the site should be investigated further.

2. Background

The survey was commissioned by Natural England. The Brief states that "The objective of the survey is to attempt to define and characterise any detectable archaeology activity within the area indicated by the aerial photograph" The survey required that both magnetometry and resistivity were to be used.

The 2007 aerial photograph contained in the brief shows the apparent ditch in the grassland. The red cross shows the location of the feature as recorded in the Historic Environment Record (HER). As shown in the aerial photographs, a strip in the area surveyed had been ploughed and is currently seeded with sweetcorn to act as a game cover crop.

3. Site Access/ Health and Safety

The Health and Safety risk assessment was prepared prior to undertaking the survey.

4. Method

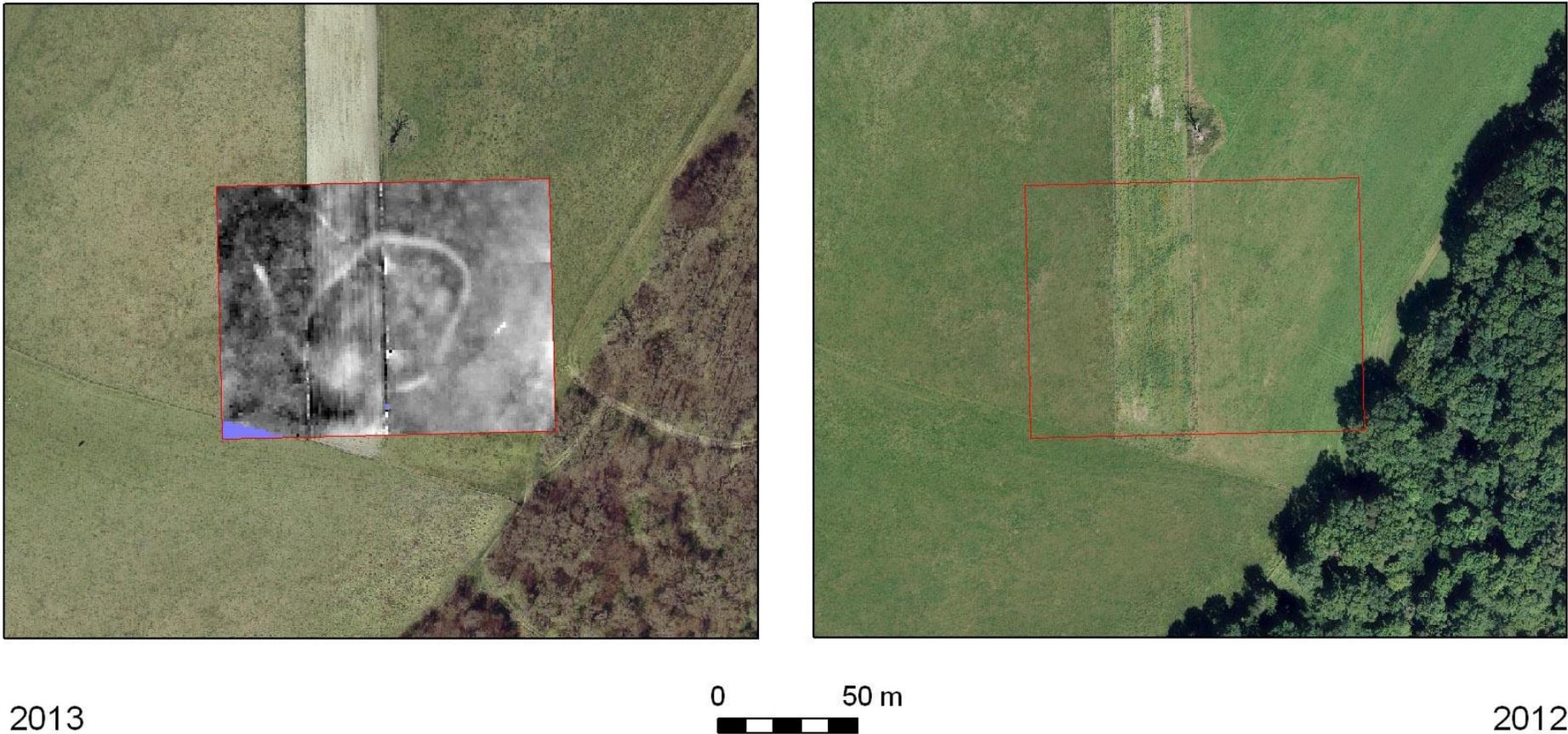
These surveys utilised the following equipment:

1. Geoscan RM15 D Resistivity meter that CDAS was able to purchase as a result of generous donations for this purpose from the Chichester District Council Coastal Pathfinder Project and the Chichester City Council.
2. Geoscan FM256 magnetometer. Previously purchased by CDAS as the result of a generous grant from the Chichester Harbour Conservancy.
3. Electronic Theodolite. Previously purchased by CDAS as the result of a generous grant from the Chichester Harbour Conservancy.

Grids measuring 30 metres by 30 metres were laid out over the area to be surveyed. The total area surveyed was 120 metres east-west by 90 metres north-south. The eastern fence of the game rearing area was used as the centre line of the grid. The most southerly point of the grid was 10.7 metres north of the fence crossing the area in a roughly northwest to south east direction. The line of the fence was almost directly north-south.

Lines for walking were laid out at 2 metre intervals. For resistivity, walkers started in a northerly direction taking readings every metre, and returned in a southerly direction, proceeding through the grid in a zigzag fashion. For Magnetometry, walkers again started in a northerly direction and returned in a southerly direction, but in this case four readings per metre were recorded.

Figure 1. Showing the 2012 aerial photograph with the 2014 resistivity plot superimposed on the 2013 aerial photograph.



The data collected were downloaded to a laptop computer (Steatite model R15D) loaded with the Geoplot 3 program supplied by Geoscan Ltd. Subsequent data processing was carried out using this computer and software. The images were transferred onto another computer for ease of report writing.

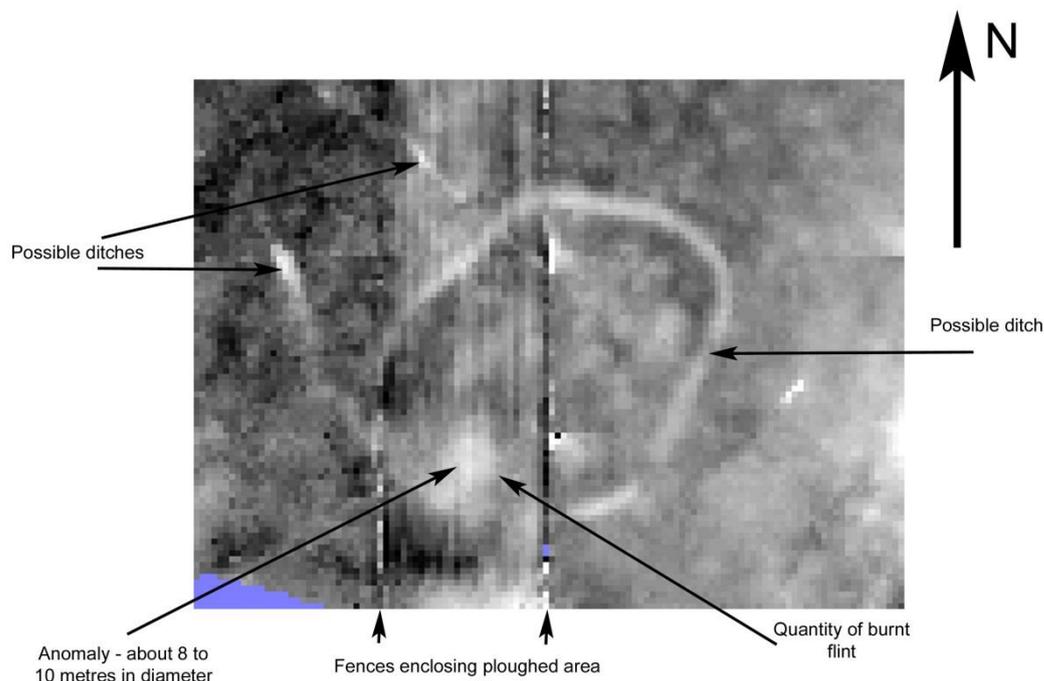
5. Volunteer Participation

CDAS spent Monday 9th June and Tuesday 10th June on the site. 11 members were involved in the survey providing 13 man days of resource. Three members set up the survey grid on Saturday 7th June.

6. Survey Results

Figure 2

Resistivity plot of the survey at Westerlands Farm



It is apparent from Figure 1 that the resistivity plot has recorded a ditched enclosure the same size and shape as it appeared to be in the aerial photographs. Figure 2 shows that in addition there are some apparent ditches running off to the northwest. If contemporary with the enclosure itself, these ditches could form an approach to the enclosure and could be an indication that it was used for stock management. The lines of the modern wire fences enclosing the game rearing area are clear, running north-south.

Within the enclosure and to the south west there is a damp (pale) area and a quantity of burnt flint on the surface nearby. The damp area is approximately 8 to 10 metres in diameter and could be the platform for a circular hut.

Figure 3 shows the magnetometry plot. Again the outline of the ditched enclosure is relatively clear, but less marked than in the resistivity plot. The trace from the possible hut platform is present but less clear.

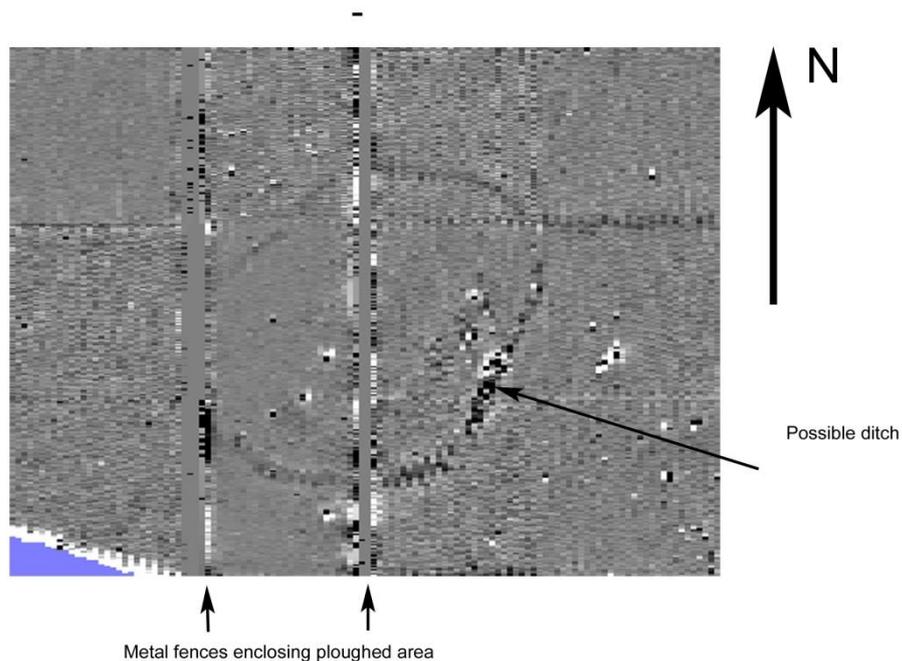
The lines of the modern wire fences are marked. These fences have a bigger impact on magnetometry than resistivity, and this is reflected in the width of the disturbance they create across the plot.

During the survey, on the exposed ploughed area, the team conducted an informal field walk. This produced a number of sherds of pottery, including:

- A small piece of samian ware from a vessel type Dragendorf 30 early-mid 2nd century. The really interesting part is that this is Pulborough samian, and very rare – Fishbourne have only a single piece in their collection. Some researchers regard Pulborough samian ware as of inferior quality. Pulborough is 6 miles away.
- The handle is from a Wiggonholt white ware flagon – a similar one is in the Fishbourne museum. Wiggonholt is 7 miles away.
- Flint tempered Rowlands Castle ware from between 60 and 120 AD.
- Arun Valley ware which is dateable to the 1st and 2nd centuries AD, but our pottery specialist suggests might be the earlier part of this period, given the Rowlands Castle ware.
- Iron Age pottery fragment from the early to mid-Iron Age.

Figure 3.

Magnetometry plot of the survey at Westerlands Farm



7. Discussion

The geophysical survey results confirm that the enclosure and the archaeology within it still exist. In addition, there is the possibility of a hut platform and approach ditches. Speculation might suggest that the feature was used for a seasonal activity such as sheep management.

The pottery evidence suggests that the area of the enclosure was in use (not necessarily continuously) from about 500 BC until the middle of the second century AD – about 650 years. The question of how the pottery arrived there is somewhat puzzling. It is all relatively locally sourced. It is possible that the shepherds brought up pottery items during seasonal stays and some was discarded. Alternatively, the sherds could have come from a midden which was spread across the pasture. However, taking a heavy load from a midden to the site on top of the Downs, and up a steep slope from the nearest permanent settlement seems unlikely. There is a Roman villa at Duncton and the Roman villa at Bignor is just over three miles away.

A more likely explanation is that during the Roman period, the circular hut inside the enclosure was replaced by another building nearby the occupants of which were sufficiently affluent to use locally sourced pottery.

8. Next Steps

Given the possible hut platform within the enclosure, and the possible stock management ditches, and the wide range of dates attributed to the pottery finds, this site should be investigated further.

The first step should be to dig a trench 2 metres wide and about 15 metres long extending across the perimeter ditch and across the potential hut platform.

Trevor Davies

CDAS Survey Team Leader

June 2014