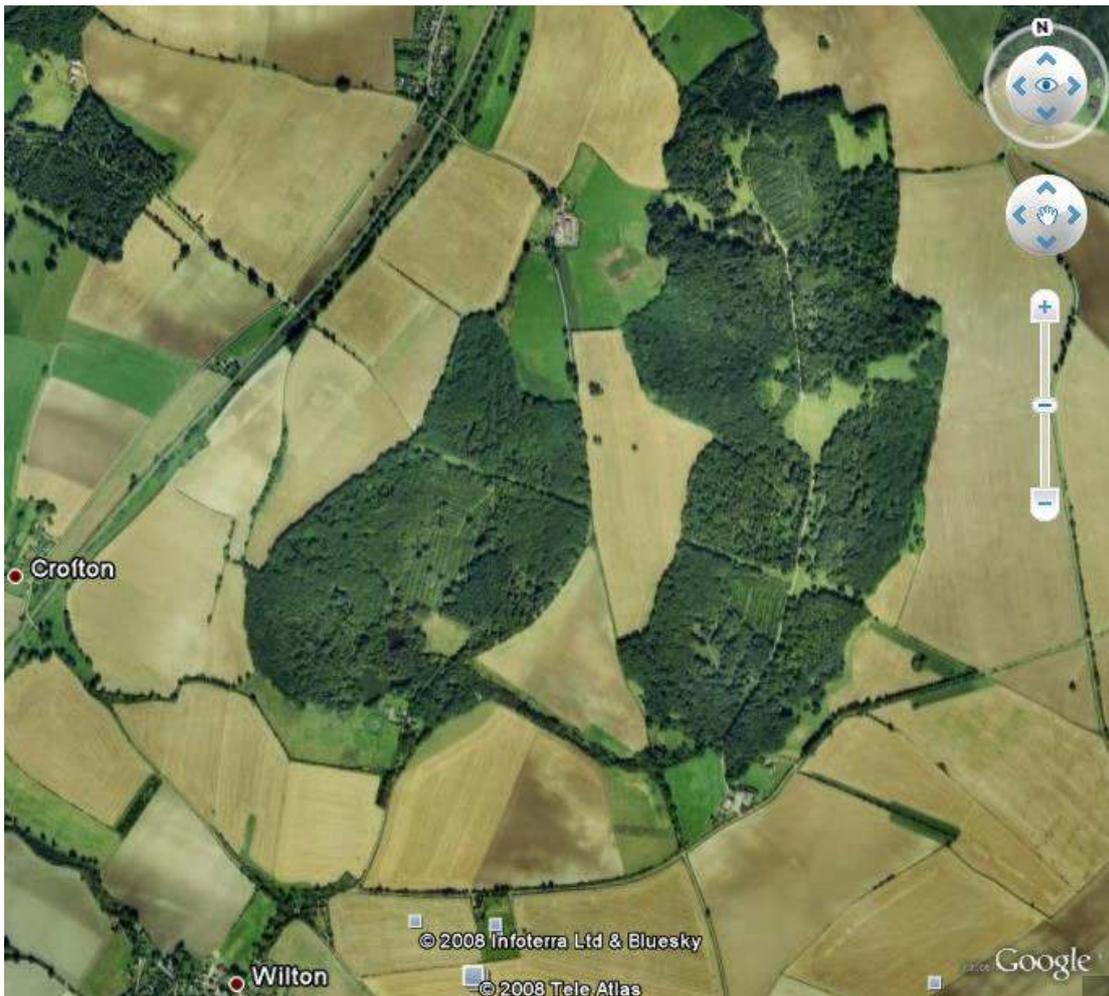




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Archaeology Field Group

Bedwyn Brail, Wiltshire: Geophysical and Earthworks Survey



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Geology

Chalk bedrock is overlain by Tertiary deposits of The Reading Beds, London clay and Bagshot sands, comprising c10m of brown clayey sands and sandy clays with ironstone (Geddes 2003).

Introduction

An aerial photograph taken in 1946 shows what appears to be a rectangular feature in an area of the brails to the north of a conduit house excavated previously by the WANHS AFG (Gunter, 2012). In 1946 this area was open ground but is now wooded. The feature may be a woodland bank or something similar, but as it is on the projected line of the exit pipe from the conduit house was worth investigating.

One of the Longleat Thynne papers transcribed by Graham Bathe (2006) refers to the pipe from the conduit house thus: "I doubt not to have water running in the base court [*of the house*] or at least within iii feate wher it is best to make the mortar heapes because the water runneth ther and the lyme kiln not farroff."

The investigation took place on 6th-7th May 2012 using a plane table to survey the area, and magnetic susceptibility to look for evidence of burning which may indicate the location of lime kilns. Test pits were hand dug over several areas showing high magnetic susceptibility.

Methods.

Plane Table Survey.

The table was set up in the middle of the area surrounding the feature identified on the aerial photograph. An alidade and tape were used to determine the angle and distance from the plane table of the various features of interest. These were plotted at the appropriate scale on drawing film fixed to the plane table (Figure 1).

Magnetic Susceptibility Survey.

A grid 30m x 25m centred over a point in the middle of the feature identified was laid out on a north / south axis. Magnetic susceptibility readings were taken at five metre intervals along transects 5 metres apart until an area of high susceptibility was found. This area was then surveyed at one metre intervals along transects one metre apart working outwards from the initial high reading. All readings were recorded manually and subsequently entered on an Excel spreadsheet against the eight figure National Grid Reference for the reading location. The spreadsheet was then used as input to MapInfo GIS software and a distribution map produced (Figure 2).

Heights above ODN were taken at the four corners of the grid using a dumpy level referencing a benchmark set up during earlier work at Bedwyn Brails.

Test Pits.

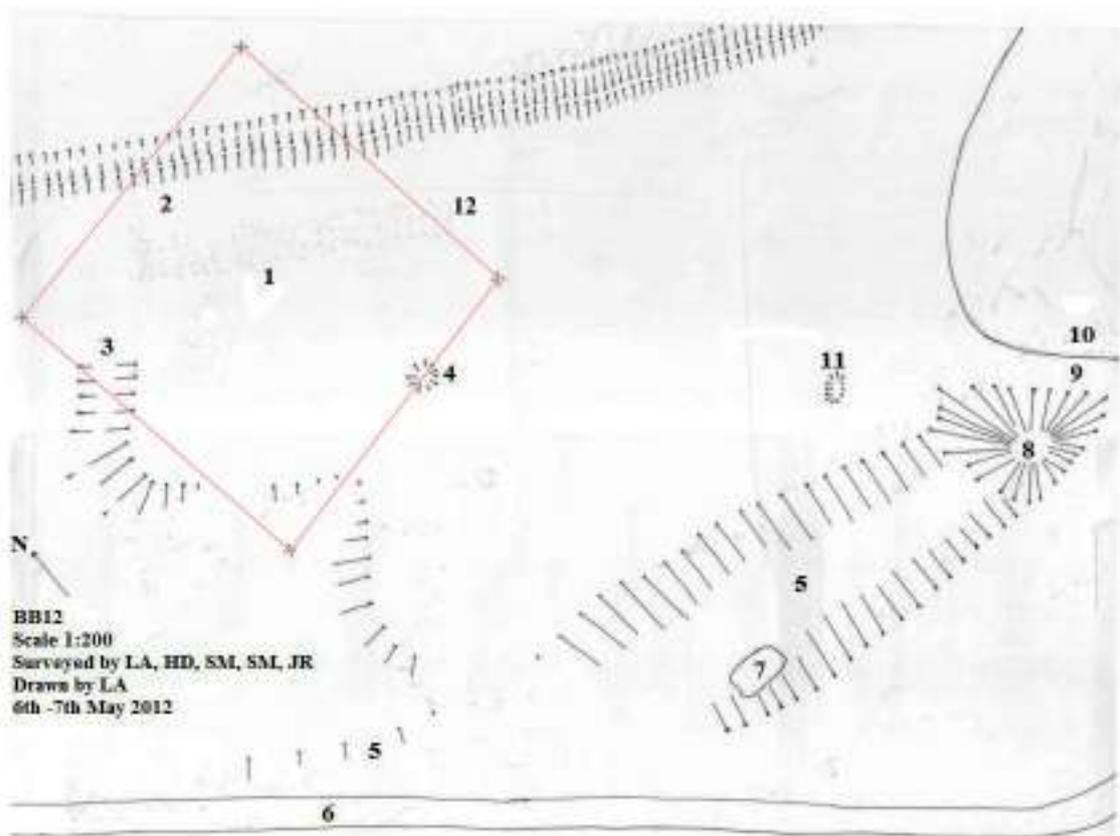
Three test pits were dug to investigate the high magnetic susceptibility area, one on the edge of the area and two in the middle. The one on the edge was dug to explain the difference between a low and a high reading at adjacent points, and the other two to explain the high readings.

Results.

The levels recorded showed that although the site was at a lower level than the conduit house and so water could be brought there the site slopes 3.5 metres from the south-east to the north-west and so would be unsuitable for a large building. Geologist Isobel Geddes who was leading a group through the Brails at the time considered the site unsuitable because of its close proximity to swallow (sink) holes.

Plane Table Survey

Fig. 2 Earthwork survey



Features noted are numbered on the drawing and described below:

Earthwork Survey Features

1. Appears to be a platform.
2. Woodland boundary with external bank and internal ditch. This appears to be later than most of the woodland boundaries, forming a division running straight north-west to south-east. Rackham (1986) notes that old boundaries tend to be sinuous, whilst more modern versions are straight and angular.
3. Ditch or path, a ditch seems more likely, draining the plateau.
4. Extraction pit, the underlying geology is clay and sand, useful commodities.
5. Holloway.
6. Present day track.
7. Extraction pit currently filled with water, suggesting that clay was extracted.
8. A sink hole/ extraction pit, the deepest extraction pit in the area, removal of clay has allowed a sink hole to develop in the chalk.
9. A dam, the current landowner has dammed the Holloway here to form a pond.
10. A modern pond - see 9.
11. An extraction pit.
12. Position of magnetic susceptibility grid

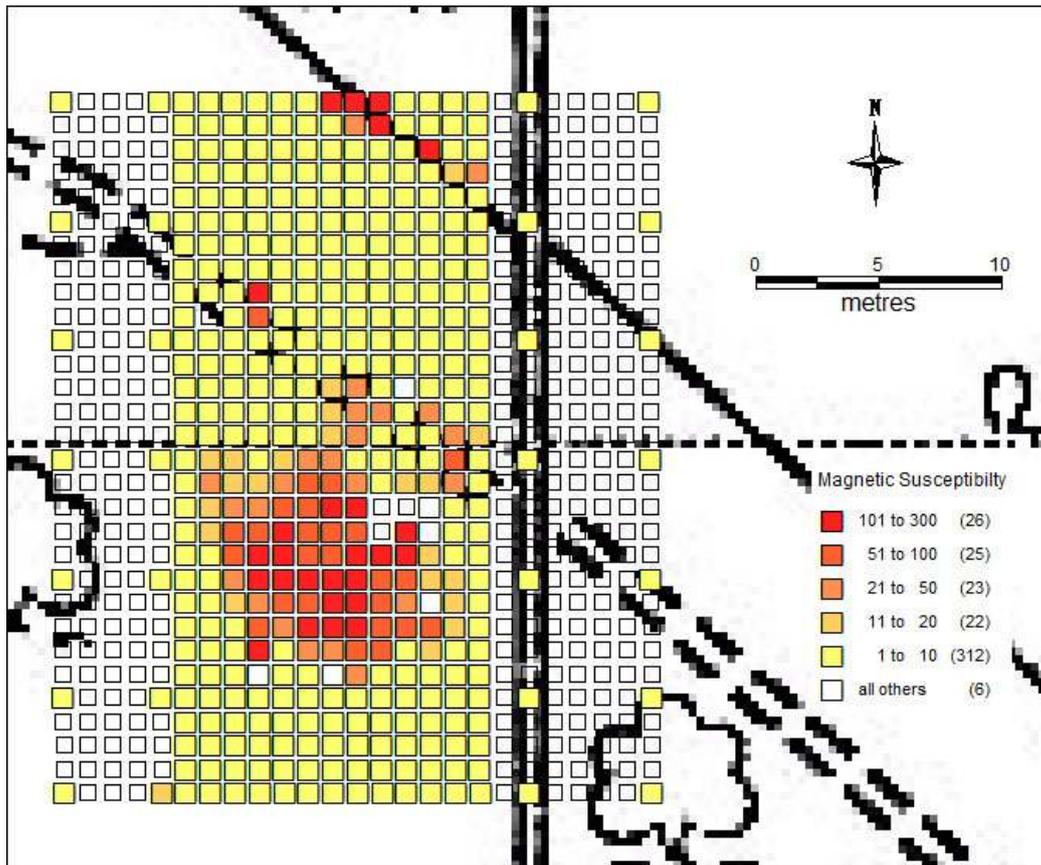
Magnetic Susceptibility

The magnetic susceptibility survey revealed an area approximately eight metres square towards the centre of the area surveyed. There were also one or two isolated areas of high readings which appear to coincide with a woodland bank and footpath which cross the area surveyed (see figure 3). These readings were probably caused by the presence of buried remains of fencing, as fragments of barbed wire were recovered from just below the surface of one area.

Test Pits.

All the central high readings appear to be due to the presence of fired ceramic material identified as brick or tile fragments and areas of burnt soil. All high reading areas excavated also revealed patches of clay.

Figure 3. Plot of Magnetic Susceptibility Readings



Interpretation.

The topography of the area makes it unsuitable as a site for a substantial building such as that proposed for Edward Seymour. However, the presence on the site or close by of clay, wood for fuel, and water would make it suitable for brick making. The presence of burnt soil and fired clay fragments suggest it may have taken place here, but there is no indication of when, and the small footprint of the burnt area suggests it was on a small scale.

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