

Wimpole Estate Brickend

On 23 and 30 April 2006 Archaeology RheeSearch carried out magnetometry and resistivity surveys at Brick End on the Wimpole Estate in Cambridgeshire.

Members participating: Brian Bridgland, Pat Davies, Liz Livingstone, Bruce Milner, Ian Sanderson, Maureen Storey, Tony Storey.

Estate coordinator: Simon Damant.

Site conditions: Predominantly low grass with some minor track rutting. A south facing, sloping field with a brook at the bottom. Northern edge post and wire fence running parallel to the brook. Access road to the east, access point at south east corner.

Weather: Warm, humid; drizzle and noticeable temperature fall later during day 1. Previous week cool with some rain. Intervening week mild with some rain. Day 2 warm and sunny throughout.

Soil: Auger samples taken across the survey area by estate staff during surveying showed complex and variable subsurface conditions. Topsoil (30cm) moist loam (see below).

Equipment: Bartington 601 gradiometer; TRCIA 50cm twin probe.

Area covered:

Magnetometry day 1	four 30×30 m grids (60×60 m)
Resistivity day 1	two 20×20 m grids (20×40 m)
Magnetometry day 2	four 30×30 m grids (2×30×60 m)
Resistivity day 2	four 20×20 m grids (40×40 m)

Location: TL 339517 820m NNE of Wimpole Hall

(All images following are orientated with north to the top of the page)



Location showing grid corners. (resistivity - ●, magnetometry - +).

On the ground location points – northern fenceline fence post 115m from road fence; 5m South normal to the fenceline. Double braced fence post along roadside opposite mature tree 13.55m to SE grid corner, 27.55m to mid E grid corner. Gatepost to SE grid corner 32.95m. Gatepost to braced post following fence line 35.95m. Gatepost to bridge railings W20.90m, E16.40m.

Purpose of survey: To look for evidence supporting the moat structure shown on the plan supplied by S. Damant, presumed to be the Arrington estates of the Earl of Hardwicke survey of 1815 (SR C43 County Collection) alternatively it could be by Robert Withers in 1825.

1815 Map of
Brick End



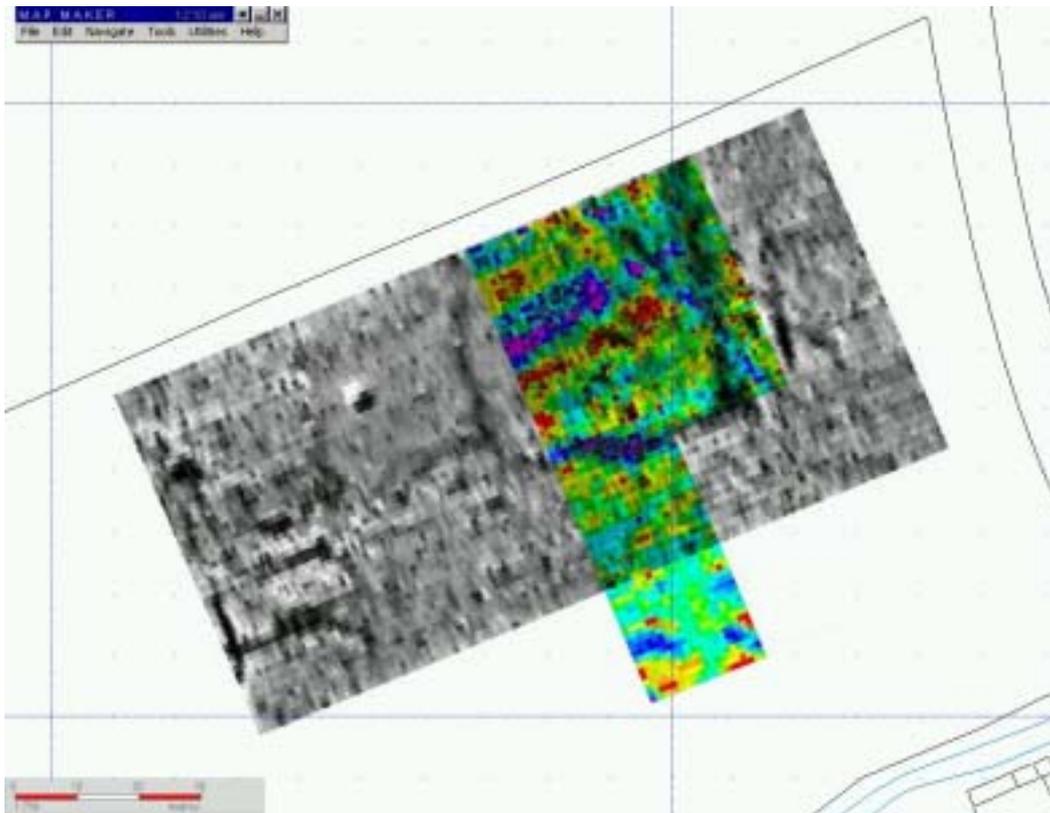
Results:

<p>Blue low, Red high Resistivity survey 80 m × 40 m</p>	<p>Black low, White high Resistivity survey 80 m × 40 m</p>	<p>Magnetometry survey 60 m × 120 m</p>

Raw data is available as a separate appendices document.

Resistivity readings: 1 m interval 1 m separation.

Magnetometry readings: 4/m 1 m separation.



Magnetometry and resistivity results superimposed

Discussion:

Magnetometry results show a clear feature coincident with the southern portion of the moat on the 1815 map. There does, however, seem to be a spur from the moat running to the south west, and no suggestion of the moat run-off to the south. There is a NS dividing line, which might be coincident with the western spring line shown on the 1815 map which could indicate that this was the actual drainage route. Building activity is suggested on the western side of this divide. A large isolated anomaly lies close to the small pond shown on the 1815 map.

Resistivity results are coincident with the magnetometry results with regard to the southern line of the moat. The eastern line attributed to the moat does not appear in the resistivity results but a linear feature running NW-SE appears in both sets of results perhaps suggesting a later drainage channel. The low and high resistance areas inside the moat area might suggest a metallised track running EW, interfering with the field drainage and resulting in moisture collection on the north (upslope) side. The NW-SE low resistance line may be a drainage channel for this collection area.

Despite a good fit between the 1815 map and existing boundaries, the actual location and shape recorded differs from the map, the most likely cause of this is photographic distortion unless extremely sophisticated lenses were used.



Magnetometry survey superimposed on 1815 map and current map features.



Resistivity survey superimposed on 1815 map and current map features.

Soil profiles in the immediate area of the surveys, abstracted from a report by Rodney Burton and the Cranfield Institute (provided by S. Damant):

Soil profiles indicated that much of the top soil was disturbed with charcoal and small bits of building stone/brick (however this was very mixed). The area in question lies in a re-entrant valley to the River Rhee and the overlying glacial deposits that have moved into the valley from the surrounding slopes and are made of a matrix of St Lawrence series, Drayton series, Abington series. Further soil profiles are from river deposits Thames series and Milton



series. The Lode/coprolite and possibly Eversham series are related to the direct underlying cretaceous geology.

The Lode series is above the Upper Cambridge Greensands which is the source from where the coprolites dug from in the late nineteenth century. Further investigation will be required to ascertain whether or not coprolite was dug for in this area.

The Eversham series lies over the Gault clay.

In and around the moated site only Drayton Abington series could be detected although the distinctive olive green sands were seen in the soil especially the North West end of the moat. It is therefore more likely that coprolites occur near the surface just a little bit further north of the magnetometer survey. From the aerial photographs when the soil has been ploughed and tilled there seems to be little evidence for any systematic removal of coprolite as occurs in other areas of the estate namely Rectory farm in the Orwell parish.