



Hildersham Geophysics Report

In November 2007 Archaeology RheeSearch Group carried out magnetometry and resistivity surveys at the suggestion of Andrew Westwood-Bate to determine whether there were any subsurface structures would account for the lumps and bumps on the site.

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

Site liaison: Andrew Westwood-Bate.

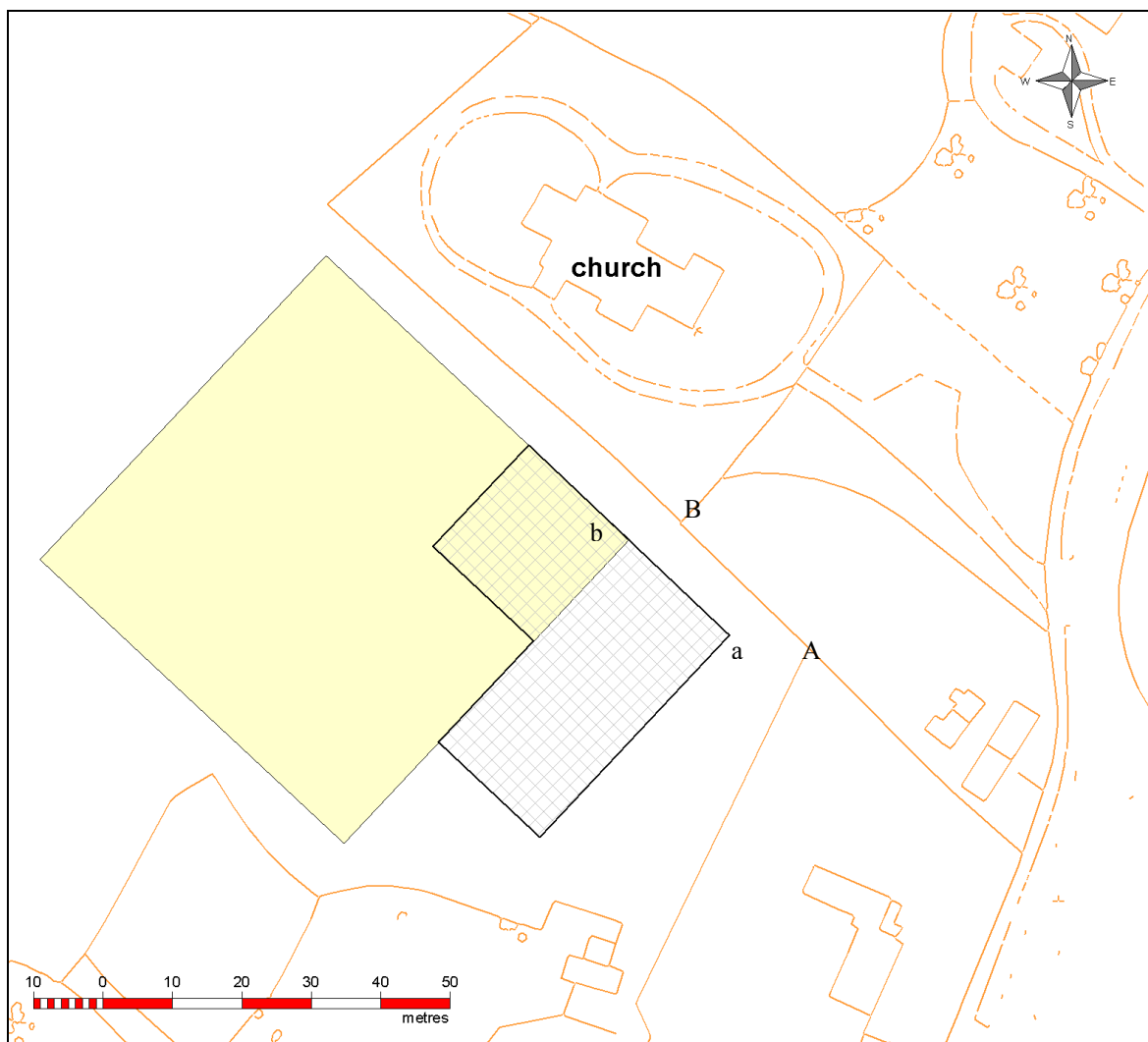
Site conditions: Close cropped paddock sloping down to SW.

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

Area covered: Magnetometry four 30 m × 30 m grids
Resistivity three 20 m × 20 m grids

Location: TL 545 488, SW of the churchyard, Hildersham.

Images are orientated with north to the top of the page except where indicated otherwise.



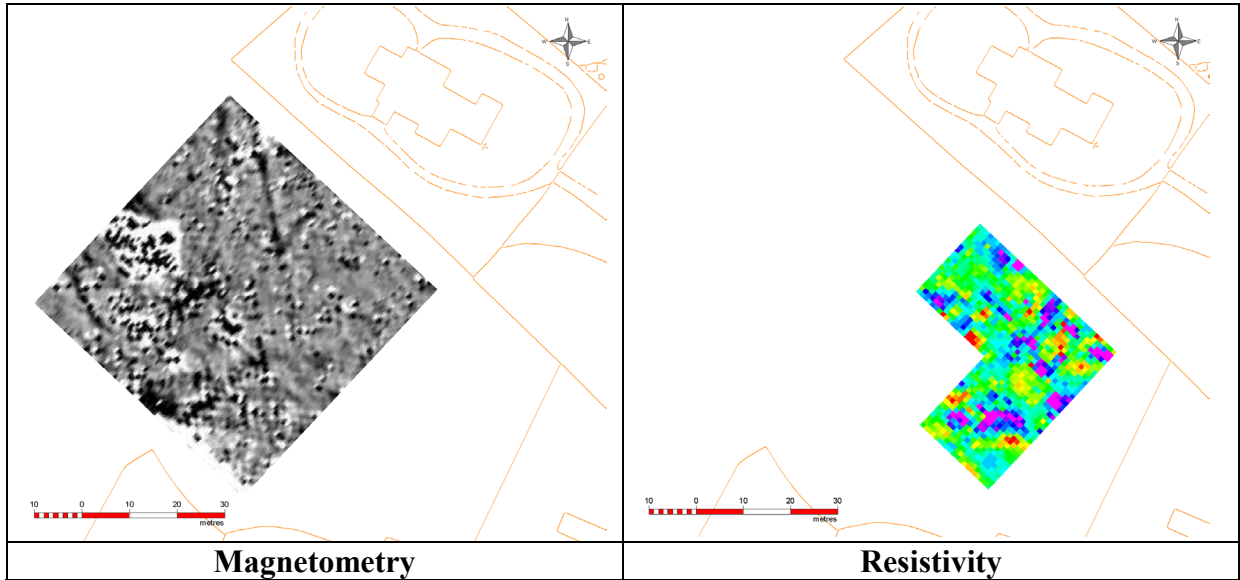
Location plan: Survey areas.

(Resistivity area crosshatched, magnetometry area solid.)

*On the ground location points. Aa 10.86, Ab 30.14, Ba 19.93, Bb 7.04 AB 28.80
N corner of magnetometry survey to nearest churchyard corner 7.32 m*

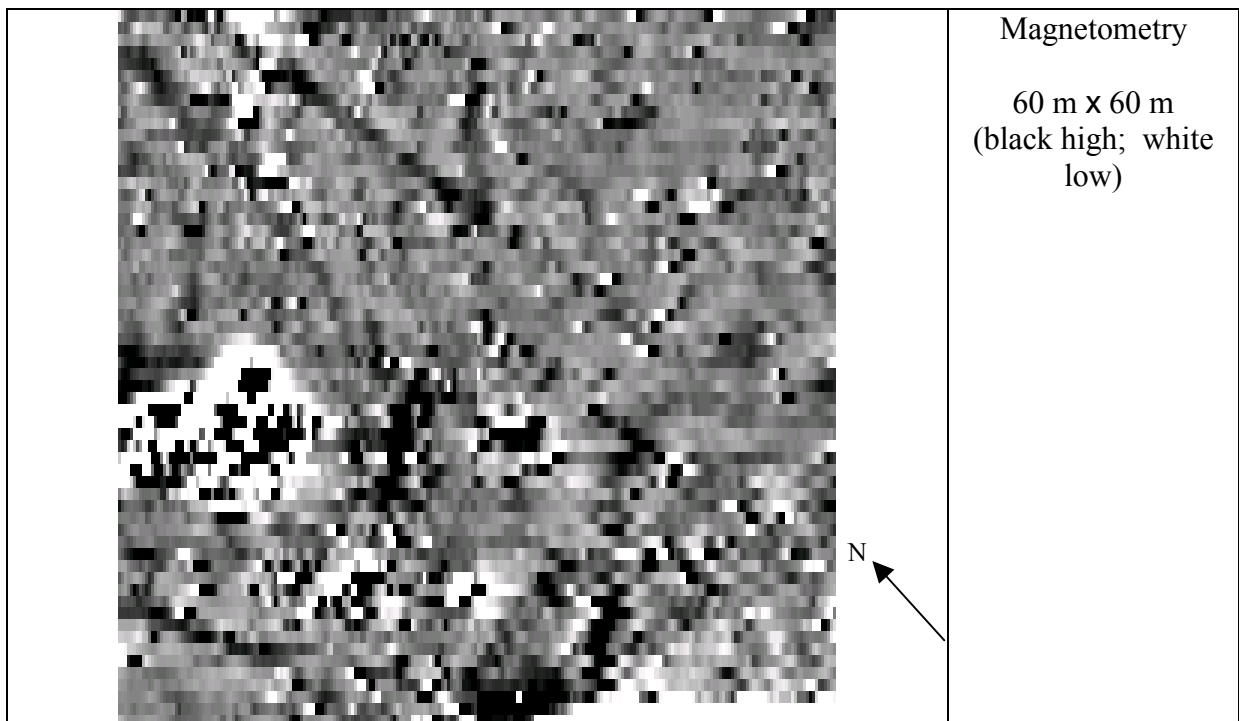
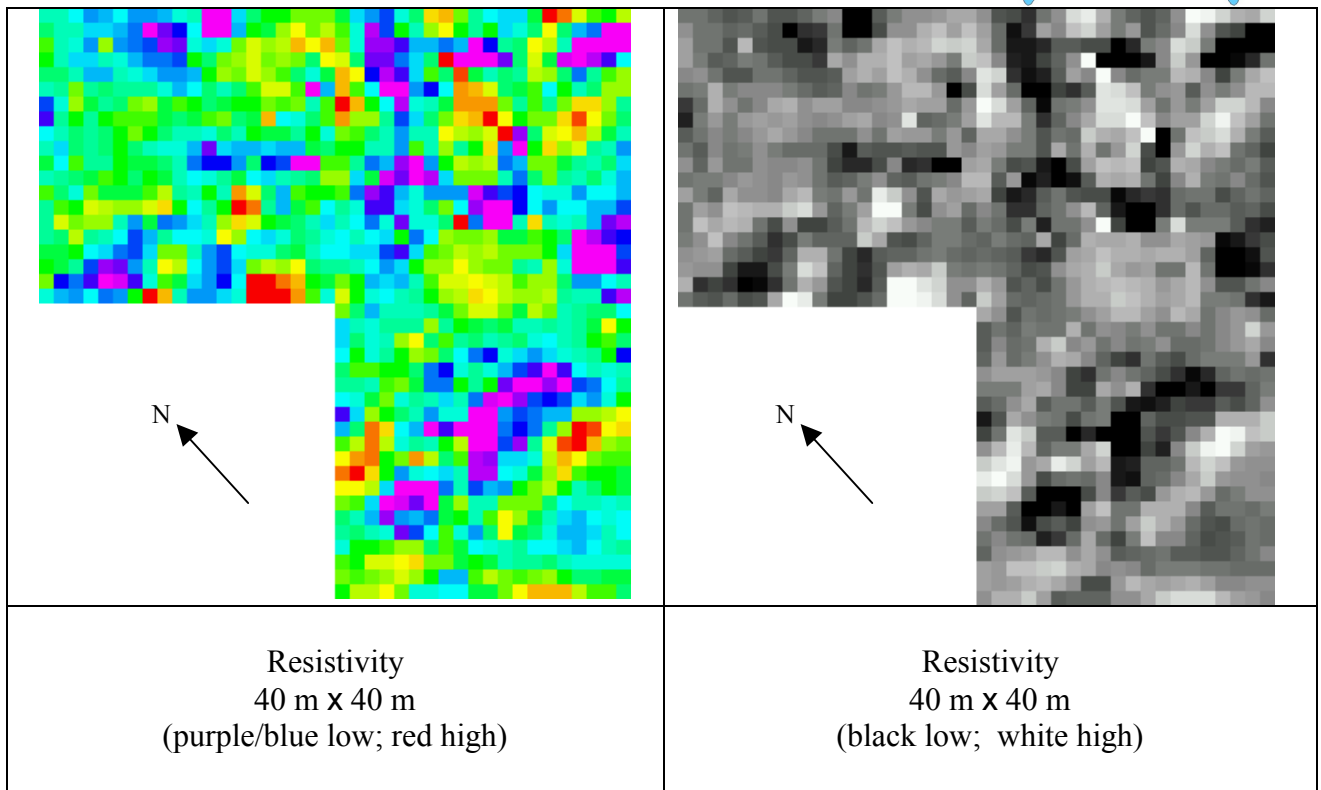
Purpose of survey: To determine if any subsurface structures were detectable which would account for the minor earthwork variations on the site.

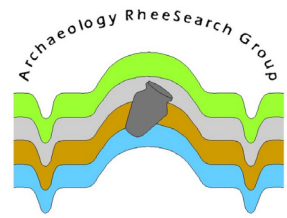
Results in context:



Aerial photograph with the survey areas outlined.

Results detail:





Discussion:

Magnetometry.

The SW edge of the magnetometry survey was affected by a nearby wire fence. The survey area as a whole, but particularly the W 30 m x 30 m grid, has a scattering of small strong ferrous or intense heat type responses. The W grid also has a larger area of strong responses with no apparent structure. This could indicate an area of metal working given that we were told that a set of bells were rumoured to have been cast in the vicinity. Two linear features run approximately NS across the survey area. The strongest, to the E, runs NS from the N of the survey until it intersects with another strong linear feature running to the NE. The NS line continues from the intersection but is markedly weaker. The other NS line (to the W), if extended beyond the survey area, would converge with the first at the NW corner of the churchyard; and like the first line becomes much weaker to the S. Neither of the two NS lines is coincident with a cropmark which runs in a similar direction between them. The NE spur line is coincident with another cropmark, being aligned towards the porch of the church. The abrupt reduction in the signal strength of the above suggests that some mechanical process has taken place in a band parallel to the NE edge of the survey area probably from the point of change to the edge of the strong response area. This could be a marked increase in soil depth, or more likely, a removal of surface which included part of the underlying archaeology. A minor terracing effect was noted during surveying, but without an earthworks survey it is impossible to relate the change in signal strength with the surface.

The alignment of the stronger signals would suggest trackways from the village past and around the churchyard, possibly towards the tumulus shown on the OS 1" First series map of 1836 just beyond the churchyard to the NW. There are several other features within the survey area but they lack the coherence needed to suggest possible functions.

Resistivity.

A well defined rectilinear, low resistance feature is apparent towards the E side of the survey area. A short line of high resistance runs NS across a gap in this feature. The shorter side of the low resistance part is parallel to the line of the churchyard boundary. The low resistance part could represent the robbed out foundations of a building about 9 m x 11 m. The high resistance part is inconsistent, but could reflect incomplete or partial removal of foundation materials.

This interpretation of this site might be enhanced with an earthwork survey.

Raw data are available as separate appendices.

Magnetometry readings: 4/m, 1 m separation.

Resistivity readings: 1 m interval, 1 m separation.

Report by Dr I Sanderson, February 2008