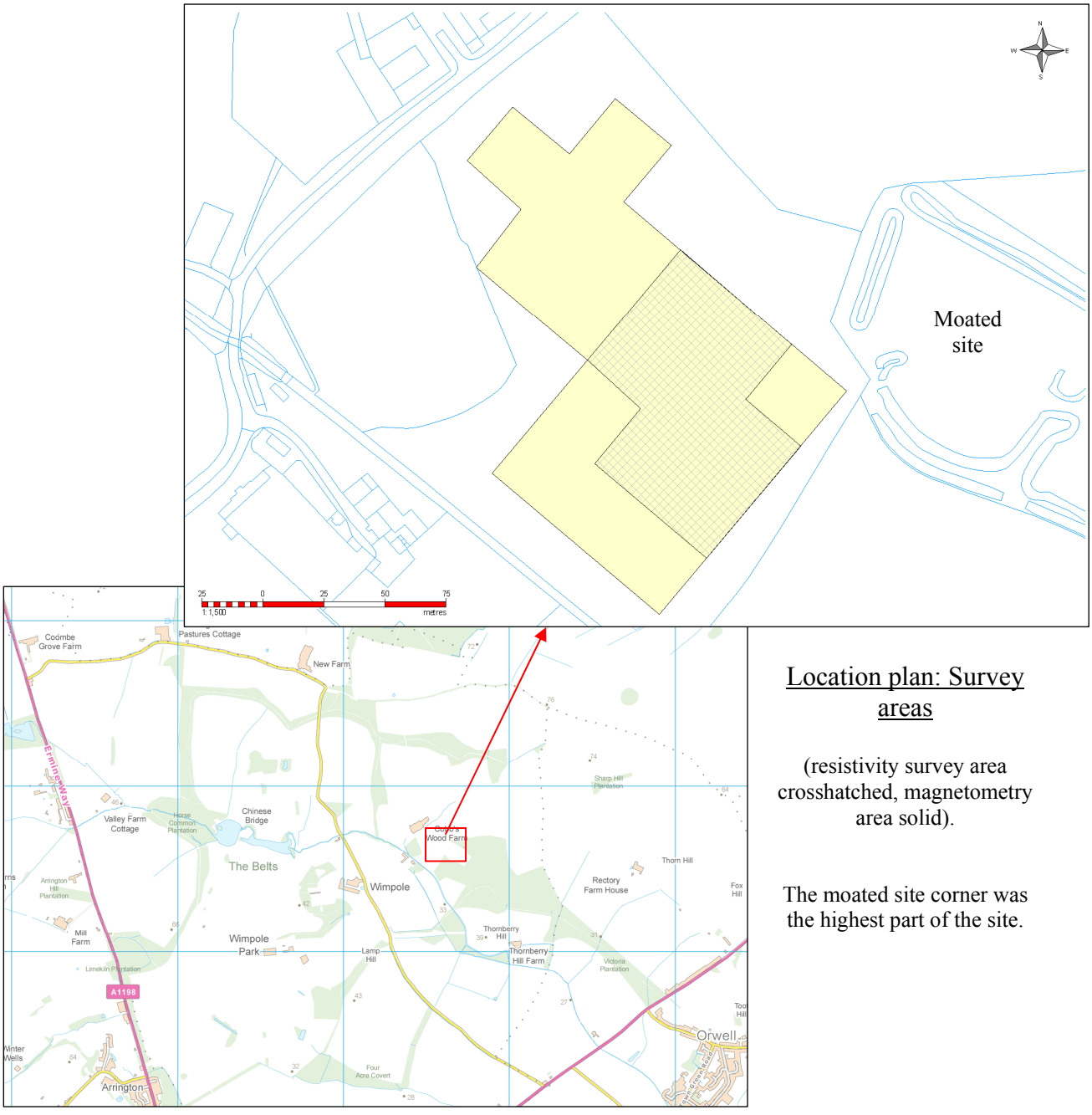
Wimpole Estate, Manor Field Report

In May, June and July 2010 Archaeology RheeSearch Group carried out magnetometry and resistivity surveys on this site as part of a long term evaluation of the Wimpole Estate.
Site liaison: Simon Damant
Site conditions: Pasture.
Members participating: Brian Bridgland, Marc Davies, Pat Davies, Liz Livingstone, Bruce Milner, Ian Sanderson, Gill Shapland, Maureen Storey and Tony Storey.
Equipment: Bartington 601 gradiometer; TRCIA 50cm twin probe.
Area covered: Magnetometry eighteen 30 m × 30 m grids
Resistivity: seven 30 m × 30 m grids

Location: TL 3450 5160, Manor Field, Wimpole Estate Cambridgeshire.



Location plan: Survey areas

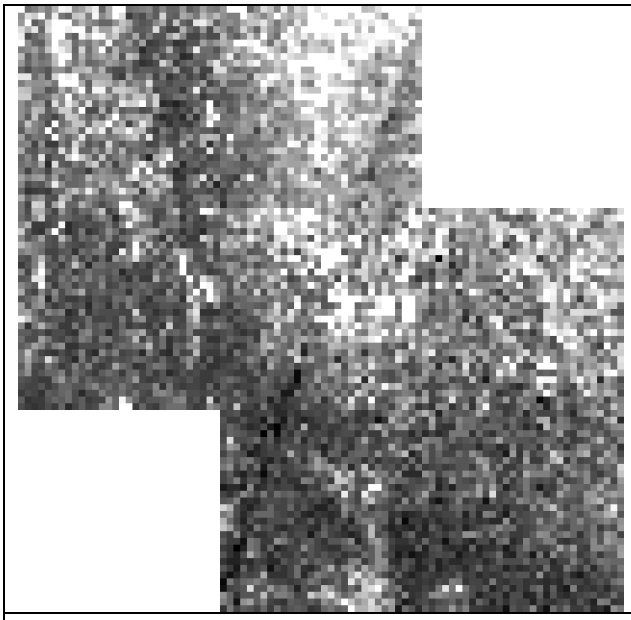
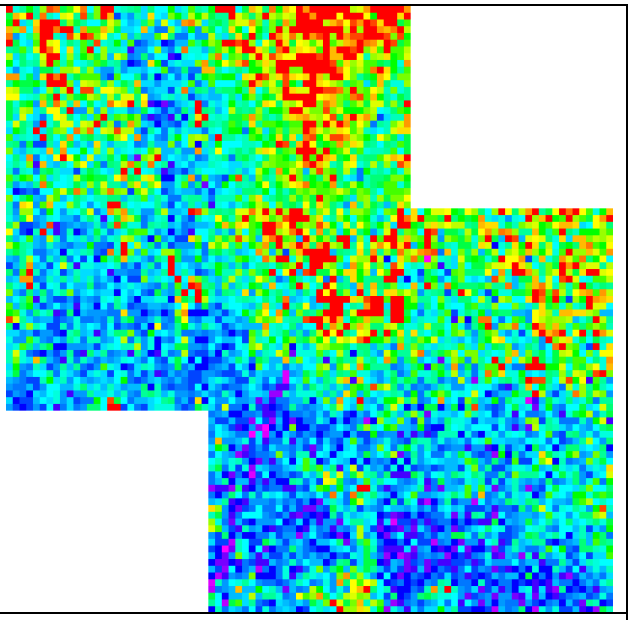
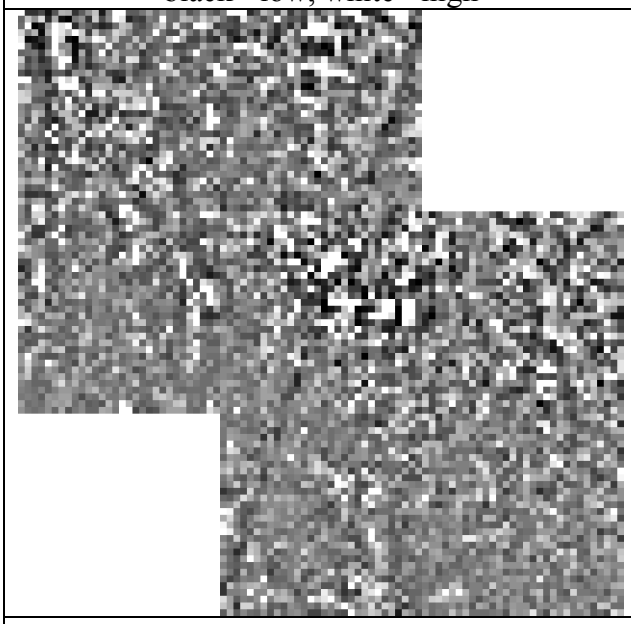
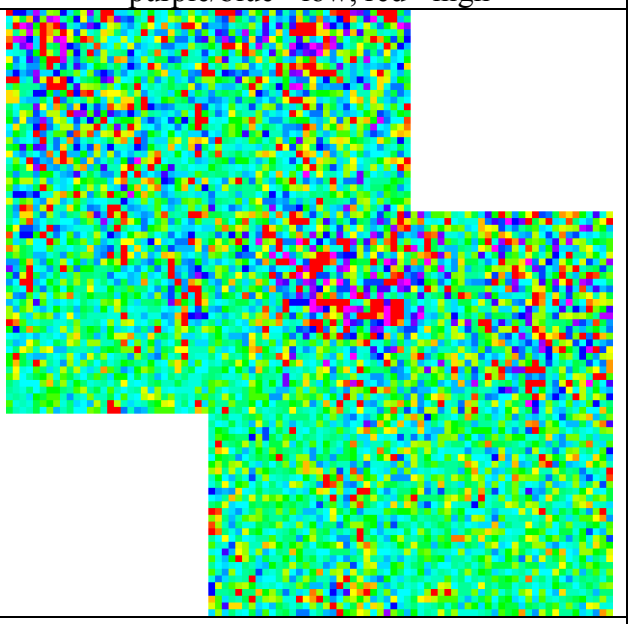
(resistivity survey area crosshatched, magnetometry area solid).

The moated site corner was the highest part of the site.

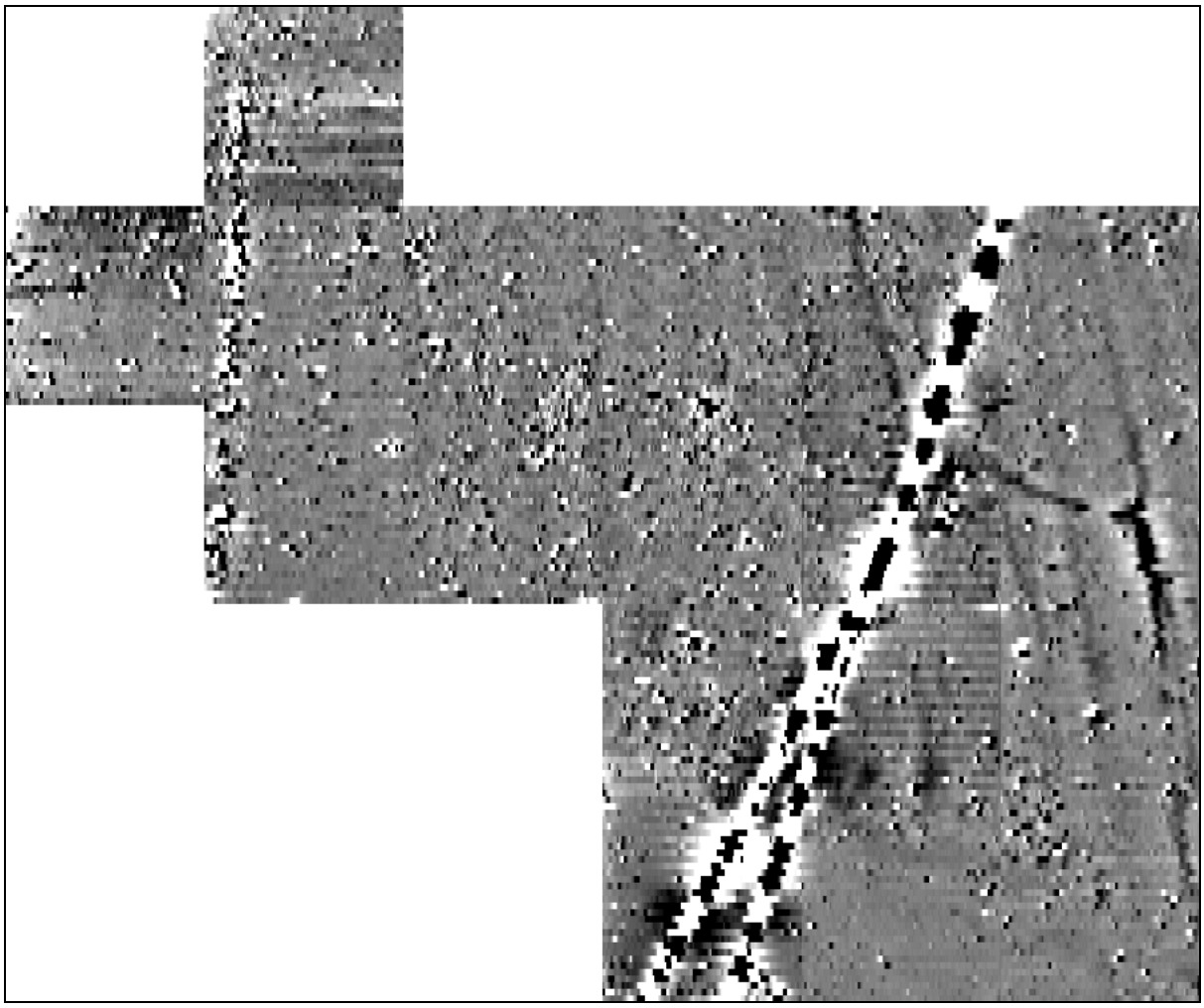
Purpose of survey: To determine if any subsurface features of archaeological interest could be detected .

Results:

The images in this section are orientated for presentation. They are not to a common scale.

<table>
<tr><td>  </td><td>  </td></tr>
<tr><td>Resistivity raw data 90 m × 90 m
black - low, white - high</td><td>Resistivity raw data 90 m × 90 m
purple/blue - low, red - high</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>Resistivity data 90 m × 90 m
high pass filter level 4
black - low, white - high</td><td>Resistivity data 90 m × 90 m
high pass filter level 4
purple/blue - low, red - high</td></tr>
</table>

It should be noted that the resistivity images have all been preprocessed using edge matching techniques because of the extreme variation in recorded values on different visits to the site.



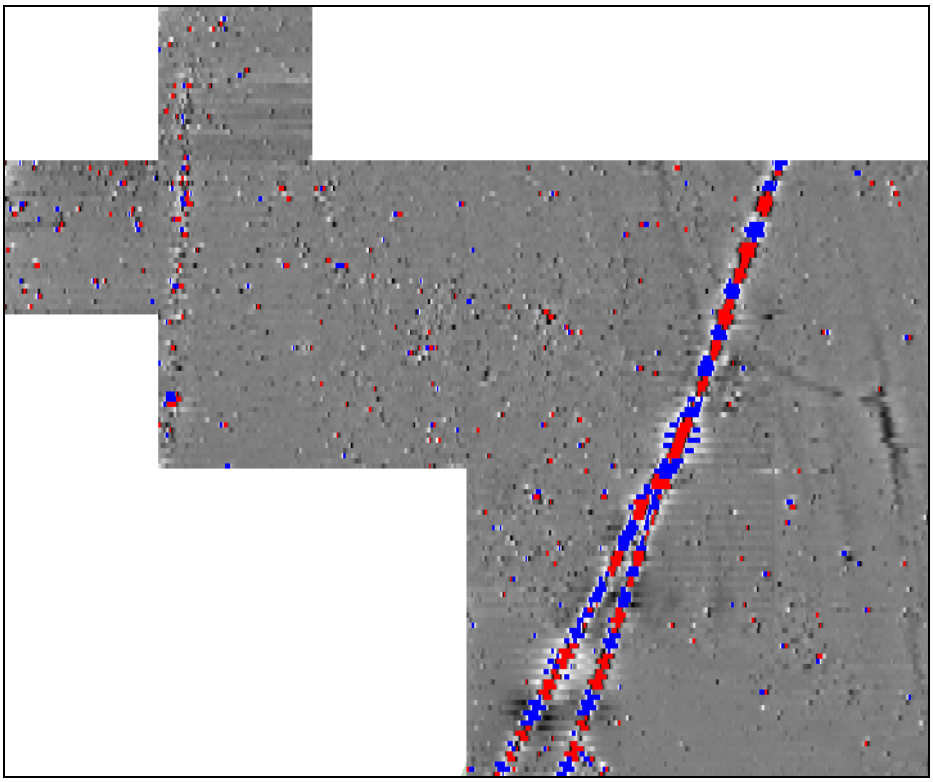
Magnetometry ±5nT, 180 m × 150 m

Discussion

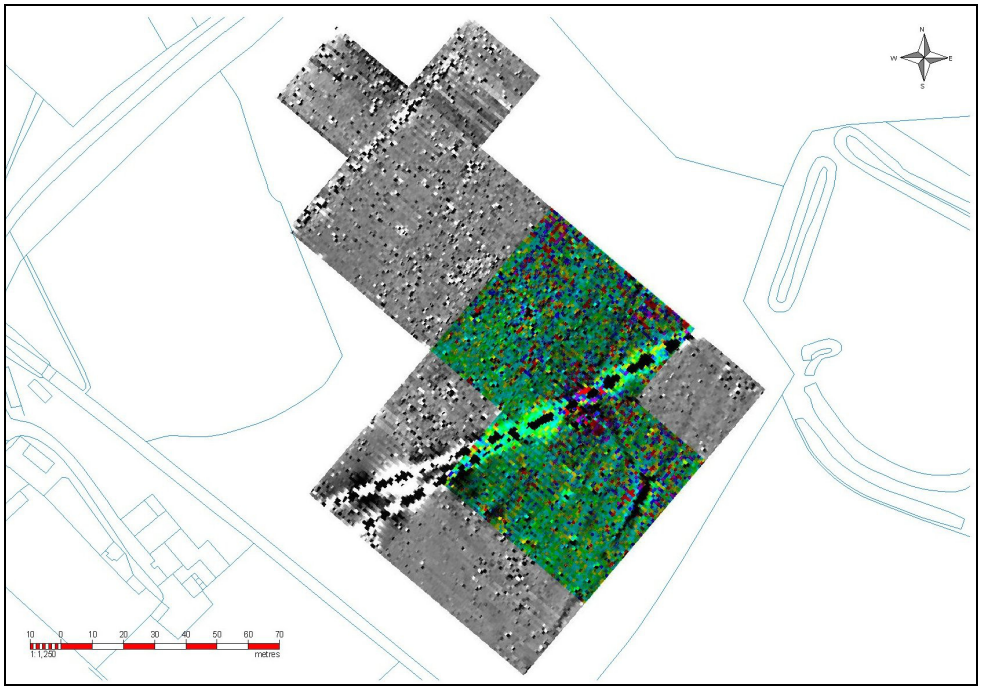
The magnetometry results are dominated by what is almost certainly a ferrous pipe. This appears to split into two distinct lines towards the bottom of the image above. A drain cover was noted outside the area surveyed which would be in line with the pipe at the top of the image. The pipe line shows in the resistivity results but is not clear. Normally this would suggest that a pipe was deeply buried, but in this case with such a strong ferrous signal in the magnetometry the higher resistance expected from a pipe void may be offset by the conductivity of the metal and the possibility that the void is reduced by water.

There is a diffuse but clear vertical line to the left of the magnetometry image which corresponds to a field boundary shown on the Wither's survey of the estate. There is a background scatter of ferrous signals in the magnetometry results which are clustered particularly to the left of the pipeline and almost absent to the bottom of the image. The absence is probably due to silting over or washing out of the magnetic signal particles due to flooding from the adjacent river, and the clustering forms no distinct pattern. To the right of, and across the pipe there is a "**y**" shaped feature with fainter lines running parallel to the long leg of the "**y**" 10 m and 17 m to the left. The short arm changes direction where it crosses the pipe line. The parallel lines suggest the ditches beside tracks from the moated site (off the top of the image) to a riverside route towards the bottom of the image. The stronger magnetic

lines (lower leg and left branch of the "**y**") may represent a stream course but the sharp change in direction as it crosses the pipeline would seem to contradict that hypothesis. A diffuse area of high resistivity at the bend in this line may indicate that a stream was redirected towards the ditches, or the higher values may be associated with works where the pipeline splits.



Ferrous signals greater (red) or less (blue) than 40nT



Superimposition of resistivity and magnetometry results

Raw data are available as separate appendices.
Magnetometry readings: 8/m, 1 m separation.
Resistivity readings: 1 m interval, 1 m separation.

Report by Dr I Sanderson for Archaeology RheeSearch