



Radwinter report

Between September and November 2016 Archaeology RheeSearch Group carried out magnetometry and resistivity surveys on this site.

Members participating: Pat Davies, Brian Bridgland, Liz Livingstone, Ian Sanderson, Gill Shapland, Maureen Storey and Tony Storey.

Site Liaison: Bidwells as agent for the land owner.

Site conditions: Rotovated stubble.

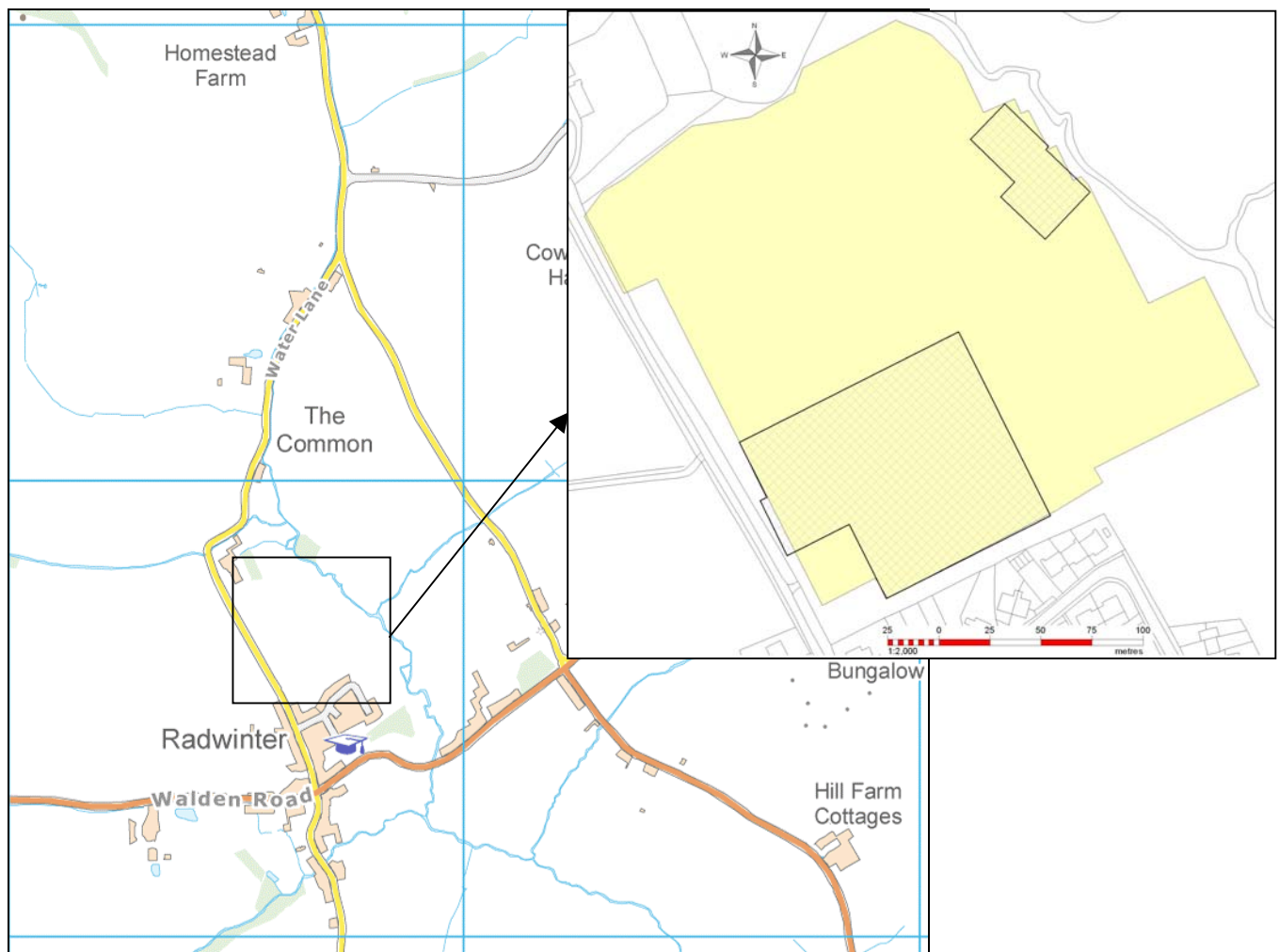
Equipment: Bartington 601 gradiometer; TRCIA 50 cm twin probe.

Magnetometry readings: 8/m, 1 m separation.

Resistivity readings: 1 m interval, 1 m separation.

Raw data are available as separate appendices.

Location: TL 606 377, Water Lane, Radwinter, Essex.



Location plan: Survey areas
(resistivity survey areas hatched, magnetometry areas solid)



Purpose of survey: The purpose of this survey was to determine if any subsurface features could be detected that supported a theory by J. Peterson on the principles underlying the setting out of Roman roads.

Site topography:

The site comprised a fairly level area with a slope down to a stream on the east. The southern boundary comprised domestic gardens to the west and a paddock where housing development had recently started to the east. The other boundaries comprised scrub with trees.

Results:

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

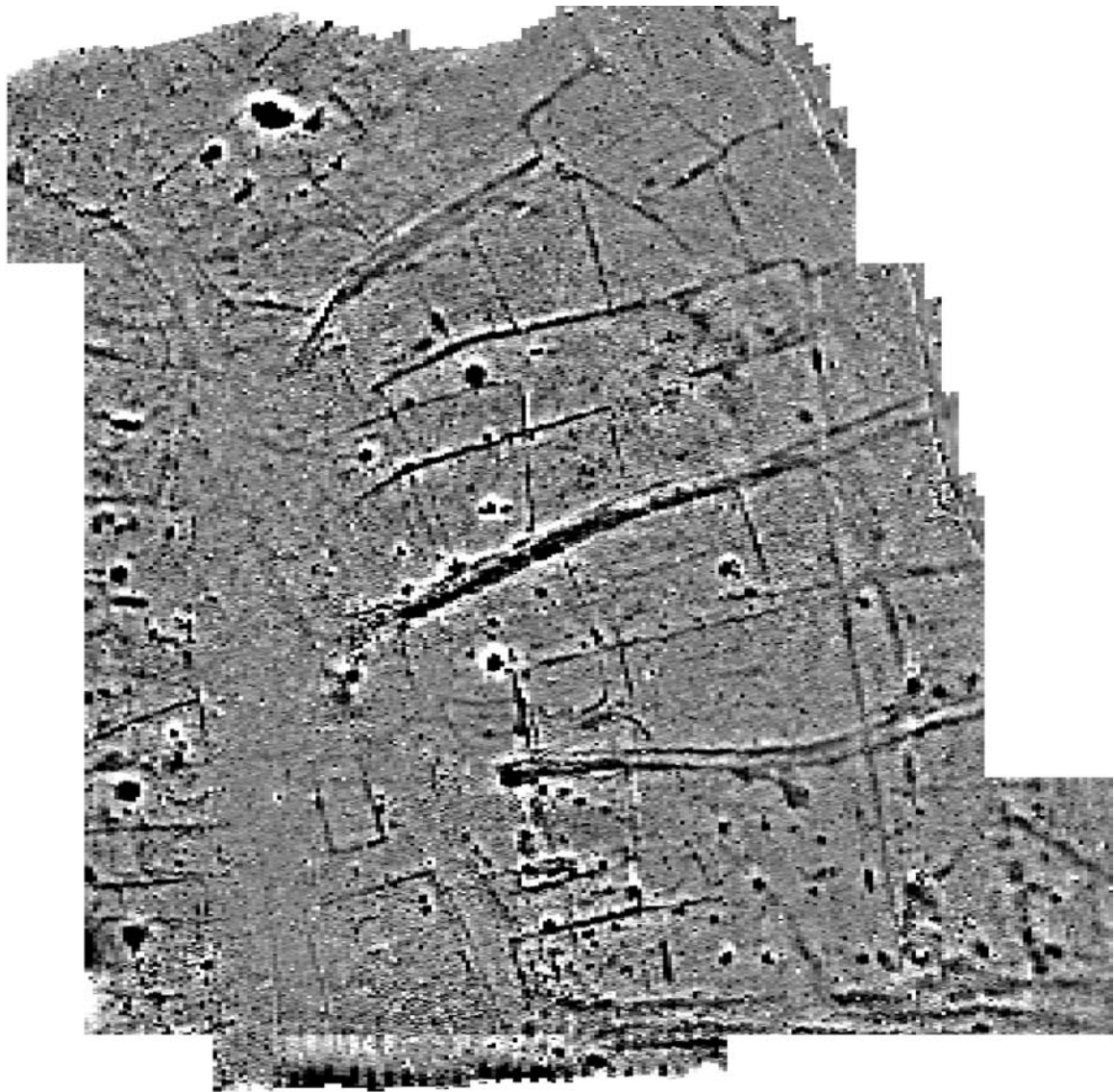
Resistivity
Western survey

		<p>Resistivity 124 m x 101 m</p> <p>Raw data</p> <p>N</p>
		<p>Resistivity 124 m x 101 m</p> <p>High pass filter 7-9</p> <p>N</p>
<p>(black - low, white - high, red - null)</p>		<p>(purple/blue - low, red - high, white - null)</p>

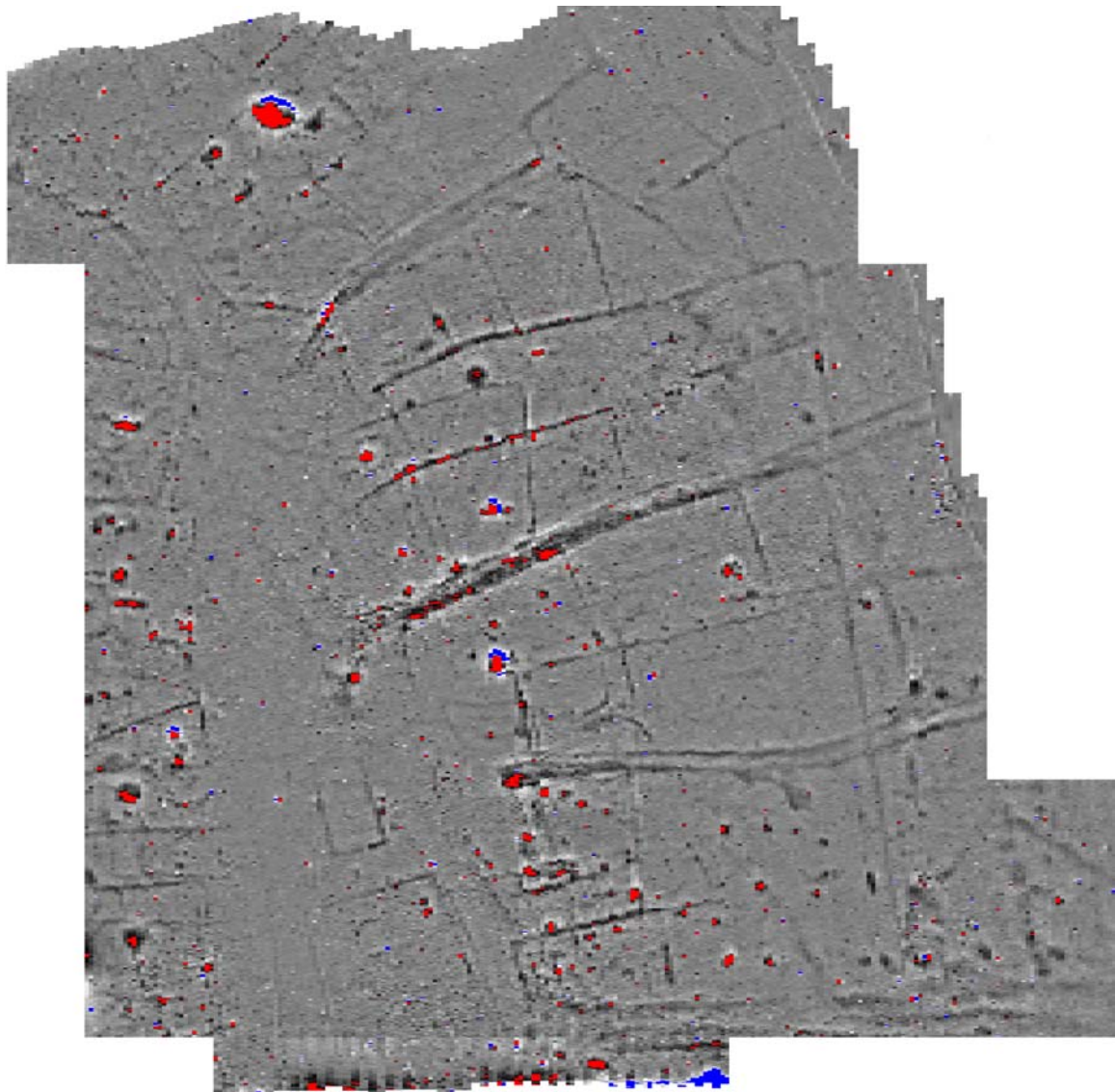
Eastern survey

		<p>Resistivity 34 m x 60 m</p> <p>Raw data</p> <p>N</p>
		<p>Resistivity 34 m x 60 m</p> <p>High pass filter 6</p> <p>N</p>
<p>(black - low, white - high, red - null)</p>		<p>(purple/blue - low, red - high, white - null)</p>

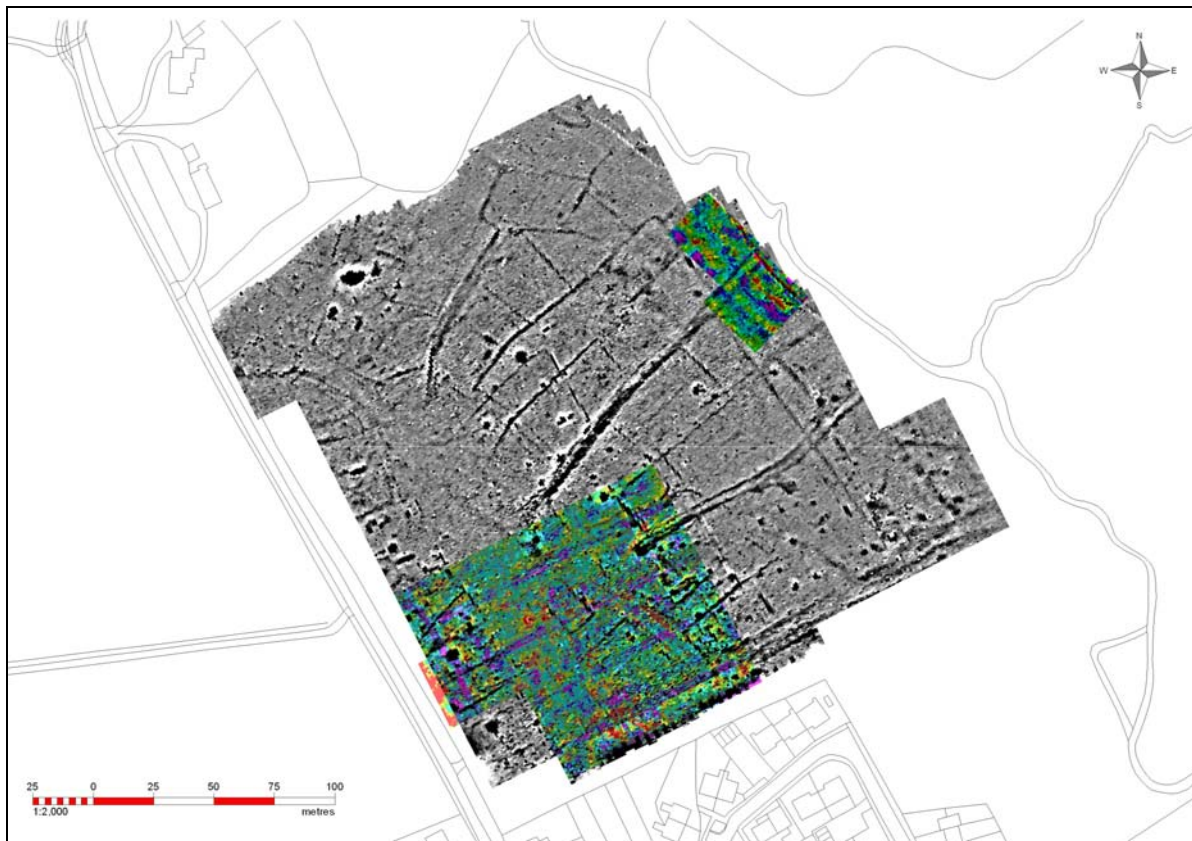
Magnetometry



Magnetometry approx. 250 m x 260 m, range +4 to -4 nT



Magnetometry approx. 250 m x 260 m, range +14 to -14 nT showing responses below this range in blue and above this range in red

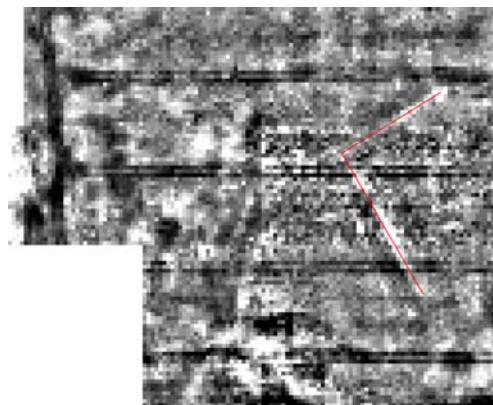


Superimposition of resistivity and magnetometry results

Discussion:

The magnetometry results reflect the discovery of part of a settlement or village which probably extended to the S. The relatively high density of Roman material observed on the surface during the survey and the ‘ladder’ forms along the W edge suggest that is Roman. There appears to be a road entering from the NW which curves to the S and widens before it passes on either side of enclosures towards the S of the survey. There are scattered high intensity points on both sides of this road. These probably represent sites of high temperature activity, such as ovens, kilns and metal working hearths. In the SW corner of the magnetometry survey there is a set of arrow shaped linear features characteristic of modern land drainage.

The resistivity results are dominated by the low values resulting from the tractor lines of the last cultivation. Despite this there is a strong high rectilinear response which matches the line in the magnetometry results on the E side of the road as it passes the larger enclosure. The NE arm of this rectilinear form passes between a strong magnetic line running E and a narrower magnetic response line running N. Overall the resistivity responses were disappointingly unclear, which could indicate that most buildings did not have foundations, that any foundations have been destroyed, or that most of those that remain are below the detection limit of the



Rectilinear form in the resistivity results highlighted in red



apparatus.

The resistivity survey on the E of the field was carried out to explore minor magnetic disturbances and suggestions from local passersby that a building once existed there. Two parallel lines of high resistance values 7 m apart and 18 – 25 m long might substantiate that suggestion but the expected high resistance lines joining the parallels are unclear.

Report by Dr I Sanderson for Archaeology RheeSearch