The Lodge, Horningsea. Geophysics Report

In September 2007 Archaeology RheeSearch Group carried out magnetometry and resistivity surveys on this site at the suggestion of Bill Hughes on the basis of the number of Roman finds discovered during gardening activities.

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

Site liaison: Bill Hughes.

Site conditions: Garden with trees (S), Grass (N).

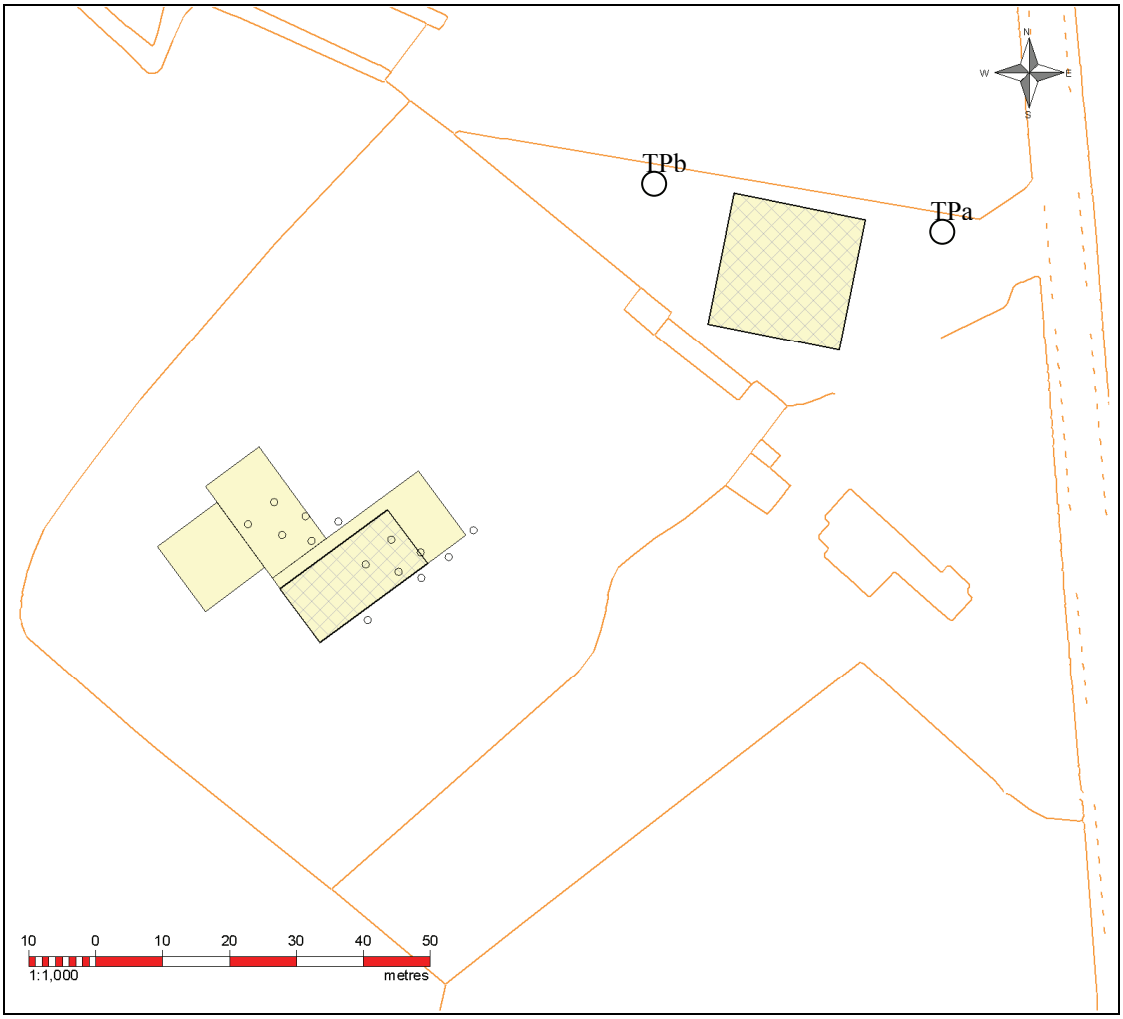
Equipment: Bartington 601 gradiometer; TRCIA 50cm twin probe.

Area covered:

	Magnetometry	one 20 m × 20 m grid, two 10 m × 10 m grids
	Resistivity	one 20 m × 20 m grid, one 27 m × 12 m grid
		one 10 m × 17 m grid, one 11 m × 12 m grid

Location: TL 497 636, The Lodge, Clayhithe Road, Horningsea.

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

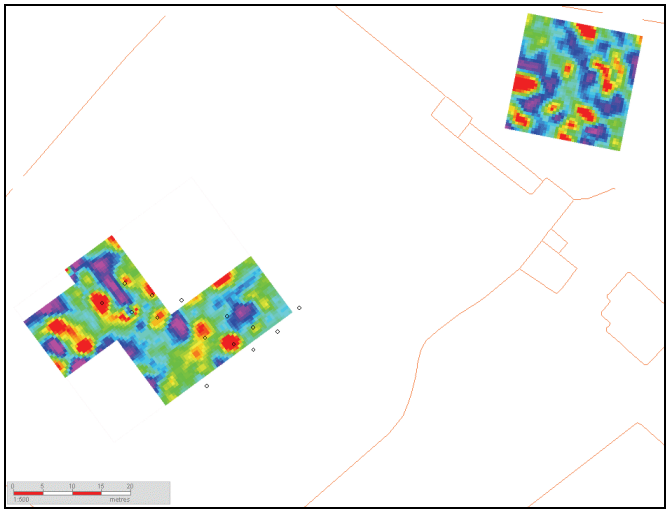


Location plan: Survey areas with Clayhithe Road to the east.
(Resistivity survey areas solid, Magnetometry areas crosshatched, trees circles)

On the ground location points – N survey area: TPa to S corner 24.44, W corner 39.0, N corner 38.89. TPb to S corner 30.59, W corner 19.60. N corner 2.77 from fence. There were no useful ground reference points for the S survey area, locations were determined by laser distance measurement to the nearest buildings.

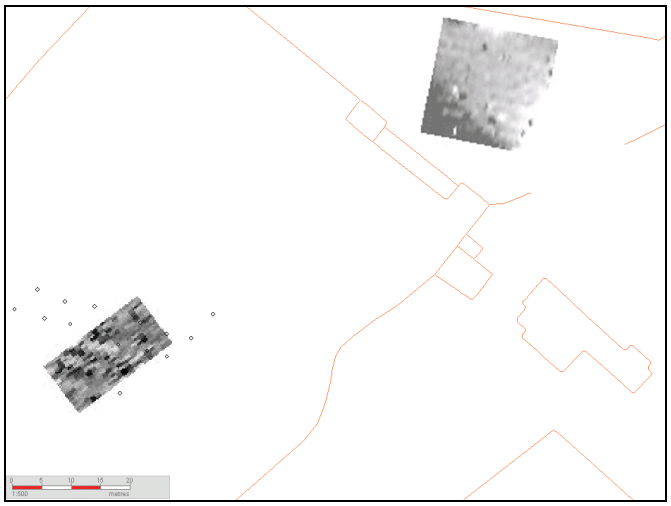
Purpose of survey: To determine if any subsurface structures were detectable which would account for the number of Roman finds discovered during gardening on the site.

Results:



Resistivity

(purple/blue – low; red – high)



Magnetometry

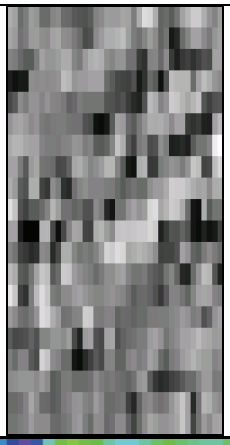
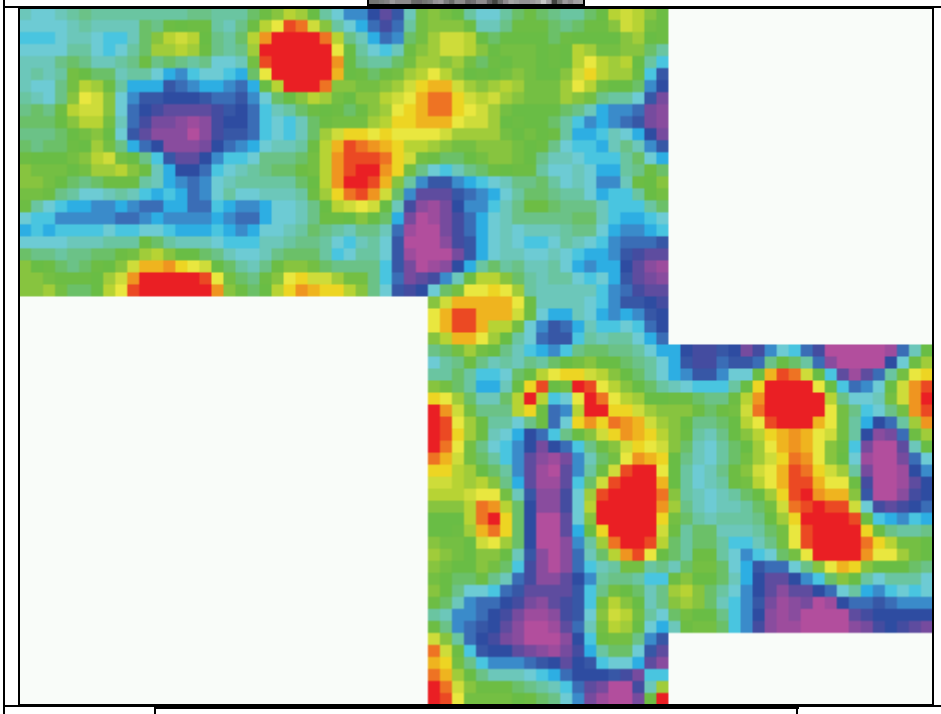
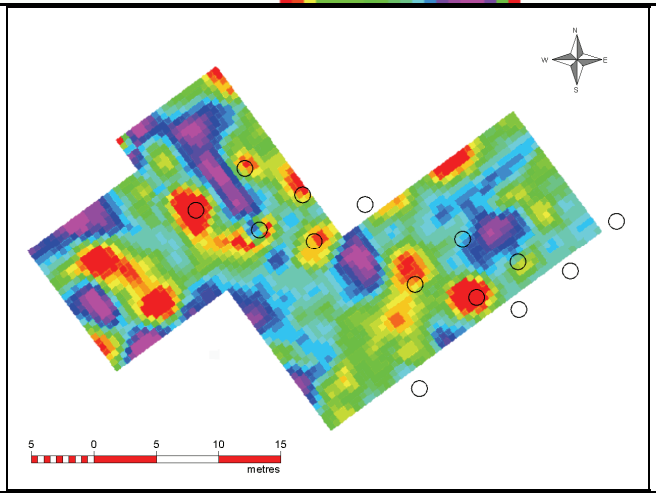
(black high, white low)

Aerial photograph* of the site from SE

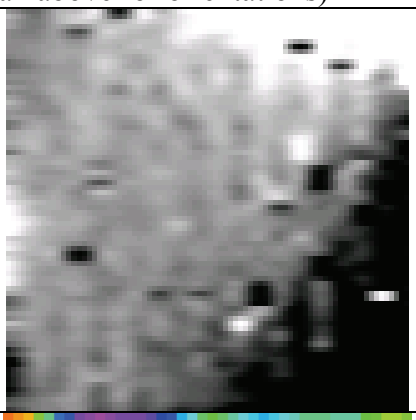
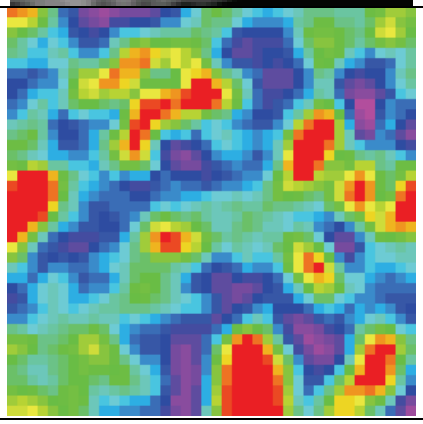
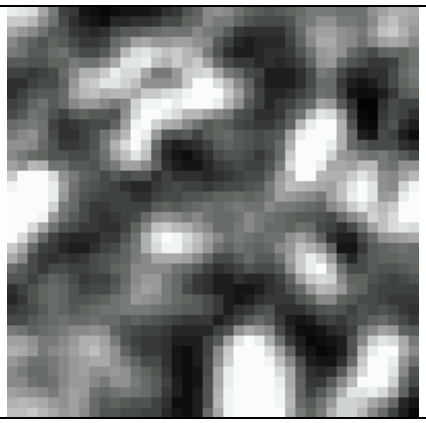
As left with approximate resistivity survey results

* from Local.Live.com

S survey area

	Magnetometry 10 m x 20 m Rotated for presentation (see plan above for orientation)
	Resistivity (interpolated and corrected) 38 m x 29 m (purple/blue – low; red – high) Rotated for presentation (see plan above or below for orientation)
	Resistivity in context showing positions of trees

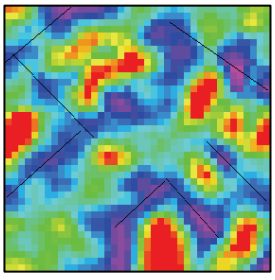
N Survey area
(see plan above for orientations)

	Magnetometry 20 m x 20 m Rotated for presentation N
	
Resistivity (interpolated and corrected) 20 m x 20 m (purple/blue – low; red – high) Rotated for presentation	Resistivity (interpolated and corrected) 20 m x 20 m (black – low; white – high) Rotated for presentation

Resistivity

S survey area:
There was a fair degree of correlation between the location of the trees and areas of high resistivity, which is to be expected, but two of the trees were in areas with low resistivity. However, we were informed that the site had been an orchard prior to its present use, with the trees and root balls being removed and perhaps replaced by good quality soil. This can lead to moisture retentive areas which show up as low resistivity. There are two linear low resistance features.

N survey area:
This survey shows a complex pattern but the area covered is too small to allow meaningful interpretation. There may be some rectilinear ditching (side image), and any of the high resistance areas could be significant but none shows a distinct characteristic pattern.



Magnetometry
S survey area:

Indistinct striping is apparent across the survey area. The signal contrast suggests progressive changes in soil condition rather than specific structures such as ditches. The area covered is too small to pick out larger scale indications.

N survey area:
The SW corner has a markedly different signal from the rest of the survey area with a clear line of differentiation to the NE side. This is almost parallel to the building line to the SW and probably reflects on a different soil type used in the embankment between the survey area and the buildings. Part of a small circular feature is visible towards the S end of the differentiation line. This is almost certainly an image processing artefact. There are 2 or 3 small isolated (white) responses which are probably small pieces of ferrous material. Some signal degradation was apparent to the SE corner. This was probably due to cars on the access road.

Discussion:
This site, given the amount of pottery found, its landscape position, and the proximity of SAM CB64 obviously has a Roman archaeological context. Unfortunately the presence and distribution of mature shrubs and trees in the S survey area, and the limited area in the N survey area means that there was insufficient scope to be confident in identifying features.

Raw data are available as separate appendices.
Magnetometry readings: 8/m, 1 m separation.
Resistivity readings: 1 m interval, 1 m separation.
Thanks are due to Maureen Storey and Pat Davies for their help in refining this report.

Report by Dr I Sanderson, January 2008