

## **Great Chesterford School Field Report**

In April and May 2018 Archaeology RheeSearch Group carried out magnetometry and resistivity surveys on this site to determine whether any archaeological features were detectable.

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

**Site liaison:** Peter Whalley.

**Site conditions:** Mown grass.

**Equipment:** Bartington 601 gradiometer; TRCIA 50 cm quad probe.

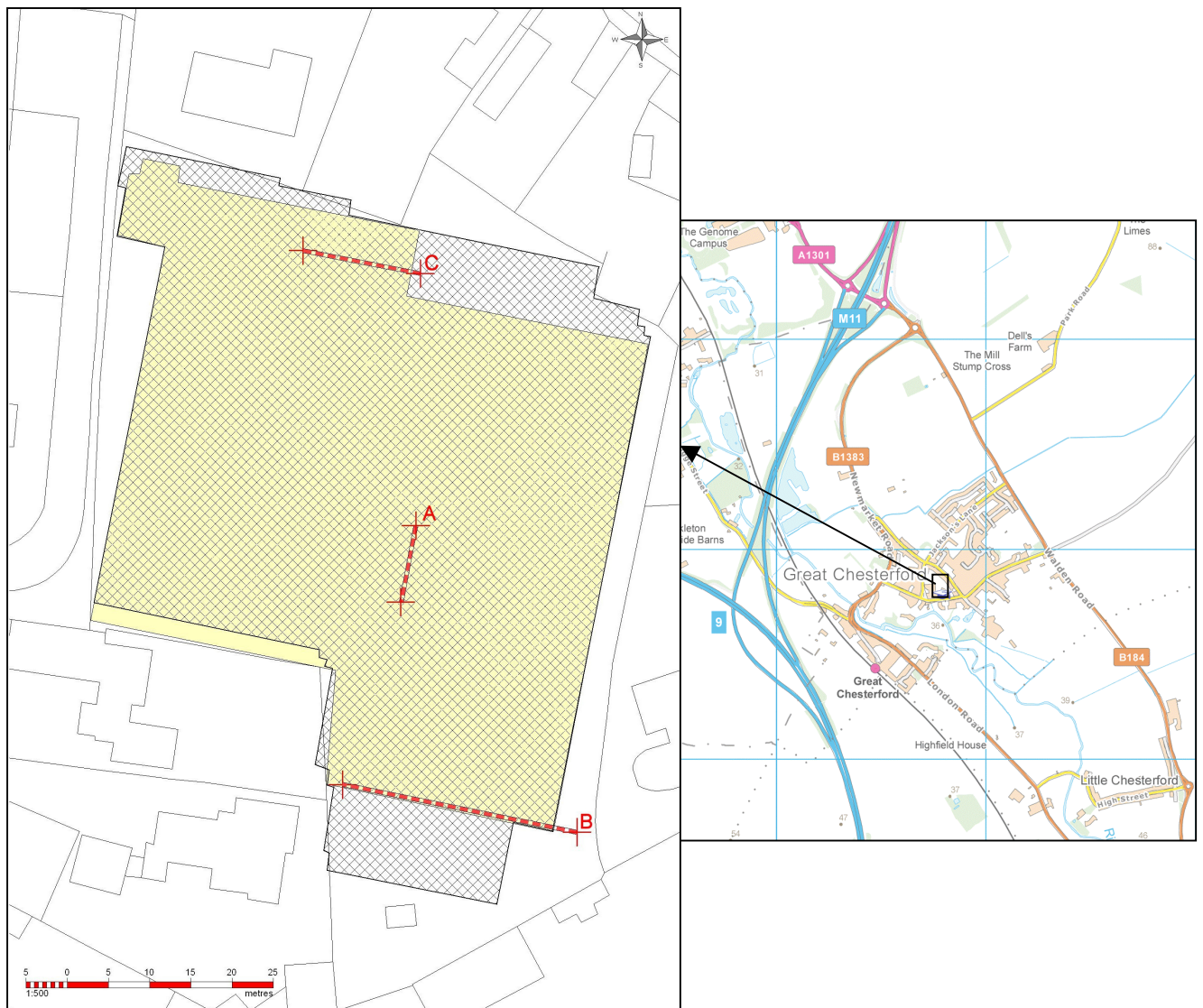
Magnetometry readings: 8/m, 1 m separation.

Resistivity readings: 1 m interval, 1 m separation.

Resistance tomography 0.5 or 1 m spacing.

Raw data available as separate appendices.

**Location:** TL506429, Great Chesterford School.



### **Location plan: Survey areas**

(resistivity survey areas hatched, magnetometry areas yellow solid, vertical slices red/white with start point shown by the identification letter)



**Purpose of survey:** The purpose of this survey was to determine if any subsurface features could be detected relating to some unevenness in the surface of the school field.

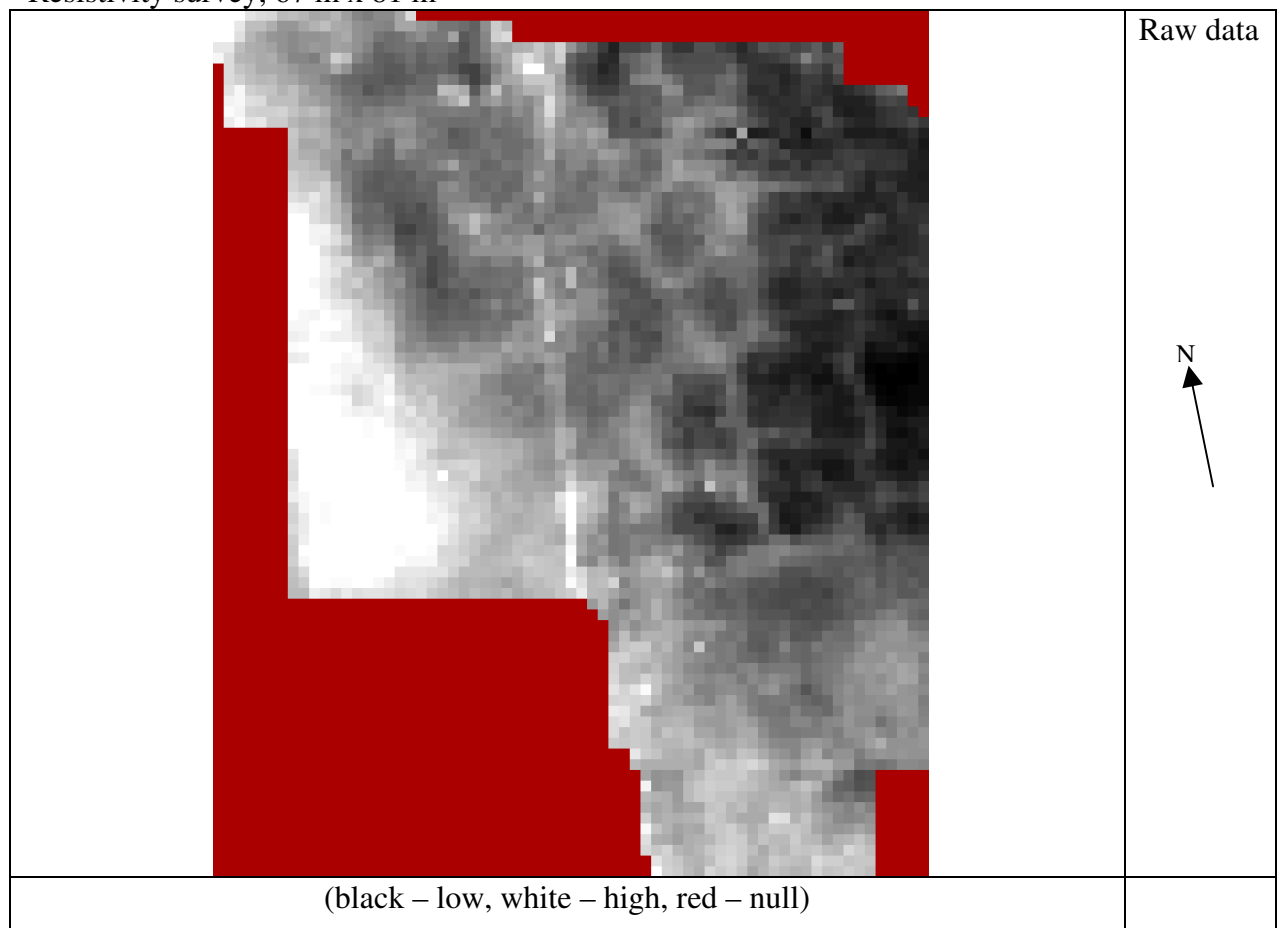
**Site topography:**

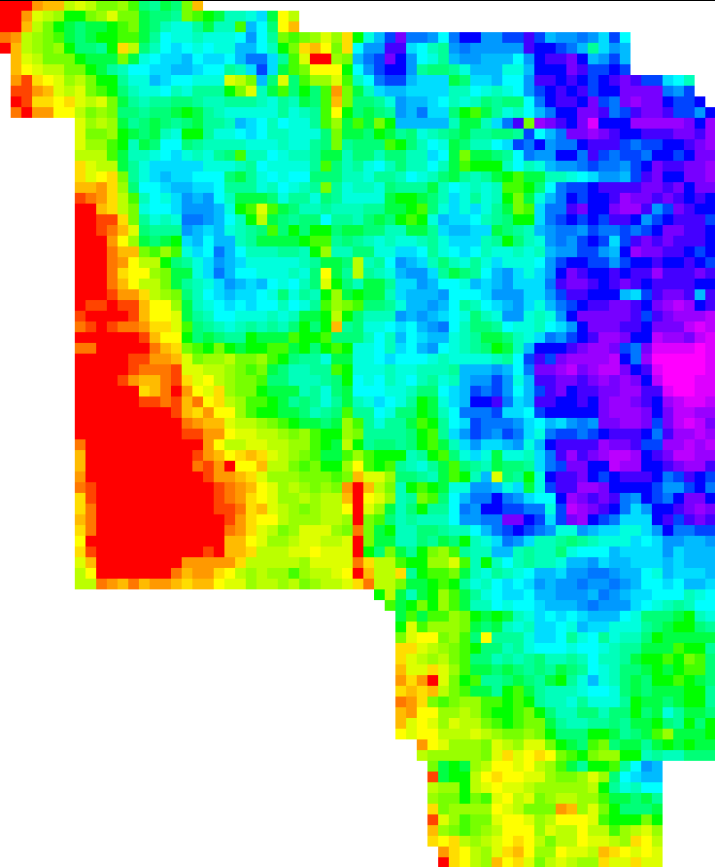

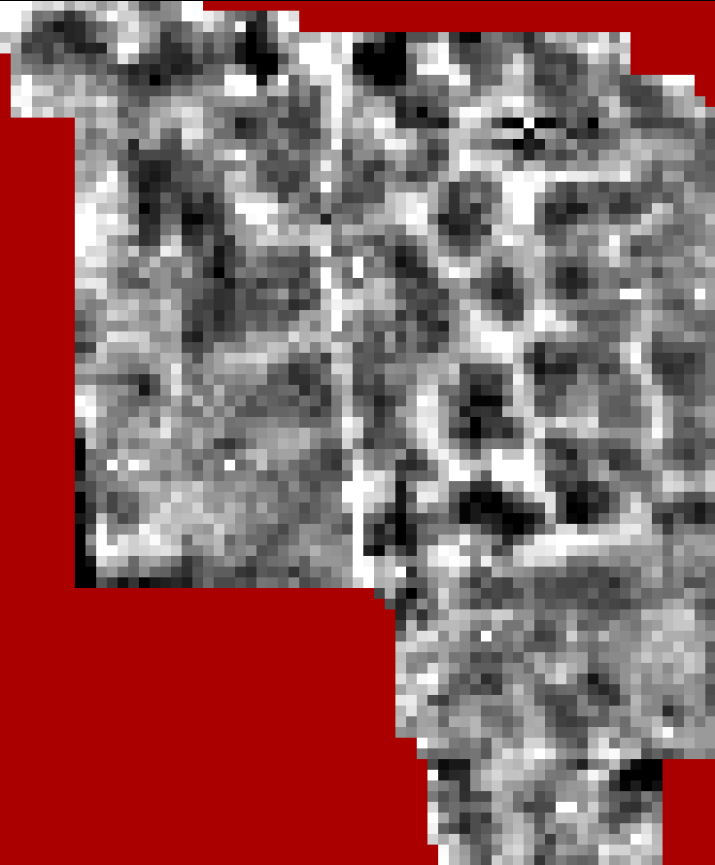

Mown slightly uneven school field with a small slope down to the east. Brick wall to the west with varied house fences on the other sides. Entrance and shelter building to the north with storage sheds in the south.

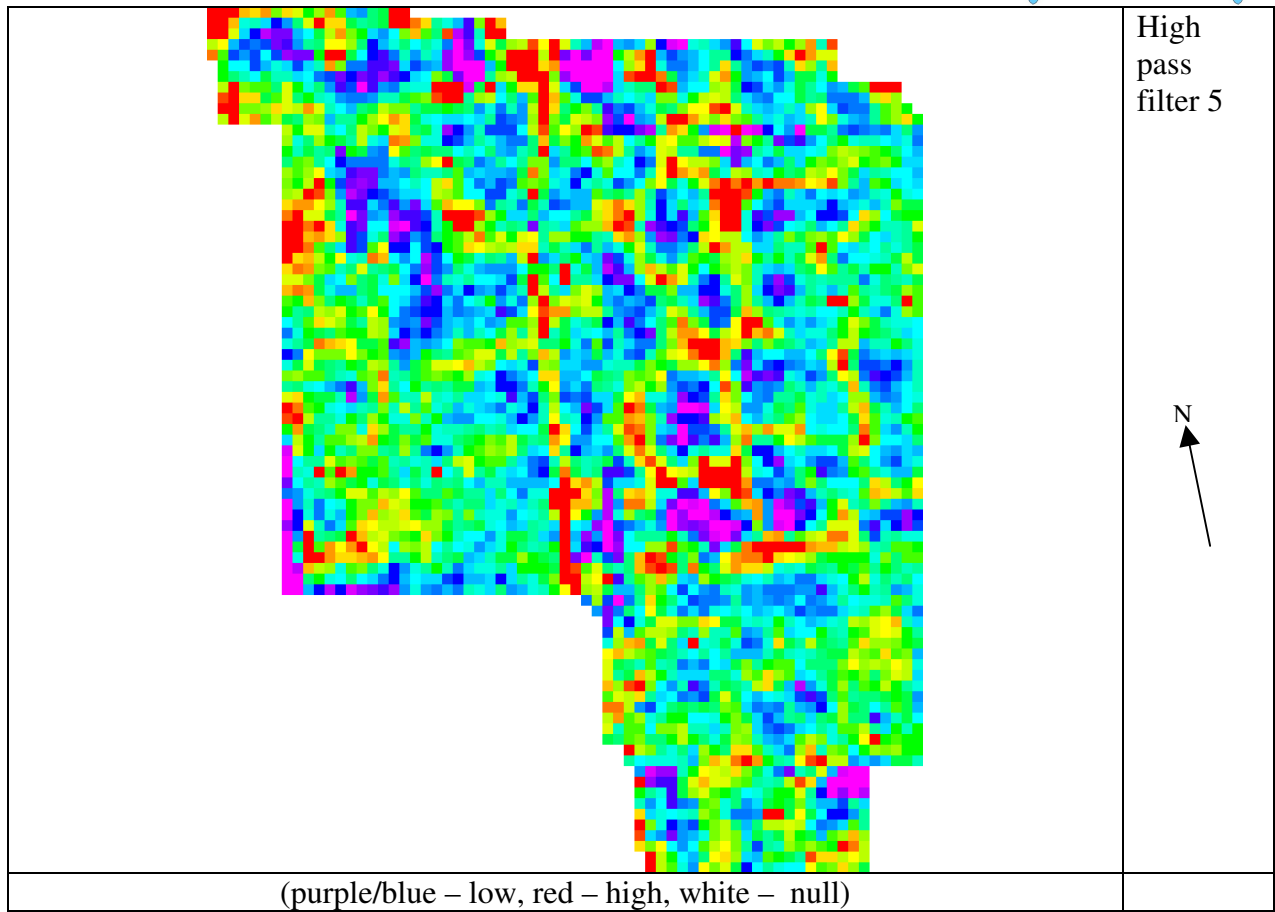
**Results:**

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

Resistivity survey, 67 m x 81 m

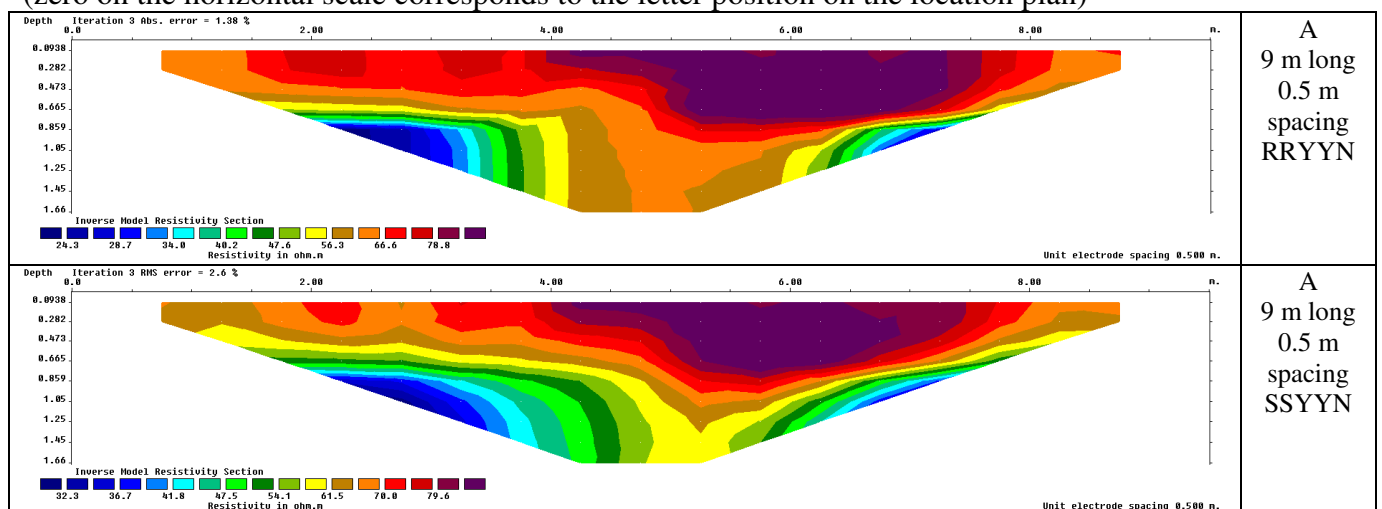


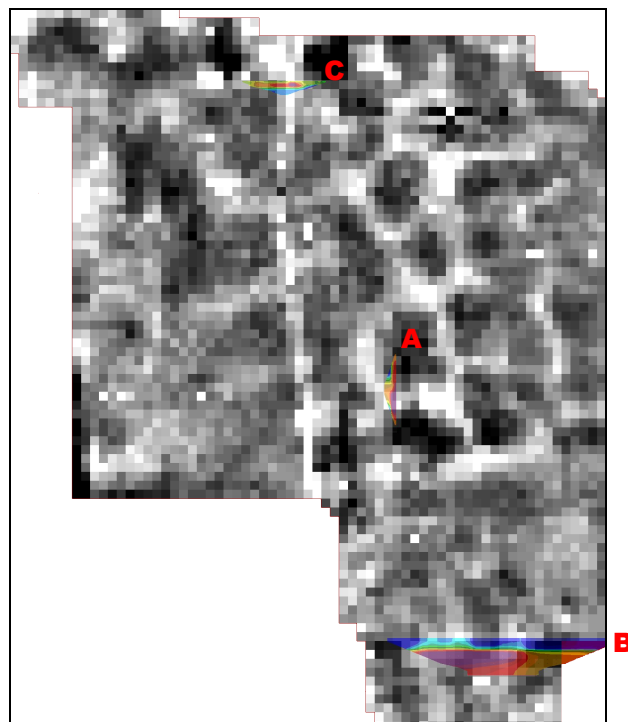
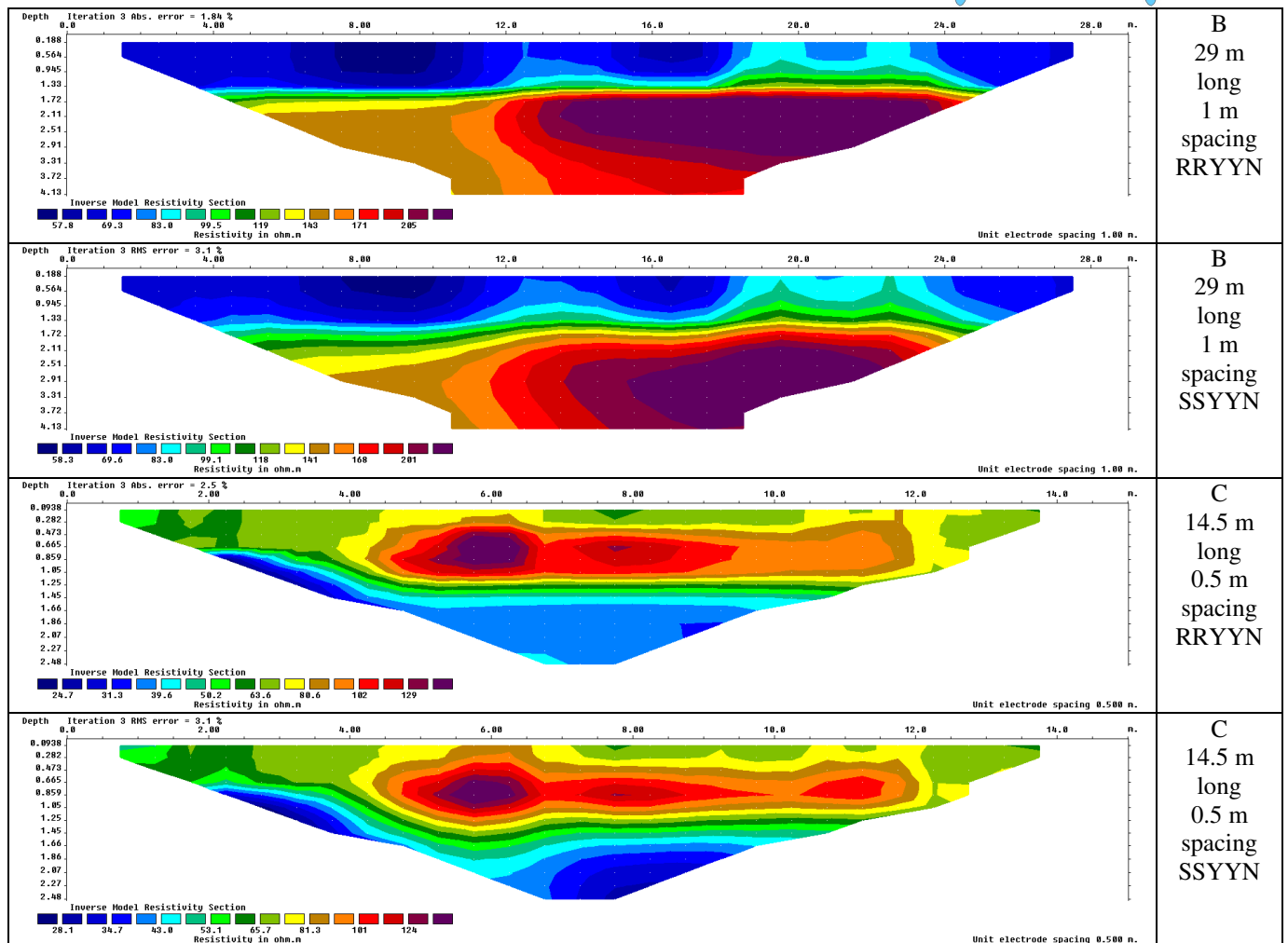
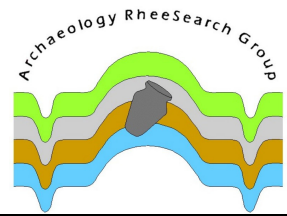
	<p>Raw data</p> <p>N</p> 
<p>(purple/blue – low, red – high, white – null)</p>	
	<p>High pass filter 5</p> <p>N</p> 
<p>(black – low, white – high, red – null)</p>	



## Resistance Tomography

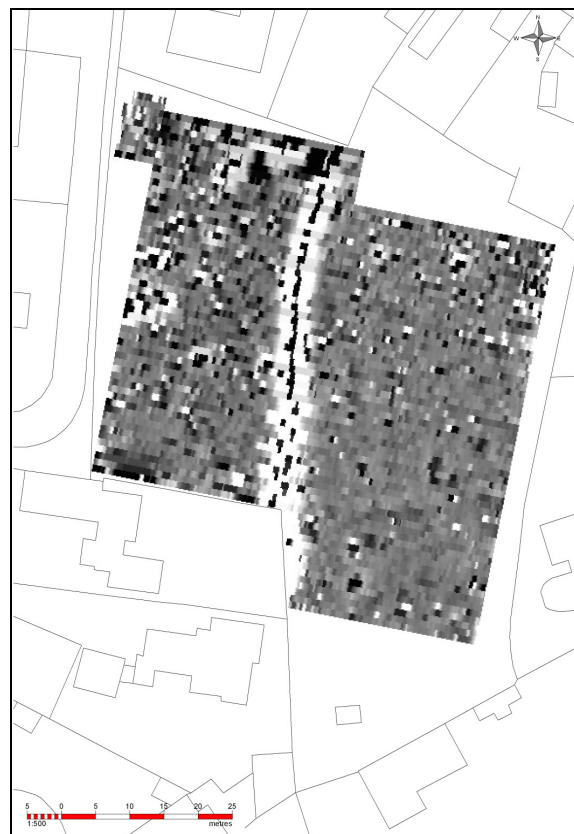
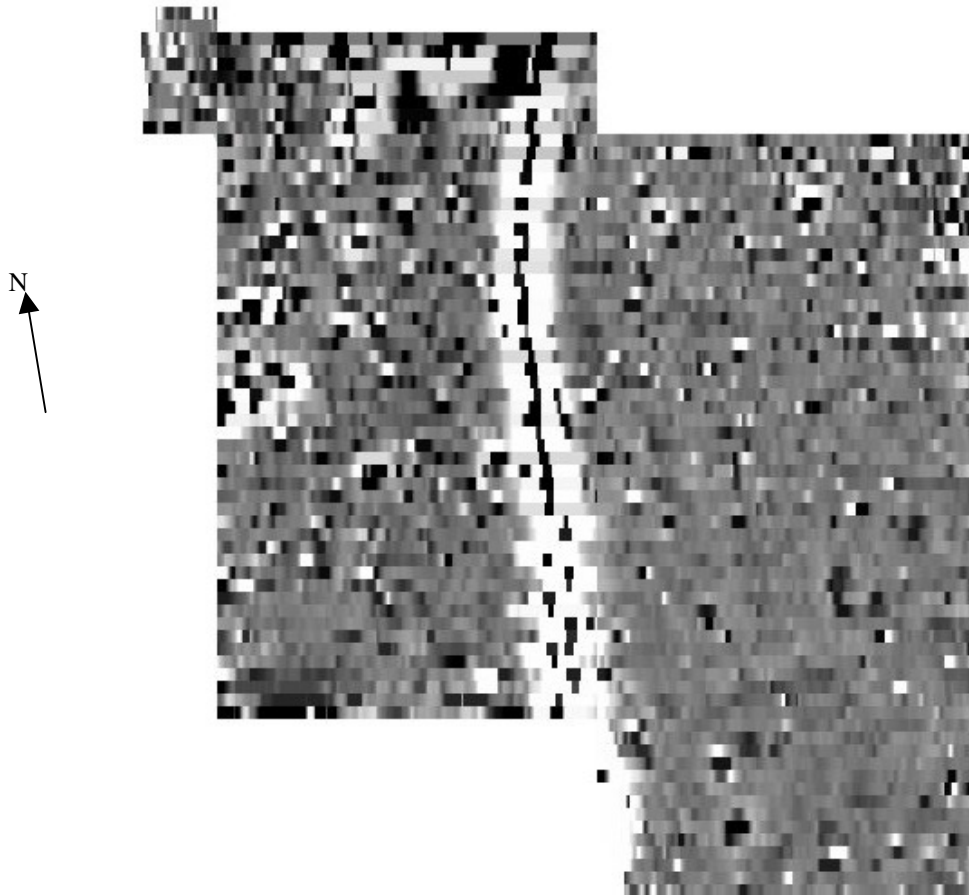
(zero on the horizontal scale corresponds to the letter position on the location plan)





Location of Wenner surveys in colour superimposed on greyscale planar resistance survey with starting (zero) position marked by the identification letter.

Magnetometry survey 70 m x 86 m range +21 to -23 nT



Resistivity plot (left) and magnetometry plot (right)





### **Discussion:**

The magnetometry results were affected by the utility line running N—S across the survey area effectively obscuring any archaeological signals. There are indications that another less obtrusive utility line runs NE from the centre of the W side to an area of magnetic noise on the N Side.

The resistivity results show a line of high resistance corresponding to the main utility line in the magnetometry results. E of that line the resistivity results show a complex set of high resistance cells surrounding low resistance centres which are most easily seen in the greyscale high pass filter plot above. These cells may continue to the S and W but are less clear in those areas. An excavation would be needed to establish the purpose of this arrangement but gravel extraction and pits for tanning or dying are possibilities.

Resistance tomography using a Wenner array configuration produces vertical resistance slices. The results obtained depend heavily on the model parameters used in the processing. The results using two different parameters for each slice are therefore given in the results above.

The first survey (A) shows that the N side has a vertical cut at 4 m from the start point, whilst the S side is sloping at approximately 2 m to the S. The second survey (B) shows two higher value features at 19.5 and 22.5 m from the start point with a depth of about 0.6 m between them. The depth on either side of the two features is almost double the depth between them. The third survey (C) positioned over the main utility line shows a distinct region of high values about 6 m from the start point and about 1 m deep. There is also a smaller high values region at about 8 m.