

Geophysical investigation of Lympe Field B, Twitton, Kent



Paul Cawsey

West Kent Archaeology Society

August 2011

(© WKAS 2011)

Acknowledgements

This investigation could not have been carried out without the help of the following people;

Mr Geoff Burr, West Kent Metal detecting club. Resistivity fieldwork.

Mr John English, WKAS. Resistivity fieldwork and data analysis in surfer and snuffler.

Mr Andrew Putman, WKAS. Resistivity fieldwork and data analysis in snuffler.

Background

Lympe field is situated in the parish of Shorham (field B) and Otford (field A), Kent and is located near to the hamlet of Twitton (Fig.1). The two fields are currently laid down to pasture and used to hold horses. Generally low lying between 60 and 70 metres above sea level, Lympe B becomes wetter towards the North Eastern end, with a change in vegetation reflecting the change in hydrology. The fields are separated from each other by the line of Twitton brook, with field B bordered on the eastern side by a ditch and bank.

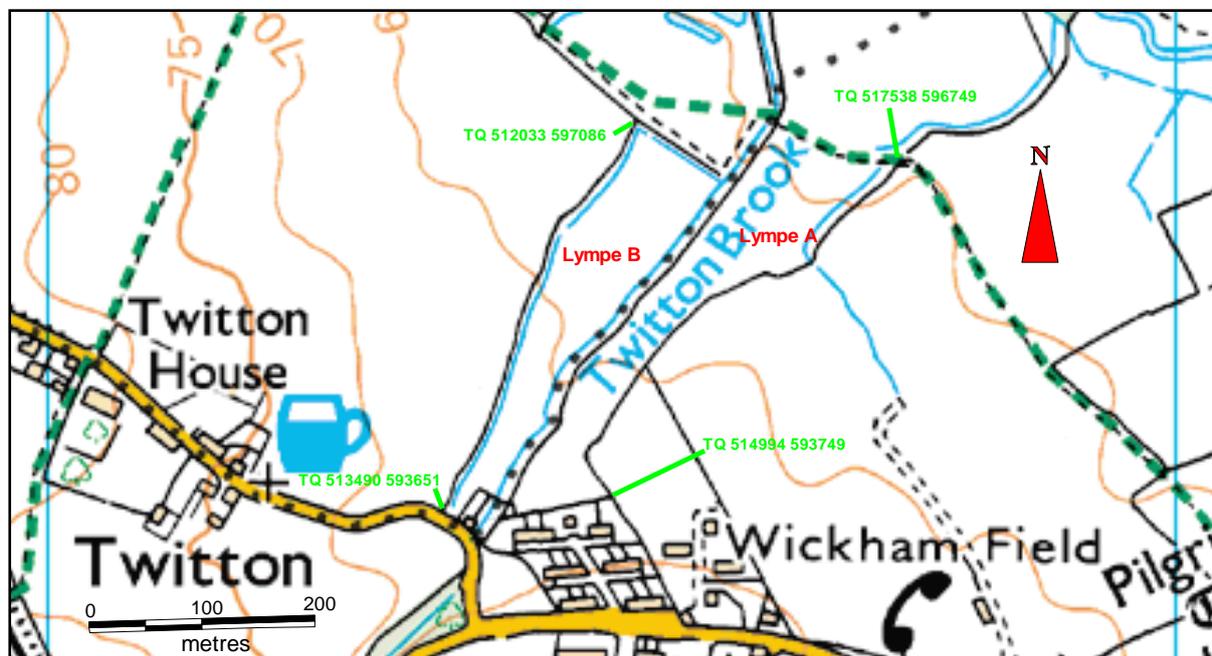


Figure 1 Location of Lympe field in relation to Twitton. (© Crown copyright / database right 2011. An Ordnance Survey / EDINA sponsored service)

In 2008, archaeological excavations took place along the boundary of Lympe field A and Wickham field. Two large rubbish pits dated 2-3rd century were uncovered along this field boundary along with evidence suggesting that this field boundary followed the line of original Roman settlement (Walshe 2008). In conjunction with the archaeological excavation, substantial metal detecting has taken place on field A (Figs 2 -) with a geophysical survey to follow. Metal detecting is now taking place in field B (finds still to be processed and mapped as of 4/8/2011) and the rationale for carrying out the geophysical survey in field B first was dictated by the location of the horses at the time of the survey.

Resistivity Survey

The site was surveyed using a RM15 Resistivity Meter, using 20 x 20m grids, with the lines separated by 1m and readings taken every 1m, making a total of 400 data points per grid. The weather was dry with little rain over the preceding week

The results were processed using Snuffler geophysics software and the following filters were used to clarify the initial data;

- 1) Destripe
- 2) Edge correction
- 3) Despiking
- 4) Interpolation

Data were also analysed in the software package Surfer in order to qualify and provide additional analysis to that provided by Snuffler.

Results

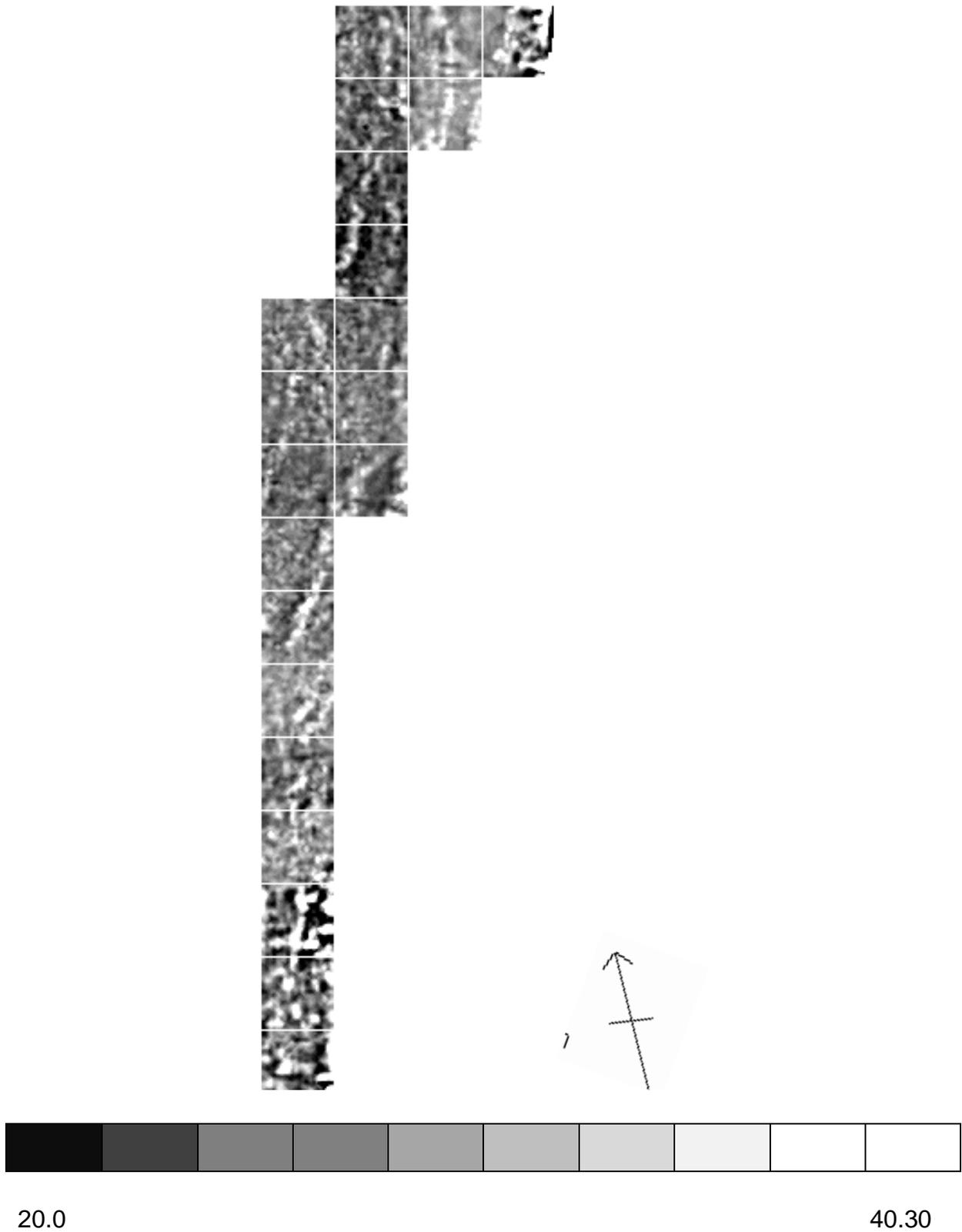


Figure 2. Snuffler greyscale plot of resistivity data (measured in Ohms). Total of 21 (20m x 20m) grids .

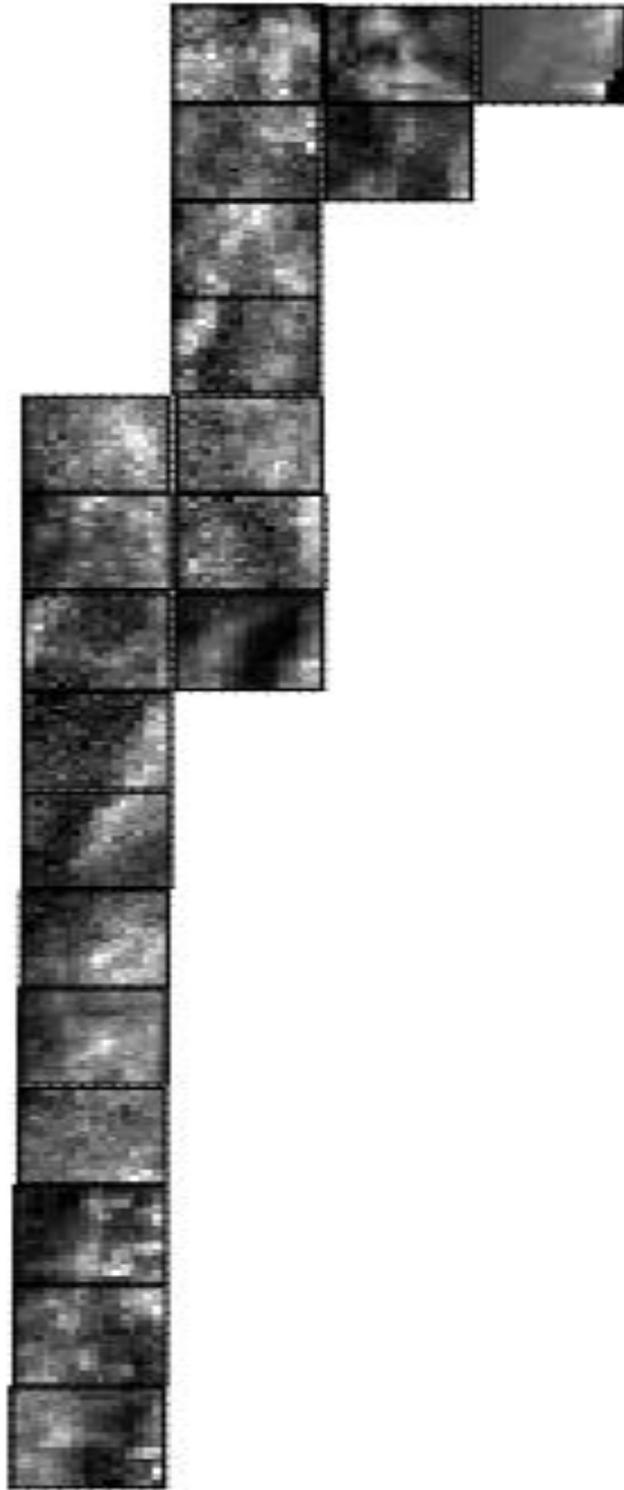


Figure 3. Analysis of resistivity data undertaken with Surfer software



Figure 4. Data overlaid onto Google Earth map



Discussion

On analysis of the data it appears that the transect through Lympe field B shows mainly geological differences through resistivity survey and what appears to be remnants of possible paleochannels or water management features. On talking to the tenant of the land, it appears that water cress may have been grown in the vicinity and remnants of this vegetation are present within the course of Twitton Brook. There are however two distinct features that are worth investigating further by the use of coring and test pitting (features A and B, figure 5). Feature A is a distinct cross shaped feature located within grid 3 of the survey area. This may be related to water management as the right hand edge of this grid lies adjacent to Twitton Brook. Feature B seems to be a rectangular feature of high resistivity towards the North Eastern end of the field. This feature coincides with a number of roman metal finds located via a metal detecting survey. We suggest putting one or two test pits in across the linears to assess if there is a distinct feature or a geological anomaly.



Figure 5. location of features to be investigated further at Lympe field B.