

Geophysics at Hollingbury, Brighton

During March of 1998 members of the Brighton and Hove Archaeological Unit conducted a geophysical survey of lands at Hollingbury. The project was used as a training exercise for members and was supervised by Mr David Combes of the Sussex Archaeological Society resistivity unit. The equipment used was the recently purchased RM15 resistivity meter.

The area surveyed is small plot of land running parallel to the Ditchling Road. The south boundary of the survey was Woodboume Avenue, east of the garage. The west boundary was Cuckmere Way and the east Ditchling Road. The area consists of a very thin width and the survey dimensions of 20 metre squares covered the majority of the east to west dimensions. A series of 7 squares 20 x 20 metres were examined running in a south to north direction. Readings were taken at 1 metre intervals. The results were transferred to computer and a graphical image of the anomalies produced.

Conclusions

The resistivity survey produced a considerable amount of linear features. The majority of these features run north to south with significant details running east/west causing some rectangular configurations. These readings of high resistivity suggest possible wall like features, although a line of clay with flint capping could produce similar effects. The area lies south of a reservoir and this may also suggest some reason for the linear arrangement. Utilities of a covered nature may produce similar readings, although ditches are generally expected to produce lines of low readings.

The documentary investigation shows the area to be of archaeological interest with a series of 'Celtic' field systems noted and recorded by H S.Toms, curator of Brighton Museum, in 1911. In contemporary records it is known that several small holdings were sited in this area and again the effect may be residual of these activities. It is known that during the Second World War military activities included this section of Brighton which may also have an impact.

For future reference, if the area becomes the object of planning development, the Brighton and Hove Archaeological Society would strongly recommend some archaeological investigation of these features. The land lies very close to the Ancient Scheduled Monument of Hollingbury Hill-fort and other burials and features dating to the Bronze age and Roman periods are also known from this area.

A copy of the notes compiled by Mr W.Santer, one of the trainees, is included in the report. Copies of the first and final days graphical output is enclosed. A copy has been forwarded to the County archaeologist for the Sites and Monuments Records (SMR)

John Funnell 12/2/99

B.H.A.S.-Geophysics 2-5-98 notes

Some notes regarding a training exercise in the use of an RM15 resistivity meter carried out on Saturday 2nd May 98, commencing 10-00 AM, by members of BIHA.S. persons present: Gary Bishop, Mark Gillingham, Bill Santer (scribe) aided (greatly) by David Coombes.

LOCATION-OS MAP-Pathfinder 1307 Brighton (TQ 20/30) 1:25000 map ref 315078.

The "site" is located North of Brighton, West of the earthwork known locally as Hollingbury Castle, it is an approximately 2 kilometres long stretch of land, only 25 metres wide at its Southern edge, running North Eastwards for the first kilometre, bounded by Ditching Road to the East, and Cuckmere Way to the West, gradually widening and turning North as it follows the Ditching Road for the second kilometre, eventually running into fields and Downland at Old Boat Corner at the new by-pass.

It was readily apparent that the survey would be confined to a line of grids the first being located at the Southernmost end of the site, continuing Northward with others between the West and East boundaries. The "base" line laid out along the Western edge was positioned so as to avoid a clump of bushes. When the first two grids had been lined out we commenced assembling the RM15 meter, and David Coombes explained that to obtain the best sequence of readings for computer interpretation in these circumstances the grids should be traversed in clockwise direction, starting in the SE corner of the first, walking Westward along the first line and then reversing along the second line, producing zig-zag traverses finishing the grid in its NE corner, ready to move into the adjoining grid, and so on.

The geography of the site caused the Remote probes to be placed in the centre of the third grid which made us work towards them, whereas it is normal that they are so placed that their cable trails the mobile probe as it is used, this being more convenient for the user.

Quote:, "An easy to remember procedure for positioning the remote probes is to triangulate two 20m lines from the corners of a 20m square and place the remote probes at their intersection. This will allow up to three complete 20m squares to be surveyed without moving the remote probes. The standard recommendation is that the remote probes must be distanced at least 30 times the spacing of the mobile probes away from the survey area, that is, at least 15m for a 0.5m Twin array", which is what we normally use.

The longest delay to be encountered during the day came when we started setting up the meter. It was found that the display was still showing the last reading from the previous survey carried out several weeks earlier! This indicated that the memory had to be cleared before entering any new grid readings and we failed, despite numerous key pressings, to clear it. Recourse was had to the Manual..eventually we realised that our problem was due to our unfamiliarity with the machine. The CLEAR MEM(ory) key on the control panel has several functions, and when it is pressed a single beep is audible, to operate the memory cleaning function the key has to be held down until four beeps are heard, only then is the memory cleared. This also applies to the DELETE LINE key. This is to help avoid accidental clearance.

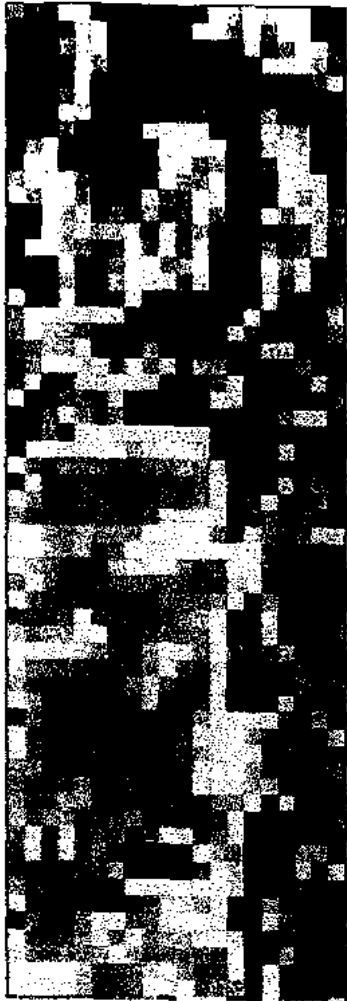
We got started at around 11-20 AM and the survey then proceeded quite steadily with Mark carrying the machine along the traverses whilst the rest of us worked out a system for moving the grid lines to avoid delaying him. David Coombes timed one grid survey at

20 minutes which he said was a good average.

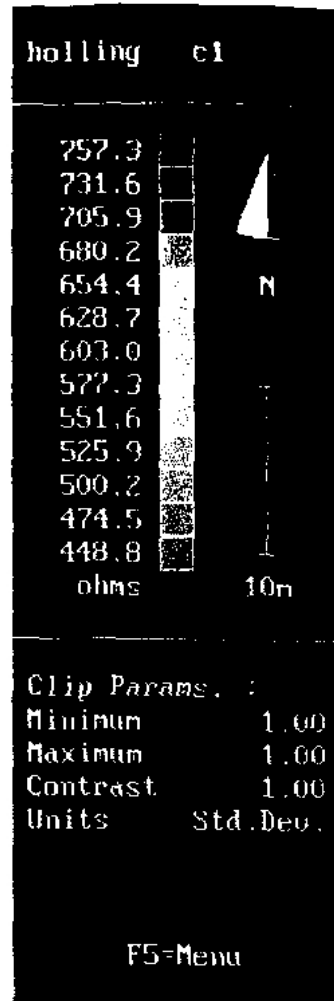
Once during the day the meter display showed an "HCR/OPENcct." reading soon after moving the remote probes, due it was found to the connectors having been pulled out of the remote probes, caused by the cable being pulled when it caught around a tall tuft of long grass if possible the "line shifters" should try to keep an eye on the cable as the traverses are walked.

At one point in the day we found that our grids were out of alignment showing how important it is to take care in setting out the base line and ensuring 90 degree offsets etc.

HOLLINGBURY 1998



After Low
Pass Filter



AFTER DAY 1

HOLLINGBURY 1998

Site : holling Comp. : ba		Resistivity Survey		Scale	1:738
Shade Plot (Clip)			Size x 1	Block	Off
Minimum	400	Grey Levels	17	Black White	High Low
Maximum	500	Palette	Positive		
Contrast	1				
Units	Absolute				



AFTER DAY 2