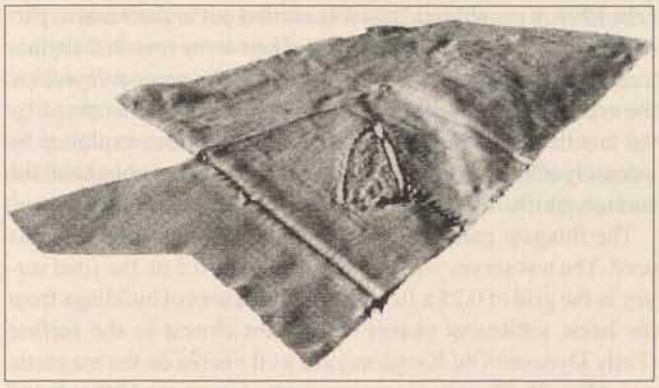

Fig. Sutton Common GIS model showing the positions of the upstanding and bulldozed enclosures – the full landscape measures 880 x 580 m

The second site was Meare Village East (Somerset) in the Somerset Levels. Here an Iron Age site had been identified on a raised peat mound within a peat-filled hollow. The settlement was characterised by clay spreads and mounds which were occupied by industrial remains and hearths. The results from the GIS model of this site reflected the positions of many of the known clay mounds which cover the site as very slight rises, most of which were imperceptible on the ground. Further it identified a number of other mounds which had been located through a magnetometry survey. Other mounds were indicated outside of the known area of the site. The results were checked by excavating a number of borehole transects. These identified correlations with some of these new mounds, but also a lack of correlation with others which appear to have been influenced by later activity.

In each of these cases the identification of archaeological features has been possible due to the increased shrinkage of biogenic sediments relative to clastic sediments within the framework of the current drainage regimes at each site. At Sutton Common, this increased shrinkage was identified in the peat-filled palaeochannel and the archaeological ditches. At Meare Village East, the scenario was reversed with the increased shrinkage lying in those areas not covered by the clay mounds. Overall the method has proven to identify archaeological features within wetland landscapes which cannot otherwise be seen on the ground.

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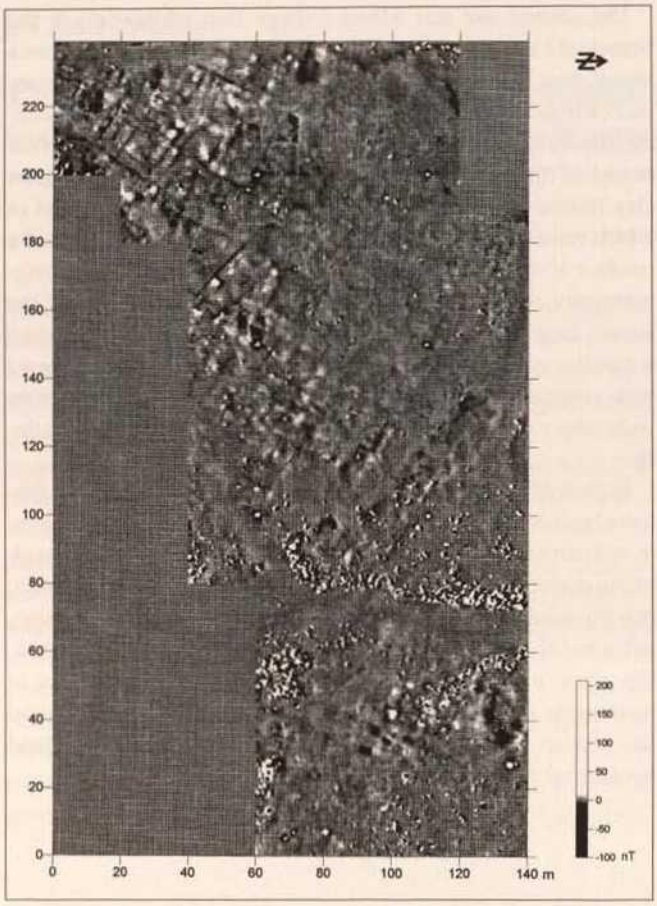
The Magnetic Survey at Tell el Farkha, Egypt

The site of Tell el Farkha is located immediately to the north of the modern village of Ghazala (14 km east of Simbillawein), in the Sharqiya province, Eastern Nile Delta, Egypt. The site was identified by the Italian Archaeological Mission (led by R. Fattovich) in 1987, the excavations were carried out between 1987 and 1990. From 1998, the excavation has been continued by the Polish Archaeological Mission, led by M. Chlodnicki (as a joint project of the Poznan Prehistoric Society, the Jagiellonian University and the Polish Centre of Mediterranean Archaeology in Cairo).

The site is located on the top of a sand gezira and extends over an area of ca. 400 x 110 m, with a maximum height of about 4.5 m over the level of the cultivated plain. It is marked by three mounds along the northern edge of gezira and a gentle slope delimited by the village houses in the south (fig. 1). The maximum thickness of an anthropogenic deposit, above the water table, can be evaluated at 5–6 m.

So far, the excavations have shown three main occupational phases of the site, the earliest one going back to the Predynastic period (4th millennium B.C.), and the later ones to the Late Predynastic/Early Dynastic period and the Old Kingdom (3rd millennium B.C.). The last two occupational phases are characterized by occurrence of mudbrick buildings. The Predynastic phase exhibits only pits and light clay installations.



Most of the site is covered with a thick mantle of halfa grass, and a powdery earth stratum built up by collapsed mudbricks and aeolic redeposition. This stratum contained appreciable amounts of pottery, flints and stones. Below this deposit (10–40 cm below the surface) some fire installations, pits and first evidence of architectural remains occurs. In deeper layers many rectangular and semicircular constructions made of mudbrick were found, some of them paved with mudbrick floor. - Total area of excavation before 1990 was 192 sqm In 1998–99 the excavated area was 282 sqm large.

In 1998, a geophysical test was carried out in the western part of the site, in the area of 4,000 sqm The survey revealed distinctive settlement traces. In 1999, the whole site was surveyed, i.e. the area of 27,000 sqm A number of obstacles were caused by the fact that the survey was carried out in the area exploited by a densely inhabited village (huge amount of metal objects on the surface, traffic, driving of cattle etc.).

The fluxgate gradiometer FM36 (by Geoscan Research) was used. The test survey was in the grid of 0.5 x 0.5 m, the final survey in the grid of 0.25 x 0.5 m. Apparent traces of buildings from the latest settlement phases – the ones closest to the surface (Early Dynastic/Old Kingdom) are well visible on the magnetic map (fig. 2). The traces were registered on the middle mound (between Y=100 and 240) and the eastern mound (Y above 240, outside the area presented on the map enclosed). The survey revealed the general disposition of buildings. Traces of the buildings start disappearing towards the north, resulting from the increasing thickness of the deposits covering the remains of the settlement.

The survey shows that the settlement stretches southwards below the contemporary houses.

The survey has already been primarily verified by excavations, e. g. a distinctive, negative linear NW-SE anomaly (between Y=170 and 180, X=40 and 60) turned out to correspond to a mudbrick wall located immediately under the surface (fig. 3). The wall was accompanied by a concentration of ashes (a positive anomaly at the NE side of the wall).

The nature of a number of rectangular anomalies (between X=90 and 120, Y=30 and 50) on the eastern mound is not clear. They may correspond to a cemetery (?); but that will be clarified during the next campaign.

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Archaeological Site Investigation by Means of Geoelectric Measurements in Tel-Halawi (Northern Syria)

About 100 Vertical Electrical Soundings (VES-Points) were measured at the site of Tel-Halawi, located on the left side of the Euphrates just before flowing into the Assad Lake in northern Syria. The VES-Stations, of only 2 m spacing, were distributed along 9 profiles (5 meters apart from each other), covering the southern part of the site (s. maps in Fig. 1). The electrode array, adopted for doing geoelectrical survey, was a modified Schlumberger configuration (pole-dipole array with the B-electrode placed far enough to be of negligable effect), which was suitable to be run with the following steps: OA = 1; 1.5; 2; 3; 4; 5; 7; 10 m, while the separation of potential electrodes (MN = 0.5 m) was constant all over the soundings.