

Archaeological Prospection at the Hindwell Neolithic Enclosure in the Walton Basin, Wales, UK

The Hindwell Neolithic enclosure was discovered from aerial photographs taken in 1994. Some further parts were found in 1995 and 1996 so that some 75% of the perimeter is now known. Excavations in 1995 and 1996 revealed the site to have dated to 2,700 B.C. (late Neolithic) and to have been delimited by a wooden palisade of posts some 8 m long and weighing 4 tonnes. Approximately 1,400 posts had been used and the enclosure covered 34 hectare.

Little was known of the interior of the site as it was covered with pasture fields. Caesium-vapour magnetometry was undertaken over these "blank" areas to try and identify internal features and/or areas of activity, the position and nature of the entrance and whether or not the line of the enclosure could be detected beneath a Roman fort which overlies the eastern perimeter.

Prior to the geophysical survey a full physical survey was undertaken at the site to try and detect microcontours and to place the site into real space. Geophysical survey was undertaken over the same grid. The results indicated that the enclosure appears to have been empty or else the internal features were of such an ephemeral nature that subsequent agriculture has removed all traces. Some large pits were located, however, as well as some interesting anomalies on the perimeter. The survey of the Roman fort produced important information regarding the phasing and internal arrangements of the monument and detected the palisade running below the fort. This also, unexpectedly, survived as a slight earthwork in this area.



Fig. 1. "Magneto-Scanner" in Hindwell 1998; four caesium magnetometers Scintrex SMARTMAG SM4G-Special with quadro-sensor configuration, two gradiometer consoles-data loggers, power supply (4 batteries 12 V/6 Ah) and automatic distance trigger mounted on a nonmagnetic chariot, total weight about 60 kg), type II/1996

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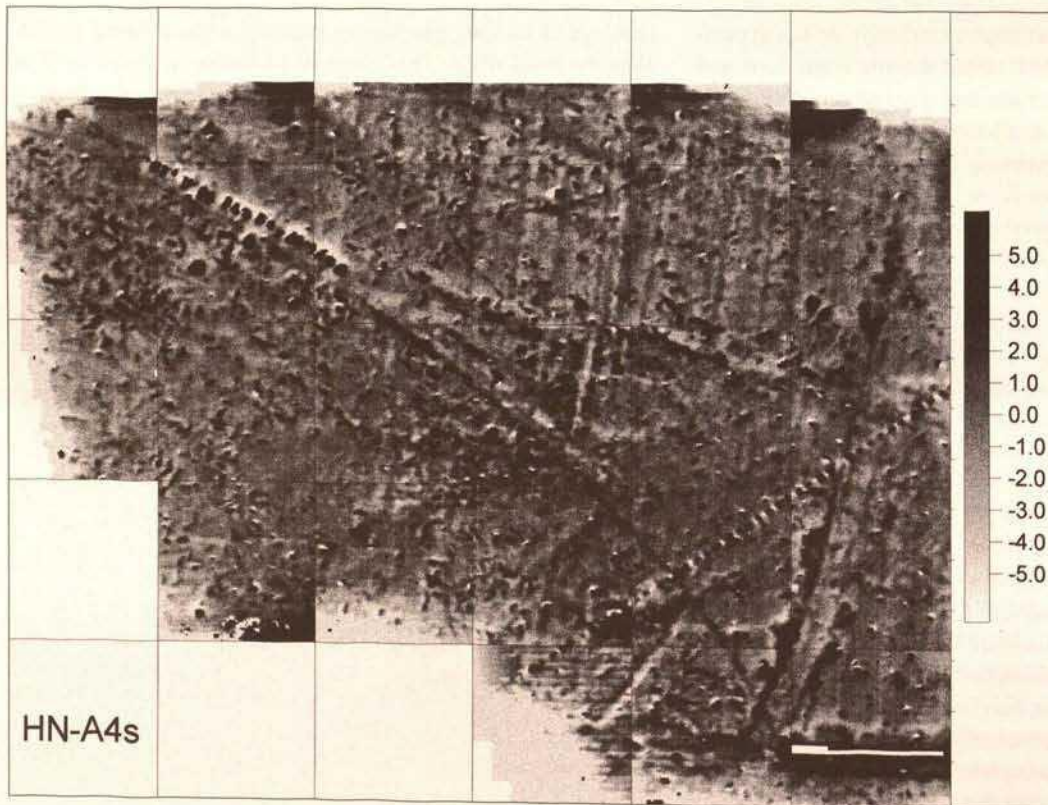


Fig. 2. Hindwell 1998; trace of the northwestern arch of the palisade of the Neolithic enclosure with a series of burnt pits; part of the magnetogram (about 4 ha) of the caesium magnetometry with quadro-sensor system Scintrex SMARTMAG SM4G-Special, sensitivity 10 pT (± 0.01 nT Nanotesla), dynamics $-0.5/+5.0$ nT in 256 grayscales (white/black), interpolated raster 0.25/0.25 m, 1 Hz bandpass filter, reduction of the diurnal geomagnetic variation by line-mean value, 40 m grid