THE HERITAGE NETWORK *LTD*

Registered with the Institute of Field Archaeologists as an Archaeological Organisation

Archaeological Director: David Hillelson, BA MIFA

HEARTWOOD FOREST
Sandridge, Herts.

Project Ref.: HN793

Magnetic Susceptibility Results

Prepared by

Alastair Hancock
ASC Ltd

April 2009

11 FURMSTON COURT, ICKNIELD WAY, LETCHWORTH SG6 1UJ
TEL: (01462) 685991 FAX: (01462) 685998

COMMENTARY

The data plot has been presented so that settlement activity of any antiquity should lie within the orange range. The higher area at the west overlies chalk and any magnetic susceptibility (MS) enhancement caused by human activity in this area is likely to be less pronounced than on the gravels running SW – NE through much of the centre and east of the site.

Red is very strongly positive and blue very strongly negative. Although both categories are suggestive of non-natural origins, the values are so extreme that they may indicate relatively recent, possibly industrial/extractive human activity.

Green is the natural background. Light blue may result from near surface geology possessing low MS.

Any large areas of MS enhancement following field boundaries and paths, or restricted areas of strong MS enhancement located adjacent to modern field boundaries or paths are likely to indicate relatively modern activity associated with recent agricultural regimes.

The MS findings are set out briefly below, together with recommendations for detailed magnetometry, although these do not take into account the locations of HER data which would also need to be included in any strategy for further geophysical survey:

Area 1.

- Fields B and C.- Three linear targets are present at the northeast of the area. The MS values of the linears are very strongly positive and very strongly negative. Although suggestive of relatively recent industrial/extractive activity, the origin of the linears should be tested with detailed magnetometry.

- The extreme NE of Field C also shows strongly negative and weaker positive MS values, more dispersed discrete areas of MS enhancement are evident at the west in Field A – a small number of selected targets should be examined with detailed magnetometry.

- Fields D and E are under oilseed and unsurveyable with detailed mag until the crop is off. Although relatively little variation in MS values is present, one block of detailed mag should be surveyed in each field.

Area 2.

- A large area of MS enhancement is present at the north of Area 2 immediately west of the NE – SW aligned internal field boundary. It is relatively weakly enhanced but could indicate settlement activity and should be tested with detailed magnetometry to ascertain its origin.

- A large area of enhancement containing extremely strong positive values is present at the south centre of the area. The strength of the MS values suggests relatively recent industrial/extractive activity but its origin should be tested with detailed magnetometry.

- A small number of other discrete areas of enhanced MS values distributed across Area 2 should be examined with detailed magnetometry.

Area 3.

- An expansive area of enhanced MS is present adjacent to the western boundary of Field A. Some of the highest values immediately adjacent to the road are located at the entrance to the

field. The enhanced MS may result from compaction of soils by agricultural vehicles entering and exiting the field, although its origin should be explored with detailed magnetometry.

- A NE – SW alignment of discrete strongly positive and strongly negative MS values are also present in Field A. As before this may suggest relatively recent industrial/extractive activity. Detailed mag should target a couple of the enhanced areas.

- Field B - a subcircular area of MS enhancement correlates with the position of a sub circular dark soil mark observed during survey fieldwork. It may define an infilled extraction pit or pond, however such a feature is not marked on recent mapping and its origin should be tested with detailed magnetometry.

- Other than at the location of an area of extraction within Field D, fields C and D show little if any enhancement. Nonetheless a small number of blocks of detailed mag should be surveyed to test possible cropmarks identified in the DBA and to examine the uniform MS response.

Area 4.

- Discrete areas of high negatives and positives are evident in the northern part of the area. Unfortunately this is under oilseed and currently unsurveyable with mag. One or two small blocks of detailed mag should be surveyed in the southern half to target the small number (3) of discrete weakly enhanced MS areas and an area of background MS.

Area 5.

- Field A - Areas of enhancement are evident surrounding the cropmarks plotted in this field. At least two blocks of detailed mag should be surveyed to test the origins of the enhanced MS values.

- Field B – A large area of enhanced MS is located along the western boundary of the field. At least two blocks of detailed mag should be surveyed to ascertain the origin of the enhancement. At least one other block of detailed mag should be surveyed –probably over the small area of enhancement located near the sub-circular crop mark identified by the DBA.

- Field ? (included within AAS 18) The low negative MS values correlate in part with a former field boundary. Areas of enhanced mag sus at the SE and E of the field should be targeted with detailed mag and at least one block should examine part of the large area of negative MS values at the west.

- Field C. The NE – SW aligned and parallel strips of enhanced mag sus should be targeted with at least one block of detailed mag. Two strongly positive areas within broader areas of enhancement at the NE corner of the field should also be examined with detailed mag.

- Fields Di and Dii. One of the few areas of enhancement within Field Di should be targeted and a single block of detailed surveyed in Field Dii to test the relatively uniform background MS.

- Field Ei – The large roughly N – S aligned area of enhanced MS at the west of the field correlates with the position of a topographic low and likely defines an area of deeper topsoil. At least one block of detailed mag to test one of the smaller discrete areas.

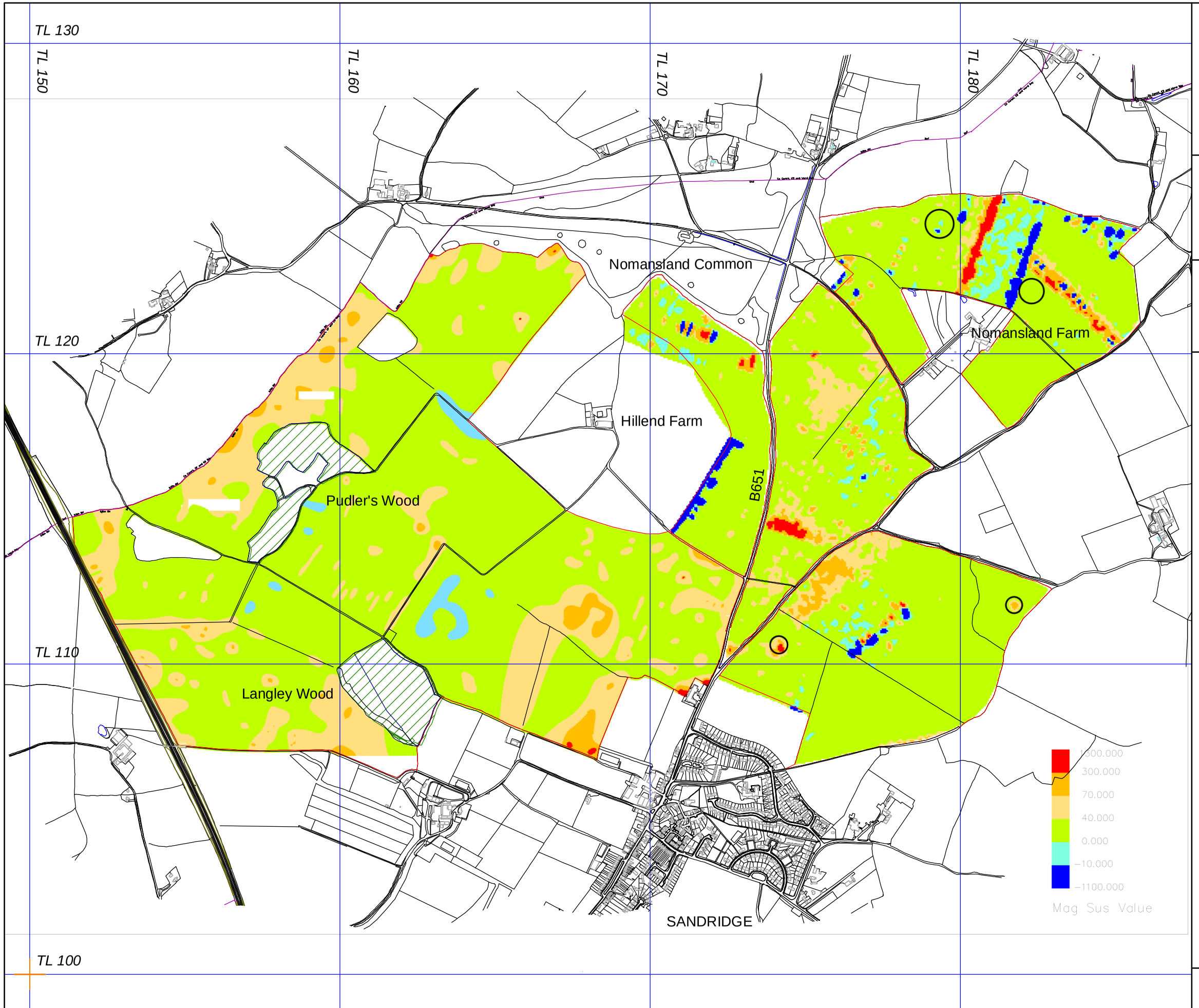
- Field Eii – A single block of detailed mag to test the relatively uniform background MS values.

- Field Eiii – Numerous areas of MS enhancement are present - at least three blocks of detailed mag should be targeted on different areas to examine their origins.

- Field F – The eastern half of the field contains a large number of areas of MS enhancement. This part of the field is currently under oilseed and unsurveyable with detailed mag. Other areas of MS enhancement in the western half of the field, and definitely the large area containing stronger MS enhancement should be targeted with at least two blocks of detailed mag.

- Field G – The large area of enhancement at the east of the field should be examined with a block of detailed mag.

In conclusion, there is enough activity across the site to justify further investigation, though it is likely that many of the areas of enhanced MS will turn out to have a relatively recent agricultural origin. Detailed magnetometry would allow a more definitive interpretation.



HERITAGE NETWORK

HEARTWOOD FOREST
Sandridge, Herts.

HN793

Magnetic Susceptibility Plot

Scale 1:12500

Figure 1