Humber Field Archaeology

GEOPHYSICAL SURVEY AT PROPOSED CLAY EXTRACTION AREA, HEMINGBROUGH, NEAR SELBY, NORTH YORKSHIRE

NOTE *This statement accompanies the GeoQuest Associates report (dated 9/4/2003) for the geophysical survey at this site and should be read in conjunction with it*

Introduction

Humber Field Archaeology (HFA) have been engaged to undertake archaeological evaluation of an area of *c* 18 5ha of land north-west of Hemingbrough village, near Selby, North Yorkshire (National Grid Reference (centre) SE 8040 3835) The work is being carried out on behalf of M J Carter Associates, acting on behalf of clients who propose clay extraction from what is currently agricultural land

A desk-based assessment (N Hall, *Land at Hemingbrough Selby North Yorkshire Assessment of Archaeological Potential*, Humber Archaeology Report No 118, January 2003) was undertaken by HFA as the first stage of this evaluation This study of the proposal area and the immediate area surroundmg it, identified a total of 81 sites of cultural heritage significance, ranging from a possible prehistoric burial mound, Romano-British and medieval settlement remains, through to post-medieval agriculture and listed buildings of 18th-/19th-century date, reflecting the rich and varied archaeological landscape within which the proposal area lies In the proposal area itself, the potential for the presence of archaeological remains was demonstrated most notably by the cropmark of a possible ring ditch which may represent the remains of a ploughed-out prehistoric burial mound or barrow, and by the likely extension mto the area of Roman settlement remains known to he just to the east

The assessment recommended a staged programme of archaeological evaluation, with further stages of archaeological investigation perhaps comprising geophysical survey, fieldwalking or trial excavation Discussions held subsequent to this between M J Carter Associates and Mr Neil Campling, Senior Archaeologist at the Heritage Unit, North Yorkshire County Council established the desirability for geophysical survey to proceed as soon as possible, to better infomi the planning application for extraction, prior to its submission A Project Design (dated 28/2/2003) was prepared by HFA to propose methodologies for the geophysical survey in accordance with recommendations expressed by Mr Campling, and submitted to him for his approval

This statement provides a commentary by HFA on the geophysical survey and draws conclusions from its findings in the light of knowledge of the site gamed from the desk-based assessment Recommendations are then made as to future treatment of archaeological remains on the site, involving some subsequent archaeological fieldwork

The geophysical survey

The survey was sub-contracted to GeoQuest Associates, and they undertook the survey m late March 2003 The whole proposal area was initially "scanned", followed by detailed survey of 40% of the total area (7 4ha) The full results of the survey can be found in the GeoQuest report which this statement accompanies

Conclusions

The survey has detected a number of weak geophysical anomalies which might be indicative of buried archaeological features (see report Figure 4, mterpretation plan) The mean amplitude of most of the anomalies on the site, however, was shown to be near or below the detection threshold of the fluxgate gradiometer, suggesting that sub-surface archaeological features – if present – were associated with a very low contrast in magnetic susceptibility between any materials infilling such features and the natural undisturbed subsoil into which they had been cut, little, if any, occupation debris would be present in such features, given these low readings

The linear anomalies which have been plotted on the interpretation plan may represent soil-filled ditches defining a system of enclosures or fields on a different alignment to that which prevails today, suggesting they might be of an early date The geophysical sub-contractors did not, however, attach a high level of confidence to their mterpretation of the anomalies as having an archaeological origin, and they might purely reflect magnetic trends resulting from minor differences in the underlying geology No traces were detected of burnt features – such as hearths or kilns – which might have indicated the location of any early settlement focus (buildings or structures) or any debris associated with it

No anomalies were detected which could clearly be interpreted as representing the continuation westwards of the Romano-British settlement site recorded in 1959, just south-east of the proposal area, the most complex pattern of linear anomalies (f2, f3 and f4) – which might conceivably be mterpreted as a system of early enclosures – does not extend into the south-east comer, the nearest of them being over 100m away from that comer Nor was anything detected which might correspond to the possible circular feature noted on an aerial photograph in this comer, perhaps confirming the uncertain nature of this observation

Recommendations

The results of the survey are not conclusive, though a low density of archaeological features is suggested within the proposal area The following recommendations as to any subsequent fieldwork necessary for the future treatment of any possible archaeological remains on the site are those of HFA only, and may not be those of the local planning authority or their archaeological advisor

Only direct investigation such as evaluation through archaeological trial excavation would conclusively establish the origin of the detected geophysical anomalies and determine the presence or otherwise of archaeological remains Such excavation would need to be targeted on the detected anomalies, though at least one area apparently free of such anomalies might need to be investigated as a "control"

Such evaluation could be carried out in advance of each phase of clay extraction, with the phases considered either individually or in groups (as appropriate) The results of evaluation for each extraction phase would allow decisions to be made regarding the need or otherwise for further archaeological fieldwork to precede extraction there The flexibility inherent in the phased approach will allow the level of archaeological response appropriate to each extraction phase to be determined

K Steedman
14th April 2003