

Cheshire Archaeology Planning Advisory Service

Further Fieldwork Techniques for Consideration in Cheshire West and Chester, Cheshire East, Halton, and Warrington during Evaluation and Mitigation

Background

The identification of archaeological sites in rural Cheshire, in common with much of lowland north-west England, poses particular problems due to the ephemeral nature of the deposits, the scarcity of artefactual material and the masking effects of a predominantly pasture landscape.

The Guidance and General Conditions for Archaeological Contractors and Consultants in Cheshire (issued by the former Cheshire County Council in 2003 and adopted by Cheshire West and Chester), contains sections on fieldwork techniques commonly employed in the County. The usual range of approaches, such as trial trenching, fieldwalking, and geophysical survey is included. A number of other approaches have, however, been utilised over the last few years, which are designed to address the problem of site recognition and definition in a way which is both credible and reasonable in planning terms. This guidance provides more information on these techniques which may be applicable to both field evaluation and mitigation secured by condition.

Metal Detector Survey

Ferrous and non-ferrous metal work can be as scarce on archaeological sites in Cheshire as other classes of artefactual material, but results from the Portable Antiquities Scheme have demonstrated that significant material is present in the area's ploughsoil and, on occasions, it is clear that concentrations of material are indicative of more significant below-ground remains. Structured, supervised metal detecting may, therefore have a role to play in the location of archaeological sites, either alongside techniques such as fieldwalking and geophysical survey or as a stand-alone approach.

Where such work is carried out, it should be undertaken by suitably-experienced individuals working under direct archaeological supervision, who have signed a waiver to any claim to a reward under the Treasure Act. Material located should be recorded by the supervising archaeologist, usually using GPS, at an appropriate level of accuracy. The supervising archaeologist will also be responsible for ensuring that the survey area is examined in sufficient detail.

This approach has been used effectively on a number of recent evaluation exercises. In some cases it has allowed the definition of particular locations requiring further work, whilst in others it has been concluded that the archaeological potential of an area of land has been addressed by the recovery and analysis of the ploughsoil assemblage and that no further work is necessary.

In addition, structured, supervised metal detecting has proved its worth on several recent excavations, in both urban and rural contexts. Consequently, programmes of formal excavation or strip and record, watching briefs and phased programmes of archaeological work on a later prehistoric, Roman, medieval, or post-medieval site that do not make provision for an appropriate level of metal detecting would be considered inadequate. The approach to organising the detecting should mirror that outlined above.

Topographical Survey

The Cheshire Plain is characterised by expanses of glacial drift with regular outcrops of sandstone of varying degrees of prominence. These areas of well-drained, elevated topography have always been attractive for settlement although not to the exclusion of the more lower-lying locations offered by the Plain. It is, however, apparent that areas of sandier, slightly elevated drift, perhaps adjacent to watercourses were often favoured locations amidst spreads of ill-drained boulder clay.

When an undeveloped site is being assessed, normally during the walk-over survey that forms part of the primarily desk-based assessment process, such topographical features should be noted and mapped as they may represent appropriate locations for further, targeted investigation. It should be stressed that mapping of features does not imply that formal, measured survey is required at this point; the annotation of existing base mapping at an appropriate scale will be entirely adequate at this stage

The potential of these locations is shown in the lithic assemblages which were revealed on the multi-period site excavated in advance of the extension to Manchester airport in the 1990s, which was focused on an extensive spread of sandy drift adjacent to the River Bollin. Similarly fieldwalking conducted by the North West Wetland Survey produced lithic assemblages where even small, slightly elevated areas of sandy drift were present. This pattern, however, is not restricted to the prehistoric period and developer-funded work has seen the investigation of examples dating to the Roman period.

Targeted Topsoil Sieving

Topsoil sieving is likely to be proposed as a targeted exercise, following a phase of topographical survey or fieldwalking.

Areas of slightly elevated lighter soil are often of restricted extent and on many occasions these soils contain small assemblages of artefactual material, (see *topographical survey* above). This potential can often be addressed in a rapid and cost-efficient way by sieving soil samples (commonly 10-30 litres) on a grid (typically 5m or 10m) across the area of interest, in order to recover the artefactual material. At the conclusion of this exercise, the quantity of material may justify further below-ground investigation but in other cases the assemblage, whilst still of interest, may not justify further work and the sampling of the

ploughsoil assemblage may be judged to have addressed the site's potential. Although this approach may be of greatest relevance to the recovery of lithic material, it should be noted that it has also led to the recovery of Roman ceramic material, so its application may be relevant to a variety of periods.

Palaeoecological Work

Lowland Cheshire is rich in basin mosses, basin mires, kettle holes, major flood plains, and minor stream valleys. Such features often contain varying depths of peat, in various stages of preservation, and accumulations of alluvium. These deposits are often waterlogged and may be associated with accumulations of sub-fossil wood. Deposits are often encountered during development-led archaeological work and can be associated with artefactual material and burnt stone. They clearly have potential for palaeoecological analysis (pollen, macrofossils, etc) and analysis of these deposits during programmes of archaeological mitigation has produced significant results on a number of occasions.

Palaeoecological analysis is only usually advised when specific potential has been identified on a particular site and will always be carefully phased in order to avoid unnecessary expense. Such work is likely to involve an initial inspection of deposits which appear to have potential by a suitably-qualified and experienced individual, and sampling of appropriate deposits, followed by a phase of initial assessment in order to determine their suitability for more detailed analysis. Only where a deposit has been proven to merit detailed analysis, which will not duplicate the results of previous work, will it be recommended that more detailed analysis and reporting is carried out. Elements of this work may be carried out at the evaluation or mitigation stage but detailed analysis is only likely to be required as part of an agreed programme of mitigation.

Sectioning of Parish Boundaries

The present pattern of civil parish boundary descends, in large part, from the earlier network of township and ecclesiastical parish boundaries. This pattern has evolved over the centuries and changes have continued to be made up to the present day so it cannot be argued that present parish boundaries are always ancient features in the landscape. An examination of the county's tithe maps (<http://maps.cheshire.gov.uk/tithemaps/>) demonstrates that in most instances, the modern parish boundary is identical with the township or parish boundary depicted on the tithe map. These features are often affected by development, particularly linear schemes such as pipelines and roads, and the sectioning of the boundaries has often revealed evidence of their structure, development, and date. Many are associated with substantial ditches which may preserve palaeoecological data, a consideration which is also relevant where the boundary follows a stream (see *palaeoecological work* above).

Work of this kind, which will almost always form part of a programme of mitigation rather than evaluation, is usually straightforward and can be completed rapidly, whilst producing useful information on the development Cheshire's landscape. Archaeological contractors need to be alert to why this particular landscape feature has been chosen for examination and the questions it has the potential to address.