



The UK's Premier Heritage Services Provider

**ARCHAEOLOGICAL
RESEARCH SERVICES LTD**
Digging with Purpose

Geochemical Analysis

Geochemistry, and more generally chemical analysis, can be employed at all points in the archaeological process, from pre-application evaluation, post-determination mitigation to post-excavation analysis. Geochemical survey offers a rapid and cost effective method that can detect and define areas of past archaeological activity and significance. Like geophysics it is low impact and can be undertaken as either a non-destructive or minimally invasive technique. It is effective in understanding the spatial distribution of past human activities when used in the topsoil and/or at depth through coring or during archaeological excavation.

The rapid production of high resolution geochemical results means that the significance of heritage assets can be more fully evaluated and decisions concerning archaeological interventions can be made swiftly with enhanced spatial data. When used in combination with geophysical survey it offers an alternative methodology for evaluation either without or prior to the use of targeted evaluation trenching. Archaeological Research Services Ltd are currently the only providers offering this integrated service. Geochemical analysis can also be undertaken on artefacts to assess their chemical composition and this can be particularly useful when analysing ancient metalwork.

The key benefits of *in-situ* geochemical survey are:

- ◆ Enhanced interpretation of archaeological deposits and artefacts
- ◆ Rapid production of results and ability to inform evaluation/excavation strategy and assist with planning and consultancy requirements
- ◆ Highly cost-effective
- ◆ Short notice for deployment
- ◆ Low impact/non-intrusive method
- ◆ State-of-the-art XRF equipment for accurate, fast, field-portable analysis
- ◆ Time efficient data capture process (can mirror geophysics)
- ◆ Effective technique for characterising large areas of landscape or honing in, in detail, on a specific structure or feature
- ◆ Multivariate dataset extends interpretative value
- ◆ Spatial output in GIS format for easy incorporation into client data systems



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