

**LAND AT SPRINGHILL, SOUTHMOOR,
OXFORDSHIRE**

**Written Scheme of Investigation for Archaeological
Geophysical Survey 2017**

Survey commissioned by:

**Oxford Archaeology Ltd
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Summary

This note describes the procedures to be used for a geophysical survey which is to form part of an archaeological field evaluation of a proposed development site at Southmoor, Oxfordshire. The survey will test for evidence of archaeological features or remains which may be present at the site.

The survey has been commissioned from Bartlett Clark Consultancy, Specialists in Archaeogeophysics of Oxford by Oxford Archaeology (OA). Fieldwork for the survey will require about two days, with a report to follow shortly after completion.

The Site

Topography and geology

The site extends across two arable fields, and is located between Springhill Road and the A420 bypass immediately to the east of the village of Southmoor. The evaluation area amounts in total to c. 11.4ha (as indicated in red on the attached location plan), and is centred at NGR SU 389979. Southmoor village forms part of the civil parish of Kingston Bagpuize with Southmoor, and lies within the administrative area of Vale of White Horse District Council about 9km west of Abingdon, Oxfordshire.

The site lies (according to the BGS on-line geology viewer) on a bedrock of Limestone, Siltstone and Mudstone of the Corallian Group, and is free of drift deposits. Soils on a Jurassic bedrock of this kind should provide favourable conditions for a magnetometer survey, and clearly defined archaeological findings have previously been detected in surveys at comparable locations.

Archaeological background

We have not been told of any previously identified or recorded archaeological sites or features within the site itself, but will take account of any relevant information which is available to Oxford Archaeology when interpreting the survey results. The survey will additionally serve as a prospecting exercise to test for evidence of previously unknown archaeological findings.

Survey Objectives

The usual purpose in undertaking an archaeological geophysical survey is to test for evidence of archaeological sites or remains, and to provide information which may inform further stages of the archaeological evaluation, and the subsequent planning process.

A geophysical survey is usually able to identify the extent and character of any archaeological remains capable of producing a magnetic response. The magnetometer will detect cut features such as ditches and pits when they are silted with an increased depth of topsoil, which usually responds more strongly than the underlying natural subsoil. Fired materials, including baked clay structures such as kilns or hearths are also likely to produce a localised enhancement of the magnetic field strength, and the survey therefore responds preferentially to the presence of ancient settlement or industrial remains. The survey is also strongly affected by ferrous and other debris of recent origin.

Survey methodology

The procedure to be used for the investigation is magnetometer surveying. A full area survey will meet the recommendations for an investigation of this kind as set out in the revised English Heritage geophysical guidelines document (*Geophysical Survey in Archaeological Field Evaluation, English Heritage, 2008*). The magnetometer survey will be done using Bartington Grad 601 fluxgate magnetometers with digital data recording. Readings will be plotted at 0.25m intervals along transects 1m apart.

The survey grid

The survey will be located by reference to a temporary site grid set out (to c. 10cm accuracy) using a Trimble GPS system (with Omnistar or VRS differential correction). This will also locate the survey directly on the OS national grid.

Report preparation

The fieldwork will be followed by the preparation of a report, which will evaluate the data taking account of site-specific issues. The report will also include a detailed discussion of the results of the survey supported by reference to the annotated site plans.

The magnetometer results will be presented as graphical (xy) charts, together with grey scale plots (so that the detected magnetic anomalies can be examined in profile and plan respectively). We accompany the data plots with interpretative plans, usually based on a combination of contoured outlines and schematic markings representing potential archaeological features, and any other relevant findings. Any identifiable modern services or other non-archaeological findings will also be indicated on the plans.

We prefer to assemble the final survey plans using AutoCAD. This allows the survey plots to be fully geo-referenced, and OS coordinates of detected features to be read from digital copies of the plans. Copies of the survey plans and report will also be distributed in PDF format.

A note on previous experience

The Bartlett-Clark Consultancy was established by A. Bartlett in 1991 jointly with the late Dr A.J. Clark FSA, who for 19 years was head of the Geophysics Section at the Department of the Environment Ancient Monuments Laboratory, and was the author of 'Seeing Beneath the Soil' (Batsford, 1990). A. Bartlett has a BSc in physics and an MPhil in computational techniques for geophysical data processing. We also have an experienced fieldwork team.

We have carried out and reported on geophysical surveys of archaeological sites of all kinds throughout Britain and occasionally abroad, and have carried out major geophysical investigations for clients including Oxford Archaeology, English Heritage, Headland Archaeology Ltd, Network Archaeology Ltd, RSK Environment Ltd, CgMs Consulting Ltd, Phoenix Consulting Archaeology Ltd, Murphy Pipelines Ltd, Nacap Daniel, Cambridge Archaeological Unit, URS, National Grid, and other County Councils, archaeological units and consultancies. We have undertaken numerous magnetometer surveys of large individual sites, or extended linear road and pipeline schemes.

Reporting procedures and archive preparation

We will submit our results and report to Oxford Archaeology for inclusion in a project archive, to be deposited according to the requirements of the County Archaeologist. These requirements are that the report should be submitted for comments to the Oxfordshire Historic and Natural Environment Team, and a copy then provided for the County HER.

We assume that copyright in the report will pass to the client on completion of the survey, subject to the archiving requirements that may be specified for the project.

Insurance

Insurance held by Bartlett Clark Consultancy includes public liability insurance cover (for £2M), employers liability (£ 10M), and professional indemnity (£ 2M).

Health & Safety

Conditions at this site should not present any unusual risks or hazards. A risk assessment document will be submitted to Oxford Archaeology if required.

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Site location plan showing proposed survey area
(area hatched in red = c. 11.4 ha; not to scale)

