GEOPHYSICAL SURVEY REPORT

SUMO Survey

GEOPHYSICS FOR ARCHAEOLOGY & ENGINEERING

Land off Elm Walk, Portishead, North Somerset

Client
Avon Archaeology Ltd

Survey Report
11014

Date
March 2017

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Project name:
Land off Elm Walk, Portishead, North Somerset

SUMO Job reference:
11014

Client:
Avon Archaeology Ltd

Survey date:
9 March 2017

Report date:
30 March 2017

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TABLE OF CONTENTS

LIST OF FIGURES

DIGITAL CONTENT (Archive Data)

- Minimally Processed Greyscale Images and XY Trace Plots in DWG format
- DWG Viewer
- Digital Copies of Report Text and Figures (both PDF and native formats)

1 SUMMARY OF RESULTS

A detailed gradiometer survey was conducted over approximately 0.5ha of grassland. No archaeological responses have been detected. A number of uncertain anomalies and an area of probable modern magnetic debris have been identified.

2 INTRODUCTION

2.1 Background synopsis

SUMO Services Ltd were commissioned to undertake a geophysical survey of an area outlined for development. This survey forms part of an archaeological investigation being undertaken by **Avon Archaeology Ltd**.

2.2 Site details

NGR / Postcode	ST 461 758 / BS20 6SX
Location	The site is located to the south-west of Portishead, North Somerset. St Mary's Road forms the eastern boundary of the site, with Elm Walk to the west and Birch Grove to the north.
HER/SMR	North Somerset
Unitary Authority	North Somerset
Parish	Portishead CP
Topography	Sloping downwards from north to south
Current Land Use	Grassland
Weather	Sunny, dry
Geology	Solid: Avon Group – mudstone and limestone (interbedded). Superficial: None recorded (BGS 2017).
Soils	Newchurch 2 Association (814c), deep, stoneless, mainly calcareous clayey soils (SSEW 1983).
Archaeology	A late Iron Age pottery scatter (42996) and Roman round buildings (00438) were discovered during works immediately to the west of the survey area in Elm Walk. A former post-medieval building (45727) is recorded within the south of the site (NSCC 2017).
Survey Methods	Magnetometer survey (fluxgate gradiometer)
Study Area	0.5ha

2.3 Aims and Objectives

To locate and characterise any anomalies of possible archaeological interest within the study area.

3 METHODS, PROCESSING & PRESENTATION

3.1 Standards & Guidance

This report and all fieldwork have been conducted in accordance with the latest guidance documents issued by Historic England (EH 2008) (then English Heritage) and the Chartered Institute for Archaeologists (IfA 2002 & CIfA 2014).

3.2 Survey methods

Detailed magnetic survey was chosen as an efficient and effective method of locating archaeological anomalies.

Technique	Instrument	Traverse Interval	Sample Interval
Magnetometer	Bartington Grad 601-2	1.0m	0.25m

More information regarding this technique is included in Appendix A

3.3 Data Processing

The following basic processing steps have been carried out on the data used in this report:

De-stripe
De-stagger
Interpolate

3.4 Presentation of results and interpretation

. The presentation of the results for each site involves a grey-scale plot of processed data. Magnetic anomalies are identified, interpreted and plotted onto the ‘Interpretation’ drawings. The minimally processed data are provided as a greyscale image in the Archive Data Folder with an XY trace plot in CAD format. A CAD viewer is also provided.

When interpreting the results, several factors are taken into consideration, including the nature of archaeological features being investigated and the local conditions at the site (geology, pedology, topography etc.). Anomalies are categorised by their potential origin. Where responses can be related to other existing evidence, the anomalies will be given specific categories, such as: *Abbey Wall* or *Roman Road*. Where the interpretation is based largely on the geophysical data, levels of confidence are implied, for example: *Probable*, or *Possible Archaeology*. The former is used for a confident interpretation, based on anomaly definition and/or other corroborative data such as cropmarks. Poor anomaly definition, a lack of clear patterns to the responses and an absence of other supporting data reduces confidence, hence the classification *Possible*.

4 RESULTS

4.1 *Probable/Possible Archaeology*

No magnetic responses have been recorded that could be interpreted as being of archaeological interest.

4.2 *Uncertain*

4.2.1 A small number of positive linear anomalies in the south of the site are of uncertain origin. Given the immediate proximity of known Iron Age and Roman remains, it is possible that they are related to former cut features, such as ditches. However, the weak nature of the responses makes further interpretation problematic.

4.2.2 Discrete positive responses at the south of the site are also of uncertain origin. These may be a result of shallow backfilled pits, possibly associated with the Romano-British activity, though this interpretation is tentative at best. The responses may equally be of natural origin.

4.2.3 Areas of increased magnetic response across the south of the area may be modern in origin, and simply relate to modern ferrous debris in the topsoil. Given the proximity of Roman remains, an ‘uncertain’ origin has been determined, as it is possible that they are a result of small-scale industrial activity or to a scatter of thermoremenant debris such as brick or tile.

4.3 *Ferrous / Magnetic Disturbance*

4.3.1 An area of magnetic disturbance in the north of the area is likely to be modern in origin, and is indicative of made ground. It is possible that the response is a related to the post-medieval building recorded on the site (NSCC 2017).

4.3.2 Ferrous responses close to boundaries are due to adjacent fences and gates. Smaller scale ferrous anomalies ("iron spikes") are present throughout the data and their form is best illustrated in the XY trace plots. These responses are characteristic of small pieces of ferrous debris (or brick / tile) in the topsoil and are commonly assigned a modern origin. Only the most prominent of these are highlighted on the interpretation diagram.

5 DATA APPRAISAL & CONFIDENCE ASSESSMENT

English Heritage Guidelines (EH 2008) Table 4 states that the typical magnetic response on mudstone can be variable. However, the detection of linear and discrete responses of uncertain origin, suggests that this survey is likely to have detected any archaeological features, if present.

6 CONCLUSION

The survey at Portishead has not identified any responses of archaeological interest, despite the close proximity of recorded Roman remains. A small number of poorly defined linear and discrete anomalies, along with an area of increased magnetic response, are of uncertain origin and may be archaeological, natural or modern in origin. A further area of magnetic disturbance may be related to the post-medieval building recorded on the site.

7 REFERENCES

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