

ARCHAEOLOGICAL PROJECT SERVICES



Geophysical Survey Report

**ST IVES ROAD
SOMERSHAM
CAMEBRIDGSHIRE**

Prepared for
ROSE HOMES (EA) LIMITED
by
Archaeological Project Services

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Event Number: ECB5568
Planning Application Number: 15/00917/OUT

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SOMERSHAM, ST IVES ROAD, GEOPHYSICAL SURVEY REPORT

Document Control

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1. SUMMARY

A detailed magnetic gradiometer survey was undertaken on behalf of Rose Homes in advance of residential development of the site. The survey was carried out over the site to identify any possible archaeological anomalies.

The geophysical survey has identified multiple anomalies, none of which are believed to be of archaeological origin.

2. INTRODUCTION

2.1 Definition of an Evaluation

Geophysical survey is a non-intrusive method of archaeological evaluation. Evaluation is defined as ‘*a limited programme of non-intrusive and/or intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site. If such archaeological remains are present Field Evaluation defines their character and extent, quality and preservation, and it enables an assessment of their worth in a local, regional, national or international context as appropriate*’ (ClfA 2014a).

2.2 Project Background

Archaeological Project Services undertook a geophysical survey as part of a planning application to identify potential archaeological features.

The site was subjected to a detailed magnetometry survey. The survey covered the majority of the field with some areas missed due to the presence of nearby structures that would affect the data.

Geophysical survey was undertaken on the 8th of November in accordance with a Written Scheme of Investigation prepared by Archaeological Project Services (2018) and approved by the Archaeological Officer, Cambridgeshire County Council.

2.3 Topography and Geology

The site is situated to the southwest of Somersham in Cambridgeshire, (Fig 1). The survey area lies to the north of St Ives Road at National Grid Reference TL 3551 7792 (Fig 2).

Local soils are of the Evesham 3 Association, comprising lime-rich loamy and clayey soils with impeded drainage (Soilscape 2018). These are developed over a solid geology of West Walton Formation and Ampthill Clay Formation. There are no recorded superficial deposits (BGS 2018).

2.4 Archaeological Setting

Earlier prehistoric remains are relatively sparse within the vicinity of Somersham. Neolithic activity has been identified to the east of the site with finds of flint axes (CHER 01750 and 01848) and an axe from the Bronze Age was also recorded (CHER 03605). Iron Age Pottery has been found in the vicinity along with settlement evidence to the east of the proposed development (CB14790).

The village probably had its origins in the Saxon Period, the place name deriving from Old English. A cinerary urn of Saxon date was recovered 1km southeast of the site (CHER 03651).

The Bishop of Ely owned the land around the village at the time of the Domesday Survey and his palace (DCB146) lay to the southeast of the site. Evidence of Medieval settlement has been found throughout Somersham and includes the 13th century Church of St. John the Baptist (CHER 00609).

The village has multiple listed buildings mainly of modern or medieval origin though these are generally in the centre approximately 500m from the site.

3. GEOPHYSICAL SURVEY

3.1 Objectives

The aim of the geophysical survey was to gather sufficient information to determine the presence or absence of archaeological remains to inform appropriate protection and future management of the monuments.

The objectives will be to confirm:

- the form of the archaeological features present within the site;
- the spatial arrangement of the archaeological features present within the site and
- the density of archaeological features present in the investigation area.

3.2 Methods

The geophysical survey was undertaken with the permission of the landowner.

The survey area lies to the north of St Ives Road between an industrial unit and modern housing estate with a farm track running along the western side of the field.

Twenty five grids were laid out to cover the majority of the site to identify any anomalies of archaeological potential.

The magnetic gradiometry survey was carried out with a Bartington Grad 601-2 fluxgate magnetometer. The area was divided into 30m by 30m grids and each was walked systematically in a zigzag pattern, taking readings every 0.25m in traverses 1m apart. Readings were automatically recorded on a datalogger which was downloaded at the end of each day. The gradiometer was 'zeroed' at the start of each day and at intervals throughout to ensure consistent results were achieved throughout the survey.

Data obtained from the survey was processed using Terra Surveyor software (Version 3.0.33.10). Following examination of the raw data, the range of readings was clipped to provide the most suitable contrast for identifying archaeological features. The final processed data was also 'destriped' to remove minor inconsistencies between the dual sensors used in the survey. At each stage the data was carefully examined to ensure the processing did not obscure features or create artificial anomalies.

The data is exported as a PNG image and georeferenced for use in scale plans of the site. Anomalies were then checked against historical maps, and where available, lidar contour data.

The survey was undertaken in accordance with a Written Scheme of Investigation and English

Heritage (2008) and ClfA (2014b) guidelines and codes of conduct. Detailed methodology can be found in Appendix 1.

3.3 Results

The results recorded during the survey are presented as a greyscale image of the raw magnetometry data (Fig 4; clipped for display but otherwise unprocessed) and processed magnetometry data in greyscale (Fig 5). All identified anomalies have been plotted on an interpretative drawing (Fig 6).

Agricultural Linear

Within the survey area there are several linear anomalies that are believed to be agricultural in origin either representing a former ploughing regime.

Isolated Dipolar Anomalies

The survey has identified multiple isolated dipolar anomalies that could be pits. However within the site these are believed to be modern debris related to farm machinery as there is no correlation in positioning and no other potential archaeological anomalies.

Areas of Bipolar Response

To the western edge of the site there is a large area of disturbance that may be related to the nearby track and industrial buildings. This disturbance could mask weaker features.

4. DISCUSSION

The quality of the geophysical data acquired is good with little disturbance across the site.

The interpretation has identified multiple anomalies, none of which are believed to have an archaeological origin. Multiple isolated features across the site may be related to pits. However, with no other evidence these are likely to be modern in origin, possibly related to the former orchard that is shown on historic mapping depicting the site in 1952.

5. ACKNOWLEDGEMENTS

Archaeological Project Services wish to acknowledge Rose Homes (EA) Limited for commissioning the project, and their assistance throughout the project. Paul Cope-Faulkner and Mark Dymond edited drafts of the report prior to submission.

6. PERSONNEL

Project Manager: Paul Cope-Faulkner
Geophysical Survey: Sean Parker
Background Research: Sean Parker
Archiving: Denise Buckley
Survey processing and reporting: Sean Parker

7. BIBLIOGRAPHY

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8. ABBREVIATIONS

APS Archaeological Project Services

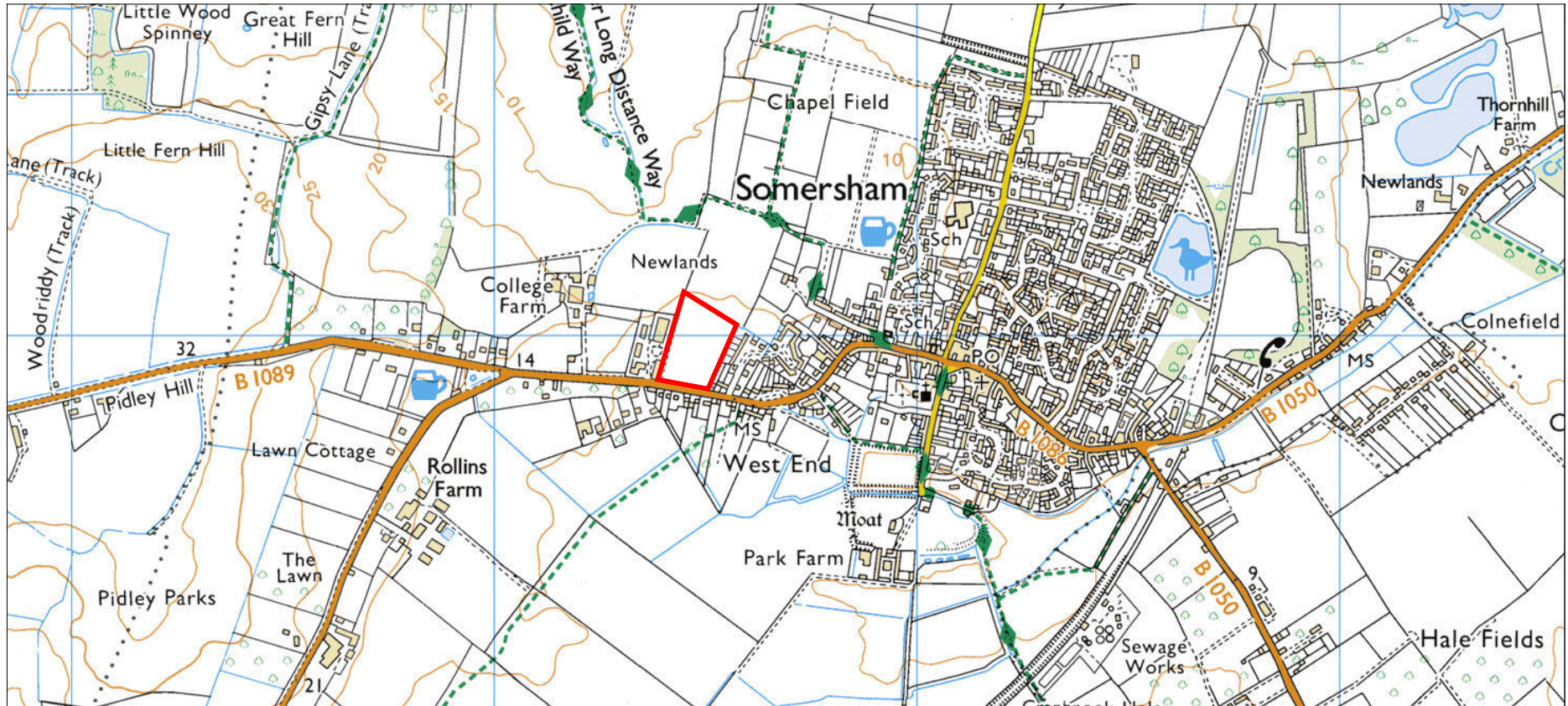
BGS British Geological Survey

CifA Chartered Institute for Archaeologists



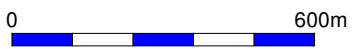
Figure 1 - General location map

SOMERSHAM




34 35 36 37 78

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 Survey Area

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Somersham, St Ives Road

Scale 1:15000	Drawn by: SP	Report No:71/18
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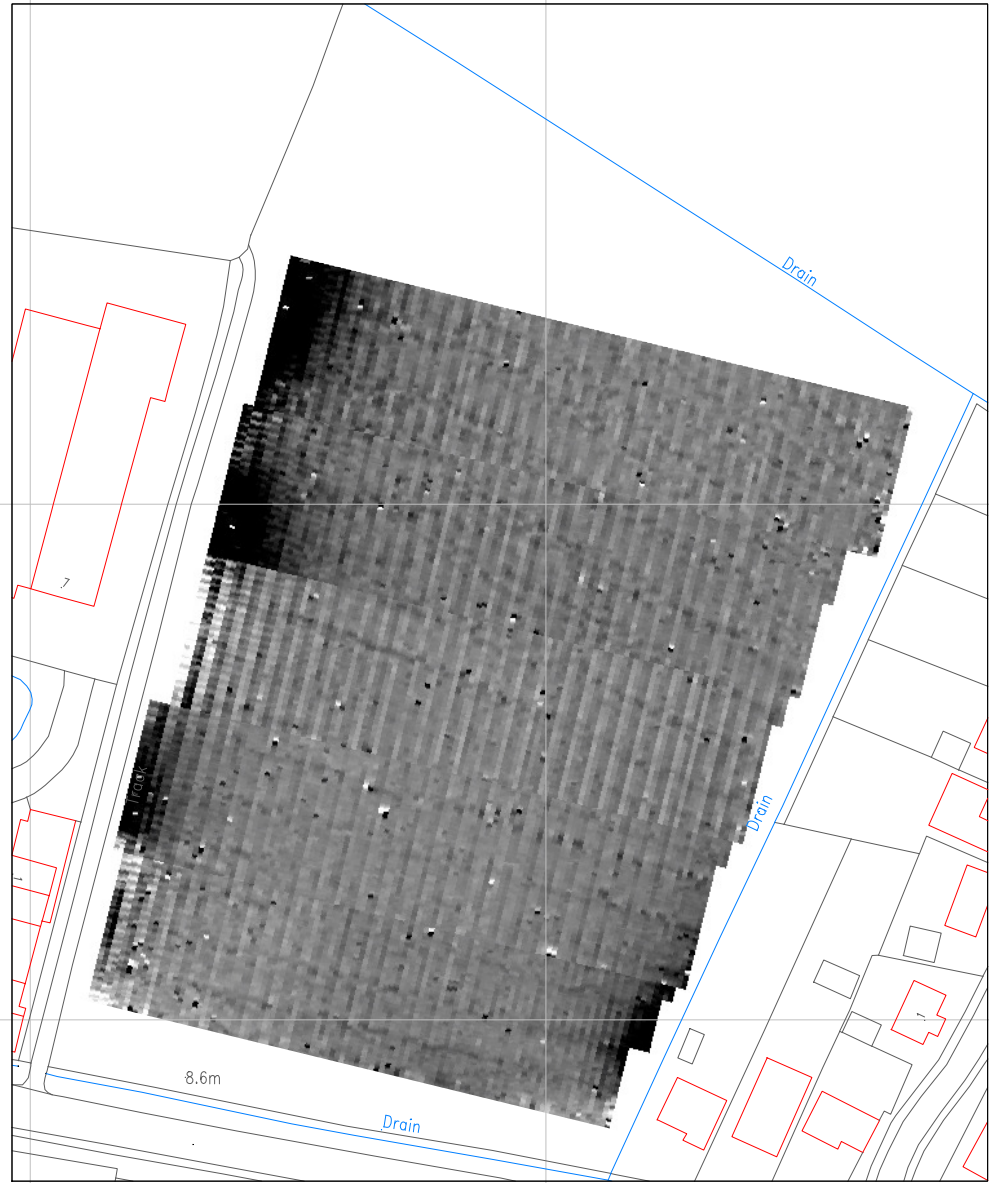
Figure 2 - Survey location plan



Figure 3 - Survey Setout

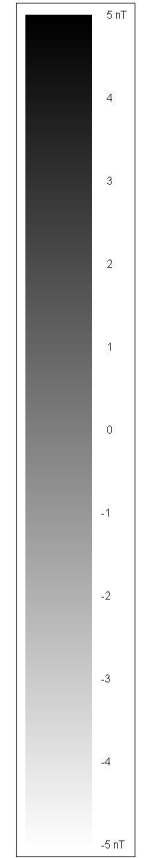
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A3 Scale 1:1000 Drawn by: SP Report No: 71/18

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Figure 4 - Raw Greyscale Data

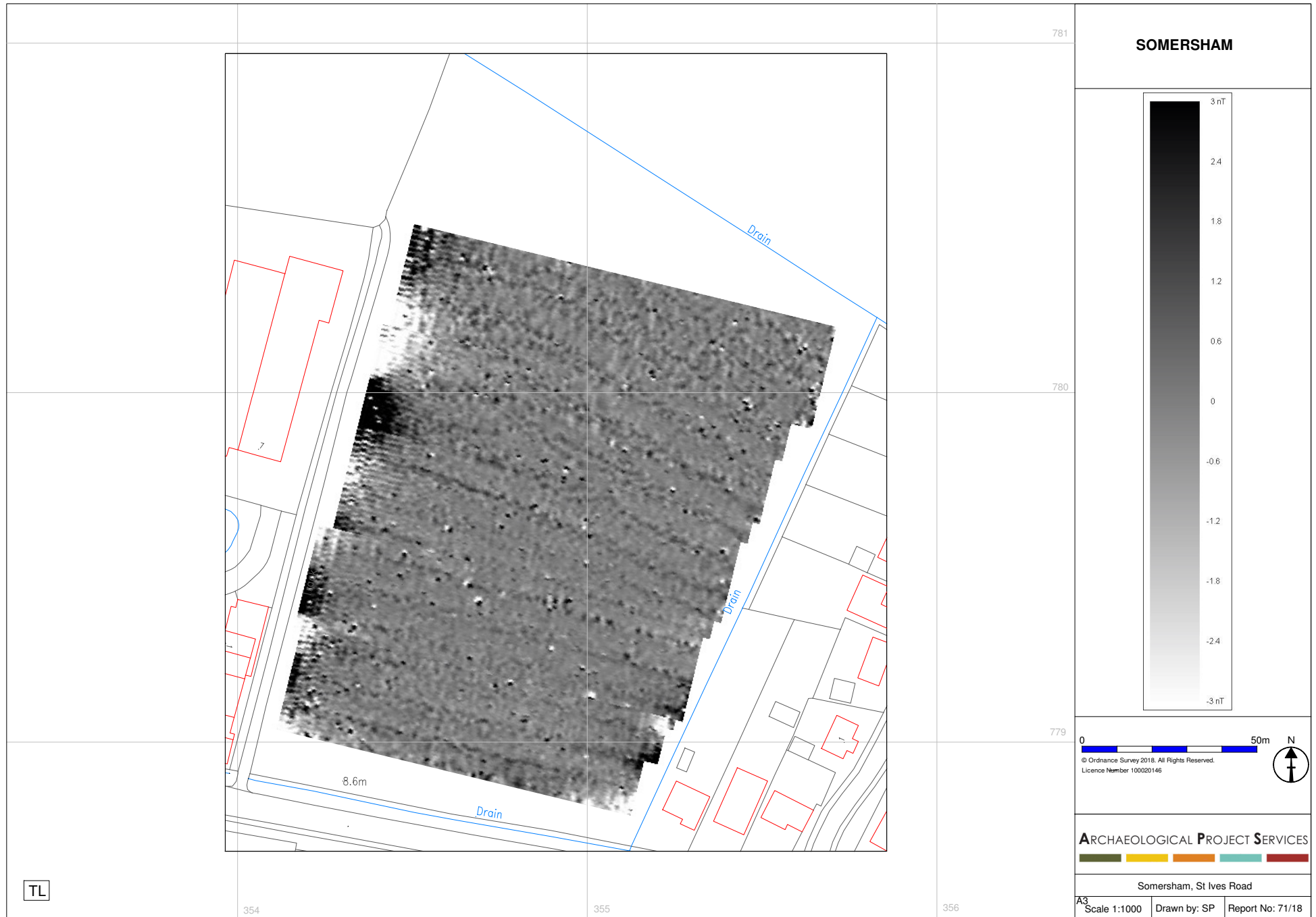


Figure 5 - Processed Greyscale Data

781

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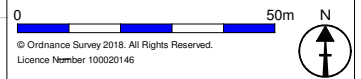


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KEY

- Agricultural Linear
- Isolated Dipolar Response
- ▨ Area Of Bipolar Response
- Survey Grid



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Figure 6 - Interpretation