ARCHAEOLOGICAL PROJECT SERVICES

# Geophysical Survey Report

## On land off
## TOOT LANE
## FISHTOFT
## LINCOLNSHIRE

Prepared for
SLR CONSULTING LIMITED
By
Archaeological Project Services

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## 1. SUMMARY

*A detailed magnetic gradiometer survey was undertaken on land at Toot Lane, Fishtoft, Lincolnshire. The work was undertaken to accompany a planning application for development of the site.*

*The geophysical results have identified multiple features of which few archaeological potential. Other anomalies indicate an infilled creek along the southern part of the site with the remaining features relating to modern use of the field.*

## 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'* (CIfA 2014a).

### 2.2 Project Background

Archaeological Project Services was commissioned by SLR Consulting to undertake a detailed magnetometry survey of land at Toot Lane, Fishtoft, Lincolnshire, in order to accompany a planning application for future development of the site. The geophysical survey was undertaken on the 14th of February and 7th of March 2019 in accordance with a Written Scheme of Investigation prepared by Archaeological Project Services and approved by the Planning Archaeologist, Boston Borough Council.

### 2.3 Topography and Geology

Fishtoft is located 4km southeast of Boston, in the administrative district of Boston Borough, Lincolnshire (Fig. 1). The site is situated a further 1.7km northwest of Fishtoft, on the east side of Toot Lane, at National Grid Reference TF 3515 4372 (Fig. 2). The site lies at a height of *c*. 2m OD on the generally level ground of the Lincolnshire Fens.

Local soils are of the Pepperthorpe/Tanvats Series, typical alluvial gley soils (Robson 1990, 31). These are developed over a drift geology of marine alluvium which in turn seals a solid geology of the Ampthill Clay Formation (BGS 2019).

### 2.4 Archaeological Setting

The site sits within an area of known archaeological activity. Prehistoric activity has been noted in the vicinity but the main focus lies some distance to the southwest.

The village of Fishtoft appears to have begun life in the Middle Saxon period as a possible support centre for a monastic complex or an early Urban Centre as revealed by excavations off Clampgate Road in 2003 (Cope-Faulkner 2012). Recorded as Toft in the Domesday Survey of c. 1086, the land was held by Count Alan and Guy de Craon (Foster and Longley 1979).

The site lies to the south of the Rochford Tower. Constructed around the start of the 16th century,

probably 1504, the red brick tower has three stories including an undercroft. A lookout platform, Toot Hill, is said to be associated with the tower. Lying to the north of the site, it is indicated on the 1888 25" Ordnance Survey map and the 6" map of 1906, but is not present on the 6" map of 1956. The platform has since been ploughed flat (LHER 12757). A significant scatter of medieval finds was plotted along the western side of Wainfleet Road to the north of the proposed development site (LHER 13824).

The former moated site of Fishtoft Grange (LHER 12998) lies to the southeast of the proposed development. Just to the north of the grange, a late medieval pottery and brick scatter was recovered and appears to be associated with the grange (LHER 12735). Pottery of this date has also been recovered from land to the southwest of the site (LHER 12996).

## 3. GEOPHYSICAL SURVEY

### 3.1 Objectives

The aim of the geophysical survey was to gather sufficient information to indicate the potential presence of archaeological remains and to establish:

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

### 3.2 Methods

The magnetic gradiometry survey was carried out with a Bartington Grad 601-2 fluxgate magnetometer. The area was divided into grids and each grid was walked systematically in a parallel pattern, taking readings every 0.25m in traverses 1m apart. Readings are 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 are achieved throughout the survey.

16 grids were laid out over the site of the survey area as shown in Figure 3.

The site lies on fairly level ground with the survey area having an intermittent low scrub cover (Plate 1). The survey avoided the areas immediately adjacent to metal fencing and housing so as not to affect the data.

Plate 1- View overlooking the site, looking east

Data obtained from the survey were processed using Terra Surveyor software (Version 3.0.33.10). Following initial examination of the results, the data were clipped (-3 to 3 nT) to provide contrast to enhance the final processed image

Data were exported as a JPG 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 Written Scheme of Investigation and English Heritage (2008) and CIfA (2014b) guidelines and codes of conduct. Detailed methodology can be found in Appendix 1.

### 3.2 Results

The presentation of the data for the site involves a greyscale print-out of the raw data (Fig. 4; clipped for display but otherwise unprocessed) and the processed data (Fig. 5). Magnetic anomalies have been identified and plotted on to an interpretative drawing (Fig. 6).

There are several weak positive linear anomalies within the survey area. These may represent infilled ditches but due to their weak response they are more likely to relate to former agricultural activity at the site or the natural build-up of magnetically enhanced material.

The bipolar linear running east-west across the site is the current trackway across the site. This may have been reinforced with building rubble and would explain the bipolar effect in the data. There are also further bipolar linears that are present in the area which are believed to relate to field drains.

The two isolated dipolar anomalies have been caused by two metal borehole caps.

There are several areas of bipolar disturbance which are probably caused by nearby modern activity, such as fences and housing.

The southern part of the site is dominated by areas of positive response. There are no coherent patterns within the responses to suggest they are the result of human activity. They are typical responses relating to roddons, the infilled creeks of the marsh/fen environment typical in south Lincolnshire.

## 4. DISCUSSION

The geophysical results have identified several anomalies within the site of which most are believed to relate to modern agricultural activity. The site is dominated by an infilled creek which, though often used for settlement, contains no evidence for occupation and is unlikely to mask potential archaeological features. This geophysical survey does not preclude the survival of archaeological features which are not susceptible to detection, such as dispersed settlement, postholes or features which may have been too ephemeral to show in the data collected.

## 5. ACKNOWLEDGEMENTS

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## 6. PERSONNEL

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## 8. ABBREVIATIONS

APS Archaeological Project Services

BGS British Geological Survey

CIfA Chartered Institute for Archaeologists