



# Northamptonshire Archaeology

Archaeological earth resistance survey on land at  
Hillside Close, Bozeat, Northamptonshire  
October 2013



## Northamptonshire Archaeology

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Northamptonshire  
County Council

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Report 13/213

October 2013



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**QUALITY CONTROL**

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**OASIS REPORT FORM**

<b>PROJECT DETAILS</b>		<b>Oasis No. 162766</b>	
Project title	Archaeological earth resistance survey on land at Hillside Close, Bozeat, Northamptonshire, October 2013		
Short description	Northamptonshire Archaeology was commissioned by Wilbraham Associates, on behalf of Manor Farm Developments, to carry out an earth resistance survey on a proposed development site south of Hillside Close, Bozeat. This work followed on from a detailed magnetometer survey which had identified traces of ridge and furrow across the whole site and zones of magnetically disturbed ground around its northern and western edges. The earth resistance survey covered the northern part of the site, and identified some probable stone or brick building remains within its north-western corner.		
Project type	Geophysical survey - earth resistance		
Previous work	Magnetometer survey (Clements 2013)		
Current land use	Pasture		
Future work	Unknown		
Monument type and period	Medieval Ridge and furrow, undated stone or brick structures, modern field boundary		
Significant finds	-		
<b>PROJECT LOCATION</b>			
County	Northamptonshire		
Site address	Hillside Close, Bozeat		
Easting Northing	SP 90626 58619		
Area (sq m/ha)	1.4 ha (total development area), 0.35ha (earth resistance survey)		
Height aOD	90m aOD		
<b>PROJECT CREATORS</b>			
Organisation	Northamptonshire Archaeology (NA)		
Project brief originator	Liz Mordue, Assistant Archaeological Advisor, Northamptonshire County Council		
Project Design originator	Northamptonshire Archaeology		
Director/Supervisor	Carol Simmonds (NA)		
Project Manager	Mark Holmes (NA)		
Sponsor or funding body	Wilbraham Associates		
<b>PROJECT DATE</b>			
Start date	11/10/2013		
End date	30/10/2013		
<b>ARCHIVES</b>	<b>Location (Accession no.)</b>	<b>Contents</b>	
Physical	N/A		
Paper	NA	Site records (1 archive box)	
Digital	NA	Client report PDF. Survey data,	
<b>BIBLIOGRAPHY</b>			
Title	Archaeological earth resistance survey on land at Hillside Close, Bozeat, Northamptonshire, August 2013		
Serial title & volume	Northamptonshire Archaeology Report 13/213		
Author(s)	Carol Simmonds		
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**ARCHAEOLOGICAL EARTH RESISTANCE SURVEY  
ON LAND AT HILLSIDE CLOSE, BOZEAT  
NORTHAMPTONSHIRE  
OCTOBER 2013**

**Abstract**

*Northamptonshire Archaeology was commissioned by Wilbraham Associates, on behalf of Manor Farm Developments, to carry out an earth resistance survey on a proposed development site south of Hillside Close, Bozeat. This work followed on from a detailed magnetometer survey which had identified traces of ridge and furrow across the whole site and zones of magnetically disturbed ground around its northern and western edges. The earth resistance survey covered the northern part of the site, and identified some probable stone or brick building remains within its north-western corner.*

**1 INTRODUCTION**

Northamptonshire Archaeology (NA) was commissioned by Wilbraham Associates Ltd, on behalf of their clients Manor Farm Developments, to conduct a earth resistance survey of c 0.35ha on a proposed development site at Hillside Close, Bozeat, Northamptonshire (NGR SP 90626 58619; Fig 1). The works followed on from a detailed magnetometer survey (Clements 2013) which had identified traces of ridge and furrow across the whole site and zones of magnetically disturbed ground around its northern and western edges

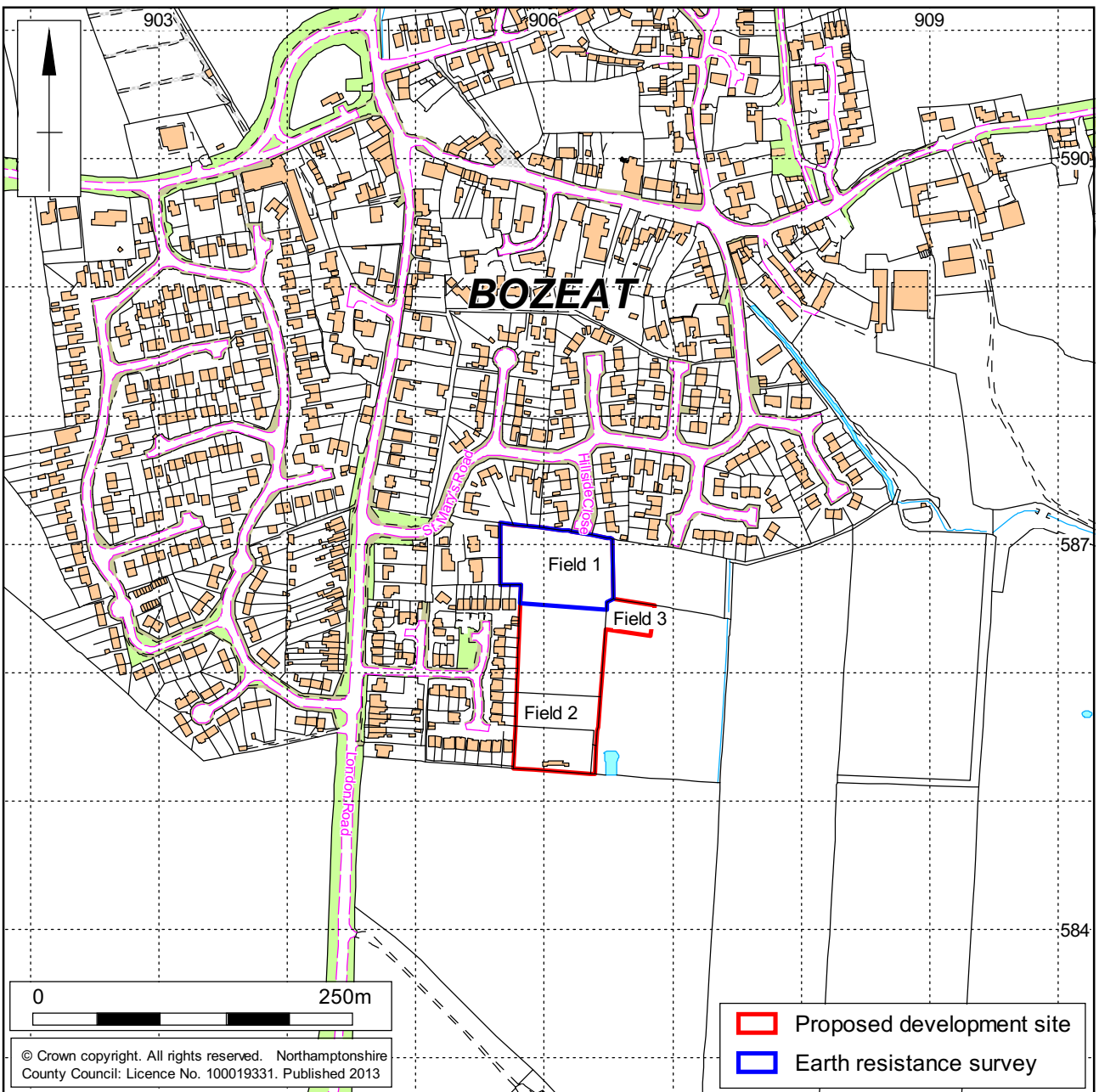
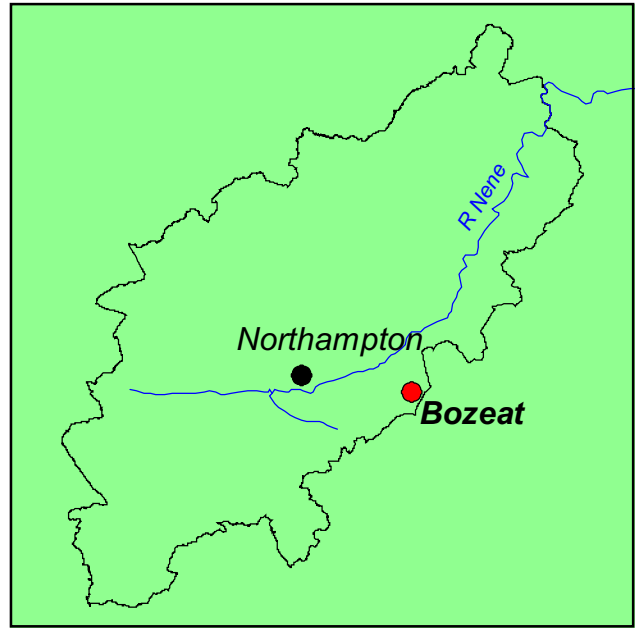
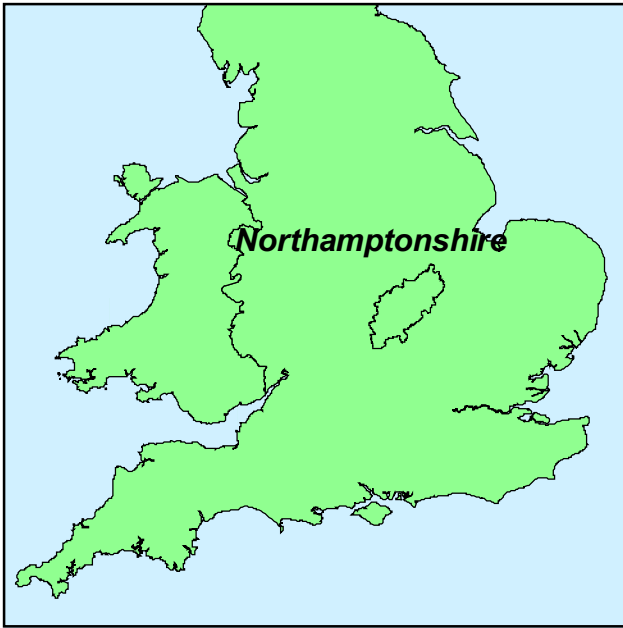
Owing to the close proximity of excavated Roman kilns and structures and the 'noisy' magnetic data the Assistant Archaeological Advisor to Northamptonshire County Council requested an earth resistance survey to identify the cause of the magnetic noise. Thus, the aim of the survey was to detect any archaeological remains present and to determine the nature, function, character and significance of the site in accordance with the National Planning Policy Framework (NPPF) to inform, in advance of determination, planning application WP/2013/0332.

**2 BACKGROUND**

**2.1 Location and geology**

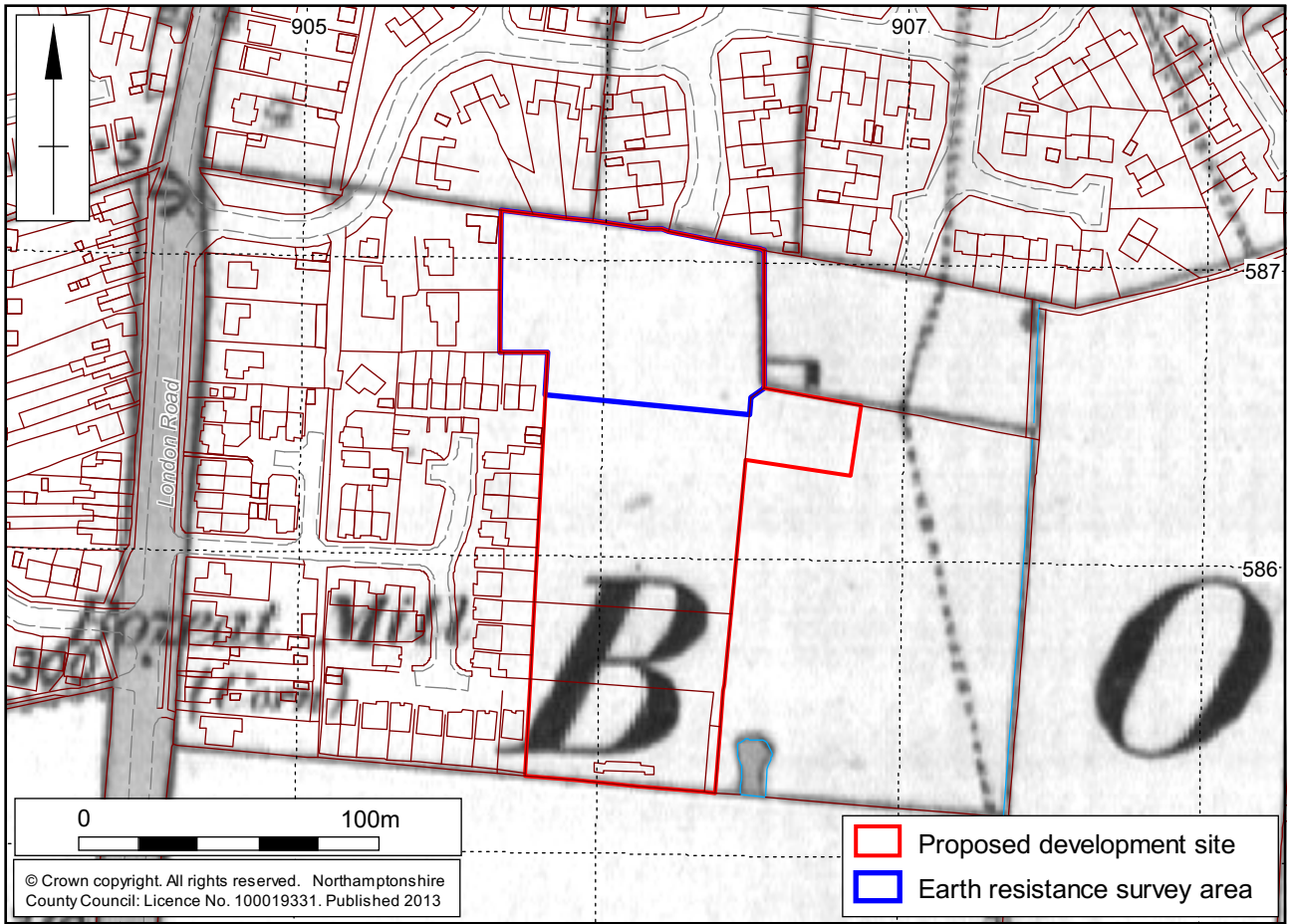
The proposed development site consists of three pasture fields on the southern edge of Bozeat. These lie at c 90m aOD and are bounded to the north and west by housing and to the south and east by further pasture fields. In the northern field (Field 1) ridge and furrow cultivation survives as earthworks.

The bedrock geology across the site comprises Cornbrash Limestones as well as Sandstones, Siltstones and Mudstones of the Kellaways Formation (BGS 2013). The superficial deposits comprise Diamicton tills of the Oadby formation. The soils are identified as lime-rich loam and clay soils with impeded drainage (Landis 2013).



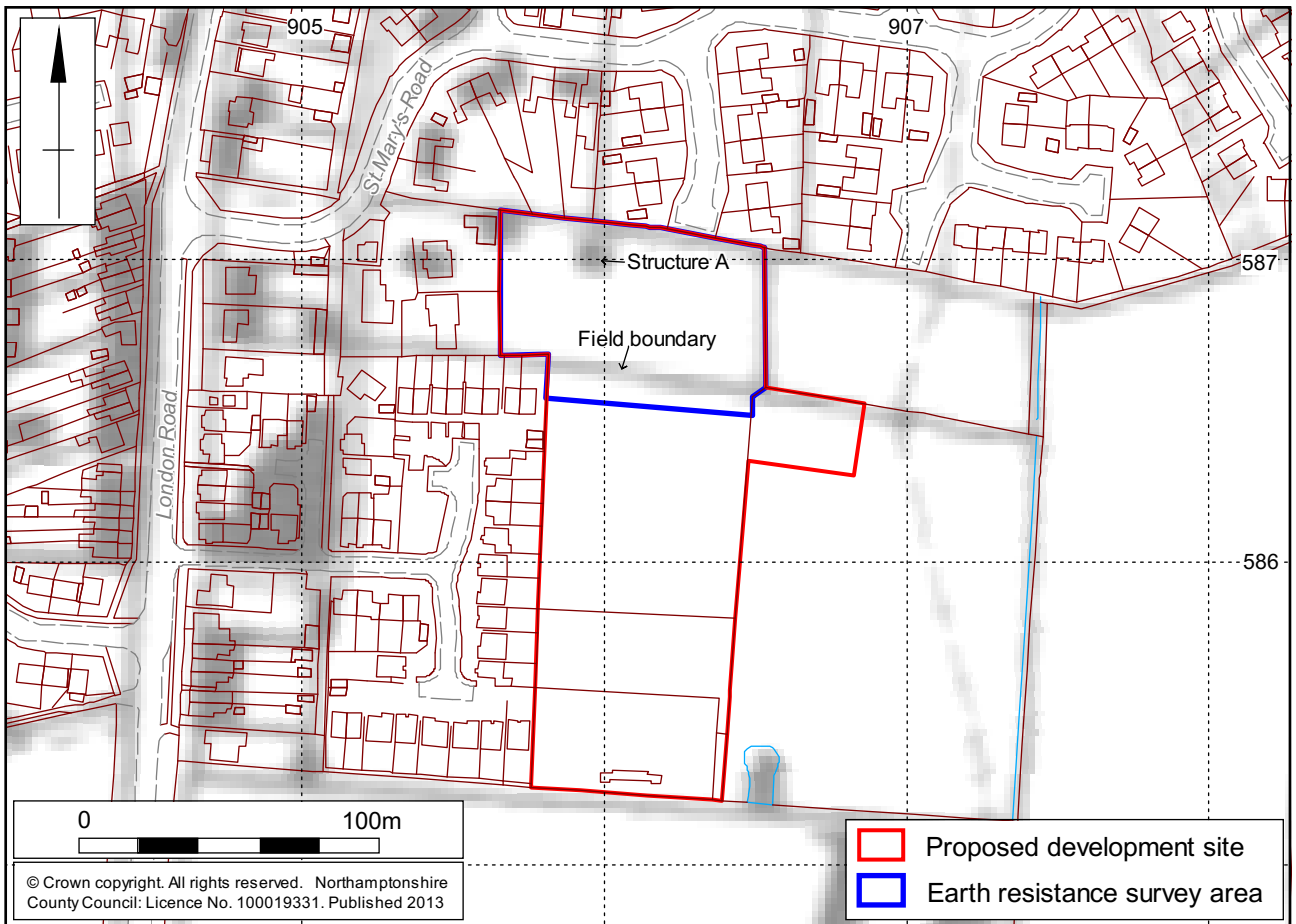
Scale 1:5,000

Site location Fig 1



Scale 1:2,500

Excerpt from first edition Ordnance Survey Fig 2



Scale 1:2,500

Excerpt from 1950s Ordnance Survey Fig 3

## 2.2 Historical and archaeological background

The area around the village of Bozeat has numerous recorded archaeological remains, with a prehistoric and Roman settlement recorded to the south-east (HER9913) and a partially excavated Roman villa at Easton Maudit to the south-west (HER3278/1/2). Further Roman remains, including buildings and a kiln, together with three early Saxon burials, were discovered immediately north of the present survey area in the 1960s, during housing development (HER3268).

The village of Bozeat is known to have Saxon origins, but the core of the late Saxon and medieval settlement lies approximately 450m north-west of the survey area. Some earthwork remains of closes and a boundary bank survive around the village core (HER3272/3/1-2). Within the survey area itself there are earthworks of medieval ridge and furrow, indicating that the area lay within the open fields of the village during the medieval period. The well defined ridge and furrow remains are aligned roughly north to south (Front Cover) and are largely in good condition. Approximately 50m south of the northern boundary the earthworks are disturbed by a ditch aligned east to west, approximately 2m wide.

A rapid assessment of the readily available historic map evidence indicated that the proposed development area lay outside of settlement. The 1880s first edition Ordnance Survey (Fig 2) shows that the area south of the village core was occupied by small rectangular fields. The proposed development area is illustrated as a single large rectangular field. By the 1950s Bozeat had begun to expand to its modern boundaries (Fig 3). London Road to the west was flanked by houses and other structures and to the north-west of the site were houses flanking newly constructed St Mary's Road, which was then a cul-de-sac. Within the survey area there are two features of interest. A field boundary aligned east to west divided Field 1 and this corresponds with the earthwork ditch referred to above. To the north of this was a small rectangular structure (Structure 'a', Fig 3) which may have been an outbuilding rather than a domestic building.

In August 2013 a detailed magnetometer survey was carried out by Northamptonshire Archaeology (Clements 2013). The survey covered the entire proposed development area comprising c1.4ha across three fields and identified the furrows of medieval ridge and furrow cultivation (Figs 4 & 5). There were also large areas of magnetic 'noise' in the north-west corner of the survey area and along its southern boundary. It was thought that the areas of magnetic noise probably represent spreads of construction debris from the adjacent housing and other buildings. However, given the close proximity of the site to recorded Roman remains (HER3268), the Assistant Archaeological Advisor to Northamptonshire County Council requested an earth resistance survey targeting the area of magnetic noise.





Scale 1:1,250 (A4)

Magnetometer survey results Fig 4



Scale 1:1,250 (A4)

Magnetometer survey interpretation Fig 5

### 3 METHODOLOGY

The earth resistance survey was undertaken across the northern part of Field 1 on 11 October 2013. The weather had been unsettled in the week leading up to the survey, and was unsettled on the day itself, but in the preceding weeks there had been a sustained dry period. The ground conditions were thus favourable, being neither excessively wet nor dry.

The instrument used for the survey was a Geoscan Research RM15 resistance meter. It was deployed in twin probe configuration with mobile probe spacing of 0.5m and the remote probes spaced a similar distance apart. Measurements of earth resistance were recorded to a precision of 0.1 Ohms ( $\Omega$ ). This instrument and probe configuration is standard for archaeological survey. Some technical difficulties arose with the instrument during the day, reducing the speed of the survey and limiting the area which could be covered, but sufficient data was collected to achieve the intended purpose of the survey.

All fieldwork methods complied with the guidelines issued by English Heritage and by the Institute for Archaeologists (EH 2008; IfA 2011) and with the Written Scheme of Investigation for the project (NA 2013).

The survey data was collected at a spatial resolution of 1m x 1m, within a contiguous mesh of 20m grid squares. The grids were laid out manually, with a tape measure and optical square, and were tied in to the Ordnance Survey National Grid by measurement to field boundaries and other points of detail. In total, the survey extended across nine full and partial grids squares.

The survey data was downloaded, gridded, processed and displayed using Geoplot 3.00u software. Although great effort was made in the field to maintain a consistent background level between grids, this was not always possible. Where irregularities occurred between data grids, 'edge-matching' was carried out. Gradients in resistance across grids were rectified with the 'de-slope' process, where necessary.

The processed data is presented in this report in the form of a greyscale plot, on which white represents the lowest values ( $< 3\Omega$ ), black represents the highest values ( $>20\Omega$ ) and all intervening values are represented by shades of grey. This plot has been scaled, rotated and resampled (georectified) for display against the Ordnance Survey base mapping (Fig 6) and is also presented with an interpretative overlay (Fig 7).



Scale 1:1,250 (A4)

Earth resistance survey results Fig 6



Scale 1:1,250 (A4)

Earth resistance survey interpretation Fig 7

## 4 SURVEY RESULTS

The geophysical survey has identified a concentration of high resistance anomalies in the north-western corner of the survey area, where 'noisy' magnetic data had previously been recorded (Clements 2013). The anomalies comprise two small, approximately square, features and a larger feature, shaped like a reversed 'C', which extends beyond the western limit of the survey area.

The 'C'-shaped feature is a high resistance anomaly, measuring at least 13m east to west and 20m north to south. Its eastern and southern edges are broad and well-defined, but its northern edge is somewhat less distinct. One of the smaller, square-shaped features, about 9m across, intersects with its eastern edge, and the other, which is of similar size, lies slightly further to its east. A few high resistance readings extend from the southern edge of the 'C'-shaped feature and may represent part of a third square feature, but this is not certainly the case.

The regularity of the square and 'C'-shaped features, and their high resistance values, suggests that they represent the remains of stone or brick walls. Their date is unknown, and whilst it is possible that they represent Roman structures a more recent origin cannot be ruled out. In particular, the eastern of the square features (marked as 'Structure A' on Fig 7) coincides with a small building depicted on a 1950s edition of the Ordnance Survey six inch map (Fig 3).

Across the remainder of the survey area there are a series of poorly-defined linear anomalies. The majority of these are aligned from north to south and evidently relate to the ridge and furrow earthworks. However there is one anomaly, at least 20m long, which is aligned north-east to south west, and does not conform to the layout of the ridge and furrow or the modern field boundaries. It is therefore possible that it represents a ditch pre-dating the onset of medieval cultivation.

## 5 CONCLUSION

The survey has detected a group of features which probably represent the remains of brick or stone structures located in the north-western corner of the proposed development site. Whilst one these features apparently corresponds to a building depicted on a 1950s edition of the Ordnance Survey six inch map (Fig 3: Structure A) the others do not relate to anything on the available historic mapping, and may be of much earlier date.

As well as probable buildings, the survey has identified traces of medieval ridge and furrow, and a possible ditch that may pre-date the medieval period. A recent field boundary was also noted as an earthwork feature (and as a line of 'noise' in the previous magnetic survey) but did not produce a clear resistance anomaly.

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