YCCCART 2011/Y10 North Somerset HER 2011/170

Resistivity Survey at Iwood (Mr Collins Field 4)

YATTON, CONGRESBURY, CLAVERHAM AND CLEEVE ARCHAEOLOGICAL RESEARCH TEAM (YCCCART)

General Editor: Vince Russett



RM 15 team training new members

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Abstract

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YCCCART has agreed with the Heritage Lottery Fund to undertake a project over two years commencing May 2009 to establish the extent of the Congresbury Roman kiln sites and investigate the archaeology of the environs around Cadbury Hill, Congresbury. Gradiometry surveys at Iwood, near Congresbury, on a field south of the river Yeo, revealed a potential domestic area, palaeochannels and a track way which is continuous with a track way identified previously north of the current river. A resistivity survey was undertaken in 2011 to investigate the potential domestic area.

Acknowledgements

A Heritage Lottery Grant enabled the purchase, by YCCCART, of a Geoscan RM15 resistivity meter without which this survey could not have been undertaken.

This survey would also not have been carried out without the willing permission of the landowner, Mr A Collins.

The authors are grateful for the hard work by the members of YCCCART in performing the survey and Vince Russett for editing.

Introduction

Yatton, Congresbury, Claverham and Cleeve Archaeological Research Team (YCCCART) is one of a number of Community Archaeology teams across North Somerset, supported by the North Somerset Council Development Management Team.

The objective of the Community Archaeology in North Somerset (CANS) teams is to carry out archaeological fieldwork, for the purpose of recording, and better understanding of, the heritage of North Somerset.

Site Location

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Fig 1: Site location

The site is close to the hamlet of Iwood, in the parish of Congresbury in North Somerset. The start point of the survey lies at ST345191 163045 some 12 miles south of Bristol

The field is privately owned, and there are no rights of way south of the river, although the site can be easily seen from the public footpath running along the north bank of the Yeo.

Land use and geology

The field lies entirely on the alluvial clays of the Northmarsh, in the floodplain of the Congresbury Yeo. It is currently used for grazing cattle and sheep.

Historical & archaeological context

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Fig 2: Map compiled by Gill Bedingfield showing the medieval lands at Iwood

The map at Figure 2 above shows that the shape of the surveyed field has changed little in 800 years and that in the fourteenth century the field was called Pasture next to Iwood Mill Bridge.



Fig 3: 1839 Map. Courtesy of Bristol Record Office BRO 37959/9. The surveyed field is number 1781 on the map.

The Tithe apportionment record, relating to the 1839 map above, shows the field as pasture, called The Bridge Nine Acres or Pigs Foot, being owned by the Trustees of William & Mary Merle and occupied by Charles Parsons.

Survey objectives

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The survey had the following objectives.

- 1) To investigate the potential domestic area identified by a gradiometry survey.
- 2) To use the survey to further train YCCCART members and members of Community Archaeology in North Somerset (CANS) in the use of the Bartington Gradiometer 601.

Methodology

The survey of field was undertaken during the period May to July 2011 by teams from YCCCART using a Geoscan RM15 resistivity meter, with settings as per the site record in Appendix 1.

The completed survey was downloaded to ArcheoSurveyor and Snuffler programmes

ArcheoSurveyor composites were adjusted using the following filters

- 1) Colour Red Blue Green 2 & Black, Green, White
- 2) Band weight equaliser
- 3) Grad shade
- 4) Despiked
- 5) Clip SD2
- 6) Edge match

The report was written in Microsoft Word 2007.

Photographs were taken by members of YCCCART, and remain the copyright of YCCCART.

Results

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Fig 4: Gradiometer shade view (ArcheoSurveyor image. High readings are black)

Resistivity

Grid 1	Grid 3	Grid 2	Grid 1	
14 July	June 9	May 19	May 19	
Grid 2	Grid 4	Grid 2	Grid 1	60m
14 July	June 30	June 9	June 9	
Grid 3	Grid 3	Grid 2	Grid 1	
14 July	June 30	June 30 9	June 30	

Fig 5: Resistivity survey plan.

Start point A on gradiometry survey

Structure at odd angle across palaeochannel. Is it a bridge?



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Fig 5: Resistivity shade view (ArcheoSurveyor image). High readings are black.

_	13.96 Ohm
	11.5
	11
	10.5
	10.13
	10
	9.61
	9.44
	9
	8.5
	6.44 Ohm
•	

The black anomaly, in fig 5 above, running across the top right hand grids probably relates to debris keeched from the adjacent River Yeo. No building appeared in the 'potential domestic activity' area at the top right of the survey, and it is now thought the magnetic response related to tipped material to stabilise the ground surface immediately inside the gate from Iwood Lane.

The palaeochannels revealed on the gradiometer survey are surprisingly evident on the resistivity results in fig 5 and a structure (bridge?) appears to cross the palaeochannel at an unusual angle.

Other high readings are indicated by the red arrows top left in fig 5. These are simple lines or lines at right angles and could represent walls or other structures.



Fig 6: Resistivity colour shade view (ArcheoSurveyor image). High readings are red



Fig 7: Resistivity green shade view (ArcheoSurveyor image). High readings are black

The colour and green images in figs 5 & 6 above confirm the possible bridge and walls previously mentioned.



Fig 8: Axonometric view (ArcheoSurveyor image). High readings are black

The further view at Fig 8 above clearly shows the structure (indicated by the red arrow) crossing the palaeochannel. This view also clearly shows the rectangle of high resistance at the N end of the possible bridge, although the interpretation of this is not clear.



Fig 9: Resistivity (green image) and gradiometry (black & white image) combined results.

The combined results, in fig 9 above, show how the palaeochannels align on both types of survey.

Recommendations

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The survey has revealed an apparent structure crossing the palaeochannel as well as possible walls.

In order to determine the true nature of the identified anomalies it is recommended that a psuedosection survey is undertaken of targeted features.

References

Bedingfield, G. 1996	I wood, How long has it existed as a discrete settlement unit and how did this affect its economy, MA Dissertation. Bristol University 1996).
Congresbury Tithe Map	BRO 37959/9 (Bristol Record Office)

Authors: Colin Campbell & Chris Short Date July 2011

Appendix

		YCCCART Sit	e Survey			
Project –	Iwood –Collins 4		-			
Survey da	te	19 May 2011 t	o 14 July 2011			
Report da	te	14 July 2011				
Type /Inst	rument		RM	15		
		Gain x1, Current 1mA Frequency 137 Probes 'Config	Hz 1' (2 probes)	Grid size: 20m x20m Pattern : Zig Zag Sample interval 1m Traverse Interval 1m. Mode Zig-Zag		
Weather		Dry, warm and	l sunny (All da	ys)		
OS Ref or	Lat-Longitude	ST	<i>·</i> · · ·			
Site name		Collins 4				
Landowne	r	Mr A Collins				
Tenant		None				
HER ref						
Site type						
Descriptio	n	Field				
Period		Unknown				
Geology						
Land use		Grazing				
Survey tea	am	 19 May : Colin Campbell, Chris Short, Geoff Pearson. Mike Fox and Pete Wright. 9 June : Colin Campbell, Chris Short, David Long, Judy Sack and Richard Baker 30 June : Colin Campbell, Chris Short, Ferdi, Susan Dugas & Vince Russett 14 July: Colin Campbell, Chris Short, David Long, John Haynes, Philippa Cormack 				
9	Survey area	Notes Read		Readings		
		size	walk direction	on		
19 May	Grid 1 Grid 2	1 x 20m 1 x 20m	S S			
9 June	Grid 1 Grid 2 Grid 3	1 x 20m 1 x 20m 1x 20m	S S S			
30 June	Grid 1 Grid 2 Grid 3 Grid 4	1 x 20m 1 x 20m 1x 20m 1x 20m 1x 20m	S S S S			
14 July	Grid 1 Grid 2	1 x 20m 1 x 20m	S S			

	Grid 3	1x 20m	S			
Summary	I	Downloaded as: Snuffler: <i>Iwood South 1 to 12</i> ArchaeoSurveyor: <i>Collins4/19May 1 & 2 ,9June 1,2 & 3,</i> <i>30 June 1 to4 & 14July 1 to 3</i>				

Grid layout

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B Not to scale



Update 14 July 2011

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Grid l	Grid 3	Grid 2	Grid 1	Suvey.
14 July	June 9	May 19	May 19	
Grid 2	Grid 4	Grid 2	Grid 1	, s
14 July	June 30	June 9	June 9	
Grid 3	Grid 3	Grid 2	Grid 1	
14 July	June 30	June 30 9	June 30	

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