YCCCART 2014 /Y12 North Somerset HER 2015/14

Resistivity Survey at Brinsea Road, Congresbury (Mrs Meaker Field 3)

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General Editor: Vince Russett



The RM15 survey on 31 July 2014.

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Abstract

YCCCART has a project to establish the extent of the Congresbury Roman kiln sites and associated features. A resistivity survey has revealed possible structures as well as enigmatic circular and linear features.

Acknowledgements

A Heritage Lottery Grant enabled the purchase, by YCCCART, of a Geoscan RM 15 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, Mrs M Meaker.

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

Introduction

YCCCART is one of a number of Community Archaeology teams across North Somerset, supported by the North Somerset Development Management Team.

The objective of the Community Archaeology in North Somerset (CANS) project is to undertake archaeological fieldwork to enable a better understanding and management of the heritage of the area while recording the activities and locations of the research carried out.

Site Location



Fig 1: Site location. The field is indicated by the arrow.

Land use and geology

The site is in Congresbury, abuts Brinsea Road and is close to Venus Street.

Land use and geology

The site lies to the south of the flood plain of the natural course of the Congresbury Yeo. The geology is Carboniferous limestone, Keuper Marl and estuarine alluvium.

The field is private with no public access and is used for grazing.

Historical & archaeological context

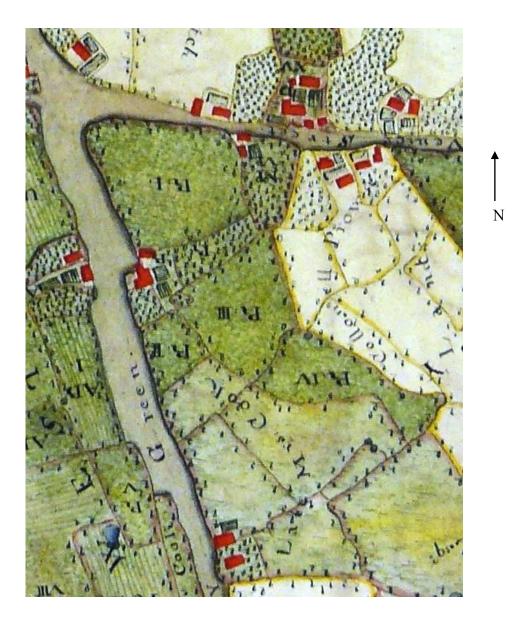


Fig 2: De Wilstar map of 1739. Courtesy of Bristol Record Office. Reference 33041/BMC/4/PL1/2. Note the map is upside down hence the lettering is the wrong way up.

The index to the De Wilstar Map of 1739 (Fig above) shows: Field RI as Barne Close. Fields RII and RIII are called Brownes Ground.

Tithe Map

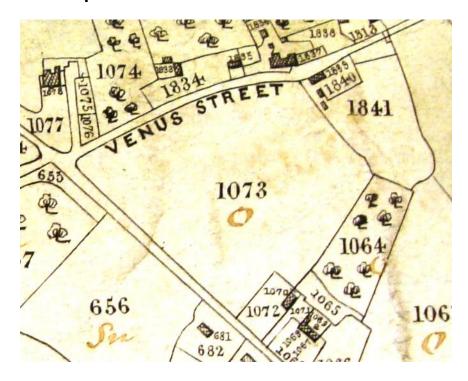


Fig 3: 1839 Map. Courtesy of Bristol Record Office BRO 37959/9. The surveyed field is number 1073 on the map.

The Tithe apportionment record, relating to the 1839 map above, shows field number 1073 as arable called Barn Close and Allotment owned by The Trustees of Queen Elizabeth's Hospital and occupied by Anne Osmond.

2007 Surveys

In 2007 limited geophysical surveys were carried out in the field by Matthew Harris as part of his archaeological degree at Bristol University (Harris, 2007).

The results of his magnetometer and resistivity surveys did not reveal any noticeable archaeology. However he pointed out that a large north – south anomaly, bordering Brinsea Road, was the result of "a relatively recent landfill procedure to stop the Meaker field slipping into the road".

Survey objectives

Methodology

The survey of the field was undertaken during the period 31 July to 9 October 2014 by teams from YCCCART using a Geoscan RM 15 resistance meter, with settings as per the site record in Appendix 1.

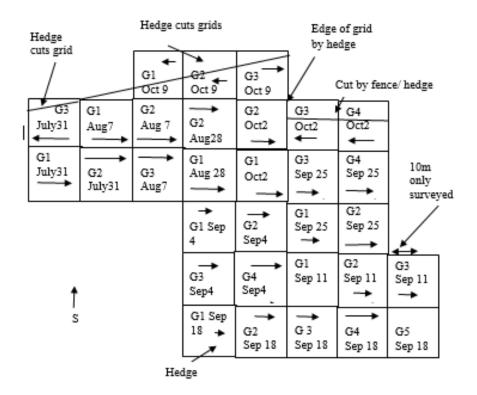
The completed survey was downloaded to a TerraSurveyor programme and the resultant composite adjusted using the following filters:

- Band weight equaliser
- Grad shade
- Despiked
- Clip SD2
- High Pass filter.
- Periphery filter

The report was written in Microsoft Word 2007.

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

Results



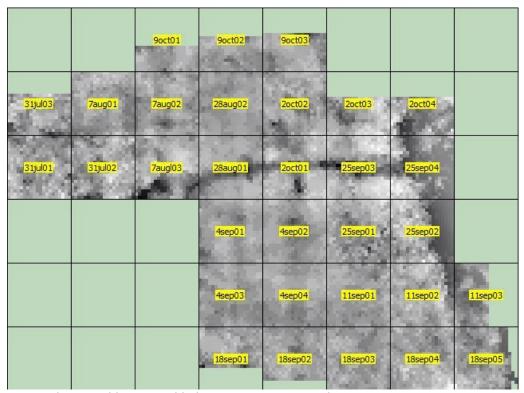


Fig 5: Above grid layout and below TerraSurveyor grids.

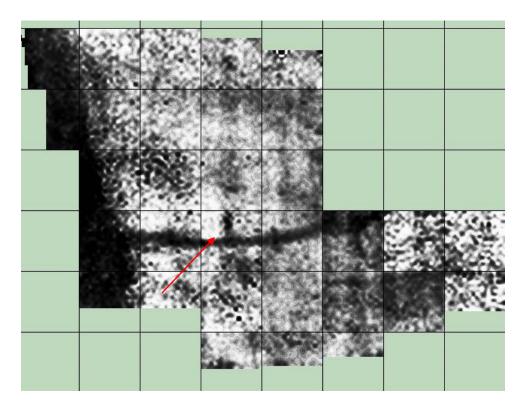


Fig 6: TerraSurveyor Shade image with base level filters only. High readings are black.

The most obvious features revealed in the results, shown in Fig 6 above, are:

- 1) The black line on the left hand side. This is the area of the landfill, bordering Brinsea Road, noted by Matthew Harris in 2007.
- 2) The black linear feature indicated by the red arrow in Fig 6. No hedge line is shown here in the early maps. Is this a ditch or track way filled with stone or a collapsed large wall?

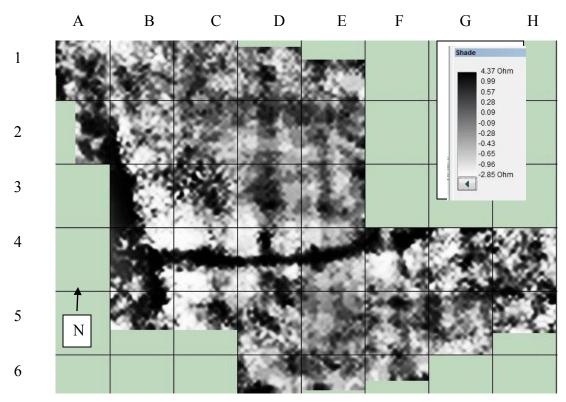


Fig 7: TerraSurveyor Shade image including high level filter and periphery match filter. High readings are black.

Further anomalies are revealed in the filtered results shown in Fig 7 above, including:

- 1) Grid 3C and the bottom of grid 2C show circular features, including central high resistance features in both.
- 2) Grid 5B shows a rectangular feature on the left hand side, perhaps the footings of the eponymous barn.
- 3) Grids 4G and 4H appear to contain a structure/s.

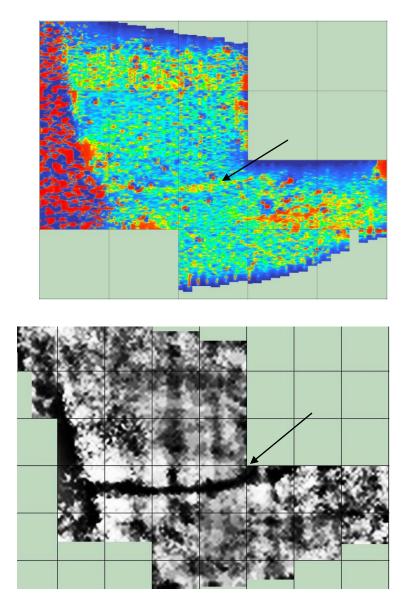


Fig 8: Above top is the gradiometry results and below the resistivity results.

A comparison of the gradiometry and resistivity results as shown in Fig 8 above, clearly shows the disturbed area on the left and the arc / linear feature indicated by the arrows.

Recommendations

A small excavation should be carried out to investigate the anomalies summarised above.

References

Congresbury Tithe Map 1839 BRO 37959/9. (Bristol Record Office)

De Wilstar map of 1739 BRO 33041/BMC/4/PL1/2. (Bristol Record

Office)

Harris Matt, 2007 An Archaeological study of possible Roman

and Sub-Roman activity to the south of

Congresbury, North Somerset.

Unpublished report

Author. Chris Short

Date October 2014

Appendix 1 Site record

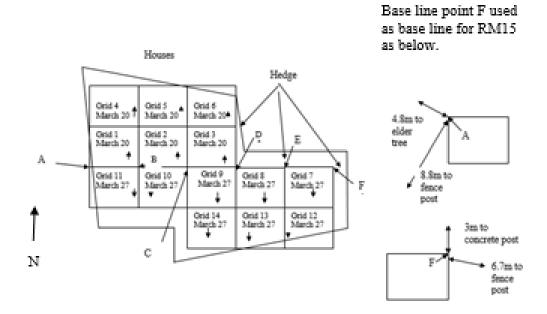
YCCCART Site Sur Project:	vey							
Survey date		31 July 2014 to 9 October 2014						
Report date		9 October 2014						
Type /Instrument		RM15						
Location		Near west end of Venus Street						
Site name		Meaker 3						
Landowner		Mrs M Meaker						
Tenant		Peter Pike						
HER ref		TBC						
Site type		Pasture						
Description								
Period								
Geology								
Land use		Grazing						
Survey team and	conditions							
31 July 2014	Team	David Long, David Walker, Pete English, Chris Short,						
		John Wilcox, Clive Nunn.						
		Dry and overcast, some drizzle.						
7 August 2014		Pete English, David Long, John Haynes, Clive Nunn. Sunny & dry.						
28August 2014		David Long, John Haynes, Clive Nunn, John Wilcox, Chris Short. Sunny, grass very wet.						
4 September 2014		John Wilcox. Clive Nunn, Chris Short, Pete English, Pete Wright & late morning Vince Russett.						
11 Contombor		Overcast, grass damp. Anno Dimmock, David Long, David Walker, Coeff						
11 September 2014		Anne Dimmock, David Long, David Walker, Geoff Pearson, Brian Wills, Chris Short & later Vince Russett.						
2011		Sunny, warm, grass damp with heavy dew.						
18 September 2014		Pete Wright, David Walker, John Wilcox, Chris Short, Vince Russett & John Evans.						
2011		Overcast, Grass dry.						
25 September		John Wilcox, Pete English, Clive Nunn, Vince Russett,						
2014		David Long.						
		Sunny, dry.						
2 October 2014		Pete Wright, David Long, Vince Russett, Chris Short,						
		Mike Fox.						
		Sunny, warm & dry.						
9 October 2014		David Walker, David Long, Mike Fox and Chris Short.						
		Sunny, grass damp.						

S	urvey area	Notes				
		Size	Walk direction			
31 July 2014	Grids 1 to 2	20x20m	w			
	Grid 3: terminated by hedge. (About line 14)	20x20m.	E			
7 August 2014	Grids 1 to 3	20x20m.	W			
28 Aug 2014	Grids 1 & 2	20 x 20m	W			
4 Sept 2014	Grids 1 to 4	20 x 20m	W			
11Sept 2014	Grids 1 to 3	20 x 20m	W			
18 Sept 2014	Grids 1 to 5 Grids 1, 2 & 5 cut by hedge.	20 x 20m	W			
25 Sept 2014	Grids 1 to 4	20x20m	W			
2 October 2014	Grids 1 to 2 Grids 3 & 4 3 and 4 terminated by hedge after line 13	20x20m 20x20m	W E			
9 October 2014	Grids 1 to 2 Grids cut approx in half by hedge on south of field Grid 3 also cut by	20x20m	E			
	hedge on south of field.	20x20m	W			

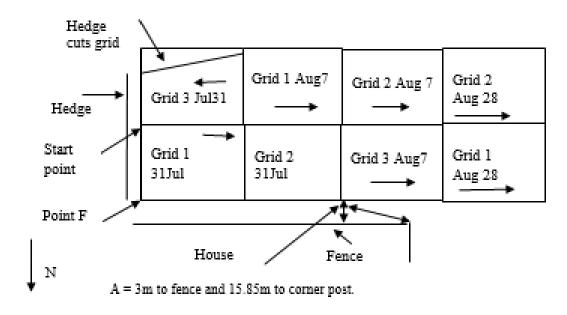
Standard settings applied

1. Ma p	Grid size Sample Interval Traverse Interval Traverse Mode	20m. 1m. 1m. Zig-Zag	5 Comms.	Baud Rate 9600 Data Separator No Space
2. Range	Gain Current Frequency	x 1 1mA. 137 Hz.	6. Progr	Program Number 1 Probe Configurations 1 Colours Gr highlighted
3. Set-Up	Output Voltage Auto log speed High Pass Filter Mains Frequency Reset RM 15?	40V. Medium 13Hz. 50 Hz. No	7. Status	Battery Voltage 10.4V.(eg) RM15 Adv 15000, Version 2.00
4. Array	Hardware PA1			

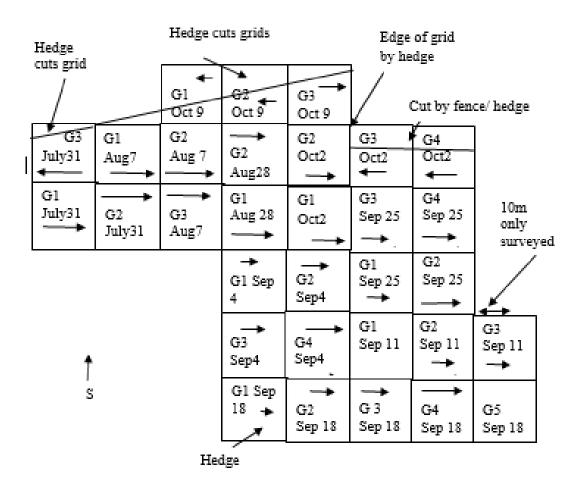
601 grid layout



RM 15 to August 28



RM15 grids to 9 October 2014



HAZARD AND RISK ASSESSMENTS

Severity of hazard:

1= Minor injury

2= Serious injury

3= Major injury or fatality

Likelihood:

1= Unlikely

2= Likely

3= Very likely or inevitable

Population (no. of persons who could be affected):

1= 1-5 persons

2= 6-20 persons

3 = 21 + persons

Risk Factor:

Severity x Likelihood x Population

(min 1, max 27)

Location: Mrs Weaver 3

Activity/Equipment:

RM15

Date of assessment:31st July 2014

Assessor:Ian Morton

Nature of hazard	Slips, trips, falls	Dust	Noise	Fire/Explosion	Exposure to harmful substances	Entrapment	Impact	Contact	Entanglement	Ejection	Electric shock	RSI/Eyestrain	Manual handling	Other	MAX. RISK FACTOR
Severity	1	0	0	0	0	0	0	1	0	0	0	1	1	2	4
Likelihood	1	1	1	1	1	1	1	1	1	1	1	1	1	2	
Population	1	1	1	1	1	1	1	1	1	1	1	1	1	1	

Control methods and timescale

Members will wear substantial footwear and long trousers which will deal with the uneven ground, wet grass and protect skin from any stumbles and protect against cow muck.

Operator to restrict period of survey to avoid back strain

Young cattle in field - care needed to ensure they do not intrude upon survey area

Entrance to field is on to a very busy road. Great care needed on entry / exit