YCCCART 2014 /Y 17
North Somerset HER 2015 /17

Resistivity Survey at Ham Lane, Yatton. (Mr Crossman 1)

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

General Editor: Vince Russett

Laying out the first grid

Abstract

A resistivity survey in a field bordering Ham Lane Yatton has revealed what appears to be a rectangular building as well as enigmatic circular 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, Mr D Crossman.

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 indicated by the red arrow.

The field lies to the north west of Yatton. See appendix for GPS.

Land use and geology

The field is used to grow grass for hay/silage.
Geology: Mercia Mudstone Group – Mudstone and Halite-stone.

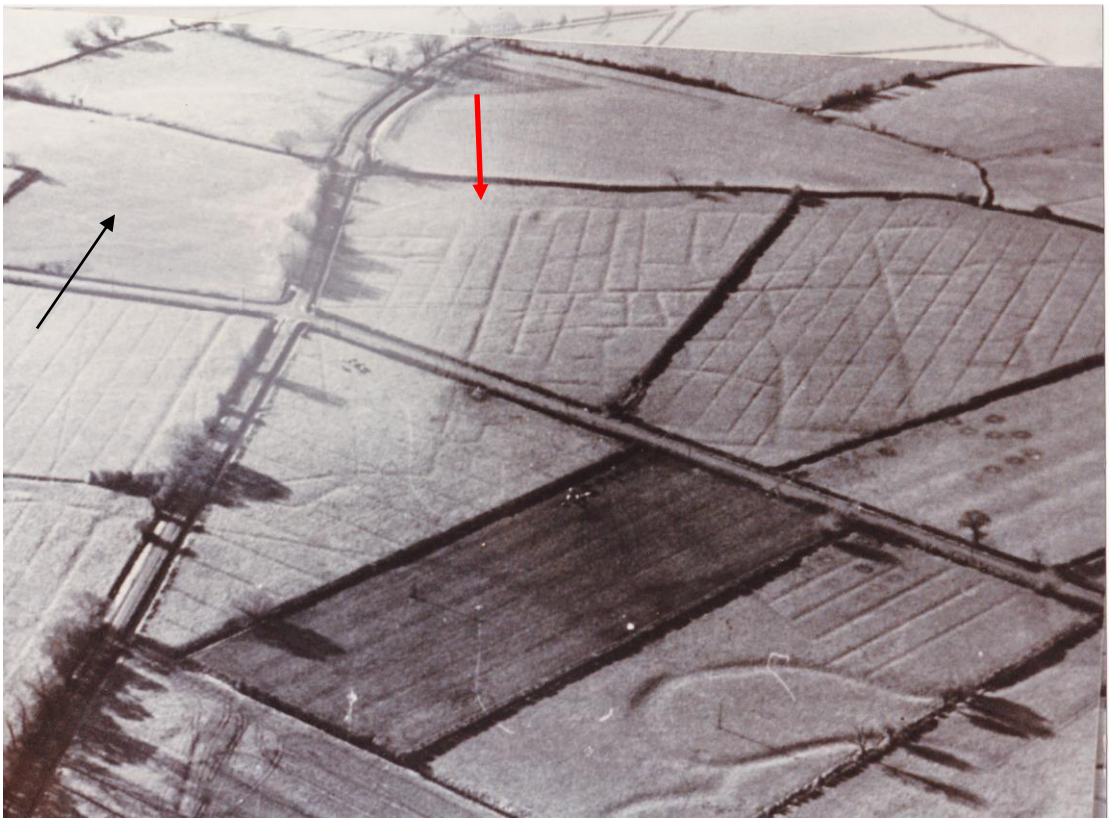
Historical & archaeological context

Fig 2. Map showing approximate location of Romano British pottery finds.

Field walking in the surveyed field during the 1990s revealed Romano British pottery. The relevant report* describes "a discrete scatter of pottery and stone from a low mound" in the area indicated by the red arrow in Fig 2 above.

*

The Romano-British Exploitation of Coastal Wetlands: Survey and Excavation on the North Somerset Levels, 1993-7
Stephen Rippon; G. Aalbersberg; J. R. L. Allen; S. Allen; N. Cameron; C. Gleed-Owen; P. Davies; S. Hamilton-Dyer; S. Haslett; J. Heathcote; J. Jones; A. Margetts; D. Richards; N. Shiel; D. Smith; J. Smith; J. Timby; H. Tinsley; H. Williams; Julie Jones; Nigel Cameron; Paul Davies; Simon Dobinson; Chris Gleed-Owen; Simon Haslett; Jen Heathcote; Anthony Margetts; David Smith; Heather Tinsley; Huw Williams; Gerard Aalbersberg; Sheila Hamilton-Dyer; Jane Timby; Norman Shiel; David Richards; Steven Allen
Britannia, Vol. 31. (2000), pp. 69-200.



N ⟶

Fig 3: 1980s aerial photograph, courtesy of D Long.

The aerial photograph, Fig 3 above, shows the surveyed field, indicated by the black arrow and to the north (in the field indicated by the red arrow in Fig 3) "earthworks of a relic landscape." (Rippon et all, 2000). These earthworks are probably the remains of a Romano British farmstead complex.

Survey objectives

Methodology

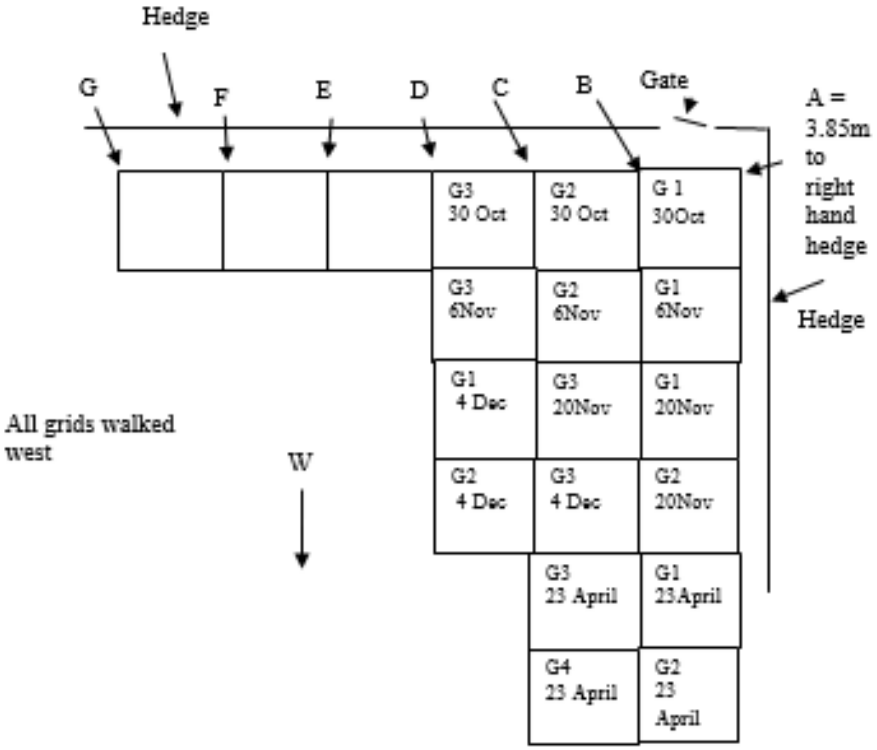
The survey of the field was undertaken during the period October 2014 to April 2015 by teams from YCCCART using a Geoscan RM 15 resistance meter, with settings as per the site record in Appendix 1.
The completed survey was downloaded to a TerraSurveyor programme and the resultant composite adjusted using the following filters:

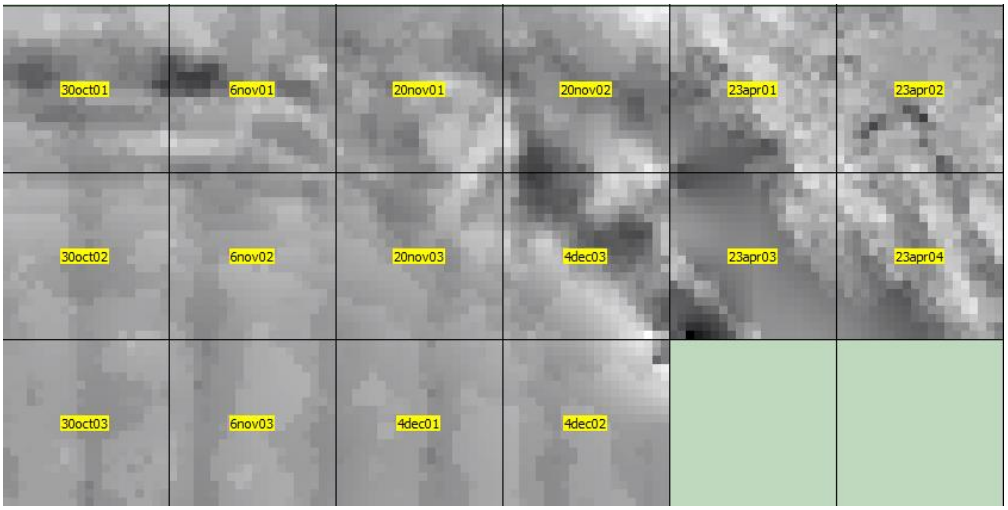
- Band weight equaliser
- Grad shade
- Despiked
- Clip SD2
- High Pass filter.
- Periphery Match – all grids
- Colour- Green, White, Black and Red Green Blue 2

The report was written in Microsoft Word 2013.

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

Results





Each grid is 20 by 20m

Fig 3: Above grid layout and below TerraSurveyor grids.

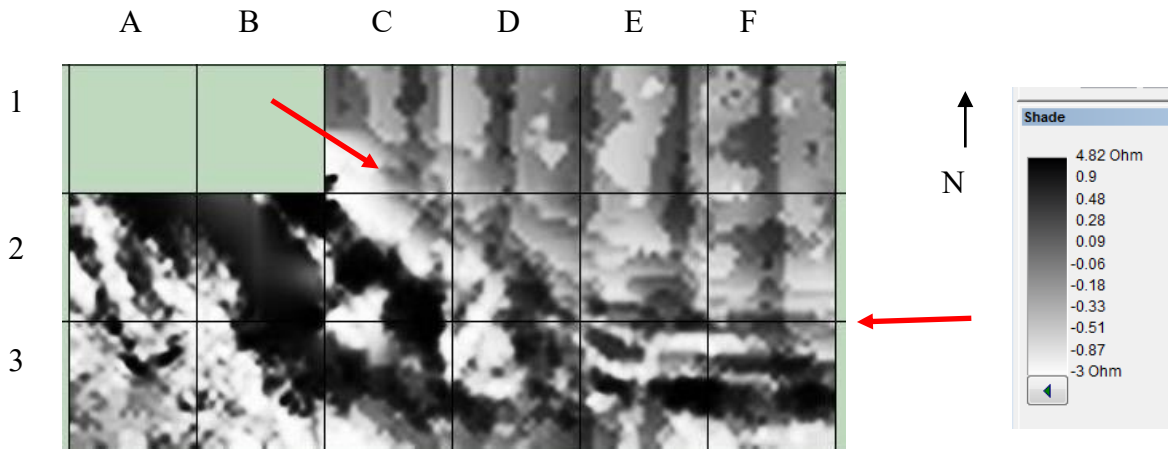


Fig 4: TerraSurveyor shade view. High readings are black.

The results in Fig 4 above show that the field is divided by an edge of bedrock along the line indicated by the red arrows.

Grids 2A and 3A (top) clearly show what appears to be the walls of a building.

Grids 2B to 2D and 3B to 3D contain circular features. Could these be part of a relic landscape, as per the adjacent field? (See Fig 3 above – area indicated by red arrow).

The straight north south lines in grids 1C to 1F and grids 2D to 2F are probably drainage pipes.

The results in the colour images in Figs 5 and 6 below also show clearly the results detailed above.

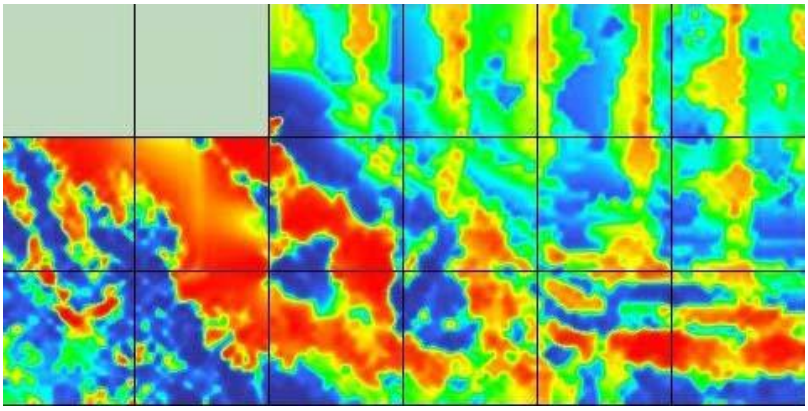


Fig 5: TerraSurveyor shade view colour image. High readings are red.

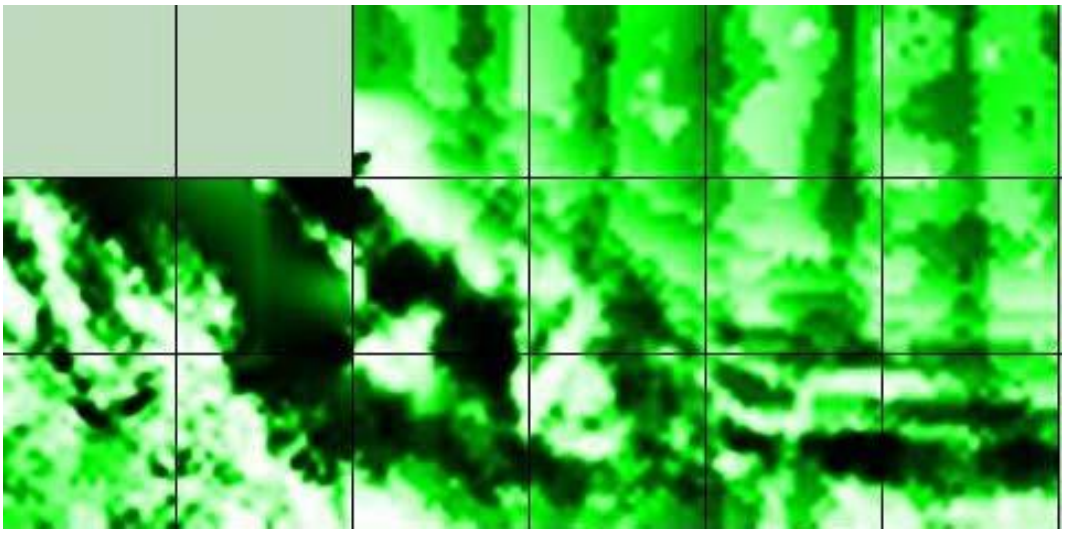


Fig 6: TerraSurveyor shade view. Green, white and black image. High readings are black.

Recommendations

Further resistivity surveys to be undertaken when the grass is not too high or the ground too wet.

References

The Romano-British Exploitation of Coastal Wetlands: Survey and Excavation on the North Somerset Levels, 1993-7

Stephen Rippon; G. Aalbersberg; J. R. L. Allen; S. Allen; N. Cameron; C. Gleed-Owen; P. Davies; S. Hamilton-Dyer; S. Haslett; J. Heathcote; J. Jones; A. Margetts; D. Richards; N. Shiel; D. Smith; J. Smith; J. Timby; H. Tinsley; H. Williams; Julie Jones; Nigel Cameron; Paul Davies; Simon Dobinson; Chris Gleed-Owen; Simon Haslett; Jen Heathcote; Anthony Margetts; David Smith; Heather Tinsley; Huw Williams; Gerard Aalbersberg; Sheila Hamilton-Dyer; Jane Timby; Norman Shiel; David Richards; Steven Allen
Britannia, Vol. 31. (2000), pp. 69-200.

Author: Chris Short

Date: May 2015

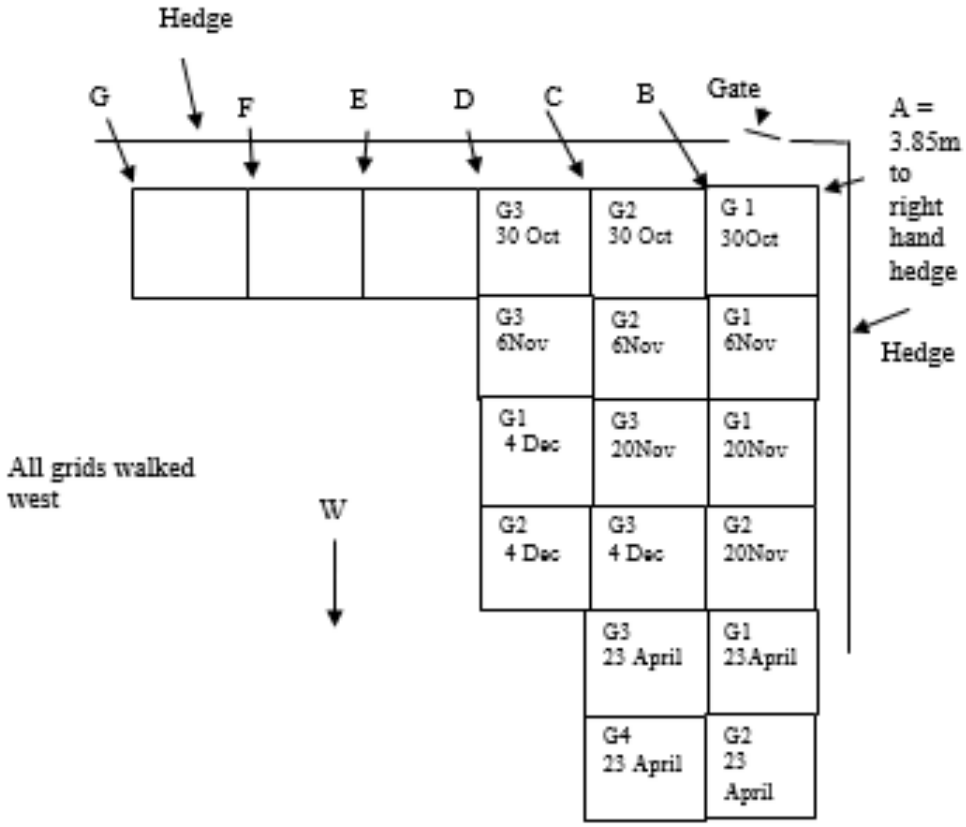
Appendix – Site Record

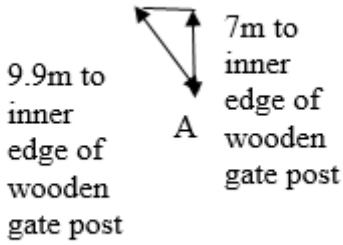
YCCCART Site Survey Project: Roman		
Survey date		30 October 2014 to 23 April 2015
Report date		23 April 2015
Type /Instrument		RM15
Location		Ham Lane, Yatton.
Site name		Crossman 1
Landowner		Mr D Crossman
Tenant		None
HER ref		TBC
Site type		Grass
Description		Large open field
Period		
Geology		
Land use		Grass for hay/silage.
Survey team and conditions		
30 October 2014	Team	Anne Dimmock, David Long, David Walker, John Wilcox, Pete Wright & Chris Short. *Weather overcast. Grass damp.*
6 November 2014		David Long, David Walker, John Wilcox, Pete English & Chris Short. *Weather overcast. Grass very wet in places.*
20November 2014		Anne Dimmock, Chris Short, Pete Wright, John Wilcox, Brian Wills and later Vince Russett. *Weather sunny, Grass very wet.*
4 December 2014		Pete English, David Long, David Walker & Chris Short. *Overcast. Grass damp.*
213 April 2015		Pete English, David Long, David Walker, John Wilcox, Ferdi & Chris Short

Survey area		Notes	
		Size	Walk direction
30 October	Grids 1 to 3	20x20m	**W**

6 November	Grids 1 to 3 Grid 3 – wet/boggy	20x20m	**W**
20 November	Grids 1 to 3	20x20m	**W**
4 December	Grids 1 to 3	20x20m	**W**
23 April	Grids 1 to 4	20x20m	**W**

Grid layout





GPS

A	342542.77	167278.48
B	342535.79	167294.87
C	342528.21	167314.07
D	342520.36	167332.85
E	342511.30	167350.09
F	342504.62	167369.75
G	342497.07	167388.24

RM 15 settings

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

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: Mr Crossman 1 **Activity/Equipment:** **RM15** **Date of assessment: October 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 to wear substantial footwear and long trousers to protect skin from any stumbles.
Operator to restrict period of survey to avoid back strain
Several large badger holes in field in this very flat field.