YCCCART 2013/Y8 North Somerset HER 2013/105

Resisitivity Survey at Wemberham Roman Villa

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

General Editor: Vince Russett



Examining the drainage pipe in the field

Page	Contents	
3	Abstract Acknowledgements Introduction	
4	Site location Land use and geology	
5	Historical & archaeological context	
7	Survey objectives Methodology	
8	Results	
16	Recommendations References	
17	Appendix – Site Record	

Abstract

YCCCART has a projecting to investigate Romano – British remains in the Yatton & Congresbury area. Resistivity surveys at Wemberham have revealed a number of unknown features suggesting additional buildings attached or separate from the known villa.

Acknowledgements

A Heritage Lottery Grant enabled the purchase, by YCCCART, of a Geoscan 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, H M & K I Stowell & Son and English Heritage for issuing a licence to undertake the surveys.

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

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 red arrow indicates the field.

Land use and geology

The site lies some 2.2 miles by road from the centre of Yatton. See Appendix for relevant GPS position.

The field is privately owned and used for grazing sheep and cattle.

Geology Bedrock Geology: Mercia Mudstone group - Mudstone and Halite-stone. Superficial deposits: Tidal Flat Deposits – Clay and Silt.

Historical & Archaeological Context

Please see YCCCART report 2013 /Y7 for full details of the historical & archaeological context.

The Roman villa at Wemberham, was discovered in March 1884 in the course of draining the field. Drain pipes were being laid at a depth of 2 feet 6 inches (0.76 metres) and in the course of this work the men cut into a tessellated pavement.

During the course of YCCCART surveys two slabs were noted in the field. They were lifted and found to cover the entrance to well constructed terracotta lined pipes, as illustrated in the following photographs.



Fig 2: lifting the slab to the drains



Slab 1

Slab 2

Fig 3: The field drainage pipes under the slabs

Survey objectives

The survey was undertaken in order to continue to investigate the extent of the settlement at Wemberham and determine

- 1) If there are any further buildings around the known villa.
- 2) The current state of the villa walls.
- 3) If there was there an access road to the villa.

Methodology

The survey of field was undertaken during the period June to November 2013 by teams from YCCCART using a Geoscan Resistivity Meter, with settings as per the site record in the Appendix.

The completed survey was downloaded to a TerraSurveyor programme.

TerraSurveyor composites were adjusted using the following filters

Standard settings

- Band weight equaliser
- Grad shade
- Despiked
- Clip SD2
- High pass Gaussian filter Where indicated
- Periphery Match Where indicated

The report was written in Microsoft Word 2007.

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

Results



Fig 4: Grid layout – grids are 20m square



Fig 5: TerraSurveyor file names. Grids are 20m square.



Fig 6: TerraSurveyor shade image – base layer. High readings are black.

The results in Fig 6 above (prior to filter adjustment) shows the villa (indicated by the red arrow) with a wing attached to its north section going in a north east direction.



Fig 7: TerraSurveyor shade image – Filters include periphery match

The villa, indicated by the lower arrow in Fig 7 above, is very much as per the plan in the 1886 report publication (See YCCCART report 2013 / Y7). In addition to the wing on the north east further structures are evident between the villa and upper red arrow.

The Villa



Fig 8: Above - TerraSurveyor shade image of villa section only (Filters include periphery
match as per Fig 7). Below – Plan from 19 th c excavation report.

A close examination of Fig 8 above reveals that the 1886 published plan appears accurate. The most prominent additional feature on the TerraSurveyor image is the wall at the end of the supposed boat house (Indicated by the red arrow).

28.1 Ohm 2.45 1.11 0.35 -0.18 -0.65 -1.11 -1.81 -2.6 -3.78 -14.43 Ohm



Fig 9: TerraSurveyor shade images – Because of the different weather conditions during the survey later surveys have been adjusted, as per the process box, then combined with the image in Fig 7 to produce the final result per Fig 10 below.



Fig 10: Final processed image

The final image per Fig 10 above reveals the following:

1) A wing to the villa appears evident in grid D7 and continuing north east until at least grid F6.

2) The right hand side of the join of grids B8 & B9 contains a right angle. Is this a continuation of a wing of the villa described in 1) above? The upper line seems to go north east across 8C and & 7D.

3) The end of an apparent structure in grid B6/7 relates closely to the large building in this area recorded on the gradiometer report (See YCCCART report 2013/Y7)

4) The structure in B6/7 may be linked other structures below such as the largely circular structure in grid C7.

5) Grids I3 and J3 show two black blobs which relate to gravel laid by the farmer to fill in a hole.

6) Grid J1 contains a structure on the same angle as the villa.

7) Grid I4 contains a square feature cut by a grype.

8) Grid G8 contains a feature not dissimilar to the bathhouse discovered on the Roman site at Lufton, near Yeovil (Gerrard J, 2009).

9) The east and south of G8 suggests further buildings.

10) A double bank and ditch is particularly evident in grids I10 & I11. Only the northern bank is fully present on the ground. Could this be a double defence of the villa from flooding?

11) The bank and ditch in I10& I11 goes westward to the south of the villa and north east where it continues along the current Wemberham Lane.

12) The join of grids H11 & H12 reveals a circular feature with a central high resistance (black) core.

13) The join of F9 & F10 shows a small structure which on the ground seems to relate to a square depression per the following photograph. Perhaps this is the remains of a well?



Fig 11: Small square depression relating to grids F9 & F10

The results are hampered by the depth of allumium over the field except for the area of the villa excavation. They are therefore likely to reflect just the highest surviving sections of walls.

Recommendations

A limited excavation is undertaken to establish the nature of the results and to sample palaeoenvironmental evidence. Additional pseudosections through the potential new buildings would also be useful.

Further evaluation of the results should be undertaken.

References

Rutter. J. 1829	Delineations of the north western division of the county of Somerset
Gardner K.S. 2000	Boggy Meares & Queashy Fennnes. Nailsea & District Local History Society. ISBN 1353-3967
Somerset Archaeological & Natural History	Proceedings during the year 1885.
Society. 1886	NEW SERIES Vol X.1.
Gerrard J, 2009	http://www.yalhs.org.uk/Lufton.pdf

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Date: December 2013

Appendix

Site Report

YCCCART Site Survey Project: Wemberham Roman	Villa	
Survey date	24 June 2013 to 28 November 2013	
Report date	28 November 2013	
Type /Instrument	RM15	
Location	Wemberham	
Ref		
Site name	Wemberham Roman Villa	
Landowner	H M & K I Stowell & Son	
Tenant	None	
HER ref	TBC	
Site type	Open land	
Description	Grass for grazing	
Period	Roman	
Geology		
Land use	Grazing	
Survey team and conditions		
240613 Tean	Peter Wright, Anne Dimmock, David Long John Haynes, Philippa Cormack, Colin Campbell & Chris Short. <i>Weather overcast/sunny. Dry and windy.</i>	
270613	Anne Dimmock, David Long, John Haynes, Philippa Cormack, Robin Ferdinando, Geoff Pearson, Vince Russett & Chris Short. <i>Weather sunny. Dry and breezy.</i>	
080713	David Long, John Haynes, Colin Campbell. Peter English & Chris Short. <i>Weather sunny, dry and very hot.</i>	
180713	David Long, John Haynes, Peter English & Chris Short. <i>Weather sunny, dry and very hot.</i>	
220713	David Long, Colin Campbell. Philippa Cormack & Chris Short. <i>Weather sunny, dry and very hot.</i>	
250713	David Long, Philippa Cormack, Chris Short, Robert Cleland, Maggie Rosevink, Vince Russett & later Ian Morton. <i>Weather dry, cloudy, humid.</i>	

	David Long, Colin Campbell, Philippa Cormack, Chris
290713	Short & John Haynes.
	Weather dry,cloudy,later rain.
010813	David Long, Colin Campbell, Philippa Cormack, Chris
	Short, John Haynes, Pete English & David Walker
080813	Cooff Poercon Maggio Posovink Chris Short John
000015	Havnes, David Walker & Vince Russett
	Weather hot, sunny & dry.
290813	Anne Dimmock, David Long, John Haynes, John Wilcox
	& Chris Short.
	Weather overcast, drizzle, grass slightly damp.
020913	David Long, John Haynes, Colin Campbell & Chris Short
050013	Lioudy/sunny. Ground Very dry.
050515	Philippa Cormack & Chris Short
	Dry,sunny,warm.
090913	Philippa Cormack, Chris Short, Janet Dickson, Anne
	Dimmock & Pete Wright.
(222/2	Cloudy, rain during grid 3, ground damp.
120913	Pete Wright, Anne Dimmock, Janet Dickson, Ian Morton
	David Walker, vince Russett & Chris Short.
071013	Pete Wright Anne Dimmock Ian Morton Arthur ? Chris
071013	Short, Colin Campbell.
	Sunny, warm, grass very damp.
101013	Pete Wright, Anne Dimmock, Janet Dickson, David
	Walker, Vince Russett & Chris Short.
171012	Sunny, grass dry.
1/1013	Short Pete English Arthur Langley David Long
	Cloudy, rain, grass very wet.
241013	Pete Wright & Pete English, Janet Dickson, Chris Short,
	Arthur Langley, David Long, John Haynes & John Wilco
	Sunny, grass very wet.
211012	Anne Diverse de Ten Marten Data Weight Data Fradiak
311013	Anne Dimmock, Ian Morton, Pete Wright, Pete English,
	Cloudy, grass wet
071113	Pete Wright, Chris Short, Janet Dickson, John Haynes,
	John Wilcox & David Walker.
	Cloudy, grass, very wet.
141113	Pete Wright, Chris Short, John Haynes, David Walker,
	Ian Morton, Vince Russett (Part time), David Long.
181113	Pete Wright Chris Short Pete English Anne Dimmock
101113	David Long & Arthur Langlev.
	Cloudy/sunny, grass, very wet.

211113	Pete Wright, Chris Short, Pete English, David Walker, John Wilcox & Arthur Langley. <i>Cloudy/sunny, grass damp.</i>
251113	Pete Wright, Chris Short, Pete English, John Haynes, Colin Campbell & Arthur Langley. <i>Overcast, grass damp.</i>
281113	Pete Wright, Pete English, John Wilcox, Janet Dickson & David Walker <i>Overcast, grass damp</i>

Survey area		Notes	
		Size	Walk direction
24 June 2013	Grids 1 to 4	20x20m	w
27June 2013	Grids 1 to 4	20x20m	w
8July 2013	Grids 1 to 3	20x20m	w
18July 2013	Grids 1 to 3	20x20m	w
22July 2013	Grids 1 to 2	20x20m	w
25July 2013	Grids 1 to 3	20x20m	w
29July 2013	Grids 1 to 2	20x20m	w
1Aug 2013	Grids 1 to 3	20x20m	w
8Aug 2013	Grids 1 to 3	20x20m	w
29Aug 2013	Grids 1 to 3	20x20m	w
2 Sep 2013	Grid 1 Grid 2 Abortive	20x20m	W
	Grid 3 Grid 4		E
	terminated by edge of bank/river.		

5 Sep 2013	Grids 1 to 3	20x20m	W
9 Sep 2013	Grids 1 to 3	20x20m	W
12 Sep 2013	Grids 1-4 3 terminated by river bank	20x20m	W
7 Oct 2013	Grid 1	20x20m	W
10 Oct 2013	Grids 1-4	20x20m	W
17 Oct 2013	Grids 1-2	20x20m	W
24 Oct 2013	Grids 1-5	20x20m	W
31 Oct 2013	Grids 1-3	20x20m	W
7 Nov 2013	Grids 1-4	20x20m	W
14 Nov 2013	Grids 1-2 & 3	20x20m	W
18 Nov 2013	Grids 1 & 2	20x20m	W
21 Nov 2013	Grids 1 to 3	20x20m	W
25 Nov 2013	Grid 1 Grid 2 (Not whole grid – finish/image line used	20x20m 20x20m	W E
	Grid 3 (Not whole grid – finish/image line	20x20m	Ē

28 Nov	Grid 1	20x20m	W
2013	Grid 2	20x20m	W
	Grid 3 (Not whole grid – finish/image line used)	20x20m	E

Base Lines



GPS





RM 15 survey to 27 June 2013



Final grid layout



About 4m to river bank



IA is 20m from A & 1B to 1E are also at 20m intervals.

GPS

1A	340574.10	165308.70
1B	340594.80	165309.60
1C	340614.90	165309.00
1D	340634.20	165310.30
1E	340654.70	165311.00

Grid 1 25Nov Survey over bank

which is 3.3m top to top & 8.5m bottom to bottom

Bank visible to right of villa is 8m wide. Remains on other bank beside it indicated on ground

