

**YCCCART 2010/Y13
North Somerset HER 47528**

**Claverham Court Farm
Geophysical Survey**

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

General Editor: Vince Russett



The RM15 at Claverham Court

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Abstract

YCCCART has agreed with the Heritage Lottery Fund to undertake a project over the two years commencing May 2009 to investigate the archaeology of Cadbury Hill Fort and its environs. As part of this study, the possible site of a medieval chapel known from written records, was investigated using gradiometry and resistivity surveys.

The gradiometry surveys covering eight 30m grids were inconclusive.

The resistivity survey over the same ground included two areas close to the house, one of 17, the other of 2, contiguous 20m. grids. Results in the larger sample showed a complex pattern of resistivity variation, with areas suggestive of possible rectangular structures, in addition to curved linear anomalies. The small sample, in an adjacent field, showed a pattern which agreed with an earlier resistivity study on the same area, viz. a fragment of a circular anomaly at the edge of one grid and a large anomaly of indistinct shape in the other grid.

No convincing evidence of foundations of a chapel was found, though the observed anomalies are intriguing and may well repay further examination.

Acknowledgements

A Heritage Lottery Grant enabled the purchase, by YCCCART, of a Resistance Meter RM15 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 J. Atwell, of Claverham Court Farm. .

The compiler of the report is grateful for the sterling work put into the survey by the members of YCCCART and Vince Russett, North Somerset County Archaeologist for editing this report.

Details of geological features are by kind permission of the British Geological Survey

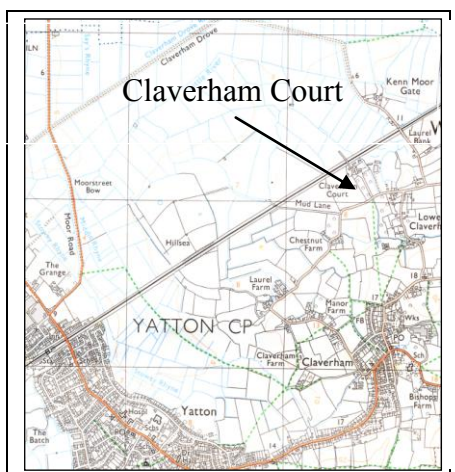
Introduction

Yatton, Congresbury and Claverham 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.

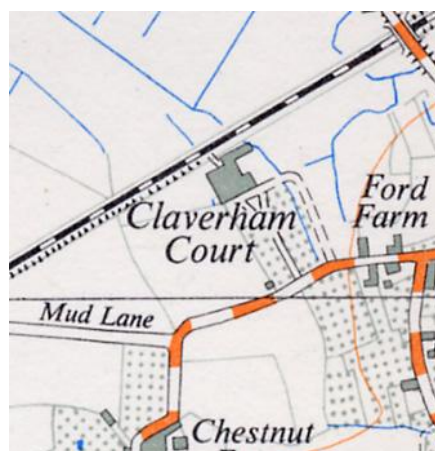
The objective of the Community Archaeology in North Somerset (CANS) teams is to carry out archaeological fieldwork, for the purpose of recording, and better understanding of the heritage of North Somerset.

Site Location

The site lies in the east of the parish of Yatton, in North Somerset. some 12 miles south of Bristol. The two adjacent fields surveyed (ST444/672) are both used as pasture, and were selected for study after consideration of early written accounts (see below). The larger survey of 17 20m square grids (designated Site 1), is on a relatively well-drained area to the south-west and slightly raised above the level of both house and farm buildings. Another, smaller field nearer to the house, (designated site 2) in which the small survey was conducted, is shown as orchard on older maps, though the date of its clearance is not established. The site locations are shown below.



Map 1: Environs of Claverham Court. Crown copyright Ordnance Survey. All rights reserved.



Map 2: OS ST 46, showing earlier orchard. Crown copyright Ordnance Survey. All rights reserved..

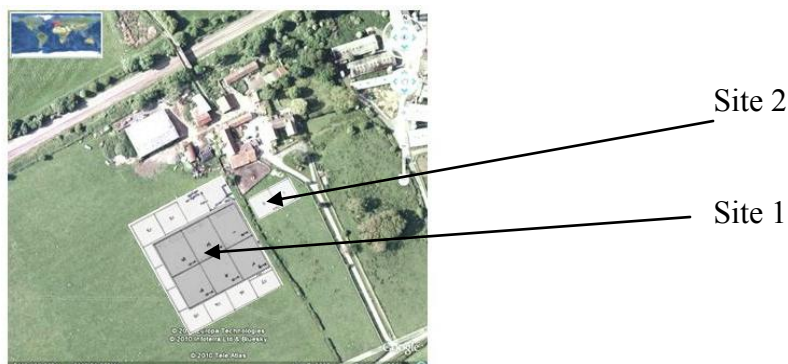


Fig 1: Grids of Resistivity survey, superimposed on Google-Earth image. (Grey area is the Gradiometer Survey area of Site 1)

Land Use and Geology

The site lies immediately to the south of the plain of Kenn Moor. Underlying bedrock is Mercian mudstone overlain with higher alluvial gravels (British Geological Survey). Currently the fields are used for stock grazing.

Historical & Archaeological Context

Claverham was evidently settled by the time of the Domesday Survey, as it was worth 30 shillings, with three ploughs. Recent finds on the fields of the Court Farm include Roman coins and a Bronze Age ceremonial axe-head, so continuous occupation for many centuries is a possibility. By the 14th Century the Court had a Free chapel, (i.e. independent of the Parish Church).

The location of the chapel is uncertain, as no ruins are now extant. For a complete discussion of the evidence for the chapel, and its position, see Lufflum, 2005, (unpublished archives of YCCCART). In summary, confusing references to its position include, as "in the orchard near the house on a rising piece of ground", (Smyth, 1774, cited in Bantock, 1982) "near the old court or manor house" Collinson (1791); and "south-east of the Court on the opposite side of the public road", (Bramble, 1891), and "behind the manor house" (Bantock). Lufflum concluded that as the original road to the house was from the east, the site must lie to the west of the house.

Survey Objectives

The survey had the following objectives.

- 1) To identify the site of the medieval chapel.
- 2) To identify any additional features.
- 3) To use the survey to train YCCCART members in the use of the RM15 & Grad 601.

Methodology

Resistivity and gradiometry surveys were carried out by teams from YCCCART from December 2009 to March 2010

Resistivity

Equipment used. A newly acquired Geoscan RM 15 Adv. 15000 (version 2) was used, with twin probe array set at 0.5m separation, and remote twin probes approximately 20m from the Grid edge. Details of the setting used may be seen in the field reports (See Appendix 1).

The 17 contiguous grids of Site 1: were surveyed two or three grids at a time, over the four month's period. Site 2 was surveyed in a single morning during March.

Each grid was surveyed in a zigzag transect at 1metre intervals of both X and Y directions. The remote probe readings for resistivity were not correlated between the successive sessions.

The arrangement and numbering of grids is shown in Figure 2

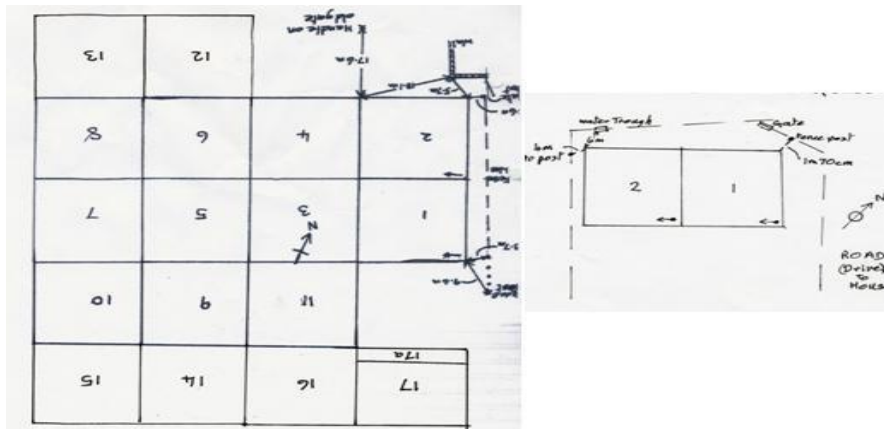


Fig 2: Grid plan for Resistivity, 20m. squares, showing approximate alignment of site 1 with Site 2

Gradiometry

Equipment used. A newly acquired, magnetic gradiometer Grad 601-2, supplied by Bartington Instruments. Settings used are detailed in the daily site report at Appendix 1. 30 metre square grids were laid out and each grid was surveyed in a zigzag transect

The arrangement and numbering of grids is shown in Figure 3 below. For site 1, the 30 metre square grids of the gradiometer survey approximate to grids 1-11 of the 20 metre square resistivity study.

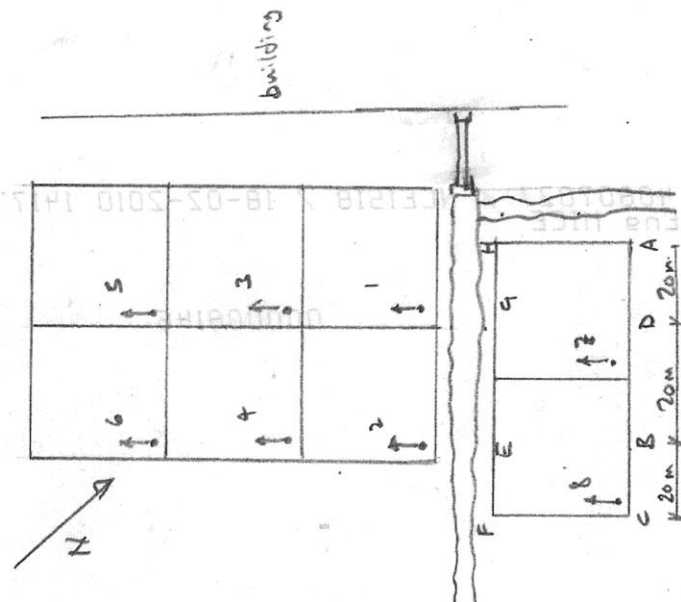


Fig 3: Grid plan for Gradiometry, 30m squares, showing approximate alignment of site 1 with Site 2.

Post survey processing of data

The completed resistivity survey was downloaded to

1. Geoplot (Geoscan Research) Version 3.00v for Windows.
2. ArcheoSurveyor
3. Snuffler (University of Sussex)

The Gradiometry survey was downloaded to ArcheoSurveyor only.

For tables of the raw data, see Appendix 3

The data were modified by integration software of the respective programmes.

The following ArcheoSurveyor adjustments were made:

- 1) Colour - Red Blue Green 2
- 2) Band weight equaliser
- 3) Grad shade (Site 2 only)
- 4) Contours
- 5) Destriped
- 6) Despiked

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

Results

Visual examination showed no topographical or vegetation variations suggestive of human activity. No depressions (gripes) indicating land drainage were seen.

Site 1.

Resistivity

Figure 4 shows the combined resistivity results from 17 20 metre grids on site 1. A line of higher resistivity can be seen spreading from north to south (grids 12 to 9), with several curved lines branching from it. The image from ArcheoSurveyor is broadly in agreement (Figure 5.), but at least two oblong areas may be made out in grids 1-8. These are best seen in Figures 6 & 7.

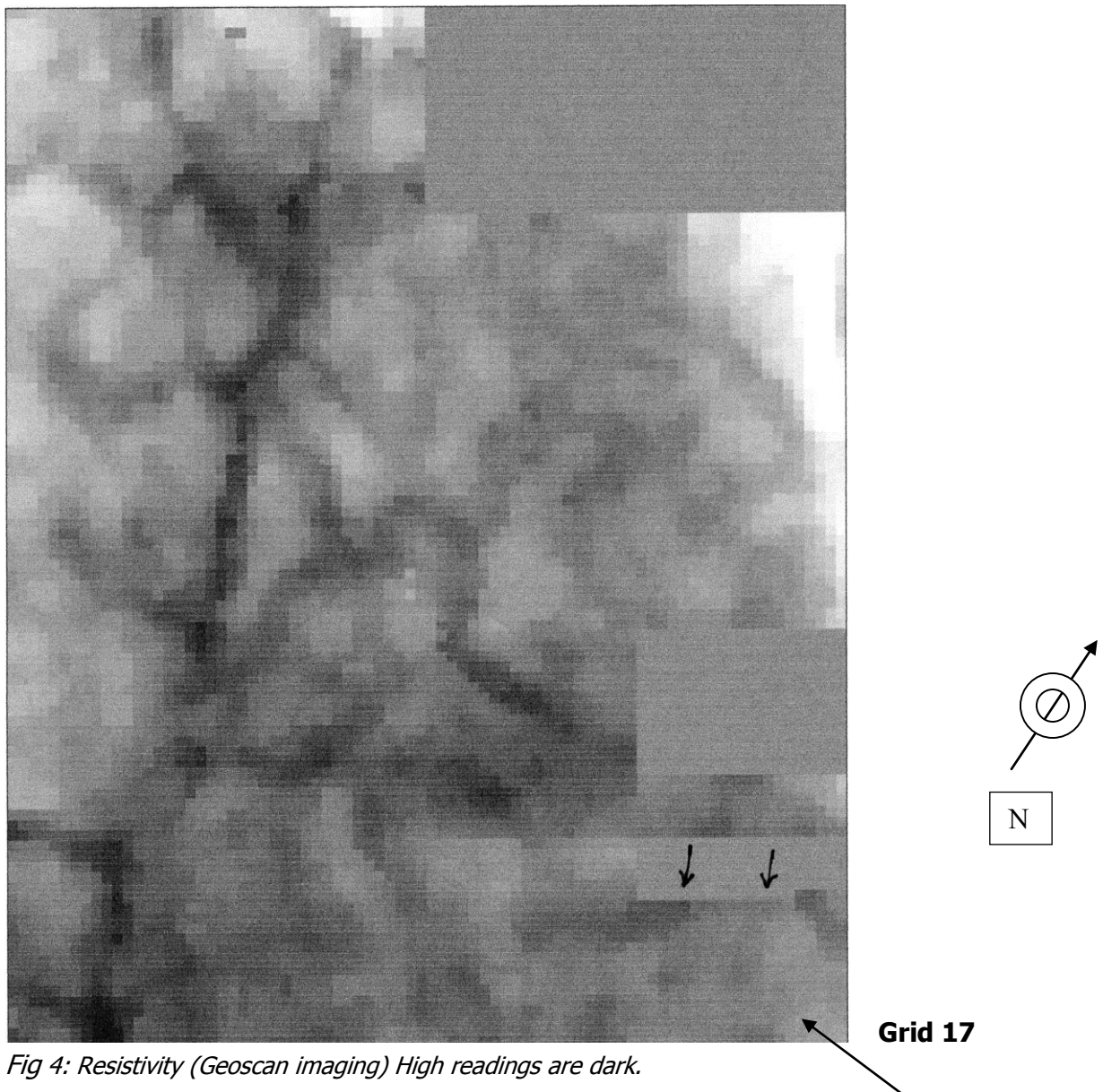


Fig 4: Resistivity (Geoscan imaging) High readings are dark.

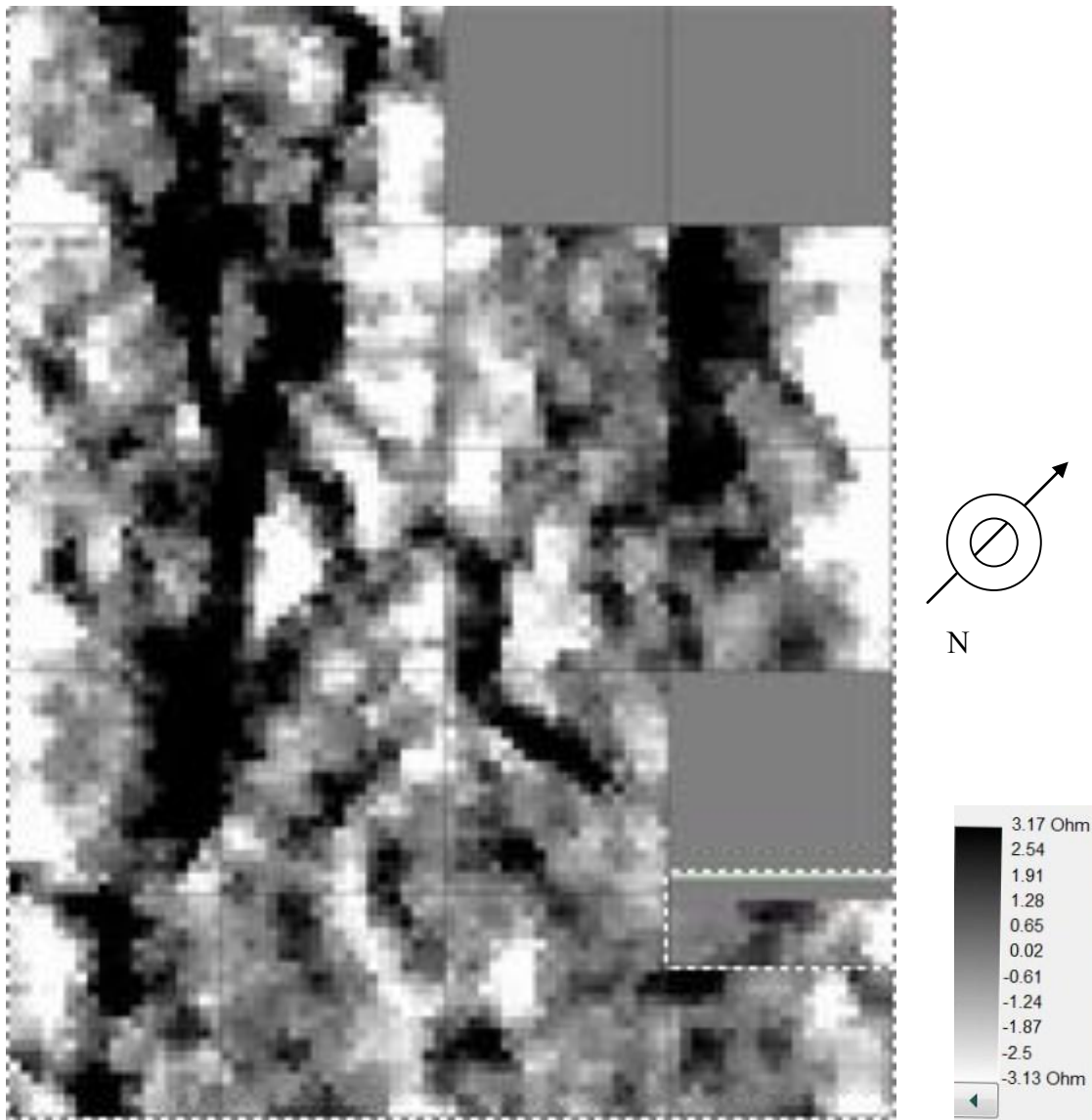


Fig 5: Resistivity, Site one, (ArcheoSurveyor imaging)

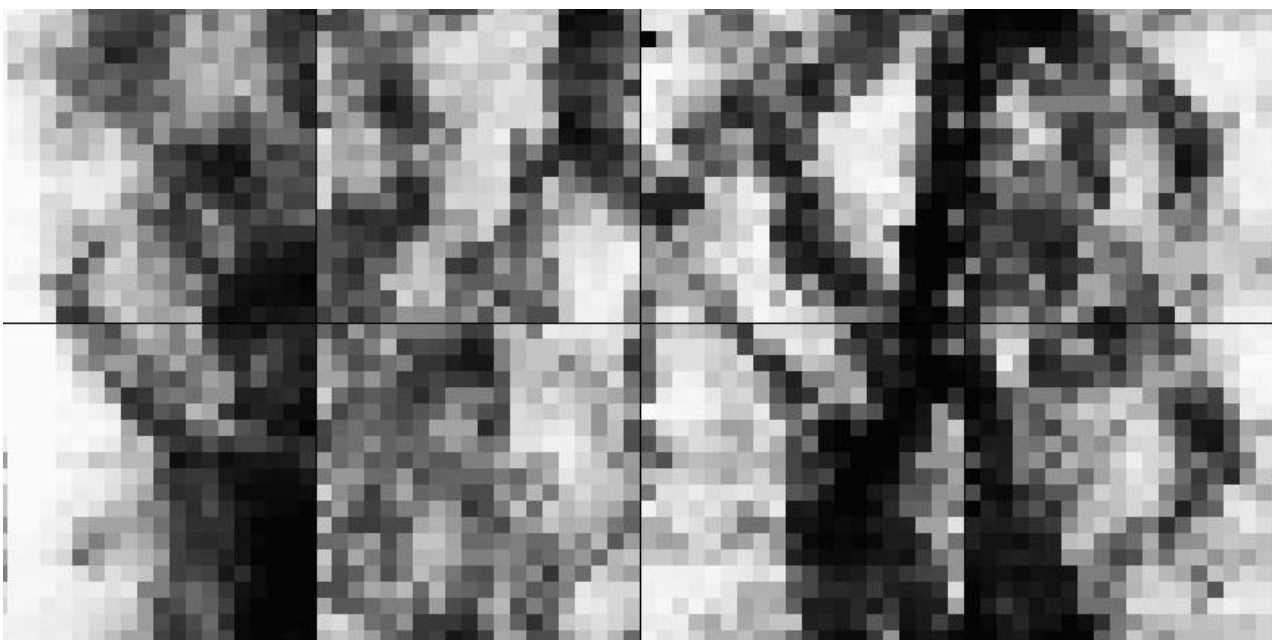


Fig 6: Resistivity Site 1, grids 1 - 8 (ArcheoSurveyor – rotated view compared with Fig.8).

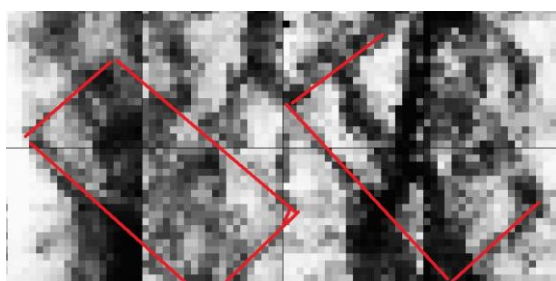
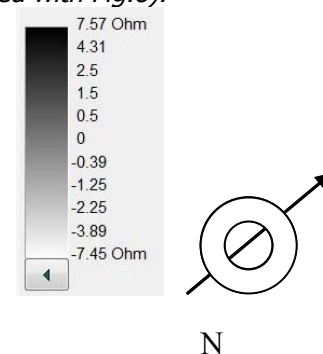


Fig 7: Interpretation of Fig 3 possible buildings shown as red lines.



Gradiometry

No clear pattern emerged from the gradiometry survey on site 1, although the image as below tends to reflect that produced by Geoscan.

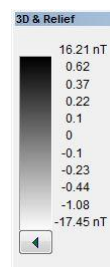
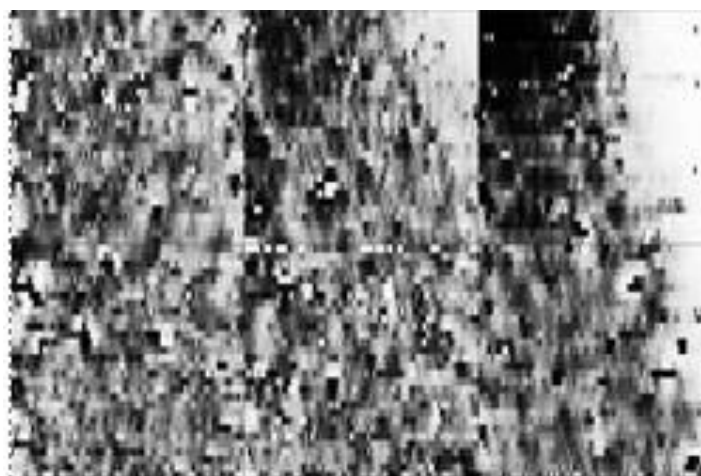


Fig 8: Site 1 Gradiometry survey (ArcheoSurveyor imaging)

Site 2

Resistivity

A region of high resistivity was found in the south-west part of the sample area (bottom left of Fig. 9). Resistivity surveying was conducted over this area in 2004, (see Lufflum, 2005) and broadly agree with present findings. Lufflum describes a fragment of a possible round building in the corner nearest the house. An anomaly possibly agreeing with this is shown in the present results (top right). A straight linear anomaly of low resistivity stretches from the top right to the bottom of the image.

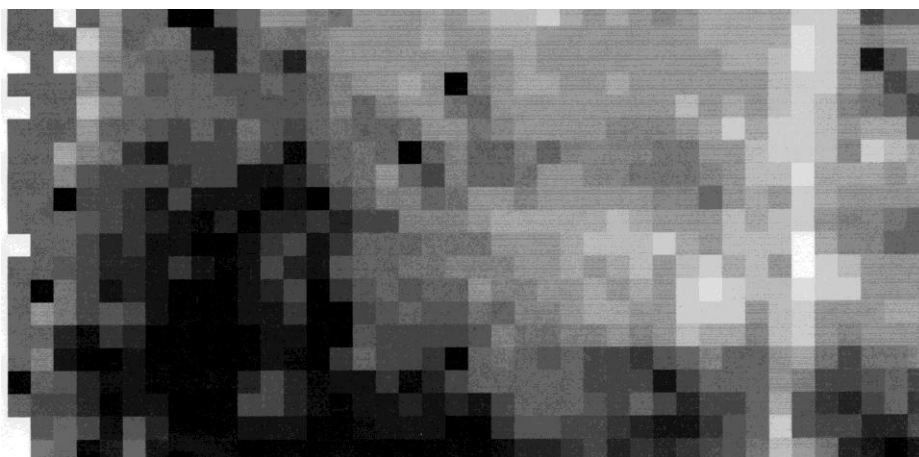


Fig 9: Site 2, Resistivity of Grids 1 & 2 using Geoscan application (High readings are dark)

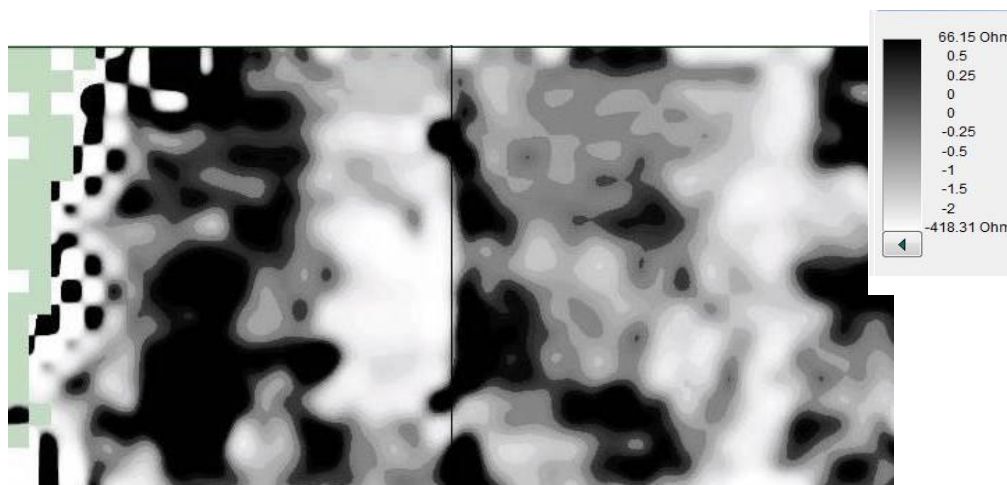
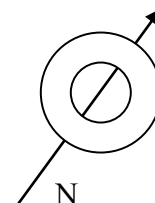


Fig 10: Site 2 Resistivity of Grids 1 & 2 using ArcheoSurveyor, (High readings are dark)



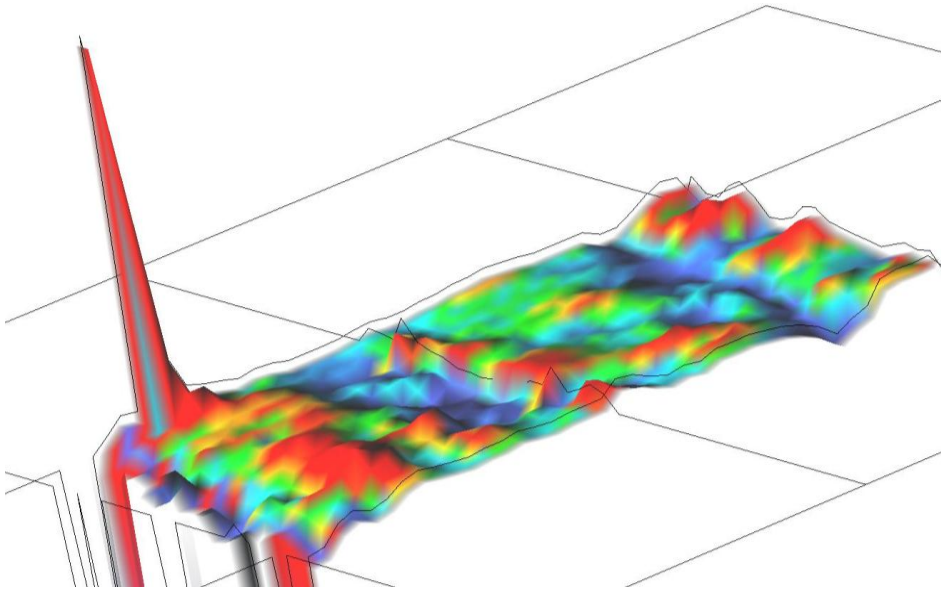


Fig 11: Site 2 Resistivity of Grids 1 & 2 using ArcheoSurveyor. Colour 3d version.

The 3d result clearly shows a round anomaly suggestive of a tower like structure (top right) and an interesting anomaly (bottom left).

Gradiometry

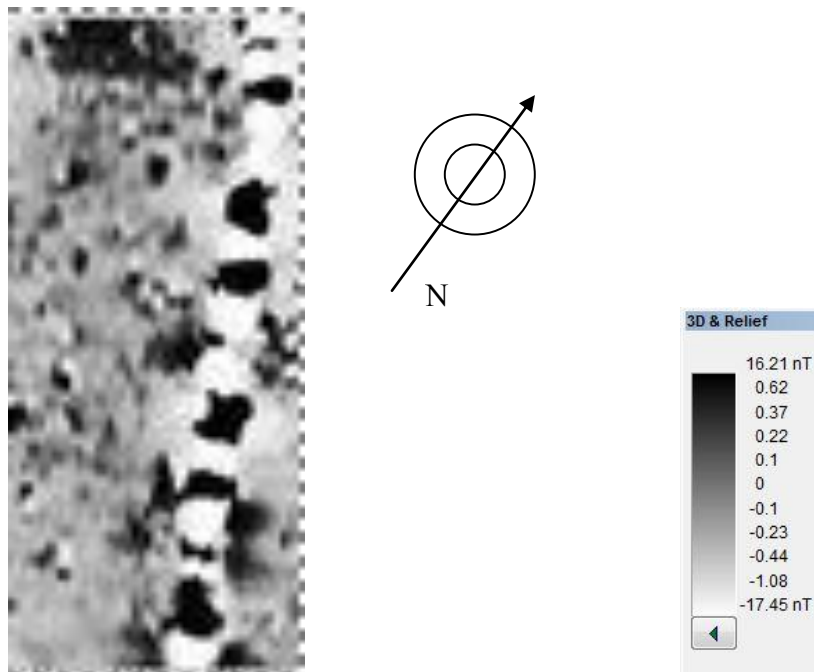


Fig 12: Site 2 Gradiometry (ArcheoSurveyor imaging). Grid 8 top.

The most striking finding from gradiometry of Site 2 is a straight linear anomaly agreeing with the line of low resistivity described above. The string of magnetic dipoles is exactly that characteristic of a modern service pipeline.

Discussion

The first conclusion, in respect of the original intention to locate the medieval chapel, is that the surveys have failed to give convincing signs of this. Despite this, a number of interesting features have been indicated by the surveys with both resistivity and gradiometry. The suggestion of rectangular structures aligned east-west in Site 1 and of curved features of uncertain significance, might be related to previous human activities. On Site 2, a segment of what could be a round building was detected in the north-east corner of the area studied. This agreed with earlier, preliminary survey of the same site. Its position in front of the Manor house suggests a possible gatehouse, though excavation would be needed to confirm presence of a building.

Recommendations for future work

The location of the chapel is still a realistic aim, and this could be pursued by a combination of document study and on site work, including undertaking psuedosections of targeted areas and extending resistivity surveys over other areas.

References

- Bantock, (1982) *The Later Smyths of Ashton Court.*
- Bramble J.R. 1891 *Somerset notes and queries*, , Vol 2 p. 135. Ed. Weaver F.W. and Mayo, C.H.
- Collinson J. 1791 *The History and Antiquities of the County of Somerset.*
- Lufflum C 2005 *Using archaeological methods, how far is it possible to show the existence and position of the Free Chapel associated with Claverham Court? A Level Archaeology Project, YCCCART Archives (unpublished)*
- Smyth, J.H. (1774) *Cited by Bantock, (1982) see above.*

Author: Colin Campbell
July 2010

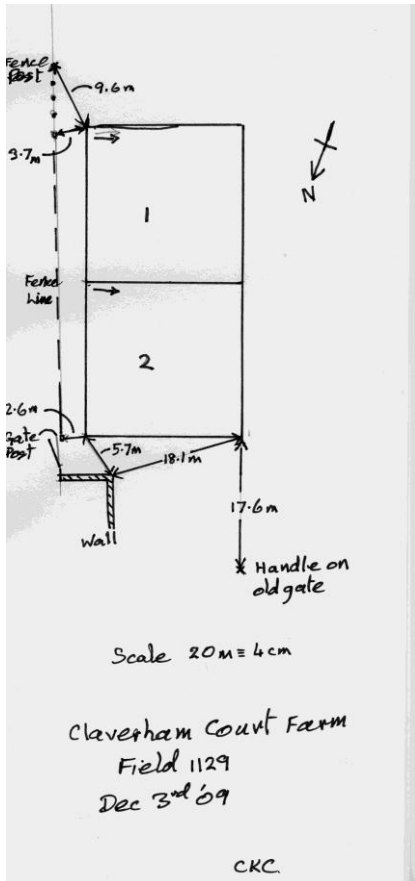
Appendix 1 – Site Records

RM15

YCCCART Site Survey		
Project – Claverham Court Farm		
Survey date	3 rd December 2009 to 4 March 2010	
Report date	3 rd December 2009 to 4 March 2010	
Type /Instrument	RM15	
	Gain x1, Current 1mA Frequency 137Hz Probes 'Config 1' (2 probes)	Grid size: 20m x20m Pattern : Zig Zag Sample interval 1m Traverse Interval 1m. Mode Zig-Zag
Weather	3 December - Sunny cold, after days of heavy rain 13 December- Dry, after several days without rain 21 January - Dry, after several days without rain 28 January - Dry, after several days without rain, 5 C 4 February - Dry, cloudy 11 February - Dry, cloudy 25 February - Dry, cloudy 4 March – Dry, sunny	
OS Ref or Lat-Longitude	ST444/672	
Site name	Near Gate & hedge, NE corner of Field 1129 (1821 map)	
Landowner	J. Attwell	
Tenant	none	
HER ref	47528	
Site type	Open field	
Description	grass	
Period	? mediaeval	
Geology	unknown	
Land use	Sheep	
Survey team	3 Dec: Colin Campbell, Chris Short, Marianne Pitman, Philippa Cormack 13 Dec: Colin Campbell, Brian Bradbury, Philippa Cormack, Geoffrey Pearson, Judy (from Nomis Pk) 21 Jan: Colin Campbell, David Long, Bob Cleland, Judy Sack, Maggie Rosevink, Marianne Pitman 28 Jan: Colin Campbell, Judy Sacks, Marianne Pitman, Brian Bradbury, Helen Munton, Shirley Everden 4 Feb: Colin Campbell, Judy Sacks, Marianne Pitman, Unsal Hassan Chris Short 11 Feb: Colin Campbell, Judy Sacks, Marianne Pitman, Unsal Hassan Chris Short 25 Feb: Colin Campbell, Judy Sacks, Helen Munton,	

		Marianne Pitman, Mike Fox 4March: Colin Campbell, Judy Sacks, Philippa Cormack, Chris Short				
Survey area		notes		readings		
		size	walk direction			
Grid ref #	1 <i>3 Dec</i>	20 m	SW byW			
	2	20m	SW byW			
	3 <i>13 Dec</i>	20 m	SW byW			
	4	20m	SW byW			
	5 <i>21 Jan</i>	20 m	SW byW			
	6	20m	SW byW			
	7 <i>28 Jan</i>	20 m	SW byW			
	8	20m	SW byW			
	9 <i>4 Feb</i>	20 m	SW by W			
	10	20m	SW by W			
	11	20 m	SW by W			
	12 <i>11 Feb</i>	20 m	SW by W			
	13	20m	SW by W			
	14 <i>25 Feb</i>	20 m	SW by W			
	15	20m	SW by W			
	16 <i>4 March</i>	20 m	SW by W			
	17	20m	SW by W			
	17a					
Summary						
Colin Campbell March 2010		Saved Geoplot as 3 Dec: Clavcour\1.dat, Clavcour\2.dat 13 Dec: Clavcour\3.dat, Clavcour\4.dat 21Jan: Clavcour\5.dat, Clavcour\6.dat 28 Jan: Clavcour\7.dat, Clavcour\8.dat 4Feb: Clavcour\9.dat and Clavcour\10.dat and Clavcour\11.dat 11 Feb: Clavcour\12.dat and Clavcour\13.dat 25 Feb: Clavcour\14.dat and Clavcour\15.dat 4 March: Clavcour\16.dat, Clavcour\17.dat and Clavcour\17a.dat Saves ArcheoSurveyor as 3 Dec: 13d0901, 13d0902 13Dec : 14de0901, 14de0902 21Jan: New01, New02 28Jan: 30jaxp01, 30jaxp02 4Feb: 4fe01, 4fe02,4fe03 11Feb: 25Fe1001. 25fe1002 4March: 4Mar01,02,03				

RM 15 Grid layout

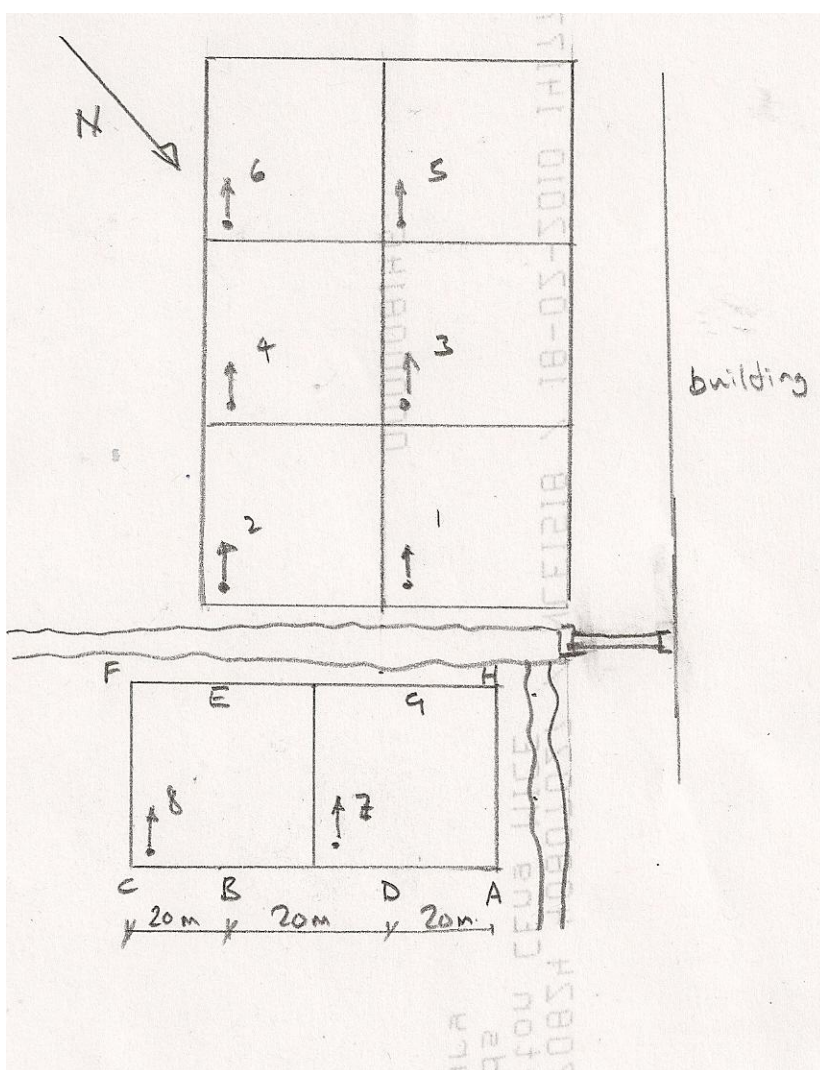


Grad 601- Sites 1& 2

YCCART Site Survey Project – Claverham Court Gradiometry						
Survey date		11 th March 2010				
Report date		11 th March 2010				
Type /Instrument		Grad 601				
		Pace :1.5m/s Lines/m : 1 Range:100nT Volume: High Sensors:2		Grid size: 30m x30m Pattern : Zig Zag Samples/m:4 Audio: On Threshold:1nT Reject:50 Hz		
Location		Claverham Court, Lower Claverham, Claverham, BRISTOL, BS49 4PZ				
		Location; see setting out details				
Ref		none				
Site name		Claverham Court				
Landowner		J. Attwell				
Tenant						
HER ref		47528				
Site type		Open field				
Description		Grass				
Period		Unknown				
Geology		Limestone				
Land use		None				
Survey team		Peter English, Susan Dugas, Mike Fox, & Ian Morton				
Survey area		notes		readings		
		Note; magnetometer display has max/min of ± 100 but actual readings downloaded may be greater				
		size	walk direction	max	min	mean
Grid ref #		30 x 30 m	SW			
	1	30 x 30 m	SW	+99.5	-100.0	-2.0
	2	30 x 30 m	SW	+88.7	-9.2	+5.0
	3	30 x 30 m	SW	+98.1	-9.2	+5.0
	4	30 x 30 m	SW	+14.5	-5.6	+3.8
	5	30 x 30 m	SW	+28.7	-6.6	+3.8
	6	30 x 30 m	SW	+84.1	-7.1	+3.6
	7	30 x 30 m	SW	+99.9	-100.0	+0.3
	8	30 x 30 m	SW	+100.0	-100.0	+1.0
Summary Ian Morton 11 th March 2010		Weather: sunny. Survey complete				

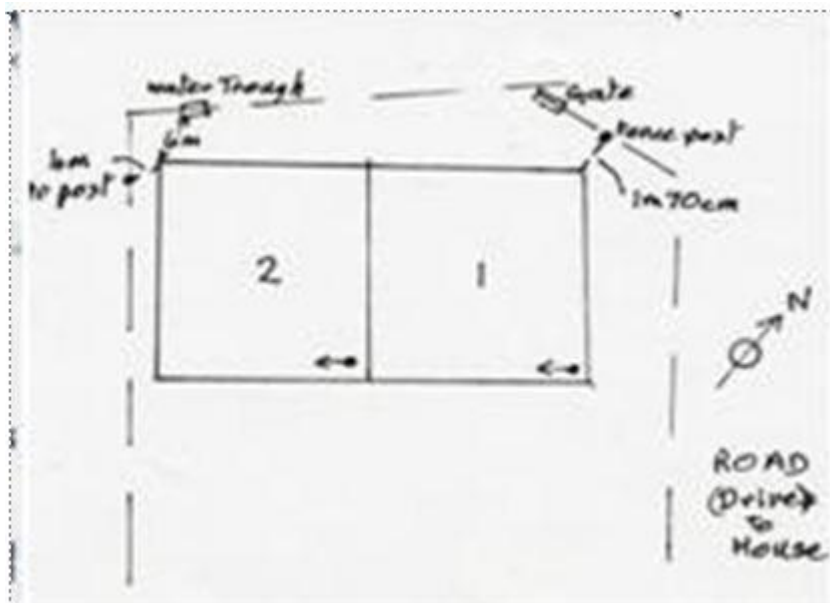
Setting out details

ref	North			West		
	°	'	"	°	'	"
A	51	24	02	2	47	59
B	51	24	1	2	47	57
C	51	24	0	2	47	57
D	51	24	1	2	47	58
E	Not recorded					
F	51	24	0	2	47	58
G	Not recorded					
H	51	24	1	2	48	0



RM 15 Site 2

YCCCART Site Survey						
Project – Claverham Court Farm						
Survey date		18 th March 2010				
Report date		20 th March 2010				
Type /Instrument		RM15				
		Gain x1, Current 1mA Frequency 137Hz Probes 'Config 1' (2 probes)			Grid size: 20m x20m Pattern : Zig Zag Sample interval 1m Traverse Interval 1m. Mode Zig-Zag	
Weather		Dry, Cloudy.				
OS Ref or Lat-Longitude		ST444/672				
Site name		Orchard Paddock west of Farm Drive (Field 1128 on 1821 map)				
Landowner		J Attwell				
Tenant		none				
HER ref						
Site type		Open field				
Description		grass				
Period		? mediaeval				
Geology		unknown				
Land use		Sheep				
Survey team		Colin Campbell, Helen Munton, Chris Short				
Survey area		notes		readings		
		size	walk direction			
Grid ref #	1	20 m	SW by W			
	2	20m	SW by W			
	3a	30 x 1m transect	NW			
Summary						
Colin Campbell 04/03/10		Saved Geoplot as Clavcours\16.dat, Clavcours\17.dat and Clavcours\17a.dat Saved ArcheoSurveyor as 18 th Mar01 & 02				



Appendix 2. Site Photographs



Pete English with the Grad 601 at Claverham Court Farm. March 2010.



Checking the equipment after a day's use.