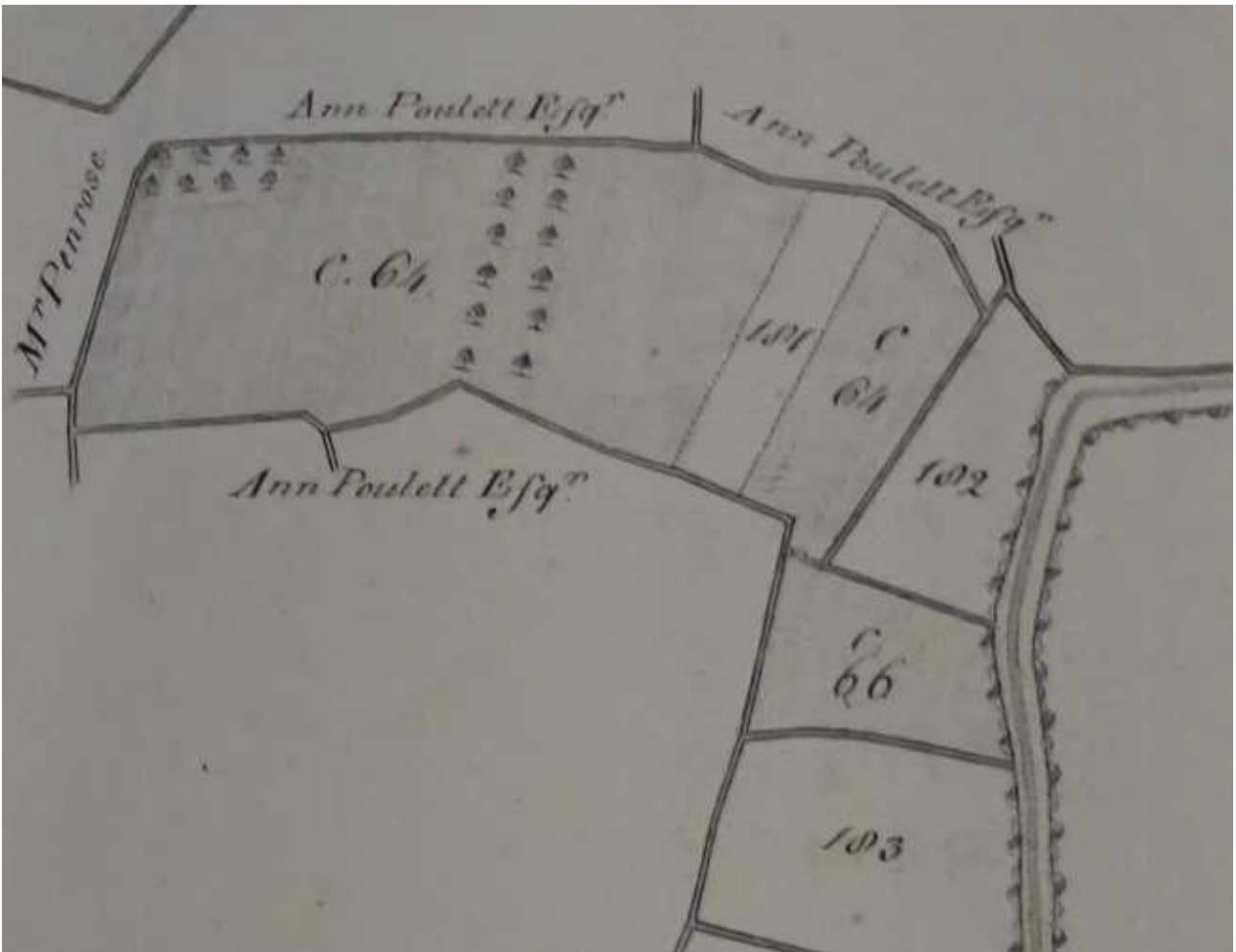


YCCART 2020 / Y1

Gradiometry Survey at Downshills, Kenn

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

General Editor: Vince Russett



The field from the Smyth-Pigott map survey of 1768 (top)

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Abstract

A gradiometry survey was undertaken during September 2019 - January 2020 at this field. Apart from some naturally-occurring patterns in the alluvium and a large palaeochannel confirmed by lidar, nothing of archaeological significance was found.

Acknowledgements

A Heritage Lottery Grant enabled the purchase, by YCCCART, of a Bartington 601 gradiometer without which this survey could not have been undertaken.

This survey would also not have been carried out without the willing permission of the landowners, David Crossman and Michelle Crossman.

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

Yatton, Congresbury, Claverham and Cleve Archaeological Research Team (YCCCART) is one of a number of Community Archaeology teams across northern Somerset, formerly supported by the North Somerset Council Development Management Team. Our objective is to undertake archaeological fieldwork to enable a better understanding and management of the heritage of the area while recording and publishing the activities and locations of the research carried out.

Site Location



Fig 1: Location of surveyed field

The field surveyed (centre, Fig. 1 above) lies at ST41666773, some 540m WNW of Ham Farm, North End, Yatton. The current parish boundary between Kenn (north) and Yatton (south) lies along the fields southern edge, although before modern boundary changes, it lay well within Yatton parish.

Land use and geology

The western half of the site lies on the estuarine alluvium of the Northmarsh, although over a buried ridge of Mercia Mudstones that protected the peatlands of the Inner Northmarsh from alluviation in the post-Roman period (<http://mapapps.bgs.ac.uk>; pers comm, V. Straker). This ridge rises from beneath the alluvium in the east part of the field.

The land was under pasture when surveyed in 2019/20.

There is no public access to this site.

Historical and archaeological context

Land at the extremities of parishes is seldom well-recorded historically.

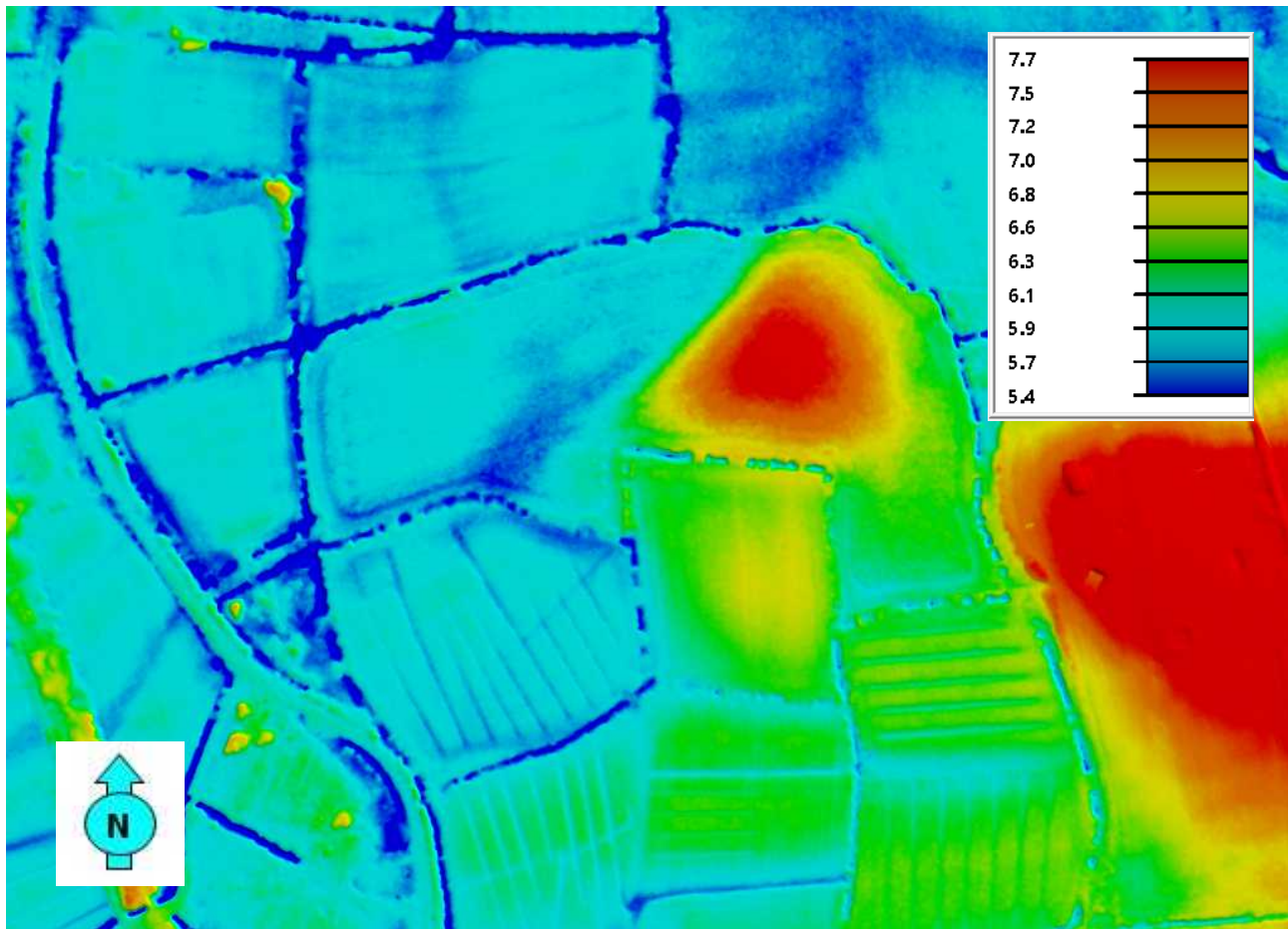


Fig 2: Lidar survey of field (scale in metres AOD)

The lidar survey above illustrates well the topography of the field, with an area of flat, low lying alluvium, rising at its eastern side to the Mercia Mudstone 'island'. Clearly showing in the data are two palaeochannels which join at the foot of that slope (dark blue in Fig. 2), and can be seen in adjacent fields to the north.

Adjacent field names illustrate the nature of the area in 1821 (Fig 4 below). The names 'Barn's Marsh' and 'Brickyards' are clearly denoting low-lying alluvial fields, while 'Downs Hill' refers to the rising land. The name 'Cat acres' is usually explained as 'field notable for cats', Without knowing the age of the name, it's not clear if wild cats are referred to, or simply the local moggy.

The area of fields with no name in the survey is unusual, however: the fields were in the same pattern as now, but the surveyor left the names blank: perhaps the whole area was known as 'Downhills' (since the field surveyed is called 'Lands in Downhill' in the survey).

At the time of the Tithe Map (1840) the names and land uses were as in Fig 5.

The survey area was mapped by the Smyth-Pigotts in 1768 (Fig 3 below), and interestingly, this shows part of what appears to be an avenue of trees crossing the field.

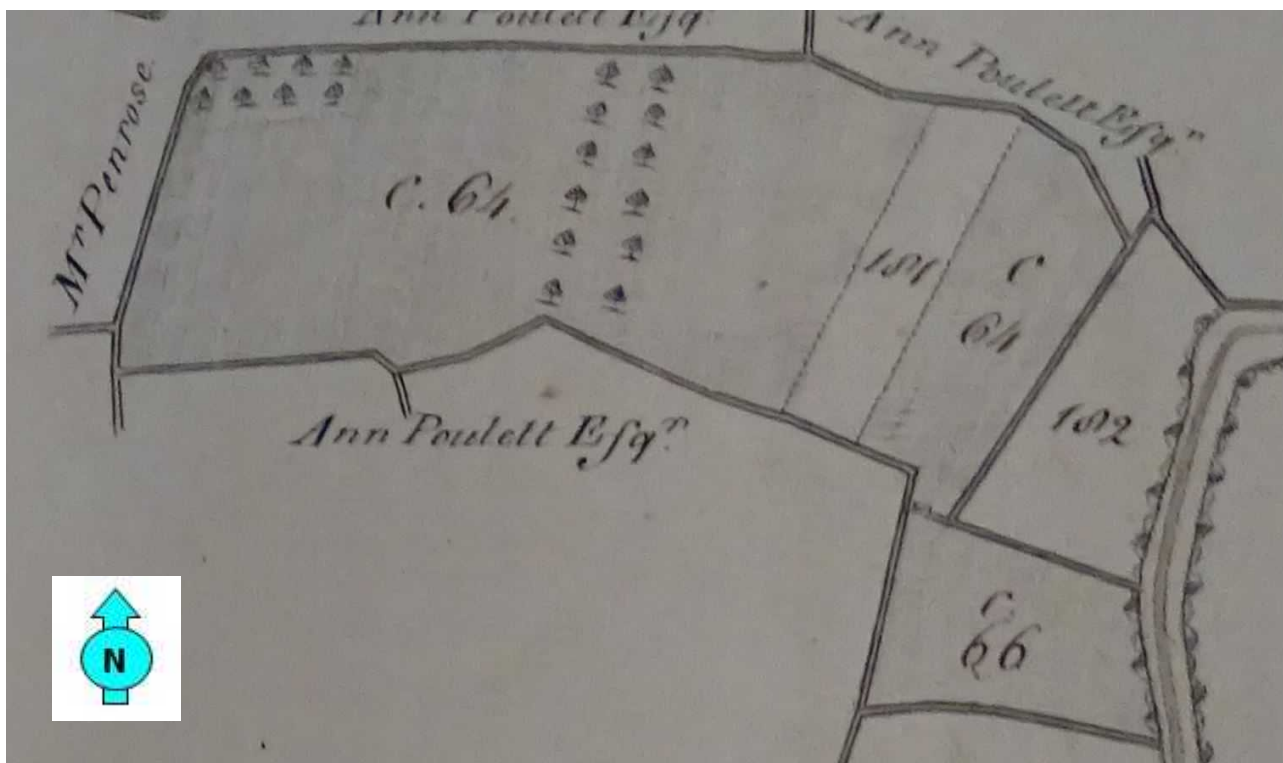


Fig 3: The survey area in 1768

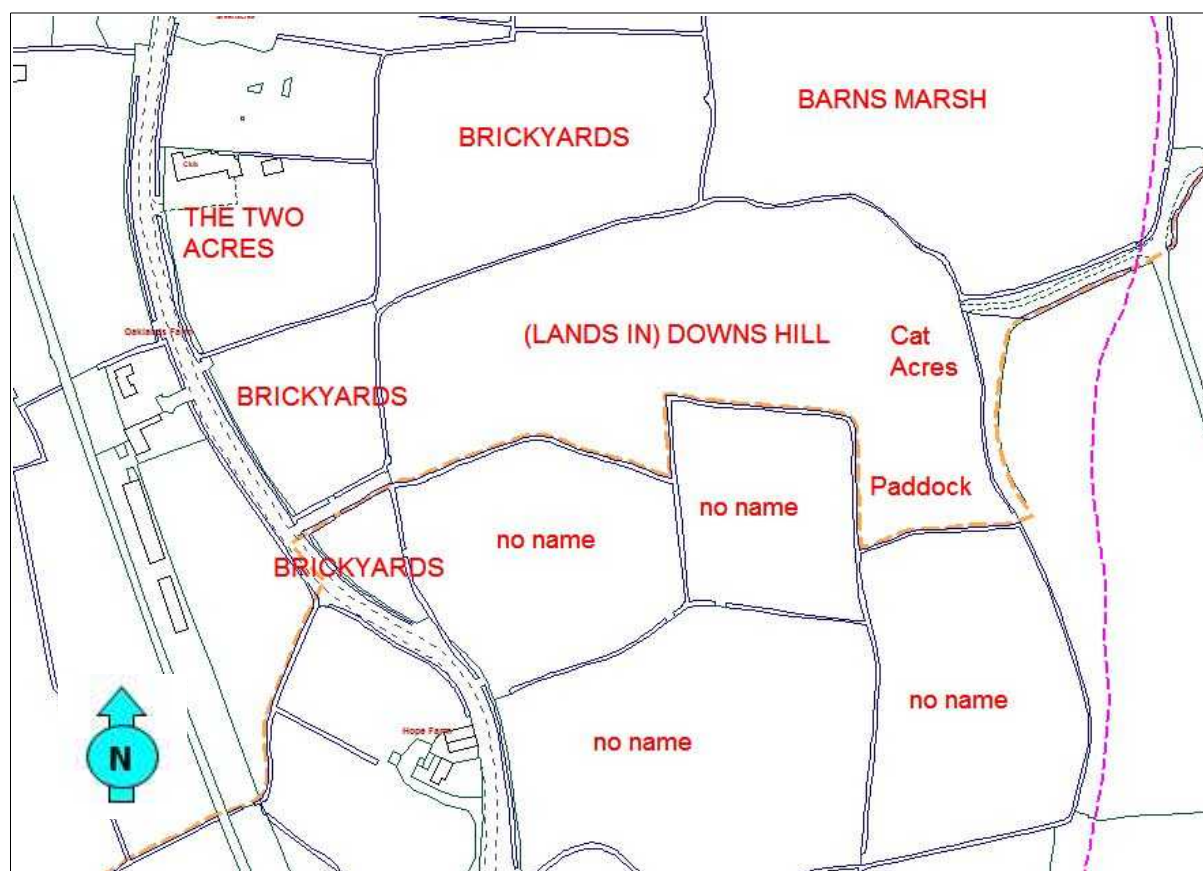


Fig 4: Local field names in 1821

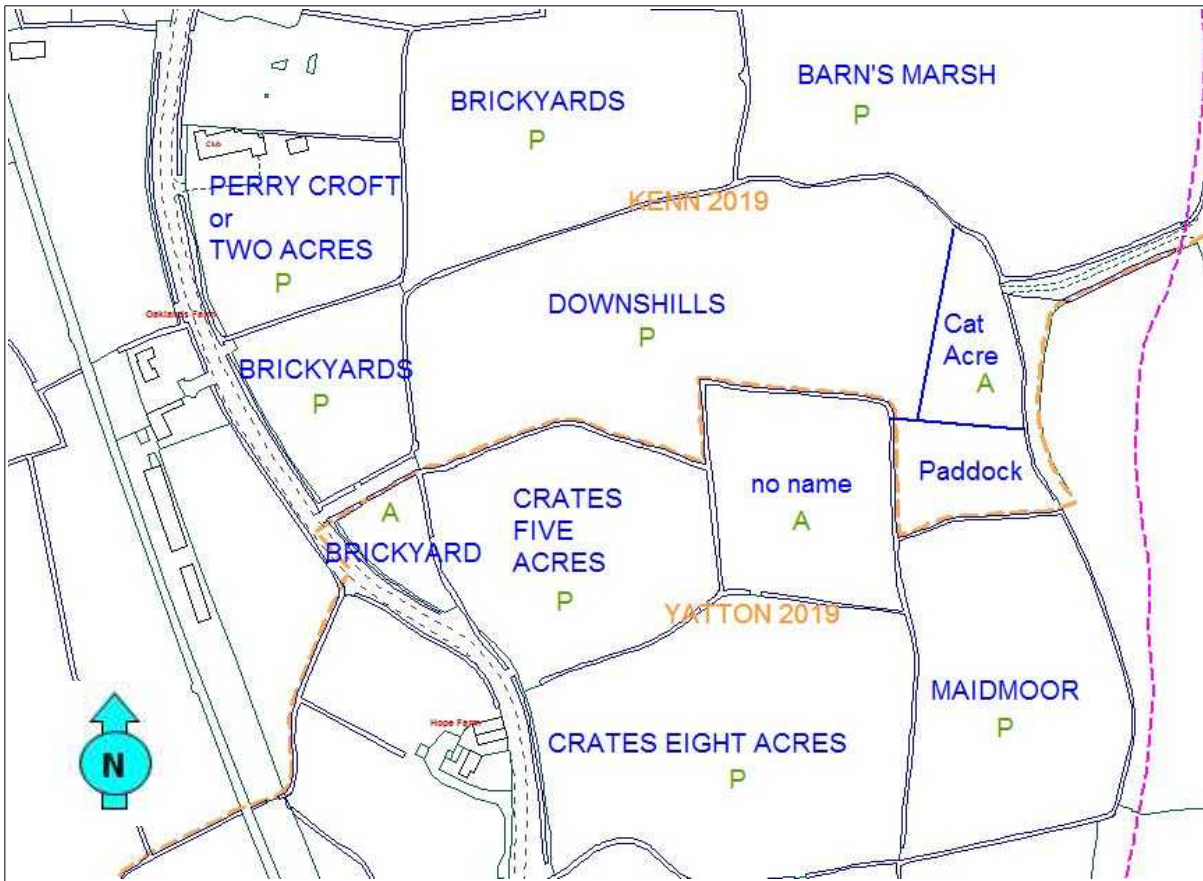


Fig 5: Local field names and land use in 1840

A few linear lush marks show in the higher part of the field in the Google Earth photographs for 2018-06-27, but at least one of these is the old field boundary between Downshills and Cat Acre, and none of them show in the gradiometer survey (below).

Survey objectives

This survey was part of a large-scale geophysical survey of the landscape to the north of Northend, Yatton and in Kenn Moor.

Methodology

The survey was undertaken during the period September 2019 to January 2020 by teams from YCCCART using a Bartington 601 gradiometer.

The completed survey was downloaded to a TerraSurveyor programme.

Composites were adjusted using the following filters:

Band Weight Equaliser

Grad shade

Despiked Destriped

Clip SD2

Colour filter, Red Green Blue 2

The report was written in Libre Office Writer 5.

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

Results



Fig 6: Gradiometry results (monochrome)

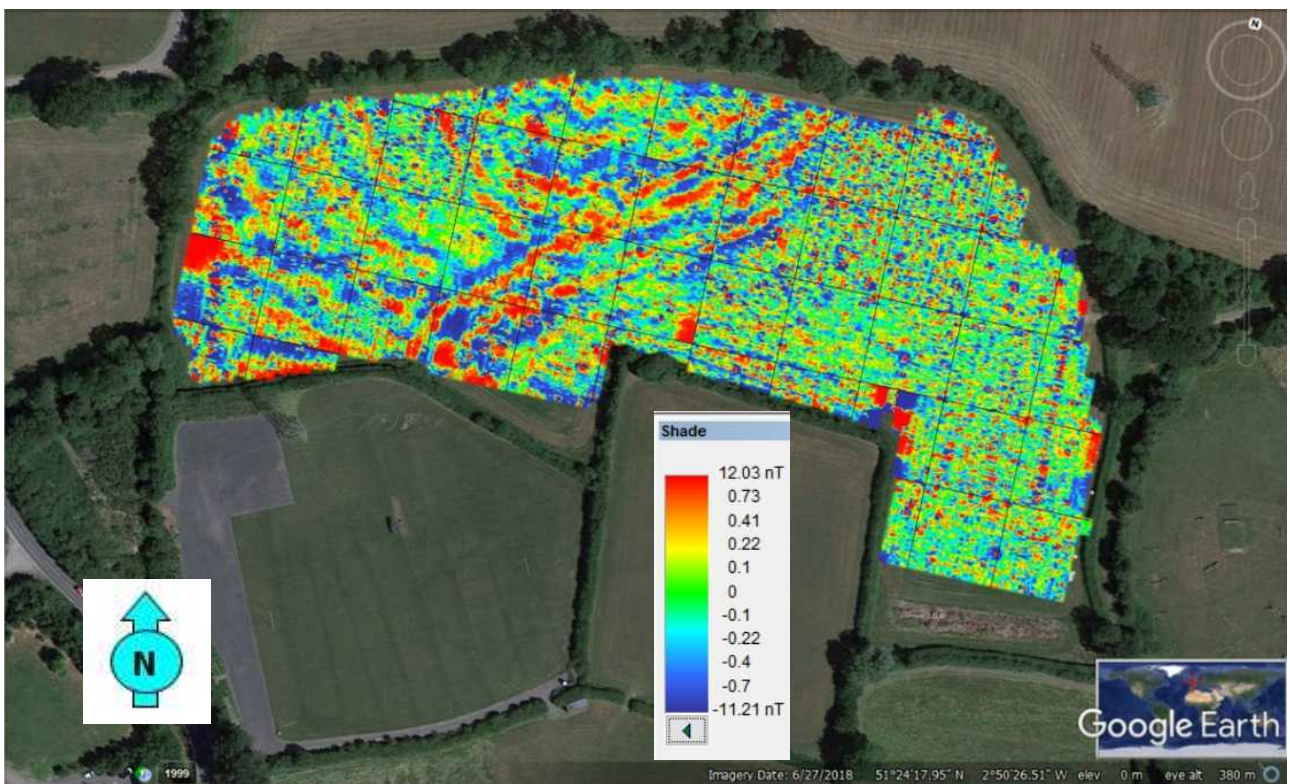


Fig 7: Gradiometry results (colour)

The results show little of archaeological interest. Running NE-SW across the centre of the field is the response we now know reflects a palaeochannel in this area, with bands of high positive magnetic response on either side of a negative band. This is confirmed by the lidar results (Fig 2 above). The second palaeochannel that is visible in the lidar data does not show as clearly in the gradiometry data.

The parallel swirls of response in the west low-lying area of the field are typical of naturally laid alluvium, which here we can date with some confidence to the post-Roman period.

Apart from two small pipes visible in the colour plot at each end of the field, there are no occupation or industrial patterns at all in the results.

Recommendations

The gradiometer survey revealed no apparent archaeological features. No further action is required.

Author: Vince Russett with Chris Short

Date: 2020-02-10

Appendix - Site Record

YCCART Site Survey Project – Crossman10		
Survey date	23/01/2020	
Report date	23/01/2020	
Type /Instrument	Grad 601	
	Pace :1.3m/s Lines/m: 1 Range:100nT Volume: High Sensors:2	Grid size: 30m x30m Pattern : Zig Zag Samples/m:4 Audio: On Threshold:30nT Reject:50 Hz
Location	Yatton Moor	
Ref	none	
Site name	Crossman 10	
Landowner	Mr D Crossman	
Tenant		
HER ref		
Site type	Grass/clover	
Description	Open field surrounded by hedges and further open fields	
Period		
Geology		
Land use	Grazing	
Survey team and conditions		
19/09/2019	Team	Pete W, Peter E, Ferdie, Arthur, Ian
	Weather	Fine, sunny, warm.
03/10/2019	Team	Pete W, Peter E, Ferdie, Ian, PC, JD
	Weather	Dry – very wet underfoot
17/10/2019	Team	Pete W, Peter E, Ferdie, Ian, PC, JD
	Weather	Dry – very wet underfoot
21/11/2019	Team	Peter E, Ferdie, Ian, PC, JD, Arthur, PW
	Weather	Dry – sticky underfoot
28/11/2019	Team	Ferdie, Ian, PC, JD, Arthur, PW, John
	Weather	Dry, bright, very wet underfoot
05/12/2019	Team	Ferdie, Ian, PC, Arthur, John
	Weather	Dry, cold, fine
09/01/2020	Team	Ferdie, Ian, PC, Arthur, John, Janet
	Weather	Dry, cold, damp underfoot, muddy in parts
23/01/2020	Team	Ferdie, Ian, PC, Arthur, John, Janet, Pete
	Weather	Overcast, wet underfoot

Survey area		notes		readings		
Date	Grid number	size	walk direction	max	min	mean
19/09/2019		Setting out base line and 1 row of grids				
	1	30 x 30	N	+99.3	-28.9	-0.4
	2	30 x 30	N	+117	-25.7	-0.8
	3	Partial	N	Data failed to display		
05/10/2019	1	30 x 30	N	+6.4	-7.4	+0.3
	2	30 x 30	N	+4.3	-9.0	+0.5
	3	30 x 30 overhead cables over grid	N	+17.3	-7.3	+0.3
	4	30 x 30 M & R 2 trays	N	+98.2	-55.6	-0.8
	5	30 x 30	N	+28.0	-13.3	-1.2
	6	30 x 30	N	+11.9	-4.8	-0.8
	7	30 x 30 overhead cables over grid	N	+8.3	-19.2	-0.8
17/10/2019	1	30 x 30	N	+19.4	-10.6	+0.4
	2	30 x 30	N	+7.6	-8.4	+0.3
	3	30 x 30 M & R 1-7 traverses	N	+10.6	-4.3	-0.7
	4	Data void - ignore				
	5	Partial M & R	N	+7.3	-5.0	-3.3
	6	Partial M & R	N	+96.9	-17.0	-2.9
	7	Partial M & R	N	+19.9	-17.2	-2.8
21/11/2019	1	Partial M & R Last traverse full Electric fence nearby	S	+17.3	-23.0	-0.0
	2	30 x 30	S	+12.6	-32.1	-0.5
	3	30 x 30 M & R Last 2 traverses Electric fence nearby	S	+12.7	-8.5	-0.8
	4	30 x 30 M & R First 9 traverses Electric fence nearby	S	+75.0	-99.1	-0.5
	5	30 x 30	S	+2.2	-18.2	-0.8
	6	30 x 30 M & R Last 2 traverses Electric fence nearby	S	94.8	-6.8	+1.0
	7	Partial M & R Pylon over the hedge Electric fence nearby	S	+12.2	-1.7	+1.6
	8	Partial M & R Electric fence	S	+4.7	-19.4	-0.5

Survey area		notes		readings		
Date	Grid number	size	walk direction	max	min	mean
28/11/2019	1	30 x 30	N	+30.7	-11.4	+1.0
	2	30 x 30	N	+14.3	-13.2	+0.4
	3	30 x 30	N	+8.4	-22.8	+0.6
	4	30 x 30	N	+8.3	-3.5	+0.9
	5	30 x 30	N	+9.7	-100	-1.2
	6	30 x 30	N	+97.1	-20.4	-0.6
	7	30 x 30	N	+48.2	-11.8	-0.5
05/12/2019	1	Partial M & R	N	+45.1	-8.5	+0.1
	2	30 x 30	N	+14.3	-4.7	-0.2
	3	Partial M & R	N	+15.8	-18.0	-0.5
	4	30 x 30	N	+13.3	-8.6	-0.5
	5	30 x 30	N	+7.1	-48.8	-1.3
	6	30 x 30	N	+7.3	-6.9	-1.1
	7	Partial M & R	N	+26.8	-42.1	-1.2
	8	Partial M & R	N	+3.3	-7.8	-1.6
09/01/2020	1	Partial - dummy data first 4 traverse	S	+10.1	-8.1	+0.6
	2	30 x 30	S	+4.8	-4.5	-0.2
	3	30 x 30 M & R Concrete trough	S	+73.3	-39.4	+0.2
	4	Partial M & R	S	+10.1	-3.4	-0.3
	5	Partial M & R	S	+1.9	-4.6	-1.0
	6	Partial - dummy data first 4 traverse	S	+8.5	-4.6	+0.2
	7	30 x 30	S	+76.9	-5.8	+0.1
	8	Partial	S	+28.5	-39.0	-0.3
23/01/2020	1	30 x 30	N	+19.3	-13.1	+0.7
	2	30 x 30	N	+26.4	-20.8	+0.2
	3	Partial M & R	N	+30.3	-100	-0.3
	4	Partial M & R	N	+17.0	-5.8	0.0



Note - Shaded grids above have been repeated

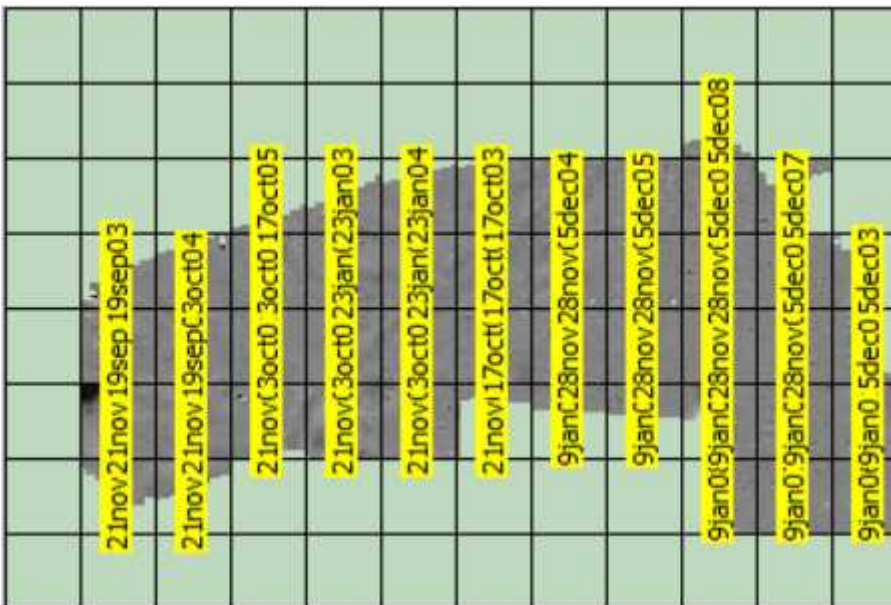
Setting out detail – main grid

Position A - 4m NW to sprayed mark on hedge and 2.7m East to sprayed mark on hedge.

Position G – 10.8m SW to sprayed mark on hedge and 9.0m SE sprayed mark on hedge.

Position of quiet spot - 13.0m North to sprayed mark on hedge.

E 34573.1
N 167759.3



TerraSurveyor grids