

YCCART 2019/Y24

**Geophysical survey and terrain modelling of the Roman road at Haydon Grange,
Priddy**

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

General Editor: Vince Russett



The Roman road running across the drive north of Haydon Grange

Page	Contents
3	Abstract Acknowledgements Introduction
4	Site location Land use and geology
5	Historical & archaeological context
8	Survey objectives Methodology
10	Results
18	Recommendations References
19	Appendix – Site Records

Abstract

As part of the study of Roman roads and potential Roman roads around Charterhouse-on-Mendip, a geophysical and terrain modelling survey was carried out on the visible road earthwork at Haydon Grange, Priddy. As well as characterising this earthwork, the field work was exploring to what extent other, less visible roads would respond to various types of survey.

Acknowledgements

A Heritage Lottery Grant enabled the purchase, by YCCCART, of a Geoscan RM 15 resistivity meter and a Bartington Gradiometer 601 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, Ms. Philippa Harris, and her tenant, Mr Elliot Davis.

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

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, showing line of the Roman road in the vicinity

Haydon Grange is located at ST52565421, down a (private) drive off the B3134, in the parish of Priddy, in Somerset. The Roman road can be seen as a low linear earthwork either side of the drive at ST52835433, some 370m from the B3134.

Land use and geology

The section of the Roman road in question lies in permanent pasture used for grazing. At the southeastern side of the field, the road passes into the Yoxter Ranges, an active military site. **Do not enter this site, used for live firing exercises, without prior permission.** There is no public access to the survey site. It lies within the Mendip Hills Area of Outstanding Natural Beauty (AONB).

Historical & archaeological context

The knowledge and use of the Roman road from Old Sarum to Charterhouse was never really lost, with it gaining local names (Shepton's Brode Way; heydon wey and so on). It seems to have been used until the Inclosures of Ubley (1773), West Harptree (1790) and East Harptree (1796), and indeed, this section is recorded on Day and Master's map of Somerset as 'unfenced road' in 1782 (Somerset Record Society 76 1981).

The earliest mention of the name hydon/haydon is from the mid-12th century. Unfortunately, the document of King Stephen granting a meadow called 'hidena' to Walter Malherbe is only preserved in a poor 17th century copy at Longleat House.

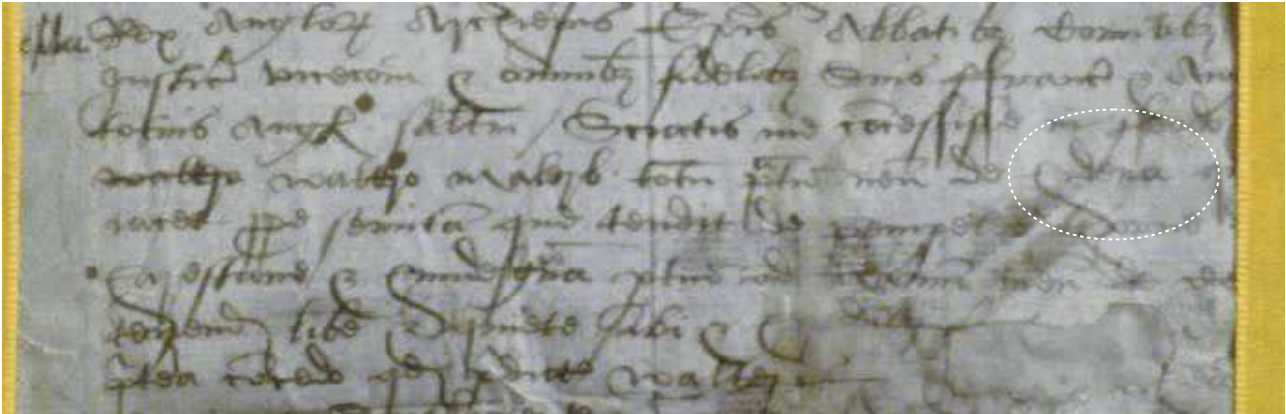


Fig 2: The earliest written mention of 'hidena' (circled) 1135x1154

Ann Cole has ingeniously pointed out that 'dene' names almost always refer to 'a long valley with two steeper sides and a gently sloping floor' (Gelling 1984), and a perfect example, partly followed by the B3371 road from Cheddar Gorge to the top of Mendip, can be seen on the lidar plot below.

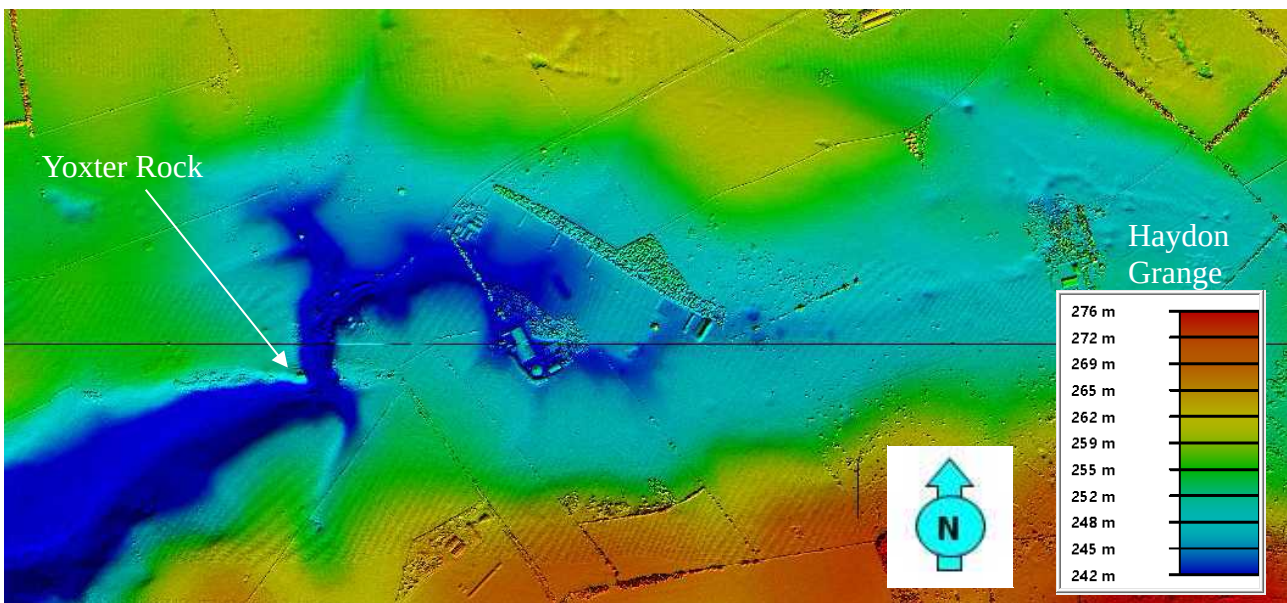


Fig 3: The 'hidena' at Haydon Grange. Scale is height in m. AOD

The 'hidena' can be seen as the blue sinuous feature running past Yoxter Rock, then curving away from the modern road, across the military ranges and up to the back of the modern Haydon Grange.

The Roman road, of course, ignores topography and runs past the very top of the valley. The name 'hydon' later became (after the grant of Charterhouse and Witham to the Carthusians by King Henry II in 1181) Charterhouse Hydon, synonymous with today's Charterhouse-on-Mendip. This often causes confusion in the records with Hinton Charterhouse, another Carthusian house south of Bath, also with land on Mendip at Green Ore.

A charter of William son of John de Harpentr' (c 1138) of 'common of all pasture on Mendep that is to say for a thousand sheep and 60 beasts' survives in the Templar archives at Winchester, and a subsequent Quitclaim of Robert de Gournay of all lands with meadow and pasture on Hidon made to the Knights of the Temple, confirms this was a Templar grange.

A final concord, which can be dated to 1230x1249 on internal evidence, between 'Brother Robert de Sanford, master of the Knights of the Temple in England complainant and Robert de Gurnay, deforciant, of 20 acres of land with appurtenances in Harpetr' and with pasture for a thousand sheep and 60 beasts in Menedep' seals this identification.

This land would have passed to the Hospitallers when the Templars were forcibly disbanded in the early 14th century.

An early reference to lead mining at Hydon is in 'Letters present of John Biconyll [the bishop] and Robert Botyll, prior of St John of Jerusalem (Hospitallers) 12 May 17 Edward 4, [1478] Richard Marshall and Isabel his wife grant to William Powton, Joan and Joan his daughter the lead mines in their manor of Templehidon'.

Powton was also (at an unknown but late C15 date) granted lease of a 'capital messuage' (manor house) at Temple Hidon, confirmed in 1505 (SHC DD/S/HY 170; Lane 2008; Nathan 1935).

This is of great relevance to the Roman and later road, since the mineral riches of the area would have been fairly difficult to exploit without good transport, and precisely this was served up until the late 18th century by the road.

Later use of the area as rabbit warren in the 17th and 18th century, deeply affected the common rights of grazing of adjacent parishes, especially as there were several warrens all adjacent in this small area on Mendip from the 1660s on (see Fig 4 below).

On other documents (such as the Compton Martin Inclosure map of 1791) the area is referred to as 'Hayden Farm Common'. The continuing use of the road, and the non-intensive use of the area, is probably the reason why the road survives in good condition to this day.

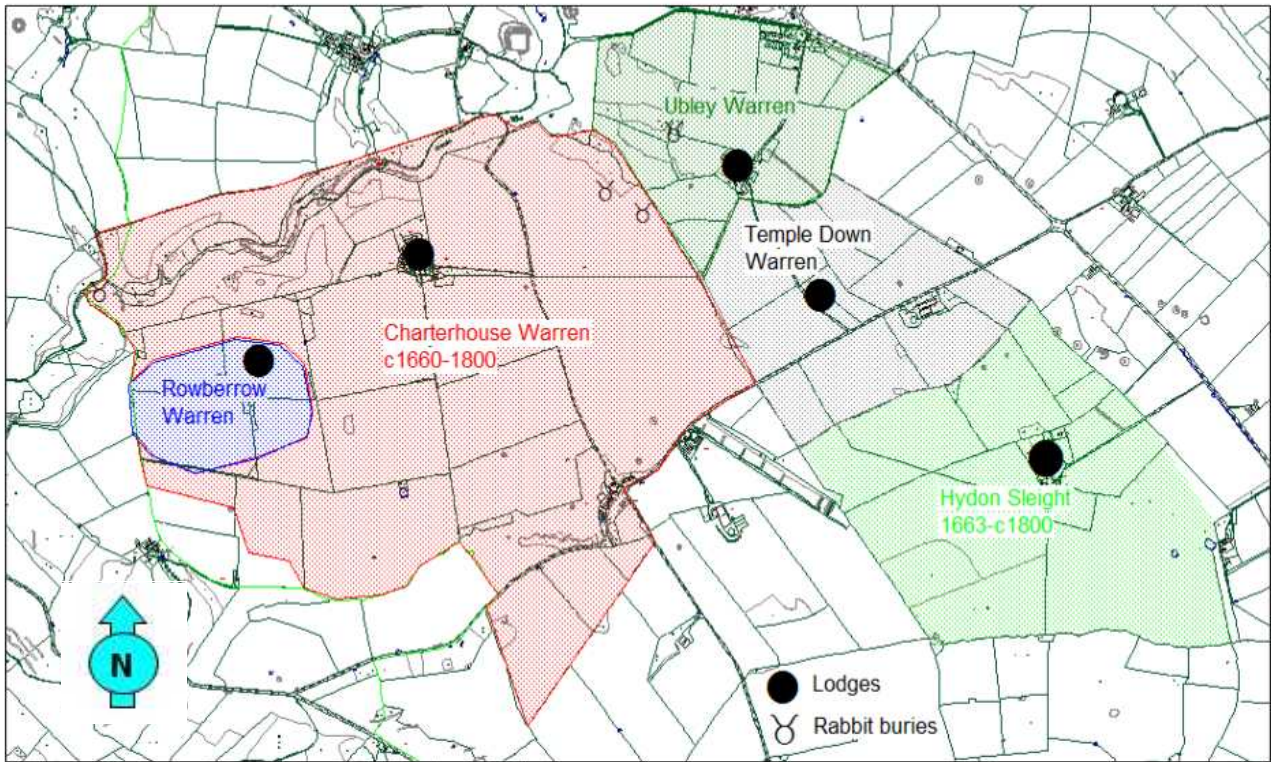


Fig 4: Warrens at Haydon / Yoxter in the 17th century

Disagreements between Compton Martin and West Harptree, caused by rival perambulations, led to sketch maps being made in the late 17th century, identifying the road, and as late as 1777, were able to refer to The Old Road:

*August 14th 1777: From the east of High field Gate to Black Rock thence to a stone call's the Leaping Stock therefrom to a barrow at Cuckow rakes, up thro' Cuckow Rakes to Wriggle Stones, from Rigglestones to Knights Barrow & thence to Lodmoor Pool, along **the Old Road from Wells to Wrington through part of Mr Whalley's Enclosures to the Font Stone** and therefrom (Winding a little to the South) to the South end of Ash Ditch at the Foss Road (SHC DD/X WIAM 4.1)*

The area has today been recovered from any mining scars, except for occasional patches of surface quarrying, which could be of any age.

Survey objectives

The Roman road at Haydon Grange is a surviving earthwork of a road which can be traced on air photographs across many adjacent fields. The survey work was carried out to

- 1) Understand the resistivity response of a known Roman road
- 2) To use these results to help interpret surveys where there is no longer a visible earthwork, but a Roman road is suspected (such as Tynings Farm in Cheddar)
- 3 To use digital terrain modelling to record and interpret the surviving earthwork

Methodology

The survey of the fields was undertaken during the period December 2018-January 2019 by teams from YCCCART using a Geoscan RM-15 resistivity meter and an electronic Hydrostatic level (NIVCOMP) (MARY) with a data reader

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

Resistivity

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

Terrain modelling

The survey was undertaken, using three, separate grids within two RM-15 Grids (Grids 1 and 2 Dec 13). Roman road 1 was within Grid 1 Dec 13 and Roman roads 2 and 3 were within Grid 2 Dec 13. For each survey, tapes were laid out using the RM-15 survey baseline and heights were measured at 1m intervals for each grid, northerly along the X axis, (8 columns, Roman road 1; 5 columns, Roman road 2, and 4 columns, Roman road 3), and westerly along the Y axis, (21 columns, Roman roads 1, 2 and 3). The zero reference point for Roman road 1 was at the SE corner of Grid 1 Dec 13, and for Roman Roads 2 and 3 it was 8m from the SE corner along the eastern edge of Grid 2 Dec 13. The zero point for Roman roads 2 and 3 was +215mm above the zero point for Roman road 1. This difference was noted but not used in the calculations for Roman roads 2 and 3. The Z axis for all grids was the height above, (+), or below, (-), the zero point for each survey in mm. The survey for Roman road 1 was started using the incorporated data logger. However, problems were encountered at row X3. The survey was recommenced at X3 (which then became X0) and individual readings were recorded on paper. For Roman roads 2 and 3 readings were recorded on both the data logger and on paper. The manually recorded data for Roman road 1 and the electronic data for Roman roads 2 and 3 were entered into Excel (Microsoft), and used in the Surfer 10 programme, to produce 2-dimensional contour and 3-dimensional images, including contours.

The report was written in Libre Office 5 Writer.

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

Results

Resistivity

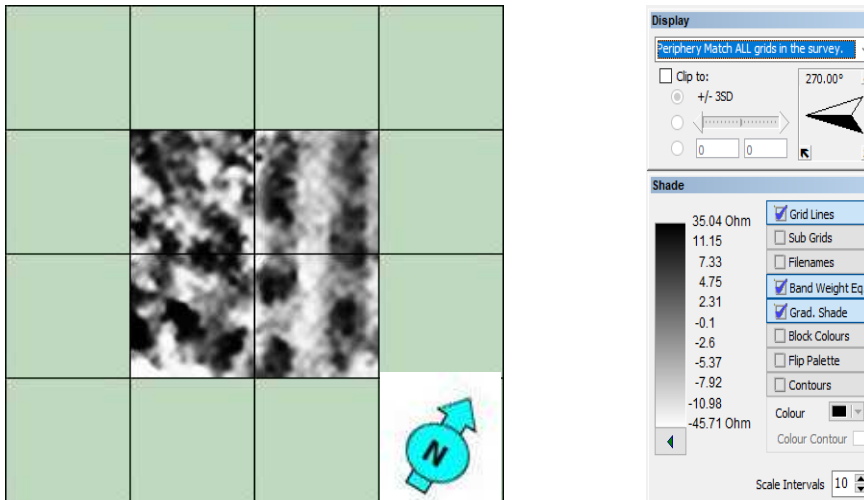


Fig 5: Resistivity results

The results (as confirmed by the terrain modelling results below) do show structures on the same alignment, and the same width as, the features visible on air photographs. However, perhaps counter-intuitively, the centre of the road shows low resistance, while the parallel bands on either side show higher. Not only that, but the high resistance seems to be higher in patches than elsewhere.

Gaffney and Gater (2003:142) point out a case where they experienced this same phenomenon: in their case, it was because the bed of the road had been ploughed away, and the ditches were full of gravel from the road, producing the high resistance seen.

We should be cautious about accepting this at face value in our area, since it has never been (or perhaps only very lightly) ploughed since the Roman period.

Foot traffic over the two millennia since the road was constructed may have caused much the same effect.

Terrain modelling

The feature was in a field adjacent to the northerly edge of the farm road, and approximately at right angles to it (Fig 1). The field sloped gently down from east to west. Looking north along the feature from the farm road, a slight, rounded raised area could be discerned. Standing within the field, at the western side of the feature and looking east, a raised, linear, area could be seen (Fig 6).



Fig 6: The road earthwork: the two figures are each standing on the brow of the ridge

Terrain modelling

In all 3 sections, the ground to the eastern edge of the feature is slightly higher than the western edge, confirming the slope of the field, and a clear, bow-shaped, approximately central, raised area can be seen. The maximum measurements, above and below the two zero points were Roman road 1, -84mm to +439mm; Roman road 2, -248 to +178mm, and Roman road 3, -184 to +127mm. Comparing these findings with the RM-15 results, in Roman road 1, the higher point was slightly to the east of the central, clear area. However, the raised areas for Roman roads 1 and 2 were, generally, located centrally over the clear area. The raised area was at its maximum height, +439mm, above the zero point at its southerly edge, decreasing to 127mm above the zero point at its northerly edge (i.e. less than half a metre, to approximately 13 cm).

Hayden Grange, Roman Road – Terrain modelling vs RM-15

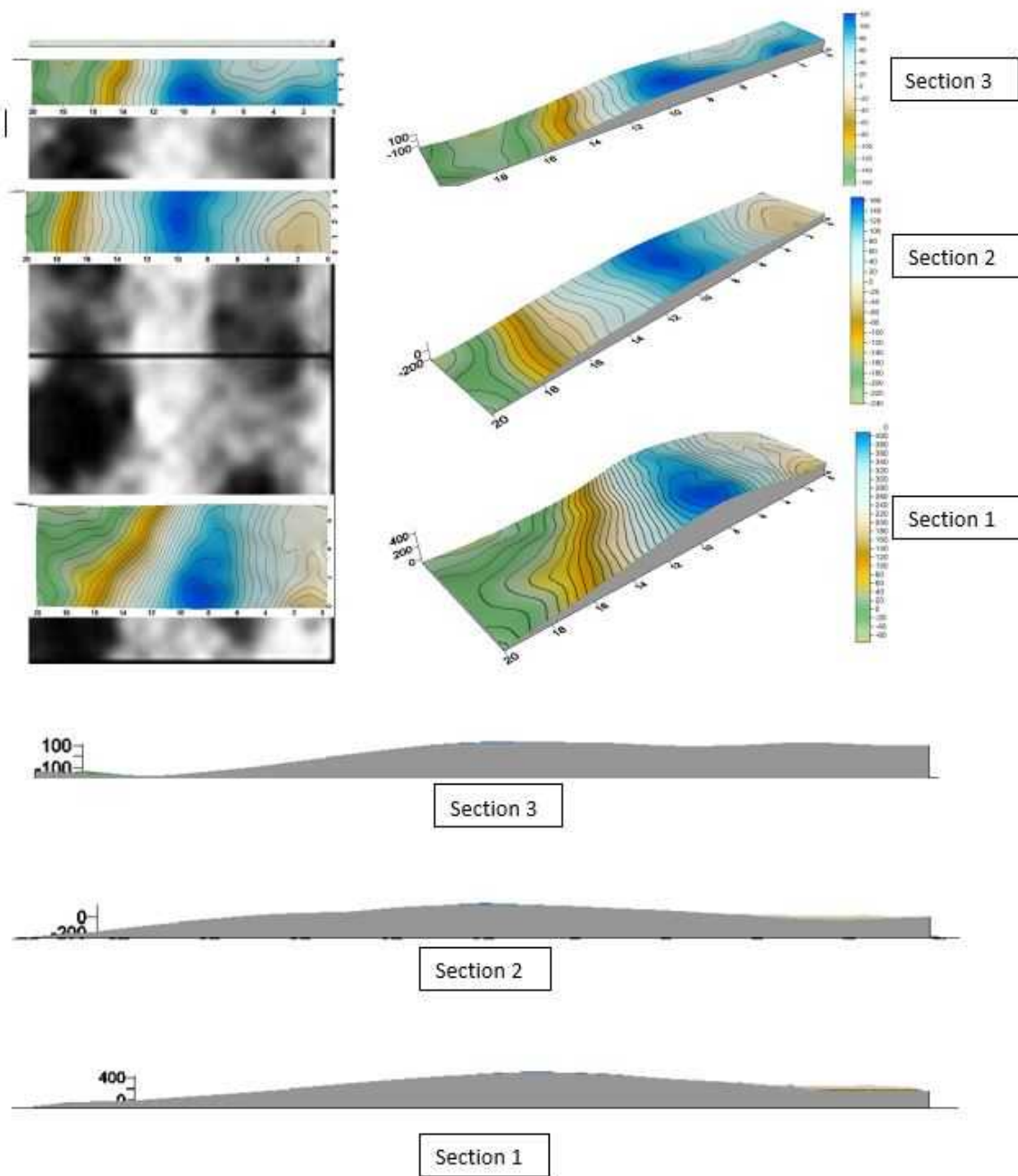


Fig 7: Contoured, section and axonometric terrain models 1-3

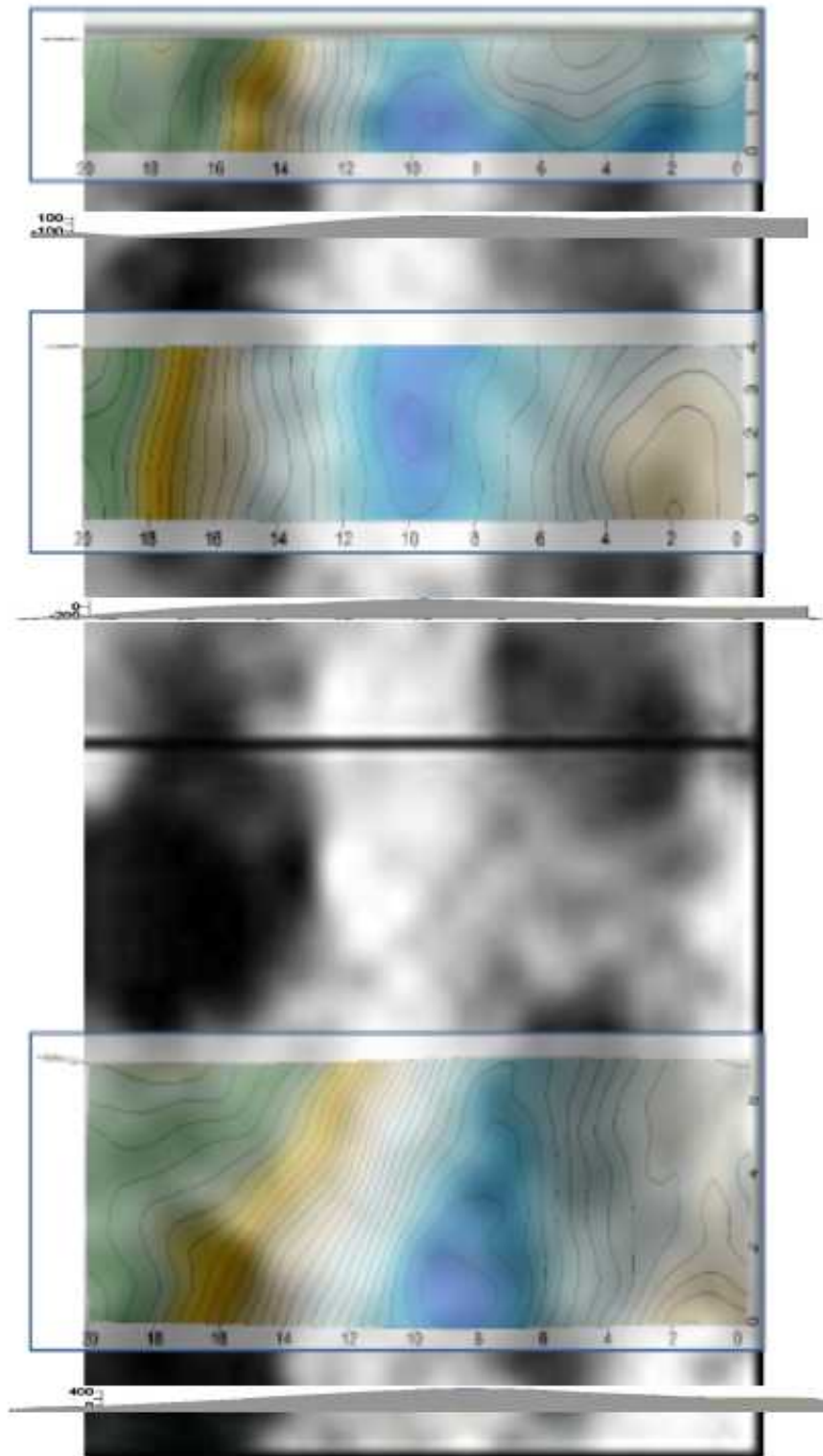


Fig 8: Contour and sections 1-3

Heights of sections

Roman road 1: -84mm to +439mm (above zero point 1, in Grid 1 Dec 13)

Roman road 2: -248 to +178 (above zero point 2, in Grid 2 Dec 13)

Roman road 3: -184 to +127 (above zero point 2, in Grid 2 Dec 13)

These terrain modelling results are not consistent with plough damage either: the method is sensitive enough to detect parallel plough lines, and these were simply not seen.

Unfortunately, in a detailed literature search, I have not been able to find comparanda for these results.

In open country, as this would have been until the late 18th century, the vicissitudes of shrub growth (at times of low grazing pressure), intense frosting on this hilltop site, the digging activity of rabbits during the warren phase, and the sheer pressure of foot, animal and later, wheeled traffic along the road would probably account for most of the features seen.

Although there was a Roman road to follow here, hilltop tracks often wander into adjacent areas: the road was probably not called 'Shepton's Broad Way' for nothing.

Recommendations for further work

It would be academically useful to expose, record and section a part of this road, to determine how much of the archaeology is original Roman, and how much later patching or other activity.

References

Gaffney, C. & Gater, J. 2003	<i>Revealing the Buried Past</i> Tempus
Lane, B. 2008	The Knights Templar in Blagdon <i>Unpub script in CHERT archive</i>
Nathan, M. 1935	<i>Somerset & Dorset Notes & Queries</i> 31: 86

Authors

Vince Russett
Geoff Pearson
Chris Short

Date

2019-11-20

Appendix

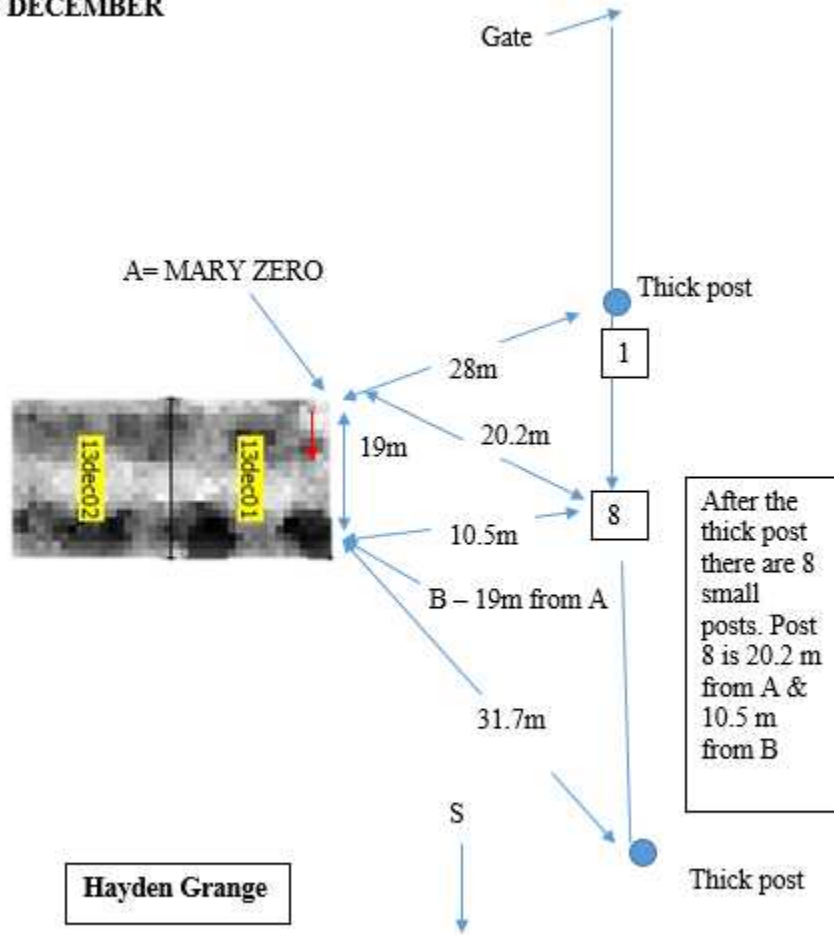
Resistivity



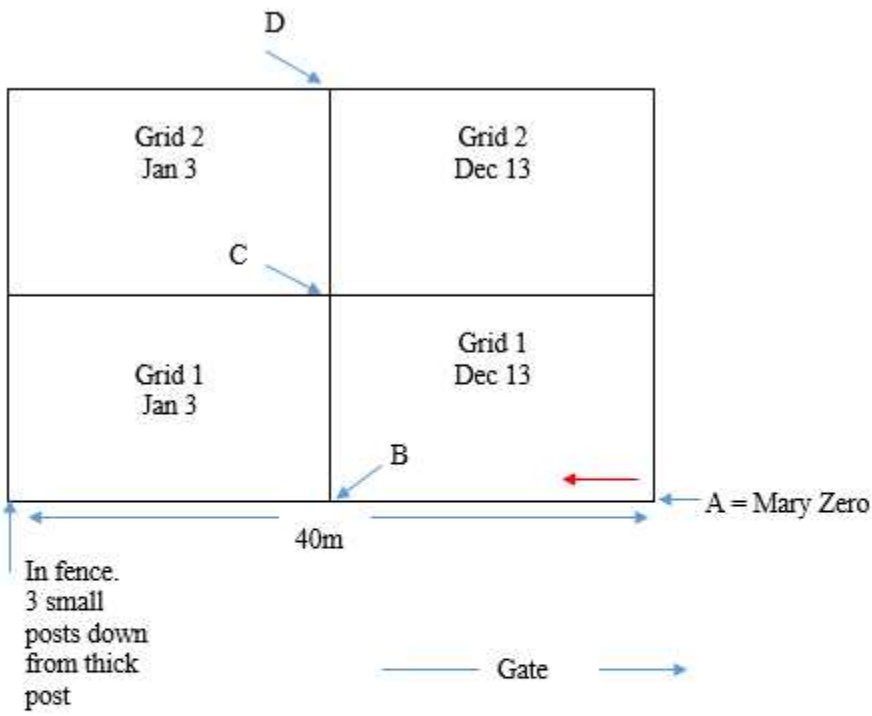
YCCART Site Survey	
Project: - Roman Rd, Hayden Grange	
Survey date	3 January 2019
Report date	3 January 2019
Type /Instrument	RM15
Location	Hayden Grange, Mendip
Landowner	Ms Phillipa Harris
Tenant	Mr Elliott Davis
HER ref	TBC
Site type	Grass
Description	
Period	? Roman
Geology	
Land use	
Survey team and conditions	
13 December 2018	John Wilcox, Pete English, Colin Campbell, Vince Russett Chris Short, Bev Knott <i>Weather: Dry. Very cold.</i>
3 January 2019	Vince Russett, John Evans, Geoff Pearson, Peter English & Chris Short <i>Weather. Dry. Very cold</i>

Survey area		Notes	
		Size	Walk direction
13 December 2018	Grids 1 - 2	20x20m	SW
3 January 2019	Grids 1 - 2	20x20m	SW

LAYOUT 13 DECEMBER



LAY OUT|JANUARY 3



←
Survey direction

GPS

A	352810.15	154340.32
B	352800.48	154322.64
C	352783.45	154332.43
D	352766.39	154348.76

Nivcomp site record 1

YCCCART Site Survey	
Project – Roman Road, Hayden Grange	
Survey date	22/11/18
Location	Hayden Grange, Mendip
Site name	Roman road 1, Grid1 Dec13
Reference	
Type / Instrument	<u>NIVCOMP electronic hydrostatic level</u>
Survey area	<p><u>7 x 20m grid</u> X axis, northerly, 8 columns @ 1 m intervals Y axis, easterly, 21 columns @ 1 m intervals Z axis: height above (+), or below (-) Zero point in mm.</p> <p>Zero point: SE corner of RM-15, Grid 1 Dec 13</p>
Data files	<p>Raw data: Paper copy in Manual Folder Scanned copy in Roman Road.</p> <p>Surfer: <u>Roman road 1.xls</u> <u>Roman road 1.rtf</u> <u>Roman road 1.grd</u></p>
Survey team and conditions	
Team	22/11/18; G Pearson, M Fox, <u>J Wilcox</u> , D Long, V Russett
Weather	Sunny, very cold
Additional information	
Landowner	
Tenant	
HER ref	
Site type	Meadow
Description	
Period	
Geology	
Land use	Grazing
Comments	<p>On 13th Dec, the grid was surveyed using the RM15, and designated Grid1 Dec13. The <u>terrain modelling survey</u>, Roman road 1, was started in the <u>10 x 20m grid</u>, starting at X0 Y0. Electronic recording failed in the X3 line. The survey was restarted at the X3 line (at Y0), using the same zero point, and continued to X10 Y20. Thus, the final survey was <u>7 x 20m</u>.</p>
Report date	19/3/19
Author	G Pearson