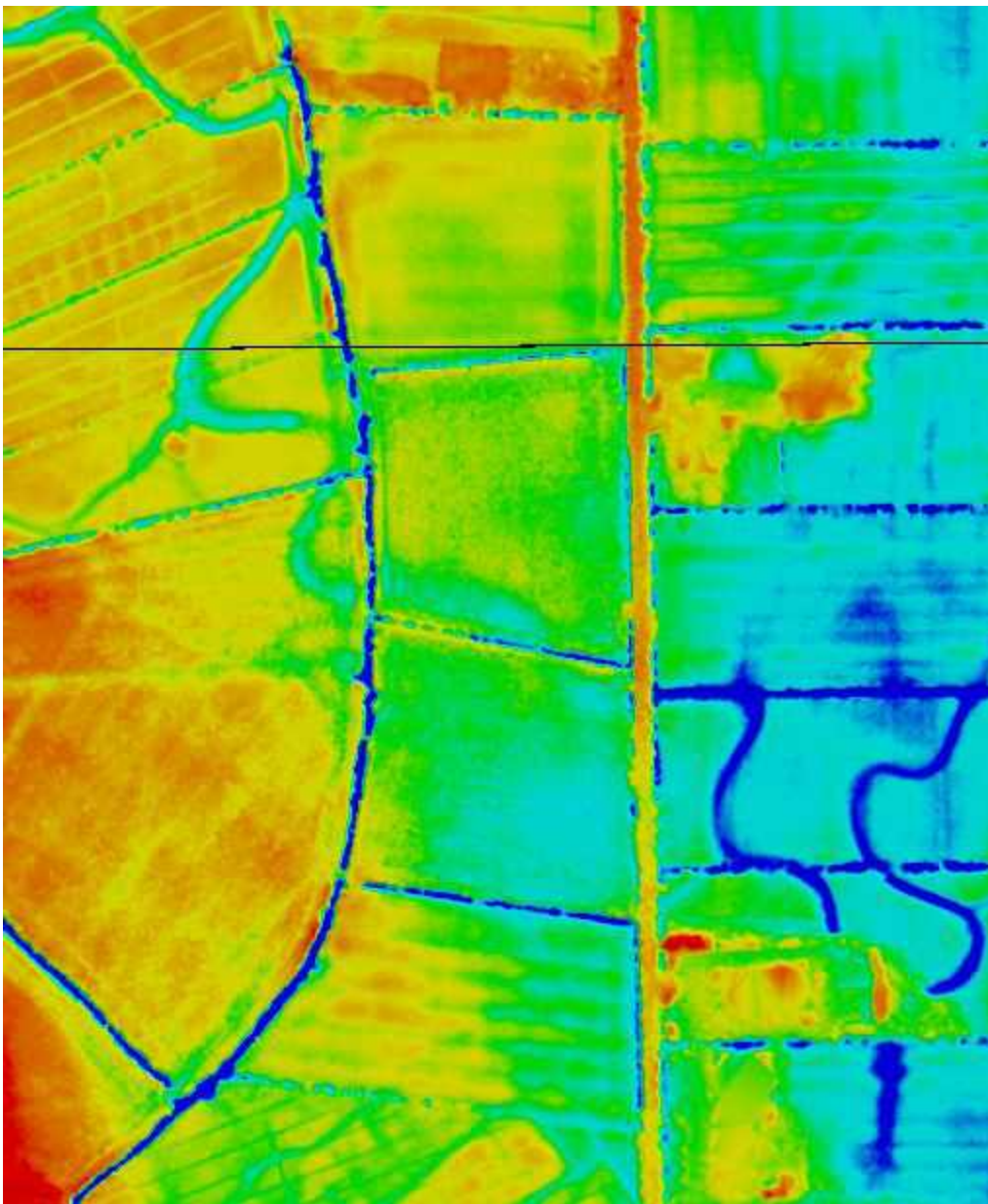


YCCART 2016/Y2

Gradiometry surveys at Kenn Moor Road, Yatton

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

General Editor: Vince Russett



A lidar view of the survey area reveals subtle landscape features

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Abstract

The gradiometry survey revealed a buried sinuous north-south palaeochannel beneath the latest alluvium in the area, and not visible at the surface, and thus probably of Roman or earlier date. A circular magnetic anomaly alongside it could be a Roman or earlier round house, alongside a Roman pottery scatter previously recorded in the same field.

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, Mr Crossman.

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 Cleeve 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 the survey area

The survey was carried out in the four fields indicated in Fig 1, lying between Kenn Moor Road and the Meadmoor Rhyne, to the north-east of Ham Farm, in the parish of Yatton in North Somerset. The staggered cross roads in the lower part of the figure lies at ST42506741. Previous surveys had also been carried out in the two fields to the south.

Land use and geology

The site is currently under permanent pasture. It lies on the alluvium of the Northmarsh, with an outcrop of the Mercia mudstones at its southwestern edge, and the peats of Kenn Moor to its east. The site lies towards the very edge of the post-Roman alluviation of the Northmarsh, which never extended far beyond this point onto the peats of Kenn Moor. The ditches surrounding the site fall within the Tickenham, Nailsea and Kenn Moor SSSI (1995) (http://www.english-nature.org.uk/citation/citation_photo/2000021.pdf).

Historical & archaeological context

The site in question was open moorland until the enclosure of the area in 1815 (Kenn Moor and Cleeve Hill Inclosure Act SHC Q/RDE/135). Unlike in some areas, the current field lay out is exactly that planned on the Inclosure map: the colours represent the different tenements to whom land was allocated in the Act. The two fields to the south were those sold to defray the costs of the Act.

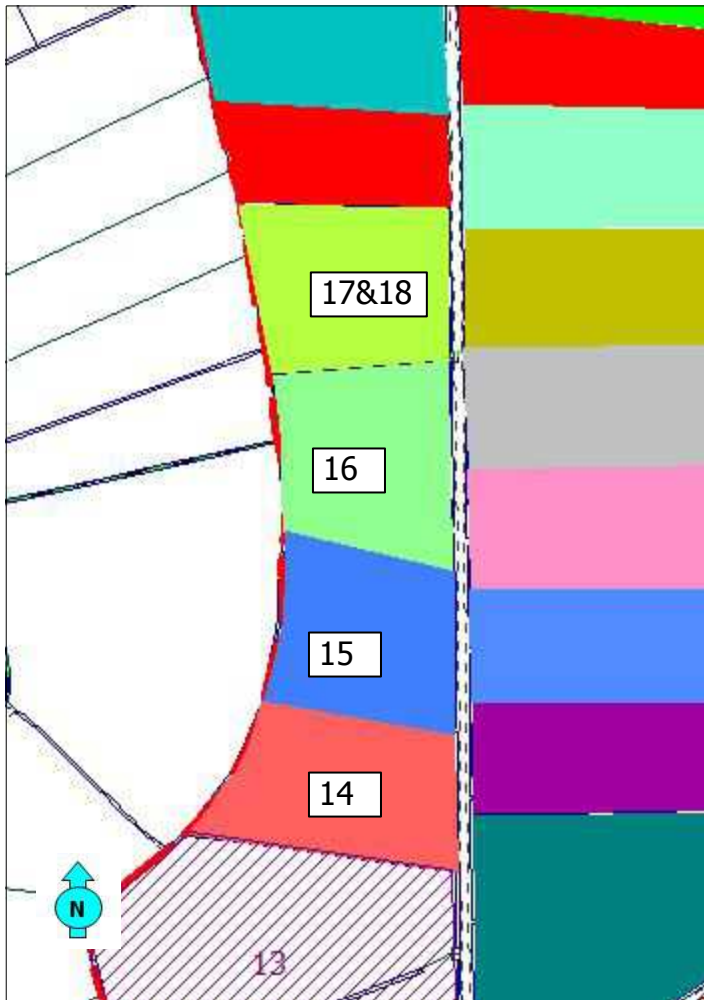


Fig 2: the four fields as allocated in the 1815 Inclosure Act. Field numbers are as referred to in the Act.

The site therefore fell within Kenn Moor before the Act, a large moor with common rights in it held by tenements in Kenn, Yatton and Claverham. Two lists of commoners are known, one in 1720 (SHC A\DFG/2) and the other around the very end of the 18th century (SHC D\RA/1/2/124), but these have not yet been matched with their tenements.

The fields were still known as 'At Kenn Moor' by the time of the 1840 Yatton Tithe Map (SHC D\D/Rt/M/368).

Interestingly, two of the allotment grantees also still held the fields at the time of the Tithe Map, 25 years later, slightly unusual at a time of land purchase and sale resulting from expenses at the Inclosure.

1815 Inclosure Map		1840 Tithe Map		
For tenement	Grantee	Owner	Occupier	
14	William Hillmans	1325	Mary Challenger	Nicholas Hillier
15	Hills	1324	Bishop Gregory*	Miss Sarah Bailey
16	Deals	1323	Bishop Gregory	Miss Sarah Bailey
17&18	Hungerfords	1322	Timothy Powell	William Say

*Yes his name really was Bishop Gregory, not Gregory Bishop



Fig 3: The survey area from the Yatton Tithe Map (1840) (SHC D\D/Rt/M/368)

Immediately outside the area of the area of the survey, the OS marks the Roman burials found by North Somerset Archaeological Research Group in the 1960s. Unfortunately, the sites are not well recorded, nor is the exact date when they were found.

However, one or two photographs exist, and the OS map of 1973-5 records the burials (Fig 4 below) at approximately ST42336778 and ST42316776, the nearest thus being less than 20m from the edge of the survey area.

Rippon (1995) recorded enhanced levels of RB pottery from the west side of field TM1324, although Roman activity was not demonstrably evident in the gradiometry survey.

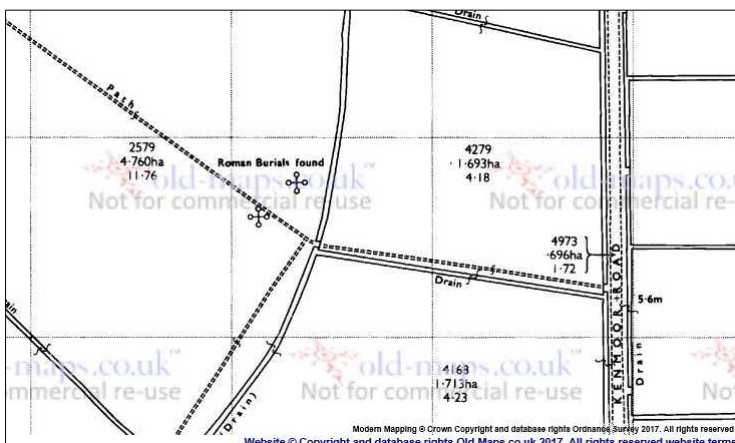


Fig 4: OS indications of where the RB burials were found in the 1960s: these are significantly different to where they are plotted on the North Somerset HER, some 80m to the north-west

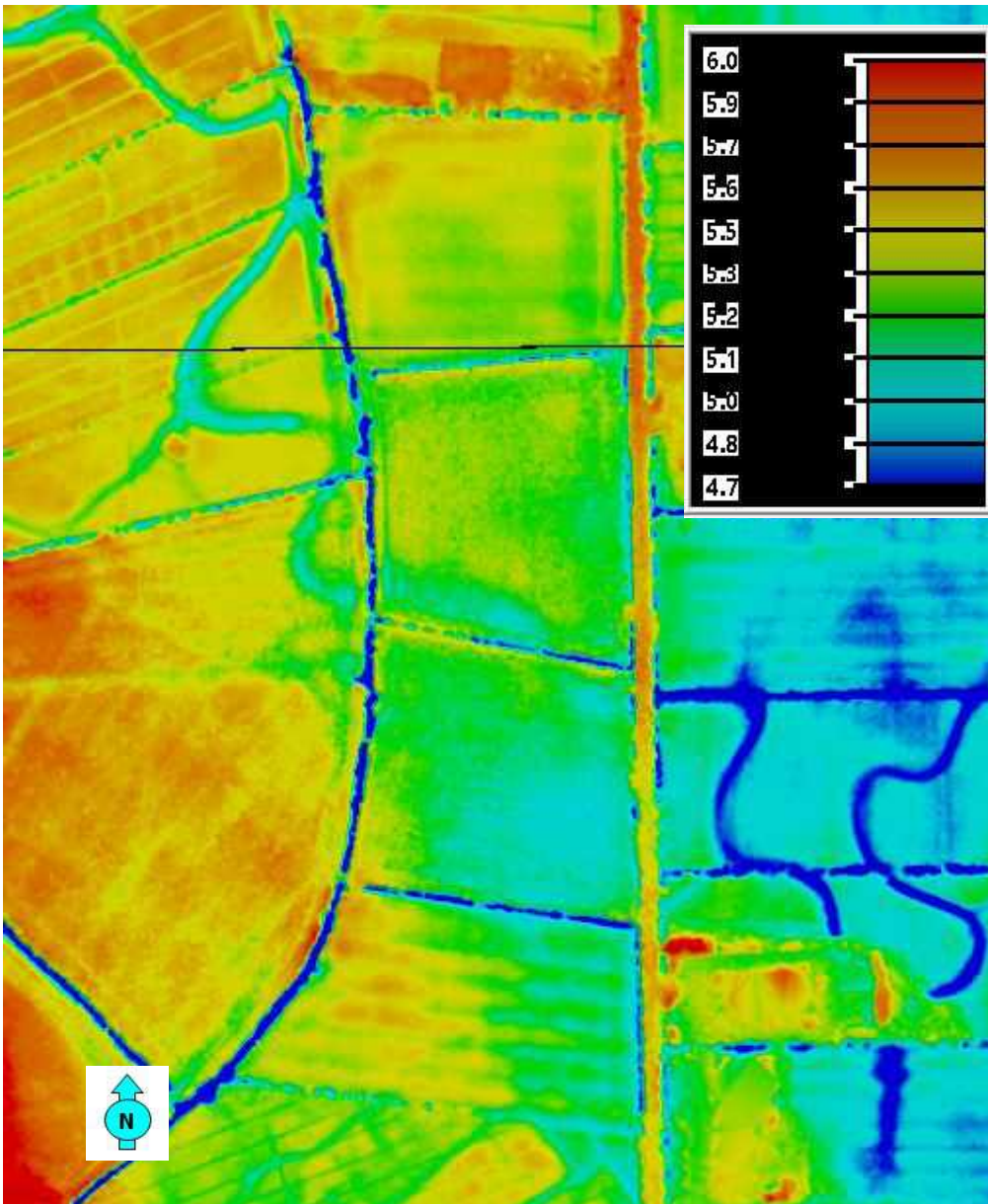


Fig 5: Lidar image of the four fields (data from <https://data.gov.uk/dataset/lidar-composite-dsm-1m1>). Scale in metres AOD

The lidar image illustrates the complexity of this area, where only a thin skin of the alluvium runs onto the peat of Kenn Moor (OS Geological 1" map; National Grid 2015), largely having been held back by the slightly higher ridge of ground (now buried) with Ham Farm and Kenn islands marking each end. This has implications for the interpretation of the geophysical results.

This borne out by the shape of the sub-drift bedrock surface, which has been known in a general way since the 1970s (Fig 5). Most of the alluvial fill is post-glacial, but the topmost 0.3 – 0.5cm is probably post-Roman.

This accounts for the complex nature of the Roman archaeology on and around Kenn Moor, which is somewhere buried in up to 30cm of alluvium, but is elsewhere at the modern surface.

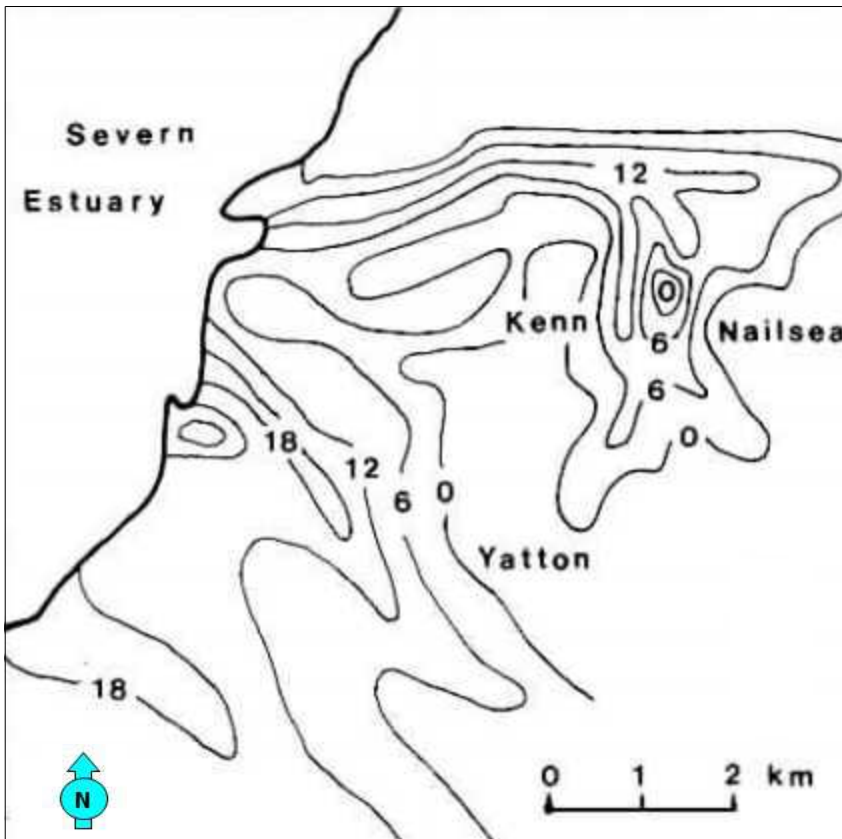


Fig 6: Sub-drift bedrock surface in the Northmarsh (from Gilbertson and Hawkins 1978). Contours are in metres below AOD.

Major engineering works, probably in the medieval period, changed the natural drainage regime completely, with Nailsea Wall separating the moors to its north and south, and the creation of the artificial course of the Little River in Yatton draining much of Kenn Moor away to the Congresbury Yeo (YCCCART, forthcoming).

Survey objectives

The gradiometry survey was carried out to investigate whether the previously discovered activity (assumed to be Roman) found in the fields to the south continued north along Kenn Moor Road (http://www.ycccart.co.uk/index_htm_files/Yatton%20Geophysical%20surveys%20Moor%20Ham%20Lane%202017-Y3%20v1.pdf).

Methodology

The survey of the fields was undertaken during the period by teams from YCCART using the Bartington 601-2 gradiometer.

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

Gradiometry

Colour - Red Blue Green 2

Band weight equaliser

Grad shade

Destriped

Despiked

Clip SD2

The report was written in Libre Office 5 Writer.

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

Results

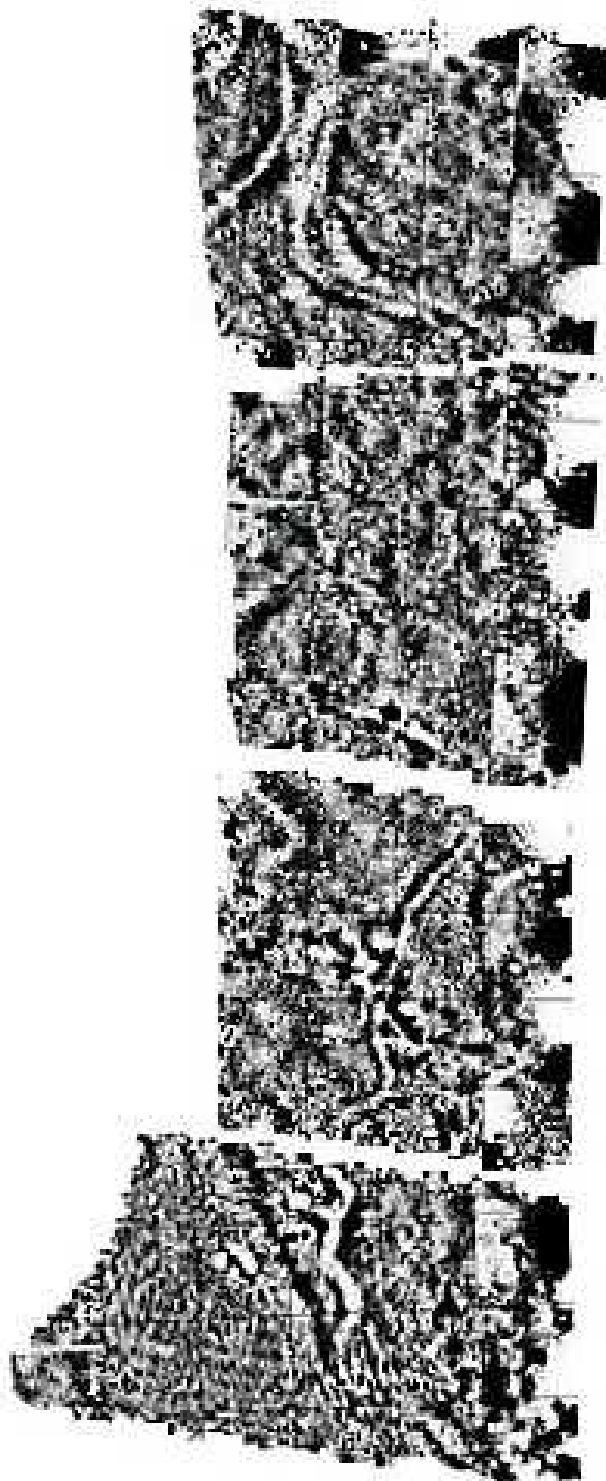


Fig 7: Monochrome results from survey fields



Fig 8: Colour results from survey fields and two fields to the south (reported in YCCART report http://www.yccart.co.uk/index_htm_files/Yatton%20Geophysical%20surveys%20Moor%20Ham%20Lane%202017-Y3%20v1.pdf)

The two figures of survey results (Fig 6 and 7 above) indicate that there was little or no Roman activity of the type seen in the two fields to the south, despite (or perhaps, because of) the proximity of the two recorded Roman burials (Fig 4 above).

Instead, there seems to be the trace of a sinuous palaeochannel running more or less north-south through all four fields. Parts of one or two other palaeochannels can be seen, including one which crosses the north-south aligned channel, and critically, can be seen on modern air photographs and lidar, which the channel visible in the gradiometry results can not. This channel seems to have captured a short section of the earlier.

Two positively enhanced magnetic features can also be seen: a linear stripe in the southern field surveyed, similar to examples seen in the fields to the south, and a very clear circular feature, next to the palaeochannel in the second field. Traces of other potential circular features occur at other points along the channels, but that in the second field is very clear and solid.

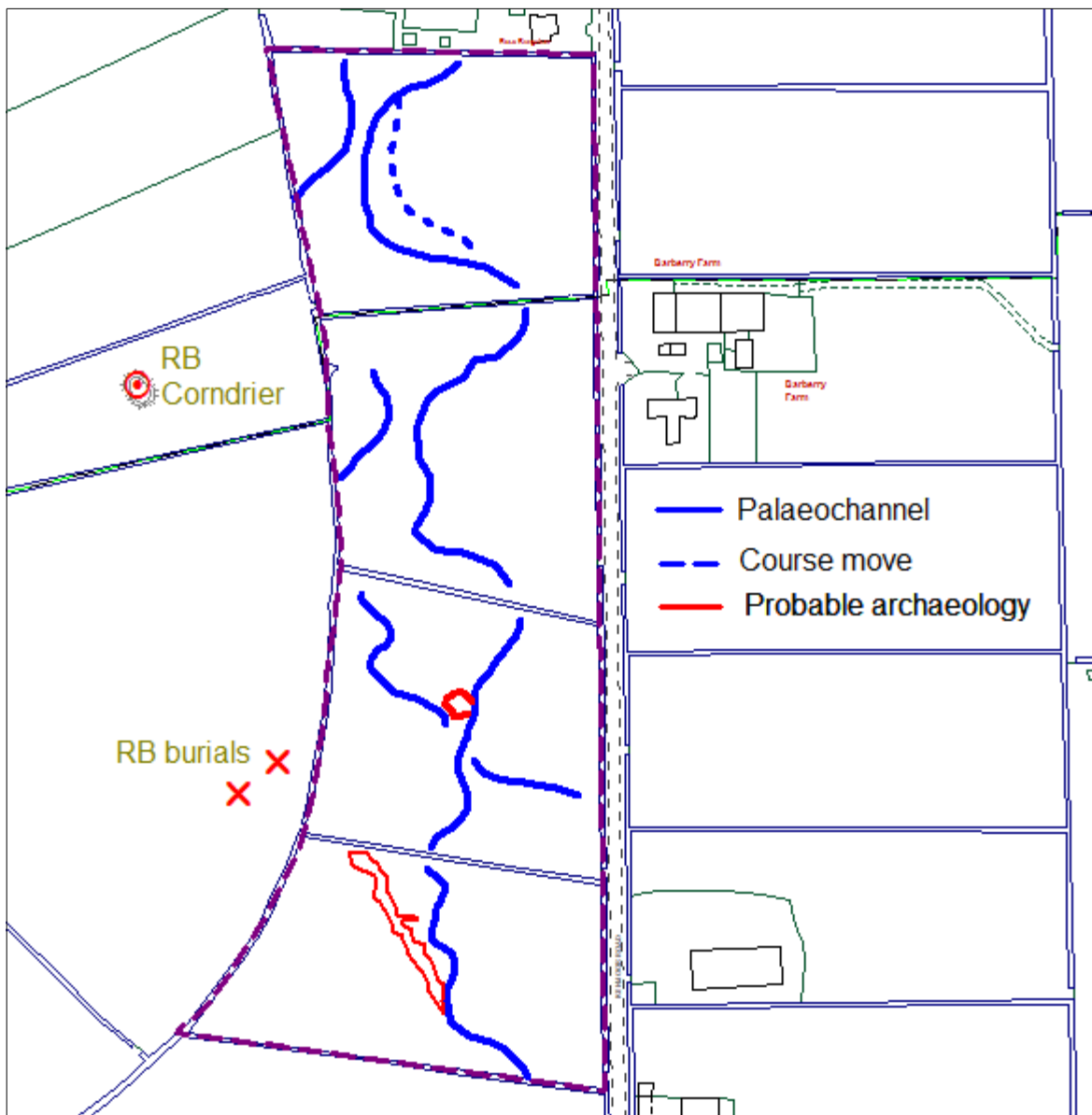


Fig 9: Interpretation of the gradiometry results (Roman details from North Somerset HER and elsewhere)

This visibility (or not) of the two channels is important. The east-west channel, visible on the lidar, becomes the modern Thirteen Acre Rhyne to the west of the survey site, and is almost certainly later than or contemporary with the alluvial layers.

The palaeochannel in the survey results is not visible at all, and must thus be infilled by those alluvial layers, which as they are most likely post-Roman here, means that the palaeochannel is thus Roman or earlier. This may have implications for the round response in the second field, which is the right size (about 12m across) and place (next to a palaeochannel) to be a potential Roman or prehistoric round house.

The relief in the area is so slight that it is impossible to tell which way water flowed in this channel: indeed today the rhyne on Kenn Moor (such as Black Ditch) can run either way at the opening or closing of a hatch on the Kenn River (NSIDBWLMP 2002: 29).

The hydrology, archaeology and history of Kenn Moor is the subject of current study, and such detection of Roman or earlier palaeochannels that are not visible at the surface will be critical to that study. Gradiometry thus offers the possibility in alluviated landscapes, of differentiating stratigraphically between epochs of palaeochannels.

Recommendations for further work

The site of the round anomaly close to the palaeochannel in field 2 should be examined by field evaluation, and a section of the palaeochannel made for environmental and dating evidence.

References

Gilbertson, D. D. & Hawkins, A. B. 1978	The Pleistocene succession at Kenn, Somerset <i>Bulletin of the Geological Survey of Great Britain No. 66</i> HMSO
National Grid 2015	<i>Preliminary Environmental Information report (Hinkley Point Connection)</i>
NSIDBWLMP 2002	<i>North Somerset Internal Drainage Board Water Level Management Plan Weston-super-Mare</i>
Rippon, S. 1995	The Roman settlement and landscape at Kenn Moor, Avon: second interim report on survey and excavation, 1994/5. <i>Archaeology in the Severn estuary</i> 6: 35-48
YCCART forthcoming	<i>Kenn Moor, the Little River and medieval land drainage</i>

Authors

Vince Russett and Chris Short June 2017

Appendices (see Report 2017/Y2a)