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Manual Survey of Field at Iwood

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

General Editor: Vince Russett



Early spring at Iwood Bridge

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Abstract

During 2011, Yatton, Congresbury, Claverham and Cleeve Archaeological Research Team (YCCCART) completed a manual survey of a field at Iwood, previously the subject of geophysical survey, when it was described as Mr. Collins' s Field 2 (see report no.Y16/2010). The manual survey revealed some well-defined earthworks which appeared to be drainage features, a low round mound that was found to have a hard layer immediately beneath the turf, several features that indicated previous agricultural activity and other earthworks that were poorly defined. Two features were also surveyed using a Nivcomp electronic hydrostatic level. The data were processed using the "Surfer" program to produce three-dimensional and contour images.

Acknowledgements

YCCCART are most grateful to the owner, Mr. A. Collins, for permission to survey and photograph the site, and also to Vince Russett, for editing the report.

Grateful thanks are also due to English Heritage for the Lottery Grant which enabled YCCCART to purchase the Nivcomp electronic hydrostatic level used in the survey.

Golden Software Ltd. generously donated their "Surfer" software program, which was used to produce Figures 3, 4, 5 and 6.

Introduction

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 Teams is to carry out archaeological fieldwork, for the purpose of recording, better understanding and management of the heritage of North Somerset.

Site Location



Figure 1: Site Location: Mr. Collins Field 2

The field lies in the hamlet of Iwood, close to the eastern boundary of the parish of Congresbury and about 12 miles south of Bristol, at ST452631.

It is bordered on the south by the current course of the River Yeo; it is privately owned, but is crossed by public footpaths.

Land Use and Geology

The north end of the field lies on Keuper Marl, overlaid in the southern part by alluvial clay. It is used for grazing, mainly of cattle, because of the dampness of the land.

Historical and Archaeological Context

See YCCCART report no. Y16/2010.

Survey Objectives

The survey had the following objectives:

- 1. To record the appearance of the earthworks in the field.
- 2. To support the evidence of geophysical surveys of the same field, as reported in YCCCART Y16/2010.

Methodology

A simple tape survey of the whole field was completed, and recorded on two boards. The first board covered the lower part of the field, where the remaining earthworks were more complex and less obvious, and was drawn at a scale of 1:200. The upper part of the field, with less complex earthworks, was drawn at a scale of 1:500 on the second board. The first drawing was then reduced to 40% of the original, so that both drawings could be fitted together on the same sheet of film.

In addition to the tape survey, and in order to show the three-dimensional appearance of some of the features, grid surveys of two small areas, using the Nivcomp electronic hydrostatic level, were performed. Tapes were laid, relative to baselines established for the manual survey, to outline the features to be investigated. A zero point for the electronic hydrostatic level was established, and height readings in millimetres above or below the zero point were recorded. Readings were taken at 1m intervals north to south and 0.5m intervals west to east, thereby forming a 'grid pattern' over each feature. One area (labelled "A" on Figure 2) covered the junction of two ditch features, and the other (labelled "B") covered a small, low mound close to, and north of, a broad ditch: the position of both of these surveys are marked on the drawing, and details of location, tapes and dimensions are preserved in the site archives. The data obtained were processed using the "Surfer" software program, (Figures 3 to 6).

During the survey, all bare earth and mole hills etc. were examined for artefacts; part of a gully that was seen to contain a quantity of stonework, was briefly examined by the County Archaeologist.

Results



Figure 2: Earthworks in Mr. Collins field 2 at Iwood

The manual survey (Figure 2) demonstrated the remains of a ditch running from west to east – that is, parallel to the course of the river Yeo - and about 30m north of the river bank, across the whole of the field. A secondary ditch ran from north to south to join the main east-west ditch; about 25m east of this junction was a low mound, some 10-12m

across, adjoining the main ditch on the north. The mound was found to have a hard surface immediately beneath the turf, and the main ditch changed direction a few degrees towards the south, at the same position. There was slight evidence of earthworks over much of the lower part of the field.

To the north in the upper part of the field was a prominent ditch or gully running from north to south and curving to the east at its lower end. Some stonework was seen in this ditch and a brief dig by the County Archaeologist revealed that there had been a small bridge over a gully at this point (see report Y16/2010, page 17). Near the top of the field, there were two large trees on the bank of the gully, suggesting that it had formed part of a field boundary at one time.

In the upper east side of the field was a lynchet, running from north to south and also curving eastwards at its lower end, with a drop of up to 0.5m, towards the east. It was suggested that these features indicated arable use of the upper part of the field at some time in the past.

Figures 3 to 6 show the results of surveys of areas of interest using the Nivcomp electronic hydrostatic level, processed using "Surfer" software. Figure 3 shows a contour survey of the junction between the main and secondary ditches, marked on the drawing (Figure 2) as area "A", while Figure 4 is a three-dimensional representation of the same area. Figures 5 and 6 show the same representations for the site of the mound (Figure 2, area "B").

It is interesting to compare the qualities of the two types of representation that are shown below. For archaeological purposes the contour plans are considered to be the more useful, since true measurements can easily be taken from them to give accurate comparisons with features from other sites. However, it should be noted that the threedimensional drawings show more clearly some slight features that are not easily seen in the contour plans, and were not seen at all in the manual survey. These are indicated by arrows on Figure 6, showing several slight gullies running down the southern slope of the mound, which would have been no more than a few millimetres deep. While these gullies are clearly not important in themselves, they serve to make it clear that the threedimensional view does indeed have archaeological value.



Figure 3: Contour plot of ditch junction; measurements in metres



Figure 4: Three-dimensional representation of ditch junction: measurements in metres



Figure 5: Contour plot of low mound; measurements in metres



Figure 6: Three-dimensional representation of low mound: arrows indicate slight gullies. Measurements in metres

Discussion

Comparison with YCCCART report no. Y16/2010 shows that gradiometry, resistivity and manual surveys each show different archaeological features.

For example, gradiometry revealed a series of enclosure boundaries on the west side of the field, which could not be seen on the surface, and were not picked up by the resistivity survey. The low mound with underlying hard surface was not clear in the gradiometer survey, being obscured by other features; neither was it clear on the resistivity survey. While the mound and the ditches were clearly seen in the manual survey, their exact dimensions were subjective, and they were more clearly delineated using the Nivcomp electronic hydrostatic level. This is the first report to include the use of the electronic hydrostatic level to produce contour and three-dimensional images in an archaeological survey, although its use has been described previously (YCCCART newsletter, December, 2011). It would appear to have potential for accurate recording of surface features.

Recommendations for Further Work

It is likely that only an excavation would clarify the results, and separate the various features that clearly lie beneath the ground in this interesting field. Extending the area of the resistivity survey might provide more information.

Geoff Pearson and Shirley Everden. May 2012