

YCCCART

Newsletter

December 2011

Yatton, Congresbury, Claverham & Cleve Archaeological Research Team

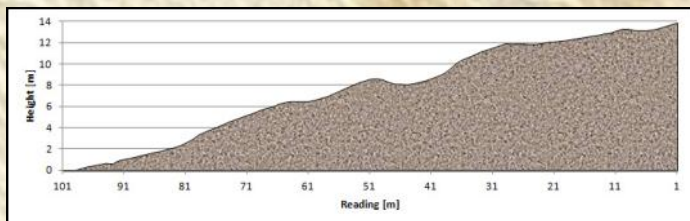
An update on FRED

It's now nearly 18 months since FRED joined YCCCART, following a chance observation of his potential by one of our team. FRED, of course, is a pseudo-acronym since he's actually a Nivcomp digital hydrostatic levelling instrument, but somehow FRED (Field Research Elevation Device) trips more easily off the tongue.



FRED

It was used initially to plot 'lines' across or along particular features. The first was an elevation at Cadbury Hill Fort using a 'daisy chain' technique on a line 100m long.



Hill 'profile'

Another member recognised its potential to map 3D contour formations. The breakthrough was achieved by use of a demonstration copy of a software program produced by Golden Software, called Surfer. Using this program the first attempt was on a round house feature on Cadbury Hill Fort (see next page for item on Surfer).

Following that result, a successful application was made to Golden Software, which kindly donated a free copy of the software.

Working with FRED is fairly straightforward. A grid is set out over the feature of interest, and heights

above or below a fixed zero point at selected intervals, are recorded on paper (an old fashioned, endearing method for the electronically challenged). The zero point is usually located in the centre of the feature to give maximum tube length to avoid having to move the equipment during the survey.

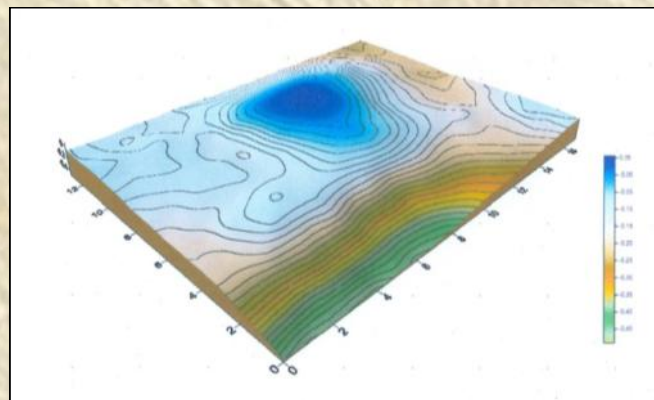
The size of grid can be variable. If a rectangular grid is required, it is quicker to do most readings at one time along the longest line, thereby moving the tape the least number of times. The start point, compass orientation and direction of recordings are also noted.

The data is entered in a spreadsheet as 3 columns, for the x, y, and z axes which is used by Surfer to produce a 3D image of the feature.

The latest feature studied is an indistinct, slightly raised area at Iwood believed to be a house platform. The following is a 3D contour plot for the house platform.



FRED with Brian in action



House platform at Iwood

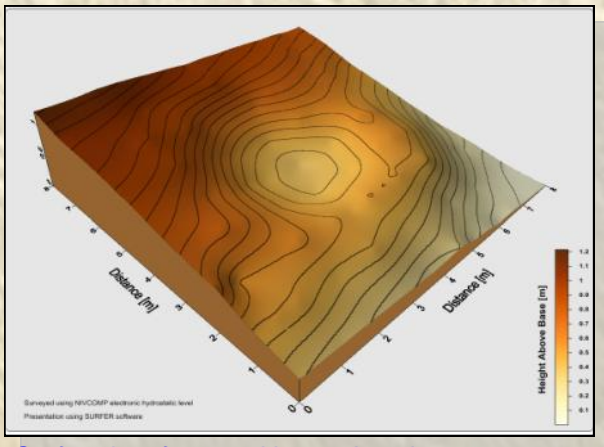
It will be of interest to see the correlation of manual, FRED, Grad601, and RM15 surveys.

Surfer Software

YCCCART was recently provided free of charge with a single-end-user licence for the software Surfer®10.

Surfer is a 3D visualisation, contouring and surface modelling package. It is used extensively in earth sciences for terrain modelling, bathymetric modelling, landscape visualization, surface analysis, contour mapping, 3D surface mapping, gridding, volumetrics, and much more.

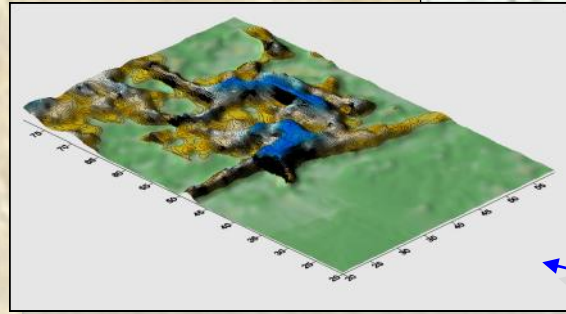
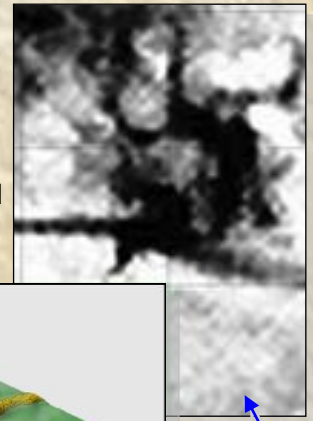
YCCCART initially downloaded a trial copy of the software from the internet. This was used to visualise data for land features it had recorded using FRED. The first was for a round house on Cadbury Hill.



Surfer plot of a round house location

From a search on the internet no references were found that a digital hydrostatic levelling instrument (such as FRED) had been used for archaeological purposes or in conjunction with Surfer.

It was considered that Surfer could perhaps also be used to visualise the data recorded by the Resistance Meter RM15 and the Bartington fluxgate gradiometer Grad601 employed by YCCCART for their geophysical surveys.



ArcheoSurveyor

Surfer

Exporting the data from ArcheoSurveyor via a spreadsheet to Surfer, our first attempt at using data recorded by the RM15 at Iwood was a great success. It was found that further detail could be revealed from the data using Surfer. The two images above show the results obtained.

We are delighted with the early results from the software and look forward to getting the most out of it as we become more familiar with its capabilities.

We would like to acknowledge our appreciation to Golden Software for giving us a free copy of Surfer for our research. Further details on Surfer can be found at www.goldensoftware.com.



Graveyard Dig

What do you do if you find human bones during an excavation? The answer is to stop work until the County Archaeologist can confirm they are ancient. If this is not possible the Police have to be informed and all work stopped. YCCCART recently carried out an excavation in Congresbury parish graveyard.

The excavation uncovered trays and trays of bones. Fortunately YCCCART has at least three members who are highly qualified vets and they were able to identify that the bones were from animals.



Have you found it ?

The dig was carried out in June. It comprised a 5m by 2m trench, in which at a depth of less than a third of a metre we encountered a layer of rubble and stones, some of which had mortar



Completed excavation

attached to them. Two pieces of Roman roof tile and a stone knife sharpener were also found as well as pieces of late Romano British Oxford Ware pottery. There was no evidence of wall faces and it has been concluded that the rubble may have been used to produce a rough pathway and could have come from a building of some status.

The building could be associated with the early church as such structures are very frequently associated with Roman sites.

If we have the opportunity we will carry out a further small-scale excavation in this area.

Working with the '601'

The Bartington fluxgate gradiometer Grad601 is one of the principal non-destructive survey techniques used by YCCCART. It measures changes in magnetic values in the ground which are an indication of previous occupation and hence could have archaeological interest. It is useful for covering large areas of ground quickly. One archaeological event which gives a particularly strong magnetic indication is burning, hence the Grad601 is very useful in identifying possible kiln sites which is one of the main themes of YCCCART's work.



Can you get the History channel?

A survey is made using a 30m x 30m grid wherever possible. Disturbed ground such as river banks are usually left out of surveys and grids kept a couple of metres away from fence lines and hedges as experience has shown these give poor results. Where possible, grids are always walked in the same direction starting from the 'bottom left.'

At the end of each grid the maximum, minimum and mean readings for the grid are recorded in the field log book, which also contains a sketch map of the grids and area, weather conditions, survey team and direction each grid was walked.

Each 30m x 30m grid consists of 15 traverses which is a walk 450m long and takes about five minutes to walk. On a good day 10 to 12 grids are completed so involves walking about 4.5 to 5.4 km. This is



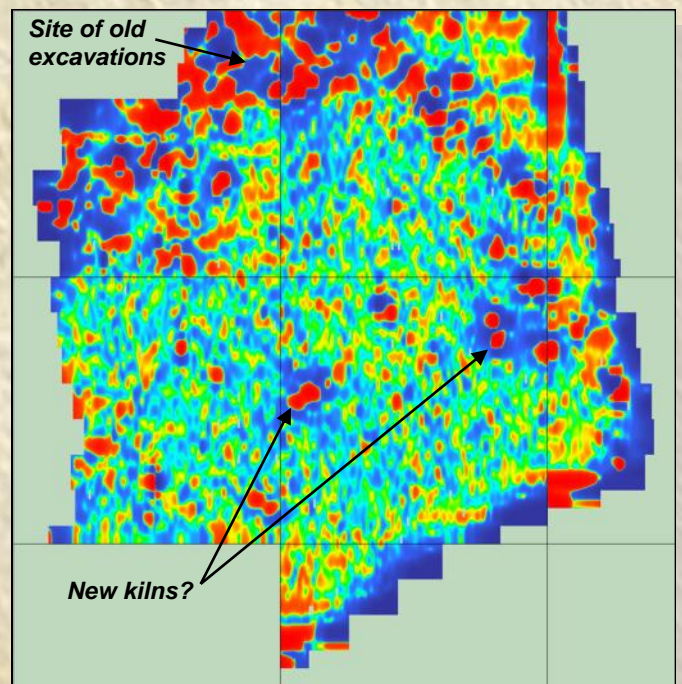
Ian and chums laying out a grid



Peter walking the grid with Grad601

often across rugged ground which has to be done at a constant quick speed. Clearly No Country for Old Men!

Romano British kilns, dating from the 3rd century, which produced a range of pottery such as pots, mugs and colanders are known to exist in Congresbury. In 2009 YCCCART started a project to establish the full extent of the kilns. The following is a result from a Grad601 survey of a field in Venus Street, Congresbury which shows the possible locations of new kilns.



Grad601 survey of Mrs Rossiter's paddock

The pot on the right is typical of the earthenware produced in the local kilns.



Pot fired in a local kiln

Congresbury Scouts and Cubs

In December 2010 and October 2011 YCCART worked with Congresbury Scouts and Cubs as part of the Scouts Community Badge and the Cubs Local Knowledge Activity Badge.



Both these badges are designed to involve the Scouts and Cubs in the local community and to help them to better understand what is going on in their community.

The Scouts session was held on one of the coldest nights of the winter. The session started with a presentation in the Scout hut on the work of YCCART. Afterwards the Scouts joined other YCCART members at St Andrews Church to study the church's special features.

The Cubs' session was held in the scout hut and concentrated on what the Romans did for Congresbury and in particular pottery production. After looking at archaeology in the 1960's and today, the Cubs left with some Roman pottery shards.

The Scouts and Cubs were on top form and it was a pleasure working with them and their leaders. These activities are excellent examples of community archaeology and a good extension of the work with St Andrew's School.

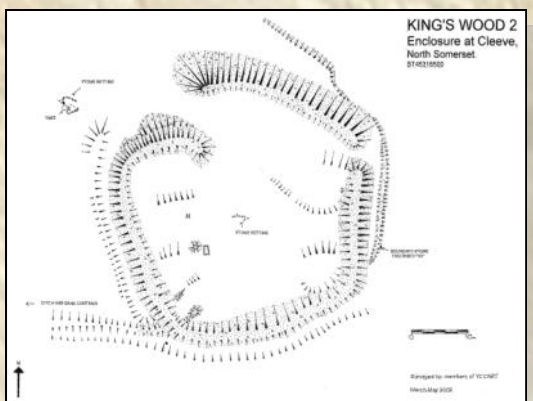


Manual Surveys

Beginning in the 19th century, archaeologists have used a very simple technique to produce measured drawings of interesting sites. The only equipment needed is a few measuring tapes and some pegs to fix the tapes in place, plus a board to hold the drawing. When YCCART first started in 2005 that was the only equipment we had, and we set about drawing all the earthworks we could find in our area. We drew lots of circular enclosures, a duck decoy, industrial remains, drainage systems and ruined cottages. Finally we finished up drawing the north-east ramparts of Cadbury Hill Fort, which we completed in 2010.

By this time we had electronic equipment, described in this and previous newsletters, which enables us to "see" what may be under the ground, and incidentally cost a great deal more than a few tapes and pegs!

Manual surveys produce accurate drawings of anything that can be seen on the ground, and they can be related immediately to what is there by any interested non-technical viewer. It is still a very valuable technique that YCCART will continue to use in conjunction with its geophysical equipment.



Drawing of enclosure at King's Wood

YCCART Ancient Recipe Gingerbread

The following is based on a medieval recipe.

Ingredients

575ml honey

435g breadcrumbs

25ml ground ginger

5ml white pepper

5ml sandalwood (you can substitute with cinnamon)



Method

In a small saucepan bring the honey to the boil on a low heat. Skim off any scum that forms on the surface of the honey. Stir in the breadcrumbs, and then remove the pan from the heat. Mix in the spices and put the mixture into a shallow tray. When the mixture is cold, cut into small pieces.

New Members Welcome

If you are interested in joining the team you will be very welcome. No experience is required as training will be provided. You do not even need to be interested in archaeology or history – we also need people that have skills in topics such as photography, web design, data processing, technology or you may just enjoy spending time out doors with a friendly group of people.

For further information please contact Brian Bradbury on 01934 838 018

Read our reports and catch up with our progress on
www.ycccart.co.uk

