YCCCART

Yatton Congresbury Claverham and Cleeve Archaeological Research Team

Newsletter December 2022

Chairman's chat

This issue has two contrasting articles about mapping. Richard guides us through the complexities of GIS and how he is using this along side technological marvels such as LiDAR, high accuracy GPS and drone photography to add to both our pre-survey research and post-survey data mapping accuracy. Vince's article reminds us of the importance of old maps in our research. They may not be accurate, but do contain valuable information that can guide our surveys. We have had a good Spring and Summer surveying, mainly on the North Marsh between Yatton and Kenn. Let's hope for some dry Thursday mornings this winter.

Arthur

Geographic Information Systems

I joined YCCCART early this year and I am very much enjoying getting to know people and helping with the surveys. It's been suggested I write a few words about what I've been up to, so here we are!

My background is in geography, transport planning and geographic information systems (GIS) and I've been able to apply some of this to YCCCART's surveys. I've been mainly concentrating on GIS, LiDAR, high accuracy GPS and aerial photography with my little drone. The GIS aspect is the one which underlies everything else really, so let's start with that.

The GIS computer software I use (ArcGIS Pro) is produced by a company called ESRI and they define GIS as follows:

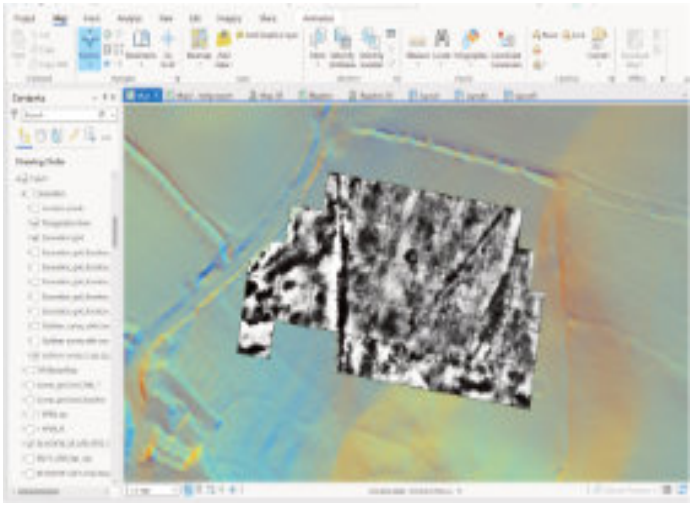


Fig 1 - ArcGIS Pro software window with YCCCART RM15 data overlaid over LiDAR data of Blagdon1 field at Holt farm, Blagdon.

"A geographic information system (GIS) is a system that creates, manages, analyses, and maps all types of data. GIS connects data to a map, integrating location data (where things are) with all types of descriptive information (what things are like there). This provides a foundation for mapping and analysis that is used in science and almost every industry. GIS helps users understand patterns, relationships, and geographic context. The benefits include improved communication and efficiency as well as better management and decision making."

The GIS makes it possible to collect mapping and spatial data from a variety of sources and put them together in one place, maintaining the correct spatial relationships between them all. So for YCCCART's activities, geophysics survey data can be overlaid on and compared with LiDAR data, aerial photos and historic or current mapping. Figure 1 shows how the software looks in use, figures 2, 3 and 4 show some of the maps for the site we surveyed at Blagdon this spring, illustrating how different layers can be overlaid and compared.

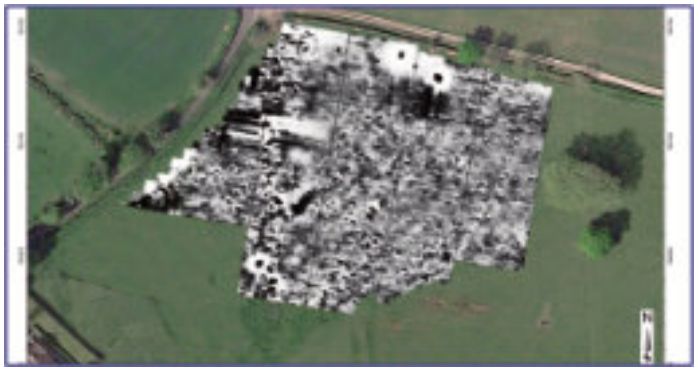


Fig 2 Blagdon 1 – 601 survey

The historic mapping comes courtesy of the National Library of Scotland maps website, who make their maps available for GIS users to import into their own projects via the internet.

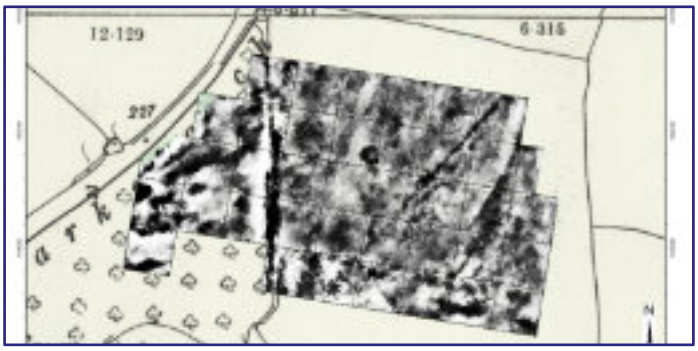


Fig 3 Blagdon 1 – RM 15 results + 25 inch OS 1903 map

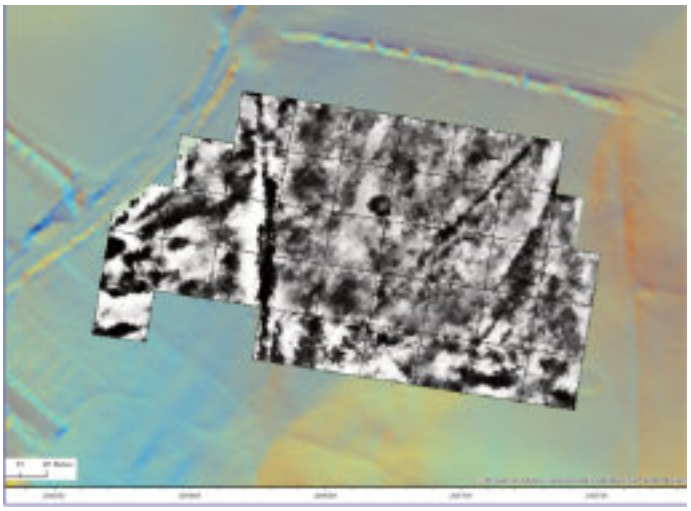


Fig 4 Blagdon 1– RM 15 results plus LiDAR hillshade

ArcGIS Pro also enables data to be viewed and manipulated in 3D, so for example we can use LiDAR data to create a 3D model of the landscape, then overlay geophys results on top to see them in context and to see where features in the geophys might match features in the LiDAR. It's also possible to exaggerate the terrain vertically, which makes it easier to see subtle features in the landscape, see figure 5.

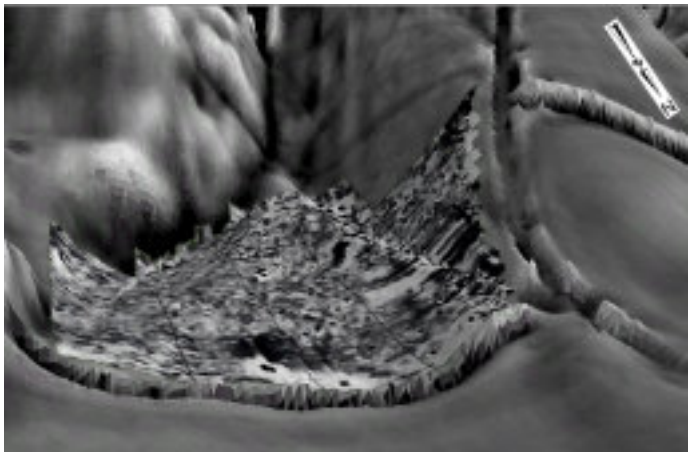


Fig 5 Blagdon 1 – 3D LiDAR SLRM and 601 (vertical scale exaggerated x10)

A further useful aspect of GIS is the ability to take measurements and set out distances accurately. I used these functions to help locate the geophysics survey undertaken at Blagdon in 2004, see figure 6, showing a plan of the original survey grid and then fig 7 showing how I related that to existing features. The latter took a bit of detective work as one of the telegraph poles has gone, but some old Google Earth aerial images showed it nicely.

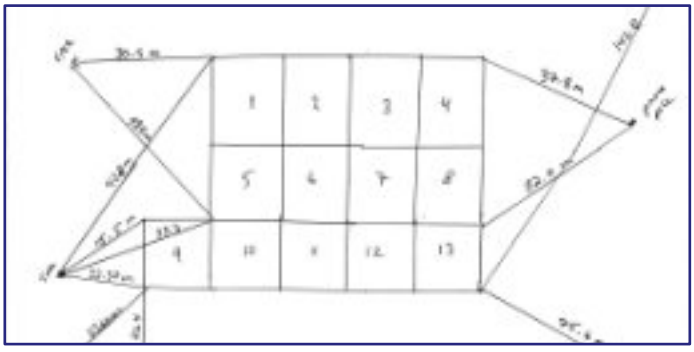


Fig 6 Blagdon 1 – Siobhan's geophysics survey plan and triangulation measurements

One key requirement for GIS is to know the location of features on the ground to a good degree of accuracy and referenced to a known coordinate system. Like most folks in the UK I use OS grid references as the coordinate system, UK LiDAR data uses this as well. Other map data in different coordinate systems and map projections can be added to the GIS maps, with the software often able to transform the data from one system to another.

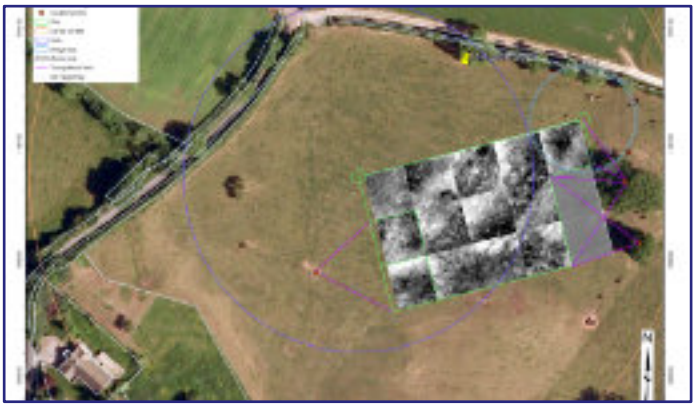


Fig 7 Blagdon 1- Siobhan's geophysics data projected onto Google map

GPS has revolutionised the ease with which people can find their location, but for survey work, the GPS position available on most consumer devices does have the limitation of only being accurate to within a few metres. I understand this lack of GPS accuracy has made things tricky for YCCCART at times, as fields are often short of fixed features to relate a survey grid to and it can be hard to return to a site after a passage of a few months and find the survey grid points again.

The GPS inaccuracy also makes comparing the geophys results to LiDAR data and historic mapping somewhat tricky as it's hard to be sure exactly where the geophys results sit relative to the OS grid. To address this, I got myself a different type of GPS which can tell its location to within a centimetre or two, which makes locating YCCCART surveys relative to OS grid references much easier. I'll carry on that story in the next newsletter…

Richard Pearson

Dates for your diary 2023

Coffee at the Methodist hall in Congresbury will continue next year on the first Thursday of the month, 12.00pm-1.00pm.

- There will be a Review Day on Thursday March 30th 10.00am-12.00pm*
- YCCCART AGM Thursday May 4th 10.00am – 12.00pm*

Please note we may include a fish & chip lunch on one of the above dates.*

A journey back through time: Ireland's ancient history

In June this year I visited Ireland with Hidden History Tours, a company specialising in archaeology and history holidays.

Starting in Dublin we headed for Sligo and the wild Atlantic coast, travelling through an ancient landscape full of prehistoric sites and mythology. There were many highlights along the way; countless court and passage tombs, the Anglo-Norman castle in Trim, more recent history at the birthplace of Countess Markievicz, W.B. Yeats's resting place at Drumcliff church and, of course, Newgrange and the hill of Tara.

So much too much to write about so I want to concentrate on just one extraordinary site, the Ceide Fields (pronounced KAYJA.) a Neolithic farmed landscape in County Mayo which dates to between 5,000 and 6,000 years ago. This part of Ireland is full of court tombs, more than anywhere else in the country, but this survivor of a farmed landscape is totally unique.

Covering an area of 10 sq kilometres, Ceide, meaning a flat topped hill in Irish, is divided up into a field system bounded by dry stone walls with a regular pattern indicating that they were carefully measured out into long strips up to 1.5k and 90 to 150m wide. These strips of land were sub-divided and were used mainly for pasture. At this time the climate was warmer than it is today enabling grass to grow for longer and allowing cattle to graze nearly all year round.

The site was discovered in the 1930's by a local school teacher Patrick Caulfield when digging for peat although the importance of the discovery was only later understood during excavations by Patrick's son Seamus, an archaeologist. The stone walls, which in places are 4.5 m below the bog, were discovered using probing rods.

Very little excavation has taken place on the site although evidence of buildings was uncovered when the visitor centre was being constructed. Some of the stone walls have been exposed but in the main lines of poles mark the position of the field boundaries.

The Ceide field system

Ceide does not stand in isolation on this promontory looking out to the Atlantic Ocean but is part of a wider Neolithic landscape which extends 15k to the south and east and with other field systems being found up to 7k to the west.

This is a site of international importance, not only is it the largest Stone Age monument anywhere in the world but it also provides a unique insight into a highly organised system of farming which sustained a small population of early farmers and their families for hundreds of years.

Aerial photograph of the site

Janet Dickson

In case you missed it.

Last month Israeli archaeologists revealed the oldest known sentence written in humanity's first alphabet.

Which words did the bronze age Canaanite scribe choose to scratch on an ivory comb in approximately 1700BC?
"May this tusk root out the lice of the hair and the beard."

The comb, which measures 3.5cm by 2.5c is worn and has lost its teeth, but the remaining stumps show that it once bore six widely spaced teeth for removing hair tangles on one side, and 14 narrowly spaced teeth for removing lice and eggs on the other.

Janet Dickson

The Ordnance Survey First Draft maps

We are unbelievably lucky that, in the 18th century, Britain decided to produce OS maps (the clue is in the word 'Ordnance' - these maps were originally intended for and produced by the military).

What is not generally appreciated, is that the 1st draft OS plans for North(ern) Somerset date to around 1810, and are available (free) on-line from the British Library. These illustrate a period over 200 years ago: George III still had ten years of being king and 'Farmer George'; Nelson's victory at Trafalgar was a thing of yesterday, but the spectre of Napoleon still brooded over Europe.

In Fig 1 below, the two villages are shown, but note 'Burnt House' at lower left in the figure: only earthworks now: See 'Winrhine' another of the almost incomprehensible changes of spelling of Wemberham. Kenn Moor is unenclosed as yet; Horsecastle is a hamlet on the main road through Yatton, not the 'off-to-the-side' area it now is.

Look closely at Kingston village, and note Kingston Manor house opposite the church: this (Fig 2) was destroyed in a fire in the late 19th century.

Fig 1: Kingston Seymour and Kenn villages, 1810 (from British Library)

Fig 2: Kingston Manor House, c 1825 by J C Buckler (from Somerset Arch Soc Collections)

Fig 3 below. A second map excerpt shows Woodspring and Sand Hill. Note the ancient names, that Wick Warth is not enclosed, but open to the sea; Culm Farm, its name spelled then as it is pronounced today.

Fig 3: Woodspring and Sand Hill c1810 (from British Library)

Finally, how could I resist showing Nailsea Wall before Inclosure? This medieval earthwork (dating before 1432) had to wait another 400 years before it saw its purpose (the drainage of Kenn and Nailsea Moors) accomplished. See Fig 4 on next page.

Fig 4: Nailsea Wall, Clevedon's 3 Yeos, and Kenn Moor and Nailsea Moor still open grazing

These maps cover most of England and are worth checking for your area. You'll be surprised.

Vince Russett 2022-11-17

RIP

The Scots Pine, the last of the Victorian tree planting up on Cadbury Hill has sadly succumbed to the elements.

This tree, standing in splendid isolation on the Citadel was an iconic landmark and will be sorely missed as was the veteran oak which came down a few years ago.

Thanks to the Queen's Jubilee Green Canopy project, two young oak trees were donated to Cadbury Hill. These have been planted well below the ramparts at the Blind Lane entrance.

Janet Dickson

Shetland Stone Tools

In September I went on a trip to Shetland, one morning we had an incident with our coach, when it was literally blown off the road. After the coach had come to rest in a ditch and was leaning against several concrete fence posts, we all managed to evacuate it, and no-one was hurt in any way.

A very kind couple in a house nearby, laid on an impromptu coffee morning for us, during a chat with the landowner, he mentioned that he had found various stone tools on his land, and produced a container with them in. One he was particularly interested in, because you could see that it had been worked to fit a right-handed person. I tried to hold it in my left hand, but it just didn't feel right. The top of the stone had been chipped away the create a ledge for the right thumb to rest against.

There wasn't any way to date these worked stones, but they turn up regularly on the islands. It was just incredible to hold something that had been worked to fit in a hand, and be that old.

If it hadn't been for a freak incident with the coach, I would never have handled the stone tools!!

Philippa Cormack

Book review

'The Anglo-Saxons' - Marc Morris

This is the most accessible and readable 500 pages that give a sweeping, but detailed analysis of the Anglo-Saxons over a period of seven centuries. The book starts with the last decades of Roman Britain and the migration of Saxons, Angles and Jutes into the east of the country. (Cadbury Congresbury hillfort gets mentioned in chapter 1) It details cultural changes, the rise of warlords, kingdoms and the influence of the Christian church. Maps are provided at the beginning of each chapter to provide context and there are some greyscale images within the chapters. Full colour images are two groups in the middle of the book.. There is a usefull family tree documenting kings and their decendants from Egbert in 802 to Harold11 in 1066. There are so many Aethelbald, Aethelstan, Aethelwold, Aethel - this and that - you need this to keep track of some of the main characters in this compelling narrative. This is story telling , beautifully written and researched of how the foundations of England were laid.

The author Dr Marc Morris is a historian who specialises in the Middle Ages. He has taught at the universities of London and Oxford. You may have come across other books he has written on the Norman Conquest, King John or Edward 1. He also presented the TV series 'Castle' and wrote the accompanying book.

'The Anglo-Saxons - A history of the beginnings of England' Marc Morris

Penguin

ISBN 978-1-529-15698-0

Arthur Langley

The Placement in Context

Introduction:

Grid reference TK 3919
Lemgo: r. 349780-349820
h. 576740-576780
Height: 190-240 m
Area size: 7 ha

The Piepenkopf Hillfort is situated in the Palatinate of North Rhine-Westphalia in the Kreis (County) Lippe in Germany. The enclosure sits on a promontory at the end of a ridgeline dominating the valleys to the North, West and South. The Iron Age in Germany lasted from roughly 800 B.C.- 1 B.C.. A sample of charcoal, from what is believed to be burnt timbers from the rear of the enclosure wall, produced a radiocarbon date of 381-204 cal. B.C.. This would mean the hillfort could possibly be associated with the 'La Tene' cultural style.

Previous excavations were conducted in 1939 by the German Archaeologist Leo Nebelsiek. These were abandoned due to the outbreak of WWII. In 1966 further examination of the abandoned "Schnitts", meaning slice in German, of Nebelsiek was undertaken by Frederiech Hohnschwert. Cardiff University began excavation at this site in 2017, expanding on the previous work. The site was mined for quartzite during WWII destroying approximately 0.5 ha.

The soil is very acidic so no ferrous or organic materials were expected to be found.

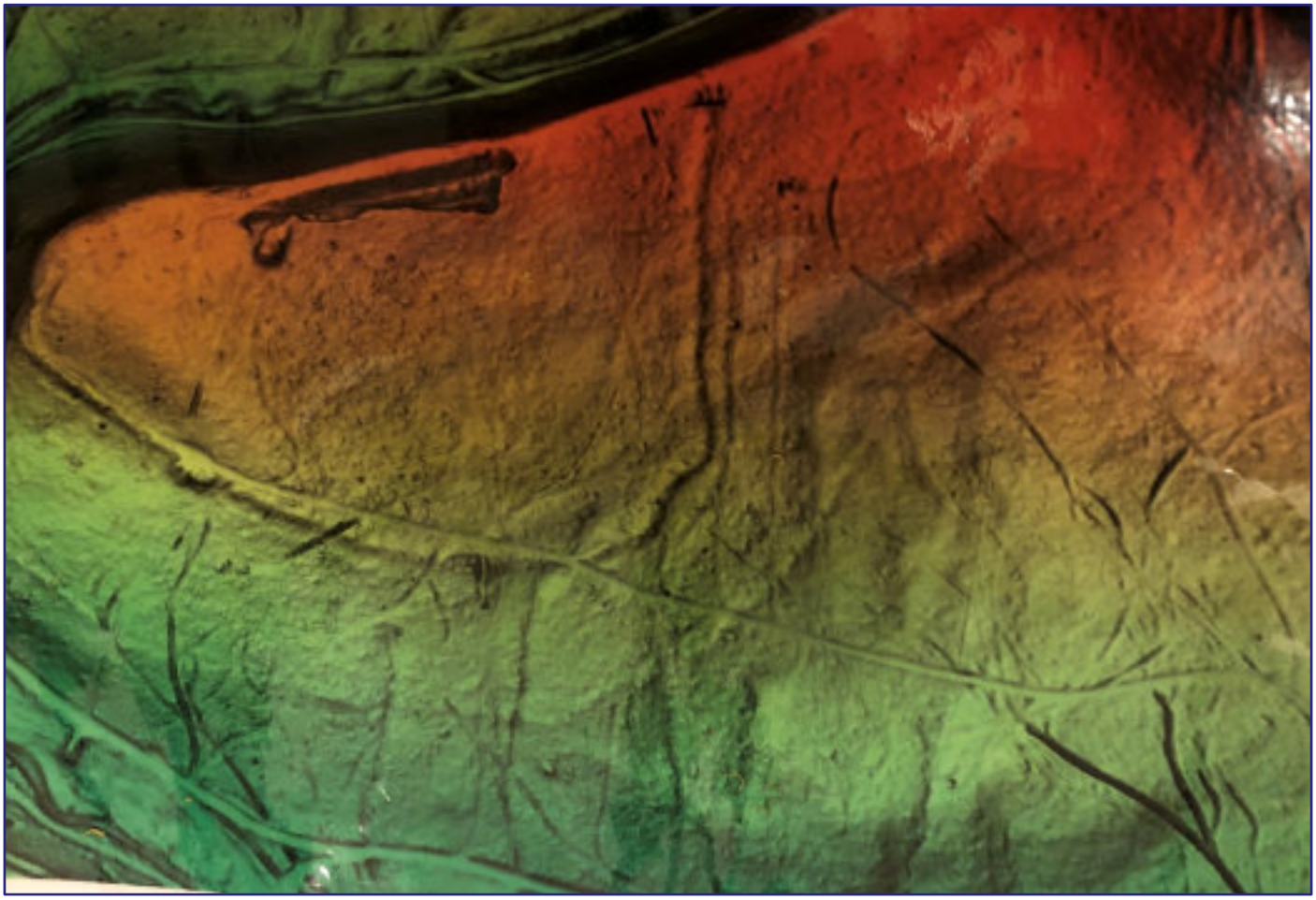
This area sits at the boundary of northern Germany where the lowland, dominated by long byre houses (Wohnstallhaus), shows a distinct lack of hillforts and southern Germany where there are numerous hillforts. The region sits at the interface of the Celtic and Germanic cultures of the Iron Age. The aims of the excavation were to gather evidence to examine why hillforts exist in this region, to what extent they were centres of production, settlement/ occupation, and warfare. Also, to establish if there were phases of occupation and use.

Satellite image of the location of Piepenkopf Hillfort

Methodology:

The main method used to excavate the site was manual stratigraphic excavation, with sections through defined features to answer specific questions. This was done mainly using hand tools, using machines to remove the heavily bioturbated top layer as the site is in established forestry.

Before the excavation commenced, debris and plant growth from the previous two years of inactivity due to the pandemic, had to be removed. The trenches then had the edges cleaned and defined using spades, prior to being marked with string. Each supervisor then marked areas for expansion of the trenches. The soil, once the tree roots were removed, was hard, compacted, yellow sandy clay. This had to be removed carefully using trowels and delicate use of mattocks so as not to disturb any structures or small finds still in context.



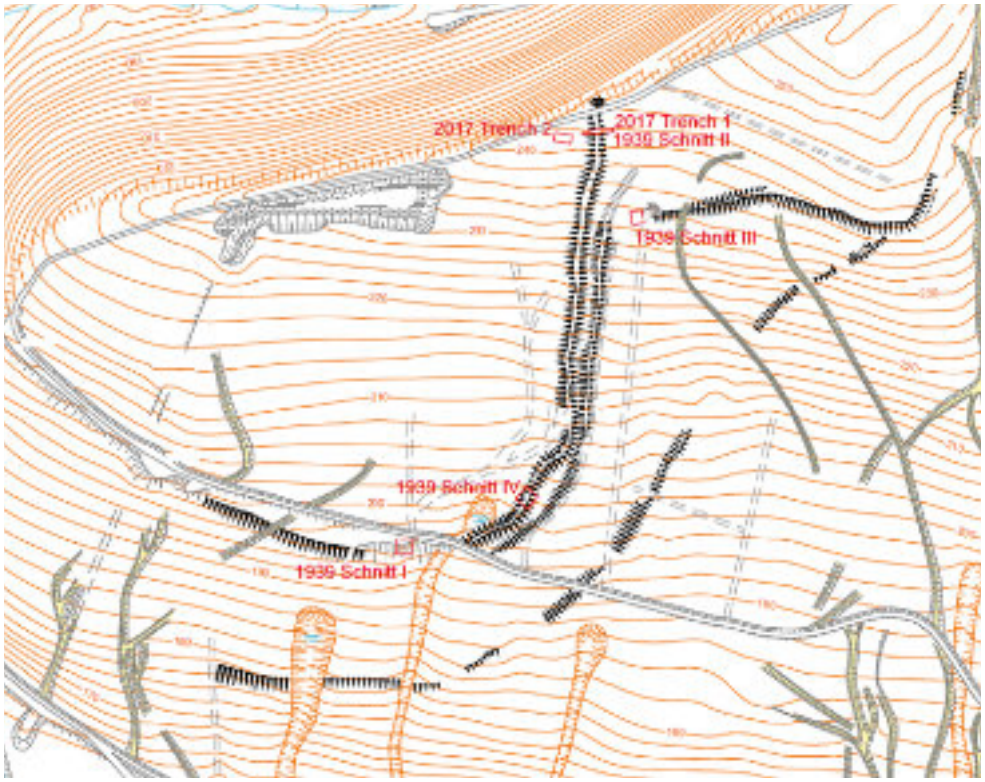
LiDARimage of the location of Piepenkopf Hillfort

Each layer was recorded on a context sheet, photographed, and drawn prior to removal. Any small finds or features were also plotted using the total station. This allowed a complete record of the site and showed how all the finds and structures relate to each other.

Samples were taken from selected contexts that were well sealed or features linked to defined structures. These methods proved successful in part, answering some questions around the use and occupation of the site. For example, a series of post-pads being located in trench 4 that could be a dwelling similar to a Wohnstallhaus.

Trench 1 is in the northeast corner of the enclosure. Excavations revealed several interesting features.

Two large post-pads can be seen highlighted in red (Fig. 3). These may be pads to support the gates allowing access into the enclosure. A section of the wall was excavated, highlighted in blue (Fig. 3). This showed a possible palisade slot running down through the main wall. Further excavation will be needed to establish if this feature extends around the whole enclosure. A large area of burning behind the wall can be seen, highlighted in yellow (Fig. 3).



Locations of 1939 "Schnitt" and 2017 trenches of Cardiff University. WWII quarry sitting in the middle of the northern boundary of the enclosure (Dennis et al 2018: 14)

Results:

Legend

- *Rough wares*
- *Course wares*
- *Fine wares*
- *Fragmentary sherds*

Plot from Tool Station showing location of trenches and finds (Lodwick, M. adapted by author)

Previous excavations by Hohenschwert in 1966 revealed burning behind the wall in the southeast of the site. This suggests that the burning may go around the circumference of the enclosure. Previous samples from charcoal in this area have given a radiocarbon date of 381-204 cal. B.C.

Fig.3 Trench 1, Main wall runs north south, left- right (Lodwick.M, processed by author)

Within the southern end of the burnt feature, more than forty narrow stake-holes were discovered. These entered the ground at varying angles all within an area of approximately 1.5x1.5m (see Fig.4). Sticks were placed in the holes after they had been sampled and excavated to define their extent. This gave a good visual representation of the feature.

Fig.4 Trench 1 - Stake-holes at southern end of burning

Within the southern end of the burnt feature, more than forty narrow stake-holes were discovered. These entered the ground at varying angles all within an area of approximately 1.5x1.5m (see Fig.4). Sticks were placed in the holes after they had been sampled and excavated to define their extent. This gave a good visual representation of the feature.

Trench 2 appears to be a series of pit-like features centred around the large square stone highlighted in blue. The pit highlighted in red was dug down to a depth of 1.5m before hitting the natural. This pit has been filled in over time, a dark humic layer can be seen near the bottom of the pit. The pit has then been lined with stones that have been trimmed to fit. Previous excavations by Cardiff University uncovered a large urn, believed to be a vessel for containing a cremation at this location.

Fig 5 Trench 2 (Lodwick.M, processed by author)

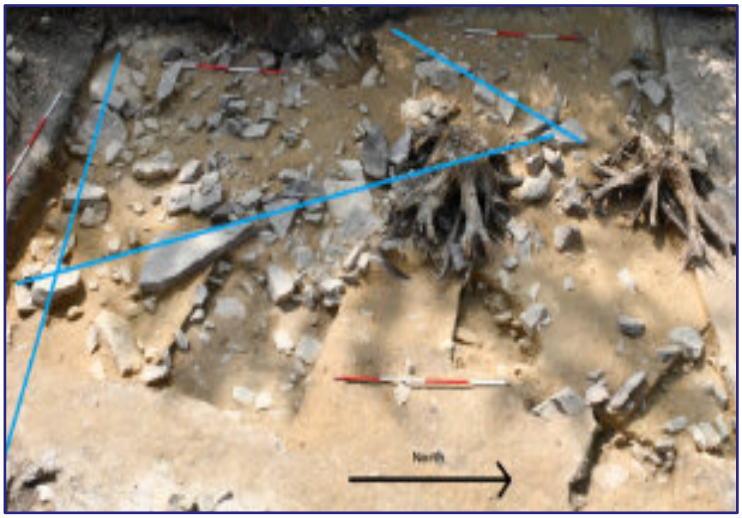


Fig.6 Trench 4 (Lodwick.M, processed by author)

If analogy is drawn with pits at sites such as Danebury, these may well have been storage pits which were then re-used in funerary practices.

The main results of Trench 4 are a number of post-pads laid out in a linear manner, highlighted in blue. This area was heavily disturbed by forestry plantation and associated trackways, however the post-pads appear in a well-sealed context. A dense cluster of pot sherds were also found in the area above the ranging rod in the foreground. The layout of the post-pads could well be indicative of a Wohnstallhaus type dwelling, with the pot cluster being detritus from the dwelling.

Discussion:

The Iron Age experienced instability and warfare. Ramparts and palisades are defensive by their very nature. However, the number of people required to defend such a site would be huge. Even with sentries at an arbitrary 10m apart along its length, rotating watch every few hours, defence would require several hundred people.

Built on the end of a ridge, the enclosure would have dominated the area and acted as a focal point in the landscape for the local community or traders. Drawing an analogy from Iron Age Britain, Maiden Castle, described by Prof. Niall Sharples as acting like a 'neon sign' against the landscape drawing people in.

The discovery of the pit complex in trench 2 may show some religious function. Along with the possible dwelling in trench 4 and the numerous pot sherds, this shows that the site was lived in and not just a defensive 'hillfort'.

Further excavation and study are required to show phases of occupation, building and use. The burning behind the wall and the palisade slot requires further investigation to show if it is local to the entrance or continues around the whole enclosure.

Iain Healy

An unexpected experience

Whilst on holiday in Scotland in September (the significance of this will become clear) we passed a sign to Cairnholy. I had heard about this chambered cairn, but since it was raining at the time, and only short notice was given before needing to turn right, coffee in Wigtown seemed the better option.

However, as the day progressed the weather improved and in the late afternoon, approaching the same sign from the opposite direction, we decided to have a look. It turned out there are two Cairnholies (the designation is sometimes Cairn Holy), I and II, about 150 yds apart. These are large, neolithic (6000 to 4000 years old), chambered cairns of the Clyde-Carlingford series. The chambers of both cairns consist of an inner and outer component but, oddly, the inner one of each was built as a box; closed and inaccessible from the outer one. Cairn Holy I is the more impressive with its megalithic forecourt and narrow, upright slabs. The cairns were excavated in 1949 when, among other things, part of a jadeite axe was found, sourced in the Alps, reflecting the owners' wealth – although the owners' bones had disappeared into the acid soil!

When we arrived, a local enthusiast was busy measuring shadows cast by the stones, (I think he has a theory, which was not divulged). However, he reminded us it was the autumn equinox (Sept.21st - 22nd) when celestial happenings occurred at Cairn Holy I. Therefore, we decided to wait, in the late afternoon sunshine, until sunset, around 7 00pm.

We were not disappointed; as the sun set we were rewarded by seeing it sink below the horizon directly between the two large, central, standing stones of the forecourt of Cairn Holy I. Brilliant.

Geoff Pearson

Articles needed for the next newsletter please

Please send articles by email to Janet Dickson or to Arthur Langley. Text should be a word document, ideally with no indented paragraphs or centred heading. Photographs should be sent separately as jpegs or png files.

Articles do not need to be too long, but images greatly help convey the message.

Congresbury Cross cleaned again by YCCCART volunteers this month