

## Archaeology lecture 19<sup>th</sup> July 2008

Nic Snashall – NT Archaeologist at Avebury. Early tools. Interest in Religion and Ritual.

### Periods:

- 1) Palaeolithic
- 2) Mesolithic
- 3) Neolithic (4000 BC in UK; 4700 BC in N. France)
- 4) Bronze Age
- 5) Iron Age
- 6) Roman
- 7) Saxon

**What is a site?** Definition changes according to what is found.

Iron Age Pits – concentrate on that.

Then later find ditches – therefore the site widens to may be a hill fort or a low land village.

Sites and Monuments Record (SMR) for every area.

It is now sometimes called H.E.R. – Heritage & Environment Record.

PPG16 – Planning regulations relating to archaeology needs that conflict with building contractors' needs.

The Treasure Act – in the UK – talks about the rules and regulations over who owns what if something is found.

Archaeologists can never benefit from their findings.

1996 The Treasure Act came in – replacing regulations concerned with “Treasure Trove”.

### Sources – Primary and secondary sources.

For Archaeologists a **primary source** would be the actual “find”.

It might be artefacts or it might be the site itself – banks and ditches, barrows etc.

**Secondary sources** – for an archaeologist these are materials derived from the primary sources. Mick Aston involved in the Shapwick Project. It is a secondary source because it details the findings that were the primary sources.

### PRIMARY SOURCES:

#### *Sites*

#### *Landscapes*

#### *Artefacts*

#### *Plant*

(inc. pollen. Palynology = the study of pollen)

#### *Animal*

(inc molluscs – snails etc are very choosy about where they will live).

**Human remains** – much legislation that cover the exhumation and excavation of human remains. You must have a licence to exhume from the Ministry of Justice. Rules re reinternment etc etc. You might be given permission to excavate a medieval Christian cemetery but you would have to abide by regulations re-internment.

#### **Soils and Sediments**

Excavation destroys some of the primary source. Thus it is incredibly important to accurately record findings before they are destroyed.

## SECONDARY SOURCES:

### ***Excavation & Survey Reports***

Catalogues & Indices

### ***Historical Accounts & Antiquarian Descriptions***

***Contemporary Written & Oral Accounts*** – go and talk to the landowner/farmer. Find out if someone destroyed a bank etc with tractor/ JCB etc etc.

### ***General Archaeological Literature***

### ***Aerial Photographs***

***Maps & Plans*** – Very lucky to have the Ordnance Survey. Just about the best mapping in the world. Contemporary maps will show early field systems etc and position of manor house / lands etc.

Stukeley operated in the Avebury area in the 18<sup>th</sup> century. He showed what stones were still there in the 1720s. Stukeley lambastes Farmer Tom Robinson for his destruction of the site at Avebury. Even comments on fact that a 58 year old has a 24 year old wife!

**Hachure** marks denote banks and ditches. Contour lines of height are also vitally important.

***“Archaeology” by Renfrew & Bahn*** – excellent undergraduate textbook that is accessibly written and well worth getting for general overview.

***Antiquarian = untrained person who has a general interest.***

If you are drawing a plan, orientation is absolutely key.

Metric measurements are always used.

Newlyn in Cornwall is the mark for Ordnance Datum measurements giving height.

“Tump” = a Gloucestershire word for hillock or mound. “Hettie Peglar’s Tump” is named after a 17<sup>th</sup> century farmer’s wife called Hettie.

Offsetting is used to record accurately a site previously not explored. You must have an accurate horizontal base line and then you measure up from this at regular intervals to record the extremities of the feature.

You are setting up a co-ordinate system having recorded the point of origin of the baseline first of all. Swinging the tape to get the shortest distance; using a plum line (plum bob) to ensure accurate position on the ground away from the base line.

Today “total station” computerised measuring system ensures accuracy courtesy of computer data etc.

Aerial photography started in WWI. First noticed that in certain conditions they could see features of previous settlement etc that weren’t visible on the ground. Hod Hill Dorset is a National Trust site that is apparently well worth visiting. Iron Age hut circles can be seen etc. Shadows are vital in showing various features – so photographs are taken at the optimum time of day. Because of the angle at which the photograph is taken, you can see some features more than others. Go when the sun is low – at early morning or evening – or at certain times of year. The casting of the shadow enables the relief to be seen. The shadow visible from the air wouldn’t be visible if you just walked the site. You can get cropmark sites – there will be differential growth in the arable crop and differential ripening because of the terrain etc that the crop is growing on. If there is a ditch, water will accumulate and the crop will be more lush in that area and will be visible from the air, revealing the feature that has resulted in the change of crop growth etc.

Soil marks are also an important feature revealed by aerial photography. Thus there are 3 main areas of aerial photography:

- 1) Shadow marks
- 2) Crop marks
- 3) Soil marks

### **Geophysics**

Resistivity Meters have two probes that stick into the ground and something creates an electric current between them. The resistance of the terrain is measured with the current going down about a meter and a half.

If you have a high resistance reading then there is likely to be something that is quite dry.

Low resistance will be where there is something that is quite damp – a pit, posthole, negative feature. High resistance could indicate a wall, bank, buried sarsen stone, etc. It would be very difficult for electricity to pass through a block of stone. Low resistance shows up as a lighter – negative feature.

A magnetometer looks at changes – at magnetic anomalies.

If soil etc. is heated to a high temperature – paths etc could be picked up, metal working areas, areas of industry. The picture comes out as a series of spikes. The result is less intuitive to interpret. Magnetivity never works as well in the Avebury area as Resistivity.

Ground penetrating radar can also be used – very costly and also very cumbersome to have to take out.

Field Walking allows you, in a controlled way, to look at ploughed fields and what they may reveal. Many people walk across a ploughed field to see what has been brought to the surface by the plough.

Test Pits are a cross between field walking and an excavation. Small scale interventions – 1 metre by 1 metre would be relatively typical or even smaller.

**Measured Survey** – All the following might be used:

- Tape measures
- Ranging Rods
- Staffs (Offset)
- Levels
- Theodolites
- Total Stations
- Electronic Distance Measurers (EDMs)
- Global Positioning Systems (GPS)

**Photogrammetry** - A process of recording with rectified photography.

Ensure that when you take your photographs, particularly of a building, they are taken in the same plain as the building. Don't take at an angle or distortion comes into the situation.

You take the images and then work out the stratigraphy. They will work out what came first, repair etc.

## Light Detection and Raging (LIDAR)

This is a new and very exciting technique that allows, from aircraft or from vehicles moving over the ground, the use of radar over large areas of land - to give accurate measured surveys. Lasers are used. It saves days of survey and enables the archaeologist to get more quickly to the work of analysis. It was initially developed by the military but also utilities – gas, electricity. “Happenstance” - The Environment Agency does a lot of it for flooding etc.

## Different Types of Excavation

**Boxed sections** with baulks in between: squares of excavation in a grid-type layout within a large square. The difficulty is that the baulks (where people walk between the exaction squares) prevent the whole picture being seen. It's like having 15 or 20 test pits.

Better, is an **Open Area Excavation** where you proceed layer by layer, recording each layer as you go. This is referred to as a cutting – as in Time Team.

A Henge encloses an area normally of ceremonial significance. The ditch is inside the bank – not on the outside of the bank as is the case in a fortification. A Henge was used for ceremonial purposes.

If you excavate in an open area you are able to recreate the plan of the building and see the whole picture.

You have to have a balance between getting the plan view and ensuring that you accurately record. **You have a triangle of action: Assess / Excavate / Record.** Nothing may appear at that stage. As you proceed you will see darker areas, or a variation in texture. There may be differences in types of soil or infill.

You excavate what happened last, first.

When you are planning an excavation, you have to determine your overall

## STRATEGY

In 1969, as part of a study of Iron Age Hillforts in the Cotswolds, a young Post Graduate student discovered there were two stages – very early Iron Age and later Iron Age. The exaction didn't end until 1993 because they successively discovered features that they hadn't anticipated at the beginning. They discovered 2 Earlier Neolithic Enclosures, 2 Early Iron Age Hillforts, a “banana barrow”, an Iron Age Long Mound, Small Roman Presence, a post Roman Settlement and a Post Roman Short Mound. Nic was working on it in 1981.

The two most important things are to record and to be flexible. You do not know what you will find until you proceed and then you may possibly discover something that no-one has found previously and which is new archaeologically speaking.

Area Excavation – can be a trench going through a large field as at Avebury which will give an idea of what the entire area was used for. Not all is disturbed therefore – leaving archaeology in place for future generations.

A **Midden** is an archaeological term for a rubbish tip.

**Debutage** is a stone working race.

## **Stratigraphy**

Layers denoting age – however the strata may be displaced if, say, a posthole is dug etc. Debris from the top layer may have fallen down within the hole to the older level. Stratigraphy isn't just layers – it is to do with a series of actions but human and geographical. A layer deliberately cut by a human or a hill wash as debris from above is washed down.

## **Sections**

### **Recording**

Vital – Context Sheets are used, Day Books and Site Journals.

Munsell Charts give endless differences between tones/hues of colour so that the archaeologist can accurately describe the colour that they found. These charts are extremely costly since the colours have to be accurately described and designated.

Finds Recording – conventions used across the UK to designate the year, project, trench, find and size etc.

Photography – Digital photography is very important these days. Black and White photography is important also to show tonal differences etc. Storing digital photographs is an issue as there have to be policies regarding migrating data forwards as technologies change. jpps lose data every time they are opened! (Find out more)

Environmental Samples – Chemical, Molluscan, Pollen, Micro-faunal.

### **Experimentation is important to see how things were done**

Visit the Reconstructions on the Somerset Levels near Mere – extremely well done. Worth a visit. In reconstructing the round house, they look at the ground plans, the relation between post holes and roofs, what the roofs would have been made of, etc etc. They have to experiment though as to what the pitch of the roof would have been as there is no evidence as to that.

Then you have to work out how long it might take to build one in terms of man-hours. How much timber was needed, how much thatching etc.

### **Analogy**

Looking at societies that still live “in the stone age” to compare those who still make stone tools with those of thousands of years ago. However, remember that those today – eg. From Papua New Guinea – are still living in the modern world. They are not untouched by the things of today. Therefore things should be viewed in that light.

### **Archaeological Interpretation over the last two centuries** *See handout.*

The **Culture Historic School of Archaeology** regarded archaeology as being a revelation of what happened in the past. It drew on just your own field of thought and experience.

Ethnology though shows you that there are hundreds of ways of getting to the same end. Christopher Hawkes was a very eminent archaeologist who was interested in “waves of invasion” - and how there were sea changes because of the invasion. However sometimes things change through preference, taste, fashion etc. CH was very important for giving us “Hawkes’ Ladder of Inference” – how difficult some things were and how certain we could be about some things.

**Processual (New) Archaeology** – taught that there were universally applicable rules and models that could be applied to give answers in a given situation. Got involved with Systems Theories – social systems principally. Relevant to how the stuff on sites related to what they saw around them. They would look at patterns of discard in a modern tribe – how they threw rubbish away. How people disposed of the waste parts of animals after butchering etc. They then applied these answers to what they saw on an archaeological site. What they forgot was that a society such as the Inuit would have different environmental factors governing their actions – if in a frozen environment would eat more meat / fat etc.

The Post Processual (Interpretive Archaeology) has made people question that we can use a variety of techniques to empathise with a people that have had a totally different experience from our own. “The Past is another country” – sometimes it can be another continent or universe, things are so different. Some things are constant – like how flint will fracture etc others are sociologically dependant i.e. The Black Death that we cannot empathise with other than by imagination. There are historical features but they are environmentally contingent as well.