

## Archaeology as Historical Enquiry

### Romans on the Don Teachers Pack – Background Information

#### What is an archaeologist and what is archaeology?

This part of the teaching is aimed at explaining what an archaeologist is and at showing how a site is found, how it is excavated, and how it is interpreted. Downloadable Worksheets 1 and 2 incorporate elements relative to this section.

##### 1. What is an archaeologist?

Archaeologists have been likened to detectives, looking for clues to find out about what happened in the past. The traditional image of an archaeologist is of someone who digs in the ground to find buried objects, but in reality digging is only a small part of what an archaeologist does. Modern archaeology involves geophysical and physical surveying, scientific dating techniques such as radiocarbon and tree ring dating, analysis of pollen fossils from ancient soils, and site recording using photography and drawing. All these can help provide clues but the evidence still needs putting together to say what it all means. This can often be the most interesting part of archaeology because the clues can be read by different people in different ways.

##### 2. How do things get buried?

- **Deliberately** – bodies (below), treasure, posts.



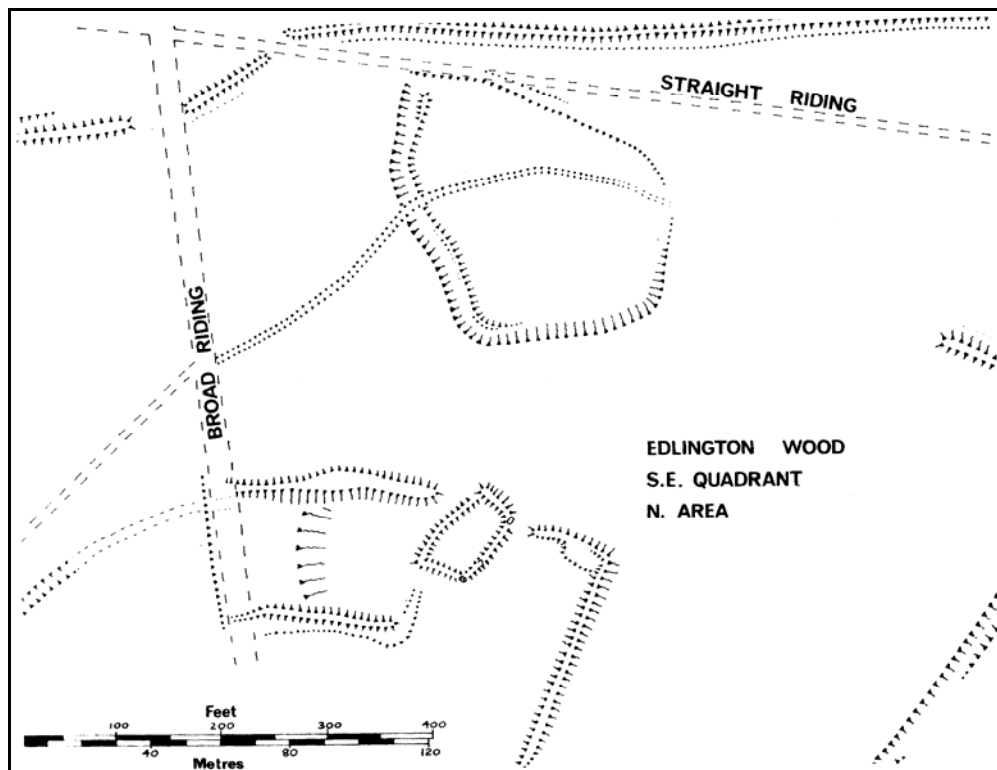
**Romano-British burial from Whitehall Villa.**

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- **By being built over** – Demolition of buildings often buried their foundations which are later built upon. Examples of this have been found at Doncaster (*Danum*) where previous living areas have been built over.
- **By creation of new soil** – leaves, wood, plant stems are broken down by tiny bacteria to form a rich soil. Similarly rain and frost can cause stone to break up into smaller and smaller parts. Many items of rubbish are degradable and will also form soil.
- **By movement of soil** – rain, wind and waves can move sand and soil around taking it from one location and leaving it at another.

### 3. How do archaeologists find a site?

- **Survey** - Sometimes ancient features can survive as upstanding earthworks, where walls have collapsed or banks been abandoned. Archaeological survey involves walking over the whole of an area and marking on a plan any upstanding features. The pattern of the features can often give a clue to their original function.



**Survey plan of Edlington Wood. Features have been identified by walking the whole area. When marked on a plan they form a pattern that can show possible past activity. To the right of "Broad Riding" are field systems dating between the 1<sup>st</sup> and 4<sup>th</sup> centuries AD.**

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- **Geophysical survey** - Similar to metal detecting but on a bigger scale. Areas identified as having possible archaeology can be geophysically surveyed. One method of geophysical survey involves walking across the area with a machine that measures the amount of magnetic material in the soil and feeds the information into a computer to make a map of a site that shows up where strong magnetic signals are. Soils always contain tiny particles of magnetic material and where ditches and pits have been dug and filled in these particles tend to group together. Where they are grouped together they will appear on a geophysical survey plan as dark areas, known as anomalies. Other features such as hearths or kilns also produce strong magnetic responses and appear as anomalies.



Geophysical survey plan from Barnsdale Bar

- **Fieldwalking** - Ploughing tends to bring to the surface items that have previously been buried. Where fields have been newly ploughed they can be walked over in search of artefacts and any found can be plotted on a map. Concentrations of finds can indicate areas of high activity.
- **Trial trenching** – An important way of finding whether and where activity may have taken place is by sampling using trial trenches. As an example consider wanting to find out what archaeology may be in a huge field that is too big to excavate completely. Instead the field can be sampled by excavating a number of smaller trenches. Resulting



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finds can indicate what past activity may have occurred and where a bigger excavation may be worthwhile. Sometimes trial trenches can be dug where surveys have revealed the possibility of archaeological features being present.

- **Chance finds** - People out walking can find artefacts, particularly where ploughing has brought material to the surface. By reporting these to their local Finds Liaison Officer, usually based at a museum, they enable artefacts to be identified and records kept of where they were found. This helps to build a picture of past human activity in an area.
- **Aerial photographic survey** - Crop marks occur due to changes in the soil. Crop growth can be affected by soil depth, and by the amount of nutrients and moisture in the soil. Where part of a field crosses an old infilled ditch it is probable that there will be better soil and more moisture so the crops will grow better (taller, greener). Where part of the field crosses an old wall, buried just below the surface, there will be less soil and less moisture so the crops will not grow as well (shorter, paler). It is difficult to see these differences from the ground but photographs can be taken from aeroplanes and these show the marks up better. These are known as aerial photographs.



Field systems showing up as crop marks near Doncaster

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### How do archaeologists excavate?

Excavation remains an important part of archaeological research, particularly in areas like quarries where potential sites are under threat of destruction.



**Quarrying will destroy archaeological sites surviving below ground**

Archaeological tools include buckets for carrying spoil, brushes for cleaning features, secateurs for cutting roots, pointing trowels for fine excavation, and picks, shovels and spades for heavy excavation.



**Young archaeologists excavating using trowels and brushes**

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Excavation is a labour-intensive and slow process, each soil level or “spit” having to be carefully removed. By its very nature, the process is itself destructive, it being impossible to replace archaeology in the context from which it has been dug up. This makes it essential that excavation is carried out systematically and that accurate record keeping takes place, in the form of photography, planning and finds recording.



**Here an archaeologist uses a planning frame and drawing equipment to draw a plan of an excavation. Further drawings, made as the trench deepens, enable three dimensional reconstruction**

### **4. What do we find? What don't we find?**

Archaeological interpretation is dependent upon preservation of material relating to past activity. Some materials naturally preserve better than others. Worksheet 2 contains an exercise where pupils can learn about what does and doesn't survive. The exercise is based on normal conditions of burial, excluding the complexities of special conditions such as anaerobic bogs where rules of preservation differ.