

## NOTES FOR NEW DIGGERS

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THE AIM OF these notes is to help newcomers to 'digs' to adjust as easily as possible to excavation procedure. Obviously sites vary enormously and techniques of excavation likewise, so the best possible advice is to ask, ask, and ask again. The first part of this article is given over to a bit of theory, skip it for the moment if you don't like the look of it, and starts at **Find**s.

### Features

Apart from objects, the most important things to be revealed by excavation are various signs of man's activity, seen by the excavator as disturbances in the natural soil or rock. On many sites, examination of these 'features' is complicated by the fact that each individual feature or disturbance is itself part of a complex series of superimposed layers. Initially, it will be as well to look at the type of site where the features are fairly simple.

Figure 1 shows the appearance of one site, after the topsoil has been removed. Immediately apparent, before any digging takes place, are 4 major features:

1. The two lines of small circles at right angles to each other and of different colour to the surrounding soil, are probably post-holes. That is to say they were either formed by the decay of an upright, wooden post in position in the ground, or they were formed by an infilling of soil into the hole left after the post had been pulled out of the ground. Post holes, regularly spaced and aligned as in this figure, probably once held the uprights of a timber framed building.

2. There is a linear feature, perhaps a filled ditch or gully running diagonally across the site.

3. The large, round, dark area is probably the top of a pit of some sort.

4. The area of burning surrounded by stone is probably a hearth.

From the way in which the features cut into each other, we can establish the sequence of their construction. The timber building and the burnt area are cut by the ditch and must therefore have been both in existence before the ditch was dug. We suspect that the burnt area represents the hearth once existing inside the timber building. The ditch, however, is itself cut by the pit, and the ditch must be therefore of earlier date than the pit.

In total, one can now see three definite phases of time on the site, before any excavation at all

(apart from the removal of topsoil) has taken place. We do not, however, have any indication of how long each phase lasted and only further excavation will clarify this.

Holes in the ground, whether pits, post-holes, ditches or gulleys, are pretty well indestructible as far as the archaeologist is concerned. You can fill them in, but this rarely prevents their detection. However, it does not need deliberate filling to conceal them, natural processes are at work all the time trying to level off such irregularities. This is of course why a rich series of features may exist below the surface yet give no indication from above. The archaeologist nowadays, sometimes has electronic equipment at his disposal, which enables him to predict with some reliability what features lie beneath the topsoil. But even with such equipment, he would be unable to predict the sequence of construction of the features which we have been able to observe in the example above, after removal of the topsoil.

Words like 'pit,' 'ditch,' etc., are convenient jargon for features, but are terms which conceal a very diverse group of previous activities on the site. We only have to think of how and why holes in the ground arrive in the first place, to appreciate the great variety of disturbances the excavator is likely to encounter. What may appear from the top to be simply a 'pit' may have served any one of a number of purposes, and the excavator has to try and discover the correct one. This short list, which most people can easily enlarge, gives some of the functions a pit might have served.

1. For burying rubbish, in particular household waste.
2. As a latrine or cess-pit.
3. For setting uprights in, both timber and stone.
4. For storing certain foods.
5. For burial.
6. Water collection.
7. For hiding things.
8. For what can be got out of a pit, i.e., clay, gravel, etc.
9. For shelter.
10. As a house basement.

The appearance of a pit before excavation, perhaps merely as a dark discoloured circle, will not tell much about its previous function, nor of course

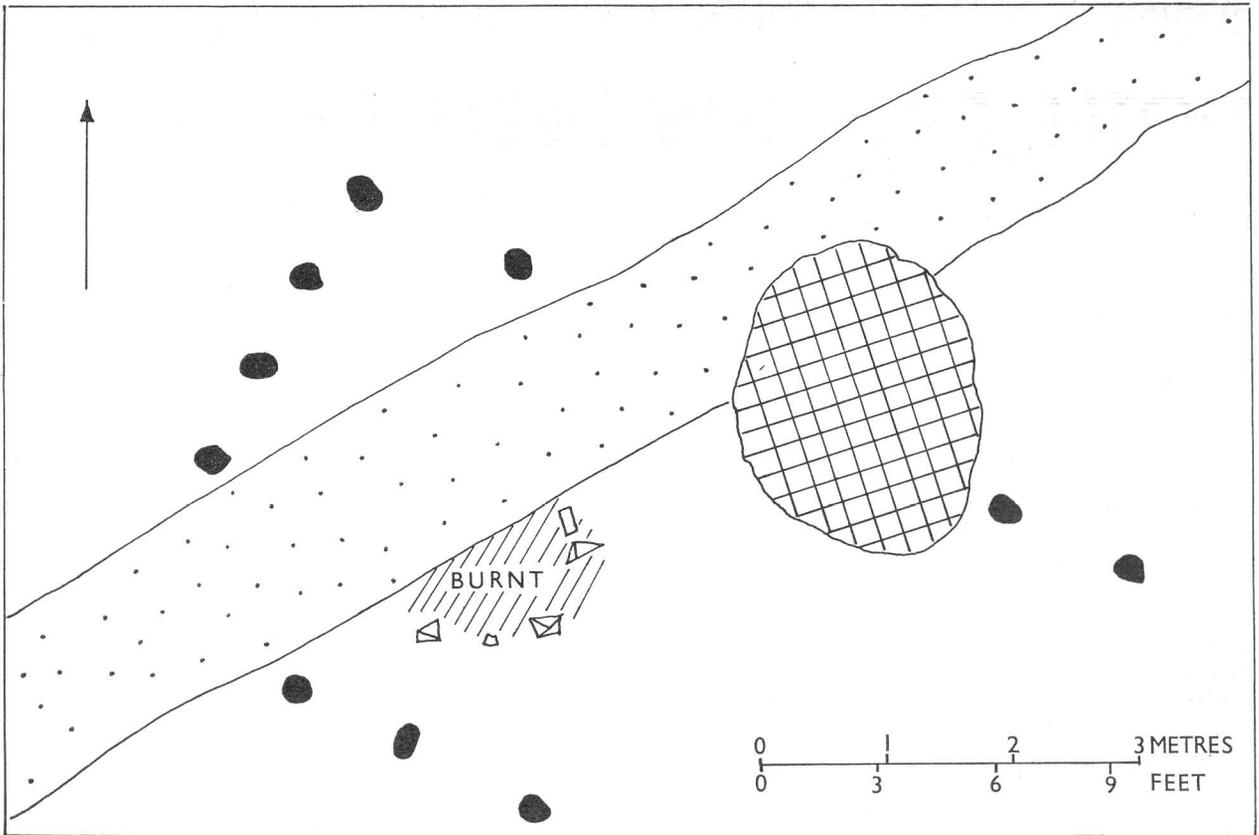


Fig. 1

about its depth. Your pit may turn out to be a well! Pits—but not often wells—are normally excavated in sections; that is one half or quarter at a time, in order to recover as much information as possible about their structure and contents.

Fortunately an enormous amount of man's activity leaves its mark in the soil. Features encountered, apart from the ubiquitous pits and ditches, include lower courses of walls, banks (along with tip lines which indicate something of their method of construction), plough furrows, robber trenches (that is, trenches dug to recover stone from the lower courses of walls for re-use elsewhere), trampled floors and many other items. The type of feature you encounter will depend entirely on the type of site you are working on, and a longer list would not be helpful.

#### Layers

On many sites the individual features discussed so far will be complicated by layering. The careful excavation and interpretation of these layers one at a time, is one of the methods by which the excavator is able to recover the history of the site. As the layers lie one on top of another in the ground, obviously interpretation will start with the most recent ones. If one were examining a sandwich for instance, as if one were excavating it, the top

layer would be found to be bread, the next, butter, then one would expose the filling, etc.

Figure 2 shows a simplified example of stratification. It is simplified inasmuch as there are only five layers (and even these could have been justifiably broken down) and each layer can be conveniently allocated a fairly definite historical date. On many sites there are far more layers to be considered.

From the outset it will be clear that the layers are very irregular, some thin, some thick, and several cutting down into the underlying layers. So although it is true that at any one point, later layers overlie earlier layers, if one took a section horizontally along the line AB (see fig.), Roman, pre-Roman and medieval would all be found at the same level. Starting at the top (layer 5), there is a brick wall standing in a stone filled foundation trench with a concrete floor to one side of it. The wall does not now stand above ground level and the pieces of brick lying above the concrete floor probably accumulated there after the building had fallen into disuse. A tin can among the rubble shows that this happened fairly recently.

The next layer (layer 4) has Tudor pottery in it, but there are also clay pipes. It is known from other

evidence that the type of pipe illustrated was not being made before 1780 and that it was last produced about 1850; the whole layer therefore cannot be safely dated earlier than 1850; that is to say the layer is given the date of the latest object in it. Despite the earlier finds in the layer (the Tudor pottery), the mid-19th century is the earliest date they can confidently be stated to have come to rest in this particular layer. We note that this also helps us to date the building above more closely; the building is obviously later in date than layer 4 on which it rests.

Layer 3 has no object in it later than the medieval period. One can see that it is not a level layer as it includes a big rubbish pit. This rubbish pit will have to be excavated thoroughly before any attempt is made to get at layer 2 which lies beneath and which it has cut through. It will be no surprise to the excavator to come across finds of layer 2 date in layer 3 because the original excavation of the rubbish pit in the medieval period will have brought up material of the earlier period to the then ground-level. If the excavator makes the mistake, however, of not clearing out the medieval pit completely, some of its contents will turn up unnecessarily when he is excavating the Roman levels beneath. The Roman levels will have become contaminated and it will have to be assumed that they were completely disturbed in medieval times, whereas we can see from the section that the pit is the only disturbance.

Layer 2 includes a layer of gravel and a small ditch or gully. The latest finds in it prove to be a Roman coin and sherds of Roman pottery. We can confidently say that there is nothing in this layer later than the Roman period. However, what happened on the site between the end of the Roman period and the beginning of the medieval? There is no layer representing the 'Dark Ages.' In fact the section does not provide any evidence as to what did happen then. The absence of a Dark Age layer does not mean that it never existed. It could have been entirely removed by activity in the medieval period or alternatively there may have been human activity on the site during this period which left no visible trace in the soil. The finds we have seen so far have a high survival rate, but if there were Dark Age communities on the site using only artifacts made of perishable materials—wooden bowls and leather containers, for instance — then these objects could have totally disintegrated, along with the evidence for Dark Age occupation.

Layer 1 contains an Iron Age pedestal urn and a Neolithic axe; below layer 1 lies soil totally undisturbed by man—the 'natural.' Again we see that no layer can be assigned to a number of archaeological periods (the Bronze Age, Mesolithic, etc.), and that layer 1 as it now appears, has to be regraded as belonging to the pre-Roman Iron Age.

That is to say that the material in the layer actually came to rest in the pre-Roman Iron Age.

### **Natural**

The depth of Natural often puzzles those working on a site for the first time; it may be 6 inches down or 15 feet. The amount of build up above Natural depends entirely on the extent and nature of activity on the site. The activity is commonly, not invariably, due to man. In the City of London for instance, the great build-up above natural is chiefly due to the dumping of domestic rubbish along with the demolition of buildings and their subsequent replacement on the same place without proper clearance of the preceding structure. Towns are, after all, magnets for goods of all types, and most aspects of trade result eventually in rubbish. Before corporation refuse disposal appeared on the scene, not much rubbish ever left a city, it was disposed of in the town itself, resulting in a gradual rise in the level of the land.

Outside towns, sites are often only a matter of inches below the ground, particularly if they are sites of only one period. Natural agencies are often a more important feature here; activity of earthworms, the nature of vegetational cover and slope of the land will tend to control depth of burial, or for that matter whether the site has survived below ground at all.

### **Finds**

We will assume that we are now on site and an area has been allocated to work on. Keep an eye out for anything which is not part of the natural soil and put it in the finds tray with which you will have been provided. This tray will have a label clearly stating the part of the site and the layer you are working in. Always make sure there is a label. You may know where the finds come from, but at the end of the day, other people may not! For the same reason, never put finds anywhere other than in a tray. Don't be afraid of looking silly by putting things in a tray which appear modern or uninteresting. You can't go wrong by being careful; you can, by throwing things on the spoil heap. Don't let your site be one of those where the best finds come from the spoil heap.

If you think you have found an unusual or delicate object leave it in the ground and get somebody to look at it before you do anything. Even apparently robust finds should not be cleaned up with the thumb once they have been removed from the ground, pottery for instance, is occasionally painted and this will flake off easily unless cleaned under controlled conditions. On some sites you may have to dig for a long time before you find anything at all. Don't be disheartened if other people around you seem to be making interesting discoveries, your turn will come.

Finally, do find out about the objects that you

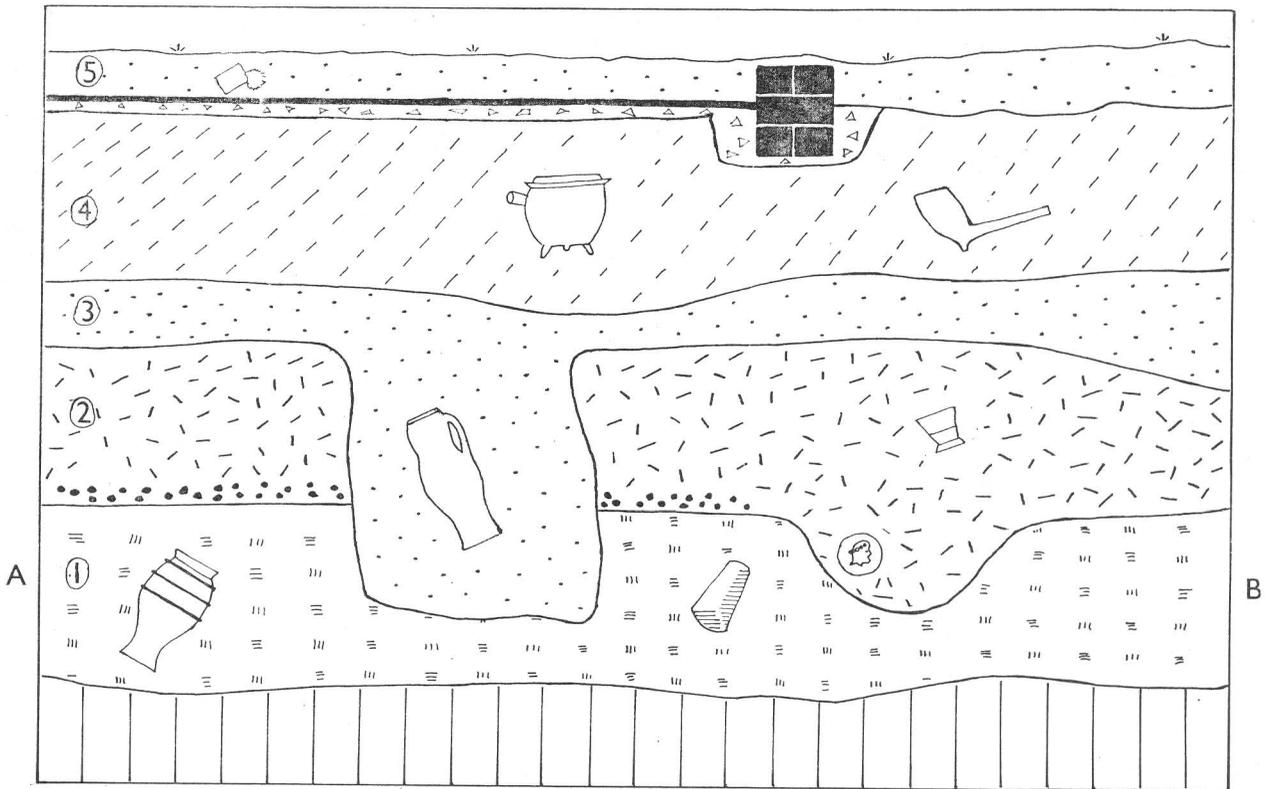


Fig. 2

are digging up. Get somebody to explain how they know the pottery is Roman, or the clay pipe is 18th century. It is your right to learn.

#### Pot Washing

'Pot washing' is just one aspect of what might more professionally be called 'processing' of finds. On most excavations some sort of processing takes place on site. If you are asked to help with this, welcome the opportunity, as it will help you to familiarise yourself quickly with the typical finds that the site produces; you can benefit from other people's efforts by pot-washing.

There are many other jobs on site apart from digging—some of them very mundane—so don't feel that your talents are being overlooked if you are asked to help out with some of these. Keeping the site ticking over smoothly is vital for the efficiency of the excavation.

#### Digging

Bear in mind that only one layer is excavated at a time; never dig into a different layer without asking first. You will normally be able to tell the difference between one layer and the next by changes in colour, feel, content or even smell.

A good deal of preliminary work on site is done with basic tools such as shovels and picks. Occasionally you will find that mechanical excavators are used; on town sites with plentiful concrete, the

tool of choice may sometimes be a pneumatic drill. This is all part of archaeology; if you have to help with shovelling building rubble, don't feel hard done by!

After topsoil has been removed, the commonest tool used for fine excavation is the mason's trowel which has a diamond shaped blade, about  $4\frac{1}{2}$  inches long. The trowel can be regarded as the archaeologist's scalpel. You should have your own trowel, clearly marked in a weatherproof manner with your name. Don't buy a trowel which has the blade riveted to the tang, as this type will snap if used energetically or under heavy soil conditions; get one which has a blade and tank forged in one piece. Woolworths do a reasonable one, current price being 3/6d. Something waterproof to kneel on is also a useful piece of personal equipment.

When trowelling, use the flat edge of the trowel, shaving off a little soil at a time and moving gradually backwards leaving a cleaned area in front of you. When you have a small heap of soil, clear it away into a bucket or dustpan. It is very unwise to have much loose soil around.

Try to keep the area you are trowelling as flat as possible so that changes in the soil will show up clearly. You may suddenly find, for instance, that you have come upon the edge of a new feature, such as a pit. Loose soil or a very uneven surface might

cause it to be overlooked. Some soil changes are very subtle. For instance a timber which decays in position may result in a ring of earth of very similar colour to the surrounding soil but slightly softer in texture. If you are not trowelling cleanly, you may overlook the change. Of course you may be working on layers where such care is misplaced, or there may not be time for such delicacy—particularly if you are working on a rescue excavation: but always assume your most careful work is called for unless told otherwise.

If you come across a find which is obviously firmly bedded in the ground, mark the spot and leave it there. Attempts to remove it may be disastrous and it is far better to wait until the soil all around it has gradually been lowered. It is a cardinal rule never to dig your own private hole in the middle of the area you are working in.

### Spoil

To the archaeologist, 'spoil' is unwanted earth, not treasure! It must be kept well away from the area under excavation. If someone starts a spoil-heap 2 feet from the side of a trench it may seem far enough away at the time, but it clearly won't be when the heap is 6 feet high and you are in a hole 6 feet down. If even a cupful of spoil falls back onto the excavated area, it could contaminate a whole layer. For the same reason keep well away from the edge of the excavated area yourself, nobody wants you contaminating a layer either.

### Sections

A 'section' is any vertical face. It is very important that sections should be kept vertical so that the relationship between layers can be accurately established. Keeping a section vertical is more difficult than it sounds, as there is a natural tendency to allow the wall of a trench to creep in at the base. It is far more satisfactory to keep it vertical as you go down, rather than having to go at it with a spade at the end of a day.

### Recording

The archaeologist and his helpers must do everything to record for posterity what they are digging up. Not only has the work of excavating to be careful and exact, but also the recording of what is found. This recording is done by measured drawing and photography. The key to the whole system of recording is usually a grid of pegs, and these pegs should be treated with respect, not buried, kicked or sat on! It is quite probable that you will be asked to help with recording of one sort or another.

Ideally, when the excavation has been completed, the archaeologist should have in his possession, records, from which he would virtually be able to reconstruct in 3D all aspects of the site which has

been excavated.

### Personal Equipment

It is handy to have your own trowel and kneeling mat as mentioned earlier, but even more important than this is adequate weather-proofing. Archaeologists often continue work under cold, wet or even snowy conditions, so be warned. Footwear is a problem. For pick and shovel work, strong boots are obviously sensible, but when you are trowelling, heavy boots are a nuisance—they bring mud into a trench and churn up cleaned layers unnecessarily. Plimsol-type shoes with little or no pattern on the sole are preferable here, and even obligatory on some sites.

Bring your own food and drink, you may be miles from a cafe and there may be nothing on the site. Some Directors neglect the inner man!

### Safety

This is mainly commonsense, but remember that you are surrounded by people who may be amateurs not only in archaeology but in use of hand tools, so keep well out of range of pick swingers, etc. If safety helmets are provided on site, wear them. If there are deep excavations in unstable soil, the sides of the trenches should be shored up. On a less serious note, take your own Elastoplast for blisters.

### Background

Very many excavations are 'rescue' excavations and because of pressure of time are not always conducted to the highest standards. For this reason try to go on a Training Excavation where a more leisurely approach gives more time for learning the finer points of excavation.

Details of all major excavations in the country together with courses and conferences are to be found in the lists issued by the Council for British Archaeology during the summer months (from 8 St. Andrew's Place, London, N.W.1., 10s. post free). Join your local archaeological group, or county society, to find out what is happening in your area. In the London region, *the London Archaeologist* gives details of excavations and other news.

You will be welcome on most excavations as an absolute beginner, but doubly welcome if you have taken steps to inform yourself beforehand. Go to evening classes, read; there are many introductory works on archaeology available. One of the best on digging is Graham Webster's *Practical Archaeology*.

Today archaeology is very much reliant upon the services of the volunteer. The quality of the published report of the excavation depends as much on the 'diggers' as on the Director and his staff. It takes time to learn how to dig well—start learning now!

Offprints of this article may be purchased by societies to give or onward sell to their members—minimum order 50 copies for 8s. (about 2d. each). Orders should be placed by 20th October (to give the Editor an indication of demand).