

Archaeological Excavation

This chapter explores why and when excavation is undertaken and identifies the advantages and disadvantages of common excavation strategies. We discuss the key concept of stratigraphy and techniques for recording sites and recovering archaeological materials. The final part of the chapter deals with the challenges of excavating different types of sites. Many issues arising from excavation and the legal and planning frameworks surrounding it are dealt with in [Chapter 12](#). Most of the key studies in this book include sections on excavation and a full account of a modern dig is provided by the Biddenham Loop key study in [Chapter 12](#) (► p. 587).

To many people, archaeology simply means excavation. Often their interest in archaeology stems from witnessing an excavation or viewing one on television. Excavation is often the public face of archaeology. It is only when people ‘dig’ deeper into the subject that they are able to recognise the role that excavation plays in the wider nature of the discipline. It has its own methodology – which constantly evolves to reflect new ideas and improving technologies. There can never be one set of rules for excavation, although there is general agreement on key elements of the process. This chapter will try to reflect that current consensus.

APPROACHES TO ARCHAEOLOGICAL EXCAVATION

Archaeology is different from many professions both in its wide public appeal and the involvement in fieldwork of professional workers, academics and amateur ‘volunteers’. Archaeology’s origins in the UK lie in the work of amateur enthusiasts and in particular the rescue movement of the 1960s and 1970s, although since the 1990s most excavations have been undertaken by units of professional archaeologists (► p. 581). This issue and the concept of community archaeology are discussed in [Chapter 12](#). Unlike Medicine or Law there is no one umbrella body either to regulate archaeology or to coordinate excavations. Nevertheless, its practitioners try to adopt and maintain a core of accepted practice and standards which underpin the discipline and ensure the quality of research. At local or regional level attempts are made to establish ‘research frameworks’ – good examples can be found on the English Heritage website and at the South-West Archaeological Research Framework. Such frameworks seek to coordinate what is already known, what archaeologists would like to know in addition and strategies for making these discoveries, including excavation opportunities.

EXCAVATION: RESCUE OR RESEARCH?

These two terms are commonly used to categorise the rationale behind excavations. The most basic

distinction is between a planned campaign to answer particular questions and excavation to recover archaeological evidence before the developers move in.

Research excavations continue the long-standing tradition of archaeologists selecting sites to dig where they believe they will find evidence to advance understanding and answer key questions. The Stonehenge Riverside Project (SRP) provides an example in which several universities, English Heritage and organisations such as the Society of Antiquaries and the Prehistoric Society combined forces to investigate the links between monuments and the landscape around Stonehenge. Such projects are often lengthy. The original funding for the SRP was from 2003 to 2009 but some work is ongoing, and if further funding is secured, more excavation will follow.

Rescue excavations now comprise by far the majority of digs. They are largely undertaken by archaeological 'units' who tender to win fieldwork contracts from developers in what is known as commercial archaeology (► p. 573). When archaeological remains are threatened by roads, buildings, quarries or other modern developments, local planning officers will require the archaeological record to be fully considered (► p. 574). Surveys are carried out and exploratory work regarding the nature and extent of archaeological deposits (impact assessments or evaluations) informs discussions between archaeologists, planners and contractors (see [Chapter 10](#)). To avoid the heavy costs and delays in construction caused by full excavation, a series of 'mitigation strategies' are often adopted. These can involve using building techniques or re-designing building plans in an attempt to minimise damage to archaeology. This is often referred to as '**preservation in situ**'. However, where excavation does go ahead, archaeologists will often set their priorities against research questions as well as time and cost considerations. Unless they miscalculate or uncover unexpected remains, they should have time to carry out their work according to proper archaeological

principles. When the time designated for excavation has elapsed and the contractors move in, archaeologists negotiate a 'watching brief'. This means that they can stop building work to record archaeological features which turn up unexpectedly.

Occasionally sites are not discovered until land clearance begins. Rapid recording and rushed excavation in these circumstances is often the best that can be done. This is sometimes called 'salvage archaeology'. Some excavations in intertidal areas still fall into this category (► p. 79). The term is used in the USA interchangeably with 'rescue archaeology'.

Similarities and differences

Amongst the key differences between the two approaches is the ability of research archaeologists to select sites and implement the excavation policy most appropriate to them. Rescue archaeology has to reflect the particular issues raised by the on-site non-archaeological development and the designers, engineers and construction teams involved in the project. This can sometimes result in many smaller 'keyhole' excavations into parts of sites rather than the excavation of large parts of them.

However, sometimes the differences can be overstated. The Channel Tunnel rail link from London to Dover resulted in the largest archaeological project to date in the UK. Engineers and archaeologists from eight different groups worked together to ensure that archaeological issues were fully considered. All forms of survey work were carried out; over 2,000 trial trenches and test pits were dug. Fieldwork informed the setting of priorities about where to excavate. Some 55 hectares of the route were identified as requiring detailed archaeological investigation. Planning of the work gave archaeologists time to 'painstakingly' record the archaeological deposits on the sites selected for detailed work. Other areas were subject to watching briefs. In this particular scheme the archaeologists were empowered to

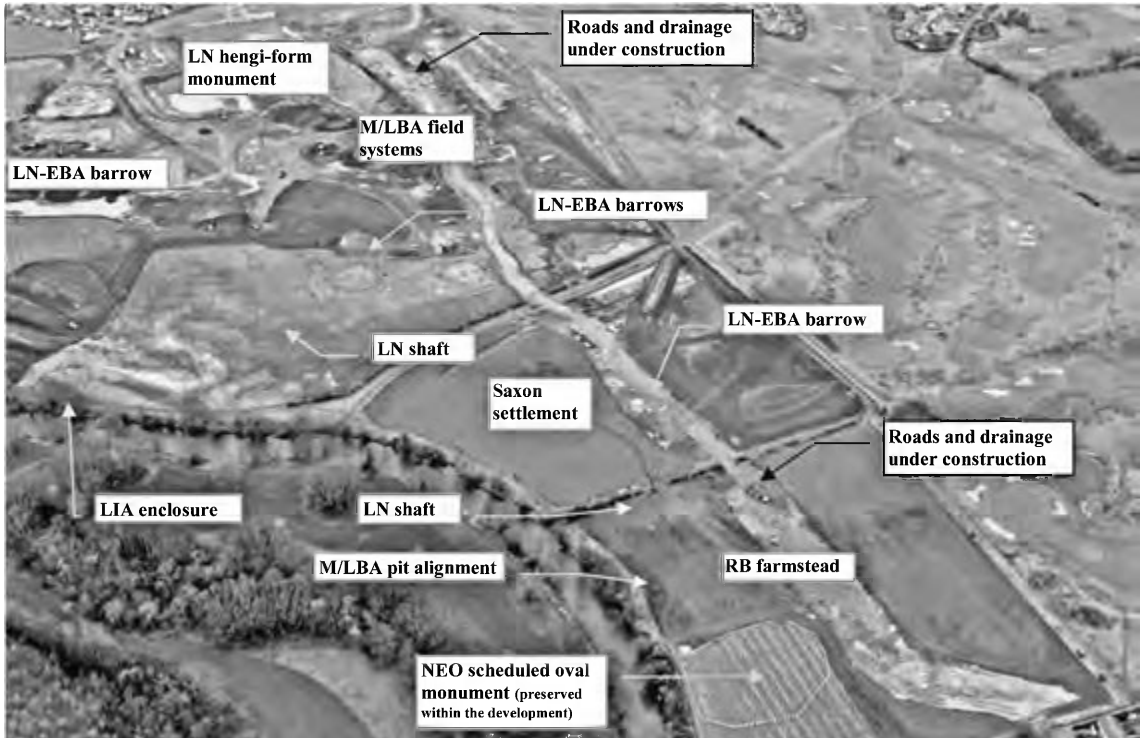


Figure 2.1 Aerial view of the Biddenham Loop excavation (► p. 587) illustrating the size and complexity of major commercial excavations. (Albion Archaeology)

KEY: NEO = Neolithic, LN = late Neolithic, EBA = early Bronze Age, M/LBA = middle/late Bronze Age, LIA = late Iron Age, RB = Romano-British

stop construction work if ‘features of significance’ were identified. Over forty sites were excavated with dates ranging from the Palaeolithic to the Second World War. The impact of the new evidence will alter many current perceptions of Kent’s archaeology.

To excavate or not?

Any removal of the accumulated evidence of the past is a finite act. Once disturbed, trowelled, shovelled and bucketed away that material cannot be replaced as it was before the excavator removed it. Hence it has frequently been said that ‘all excavation is destruction’. Today no one condones excavation as it took place in the C19th: for the pleasure of the excavators and to

establish collections of artefacts. In all but extreme circumstances where chance discovery of remains demands a prompt response, there should be controlled planning. This should establish the rationale for excavation and formulate a series of questions which, it is hoped, the excavation might answer.

Often a full and rich record of a site can be gathered if a wide range of reconnaissance methods has been applied and there are sufficient clues about hidden features or structures. In many cases, once the record of such survey activities is carefully housed in an appropriate archive (► p. 5), archaeologists leave the physical remains untouched. If, however, a decision is made to excavate, it is viewed as a very serious step. While most scientific experiments can be

repeated over and over again in the laboratory, archaeological excavation, although scientific in its approach, does not, by its very nature, allow a second chance. Some excavation procedures, somewhat confusingly referred to as sampling strategies, have been developed to try to ensure that not all the evidence is removed in the primary investigation of a feature or deposit. Nevertheless, destruction is minimised if the archaeologist pays appropriate care and attention to the way the excavation is conducted and particularly to the quality of the records kept. This is sometimes referred to as ‘**preservation by record**’.

There are other considerations. A balance must be struck between the desire to protect archae-

ological remains for future generations and the need to develop the discipline and advance our knowledge through excavation. It is also important that archaeology is kept sufficiently in the public eye to receive the support it needs. All these issues are explored further in [Chapter 10](#). If handled appropriately, excavation can move beyond the possible results of survey and get to the real core of archaeology – the hard evidence of their existence left by previous people.

Planning for excavation

The decision to dig will originate either in a research project or because remains are due to be destroyed. In either case the excavation director



Figure 2.2 *No, it isn't a row of onions.*

The reuse of ceramic containers for drainage purposes in the town walls at Cremona in Italy presents an archaeological dilemma. Should all the vessels be recorded in situ and excavated by hand or treated as fill and a sample of complete and diagnostic pieces kept and the rest discarded?

will base plans on what is known from desk-top surveys and reconnaissance (► p. 3). These plans will aim to answer a series of questions at different levels. An example of a question linked to wider debates might be 'Did towns decay early in the fourth century AD?' A more specific question might be 'Why was this site abandoned?' Below that might be a whole series of questions such as establishing the date of deposits and understanding site formation processes (► p. 165). These questions along with constraints of time and money will lead to decisions about where, how and how much to dig.

The first requirement is to produce a clear research design. This is a plan for how the archaeological project will be conducted in order to meet its goals. This may include:

- what is already known from previous local archaeological work;
- justifications for digging the site;
- the use of survey techniques to plan excavation strategies;
- the extent of the excavation required to enable interpretation;
- sampling policy and analysis of samples;
- determining the methods of investigation to be used;
- the recording system to be used;
- ethical considerations such as dealing with human remains;
- identifying the facilities or specialists for post-excavation work;
- how the research will be published and disseminated.

At an early stage there will be political and ethical issues arising from relationships with landowners, the local community and the agency funding the work. Once underway, the director will need to maintain professional standards while working under time and economic constraints and adapt the design in the light of events and discoveries on site. One further issue which



Figure 2.3 Trench with health and safety features

excavators have to be aware of is the health and safety of their diggers. Precautions range from hard hats and reflective clothing on developer sites to ensuring that deep trenches are properly shored up or have stepped sides. With deep trenches carbon monoxide may be an issue and meters may be needed. In most instances consideration needs to be given to how spoil will be safely extracted and how to prevent materials falling onto the diggers. Safety issues are most evident on underwater sites where air supply, currents, cold and sharks are amongst the potential hazards not faced on land.