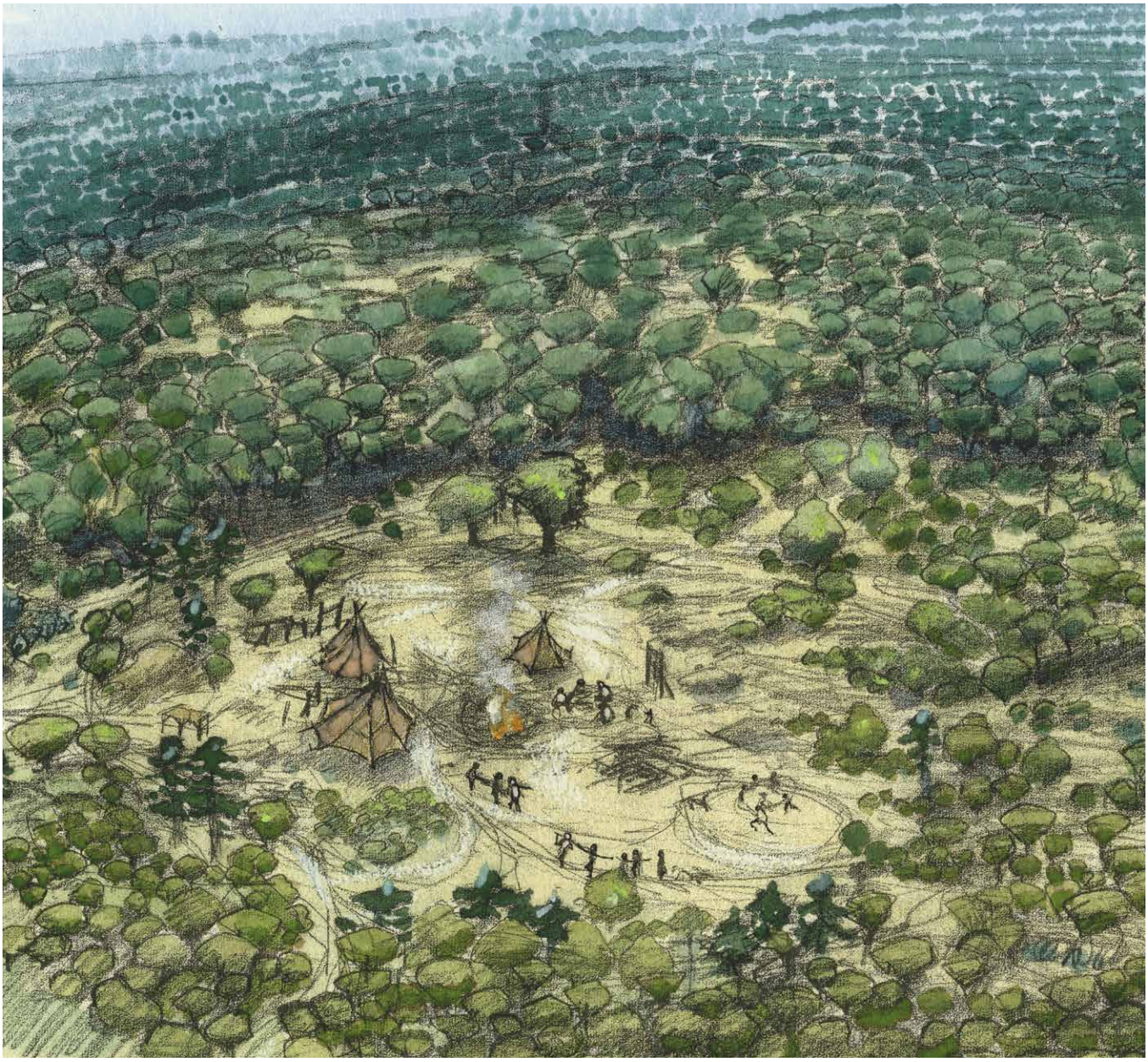
Historic England

Sites of Early Human Activity

Scheduling Selection Guide



Summary

Historic England's scheduling selection guides help to define which archaeological sites are likely to meet the relevant tests for national designation and be included on the National Heritage List for England. For archaeological sites and monuments, they are divided into categories ranging from Agriculture to Utilities and complement the listing selection guides for buildings. Scheduling is applied only to sites of national importance, and even then only if it is the best means of protection. Only deliberately created structures, features and remains can be scheduled. The scheduling selection guides are supplemented by the Introductions to Heritage Assets which provide more detailed considerations of specific archaeological sites and monuments.

This selection guide offers an overview of the sorts of archaeological monument or site associated with early human activity which are likely to be deemed to have national importance, and for which scheduling may be appropriate. It aims to do two things: to set these within their historical context, and to give an introduction to the designation approaches employed.

This document has been prepared by Listing Group. It is one is of a series of 18 documents. This edition published by Historic England July 2018.

Please refer to this document as:

Historic England 2018 Sites of Early Human Activity: Scheduling Selection Guide. Swindon. Historic England.

HistoricEngland.org.uk/listing/selection-criteria/scheduling-selection/

Front cover
A reconstruction of a Mesolithic hunting camp in a woodland clearing. In most cases these sites survive today only in the form of a scatter of worked flint.

Contents

Introduction

This selection guide offers an overview of the sorts of archaeological monument or site associated with early human activity which are likely to be deemed to have national importance, and for which scheduling may be appropriate. Archaeological sites, defined here as locations that contain physical evidence of past human activity, can be preserved and revealed in different ways. Broadly speaking, for legal reasons (see below) those without structures are not presently eligible for designation by scheduling, although especially in the case of early prehistoric sites (dealt with here), they may undeniably be nationally important and just as significant for our understanding of the past as upstanding monuments or sites with substantial sub-surface features. Moreover, because of the nature of such sites they are often particularly fragile and vulnerable. Therefore, their identification will generally be regarded as a priority; they will warrant the most careful consideration for protection by means other than scheduling.

Sites of early human activity without structures (hereafter 'sites without structures') are defined as comprising groups of objects of various type and their associated deposits; 'objects' are taken in this context to be any non-structural items deposited or displaced by direct human action, including artefacts, human remains, physical traces such as footprints, and natural material used by people, such as animal bone and plant remains; they may also include natural material not used or deposited by people, such as pollen, insect remains or mollusc shells, where these items provide clear and exceptional evidence of the impact of the environment and climate on early human ways of life.

Sites without structures can be broken down into a number of potentially overlapping categories, including:

- places where people dwelt without building substantial or permanent structures
- places where people exploited natural resources
- natural places where people deposited cultural material
- places which preserve a clear record of how the environment has directly influenced or been altered by human activity

Most sites without structures fall into the first category and are prehistoric in date, largely pre-dating the emergence of permanent settlements in the mid-second millennium BC; for early periods such sites comprise the majority of the surviving record. Sites in the last three categories, however, could potentially belong to any period. While this guide treats solely prehistoric sites, the principles set out may in some circumstances be applicable to later sites of national importance.

1 Historical Summary

1.1 Chronological framework

Many sites without structures are early prehistoric (Palaeolithic and Mesolithic) in date and it is helpful to outline the chronological terminology associated with them. The human occupation of Britain is entirely confined to the present geological period, the Quaternary, which is subdivided into two epochs: the Pleistocene and the Holocene, in which we currently live.

Periods of warmer and colder climate within the Quaternary are generally referred to in terms of Marine (or Oxygen) Isotope Stages (MIS or OIS), identified from the chemistry of deep sea cores. Stages are numbered by counting back from the present (the Holocene is MIS 1); they vary in length and in the degree of climatic variation but the even-numbered cold stages are generally equated with glaciations or 'ice ages'.

In the Holocene, which began after the last glaciation, about 11,500 years ago, chronologies are relatively straightforward, with the Mesolithic (broadly divided into Early and Late sub-periods) taking up the first half of the period prior to the appearance of Neolithic farmers around 4000 BC. For the much longer Palaeolithic period in the Middle and Late Pleistocene, however, we are faced with geological timescales and an intermittent human presence in Britain reflecting both climate and the changing geography of Britain as peninsula or island. The detailed chronologies available for later periods are lacking here because the main signature of human presence (stone tools) changed little over long spans of time while scientific dating of the sediments in which they are found is difficult and often imprecise. Therefore it is often more appropriate to simply assign sites to the relevant MIS.

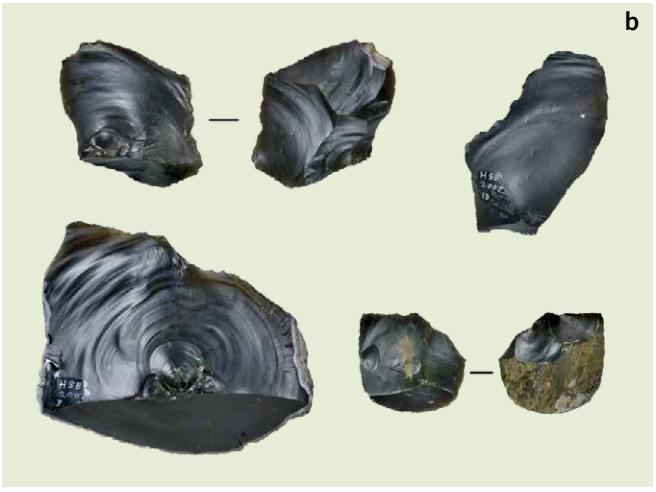


Figure 1
a Excavation of the Cromer Forest-bed deposits on the beach at Happisburgh Site 3, Norfolk: work at this site by the Ancient Human Occupation of Britain Project has produced the oldest known evidence of a human presence in this country.
b Struck flints from the Happisburgh excavation.

Pleistocene chronology

DATE (BP)	ISOTOPE STAGE (MIS) cold	warm	ARCHAEOLOGICAL PERIOD and key sites
		1	Three Ways Wharf Farndon
10,000			LATE UPPER PALAEOLITHIC
20,000	2		
			EARLY UPPER PALAEOLITHIC
50,000			
		3	Lynford
	4		LATE MIDDLE PALAEOLITHIC
100,000			
		5	
	6		
200,000			
		7	North Sea Area 240? Harnham?
300,000	8		EARLY MIDDLE PALAEOLITHIC
		9	
	10		
400,000			Swanscombe
		11	
	12		
500,000			Boxgrove
		13	
	14		
600,000			
		15	
	16		
700,000		17	Pakefield?
	18		
		19	
800,000			
	20		
			Happisburgh?
		21	
900,000	22		LOWER PALAEOLITHIC
		23	
	24		
		25	

Holocene chronology

DATE	ARCHAEOLOGICAL PERIOD
2000 AD	PRESENT
1500	POST-MEDIEVAL
1000	MEDIEVAL
500	ANGLO-SAXON
1	ROMAN
500	IRON AGE
1000	LATE BRONZE AGE
1500	MIDDLE BRONZE AGE
----------	----------
2000	EARLY BRONZE AGE
2500	
3000	LATE NEOLITHIC
3500	MIDDLE NEOLITHIC
4000	EARLY NEOLITHIC
----------	----------
5000	
6000	
7000	LATE MESOLITHIC
8000	
9000 BC	EARLY MESOLITHIC

Outline chronology for the Pleistocene (left) and Holocene (right), emphasising the lengths of the Palaeolithic and Mesolithic periods. Note that Pleistocene dates are given in years BP (Before Present). The divisions within the Holocene mark the appearance of the first major monuments in the Neolithic and the widespread emergence of settlements with permanent structures in the Middle Bronze Age.

Figure 2
Upper Palaeolithic flints from Launde, Leicestershire:
a being located and tagged in the field;
b after cleaning and recording.

The earliest currently known human occupation of Britain (at Happisburgh, Norfolk; Fig 1) probably occurred in an interglacial that equates to either MIS 25 (about 950,000 years ago or 950 kyr) or MIS 21 (about 850 kyr). At present there are little or no finds preceding MIS 15 and no evidence for a human presence in much of MIS 12 (Anglian glaciation), 10 (early Wolstonian), 6-4 (including the Ipswichian interglacial MIS 5e) or 2 (the Last Glacial Maximum, around 20,000 years ago).

Three human species are definitely known from the Pleistocene record: *Homo heidelbergensis* in the Lower Palaeolithic, before MIS 9 (about 300 kyr); *Homo neanderthalensis* in the Middle Palaeolithic, which is divided into earlier and later stages, respectively spanning MIS 9-7 (about 300-180 kyr) and MIS 3 (about 60-40 kyr); and *Homo sapiens* in the Upper Palaeolithic, which is similarly divided into earlier (about 40-25 kyr) and later (about 15-11.5 kyr = 13000-9500 BC) stages separated by a period of human absence. Based on contemporary finds from Spain the earliest occupation may well relate to a fourth species, *Homo antecessor*, although no skeletal remains of this early human have yet been found in Britain. The closest we get to them are the ancient footprints briefly revealed in Forest-bed deposits on the beach at Happisburgh.

1.2 Occupation sites

The first and largest category of sites without structures comprises places of occupation or dwelling. For over 99 per cent of the time that people have inhabited Britain they have not lived in permanent settlements. During the Palaeolithic and Mesolithic, people subsisted by hunting animals, scavenging carnivore kills (at least in the earlier part of the Palaeolithic), and gathering wild plants and other foods, a lifestyle that necessitated a nomadic or mobile existence.

Although people would probably have built shelters, these are thought to have been light and temporary, and consequently structural remains rarely survive; exceptions include the Mesolithic dwelling at Howick(Northumberland), which was occupied intermittently for 2-300 years, perhaps on a seasonal basis. Instead, the occupation of a place is usually marked by scatters of artefacts, primarily worked flint or other stone (Fig 2), left on the contemporary ground surface (and often

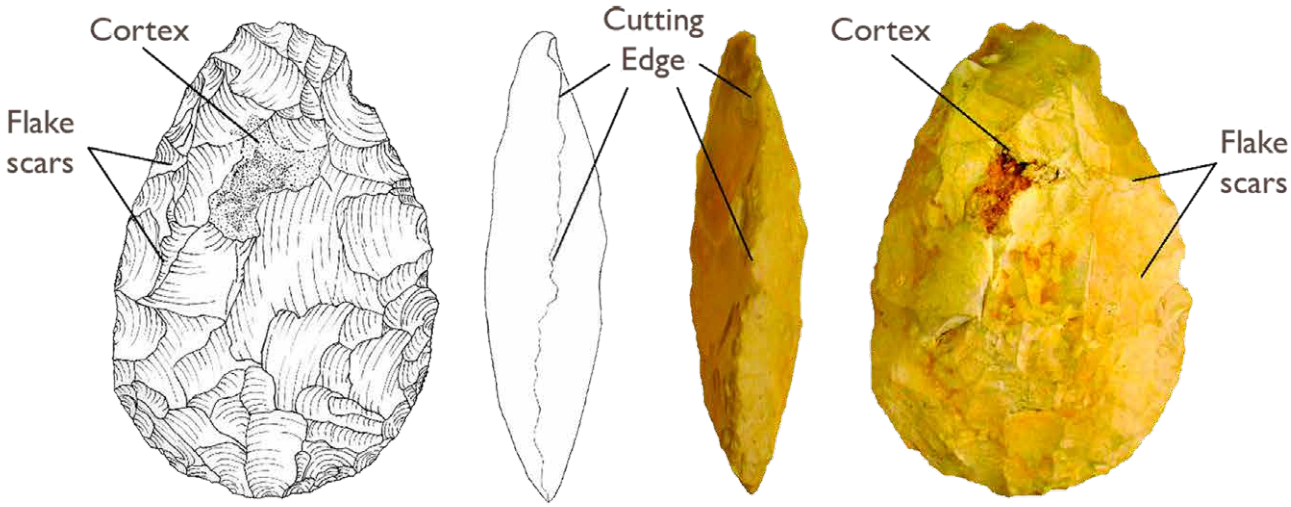


Figure 3
Drawing and photo in plan and profile of a flint handaxe or biface. These are the characteristic tools of the Lower and Middle Palaeolithic, though they are not found at the very earliest sites such as Happisburgh.

brought to our attention by ploughing, erosion or, for Pleistocene sites, quarrying). In some cases, depending on the preservation environment, more fragile materials such as bone and wood may also survive. Hearths are occasionally represented by patches of burnt soil or spatial patterning within artefact distributions.

Although settlements were small and generally occupied for short periods (ranging from a few hours at a hunting stand to seasonal occupation of a base camp) people would have routinely returned to some sites as part of their annual round, so the largest contain thousands of objects which accumulated over a series of occupation episodes.

Evidence of occupation in the Lower and Middle Palaeolithic in England is almost wholly restricted to areas south of the Trent – though this may in part reflect the distribution of flint outcrops (in the Midlands stone tools were often made of quartzite or andesite rather than flint, and these may be harder to recognise), the extent of later glaciation, and the historical concentration of sand, gravel and brickearth extraction towards the south and east.

Because the work of glaciers and rivers over immensely long periods of time has either eroded or deeply buried the land surfaces of this period, most finds of Lower and Middle Palaeolithic artefacts – the oval or pointed flint handaxe is the most characteristic form (Fig 3) – come from 'secondary contexts' (for which see page 13), usually river gravels into which artefacts have been transported; these deposits are significant despite their transformed nature because they still contain valuable data for the reconstruction of early human behaviour at a range of different spatial and temporal scales.

Occasionally, however, important and rare *in situ* buried deposits (for instance, land surfaces or buried river channels) are found at quarries (notably at Boxgrove, West Sussex) or natural exposures (for instance, the cliffs at Happisburgh), while surface scatters of this date are also known (for instance at Harnham, Wiltshire where ploughsoil finds led to the discovery of some underlying *in situ* deposits). The fresh condition of many of the finds dredged up from Area 240 in the North Sea suggests that similar sites exist off-shore as well.

When modern humans arrived in Britain, perhaps as early as 40,000 years ago, they brought with them new forms of complex behaviour in tool making and symbolic thought. Early Upper Palaeolithic occupation evidence definitely associated with *Homo sapiens* has so far come almost exclusively from caves, though there are open-air sites with leaf points that could have been made either by modern humans or late Neanderthals.

For the Late Upper Palaeolithic, in contrast, the lack of subsequent glaciation means a wider range of open-air sites are known, often manifested as surface lithic scatters, like those of later periods. One of the key flint scatters of the period is Farndon Fields in Nottinghamshire, which may be contemporary with the occupation of the caves at Creswell Crags (on the Derbyshire-Nottinghamshire border), location of the earliest artworks found in this country. Caves are the only type of early prehistoric site that can presently be scheduled (see the Introduction to Heritage Assets on Caves, Fissures and Rockshelters).

The differences between Palaeolithic and Mesolithic settlements in part reflect rapidly changing environments. As the climate warmed at the start of the Holocene, the open tundra and steppe vegetation that faced Ice Age populations was replaced by woodland with a new range of plant and animal species, necessitating different cultural adaptations. The early Holocene birch and willow 'pioneer' woodland eventually gave way to species such as ash, oak, elm and lime, until by the Neolithic much of Britain was densely wooded. In some areas, like the Vale of Pickering and the Thames Valley, site

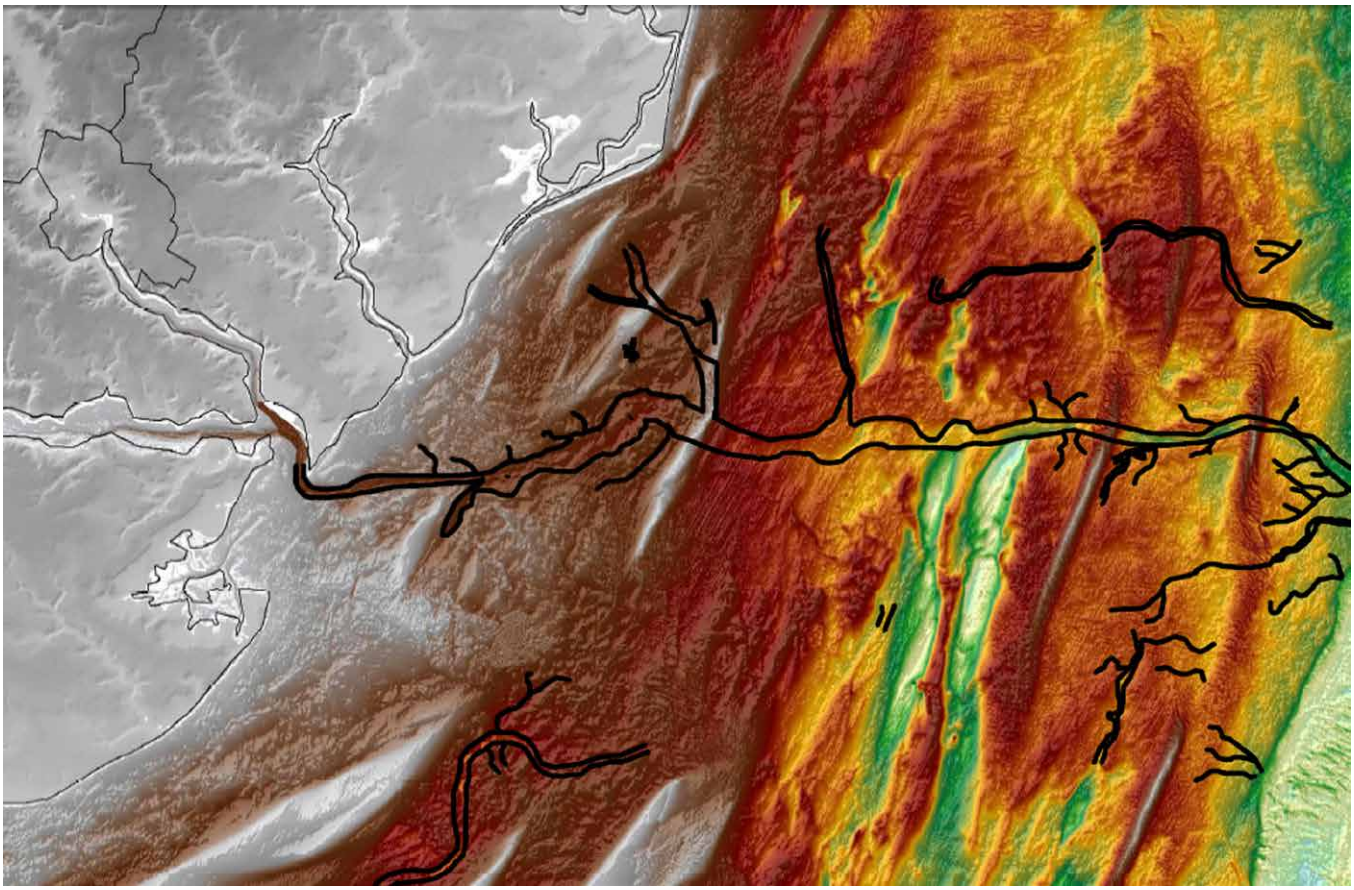


Figure 4
Bathymetric and seismic data from the North Sea allow the identification of submerged landscape features such as these channel systems in the Thames Estuary.

distributions and sizes changed significantly in the course of the Mesolithic, probably reflecting these environmental changes. There is occasional evidence for the exploitation of coastal resources but shell middens like those found at Oronsay in the Hebrides remain rare in England (they are known from Devon, Dorset and the Isles of Scilly).

As a result of sea-level rise during the Holocene, Britain became an island around 8,000 years ago, cutting off hunter-gatherer populations from their continental neighbours and initiating a distinctive insular prehistory with only intermittent evidence for cross-channel contact. This also means that much evidence for Palaeolithic and Mesolithic occupation now lies beneath the sea or in the inter-tidal zone. Recent work has mapped the pre-inundation landforms of areas such as the southern North Sea, often termed 'Doggerland', allowing us to define areas of potential for the survival of occupation sites (Fig 4); though individual sites remain hard to locate or define at present, it is likely that prospection and sampling techniques will improve in the future.

Around 6,000 years ago, the onset of the Neolithic began a major process of change in people's ways of life. The introduction of domestic plants and animals as well as new material technologies such as pottery, the construction of the first communal monuments and the more systematic exploitation of stone and flint sources all indicate a fundamental change in the relationship between people and the world around them (these changes are explored in other Selection Guides, principally those on Agriculture; Commemoration; Industrial Sites; and Religion and Ritual pre-AD410.

However, the speed and nature of this process is still debated. What was often characterised as a Neolithic 'revolution' or a 'package' of related innovations may have been less sudden or uniform than often supposed. Just as apparently 'Neolithic' practices like woodland clearance have their origins in the Mesolithic (see below), so the nature of settlement in the fourth millennium BC is not that different from what went before, still primarily defined by lithic scatters with a similar flintworking technology (Fig 5).

Figure 5
Early Neolithic leaf-shaped flint arrowheads from Beeston Castle, Cheshire: arrowhead forms are particularly diagnostic of the age of a flint scatter.

The degree and scale of clearance, agriculture and sedentism among Neolithic communities is much debated, and probably varied across Britain. Both archaeological and environmental data are critical to this debate. It seems likely that the earlier Neolithic of southern Britain saw an economy geared primarily towards pastoralism with only small-scale horticulture and a seasonal round perhaps not that different from the routines of Mesolithic hunter-gatherers.

Many Neolithic and Early Bronze Age occupation sites remain characterised by artefact scatters dominated by struck flint, although the finds are more likely to be accompanied by sub-surface features such as pits and postholes than in earlier periods. In exceptional cases, the remains

of timber or stone structures may be found, but it was not until the Middle Bronze Age, during the 2nd millennium BC, that permanent buildings (roundhouses) were routinely constructed in most parts of Britain. Combined with a decline in flint use during the course of the Bronze Age, this represents a decisive shift in the character of the archaeological record; later Bronze Age and Iron Age settlements are therefore fully dealt with in the accompanying Settlement Sites selection guide. However, a few specialised occupation sites of these and later periods are still characterised primarily by artefact scatters and may fall within the remit of 'sites without structures'.

1.3 Working sites

Both at dwelling sites and elsewhere in the landscape people carried out specific activities in places that retain traces of their work but no formal structures. In the Palaeolithic and Mesolithic these include locales of animal butchery and flint-knapping, for instance at Boxgrove (West Sussex; Fig 6), where undisturbed remains of Lower Palaeolithic (MIS 13, about 500 kyr) stone tool making and animal butchery comprise an internationally important resource. The best preserved Middle Palaeolithic site found in recent years was at Lynford Quarry (Norfolk), where unweathered stone tools and mammoth

Figure 6
Flint implements in primary context on an ancient land surface at Boxgrove, West Sussex: their distribution preserves important information about how the tools were made and used

Figure 7 (left)
Excavation of mammoth remains at the Middle Palaeolithic site of Lynford, Norfolk.

Figure 8 (top and bottom right)
a Neolithic stone axe quarry at Great Langdale, in the central Lake District. **b** Stone axes from Raunds, Northamptonshire: these axes travelled widely during the Neolithic – the one on the left is from a Cornish source, the provenance of the other is uncertain.

bones some 60,000 years old (MIS 3) were associated with an old river channel (Fig 7).

Sometimes the difference between dwelling and working sites is far from clear; at Three Ways Wharf in the Colne valley in west London, careful analysis has identified a number of late Upper Palaeolithic/early Mesolithic carcass processing/occupation events of varying duration from a couple of days to a period of weeks or months.

Throughout the Neolithic and Early Bronze Age, flint (in southern and eastern Britain) and igneous or metamorphic rock (in the north and west) were mined or quarried for the manufacture of axes (Fig 8b), which served not only as practical tools but also as gifts or goods for exchange, traded across large areas of the country. The upland stone axe 'factories' are structurally more ephemeral than the flint mines of the Sussex downland and East Anglia, which comprise substantial cut features that meet existing criteria for scheduling (though near-surface flint extraction with the kind of remains not covered by existing designations may be encountered elsewhere on the chalk of southern England or in association with coastal sources, for instance at Flamborough Head in East Yorkshire). Stone axe factories have so far been found only in the central part of the Cumbrian Lake District (principally around Great Langdale), since sources

known to have been exploited in Cornwall, Devon, Leicestershire and Northumberland have yet to be precisely located. Extraction sites are characterised by workings such as quarries, faces, hollows and working floors where initial stages of manufacture or processing took place, along with hammerstones from the extraction process, and debitage and roughouts marking the early stages of manufacture (Fig 8a). These important sites, especially the waste heaps and flake screes, are vulnerable to erosion by natural processes and the impact of visitors, in terms of both footfall and collection of artefacts.

Little is currently known about other aspects of stone extraction, such as the quarrying of megaliths and standing stones, though the source of the Stonehenge bluestones in south Wales is currently the subject of active research. There is great potential for further study of this aspect of the construction of Neolithic and Bronze Age monuments, for instance locating the source of the Stonehenge sarsens, often supposed to be on the Marlborough Downs of Wiltshire.

1.4 Natural features and sites of deposition

As well as open-air settlements and working sites, there are other ways in which important prehistoric material can be preserved without accompanying structures. For instance, natural shelters were often sought out for occupation or burial of the dead, principally caves – though it should be noted that despite the common stereotype of primitive cave-dwellers, caves rarely seem to have been occupied in the Lower Palaeolithic. In the Mesolithic and Neolithic, stone tool finds may be associated with tree-throws (cavities or depressions created in the subsoil by the fall or decay of a tree), which could have been utilised for shelter; for instance, the well-known 'Mesolithic pit dwellings' excavated in 1950 by Louis Leakey at Abinger Hammer (Surrey), are now identified as tree-throws.

Other types of natural feature may not have been inhabited but can contain objects which

Figure 9
Exposed silts with preserved prehistoric footprints at Crosby Beach, Merseyside.

were deliberately (or sometimes accidentally) deposited by people. One unusual variant of this type of site comprises places where human footprints or similar ephemeral traces of activity have been preserved by chance, for instance in intertidal or estuarine sediments, as at Formby and Crosby (Merseyside) (Fig 9). Geological features were used for the ritual deposition of artefacts and human remains, especially in the Neolithic and Bronze Age, including vertical-entry caves, such as the Mendip swallets or the Ryedale 'Windy Pits' (Yorkshire), and natural shafts or solution hollows (for instance Fir Tree Field, Dorset; Eaton Heath, Norfolk), which may have formed during the last Ice Age.

Such deliberate (or 'structured') deposition continues into later prehistory and beyond, with wet places (bogs, rivers and springs) becoming preferred locations for the deposition of metalwork, human remains (for instance Lindow Moss in Cheshire, location of the well-preserved bog body 'Lindow Man', who dates to around the time of the Roman conquest) and other objects (such as the Bronze Age log-boats recently found in an old channel of the Nene at Must Farm near Peterborough). Some of these may be accidental losses but the majority represent important Bronze and Iron Age ritual practices, dimly recalled in the later Arthurian legends.

Sites of repeated deposition often include structures of some kind (see the Introduction to Heritage Assets on Later Prehistoric Shrines and Ritual Structures) but this is not *necessarily* the case, and as such some locations may therefore fall into the category of sites without structures. The sea is another watery location and prehistoric 'shipwrecks' (see the Ships and Boats: Prehistory to Present selection guide) are occasionally encountered in the form of scatters of metalwork on the sea bed – although in the absence of any trace of vessels the possibility of deliberate deposition should be considered here too.

1.5 Environmental remains

The evidence from occupation sites alone does not provide a full understanding of prehistoric ways of life, which also requires knowledge of the environment in which people lived, their impact upon it and its effect on them. The prehistoric environment can be investigated through the scientific study of deposits which preserve evidence of plant, animal and other remains (Fig 10). Such deposits may be found alongside or in different locations from the artefact-bearing sites for which they provide an environmental context. Sites in this category preserve important evidence of the impact and timing of human activity or modification of the environment without structures or artefacts necessarily being present; or, particularly for the Pleistocene, they preserve evidence of the climatic conditions to which early human populations had to adapt. This type of site is included on the basis that Pleistocene early humans cannot be understood independently of their environment, and since evidence of that is preserved only in exceptional circumstances such places, which may already be geoconservation sites designated by Natural England, also form part of the historic environment and warrant protection as such.

With a growing range of scientific techniques being used, the potential of such remains continues to increase. Relevant locations include peat bogs, river and lake deposits, caves and fissures, periglacial features such as pingos (frost mounds formed in areas of permafrost) and ice wedges (networks of cracks formed by freeze-thaw processes), hillwash sequences, buried soils or land surfaces and marine deposits. Datable deposits and sites that preserve key stratigraphic relationships are particularly significant.

The types of remains encountered include waterlogged or charred plants, beetles and mites, pollen, diatoms and foraminifera, mammal bones and molluscs. They provide information about a variety of environmental parameters such as vegetation, farming regimes, temperature and climate. For instance, peaks of tiny charcoal particles in early Holocene peat sequences

Figure 10
Environmental sampling of peat at Treen Common, West Cornwall.

provide evidence for the use of fire to create small-scale clearances in order to drive game or improve grazing in the Mesolithic, while pollen or sedimentary evidence for the date and scale of later Holocene clearance can often tell us more about the impact of farming on an area than the archaeological sites.

1.6 Artefact scatters

As well as the functional categories outlined above, sites without structures can be characterised in terms of the extent to which they have been transformed by natural or human processes since the objects were originally deposited. Three main types of artefact scatter can be defined, though this simplifies what is in reality a continuum of preservation and condition. Nevertheless, the general distinction is important when considering protection approaches:

In situ scatters (or primary context sites)

Those sites with undisturbed or minimally disturbed remains of human activity on old land surfaces that have been protected by the accumulation of glacial, marine, fluvial, colluvial or organic material over them, that is to say they are not usually visible on the surface but may be revealed by erosion or during extraction and so forth (see Fig 6).

Surface scatters

are those disturbed by natural or agricultural processes, especially ploughing, to the extent that significant quantities of finds are present in

Figure 11
Spatially controlled fieldwalking in gridded transects or boxes is the main technique for investigating plough-zone lithic scatters.

the topsoil and – in the right conditions – visible on the surface (Fig 11). In some cases the entire site may lie within the ploughzone; in others the surface material may overlie deposits and/or objects still in primary context. Though presenting as sites without structures some of these scatters will also overlie buried structural evidence.

Secondary context sites

are locations where artefact-bearing deposits have been reworked by marine, glacial, fluvial or colluvial action and objects have ended up a considerable distance from their original place of use or discard. Despite their disturbance these sites may comprise large aggregations of artefacts which provide important evidence on the early human occupation of a particular catchment or region.

For *in situ* and surface scatters, archaeological information is preserved in two principal ways: morphological (that is the form of the artefacts) and spatial (their distribution). Secondary context sites provide only limited spatial information; important sites of this type are primarily of Lower or Middle Palaeolithic date (see below) since, despite the loss of contextual spatial data, artefact collections of these periods are very rare. At any site further information may be available from the condition of the artefacts and/or associated non-artefactual material such as environmental remains.

Most assemblages of worked flint or stone are diagnostic of period and provide valuable information about how and where the raw materials were obtained, the technology and skills involved in tool manufacture and their use for different activities. Other materials, such

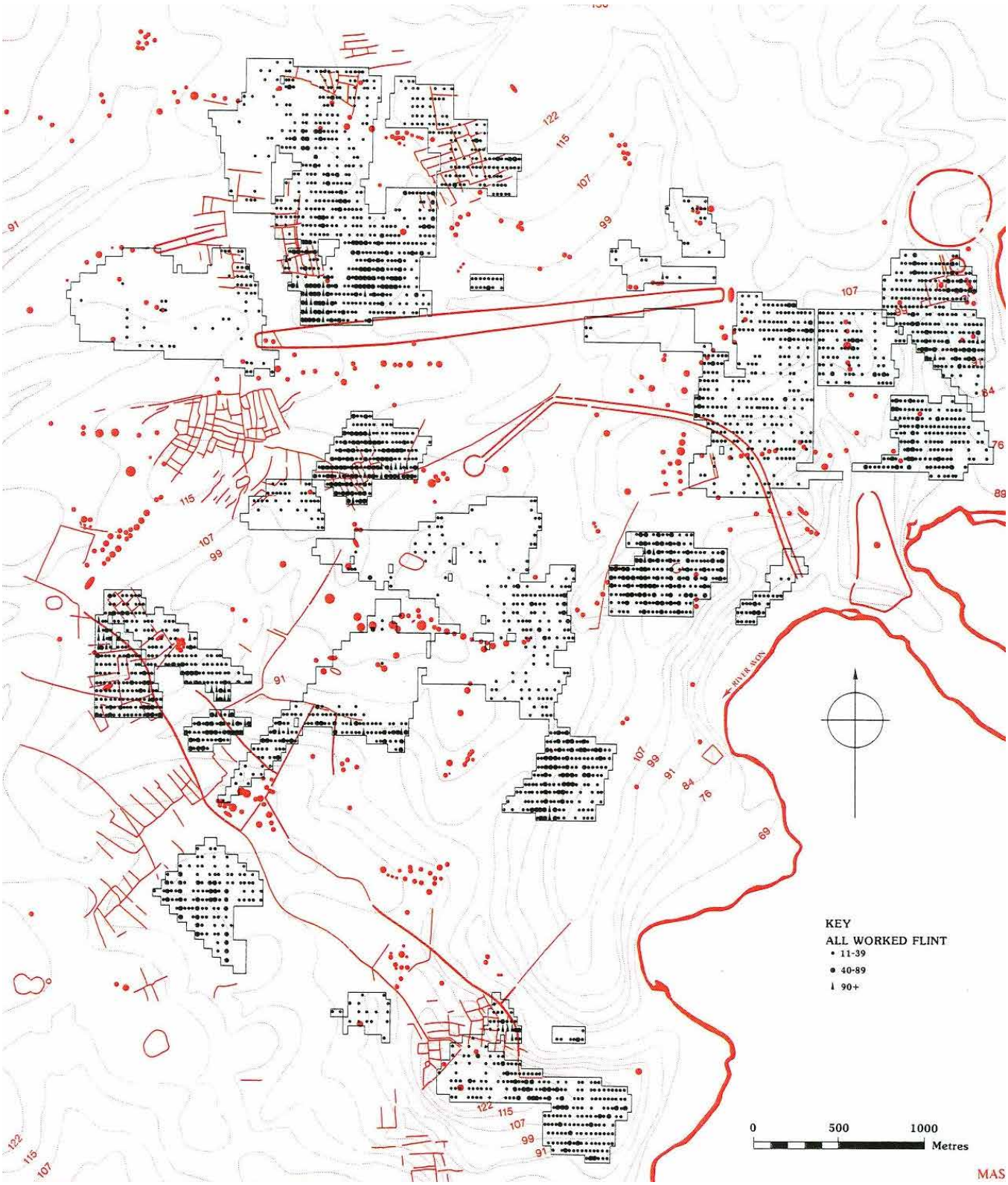


Figure 12
The distribution of all worked flint from extensive surface collection undertaken as part of the Stonehenge Environs Project.

as animal bone or (from the Neolithic period onwards) pottery, are similarly informative but tend to be more fragile once exposed, so they are rarely preserved in large quantities within surface scatters.

As well as the raw material, form and function of artefacts, their spatial distribution preserves important information. For *in situ* scatters, clusters of objects may record individual human actions such as a knapping event, the butchering of an animal or a discard episode; or their cumulative distribution patterns may indicate the location of features like shelters or hearths which are no longer directly visible. Surface scatters are more difficult to interpret: they require consideration of the problem of palimpsests (overlays of material from different episodes of occupation, or even different periods, that have become mixed); lateral movement within the ploughzone; and the relationship between surface and sub-surface object populations. However, spatial analysis can still be used to explore variations in the density and distribution of different artefact types within a scatter, in order to understand the nature and original location of particular activities.

While the internal structure of individual scatters can be analysed in this way, they gain value where they can also be studied collectively as groups of sites within a wider area; the Stonehenge Environs Project and the Fenland Survey are two examples on rather different scales (Fig 12).

2 Overarching Considerations

2.1 Scheduling and protection

Archaeological sites and monuments vary greatly in character, and can be protected in many ways: through positive management by owners, through policy, and through designation. In terms of our designation system, this consists of several separate approaches which operate alongside each other, and our aim is to recommend the most appropriate sort of protection for each asset. Our approach towards designation will vary, depending on the asset in question: our selection guides aim to indicate our broad approaches, but are subordinate to Department for Digital, Culture, Media and Sport (DCMS) policy.

Scheduling, through triggering careful control and the involvement of Historic England, ensures that the long-term interests of a site are placed first. It is warranted for sites with real claims to national importance which are the most significant remains in terms of their key place in telling our national story, and the need for close management of their archaeological potential. Scheduled monuments possess a high order of significance: they derive this from their archaeological and historic interest. Our selection guides aim to indicate some of the grounds of importance which may be relevant. Unlike listed buildings, scheduled sites are not generally suited to adaptive re-use.

Scheduling is discretionary: the Secretary of State has a choice as to whether to add a site to the Schedule or not. Scheduling is deliberately selective: given the ever-increasing numbers of archaeological remains which continue to be identified and interpreted, this is unavoidable. The Schedule aims to capture a representative sample of nationally important sites, rather than be an inclusive compendium of all such assets.

Given that archaeological sensitivity is all around us, it is important that all means of protecting archaeological remains are recognised. Other designations such as listing can play an important part here. Other sites may be identified as being of national importance, but not scheduled. Government policy affords them protection through the planning system, and local authorities play a key part in managing them through their archaeological services and Historic Environment Records (HERs).

The Schedule has evolved since it began in 1882, and some entries fall far short of modern standards. We are striving to upgrade these older records as part of our programme of upgrading the National Heritage List for England. Historic England continues to revise and upgrade these entries, which can be consulted on the Historic England website.

2.2 Heritage assets and national importance

Paragraph 194 and footnote 63 of the National Planning Policy Framework (July 2018) states that any harm to, or loss of, the significance of a designated heritage asset should require clear and convincing justification and for assets of the highest significance should be wholly exceptional; 'non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments, should be considered subject to the policies for designated heritage assets'. These assets are defined as having National Importance (NI). This is the latest articulation of a principle first raised in PPG16 (1990-2010) and later in PPS5 (2010-2012).

2.3 Selection criteria

The particular considerations used by the Secretary of State when determining whether sites of all types are suitable for statutory designation through scheduling are set out in their Scheduled Monuments Policy Statement.

3 Specific Considerations

3.1 Approaches to protection

As already noted, the types of site described here are, on the whole, not eligible for designation by scheduling because the absence of substantial structures means they do not fulfil the definition of a monument contained in relevant legislation, that is 'any building, structure or work, whether above or below the surface of the land, and any cave or excavation … [or] any site comprising the remains of any such building, structure or work'.

In particular, because most Palaeolithic and Mesolithic sites fall into the category of 'sites without structures', they are inevitably under-represented in the present Schedule of Monuments. Thus even the globally significant Lower Palaeolithic site of Boxgrove (West Sussex) (Fig 6) was ineligible for statutory protection. Currently the schedule has just over 50 sites in England with significant Palaeolithic and/or Mesolithic remains (of which over 40 are caves or rock-shelters), compared with over 1,300 for the Neolithic and over 8,900 for the Bronze Age (in some cases multiple sites being combined in a single designation). Even with the larger representation of Neolithic and later sites, however, some of national importance, including the Neolithic axe factories of the central Lake District (Fig 8), fall outside the current criteria for designation for the same reason.

The presence of associated sub-surface features may make sites identified by the presence of surface artefact scatters eligible for scheduling, but such features are generally traceable only by remote sensing techniques or excavation. Star Carr (North Yorkshire) is an example of a site where excavation proved the existence of structures, leading to its scheduling.

A small number of multi-period sites, like Hengistbury Head (Dorset), include Palaeolithic and/or Mesolithic flint scatters.

However, nationally important sites without structures are given protection in the planning system via the National Planning Policy Framework (July 2018). This sets out that planning should conserve heritage assets in a manner appropriate to their significance (para 184). It further states that non-designated archaeological sites of demonstrable equivalent significance to scheduled monuments should be treated as designated heritage assets (footnote 63).

What follows is further specific guidance for sites of particular dates and types. Current research frameworks are also relevant to an assessment of importance of any given site.

3.2 Palaeolithic sites

Because of their extreme scarcity and the global scope of research into human origins, the importance of sites like Boxgrove with significant *in situ* remains (Fig 6) or any early human fossils cannot be overstated. Located at the north-west extremity of early human life in the Pleistocene Old World, Britain's Lower Palaeolithic sites, whether in primary or secondary contexts, include

some of the oldest fossils and artefacts in Europe. Along with Middle Palaeolithic sites, they are important because they offer rare glimpses into the ways of life of other human species, now extinct, and help us reflect on what it means to be human; as the leading Palaeolithic archaeologist John Wymer has stated, it is as dangerous to assume that these people shared a similar psychology to ourselves as it is to regard them as totally non-human. This needs to be borne in mind when making judgements about the national importance of what may appear to be ephemeral or transported remains.

Although associated with our own species and much closer to us in time, sites of the Upper Palaeolithic period are just as important in terms of what they can tell us about the environmental tolerances of early humans. They are also still exceptionally rare, especially open-air sites (Fig 2): exclusively Palaeolithic scatters formed less than one per cent of the sites identified in a survey of four counties undertaken in 1994-1995. Any site of this period represented by more than stray finds should be considered nationally important.

Criteria for defining nationally important Palaeolithic sites are set out in the Historic England guidance document *Identifying and Protecting Palaeolithic Remains*. In summary, a Palaeolithic site may be reckoned nationally important if it contains any of the following types of evidence that are extremely rare in Britain and especially if the site can be dated:

- any human remains are present
- the remains belong to a period or geographic area where evidence of a human presence is particularly rare
- organic (for instance, wooden) artefacts are present
- well-preserved indicators of the contemporary environment can be directly related to the remains
- there is evidence of human lifestyles, for example interference with animal remains
- one deposit containing Palaeolithic remains has a clear stratigraphic relationship with another
- any artistic representation, no matter how simple, is present
- features such as hearths, shelters, and floors survive
- the site can be related to the exploitation of a resource, such as a raw material
- artefacts are abundant

For substantially disturbed or reworked Palaeolithic sites, however, or *in situ* scatters of later periods, the evidence should be exceptional in order to be considered nationally important, or at least three of these criteria should be met. Disturbed sites of Holocene date should be judged against the criteria for surface artefact scatters.

3.3 Mesolithic and later flint scatters

Mesolithic sites are more numerous and often larger than those of the Upper Palaeolithic, either because they were visited more often or social groups were bigger: in the 1994-1995 English Heritage survey of lithic scatters, exclusively Mesolithic sites formed up to 40 per cent of the resource in some areas. Neolithic and Early Bronze Age sites occur in similar numbers, with multi-period scatters also quite common. Criteria for establishing the significance of these sites can be found in the Historic England guidance document *Managing Lithic Scatters*(2001).

In summary, a surface artefact scatter may be of national importance if:

- sufficient information is available to define a boundary, making it recognisable as a discrete site with a significant concentration of material
- the quality of the lithic artefacts (fresh condition, sharp edges, and so forth) and/or the presence of less durable artefacts such as pottery suggest buried deposits have only recently been disturbed
- additional evidence suggests the presence of buried structural remains with which the artefacts are believed to be associated
- there is evidence for part of the site being undisturbed
- it has been dated or interpreted with confidence
- the artefacts suggest diversity within the scatter, either in terms of repeated occupation over a long period (for instance, where diagnostic artefacts of more than one period are present), or if evidence exists for particular tasks

In practice, sites meeting four of these criteria are sufficiently rare in England to be judged nationally important; however, there is likely to be regional variation within this and there will be cases where sites have national importance on the basis of just one or two exceptional aspects.

3.4 Working sites

The known prehistoric extraction sites in Cumbria (the central Lake District Neolithic stone axe factories) comprise four basic types of site: quarries on outcropping rocks, which can be sub-divided into two types – perpendicular rock faces, fissures or caves, and open cast or surface quarrying (Fig 8a); scree or blockfield exploitation at source with no visible evidence of quarrying; exploitation of raw material occurring in scree far below the parent outcrop; and working floors at a distance from the sources, to where the material was carried either by hand or by glacial drift. In terms of site definition, work has concentrated on putting sites into a few, larger, manageable groups, rather than numerous small discrete areas.

Too little is known at present about different types of prehistoric extraction site in other parts of the country, whether related to stone or metal ore extraction, to offer explicit guidance on national importance. It is probable that significant sites still await discovery.

3.5 Sites of deposition

These are diverse and variable. In many cases the items which identify and define important sites are found in the course of development or agricultural work when they are already out of the ground. But such sites may have national importance if there is a clear likelihood of further deposits being present, either because more than one find spot is already known or because they form a discrete location that would have been of interest to prehistoric people, for instance a peat-filled glacial feature. In addition, to be deemed nationally important at least one of the following criteria should be met:

- the site is known or very likely to contain *in situ* material which is nationally rare, for instance, bog bodies
- the site is known to contain significant accumulations of artefacts and other objects that clearly demonstrate the cultural use of natural features like solution hollows, fissures or tree-throws

3.6 Palaeoenvironmental sites

For some sites without structures there is a potential overlap with Sites of Special Scientific Interest (SSSI), designated by Natural England, which deal with the conservation of natural environment assets – of habitat, biodiversity and geology. Sometimes these overlap physically with heritage assets, reflecting the fact that some types of deposit, such as peat bogs (Fig 10), tend to have national importance in terms of both the natural and historic environment. Most English SSSI designations are for surface flora and fauna only, but geoconservation sites and some others (for instance lowland mires) may encompass buried deposits and sequences.

While management for natural and historic environment conservation is generally complementary, there are possible areas of contention, such as dry eroding sites or wetland recreation, where natural environment values may not be compatible with the preservation of archaeologically important deposits, and appropriate liaison with Natural England will be required.

3.7 Submerged prehistoric landscapes

The discussion above is primarily of relevance to terrestrial sites; however, there is also the need to consider those in coastal and marine contexts. For the inter-tidal and off-shore zones there are two relevant types of site: those which were formed in water and those created on dry land which has subsequently been inundated. The former group consists primarily of Bronze Age and Iron Age shipwrecks or possible shipwrecks marked by scatters of metalwork and other objects, as discussed above; Neolithic and even Mesolithic wrecks are also possible and off-shore finds of stone axes, for instance, might be indicative of these. There is also the potential for objects associated with coastal exploitation which are not permanent structures, such as some fish traps, to be preserved in the inter-tidal zone.

The second group comprises submerged sites which were occupied by people during periods of lower sea levels. In the inter-tidal zone these can potentially be of any date, depending on local patterns of coastal change, and within the remit of this guide may include lithic scatters, shell middens, surfaces with fossil footprints of humans or domestic animals (Fig 9) and other deposits clearly associated with evidence of human activity.

The off-shore zone which was inundated during the early Holocene potentially contains identical types of site to those identified in terrestrial contexts for the Palaeolithic and Mesolithic periods (primarily occupation sites of varying type and extent). However, preservation conditions and site formation processes will have been different: for instance, while lack of drying and generally low oxygen levels may be advantageous, this could be offset by the effects of salt and marine burrowers. Nevertheless, the difference in our approaches to terrestrial and submerged sites is not so much in the nature of the evidence but in the level of current knowledge and the methods available for researching and managing them.

Recent advances in remote sensing have greatly improved our understanding of the topography of submerged land surfaces under the North Sea and English Channel (Fig 4), which will allow future research to focus on areas where terrestrial models suggest occupation is most likely to be found. However, we currently lack adequate tools for reliably locating and characterising sites of early human activity in the same way we can on dry land through fieldwalking and other investigative techniques. On the other hand, it is likely these techniques will continue to develop so we need to be prepared in the future to apply the same criteria to the protection of submerged sites that we currently do for terrestrial ones.

4 Select Bibliography

4.1 Palaeolithic

Ashton, N., Lewis, S., De Groote, I., Duffy, S., Bates, M., Bates, R. et al. (2014), 'Hominin Footprints from Early Pleistocene Deposits at Happisburgh, UK'. PLoS ONE 9(2): e88329. doi:10.1371/journal.pone.0088329.

Ashton, N., Lewis, S. and Stringer, C. (eds.), *The Ancient Human Occupation of Britain* (2011)

Barton, N., *Ice Age Britain* (2005)

Buteux, S., Chambers, J. and Silva, B., *Digging Up the Ice Age* (2009)

Pettitt, P., Gamble, C. and Last, J. (eds.), *Research and Conservation Framework for the British Palaeolithic* (2008)

Pettitt, P. and White, M., *The British Palaeolithic: Human Societies at the Edge of the Pleistocene World* (2012)

Pitts, M. and Roberts, M., *Fairweather Eden* (1998)

Stringer, C., *Homo Britannicus: The Story of Life in Britain* (2006)

Tizzard, L., Baggaley, P. and Firth, A., 'Seabed Prehistory: Investigating Palaeo Land-surfaces with Palaeolithic Remains from the Southern North Sea', pages 65-74 in J. Benjamin and others (eds.), *Submerged Prehistory* (2011)

White, M. (ed.), Lost Landscapes of Palaeolithic Britain (2016)

Wymer, J., *The Lower Palaeolithic Occupation of Britain* (1999)

4.2 Mesolithic and later

Bond, C., 'The Portable Antiquities Scheme: the contribution of lithics and lithic scatters' pages 19-38 in S.Worrell and others (eds.), *A Decade of Discovery: Proceedings of the Portable Antiquities Scheme Conference 2007* (2010)

Bradley, R., *The Passage of Arms* (1990)

Bradley, R. and Edmonds, M., *Interpreting the Axe Trade: Production and Exchange in Neolithic Britain* (2005)

Butler, C., *Prehistoric Flintwork* (2005)

Conneller, C. and Warren, G. (eds.), *Mesolithic Britain and Ireland: New Approaches* (2006)

Edmonds, M., Evans, C. and Gibson, D., 'Assembly and Collection: Lithic Complexes in the Cambridgeshire Fenlands', *Proceedings of the Prehistoric Society* 65 (1999), 47-82

Evans, C., Pollard, J. and Knight, M., 'Life in Woods: Tree-throws, 'Settlement' and Forest Cognition', *Oxford Journal of Archaeology* 18 (1999), 241-54

Gaffney, V., Fitch, S. and Smith, D., *Europe's Lost World: The Rediscovery of Doggerland* (2009)

Hall, D. and Coles, J., *Fenland Survey: An Essay in Landscape and Persistence* (1994)

Momber, G., Tomalin, D., Scaife, R., Satchell, J. and Gillespie, J., *Mesolithic Occupation at Bouldnor Cliff and the Submerged Prehistoric Landscapes of the Solent* (2011)

Richards, J., *The Stonehenge Environs Project* (1990)

4.3 Palaeoenvironment

Ellis, N. (ed), *An Introduction to the Geological Conservation Review* (1996)

Historic England, *Environmental Archaeology: A Guide to the Theory and Practice of Methods from Sampling and Recovery to Post-Excavation* (2nd edn) (2011)

Simmons, I., *An Environmental History of Great Britain: From 10,000 Years Ago to the Present* (2001)

5 Where to Get Advice

If you would like to contact the Listing Team in one of our regional offices, please email: customers@HistoricEngland.org.uk noting the subject of your query, or call or write to the local team at:

North Region
37 Tanner Row
York
YO1 6WP
Tel: 01904 601948
Fax: 01904 601999

South Region
4th Floor
Cannon Bridge House
25 Dowgate Hill
London
EC4R 2YA
Tel: 020 7973 3700
Fax: 020 7973 3001

East Region
Brooklands
24 Brooklands Avenue
Cambridge
CB2 8BU
Tel: 01223 582749
Fax: 01223 582701

West Region
29 Queen Square
Bristol
BS1 4ND
Tel: 0117 975 1308
Fax: 0117 975 0701

Acknowledgments

Images

© Historic England

All images except those listed below

© Other

Figure 1: Phil Crabbe/Natural History Museum

Figure 2: Lynden Cooper/University of Leicester Archaeological Services

Figure 3: From ‘Palaeolithic Artefact Recognition Sheet’ by the National Ice Age Network

Figure 4: From ‘Relic Palaeo-landscapes of the Thames Estuary’ by J. Dix and F. Sturt. University of Southampton.

Figure 6: Boxgrove Project, UCL

Figure 7: Norfolk Archaeological Unit

Figure 9: National Museums Liverpool

Figure 11: Archaeological Research Services Ltd.

Every effort has been made to trace the copyright holders and we apologise in advance for any unintentional omissions, which we would be pleased to correct in any subsequent editions.

Historic England

We are the public body that helps people care for, enjoy and celebrate England's spectacular historic environment.

Please contact
guidance@HistoricEngland.org.uk
with any questions about this document.

HistoricEngland.org.uk

If you would like this document in a different format, please contact our customer services department on:

Tel: 0370 333 0607
Email: customers@HistoricEngland.org.uk

All information and weblinks accurate at the time of publication.

Please consider the environment before printing this document

HEAG242
Publication date: October 2012 © English Heritage
Reissue date: July 2018 © Historic England
Design: Historic England