

Section 3

Research Agenda

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ENGLISH HERITAGE



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“The known is finite; the unknown infinite; intellectually we stand on an islet in the midst of an illimitable ocean of inexplicability. Our business in every generation is to reclaim a little more land”

(Thomas Huxley, 1888, 204)

Developing an agenda: defining issues

The small islet of Huxley's allegory is, for Stonehenge and its landscape, represented by the body of knowledge that has built up over the last 300 years or so, some of it secure, some less so (Section 2). How that body of knowledge can be expanded in the foreseeable future, how more can be added to the islet, is the subject of this Section.

Axiomatic to modern traditions of research is the idea that clear well-articulated questions lead to good results. This is especially the case for problem-orientated research, but equally to make good use of curiosity-driven research there needs to be clear visions of what is being looked for and what is really important and worth pursuing if and when it is recognized. There are many different kinds of research question, some simply interrogatory others interlocutory. In broad terms they can be divided into three groups reflecting different scales of approach (Darvill 1998, 5):

Questions: Matters that are capable of relatively direct solution given some kind of carefully planned and direct inquiry. Things such as the date of a site or structure; the relationship of one thing to another; or the association of one group of material with another.

Problems: These are substantial matters that do not have a simple answer. Rather they require careful resolution, probably over a period of time, based on the structured accumulation of verifiable data using specific methodologies. The quality of solution to any problem is in part a consequence of the methodology adopted. Typical problems might, for example, include the dating of a particular kind of pottery, the nature of settlement in a

defined region, the nature of associations between one set of things and another, or the essential characteristics of a type of archaeological deposit. Unlike the solutions found for specific questions, the resolution of a well-defined problem provides the basis from which confident interpretations can thereafter be made, at least until the problem is redefined.

Themes: These are general interpretative matters that are not so much specific studies as broad subject domains that can bind together and embrace a series of connected but not necessarily united studies.

Collectively, these can most easily be seen as "issues", namely important subjects for consideration, discussion, debate, or resolution through research, inquiry, experimentation, or investigation. Listed together such issues form a *research agenda* of the kind envisaged by Olivier (1996, 5), but there are many different ways of looking at issues, what they cover, their philosophical and theoretical underpinnings, and the interest groups they serve.

Issues generally arise from a critical reflection of what is already known (Section 2 above), sparks of inspiration from seeing things in different lights, and making new connections between ideas. In trying to move research forward there is always a danger of simply perpetuating existing knowledge through over-reliance on traditional classifications and ways of thinking. Thus in this Section, rather than following the regularized chronological subdivision of the past into rigid slices, or exploit the cybernetic logic of integrative themes, the aim is to allow issues to be self-defining in terms of being essentially reactions to existing interpretations. For presentational reasons, and to assist in evaluating them, they have been arranged below into four main

groups:

Period-based and site-based issues - Synchronic views of some particular part of the past in the present or a particular site; the classic snapshot image of what happened at a particular moment in time and space. In many cases these are the BIG issues that visitors focus on when looking at or being shown a particular site.

Subject-based issues - Diachronic views of a currently defined field of interest that cross-cuts time and space, often focused at the landscape or inter-site level.

Contextual and interpretative issues - Perspective or process-based fields of interest that relate to fundamental understandings of the archaeological material, its formation, biases, strengths, weaknesses, and what we make of it.

Management-based issues – Matters which relate directly to the integration of research with day-to-day, medium term, and strategic management issues, including the effectiveness of management works in conservation, protection, and presentation.

In many cases of course individual issues might span more than one heading, and indeed some overlap in terms of their coverage. Some of the issues relate to a particular site, some to the whole archaeological resource of the World Heritage Site, and others to still wider contexts. There is no attempt here to privilege one kind of issue over another, their inclusion here indicates that one or more sector of the research community concerned with the Stonehenge Landscape considers them important and worthy of pursuing.

Period-based and site-based issues

Issue 1: What is Stonehenge?

Background: Probably the most frequently-asked question about Stonehenge itself, although recognized by archaeologists as a series of questions about each of the different articulations (phases) of the site (Illustration #80). There is probably no single answer. The archaeological focus on the construction

phases has shifted attention away from its use; although ethnographic models suggest that divisions between construction and use are perhaps rather artificial and that the act of construction, modification, and reconstruction is central to the meaning of the structures themselves. Some elements look like well-known kinds of monument: for example the ditch looks like that of a causewayed enclosure while some of the stone settings match with settings found at stone circles elsewhere in north-west Europe. What is unique, as far as can be told, is the sequence represented and the use of five massive trilithons and stone lintels on some settings. Whether Stonehenge was unique in the Neolithic world or unique only in being the one that survives is not known, but again deserves attention.

Closely linked to this issue are the matters of: Why build Stonehenge? How many Stonehenges were there on the site? How was it used? What was the precursor to the visible Stonehenge?

Issue 2: Who built Stonehenge?

Background: A superficially simple question but one that connects into a wide range of problems and themes. Since it is not known whether the present Phase 1 is indeed the earliest structure on the site there is the matter of whether it is a third millennium BC community or an earlier one that is the target of attention. Taking the main recorded phases of the monument, there has been considerable debate about the role of cultures outside Wessex in the Stonehenge World and indeed beyond. Connections with Mycenaean Greece have been much discussed (see Renfrew 1968; 1997, 5-6), as too possible influences from Armorica (Burl 1997; Scarre 1997). The International Millennium Exhibition staged in 2001 in Nuremburg (Germany) and entitled "Mycenae : Nuremburg : Stonehenge" suggests that there is considerable interest in the very long distance links represented by later Neolithic and Bronze Age constructions across the Old World. More locally, there are important strands of this issue that relate to whether the builders were local indigenous populations partly or whole, and/or to what extent others from elsewhere in southern Britain and beyond were involved.

Closely linked to this issue are questions such as: what kind of social organization prevailed? The earlier phases

seem well within the abilities of later Neolithic communities to judge from their other achievements, but the sarsen trilithons and peristyle demanded labour on a quite different scale. Perhaps this southern monument ended up being a truly national undertaking.

Issue 3: How was Stonehenge built?

Background: The construction of Stonehenge, and indeed related monuments such as the Stonehenge cursus and Durrington Walls, individually and collectively represents a huge investment of labour not least in terms of their physical construction, assembly, fitting together of the stonework, and building earthworks. Some estimates of labour requirements have been made (Renfrew 1973), and there have been experiments and proposals for simple tasks such as ditch-digging using bone and antler tools as well as more complicated tasks such as moving and raising the large stones at Stonehenge (see above). (e.g. Richards and Whitby 1997; Adamson 2002). Many of these exercises explore possibilities and provide time and motion studies. Many are still mesmerised by Richard Atkinson's (1979, 105-122) experiments and his insistence upon sledges and the use of vast teams of human beings to pull them. As the date of the large stone settings becomes more sharply focused (2550-1660 BC) the possibility that some kind of wheeled vehicles were used must be entertained and deserves further exploration. Experiments using multi-block and oxen is one approach. The search for clues at Stonehenge itself in the form of ruts (Paul Ashbee reports seeing numerous ruts, apparently undated, along the line of the Avenue near Stonehenge during excavations in the 1950s). More work is also needed, especially using the ethnographic evidence of the 20th century sarsen industry in Wiltshire and the experience and skill of contemporary communities who have made similar achievements using comparable technologies. Matters to investigate include:

- The process of shaping and dressing the sarsen stones
- Raising the lintels
- How much time, labour, energy was needed to achieve various defined tasks

Issue 4: Where did the builders and

users of Stonehenge live?

Background: Although half a dozen-timber structures dating to the period 3000-1500 BC is known in the Stonehenge Landscape there is polarized debate about their interpretation (Illustration #81). Some see the timber structures as essentially secular, dwellings or dwellings also used for ceremonial purposes (Wainwright 1977, 6). Others unfold the argument that all timber structures are essentially ceremonial features (not necessarily buildings at all), as a consequence of which there are no dwellings, and thus the population was highly mobile (Thomas 1996, 2). Is this right? What variation exists? What should be expected given the known range of habitations in the Stonehenge World? Where might they be preserved? Do such contexts exist? How can they be explored archaeologically? Are existing categories referring to structures and buildings appropriate? Should we be looking for a "new" kind of archaeological evidence such as "yurt"-like shelters represented archaeologically as rings of stakeholes, a hearth, one or two pits (possibly latrines), and light scatters of rubbish? Should all pits be regarded as similar or can differences be seen here too? Key matters thus include:

- Problematizing what is meant by "occupation features" and the signature likely to be left by various settlement systems and the ways in which domestic and ceremonial practices were spatially and temporally interwoven in the Stonehenge Landscape.
- Understanding the nature of posthole structures, their variability, and their interpretation
- Reviewing the nature and content of excavated pits and the preparation of suggestions for the future investigation of such features.

Issue 5: The appearance and later history of Stonehenge

Background: Depictions of Stonehenge with complete rings of stone uprights are based on a series of untested assumptions (Ashbee 1998). There are insufficient stones at the site today to complete the circular settings, but little evidence has been advanced for the systematic robbing or destruction of the site as, for

example, is documented at Avebury. Equally, obvious destinations need to be fully checked: use for road-metalling on the adjacent turnpike (now the A344); hardcore to prevent carts and carriages getting bogged down in the 17th and 18th centuries AD (are the layers of chippings recorded by Hawley and others all working waste are is some broken-up orthostats?); the fabric of local churches and Roman villas; the fabric of Amesbury Abbey; and the rockeries of Wilton. A line of holes made by a stone-breaker's jumper can be seen in the now supine Slaughter Stone strongly suggests systematic robbing at some period.

The original position and arrangement of some stones is far from certain, yet are also critical to understanding the appearance and use of the site. A case in point is the so-called Altar Stone in the central area (Burl 2001). What happened at Stonehenge between about 1500 BC and the 18th century AD when the first systematic records of the site began to be made represents a big gap in knowledge and one that has very considerable implications for understanding and presenting the earlier periods too. Key matters include:

- Position and arrangement of the Altar Stone
- Were the sarsen and bluestone circles ever complete?
- What happened to the missing stones?
- Did the Aubrey Holes contain posts?
- What were the Y and Z holes?
- Were there standing stones along the banks of the Avenue as suggested by geophysical survey?
- Is the sarsen debris scattered across the site only the result of construction activity or is there also debris from stone-breaking?
- How was the site used in later periods?
- How did an Anglo-Saxon inhumation come to be placed within Stonehenge?
- Was there stone robbing that has so far gone unnoticed?

Issue 6: Carvings, rock art, and the surfaces of the stones

Background: The presence of rock art on the surfaces of some of the stones at Stonehenge was first recognized in modern times as fact in 1953, since when the material has been much

discussed (Cleal *et al.* 1995, 30-33). The antiquity of the carvings, mainly axes, is based on stylistic grounds. No detailed full systematic study of the surfaces of the extant stones has been carried out (which must include the tops of the lintels), although some latex moulds were made in the 1950s (now seemingly lost) and in 1967 stereometric photography was used (see Cleal *et al.* 1995, figure 9). Recording could now be done using laser-imaging to create micro-topographic models that can be illuminated from any angle during computer analysis. One of the key matters is to resolve conflicting interpretations of motifs such as the "box" (Burl 1997; Scarre 1997); another is to separate out as far as possible the relatively modern graffiti from potentially authentic prehistoric rock art. Knowing its full extent and character is a first step, recognizing that some may have been on the stones before they were brought to Stonehenge. Surface models would also provide a means of monitoring change to the rock surfaces.

The similarity of Stonehenge to the site of Flagstones, Dorset, raises the question of whether there was rock art on the sides of the Stonehenge ditch as there was at Flagstones (Woodward 1988). Indeed it must be queried whether other monuments in the Stonehenge Landscape carry rock art, as seems to be increasingly recognized elsewhere in central southern England.

Issue 7: The linear structures in the Stonehenge Landscape

Background: A great deal of attention has focused on the circular elements of the Stonehenge Landscape, especially the henges and barrows. Also of note are the many linear structures. The cursus is the most investigated so far, but even here excavation has been minimal and detailed survey almost non-existent (Illustration #82). It is probably the most completely preserved cursus so far known in the British Isles, and was the first to be recognized and so named. Detailed topographic surveys at the Cleven Dyke, Scotland (Barclay and Maxwell 1998, 27-29) show the complexity of a broadly similar linear structure and the value of such work. Further afield, note may be made of the "Banqueting Hall" at Tara in Ireland. Geophysical survey would also repay the effort, as shown with the so-called "Lesser Cursus" (David and Payne 1997, 88) which is probably more at home in the long-mound /

bank barrow tradition avenue of the Wessex later Neolithic (*cf.* Bradley 1983). Work at the Stonehenge Avenue suggests that stone settings might be present along the banks, but this has never been tested. The phasing of the Avenue also remains unresolved.

The palisade ditch located on the west side of the Avenue and running for over 1km on the northwest side of Stonehenge itself has been sectioned on three occasions (1953, 1967, and 1978). A burial dated to the later Bronze Age was found cut into the top of the ditch in 1967, but the palisade itself is clearly earlier (Cleal *et al.* 1995, 155-61) and perhaps related to the now widely recognized series of later Neolithic palisaded enclosures from many parts of the British Isles (Gibson 1998). The Stonehenge palisade ditch urgently needs to be dated properly, set within the wider sequence, and traced to determine if it is part of an enclosure or not. Stonehenge may turn out to be a small structure immediately outside a far more substantial timber-walled enclosure.

The long barrows within the Stonehenge Landscape have not been studied much in recent years. Many have been damaged by cultivation over the last century or so and their original outline and form obscured. It is clear, however, that there are several different shapes and sizes represented. Within the WHS only two long barrows, Winterbourne Stoke Crossroads and Durrington 42 at the east end of the Cursus, fully deserve that classification; the remaining examples, including perhaps the so-called long mortuary enclosure on Normanton Down, appear to be oval barrows (*cf.* Drewett 1975, 137-8) but this again needs checking. No details of the internal arrangement of these barrows are known; whether there are stone or wooden chambers, for example. Geophysical surveys could help here, but excavation will ultimately be needed for dating and to determine internal sequences of construction.

Issue 8: Anglo-Saxon Stonehenge and the Christian transition

Background: One of the major advances in recent studies of Stonehenge and its surroundings is the recognition that the Anglo-Saxon presence at the site was rather greater, and perhaps more significant, than previously thought. The 7th century burial accompanied by possible evidence for a gallows (Pitts 2001b; and see Hinton 1998) together with coins from

the area and a fair scatter of Anglo-Saxon pottery suggests that there is more to be found. Other undated features at Stonehenge may indeed prove to belong to this phase. Leslie Grinsell records a number of pagan Saxon burials in the area and there is an intriguing reference to a cemetery on Durrington Down (Grinsell 1959, 66; see above Section 2). A number of recent studies have considered the role and place of prehistoric monuments in the lives of Anglo-Saxon communities (Williams 1998) and it is well known that many such monuments were "Christianized" in the later first millennium AD (Grinsell 1987). Stonehenge thus provides a highly appropriate case-study for helping to understand this important transitional period when Christianity was replacing earlier, and potentially very deep-rooted ideologies.

Subject-based issues

Issue 9: Barrow cemetery evolution, structure, and meaning

Background: The Stonehenge Landscape contains more than 30 clusters of barrows of the sort conventionally referred to as cemeteries. Many have been partly or wholly damaged by agricultural activities with the result that there is not a single undamaged group around Stonehenge. A fair number of barrows have also been excavated, although no cemetery has been completely examined. Little or nothing is known about the flat graves that might be expected between and around the barrows of the major cemeteries. It is, however, clear that cemeteries typically include barrows of different date and form (Grinsell no date; Woodward 2000).

Much reliance has been placed on traditional typologies and classifications of upstanding and recorded monuments, but none have adequately been defined in terms of the number and variety of burials represented, their area and limits, their "non-monumental" components, and the absolute dating of the constructional sequence and use patterns. Some human remains and cremations do survive in museum collections and could be used as the basis for a dating programme. In other cases it is known that their excavators reburied human remains; re-opening earlier trenches could easily recover these.

The relationship of the Wessex barrow cemeteries to those found elsewhere in the British Isles is also deserving of attention.

Recent surveys of Bodmin Moor, the Dorset Ridgeway, and the Lincolnshire Wolds, for example, provide useful *comparanda*.

Issue 10: Monumentality and the changing landscape

Background: It is widely recognized that the Stonehenge Landscape contains a concentration of monuments the like of which is rare on a European scale. This is often explained as the result of a some kind of persistent recognition of the importance or significance of place. Both these assumptions need to be challenged and tested, and if supported some understanding of what that importance or draw might have been. Critical in this regard is recognizing when the process of monumentalization began. The presence of postholes dating to around 7500 BC to the northwest of Stonehenge have been cited as being significant (Parker Pearson and Ramilisonina 1998, 323) as too the presence nearby of an ancient and substantial tree (Darvill 1997, 174-6). Because of the way these features came to light (through excavations connected to management works in 1966 and 1988-9) very little of their context is known (Cleal *et al.* 1996, 43-56).

One approach is to focus on the idea of “planning” in the landscape and to see how successive additions were influenced or otherwise by the disposition of the monuments already in place.

On a broader front, the long-term effects (right down to the present day) of existing monuments in the landscape affects people's perception and understanding of that place even though the original meaning of some elements may be lost. Starting from a simple question - Why is Stonehenge where it is? - This issue builds into a broad theme about the meaning of monuments. What was the cultural context of the area before Stonehenge? How were Stonehenge and surrounding monuments re-used / resignificated in later times.

Issue 11: Sacred shapes, forms, and intervisibility

Background: The shape and form of Stonehenge itself, and all the other monuments in the Stonehenge Landscape too, were deliberately constructed and are likely to

embody a range of meanings in their position, shape and form, orientation, and the materials used in their construction. Aspects of these possibilities have already attracted attention and have led to new ways of viewing the sites (Darvill 1997; Parker Pearson and Ramilisonina 1998; Pollard and Ruggles 2001; Whittle 1997). The intervisibility of monuments has also begun to be explored using the capabilities of GIS (Batchelor 1997). There is far more to do on this theme, not least drawing in anthropological models to provide new insights into the way things might have been treated.

As it is often perceived, the Stonehenge Landscape tends to be constrained by the better preservation of monuments west of the River Avon. There are, however, fair numbers of barrows east of the Avon and these should perhaps be brought into the picture even though less visible. The *Stonehenge Management Plan* calls for a research-driven review of the boundaries of the World Heritage Site (English Heritage 2000, 4.4.17) and a preliminary to this would be a systematic review of representation of monuments east of the Avon and west of the Till.

Issue 12: The social use of space

Background: Considerable attention has been given to the reconstruction of the physical environment (although there is still more to do here), rather less to the way societies treated and used space. This is probably critical to understanding questions about the role and purpose not only of Stonehenge but also all the other sites around about. It cannot be assumed to be static, and the processes by which one society regards space in the light of its own heritage is itself a matter of general interest that work within the Stonehenge Landscape may shed light on (Illustration #83).

Distributions of a vast range of archaeological material need to be reviewed: one example is the distribution of rich Wessex-style graves which, looked at regionally, cluster east of the Avon rather than around Stonehenge itself (see Cunliffe 1993, figure 3.16 for a useful summary map). Scale is important here as the way space was regarded may well find expression at the small scale within individual sites and structures as well as across larger expanses (*cf.* Pollard and Ruggles 2001; Darvill 1997, 173). Key matters include:

- Why do so few barrows occur immediately around Stonehenge itself?
- Where are the cemeteries and associated settlements of Roman, Anglo-Saxon, and medieval times?

Issue 13: Rivers, valleys, and water

Background: Although the chalk downlands have long been the centre of archaeological interest, the Stonehenge Landscape contains two main river valleys running broadly north to south: the Till to the west and the Avon to the east (Illustration #84). The Avon in particular runs close to a number of key monuments including Durrington Walls (with its south-east entrance opening to the river), Woodhenge, Vespasian's Camp, and Ogbury. Long known as the focus of medieval and later settlements the valley has hardly been explored in terms of its place in the prehistoric settlement system. The Stonehenge Avenue connected Stonehenge with the Avon. The Avon is also widely believed to have played a role in the transportation of the Bluestone to Stonehenge whether by the northern route along the Bristol Avon / River Wylde / Wiltshire Avon route or the southern route using the Hampshire Avon / Wiltshire Avon (Atkinson 1979, 107).

Darvill (1997, 179) has proposed that Phase I of Stonehenge is a microcosm of the wider landscape with the flow of the river represented in the position of the main entrances into the enclosure. Parker Pearson and Ramilisonina (1998, 318) suggest that the river links the domain of the living with the domain of the ancestors, journeys along it representing the transformation from life to death. The role of the Stonehenge Cursus crossing the interfluvium between the Avon and the Till may also be relevant.

What are now seasonal watercourses or dry valleys deserve some further investigation as part of the need to examine the overall topography of the prehistoric landscape. Some may well have been more conspicuous and perhaps also more significant features in early times. It is notable, for example, that Stonehenge Bottom connects with the Avon valley and might at one time have been a feeder tributary or even a former river-course. The fact that the Stonehenge Avenue runs into Stonehenge Bottom on its first leg before running over King Barrow Ridge to join the Avon may be worthy of further investigation.

Sherratt (1996) has drawn attention to possible connections between all the various river Avons in southern Britain suggesting that they were considered as one in ancient times: "The River". Coles (1994) has shown that other river systems in southern England might also be regarded as transportation routes. A number of matters may be considered here:

- The nature and extent of alluvium in the Avon valley; river regimes and water heights in the past
- The extent and date of peat sequences in the Avon Valley north of Amesbury
- The nature and extent of buried land surfaces in the river valley
- The possibility of waterfronts adjacent to established monuments (this problem is already being pursued by Mike Parker Pearson for Durrington Walls)
- The history and early status of Stonehenge Bottom as a permanent or seasonal watercourse and its relationship to the Avenue.

Issue 14: Materials, resources, and the origins of structural components and objects in the Stonehenge Landscape

Background: Much attention has focused on the source of the Bluestones at Stonehenge and elsewhere and the means by which they might have been moved. There are many other kinds of material from archaeological contexts whose origins deserve to be more closely examined. The sarsen stones at Stonehenge have traditionally been assumed to derive from the Avebury area, but this has not been scientifically demonstrated through characterization studies. Investigations of stone from the 1979-80 excavations around the Heelstone by Hillary Howard suggested that not all the sarsen came from the Marlborough downs; the only other likely source is east Kent where builders of the Neolithic Medway tombs used sarsen but this has not been followed up.

There is much more work to be done on the sources of ceramics, stone objects, metal objects, and perhaps on the movement patterns of human beings buried around Stonehenge. Scientific methods of characterization and analysis provide new ways of exploring the materials represented in structures and objects.

Contextual issues are also important here, for example the significance or otherwise of bluestone chips in nearby barrows.

Issue 15: Astronomy, attitudes, the idea sacred spaces, and cosmology

Background: The existence of astronomical alignments within the structure of Stonehenge and other monuments in the area (including Woodhenge) has been a recurrent theme of many descriptions and in an assumed element of many interpretations. The nature of these alignments has recently been the subject of investigation (Ruggles 1997), and some can be supported by the design and architecture of the monuments. There have been important shifts in the perception of such alignments away from the back-projection of 20th century precision astronomy and descriptive geometries towards more realistic views of how alignments may be embedded in prehistoric structures (Illustration #85).

One remaining matter is the widespread imposition of binary oppositions onto the archaeological material and the need to break down inappropriate oppositions (e.g. settlement :: ritual site / ritual landscape :: secular landscape). Patterns of deposition and cosmology will not only be found in architecture, but also in the nature, use, and deposition of artefacts (Darvill 1997; Pollard and Ruggles 2001). There has for a long time been a focus on Stonehenge, but what of the other structures and sites in the area such as Coneybury and Durrington Walls?

The archaeology of signified places is also a theme that deserves to be explored. One example are places of high visibility or the focus of attention from within established monuments: what was on the skyline at the point where the mid-summer sun rise visible from Stonehenge occurs?

Issue 16: Fieldsystems and the early agricultural landscape

Background: In 1957, Grinsell listed all the recorded ancient fieldsystems in Wiltshire as essentially Iron Age in date, following conventional wisdom at the time (Grinsell 1957, 272-79). It is now known that fieldsystems are of many different types and of various dates from the later Neolithic through the Roman period (Fowler 1983, 94-119; Fowler and

Blackwell 1998, 42-56). The evidence of aerial photography in the Stonehenge Landscape has revealed more than a dozen main blocks of fieldsystem; on morphological grounds there are several types represented and these deserve to be examined and characterized.

Such fieldsystems are notoriously difficult to date, but that should not prevent carefully targeted investigations. The temptation to date the construction and use of the fieldsystems by the dominant material spatially associated with them through surface recovery is to be avoided as such material could potentially relate to a period in history when manuring took place or cultivation has scattered earlier or later cultural material. Some investigation of the nature of the various assemblages recovered from fieldwalking in terms of the depositional characteristics of the material might help identify different sources.

The evolution of the fieldsystems is also important. Excavations elsewhere suggest that many have long histories consequent on the major investment in landscape organization that they represent. Are those in the Stonehenge Landscape, which appear to be Bronze Age actually late Neolithic in origin?

Issue 17: Landscape evolution and design

Background: The modern landscape is a complicated palimpsest built up since early prehistoric times. There are a number of major gaps in the overall understanding of how things have changed over time.

The early prehistoric landscape, mainly the immediate post-glacial and Mesolithic periods (10,000 – 5,000 BC) is very poorly understood both in terms of its physical and environmental form (including topography, geomorphology, and appearance), and its cultural components such as the disposition and intensity of occupation. The importance of better understanding this phase of the landscape better is the increasing recognition of its importance in setting the scene and perhaps providing the impetus for the extraordinary range and density of sites and structures that characterize the rather better known landscape of the Neolithic and Bronze Age.

The first millennium BC and first millennium AD are also major gaps for which detailed knowledge is sparse. The role of major monuments such as Vespasian's Camp in relation to nearby sites such as Yarnbury and

Ogbury needs to be explored. In some cases the Stonehenge Landscape may be too small an area for meaningful analysis.

Much of what is visible in the World Heritage Site today is the result of post-Roman activities and especially recent land management policies by the principal landowners, the National Trust and the Ministry of Defence. Embedded in the modern structure of the landscape are many ancient features, as Bonney (1976) showed with reference to the Winterbourne Stoke / Wilsford cum Lake parish boundary which utilizes the alignment of the Winterbourne Stoke linear barrow cemetery and the Monarch of the Plain barrow. The relatively modern needs to be separated out from the potentially ancient.

Post-medieval landscape design has not been explored in much detail within the Stonehenge Landscape, yet is potentially rather important and illuminates many of the lines of inquiry currently being tackled elsewhere (Williamson 1995). This is well demonstrated by the expansion of Amesbury Abbey Park in the 18th century AD with the creation of the grotto (Gay's Cave, with its "civilized" classical form emerging from the vermiculated rough stone) and the distant rides through Vespasian's Camp to a distant view of the ultimate romantic ruin in the form of the "druidical" Stonehenge.

Unpicking such a palimpsest requires great care and the use of multiple sources, especially for the medieval and later periods (cartography, historical documents, estate records, aerial photographs, oral history *etc.*). The GIS-based mapping already available at English Heritage provides a solid starting point and could be developed to provide a map-regression analysis of the landscape. This will be especially important in relation to:

- The physical and cultural landscape of early prehistory
- The landscape of the first millennium BC and first millennium AD
- The development of the medieval landscape and the Hundred of Underditch
- The Inclosure of the area (building here on the RCHME 1979, xv-xxiv work)
- The emparkment of some areas (especially around Amesbury)
- The impact of successive phases of military training.

- Map and fully document the historic buildings in the Stonehenge Landscape

Contextual and interpretative issues

Issue 18: The relationship between physical access, experience and people's sense of place

Background: Physical access to the Stonehenge Landscape is currently structured by existing roads, pathways, entrances, exits, and boundaries (Illustration #86). How do these relate to known patterns in the sub-division of space in the past? How does the modern experience of space relate to former experiences? How can movement and experience be modelled? To what extent are place-names a reflection upon how the historic landscape has been perceived through the ages?

Issue 19: The robustness of assumed knowledge based on earlier investigations

Background: More than three-quarters of archaeological work in the Stonehenge Landscape was done in the 19th century and early 20th century before the availability of techniques such as radiocarbon dating, soil analysis, and environmental sampling. Many of the things we think we know about Stonehenge and other monuments around about we don't actually know at all; even though many have become "facts" and major planks in the support of general arguments and interpretations.

Much has been achieved through the re-analysis and study of early archives and reports on this work, but it is not always clear exactly what antiquarian excavators mean when they report particular observations. Re-interpretation is sometimes possible, but in many cases this simply raises possibilities that deserve to be checked. Work at the Sanctuary near Avebury (Pitts 2001a) shows how much can be achieved through the careful re-examination of antiquarian excavations. Indeed, the Council for British Archaeology recommended the re-excavation of barrows unscientifically dug in the past in their 1948 field research policy document (CBA 1948, 92), a proposal that was considered to apply when

Paul Ashbee re-excavated Amesbury Barrow 51 in 1960 and found that William Cunnington's excavation for Sir Richard Colt Hoare in 1805 had in fact done relatively little damage (Ashbee 1976).

This issue is essentially a contextual one, involving a large number of site-specific questions.

For Stonehenge:

- Do the timber structures (Phase 2) really predate the first stone phase (Phase 3)
- What is the date of the Station Stones
- Are the lines of postholes in Phase 2 part of a timber avenue?
- What is the relationship of the Heelstone and Stone 97 with the central settings?
- What was the function of the Aubrey Holes?
- Can any of the numerous undated features be identified as part of an earlier (pre-Phase 1) monument?

For the Stonehenge Car-park:

- Are the postholes discovered so far isolated structures or are they part of a larger entity?

For Bush Barrow:

- Was the adult male inhumation associated with the well-known set of rich grave goods excavated by William Cunnington in 1808 really the primary grave?

Issue 20: Understanding and using the artefacts and ecofacts from the Stonehenge Landscape

Background: The 700 plus investigations in the Stonehenge Landscape over the past three centuries have yielded a vast collection of artefactual and ecofactual material. This is widely scattered amongst local and national museums. Some material that was excavated in the 19th century is known to have been reburied at its place of discovery and could, if exhumed, provide major new collections. Some artefactual material has been well catalogued and described (e.g. Annable and Simpson 1964) and there have been a number of

studies of particular classes of material, often in the context of geographically broader reviews. Site-based studies of excavated assemblages are available for more recent excavations. There is no general corpus of excavated artefacts from the Stonehenge Landscape (although a listing and concordance of material from excavated barrows is awaiting publication) and major groups of material, such as later prehistoric pottery, flintwork, and stone objects, have never been adequately surveyed. Technical investigations of extant artefacts, such as, the study of use-wear patterns, breakage, and fragmentation, is urgently needed. In the case of human remains there is scope for biomolecular studies, such as DNA characterization. These are essentially thematic studies whose execution involves looking inside the Stonehenge Landscape and outside it to other parts of the Stonehenge World.

Issue 21: The meaning and utility of traditional monument classifications

Background: Early work in the Stonehenge Landscape was instrumental in defining the categories used for the classification of archaeological monuments. In some cases these have been expanded and applied to other parts of Britain with little critical review of their utility. Amongst the most significant such classifications are those relating to barrows. As the homeland for these classifications it would be appropriate to revisit them and deploy modern methods of investigation as well as new approaches to classification and taxonomy to consider the coherence and integrity of these traditional systems. Especially important are:

- Long barrows: their structure, internal arrangement and relationship to regional groupings
- Oval barrows: the extent to which they can be separated out as a distinctive class
- Fancy barrows: the integrity of the grouping and the distinctiveness of the typical component forms (e.g. bell barrow, disc barrow, saucer barrow, pond barrow etc.)

Issue 22: Contemporaneity and the relationships between monuments at the landscape, regional, and world scale

Background: Although Stonehenge is unique in terms of some of its structures and the particular succession of structures on the same site over a period of more than 2000 years it is also very much part of a tradition of late Neolithic and early Bronze ceremonial centre. Examples are known at intervals of roughly 40km across much of the British Isles. In Wessex they include: Avebury (Wiltshire), Dorchester on Thames (Oxfordshire), Dorchester (Dorset), and Knowlton (Dorset), Priddy (Somerset). Most contain a selection of monuments drawn from a wider repertoire such that not every centre has the same set; all have common elements. Such a pattern was been used by Colin Renfrew (1973) to look at social change (and see also Ashbee 1978, 83 and 101).

Accessibility may have been a key element to the positioning and distribution of these centres and associated monuments. In the wider Stonehenge world there are similar sites around Newgrange in the Boyne Valley of Ireland, Mainland Orkney, and Carnac in Brittany. Each is separated by a degree of physical distance, but there are major questions also about the social distance between centres - questions of identity and territory - and whether there are lesser-order centres of some kind in between.

On a wider scale still, there is the question of how the architecture of Stonehenge 3 fits into the contemporary traditions found in other parts of Europe.

Issue 23: Filling the gaps and understanding distributions

Background: A considerable amount of survey work has been done around Stonehenge, much of it methodologically tied to the prevailing land-use regimes. Thus, south of Packway, most work has concentrated on fieldwalking and the recovery of material from cultivated land; north of the packway there is very little opportunity for such work, and instead the focus has been on topographic survey and earthwork plotting. Combining earthwork evidence and cropmark evidence visible on aerial photographs provides one means of developing broader overviews even though the nature of the data on which such plots are based is variable. Aerial photographs do not, however, give total coverage of relevant archaeological features. Small features such as

graves and pits are poorly represented and need to be sought by other means.

The use of other techniques which would serve to link existing surveys, provide consistent data over broader areas, and fill physical gaps in existing data sets with comparable data is possible. The use of test-pits to quantify topsoil content where fieldwalking is impractical is one possibility whose potential has been demonstrated. Further extensive geophysical and geochemical surveys would provide another layer of distributional information.

Some comparative studies with other areas of southern Britain would provide a more secure understanding, in absolute and relative terms, of the distributional data available. Many of the approaches applied here can be non-destructive or involve only minimal intervention. Taking the broad view there is also work to be done on understanding why preservation is apparently so different in different parts of the landscape, and what the implications of this are for interpreting what is already known and targeting future work. One critical question of wider interest, but potentially answerable with data from the Stonehenge Landscape, concerns understanding the meaning and interpretation of flint scatters and some understanding of their variability.

Issue 24: Populating the record for post-Roman studies

Background: While the importance of understanding the post-Roman landscape is widely recognized and frequently acknowledged, the database from which to work on these matters is generally inadequate. The ability to draw on sources of evidence such as place-names, documentary sources, cartographic evidence, legal instruments, distributions of stray finds (Illustration #87) and, for the most recent periods, also oral histories too, provides a rather different complexion to the essential research resource. There is an urgent need to integrate these traditional sources for post-Roman archaeological studies with the existing database which focuses on the kinds of data most relevant to prehistoric archaeology.

Much of the conventional archaeological data for the post-Roman period has accumulated as the incidental outcome of work focused on other matters. Surveys of the area with more explicitly defined objectives in

relation to later periods (e.g. historic buildings) provide an obvious means of redressing the balance. Key matters here include:

- Where are the later first millennium BC cemeteries and burial places?
- Is it possible to find cartographic and physical evidence of early medieval boundaries and territorial units?
- Which modern settlements were established in early medieval times?

Issue 25: Environment and change to the physical landscape

Background: It is well-known that the Stonehenge Landscape visible today is a relatively modern creation. Major advances have been made in the understanding of earlier environments, and a set of predictive models built-up from available local sequences (Allen 1997). Many questions remain, however, on a site-by-site basis and with the Stonehenge Landscape as a whole. The need to provide this was well recognized in the *Stonehenge Management Plan* (English Heritage 2000, 4.7.6). The basic issue here is how people in the past intentionally or unintentionally transformed, modified, or changed the physical landscape either independently or in response to more deep-seated cycles, trends, or catastrophes. Various models are available to assist in exploring these matters: progressive change; punctuated equilibrium; global catastrophe events; and so on. Resolving this issue will involve rather wider considerations than might be found solely within the Stonehenge Landscape, although locally important matters include:

- When was the post-glacial woodland cover cleared?
- The make-up and extent of the woodland cover during the third and fourth millennia BC.
- Was grassland ubiquitous or were monuments mainly only built in grassland areas in the Neolithic and Bronze Age?
- What happened to the rich soils of the untamed Wildwood?

Issue 26: The hidden landscapes

Background: The rolling downland and incised river valleys of the Stonehenge Landscape provide a number of situations for the preservation of early land surfaces below more recent layers of colluvium. Sampling to date in areas such as Stonehenge Bottom shows that the accumulation and movement of mantle-deposits is complicated and not easily predicted. Deeper cover-deposits are, however, known along the Avon (Illustration #88). A systematic programme of modelling local site formation processes and the movement of soil and sediment in the environment would provide a major interpretative filter on distributional data, and explain at least some gaps in the current spread of site data.

Another major source of information about early landscapes are the buried soils sealed by structures such as barrows and ramparts. Many of these may be accessible using the holes excavated by 19th century investigations. The extent of later Neolithic land surface sealed beneath the many hundreds of early Bronze Age barrows is probably one of the most important archaeological resources in the British Isles. Important matters here include:

- Modelling, perhaps using GIS, the movement of soils and deposits within and around the Stonehenge Landscape, especially areas of deposit loss and sediment deposition.

Issue 27: The missing slices of time

Background: The Stonehenge Landscape is best known for the archaeology of the "Age of Stonehenge". Very little is known about major slices of time either side the later Neolithic and early Bronze Age, and yet these are very much part of the Stonehenge story. Especially poorly known is the archaeology (in conventional cultural-historical periods) of the:

- Later Mesolithic
- Early Neolithic
- Later Bronze Age
- Iron Age
- Roman
- Anglo-Saxon period
- Medieval
- Post-medieval

- Modern

Issue 28: Chronology and dating the undated

Background: Telling a good story about Stonehenge and its landscape requires a clear and full understanding of the dating of sites in terms of their internal sequence (order, duration etc.) and the contemporaneity of particular elements with phases or horizons at other sites both near and far. The extensive series of radiocarbon dates for Stonehenge itself has radically changed views on the development and relationships of that structure. There are also likely to be some surprises as the dating of the isolated burial at Stonehenge to the 7th century AD shows (Pitts 2001b). Few other sites in the area are as well dated, and many are simply not dated or assigned to broad phases on the basis of form or assemblages of artefacts excavated in the 19th century. The need to provide a more robust and extensive framework for all periods was well recognized in the *Stonehenge Management Plan* (English Heritage 2000, 4.7.6). Opportunities to redress the balance are provided by the absolute dating of human remains, objects, or the recovery of new samples from graves, pits, ditches, or old land surface through the re-opening of previous excavations.

Aerial photography, fieldwalking, and surface survey have revealed a great many archaeological sites and scatters of material, many of which are undated. From flint scatters to crop-marks suggesting the presence of plough-levelled ditched enclosures the majority of material cannot be fitted into robust synchronic views of the landscape at a particular time or the sequence of changes viewed over the long term.

Some material is conveniently used to fit particular models or views of the landscape without much recognition of the uncertainties over the chronological position of the material in question. This expanse of recorded archaeology needs making useful in terms of its contribution to the Stonehenge story by selective excavation to confirm its existence (or former existence), and, where possible, provide a date. Only in this way can reasonable sampling schemes be developed to investigate the archaeology of particular periods or regions.

Management-based issues

Issue 29: Erosion and rates of change

Background: The Stonehenge Landscape is one of the most intensively managed for archaeological objectives in England. As such it therefore provides an opportunity to monitor monument decay processes over long periods and match the patterns recorded against a detailed knowledge of land-use practices, weather conditions, visitor attention, and other factors that have been recognized as potentially significant for the preservation and conservation of sites. Woodland, pasture and arable land provide three key starting points for such monitoring, although bench-mark studies of a sample of monuments in each will be needed as the starting point. Changes to the surfaces of the stones at Stonehenge itself could be monitored through a rock art recording programme (see above). The need to provide research-based information about the condition of sites and monuments within the World Heritage Sites is well recognized in the *Stonehenge Management Plan* (English Heritage 2000, 4.4.18-19)

Issue 30: Publishing the outstanding investigations in the Stonehenge Landscape

Background: The publication in 1995 of the 20th century excavations at Stonehenge and monuments closely associated with it made accessible a vast body of data that had previously been hidden in unpublished archives and records (Cleal *et al.* 1995). In the last decade of the 20th century a great deal of work was carried out in the Stonehenge World Heritage Site in connection with the evaluation of possible sites for the proposed new visitor centre and road corridors for access tracks and the much trumpeted upgrading of the A303. Many of these studies were field evaluations or various kinds involving targeted trenching, surface collection, test-pitting, and extensive geophysical surveys. Some property development within the World Heritage Site also took place. It is also known that there are a few unpublished excavations of barrows and other features in the landscape from the 1960s. In future the publication of archaeological work is likely to be more closely phased with the planning process and the completion of

mitigation works. Currently, the key matters are thus:

- Draw together and publish investigations connected with the Stonehenge Conservation and Management Programme
- Publish outstanding developer-assisted evaluation and mitigation work from the Stonehenge Landscape
- Publish the remaining 1950s, 60s, and 70s excavations in the Stonehenge Landscape.

Issue 31: Shaping popular perceptions

Background: There are many stories, myths, legends, and popular perceptions about both ancient and modern aspects of the Stonehenge Landscape. They are documented since at least the time of Geoffrey of Monmouth and are reflected in many aspects of popular culture through recent centuries: literature, poetry, music, painting, drawing, and most recently in advertising and product endorsement. How such things have influenced people's perception of Stonehenge and its landscape is not fully known. Equally, the seemingly endless discussions about the future placement of visitor facilities and the controversy surrounding plans for road improvements impact on shared and individual perceptions of the site and its surroundings; well evident in the level of press coverage and the number of cartoons based on particular readings of the issues (illustration #89).

The influence of popular perceptions on visitor interest and the levels of expectation that visitors have are major components relevant to visitor management and the presentation of the site and its surroundings.

Issue 32: The human experience of the research process

Background: How does archaeological knowledge of the Stonehenge Landscape get from the hole in the ground to the words on a signboard? Visitors to the World Heritage Site have a general interest in all stages of that process. There are questions of control and the politics of the way knowledge is created. Most people visiting the area have questions in their minds (some are those set out here) and are interested in the process of resolving them.

How has knowledge of the site and the landscape changed? Is it any better now than 100 years ago? It is often said that the best thing about Stonehenge from the visitor's perspective is the "mystery" element; can that thrill of uncertainty be harnessed?

Issue 33: Linking research and site management

Background: It is well established that research leads to discoveries which in turn influence the ways in which land managers tackle fundamental issues such as access, land-use, conservation, interpretation, development control, and the need for further investigation and fieldwork. At one level this requires co-ordination, but the relationship is a two-way one as there are also numerous opportunities for research that arise through management works. Nor do all management works within the landscape arise from archaeological management, there are other interests too and many stewards of other physical and economic resources. The spotlight tends to fall on large-scale management operations, themselves often controversial, such as road-improvement schemes. There are many other situations, far less visible and rarely controversial, where management works and research opportunities can be fitted together.

Issue 34: Restoration and access

A major component of management works within the Stonehenge World Heritage Site concerns the restoration or establishment of appropriate land-use regimes, the creation of vistas and views, and the provision of routes and pathways through the landscape. The viability and authenticity of these are major concerns. Key questions here include:

- Which views into, across, and out-from the Stonehenge WHS should be restored or enhanced?
- What were the prehistoric, Roman, medieval, and post-medieval routeways through the Stonehenge Landscape and which ones is it appropriate to use today?
- How did the prehistoric and later landscape look in terms of the balance between grassland / arable land / tree cover / shrub growth / animal populations?

Issue 35: Importance and vulnerability

Background: The Stonehenge World Heritage Site and its surroundings contain a lot of very diverse archaeological monuments, remains, and deposits. Not all of it is necessarily of the same archaeological importance, nor can the significance of sites or areas be judged simply on the basis of visibility or size. Vulnerability to a range of anticipated threats also needs to be considered – visitor use, stock grazing, planting patterns, and so on. Key questions here include:

- Which are the most important and significant sites, areas, or deposits within the Stonehenge World Heritage Site and the Stonehenge Landscape?
- Which are the most vulnerable kinds of sites, areas, and deposits?
- Which monuments or structures could usefully be enhanced? And how is the best way of doing that?

Issue 36: Co-ordination, interpretation, and recording

Background: the process of carrying out research in the Stonehenge Landscape potentially involves many individuals and organizations; indeed this is already the case. The sharing of results, information, and resources potentially enriches the overall research endeavour. One of the suggestions made in the *Stonehenge Management Plan* is for the creation of an archaeological research group of some kind (English Heritage 2000, 4.7.3).

A physical resource through which research can be facilitated is also lacking at Stonehenge. Such a facility might not only provide a local base from which work could be co-ordinated, but also provides a setting for the public display of recent findings and a guide to ongoing work. One of the suggestions made in the *Stonehenge Management Plan* is for the creation of research facility at the proposed new visitor centre site (English Heritage 2000, 4.7.5 and 4.7.8).

The present Stonehenge Landscape GIS maintained by English Heritage provides a substantial integrated record of archaeological interventions, sites, and monuments. As a tool

to capture and present the vast body of data that has accumulated over the last 300 years or more it works well. Looking ahead, however, the nature of the data that will be generated through future fieldwork programmes is likely to be far more complicated in its structure and able to be used in far more sophisticated ways through combining datasets and using immersive digital technologies in the field and for visualization exercises for academic research and public display. Integrative approaches to diverse datasets such as have already been developed by the Stonehenge Landscapes Project (Exon *et al.* 2000) are an important first step in the greater use of digital technology.

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