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Future Directions for the Study of Stonehenge and its Landscape

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Background

IN THE EARLY PART OF THE EIGHTEENTH CENTURY, William Stukeley recorded many of the monuments in the Stonehenge landscape and excavated a number of round barrows. Subsequently, in the first two decades of the nineteenth century, Sir Richard Colt Hoare and William Cunnington examined over 200 round barrows in the vicinity of Stonehenge—almost half the total number. Similar extensive campaigns of excavation were currently being carried out, not only within Wessex, but also in the Peak District and in Yorkshire. The sole object of these investigations was the collection of relics and to obtain these, a single trench or central pit was dug into the mound thus locating and removing the central burial but leaving the fabric of the mound intact. This is important for future research programmes because the surviving deposits contain much that is of value in terms of environment and dating which can be extracted with little damage to the monuments themselves.

Between 1980 and 1990, English Heritage commissioned Wessex Archaeology to undertake a study under the direction of Julian Richards which would 'identify the prehistoric settlements in the Stonehenge region and establish their state of preservation with a view to developing a management strategy for them'. The results of that study were published by English Heritage in 1990 and form the basis for our current understanding of the landscape. Finally in 1995, English Heritage published a volume—commissioned from Wessex Archaeology—which presents a detailed discussion of the structural history of Stonehenge derived from the primary records of the excavations carried out between 1901 and 1964 as well as more recent small-scale excavations. The volume is of fundamental importance to anyone who wishes to understand Stonehenge; wishes to advance a new theory about it, or wishes to improve its management. The research necessary to produce the volume has raised new questions about the monument and its setting and the purpose of this paper is to outline these issues which will be addressed in the context of a carefully designed research programme over the next five years.

Aims and objectives

The effective management of the Stonehenge World Heritage Site depends on a clear understanding of its constituent parts—their history, structure, inter-relationships and condition. A research programme to create that understanding is essential, both for its future management and to inform the interpretative strategies for the public. English Heritage therefore intends to undertake a series of investigations at Stonehenge itself and in the surrounding landscape which will address the following themes.

1. *Who built Stonehenge?*

Where were the builders of Stonehenge living? What was the nature of their society and what were they doing in the landscape? Who were they? The potential for DNA analysis should be explored to determine family or other groupings within the human bone assemblage.

2. *Why build Stonehenge?*

Are there relationships in the content of the monuments and their spatial distribution in the landscape which shed light on why Stonehenge was built? The relationship of the monument with the natural and man-made environment should be explored in order to achieve a better understanding of the nature of the landscape and its interactions during the various phases of use at Stonehenge.

3. *What was the nature of society at the time of Stonehenge?*

Most of the investigations at Stonehenge and in the surrounding landscape pre-date the modern era when environmental data and samples for dating are systematically retrieved. A major theme of the research programme must therefore be to obtain good quality information on the environment, economy, chronology and relationships of the communities living around Stonehenge from the earliest times.

4. *Outreach and education*

The opportunity will be taken to undertake research into methods and techniques of investigation used in the archaeological process and to integrate this with the interpretative strategy for the public. Visitors will be able to observe the work at close quarters and interact with the archaeological process, both in the field and in processing areas within the visitor centre. The aim will be to develop an integrated programme of outreach and education designed to promote an understanding of the processes of archaeology as well as contributing to a wider understanding of Stonehenge and its landscape. This could include:

- the placement of the research team in the visitor centre;
- the use of excavations and fieldwork to act as a focus for the visitor;
- the production of guides, leaflets, posters, etc. describing the work in progress;
- talks, demonstrations, tours, etc.

The study area

In 1810, Sir Richard Colt Hoare defined the environs of Stonehenge as extending from the valley of the river Till in the west to Amesbury and Durrington Walls in the east and from the Lesser Cursus in the north to the Wilsford Barrow Group in the south. For his purposes, Richards extended the study area to the north to include Robin Hood's Ball causewayed enclosure—which with its associated long barrows is considered to be a focal element of the early monumental landscape. This alignment has also been broadly followed by the boundary of the World Heritage Site as defined by UNESCO and confirmed—with some minor amendments—by studies undertaken on behalf of the Stonehenge Management and Conservation Project by the Central Archaeology Service of English Heritage.

The archaeological boundary has therefore been adopted as the study zone for the future programme and contains an unparalleled diversity and density of prehistoric monuments including:

7 ceremonial monuments
11 long barrows and related monuments
474 round barrows
6 hillforts and enclosures
462 hectares of field systems
22 km of linear earthworks

This diverse landscape is partly contemporary with the major phases of construction at Stonehenge and for the purpose of this research design, the monument and its landscape have been regarded as a single entity.

The monument

There is scope for further research at the monument itself. Specific questions can be formulated on the basis of the 1995 volume which require only limited, carefully planned excavation at the site, and some which do not require any spade to be put to the earth. It is part of English Heritage's plan for the future of the monument that scientific research should continue at a level which is appropriate to the needs of academic inquiry but which is also compatible with the requirements of conservation and the long-term management of Stonehenge.

A number of key issues have therefore been identified which may be addressed by either non-intrusive or small-scale excavation at the monument but it did not and still does not stand in isolation and there are wider issues to consider than the individual relationships of one stone to another within the site itself. Any long-term research design for Stonehenge must look beyond the stones, both literally and metaphorically, and aim towards a much better understanding of the monument within its landscape and its relationship with other sites which form part of that landscape. The key issues are as follows.

1. *Understanding the archaeological record*

1.1 During Hawley's excavations at the monument from 1919 to 1926, only a sample of foreign stone from the site was retained, the rest was buried in a series of pits dug specifically for the purpose some distance to the south of the monument which became known as *Hawley's Graves*. Most of the cremated human bone recorded in his excavations was deposited in Aubrey Hole 7. One objective of a future field programme should be to re-excavate and analyse previously excavated materials re-interred by Hawley for comparison with the surviving assemblages.

1.2 The extent of pre-twentieth century excavations at the centre of the monument should be established. This will lead to an improved knowledge of the survival of deposits in that area and it will enable the stratigraphy to be recorded and central features to be planned.

2. *Recording the monument above ground*

2.1 A physical survey and description of Stonehenge is long overdue. The topographic data for the monument and its surrounding area has been collected. Further resources are needed to process all of this data and to produce the elevations and sections for all of the accessible stones.

2.2 A detailed study should be completed of all carvings, graffiti and stone-working techniques using photogrammetry, casts, and other appropriate high-resolution techniques. The face of each stone has been subjected to a photogrammetric survey and resources are required to process the data.

2.3 A detailed petrological description of each stone is desirable, together with the identification of its source—including examination of the collections of worked stone from the site. We now know that the igneous rock bluestones were brought from the Preseli Mountains in north Pembrokeshire and the remaining problems involve the sedimentary rocks at Stonehenge. The most prominent is the Altar Stone which has never been sampled and it is important to the story of Stonehenge that we find its true origin which is likely to be the Cosheston Beds near the shores of the Milford Haven estuary. Confirmation of this will be of great interest to those addressing the question of the route taken by the stones from north Pembrokeshire to Stonehenge.

3. *Investigating the monument*

3.1 To refine our understanding of the structure and sequence of the Bank, Ditch and Counterscarp, more investigation is called for, not least because of the possibilities of associated post-holes.

3.2 Investigate some undisturbed Aubrey Holes to re-evaluate the results of earlier work and attempt to resolve questions of date, function, internal sequence and relationship with the Bank.

3.3 Examine the evidence for internal timber structures, particularly in the southern part of the interior of the enclosure.

3.4 Currently, the pattern of excavations within the monument does not reflect its symmetry. In order to balance information from comparable areas of the monument, it is desirable to examine the area to the north or north-west of the centre to investigate the sequence of stone structures in that area and to explore anomalies revealed in the geophysical survey.

The landscape

The main aim of this study will be to investigate the place of Stonehenge in its landscape, to establish the place of each monument within that landscape to the other, and to formulate management proposals to ensure their future well-being.

1. *The database*

A database to hold information relating to the World Heritage Site should be created. This will involve:

- a desk-based collation and assessment of the currently available data (archaeological information, soils, geology, hydrology, topography, etc.) assembled from existing sources (aerial photographs, satellite images, maps, SMRs, etc.);
- a carefully designed programme of targeted fieldwork will be undertaken to enhance specific elements of the topographic record (modern survey techniques offer us the opportunity to produce detailed records of the current state of monuments, not only important for their management but also their interpretation—inter-visibility, reconstruction, etc.);
- new survey techniques, such as multi-spectral imagery, will be explored to enhance specific aspects of the current record;
- the database will be regularly updated by monitoring new discoveries, monument condition and the modern use of the landscape.

2. *Contemporary environments*

2.1 A carefully designed programme of sampling within contexts disturbed by earlier excavations should record the environmental context of all phases of human activity within the Stonehenge landscape. The full range of scientific techniques now available to us and not available 30 or 40 years ago will vastly increase our understanding of chronology and contemporary environments through the re-excavation of nineteenth century trenches thus causing little or no damage to the archaeological deposits themselves.

3. *Round barrows*

Of the 500 monuments in the Stonehenge landscape, over 470 are round barrows and the main aim of their investigation will be to develop an interpretation of burial within an organised ritual landscape. This will involve:

3.1 A desk-based assessment of earlier excavations with particular reference to those undertaken by Colt Hoare and Cunnington.

3.2 A desk-based assessment to chart the topography and analyse the structure of the barrow cemeteries and their setting.

3.3 Limited excavations using the position of earlier investigations as much as possible in order to:

- obtain samples which will enhance our understanding of the contemporary environment and its date;
- investigate contemporary burial practice through the morphology of round barrows and its relationship to burial rite, gender and ritual diversity;
- investigate the occurrence of bluestone fragments within neighbouring round barrows and their relationship with the structural sequence at Stonehenge.

4. *Durrington Walls and Woodhenge*

4.1 A carefully focused programme of excavation and survey across the bank and ditch and in the interior of Durrington Walls is desirable in order to set the 1967 excavations in the context of improved techniques and knowledge.

5. *The Avenue*

5.1 A fresh investigation of the Avenue is required, to include geophysical and topographical surveys and limited excavation, to examine its structure, relationship with adjacent monuments, flint scatters and in particular, its junction with the river Avon.

6. *The Palisade Ditch*

6.1 An investigation of the Palisade Ditch north and west of Stonehenge is desirable, in particular on Stonehenge Down and close to the bend of the Avenue, which should include geophysical and topographical surveys and sampling by excavation. This should be seen against a background programme of investigating the other extensive linear ditches in the study area and an attempt to try to understand the development of land divisions.

7. *Extensive survey*

7.1 Within the Stonehenge landscape, there is considerable scope for mapping areas of prehistoric and Roman settlement suspected on the grounds of field-walking and aerial photography. Enclosed settlements and field systems seem to first appear in numbers in the landscape around Stonehenge in the later Bronze Age (1200 BC) and there is evidence that the landscape is changing in character from a mainly funerary emphasis to a more domestic use. The relationship of Stonehenge to this developing agricultural landscape in the later Bronze Age is one which needs further study. The evidence for this period could be explored further by targeting geophysical survey on areas containing scatters of later Bronze Age pottery located in previous surveys. Geophysical survey should assess the potential of sites defined by surface collection and aerial photography thus assisting the management of the archaeological resource in the Stonehenge landscape.

Conclusion

Stonehenge and the cultural landscape within which it stands are uniquely important and form part of a UNESCO-approved World Heritage Site. The publication of the first comprehensive account of Stonehenge has enabled the conference to debate the themes which are not discussed at any length in that volume. The next step is the preparation of a research strategy for the next decade which will enhance our understanding of this unique resource and the undertaking of which will form part of a visitor experience which will stimulate their understanding and enjoyment of our heritage.

GEORGE EOGAN

Stonehenge in its wider context

A feature of Europe during prehistory is the emergence of core areas. Stonehenge and its environs is of course one of the most notable but in different parts of Europe the clustering of monuments or artifacts or both is a feature. As at Stonehenge the other sites that I will mention include spectacular monuments; one variety that is characteristic of all is an open-air ceremonial enclosure. Apart from its scientific importance Stonehenge and also the other four complexes are significant tourist attractions and this has led to the development of visitor facilities, management regimes and programmes of monument and landscape conservation.

In Britain an obvious analogy to the Stonehenge area is to be found in the Orkneys, especially on Mainland, particularly in the general area of Stenness with its great passage tomb of Maes Howe, its henge monuments, standing stones and the significant settlement of Grooved Ware date at Barnhouse.

Another significant area, again in Scotland, is the Kilmartin area of Argyll which is a naturally defined archaeological region. Plans are afoot with the development of a major conservation programme and also to make the area more readily available for both scientific activities and general visitor needs.

In Ireland a most relevant area is in the valley of the river Boyne, known as Brugh na Bóinne. There, at different times during prehistoric and historic times a succession of cultural complexes arose. At the time of building and use of the passage tombs the area must have constituted a ritual landscape but the tombs also inform us about the scientific accomplishments of their builders.

One of the most celebrated archaeological areas of continental Europe is in the Carnac-Locmariaquer region of Brittany. In particular this area is renowned for its passage tombs and stone alignments including such spectacular sites as Gavrinis. This is an area with a considerable resident population but also an area that attracts large numbers of tourists.

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Future directions for the study of Stonehenge and its landscape

Many campaigns of excavation and fieldwork have been carried out at Stonehenge and in the surrounding landscape over the past 150 years. The work at the monument this century has recently been published by English Heritage and the proposal to create a Millennium Park around Stonehenge has been seen as the opportunity to undertake a programme of research which will address fundamental questions and integrate the work with the presentation of that landscape to the public.