Stonehenge into the 21st Century

Stonehenge is probably the most well-known prehistoric monument in Europe. It is an icon of Britain's ancient past and every year about 1 million visitors gaze at the jumbled pile of stones and speculate on the use of such a structure, the effort needed to build it, the mysteries of its alignments, or the meanings that its form had for those who built it (fig. 1). In practical terms, the landscape around Stonehenge is part of a World Heritage Site and the monument itself and its immediate setting is in the Guardianship of the State and is managed by English Heritage on behalf of the Nation. Moreover, Stonehenge and many nearby archaeological sites are Scheduled Monuments and therefore protected by English law, while the field in which Stonehenge stands is surrounded by an estate of about 1500 acres which is owned by the National Trust and which is managed as a working agricultural landscape in a manner which is sympathetic to the conservation of the archaeological remains and the natural beauty of the countryside. In theory, Stonehenge should be one of the best-protected and best-managed archaeological monuments in Britain, if not in Europe, but for some years now it has been widely recognized that this is not the case.

Because of its fame, its bogus associations Druids, the reputed astronomical alignments, and its popularity as a tourist attraction, the site of Stonehenge and the landscape around about pose a major conservation and management problem. In many respects Stonehenge illustrates in a microcosm the wide range of difficulties, issues, and questions that face heritage management and conservation everywhere. This short paper attempts to summarize the problems facing Stonehenge, consider some of the principles which guide attempts to resolve these problems, and outline the solutions that have been proposed and which are currently being exposed to public consultation. The paper is not so much concerned with Stonehenge the archaeological monument but rather with Stonehenge as a case study in archaeological resource management and in particular the conservation and management of a relict cultural landscape. It is based upon, and draws heavily from, the research carried out for a detailed Environmental Assessment (Darvill 1991) undertaken on behalf of English Heritage and the National Trust who, as will be explained later, are in the process of formulating detailed proposals which take the future conservation and management of the Stonehenge landscape forward into the 21st century. At the time of writing (April 1992) much remained to be done in respect of finalizing proposals, and accordingly this general overview should be regarded as an interim statement.

Following a brief introduction to Stonehenge and its setting, the paper is divided into four parts: the first deals with the main current problems facing the use and presentation of the monument; the second outlines recent efforts to create a better future for Stonehenge and its landscape; the third outlines the fundamental principles which have been used to guide thinking on the development of the new proposals; the fourth briefly describes the main elements in the proposed new conservation and management initiative.
Stonehenge and its setting

Stonehenge stands near the southern edge of Salisbury Plain in the County of Wiltshire, England. Topographically it lies at a height of about 100 m OD amid rolling chalk downland on the interfluve between the River Avon to the east and the River Wylye to the west. The small market town of Amesbury lies about 3.5 km to the east, the cathedral city of Salisbury is some 12 km to the south.

There have been many studies of Stonehenge and its surrounding area since the gentlemen travellers and antiquaries of the 16th century and later first took a serious academic interest in the site. Recent research has mainly been concerned with the identification, mapping, evaluation, and understanding of the archaeological components of the landscape surrounding Stonehenge and have used as their basic methodologies such techniques as ground surveys, aerial reconnaissance, fieldwalking, geophysical surveys, and selective excavation. The results of these various programmes of study have yielded a colossal database of information, and one that is still growing. What can be recognized from the available information is that there are four main successive phases in the use of the landscape by prehistoric communities. Each phase is characterized archaeologically by different kinds of monuments and patterns of settlement and land-use, but this kind of evidence undoubtedly reflects far more fundamental shifts in the patterns of symbolic meanings, perception, and emphasis that both derived from and structured social relations, behaviour, and the very basis of social action within the communities that lived and worked in the Stonehenge environs during prehistoric times.

The earliest substantial traces of settlement in the Stonehenge landscape date to the middle Neolithic period (c. 3800–3000 BC). Monuments include the Stonehenge Cursus, two substantial long barrows, several oval barrows, a long mortuary enclosure and long mound (known as the Lesser Cursus), and slight traces of open settlements, perhaps temporary camps. Also known is a ritual shaft at Coneybury, and occasional pit groups such as at Durrington Walls and on King Barrow Ridge. A pair of causewayed enclosures at Robin Hood’s Ball lies to the north-west and may have been the main focus of settlement for this period. Physically, the landscape during this period was fairly open grassland perhaps with some small wooded areas and scrub along the river valleys and some small-scale arable agriculture. The social landscape as it can be perceived was already structured by this time with the long barrows and the Cursus defining a ceremonial focus.

The second phase of activity dates to the later Neolithic (c. 3000–2500 BC). Stonehenge itself begins its long history around 3000 BC when an enclosed cremation cemetery was constructed on the site. This monument, which is still visible, comprised a circular earth and chalk bank with an external ditch some 110 m in diameter. The main entrance was to the north-east and was aligned on the rising of the midwinter
Fig. 2. Two of the well-preserved round barrows on King Barrow Ridge to the east of Stonehenge. Cleared of trees following the gales of October 1988 these and other barrows in the landscape round Stonehenge can now be easily appreciated by visitors.

moon, although there was at least one other entrance to the south. Within the enclosure was a concentric ring of 56 pits (the Aubrey Holes) some of which contained cremated human remains. Cremation burials have also been found in the bank and in the primary silts of the ditch. Outside the main entrance stood a pair of standing stones, one of which now survives as the Heel Stone. Parallels for this monument include the recently discovered site at Flagstones near Dorchester.

To the east of Stonehenge was a small henge monument at Coneybury. To the northeast was another henge, Woodhenge, and the massive henge-enclosure at Durrington Walls. The enclosure at Durrington Walls is over 140m in diameter and is known to contain a number of large timber buildings, two of which have been excavated. The site may be the main settlement in the area, surrounded as it is by a variety of ceremonial sites such as Woodhenge already referred to and bedrock-cut groups of pits some of which are known to have contained rather special deposits of animal bones, pottery, and carved chalk plaques. Round barrows were being built in the area from the middle third millennium BC onwards, at first alongside late examples of the oval barrow tradition but increasingly in new areas of the landscape. Industrial sites in the form of flint mines and working areas are known near Wilsford Down.

What went on between these monuments in late Neolithic times is not precisely known, although it is believed that open countryside prevailed. The structure is clear enough, however. A central zone given over to ritual and ceremony is surrounded by industrial areas and settlement areas.

In the third phase, broadly speaking the early Bronze Age (c. 2500–1800 BC), ritual and burial monuments dominate the archaeological record of the area. After a period of abandonment for several centuries, Stonehenge was re-modelled in the decades following 2500 BC. The main entrance was realigned to an orientation on the summer solstice sunrise and a short straight avenue comprising parallel banks and external ditches was added. A pair of concentric circles of bluestones imported from west Wales were set up in the middle of the eroded earthworks of the enclosed cremation cemetery. A rectangular setting of stones known as the station stones was set up, and further stones were added around the entrance.

Round barrows were constructed in great numbers, mostly within a series of defined round barrow cemeteries which occupy ridges (fig. 2). Overall, the area around Stonehenge seems to have become a ceremonial place arranged so that the main barrow cemeteries overlooked Stonehenge itself, although the full implications of the symbolic arrangement of the landscape have yet to be explored.

In its fourth phase, conventionally the middle and later Bronze Age (c. 1800–900 BC), the area around Stonehenge again became subject to a more diverse range of uses. Stonehenge itself continues to be modified and used, while Dverel-Rimbury style urns containing cremation burials are known in small bowl barrows, and in flat cremation cemeteries connected with round barrow cemeteries. Together these features document a continuing burial and ceremonial dimension to the landscape. Settlements are known near Fargo Plan-
Fig. 5. Map summarizing the main elements of the proposals forming Stonehenge Conservation and Management Project.

In total, these successive identified phases of landscape provide a complicated picture of ever-changing land-use and settlement through some 25 centuries. Some of the monuments may not by typical of those found elsewhere, but many of the main features of the landscape are entirely typical, and exhibit great potential for the investigation of many themes ranging from the functional and pragmatic through to the symbolic and aesthetic. How much of a general understanding of the landscape evolution and social history of the Stonehenge area is known to, or is picked-up by, visitors to Stonehenge is not really known, but it is believed to be rather minimal. Understanding what is being seen is only part of the problem, however, and leads on to the important matter of the identifying the conservation and management issues associated with the recent and current use and presentation of Stonehenge.

Identifying the problems

Stonehenge and its surrounding landscape are the subject of many and varied pressures from numerous sources, among them the need to protect and preserve an archaeological resource of recognized international significance, public expectations and demands for access to the site, the maintenance of a working agricultural landscape, the needs of local communities, and the needs and aspirations of the academic world. Viewed critically, there are nine main problems facing Stonehenge at present, most of them the combined effects of some or all of the pressures noted above. The main problems can be summarized as follows:

1. Small size of the facilities relative to the large number of visitors (estimated at between 703,000 and ca. 1 million per year). Present facilities do not meet the operational needs of effective site management (fig. 3). The average length of visit is about 20 minutes so there is a high turn-around of visitors who do not have sufficient time to even begin to understand the history and significance of the site and its setting.

2. Poor quality of the facilities given that Stonehenge is the best-known prehistoric monument in Europe. The stones are inaccessible, the site frequently overcrowded, and the level of information that is provided generally insufficient for most visitors. Many of the visitors come from overseas. The interpretation facilities that do exist at present are all in the open. The monument is generally rather poorly understood and most of the excavations undertaken at Stonehenge itself have yet to be published.

3. Unsatisfactory access and exit arrangements to the car-park from the A344 which at peak periods becomes dangerous.
in the vicinity of Stonehenge with frequent “near-misses” and accidents.

4. Visual intrusion of the A344, car-park, and visitor facilities in the landscape near to the monument (fig. 4).

5. Noise nuisance and atmospheric pollution from the A344 to the north and the A303 to the south. The presence of a military training ground to the north also causes noise nuisance, as too the presence of low-flying aircraft.

6. Inappropriate use of the free car-park, lavatories, and snack bar as a convenient service area adjacent to the London to Exeter trunk road (A303).

7. Inadequate access arrangements for the disabled and insufficient space to establish a circular walk for visitors around Stonehenge itself. The monument is also subject to claims for preferential access by modern-day Druids and “hippies” at certain times of the year, as for example at the Summer Solstice.

8. Imperfect situation for the appreciation of Stonehenge as an ancient monument and for easy access to the surrounding landscape which is exceptionally rich in archaeological remains and represents a fine piece of downland scenery in its own right.

Conservation and management initiatives

Identifying the problems connected with the conservation and management of a major archaeological monument is only the starting point and is relatively straightforward. Working out what needs to be done to improve things, what can be achieved, and how it should be implemented is even more difficult. In the case of Stonehenge the initiatives which lie at the core of the present Conservation and Management Project result from a lengthy and wide-ranging programme of research, discussion, and public consultation. Work began in earnest in April 1984 shortly after the Historic Buildings and Monuments Commission for England (English Heritage) took up its statutory responsibilities set out in the National Heritage Act 1983.

The first stage was the establishment by English Heritage of a Stonehenge Study Group. This Group comprised representatives of a number of institutions with direct interests in the future of Stonehenge and was required to: “... consider the possible options for a long-term improvement of the setting of Stonehenge and the way that visitors are received and the monument is shown to them ...” Extensive consultations were undertaken during the deliberations of the Stonehenge Study Group and some 22 individuals and 17 organizations made submissions to the Group. Among these submissions were a small number of specific proposals, some of which received widespread publicity at the time. The Study Group produced its report in 1985. No specific recommendations were made, but various options were presented in respect of the landscape, visitor facilities, roads, and possible sites for the construction of a new visitor centre. Of the eight possible sites for new facilities which were explored, two (the present car-park and Stonehenge Bottom) may be regarded as “near” sites in the sense that they involve a walk of less than 10 minutes to the Stonehenge, four (South of Fargo Plantation; West of Fargo Plantation; Larkhill East; and Larkhill West) were “middle-distance” sites as they involve a walk of 15–20 minutes to the stones, and two sites (Vespasian’s Camp and Durrington Walls) are “distant” locations as they lie over 30 minutes walk away from the stones.

On 17th January 1985, at the launch of the Stonehenge Study Group’s Report, the Chairman of English Heritage, Lord Montagu, indicated that the Group’s proposals favoured by English Heritage involved the closure of the A344 and the resiting of the visitor centre to Larkhill West, about 1 km to the north of Stonehenge. Following this announcement, between 1985 and 1990, plans for the new visitor facilities at Stonehenge moved forward on several fronts. Negotiations for the assembly of the necessary land were put in hand. Detailed plans for the lay-out and servicing of the site began to be worked out. And, perhaps most important of all, the outline proposals were presented to the general public and the archaeological profession through publications, exhibitions, lectures, meetings, and newspaper reports.

More recently, English Heritage have joined with the National Trust to promote and implement the next stage of the initiative and have appointed a team of professional advisors and consultants including property advisers, landscape architects, archaeologists, engineers, quantity surveyors, and public relations advisors.

Principles of change

In formulating detailed proposals for the future conservation and management of Stonehenge and its environs, a number of general principles or philosophies have been kept to the fore. These may be summarized as follows:

1. The preservation and conservation of the archaeological remains are the main objectives of the management strategies to be developed for the site and the surrounding area.

2. Detailed research is needed to inform the development of new proposals. Following a survey of the area by the Royal Commission on the Historical Monuments of England during the 1970s, a further survey based on fieldwalking and limited evaluation excavations was carried out during the 1980s. Together, these pieces of work informed much of the early decision-making, including the selection of preferred options for the siting of new visitor facilities and access arrangements. In 1990, a further round of research was commissioned which included a full Environmental Assessment, public consultations, and visitor surveys.

3. Stonehenge and its historic landscape should be reintegrated so as to focus attention on the landscape as a whole rather than any one single monument. In this way Stonehenge will become one point within an archaeological landscape which contains the most dense concentration of prehistoric monuments in Europe. Some of these monuments are still visible and provide a rich and varied insight into Neolithic and Bronze Age times in Britain.

4. Twentieth century intrusions should be removed from the immediate vicinity of Stonehenge.

5. New infrastructure and facilities should be provided to cater for the every-day needs of visitors.

6. Facilities to inform and enthuse visitors need to be provided.

7. Facilities and opportunities for students and scholars of archaeology and other disciplines which relate to Stonehenge, its associated monuments, or the landscape in which they lie should be provided.
8. Visitors to the site need to be managed in a careful and co-ordinated way with good quality and appropriate educational and interpretation facilities so that Stonehenge and its setting can be understood and respected by all visitors. New visitor facilities should provide a "gateway" to the archaeological landscape rather than an attraction in their own right.

9. Access to the landscape and the monuments within it should be promoted and enhanced but should, for most people, be on foot. Special arrangements should be made for access by the disabled.

10. Any changes to the landscape or existing infrastructure must be undertaken in an acceptable, balanced, and environmentally acceptable manner with minimal environmental impact and maximum environmental gain. The overall approach should be sustainable in the long term, practical, and economically viable.

The proposed solution

There are three main elements to the proposals contained in the Stonehenge Conservation and Management Project. In formulating these a number of assumptions have had to be made. Among them: predicted visitor numbers have been estimated at approximately 750,000 persons per annum (ie. about the same level as at present). The Design Day has been taken as the average of the top 20 days at Stonehenge. For 1989 this gives a percentage of 0.66 of the annual total of visits. This allows for the lower seasonality of Stonehenge visiting. The peak arrivals occur between 11.00am and 12.00noon, and average 17.5% of arrivals, peaking at 23.2% in November. A Design Day arrival peak of 20% has been assumed. The three main elements of the proposed solution are briefly described in the following subsections, Figure 5 shows the position and extent of the existing and new facilities.

1. Removal of existing facilities and the closure of the A344

The existing visitor facilities at Stonehenge comprise: a car-park for approximately 120 cars, coach parking, an overspill car-park, below-ground public conveniences, above-ground public conveniences in the car-park, a snack-bar, bookshop, small gathering/queuing area, ticket office and staff room, and a small display area and underpass. Most of these facilities are set into the slope and are not visible from Stonehenge itself. The concrete buildings give the impression of a military bunker with narrow slit windows and flat roofs. Resiting the visitor centre to Larkhill (item 2 below) will render most of these facilities redundant, and so they will either be removed or refurbished. Custodian accommodation is required close to Stonehenge itself to provide shelter in inclement weather and during rest-breaks. This would also be used by the security staff during the night. The existing shop and snack-bar would be totally refurbished to provide this accommodation.

The existing car-park will be totally removed and the area restored to grassland. The drop-off point and parking for disabled transport will occupy only the minimum of space required and will be surfaced with crushed stone to create an informal rural character. Minor regrading will be required to integrate the former areas for parking and road into the surrounding landscape. An existing electricity substation next to the present buildings needs to be retained and carefully concealed.

The closure of the A344 is essential if Stonehenge and its surrounding landscape within the World Heritage Site is to be properly conserved. The eastern part of the road from the turning into the present visitor centre to the junction with the A303 will be removed and reinstated as downland. A narrow strip will be retained to provide access to the underground services. The central section of road from the present visitor centre to Fargo Plantation will be reduced in width to c.3.0m to provide emergency access to Stonehenge and to provide access for special vehicles carrying disabled visitors to a small disembarkation area near the present bus-stop. The western section of road from Fargo Plantation to Airman’s Corner will be reduced to a width of c.7.3m and will form the first stage of the access road to the new visitor centre.

No footpaths are to be closed as a result of the proposals, but there will be a few changes to existing alignments and it is proposed to close a bridle-way and replace it with a new footpath. The main method of getting from the visitor centre to Stonehenge and to other monuments will be by walking. It is envisaged that the majority of visitors will want to take the most direct route to Stonehenge, and it is proposed to use a combination of the existing by-way for the first 300m and then the line of a former road that ran directly to Stonehenge from Larkhill. The view to Stonehenge from points along this route are dramatic. After viewing Stonehenge, visitors wishing to return directly to Larkhill could be directed along the existing by-way which will be converted to a footpath.

The intensity of use on this circular path will require it to be surfaced. The surfacing should be comfortable to walk on, non-slip, and resistant to trampling. The surfacing will need to be suited to the needs of disabled people as well as push-chairs. The width of the path will vary, widening at viewing points or resting places. The gradients of the route are shallow, on average between 1:50 and 1:30. The steepest sections at either end do not exceed 1:20, the maximum gradient for independent wheelchair users.

Disabled people will be catered for in a number of ways. The main pedestrian route will provide a smooth firm surface with flat to gentle gradients which can be used by wheelchairs. For those unable to use the pathways a scheduled transport service is proposed; the terminus of the vehicle route would be in about the same place as the present bus-stop.

There is obviously a need for a perimeter fence that is stockproof and permanent along the boundary of the site. This would effectively be the boundary of the National Trust land. Within this area the minimum of permanent fencing will be retained, although this will give rise to the need to erect temporary fencing with movable stiles to ensure satisfactory grazing levels over the whole area.

2. A new visitor centre at Larkhill

The starting point for any visit to the Stonehenge landscape will be a new visitor centre and car-park situated at Larkhill, about 1km due north of Stonehenge itself. Here, a coach-park with 10 spaces is provided in a clearing formed within an existing plantation, also a bus-stop for public transport. South of the coach-park will be the main visitor facilities. The focus of
these will be one or more buildings which will include the following main elements: Reception and ticketing; Shop; Café; Toilets and mothers' room; Education rooms; Interpretation area; Offices and administration rooms; and Service plant and storage. The floor area of the building(s) will be approximately 2800 sq m gross. No work has yet been undertaken on the design of the buildings which will house the visitor facilities.12

Around the buildings there will be a service area, staff parking, play area, viewing point, disabled transit point, and gathering place. The design and disposition of these facilities has yet to be determined, but some elements may require to be cut into the slope to reduce their visual impact.

The main car-park lies at the eastern end of the site. The access road divides the parking area into two zones, a core car-park and an overflow car-park. The main car-park provides 400 spaces. The radial lay-out provides a clearly understandable arrangement for drivers and safe pedestrian routes to the reception area. The overflow car-park adopts an informal approach to lay-out with parking formed in glades between areas of new woodland. The overflow car-park will mainly be used in the summer months and can accommodate 250 spaces. If required later, an additional 100 spaces could be provided by extending the car-park into the plantation to the south after necessary woodland management and reinforcement planting has taken place. Both the main and overflow car-parks will be set into the slope to prevent views of the cars from the north. Views from the south will be screened by the existing plantation.

A key element in the design of the visitor centre site is woodland planting. Once established this would combine with existing plantation to create a woodland setting. The main areas of screening are to be the northern and eastern sides of the car-park. The woodland planting will use mainly native broadleaved species.

Treatment of the plantation margins is particularly important. At present the edges are straight with a vertical wall of conifers. This will be softened by planting irregular groups of broadleaved trees along the edge and, where gaps occur, penetrating into the conifer stand. The appearance and ecological diversity can be further enhanced by introducing native shrubs and long grass to create a graduation from woodland to chalk downland. Tree planting will be used in the car-parks to provide spatial definition and help reduce the impact of hard surfaces and vehicles.

Access to the visitor centre will be along a new road from the west. This road will follow the route of the former A344 eastwards from Airman's Cross before curving in an arc north to Fargo Plantation. Where it passes the Stonehenge Cursus it west. This road will follow the route of the former A344 parallel to the former military railway. By passing through the plantation at an angle direct views through the plantation from the Stonehenge Estate are prevented. The route from Fargo to the edge of the visitor centre site would follow as closely as possible the boundary of the National Trust land which lies in a shallow dry valley. The open view north-westwards from the estate to Salisbury Plain is to be retained. Continuous screen planting along the length of the road is not considered appropriate. Woodland planting will extend from Fargo and the crescent-shaped plantation at the edge of the visitor centre site to help integrate the road. The road will best be absorbed into the landscape by placing it in a shallow cutting, an average of 2m deep.

3. Management infrastructure

The creation of the new visitor centre as a gateway to the Stonehenge landscape means that the day-to-day management of the estate will have to be carefully controlled, and that some new infrastructure works will be needed, for example footpaths, fences, stiles, and gates. A detailed Management Plan will be required covering the whole estate and including immediate, short-term, and long-term management actions. On the specifically archaeological front there will be proposals dealing with the conservation of individual monuments, restoration and research works where appropriate, and the publication of outstanding excavations and surveys. Other landscape management topics to be covered include grazing, woodland management, fencing, litter control, signboarding, footpath management, and security.

Conclusion

This paper has considered, in interim form only, the main elements of what is a large, complicated, and rapidly evolving project. There is still much to be done before the proposed Conservation and Management Programme for Stonehenge is implemented. When in place, however, the new proposals will provide a more satisfying experience for the visitor and a more acceptable long-term future for the archaeological resource.

Footnotes

1 Early studies included: Camden 1586; Aubrey 1665–93; Stukeley 1740.
3 Burl 1987.
5 Although the word "henge" is an element of the plaeename Stonehenge, and was presumably adopted into the archaeological vocabulary because of the fame of Stonehenge. The earliest phase of Stonehenge itself does not fit conformably into range of structures that are generally accepted as representing the class of monuments which are usually known as henges. Neither are any of the later phases of Stonehenge able to be classified as henges; they are concentric stone circles, the earthwork having become silted up well before the stone circles were erected.
6 Wainwright and Longworth 1971.
7 It may be noted here in passing that the present initiative on the management and conservation of Stonehenge is not the first time that the problem has had to be addressed. Early cases are well described by Chippindale (1983; 1983a); the most recent prior to 1984 was in 1977 when the Department of the Environment set up a Working Party whose report (DoE 1979), and a Memorandum of Dissent by some members of Salisbury District Council, was completed in 1979. The Government decided not to act upon the recommendations of that Report, which has not been published.
8 SSG 1983, 2.
11 An outline Planning Application was submitted to the Local Planning Authority (Salisbury District Council) on 16th May 1991. At their meeting on 11th December 1991 the Authority refused planning permission despite the recommendation of their officers that consent should be given and despite widespread support for the proposals from individuals and organizations. English Heritage and the National Trust have lodged an Appeal against the decision and it is expected that a Public Inquiry will examine the Appeal early in 1993.
12 An architectural competition for the design of the visitor centre building was held during the autumn of 1992.
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