Conservation Bulletin, Issue 40, March 2001

(NB: page numbers are those of the original publication)

GARDENS & LANDSCAPE

Introduction by Kirsty McLeod

Gardens and landscape in the care of English Heritage include a wide range of nature conservation areas and historic sites. There have been a number of major garden restorations that have added to the understanding of the past and delighted visitors. Developments in refining historic landscape characterisation, designing contemporary heritage gardens and regenerating public parks have far-reaching implications

This issue of Conservation Bulletin focuses on historic gardens and landscape. The Mori Poll undertaken as part of the consultation for the historic environment review shows that people value places, not just as a series of individual sites and buildings but as part of a familiar and much-loved environment – a landscape. As the Black Environment Network has commented in response to the poll: ‘People need to understand the components of their locality – street names, elements of their home, cultural memory, places of worship, green spaces – they all have stories’. It is the whole place, not any individual feature, which speaks to them of their history and which is why we have called the review *Power of Place*.

If one message emerges out of *Power of Place*, it is the need to see the historic environment as a whole, seamless part of everyday life, with us and around us all the time.

Landscapes are integral to the setting and evolution of historic buildings and monuments. However, the study of historic landscapes is comparatively young.

Those engaged in this study have over the years been working to record, assess and explain the subtle ways by which land becomes landscape – whether it be by function, use or design. Even before the publication of *Power of Place*, their research had affected the way we view historic places. Simultaneously English Heritage's approach has been evolving overtime from a monument-based strategy to a more holistic vision. This is reflected in the range of articles in this issue, including one about Historic Landscape Characterisation, the effect of which we hope will be to provide a new and effective way for us and our partners to understand and protect our historic landscapes, and to manage the changes that are bound to come. With MAFF, the Countryside Agency and English Nature, we are working to encourage agri-environment schemes that can support the historic landscape. The woodland pasture and parkland habitat action plan, for example, will aim to protect parkland with its many veteran trees from the plough. We hope that it will also result in the restoration of parkland.

Gardens and landscape speak to everyone, wherever they live. Indeed they often constitute our first memories of somewhere outside our home. In towns and cities, public parks historically have provided relaxation and outdoor enjoyment for town-dwellers, but recently many have fallen into disrepair. English Heritage is a partner, alongside DETR, HLF and the Countryside agency, in the *Parks Needs Assessments* – a crucial piece of research which aims to supply baseline data on the condition of our historic public parks. Because gardens are forever changing, they are inevitably fragile and easily lost. We are already updating our Gardens Register. In summer 2001 we will be publishing a methodology for determining gardens at risk. Restoration of an historic garden is usually required where there has been change of use or insufficient funding for long-term maintenance. We believe that the conservation plan process is the best method of understanding the significance of the historic environment in order to guide future management.

This year we are publishing guidelines for producing conservation and management plans which incorporate historic parks, gardens and designed landscapes – an aid for consultants. We also intend to review the success of garden grants as part of the English Heritage combined grants scheme. Where there is insufficient evidence for the restoration of an historic garden, our Contemporary Heritage Gardens scheme has demonstrated how the best contemporary designers can design new gardens which are not only beautiful in themselves but are also appropriate in an historic setting.

In our own gardens, we strive to be exemplars whether it be in nature conservation or in historical research. At Brodsworth Hall, the Head Gardener is carefully restoring the garden to its 1870's heyday with historically authentic plants managed in a manner fitting to their period. The restoration of the walled garden at Audley End has brought together a host of specialists from garden archaeologists to historic fruit experts, all working together to uncover the story – horticultural and social – of this great garden and its staff in the late 19th century.

Throughout the gardening world there is a shortage of skilled and experienced staff. English Heritage tries to support the principle of training directly by employing trainees and apprentices at many of its garden sites. We would hope to encourage local authorities and landscape contractors to do the same, and help in training the gardeners of the future.

Carnivorous plants at Darwin's home, Down House, Kent Drosera binta*, commonly known as the Sundew. The garden, greenhouses and 'sand-walk' or 'thinking path', used by Darwin when writing his books, are being restored at Down House, which is open to the public from 1 April to 30 September.*
For information about access, please contact English Heritage Customer Services on 0870 333 1181 or customers@english-heritage.org.uk

Kirsty McLeod

English Heritage Commissioner, Chairman of the Historic Parks and Gardens Panel (formerly Historic Parks and Gardens Advisory Committee)

2001 ODYSSEY

Register of Parks and Gardens

The Register of Parks and Gardens of special historic interest in England, first published in 1988, has had an increasing impact on conservation and development issues

Highfields Park, Nottingham (grade II), a public park laid out in the early 1920s to the designs of P Morley Horder. It is one of 188 public parks on the Register

Garden history is a comparatively young and dynamic subject, having become an academically recognised subject only since the 1960s, and the *Register of Parks and Gardens of special historic interest in England* is fast coming of age. The compilation of the Register was begun in 1984, long after Scheduling (1883) and Listing (1948) but before the Battlefields *Register* (mid 1990s).

The first edition of the *Parks and Gardens Register* took four years to compile, in the hands of the redoubtable Dr Christopher Thacker. Quick completion of a material register was given priority over production of a more defmitive magnum opus – that was to come later. With the generous and essential help of many interested individuals and bodies outside English Heritage it was finished in 1988 and contained 1085 historic parks and gardens, concentrated largely on the landscape park of the English country house, with some smaller Victorian and Edwardian gardens and a sprinkling of what were considered then as more marginal types such as municipal parks and earthwork gardens.

As with historic buildings it was decided to grade at I, II* and II, but with a higher proportion, at 10% and 30% respectively, of grade I and II* parks and gardens. The storms of 1987 and 1990 prompted both the institution of a gardens grant scheme, to aid the restoration of storm damage in grade I and II* sites, and the drawing up of historic surveys for those sites applying for grant aid. As a result, our historic knowledge of a significant

group of gardens was substantially increased, and much valuable restoration work was carried out on overmature and declining landscapes.

Register Review Project

English Heritage recognised that further work was needed to identify both the extent of sites already on the *Register* and further eligible sites. Following the great storms of 1987 and 1990 it was essential to define the areas eligible for grants for the repair of storm damage. Additionally, many local authorities were highlighting the need for boundary identification for local planning and development control purposes. These needs led in the early 1990s to the drawing up of site boundary maps to accompany the descriptions, although with limited resources it was possible only to identify the extent of the historic sites by desk-top use of historic and current maps. The need to identify those sites omitted from the first edition led to the first stage of the *Register* Review Project, a desk-based exercise carried out county by county and designed to highlight sites which should be taken forward for detailed consideration in a second stage, as resources might allow.

Spot registration

Parks and gardens have been continually added to the *Register* through the spot-registration process. At the request of the public, amenity bodies and other interested parties, sites of special historic interest may be added, usually where there is a particular need, for example, a planning issue or major grant application. In this way the number of sites has increased to 1400, though the Register still lacks a significant number of eligible sites.

Consultation procedures

In June 1995 the *Register* passed a major milestone with the publication of the Town and Country Planning (Development Procedure) Order 1995, which augmented the guidance issued in PPG 15: *Planning and the historic environment* (September 1994). As a result, planning authorities have since been required to consult English Heritage on planning applications affecting grade I and II* registered sites and to consult the Garden History Society on applications affecting all registered sites, irrespective of grade. The consultation procedures are intended not to impose controls on the management of a site. Instead, they provide the opportunity for those two expert bodies to advise local authorities specifically on the implications of proposals affecting designed landscapes, whether or not the proposals affect the setting of listed buildings.

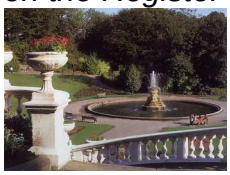
The *Register* remains a comparatively lightweight designation, in terms of its place in the planning system. While it remains a material consideration (see PPG 15 and Town and Country Planning (Development Procedure) Order above), the Register brings no additional statutory controls.

Register Upgrade Programme

In 1996 the *Register* Upgrade Programme was begun, with a team of four full-time *Register* Inspectors and several consultants, to revise and update the first edition. Here was the opportunity to carry out a limited but still profitable amount of research on each site, visit sites with the kind permission of owners, rewrite descriptions at a higher level of detail and revise boundary maps where necessary. The result is intended to be a really useful tool for local authorities in protecting the historic environment. To date over 1000 sites of the current 1400 on the *Register* have been visited and the owners and local authorities notified of the revised descriptions and boundary maps. It is expected that the second edition of the Register will be finished in 2003.

The *Register* team's technical staff numbers have diminished over the past year or two, but we continue with the Upgrade Programme to collate and process the information. Together with the systematic and detailed assessment of each site, grading is also being addressed to ensure consistency. A Regrading Panel, consisting of three expert members of the Historic Parks and Gardens Panel (formerly the Historic Parks and Gardens Advisory Committee), offer advice on those relatively few sites thought by Inspectors to be inconsistently graded. With the financial implication that accompanies the grading, in terms of the eligibility of grant aid for those sites of grade II* and I, it is necessary to strive constantly for consistency countrywide.

Church Cemetery; Nottingham (grade II), an example of an early, privately-funded cemetery, laid out in the 1850s, and opened in 1856. It formed part of a series of public open spaces in the city, intended for public walks and recreation. It is one of 26 cemeteries on the Register



Miller Park, Preston, Lancashire (grade I1), a good example of a purpose-built municipal park laid out by Edward Milner in 1864

Detail of the Water Gardens at Harlow, Essex, designed by Sir Frederick Gibberd as an integral part of his 1947 master plan for Harlow New Town and completed in 1960. It is one of nine post-World War 11 sites on the Register *and is graded II* for its exceptional historic interest*

Public parks, cemeteries and post-World War II sites

In 1999–2000 the Environment Sub-committee of the Parliamentary Select Committee on Environment, Transport and Regional Affairs conducted an inquiry into town and country public parks. The *Register* then contained 162 historic, publicly-owned parks, though there were omissions. This inquiry became the catalyst for the two-year Public Parks Review Project, begun in mid-2000 to ensure that all eligible historic public parks are identified, assessed and included on the *Register* by 2002, possibly bringing the number of registered public parks up to 240. The majority are located in the northern half of the country, but there are a significant number south of the Midlands. It is hoped to disseminate further information on public parks generated by this project in the form of a conference and publication over the next year or so. A similar two-year review project assessing historic cemeteries is to begin in April 2001.

As a result of advances in garden and landscape history, new types of sites have been identified as eligible for inclusion on the *Register*, such as cemeteries, hospitals, allotments, military sites and airfields, and pumping stations. Post-World War II sites include several types: domestic and private gardens, municipal civic spaces and municipal

housing projects. It is hoped to commission further studies on these subjects to broaden our knowledge.

Future developments

And what of the future? The Historic Environment Review, *Power of Place* (English Heritage, 2000), and its practical implementation, if endorsed by Government, will provide a strong steer for the future of the *Register* and the conservation of historic parks and gardens. Conclusions from *Power of Place* which directly affect the *Register* are wide ranging and cover the need for further research to understand the full significance of sites, to set important historic sites in a wider context, and to ensure that sites of importance to all parts of society are considered fully. *Power of Place* acknowledges both that legislation underpinning conservation work needs streamlining to ensure that it is consistent, straightforward and accessible and also that the *Register* should be strengthened. A review of the effectiveness of existing arrangements is now due; it should consider the extent and kind of damage sustained by registered sites since the first edition of 1988 and provide indicators for the best way forward in terms of statutory protection. A statutory duty of care on owners of registered sites has been recommended in *Power of Place*.
When the *Register* Upgrade has been completed in 2003 and the second edition published, stage 2 of the *Register* Review will begin to identify, assess and add new sites. Research will continue to ensure that the *Register* is used most effectively for the conservation of our historic parks and gardens.

Sarah Rutherford

Acting Head of Register of Historic Parks and Gardens

Requests for site descriptions and boundary maps should be addressed to the National Monuments Record Centre, NMR Services, Great Western Village, Kemble Drive, Swindon, SN2 2GZ, Tel 01793 414600, Fax 01793 414606, e-mail info@rchme.co.uk

Spot registrations Spot registration, on grounds of special historic interest only, is undertaken by the Register team, Designed Landscapes, on a strictly limited basis. Priority is given to those sites where there is an immediate planning concern, then to those where support for major grant aid applications is sought. For further information on submitting spot registration requests please contact: English Heritage, Designed Landscapes Team, Room 210, 23 Savile Row, London W1S 2ET, tel 0207 973 3584, or e-mail david-conway@english-heritage.org.uk

BRODSWORTH HALL

Restoring a Victorian garden

The gardens at Brodsworth Hall in South Yorkshire have been restored and enhanced by a major development project based on historical and horticultural evidence

For those involved in the presentation and interpretation of historic properties, the term ‘restoration’ can be something of a loaded concept, especially in the historic landscape. The natural environment is in a continual state of flux, constantly evolving and changing according to the social and economic pressures of the time, as well as a particular period of style and fashion. In gardens, the rapidity of this change is further exacerbated, often in a single generation, by the owner’s personal taste, interests and wish to leave his or her mark for posterity.

Is it therefore possible – taking into account the layers of design accumulated over time as well as modern day expectations of our historic environment – to successfully ‘restore’ an historic landscape? The answer is yes as long as one takes into account that, apart from the few fortunate examples that retain near perfect historical records, the concept of total restoration is not only difficult but, if pursued too zealously, may succeed in removing additions to a design that are no less important than the original concept. The key words therefore must be caution and compromise. Only with a careful and sensitive development strategy can one succeed in breathing new life into what are often neglected and degraded specimens, in order to restore the unique flavour of a site.
The policy to conserve as found at the Hall at Brodsworth, once formulated, was followed relatively closely, despite the complexity of the building. The strategy for the garden, on the other hand, had to take account not only of the original design but also of additional elements that had evolved through time. Some of those additions were intentional while others, such as the limestone grassland communities now flourishing within the once neatly clipped croquet lawns, were a direct result of neglect or charge in management strategy; all, however, must be considered when developing a restoration policy.

Form and function

The present Brodsworth Hall, built in the 1860s, inherited a pleasure garden, woodlands and extensive parkland, laid out in the 18th century to complement an earlier Georgian mansion. A formal garden was laid out at the same time as the present Hall’s construction, superimposed onto the earlier landscape to reflect the building’s Italianate composition. An inspired piece of design, the new garden incorporated views, vistas, walks and garden features reflecting the interests and travels of the owner, Charles Sabine Augustus Thelluson.

Although English Heritage took possession of Brodsworth Hall in 1990 it was not until 1994 that staff had the opportunity to focus their attention on the garden. One of the first jobs undertaken in the garden was extensive clearance of the overgrown paths, which led in turn to a more detailed study of the garden and its contents

One of the many overgrown Yews in the garden one year after pruning. Although this particular specimen was reduced by over half, the subsequent re-growth visible towards the base of the plant shows how quickly yews recover and rejuvenate. In time this tree will

be trimmed to its original shape, once again contributing to the formal character of the original design

The original form and character of parts of the garden still retain, despite many years of extensive neglect, a sense of their Genius Loci. Many gaps do exist, however, both in the physical landscape and our knowledge of the original planting. Except for a few photographs, there is an almost complete lack of historical plans, planting designs or even general garden information.

The function of the restored garden, on the other hand, has been somewhat easier to define. No longer the country retreat of a Victorian gentleman and his family, the gardens would now be open to the public. Modern visitors expect, quite rightly, things not always considered essential or even desirable by our forebears. Accessibility and a safe and secure environment are seen as paramount. But beyond these basics, an historic environment may entertain, educate and inspire an increasingly well-informed and interested public.

Stage of the restoration project

After an initial survey of the garden it was clear that major work would have to be undertaken to reopen walks and circulation routes made impenetrable by decades of neglect. This work had the added bonus of revealing several features until then lost completely in the undergrowth, invisible to staff on site.

With the main access routes reopened, a detailed study revealed more of the garden's character. Coupled with historical photographs a clearer picture began to emerge of how the garden would have looked to its original creators. Shrub borders long since lost were identified and the level of the garden's maintenance could be gauged not only from pictures but sometimes from the subtlest of physical evidence. A good example of this was the trimming guides on plants long since allowed to grow as they pleased indicating not only the intended size but also the shape of many garden specimens. Yew hedges were cut back to their historic lines and former formality. This work, still in progress, has allowed the garden staff to experiment with ways of rejuvenating various plants. Visitors have in the main been fascinated by a plant's ability to thrive under this treatment.

For the successful development of the garden, it was important to draw up a strategic five-year plan. In areas of the garden where the original character remained strong and photographic evidence was good, assumptions could be made about the style and content of the planting. In areas where considerable loss had occurred and insufficient data existed, however, a decision was made to consider representative planting. To the purist this may seem a corruption of the design, but with so little surviving evidence, a totally authentic reconstruction would have been impossible to achieve.

The opportunities on the other hand were enormous. Using plants bred or introduced in the 19th century or similar modern varieties, the compositions would not only complement the character of the garden more eloquently than more modern plants but would also allow the public to see these plants from the past in their true contextual setting.

A good example of this was the decision to use almost exclusively 19th-century Pelargoniums in the formal bedding display for 2001. While not as floriferous as the new F1 hybrids, these plants have a delicacy of leaf, colour, shape and scent unfortunately often discarded in the perpetual race for the latest fashionable specimen.

The discovery and collection of plants from around the world, a passion for the Victorians, could be used not only to bring life to the world of plant chronology but also to help tell the story of the individual collectors, their adventures and triumphs.

Research into period-correct plants, often slow and painstaking, has given staff a deeper understanding of the plants available at the time as well as an insight into Victorian garden design. Research material for the project came from many sources including catalogues from the famous nurseries of the day, books indispensable to the Victorian gardener such

as Robert Thompson's *The Gardener's Assistant* and John Claudius Louden's *Encyclopaedia of Gardening*. Specialist publications such as the world conifer checklist by Haddow and Welch were also consulted, and The National Council for the Conservation of Plants and Gardens was indispensable, their members a wealth of useful information.
Within the framework of general development, the opportunity to undertake complete small-scale restoration projects has however been the most rewarding of all the work accomplished to date. One such project was the almost unique rock garden situated at one end of the Quarry garden. Historical records had shown that this feature, built almost entirely of stone salvaged from the remains of the original Hall, was planted with soft greens and rich textures to create an intimate paradise whose silence was broken only by the trickle of a small cascade and the sound of the early morning chorus of birds that still proliferates in the grounds. This wonderful feature has recently acquired one of the largest collections of hardy ferns in the country obtained by English Heritage from the wife of the late Wing Commander Eric Baker, both of whom have been enthusiastic Pteridodologists. This collection has recently been further enhanced by a number of mature tree ferns. The result is a garden feature that would not be unrecognisable to the generations of the Thelluson family who would have found peace and tranquillity in this lovely garden.
The work will continue over the next few seasons, giving the visitor a unique insight into the restoration and revival process. The eventual aim is to bring about not only a pleasant experience for the visitor but also a closer understanding of the desires, aims and technical ingenuity of our Victorian predecessors.

The Rock Garden immediately after planting ar extensive collection of hardy ferns. To the right can be seen the tree ferns planted to help recreate the garden's intimate character

David Avery

Head Gardener, Brodsworth Hall

BELSAY HALL

Restoring the hot wall

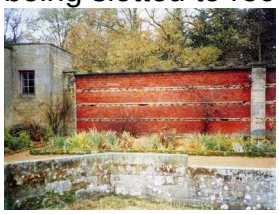
Belsay Hall in Northumberland is noted for its unique quarry garden. The creator of the garden, and builder of the hall, Sir Charles Monck, was also a keen horticulturalist

Following the precepts of J C Loudon he built a heated wall to extend the growing season, enabling the production of figs, peaches and plums well beyond their natural northern limits. This article explains how a recent repair project helped understanding of the construction and horticultural techniques involved
In 1833 Sir Charles Monck specified his heated walls thus: 'A wall to be built of park house stone ten feet high and 2 feet 6 inches thick with flue, the facing bricks of which are to be set on edge, with soles and corners of stone to the flue to be built into the wall so as to tie the facing bricks and loops of iron between the covers and soles. The piers of stone to be 2 feet broad and advanced one foot beyond the wall. The wall to be 30 feet between the piers and checked in six inches into the piers. The wall to have stone coping projected one foot and extended backwards over the wall its full thickness.'

This wall, visible from the visitor's car park on the north side of the hall, is approximately 150m long, running in a straight line due west from an enclosed garden at the east end and embracing the gardener's cottage at its mid point. The specification implies projecting stone piers dividing the wall into bays, clearly to be seen; twelve of the bays are in the straight section and two, at the west end, are turned to face south east.
Repairs were required to the two western-most bays, problems with the lower level brick facings on the south, garden-facing side being particularly evident. The iron loops (provided to carry oak poles for securing fruiting branches) had rusted, and the 'jacking' effect of the corrosion forced the masonry bands containing the loops apart, thus over-stressing the brick on edge flue facings set in between. Much of the masonry in these bands was fractured, and the bricks themselves were decayed and laminating. It also appeared that the complete wall section might be leaning backwards, thus implying major intervention. However, subsequent opening of the structure revealed that the thick masonry backing was well within the limits of structural safety, so repairs were limited to reinstating the facings and flues on the south face.

Preserving the character

The masonry bands consisted of paired stone courses, in each case the lower course being slotted to receive the fish tailed iron loops.



South face of hot wall before repair

Repair works in progress

They were replaced with local Blaxter stone, the courses being built into the rear wall as originally. Many of the loops were corroded through at the line of the wall face. New matching iron loops were made and all coated with micaceous iron oxide paint before incorporation.

Research and recording

New bricks to match the existing in size and body character were obtained from Charnwood Bricks of Leicestershire and laid in 1:3 lime sand mortar. The work was carried out by masons of Historic Property Restoration Ltd under the direction of the architect, Peter Brown. Thorough documentary research and on-site archaeological recording of the project has been carried out by Fiona Green.
From Sir Charles Monck's specification and from the evidence on site, it was not at all clear how the walls were heated. Careful observation and investigation during the repairs revealed that each bay is capable of being heated separately, and consists of a series of four horizontal brick-faced ducts, separated by the masonry bands, that link together at alternate ends.
Hot air (and smoke) from a wood fire lit in a chamber against the rear of the wall adjacent to the pier entered the lowest horizontal flue duct. By means of removable rear stones, and

other small, temporary fires, the main draught was induced to traverse the interior of the wall four times before emerging through vents in the top of the piers.

John Simons

Project Coordinator, Northern Regions

For a full record of the work and discussion of the significance of the wall see Fiona Green's article on the heated garden walls at Belsay Hall in *Archaeologia Aeoliana*, 5th series, 28 (2000), 223–230.

AUDLEY END

Restoring the kitchen garden

English Heritage has just completed the restoration of the kitchen garden at Audley End House, Essex, a project that has drawn upon a range of specialist skills for its organisation and execution

Walled kitchen gardens were once an essential part of every English country house, providing choice fruit, vegetables and flowers for the family and servants at all seasons of the year. But with the decline in fortune of the country house, and the growth of international imports, the freezer and the supermarket, nearly all these kitchen gardens have fallen out of use. Many have been re-developed for housing or other uses, or converted to ornamental gardens. Others lie disused and neglected, their walls and glasshouses fast disappearing.

Recent years have seen a revival of interest, particularly since the popular BBC series 'The Victorian Kitchen Garden' in 1987. There are now a few working kitchen gardens open to the public, most notably at West Dean in Sussex and Heligan in Cornwall. English Heritage has now made a distinctive contribution to this revival, with the restoration of the kitchen garden at Audley End House, near Saffron Walden, Essex.

Audley End is a fine mansion of Jacobean origin set in extensive gardens and parkland. The kitchen garden was established on its present site in the 1750s and gradually expanded, its various separate compartments extending to over eight acres by the late 19th century. At the centre of its historic core, the 1820s Vinery range forms an impressive show of glass across the whole of the south-facing wall.

Following the death of the 7th Lord Braybrooke Audley End during World War II, Audley End was bought for the nation and opened to the public. The walled kitchen garden area was leased to a commercial nursery business, giving valuable continuity of horticultural use although no public access was possible. Its special value was recognised in the early 1990s by Mike Sutherill, then English Heritage's inspector for the site, who carried out the first detailed research on the history of the garden and managed to secure the repair of the great Vinery, then close to collapse. The ambition to restore the garden fully was born, and when the tenant of the nursery business retired in 1998, English Heritage bought the lease and formed a special partnership with HDRA, England's premier organic gardening organisation, to take the project forward. Overall project management, design and the bulk of the funding was provided by English Heritage, while HDRA contributed horticultural management and organic gardening expertise, with a new team of four gardeners.

Project proposals

Using earlier research, a conservation plan was produced and a clear vision for the restoration project developed. The historic core of the garden, the two-acre compartment in front of the Vinery, would be restored authentically as a full working kitchen garden of the period around 1900, when the garden was at its peak. But besides recreating the past,

both English Heritage and HDRA were keen also to look to the future. The separate one-acre compartment behind the Vinery was therefore to be the 21st century kitchen garden, where HDRA could develop and demonstrate newer methods and varieties, with planting to a modern design, within the historic framework. The outer compartments would be used for fruit production, with the whole garden managed in a fully organic and sustainable way by HDRA. A budget of just under £0.5m was established, with a 3-year implementation programme. Funding was mainly from English Heritage, though Mike Sutherill, now project development manager for the region, was instrumental in securing £160,000 from a local European Regional Development Fund programme.

The project team

There was determination on all sides to achieve a high quality result. In particular, we wanted to ensure that the project organisation allowed all the necessary disciplines, expertise and skills for such a multi-faceted project to play their part. Landscape projects in the hands of architects and conservers of built fabric can all too easily fail to allow sufficient space for the horticulturalist and plantsman. On the other hand, a lack of appreciation of architectural or archaeological detail can undermine an otherwise successful garden project. There needs to be a willingness on all sides to listen to and learn from other team members of all disciplines – particularly where history, horticulture and built fabric are as intertwined as in a kitchen garden.

The core project team consisted of the project coordinator, Nick Hill, and the inspector, Lucy Worsley from English Heritage, with HDRA's horticultural advisor Bob Sherman and the new Audley End Kitchen Garden head gardener, Mike Thurlow. All architectural conservation and building infrastructure work was managed by English Heritage's in-house team of Nick Hill and Gurdev Singh, a senior architectural assistant. Lesley Howes was appointed as consultant archaeologist, also carrying out building analysis and additional documentary research. The project team was also fortunate to attend a National Trust-sponsored conference on kitchen gardens in July 1998, just before the project got underway. This gave an opportunity to make contact with some of the leading figures in this specialised field, including Peter Thoday and Susan Campbell.

Research

The project team had a rich variety of historical source materials to draw on. Besides historic maps, showing the overall development of the garden, there are surviving building accounts, architectural drawings, planting lists and late 19th century descriptions. Perhaps the most unusual documentary source is the diary of an under-gardener who worked in the kitchen garden from March to September in 1874, and kept a daily record of his activities. Of photographs, only one view inside the kitchen garden of 1948 has so far been found, though the sequence of post-war aerial photos proved very useful. The 7th Lord Braybrooke's daughter, the Hon Mrs Catherine Ruck, provided a layer of oral history on two visits with the project team. Having herself worked in the kitchen garden during its final years at the beginning of World War II, she was able to recall a remarkable level of detail, even drawing a full plan of the garden from memory. Besides all of this documentary material, there was the extensive surviving building fabric and below-ground archaeology to explore and analyse. Critical to an intelligent synthesis of all this diverse material was a wider understanding of the typical features of kitchen gardens and how they functioned. The team drew in consultants in the field, such as Peter Thoday, read widely and visited other kitchen gardens. Standard Victorian references, such as Robert Thompson's *The Gardener's Assistant*, provided copious information and instructions on every operation, from laying paths to pruning vines. To bring all this information together, a site gazetteer was compiled, covering each feature in turn.

The 1820s Vinery range in 1987, with central display house flanked by vineries. It was repaired in 1993–5, with over 60% of the original timber preserved

Reinstatement of overall layout

The rectilinear arrangement of gravel paths, clearly shown on the 1877 OS map (though with origins in the 1750s) was confirmed by extensive archaeological excavation. In the principal compartment, the paths were re-laid in a matching hoggin (gravel/clay) mix to the original widths, dividing the garden into the typical rectangular beds or ‘quarters’. For the path edgings, Mrs. Ruck’s memories and the lack of archaeological evidence for brick or tile confirmed that the original had been of box, as widely used in kitchen gardens. So new box was planted, using over 8,000 plants. Evidence showed the paths had been lined with espalier-trained fruit trees, so a new framework of iron posts and wire based on Victorian catalogues was designed, with extensive new planting of period apples and pears. In the 21st Century Garden compartment, the historic path layout was restored around the perimeter, but here an eco-friendly recycled brown plastic edging material was used by HDRA instead of box.

The Kitchen garden in August with the restored vinery range beyond

Buildings and infrastructure

An extensive programme of wall repairs was necessary, and a conservative approach was taken to ensure the survival of the patina of old brick surfaces, pitted by centuries of nails for trained fruit, with carefully matched handmade bricks and lime mortar pointing. The long ‘hot wall’ at the centre of the garden was built in 1802 with flues inside to give warmth for fruit protection. The opportunity was taken during repairs to trace the pattern of its serpentine flues. Doors and gates were re-fitted to openings, copying the last surviving examples, and painted a charcoal grey as established by specialist paint analysis. A large glasshouse, the Orchard House, a specialised structure for peach production, was completely rebuilt following evidence from the surviving brick base and the original 1850s design drawings. Comprehensive building analysis disentangled some of the complex history of the 1820s Vinery range and its remarkably complete ‘back sheds’ to the rear. This informed the restoration of the potting sheds, tool shed and mushroom house to their original use. At the centre of the ‘back sheds’ range was the boiler pit, filled in after World War II. When excavated, the deep pit was revealed as well as the lower parts of the two 19th century boilers that had supplied heat to the whole range. Trenches for undergrounding of overhead cables and other new services all provided further valuable archaeological information.

Horticulture and planting

In the main compartment, period varieties have been selected wherever possible, with a cut-off date of around 1900. The large central ‘quarters’ have four vegetable beds for crops in rotation, with other areas for soft fruit and currants. The smaller side borders have more special crops, such as saladings and herbs, as well as some of the once-common period plants such as sea kale and skirret. As guardian of the Heritage Seed Library, HDRA was well placed to source appropriate varieties. Peter Thoday advised on correct period management, including the use of great long rows for vegetables and the block planting of flowers for cutting alongside the central axis path. A large number of period fruit trees are being trained on the walls, with assistance from several enthusiastic nurserymen in tracking down old varieties. The new gardening team, led by Mike Thurlow, is eagerly learning Victorian horticultural practice.

Interpretation and display

An integral part of the project from the outset was interpreting the garden to visitors. Besides covering its historical development, the display panels tell the story of the function of the kitchen garden and of the lives of those who worked there, adding a new element with considerable popular appeal to a tour of Audley End. Patrick Adam of English Heritage’s interpretation team guided this process, with information produced by the project team. Graphic designers produced a range of information panels for the Vinery range, with a free leaflet to guide visitors around the main compartment without intrusive boards. In the bothy at one end of the ‘back sheds’, a display recreates the life of the gardeners who lived in these rooms in the Victorian period.

After three years of research, building repair and re-planting, Audley End Kitchen Garden is now in operation. With most projects – particularly the repair or restoration of buildings – this would mark the end of the process. For the restoration of a working kitchen garden, however, it is only the beginning. The historical understanding of the site, the restoration of the built fabric and the re-planting work, with all the special skills involved, have now created the necessary infrastructure and framework – the stage-set. The real drama – the recreation of a whole complex horticultural system – lies in the years ahead.

Audley End House and Gardens are open to the public on Wednesdays to Sundays from 1 April to 31 October. For more information, please ring 01799 522399.

The principal compartment with the great Vinery range has been restored as a working kitchen garden of around 1900. To the right is the chequerboard pattern of the new 21st century kitchen garden, with the extensive orchard beyond

Nick Hill

Project Coordinator, East Midlands Region

CONTEMPORARY HERITAGE GARDENS

New gardens in historic settings

Ten new gardens are being designed within historic settings, and the first two to open at Eltham Palace in London and Osborne on the Isle of Wight have delighted visitors

South Moat Border Eltham Palace: Isabelle Van Groeningen's design combines traditional and contemporary planting styles to provide interest from Easter until autumn

The Contemporary Heritage Garden Initiative was launched in April 1999 following the popularity of the new garden created for HM Queen Elizabeth the Queen Mother at Walmer Castle in Kent. Designed by Penelope Hobhouse, the garden continued the tradition of the Lord Wardens of the Cinque Ports of creating new garden areas at Walmer Castle. The Queen Mother's Garden demonstrated that such investment can increase visitors, income and raise the profile of English Heritage, particularly in the popular world of garden design and horticulture. In the year following the Walmer Castle garden opening, the site showed a 47% increase in visitor numbers.

Many of English Heritage's 408 Historic Properties are unsuitable for new gardens, either because opportunities would be constrained by the need to protect buried archaeology, or because they are landscape or earthwork sites where new gardens would be inappropriate. Some of our major historic house sites already have nationally important historic gardens which are being restored and where new garden design would be intrusive. Despite these constraints, there are a few suitable properties where conservation and high quality new design can improve the site setting without destroying historic fabric. There is also value in permitting the best designers of today to work within the constraints of the historic environment and create examples of their work to display to future visitors. Over five years, ten new gardens will be designed and built at our historic properties by contemporary garden and landscape designers who approach design with understanding and a spirit of place.

First phase

The first two new contemporary gardens opened in summer 2000 in the South Moat at Eltham Palace in London, and in the Walled Garden at Osborne on the Isle of Wight. At Eltham Palace, Isabelle Van Groeningen has designed new planting for the dry South Moat, replanting the 120m-long mixed border to provide interest from April to October and thinning scrub on the South East Moat bank to create the 'White Wood'. At Osborne, Rupert Golby revived the spirit of Queen Victoria and Prince Albert's fruit and flower garden in the derelict walled garden. Detailed research was been undertaken at both sites in order to understand their history and development, including desk top study, archive research and archaeological investigation to understand fully the significance of the sites and assess the potential risks of new works.

Why has English Heritage commissioned new design rather than restoring the old? For both sites there was sufficient data to allow the retention or restoration of the layout of paths and borders; however, no planting plans were found. We therefore decided to set a new garden in an historic setting rather than create a historical pastiche.

South Moat, Eltham Palace

Eltham Palace has been gardened since medieval times with a lapse of over 200 years when it became a fashionable picturesque ruin. The medieval gardens were laid out beyond the moat to the south, but it was not until the 19th century that, the site having been remodelled as a gentleman's residence, ornamental and kitchen gardens were developed within the confines of the moat. A watercolour from the time shows a double herbaceous border within the South Moat. In the early 1930s Stephen and Virginia Courtauld took on the lease from the Crown to restore the Great Hall and build a modern

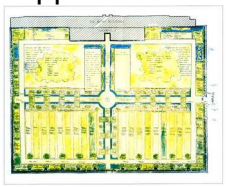
house on the site. In 1935, a master plan for the gardens was commissioned from Andrew Mawson and Partners and exhibited at the Chelsea Flower Show. The Courtaulds and their architects Padget and Seeley then developed these proposals further. New garden areas were laid out including shrubberies, lawns, a sunken rose garden, garden rooms, spring bulb meadow, a rock garden, woodland garden and moat extension.
Despite their efforts, the Courtaulds surrendered their lease after nine years and the site came under the management of the Ministry of Defence for the Officers Training Corps. Photographic evidence suggests that initially the borders in the South Moat were grassed over; however, this was reversed when the Royal Parks Apprentice School was established in 1975. The gardens declined during the 1990s following the departure of the Royal Parks Apprentices and the withdrawal of the Ministry of Defence. English Heritage decided to restore the gardens to their appearance during the Courtauld era, the most significant period in recent history. Contemporary photographs including aerial shots and those from the collections of Padget and Seeley and *Country Life*, together with early colour cine film taken by the Courtaulds, proved o a valuable resource when restoring the Courtauld garden.
While Courtaulds had made significant changes to the garden, the South Moat garden was only simplified in layout, its long border designed for maximum effect from the early to mid-summer. In order to retain the theatrical drama of this border for our visitors, interest needed to be extended over a period from April to October. Isabelle Van Groeningen has achieved this by combining elements of the traditional English herbaceous border with those popular on the Continent and North America such as a host of composites and grasses to extend interest into the autumn. The colour scheme responds to light intensity, the brightest parts planted with strong colour, the shadier parts with pale shades. At the south-west end of the moat, design is strengthened by a semi-circular hedge and seat from which the full length of the Long Border can be enjoyed. Many thousands of bulbs have been planted with woodland subjects in the White Wood and meadow species in the long south moat bank.
The White Wood, as the designer has named it, refers to her new planting on the south east wooded moat bank. Two flights of steps and a sinuous path lead through drifts of white flowering shrubs and herbaceous plants chosen to withstand dry shade and provide interest from late winter to early summer.

White Wood at Ekham: The selection of white flowered shrubs and groundcover herbaceous plants illuminate the subtle shade of this wooded corner

Walled Garden at Osborne

The Osborne Estate of over 200 acres of gardens, meadows, woods and coast has undergone a phased programme of restoration since it came into the care of English Heritage in 1984. Care has been taken during restoration to introduce only plant species and cultivars available before 1900.
The brick walled garden standing on the west pleasure grounds at Osborne, built for the earlier 18th century house, was retained and adapted by Queen Victoria in the 19th century. Two fine lean-to glasshouses, with service buildings behind, were erected in 1854 on the south-facing wall of the garden, for the display of exotic plants. By 1844 almost all the fruit and vegetables for the Royal Household were provided by the new 27-acre kitchen garden at Frogmore, and the development of the railways made it possible to for

fresh produce to be transported to Osborne when required. Fruit trees on the walls and bordering the main paths of the Osborne garden were therefore not vital for their produce. Pruned forms, no doubt, provided architectural interest and formed an interesting horticultural collection of both popular and unusual kinds, and the mild climate of the island supported unusual crops, such as oranges, as well as early fruiting.



Rupert Golby's design exploits the dynamic nature of the planting

The galvanised arches that now frame the view to Prince Alberts glasshouse are a contemporary structure for the training of period fruit varieties

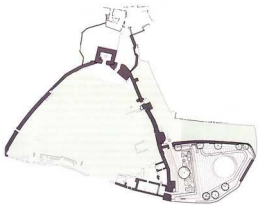
The remaining ground was planted with shrubs, herbaceous and annual plants to supply cut flowers and seasonal planting for the Royal Household and flowering plants for the terraces, cottages and entrance lodges of the estate. The luxuriant use of fresh flowers and foliage for decorating clothes, gifts, tables, rooms and terraces played an important role in Victorian fashionable society. It is known that frames were used for the production of violets, a favourite of Queen Victoria; her letters and diaries record that 'tea roses grew at a front wall of one of the houses' and 'a great many fine plants Albert brought also here'. Competing designers were asked: 'to design an imaginative and decorative planting scheme that will recreate the spirit of Queen Victoria and Prince Albert's fruit and flower garden and provide cut flowers and foliage for the house'. Rupert Golby produced a dynamic planting scheme that fulfils the functional requirement for production of fruit and flowers while adding exuberant planting. He described his proposals for the Walled Garden as 'celebrating the lives of Queen Victoria and Prince Albert and their age, using period plants within a contemporary design. The intention of my design is to build upon and enhance the existing fabric, honouring the original purposes and function of the Walled Garden. The seasonal cyclic energy essential to a reproductive walled garden is retained but reinterpreted in bold and broad multiple plantings'.

The newly opened walled garden at Osborne has fulfilled its aims in restoring the historic fabric created for Queen Victoria and Prince Albert, and period-correct plants are combined in a contemporary manner to restore its dynamic character. In restoring a garden in this manner we hoped to have avoided the confusion that may arise when restoration of the historic fabric is combined with conjectural reconstruction.

Second phase

The second phase of the programme is to create new gardens in the Cock-Pit Garden at Richmond Caste in Yorkshire and in a terrace occupied by an asbestos custodian's shed at Lincoln's Bishops Palace. The development proposal for each was based on conservation plans that identified the potential for new garden development.

The Cock-Pit Garden, Richmond Castle



Neil Swanson's design for the Cock-pit Garden, Richmond Castle, will encourage the visitor into the garden to admire the dramatic views of the castle and out over the Swale Valleyspires and provide an Italianate feel to the raised terrace

The Cock-Pit at Richmond is an enclosed space adjacent to the oldest part of the site, the Gold Hole Tower. The First Edition Ordnance Survey indicated that the site was gardened in the 19th century and this is supported by archaeological evidence which uncovered the base of a glasshouse structure and the wall of a long garden frame. The present layout is a result of extensive consolidation works to the outer walls by the Ministry of Works during the early part of the 20th century.

Neil Swanson produced a well structured simple design using yew hedging to guide the visitor round the garden and focus on the dramatic views up towards the castle and out across the Swale River valley. The high terrace will become a contemporary parterre, with individual topiary pieces representing the Richmond 16, conscientious objectors imprisoned at Richmond Castle during World War I. The sloping ground below the top terrace will in summer provide informal seating to view the circular performance space below. Much of the design is based on the structural form of evergreens shaped into hedges or topiary; however, a walk enclosed by a hedge and the south curtain facing will be planted with large drifts of herbaceous plants on either side of the path.

The terrace garden, Lincoln Bishop's Palace

The clipped fastigiate hornbeam trees mirror Lincoln's Cathedral spires and provide an Italianate feel to the raised terrace

A detailed survey of Lincoln Bishop's Palace in 1647 describes the site as, '...being included with a verye stronge stone wall of about 16 foot high having highe mounted longe walkes on one syde, set with fruit trees, and is a greene courte, a bowling greene, orchard, a garden etc. conveniently separated and divided with stone walls...' Disturbance following extensive repairs to the walls has removed too much of the archaeological evidence for a restoration to be meaningful.

The main focus of the garden consists of nine fastigiate hornbeam trees that will be clipped to retain a pencil shape, reminiscent of the Italian use of cypresses on terraces. The trees will be linked by radiating brick rills, set level with the turf. Simple planting of lavender frames the edge of the terrace and is best viewed from the raised oak platform that serves also as the entrance to the garden.

Third phase

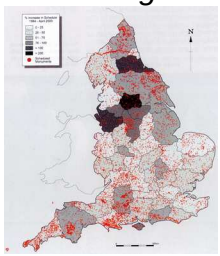
For the third phase of the Contemporary Heritage Garden Initiative, competing designers are being asked to present their proposals for the Governor's Garden, an old kitchen garden at Portland Castle in Dorset or to restore the lost Wilderness Garden at Witley Court and create a setting for contemporary sculpture.

John Watkins

MONUMENTS PROTECTION PROGRAMME

Knowledge for managing change

Begun in 1986, the MPP has added greatly to the knowledge and understanding of the archaeological resource and continues to advise the government on MPP-based scheduling recommendations



Map showing the increase in the size of the Schedule between 1984 and 2000, overlain by the national distribution of scheduled monuments

The Monuments Protection Programme (MPP) strives to keep a wide audience fully informed of its work, through its recent booklet, *Twentieth Century Defence*, or its guides for owners and occupiers of scheduled monuments. The earlier retrospective, *MPP 1986–96*, has now been superseded by a new leaflet, *MPP 2000: A review of the Monuments Protection Programme, 1986–2000* which summarises the MPP's history, aims and progress.

The Monuments Protection Programme is English Heritage's comprehensive review and evaluation of all aspects of the country's archaeological resource, carried out thematically and with due regard to regional and local diversity. It was designed to bring together existing information to increase understanding of the resource, both as a whole and in terms of its individual sites, monuments and places. This understanding greatly facilitates the conservation, protection and public appreciation of the archaeological heritage, and is thus fully in line with the first precept of *Power of Place* that knowledge is the first pre-condition for sustainable management of change.

Monument Class Descriptions

One of the MPP's principal responsibilities is the identification of nationally important monuments whose condition will benefit from legal protection through scheduling, but as *MPP 2000* demonstrates, there are wider aims. After 15 years, the achievement of the Monuments Protection Programme is clear. It has produced a new, rigorous classification of the archaeological resource: the Monument Class Descriptions. About half of the national archaeological resource has been evaluated at a strategic level using SMR data, and an on-going set of national evaluations of the remainder is nearing completion. The methodology for this evaluation itself represents a major step forward and in many areas, notably industrial and recent military archaeology up to and including the Cold War, the results have revolutionised our view of the archaeological heritage. The MPP is well on the way to creating a new Schedule of protected nationally important monuments.

Advising the government on how to revise and enlarge the Schedule of Monuments (initially set up by the 1882 Ancient Monuments Act) was one of the MPP's starting points. Significant progress has been made since MPP-based scheduling recommendations began to be made to the Secretary of State in 1989–90, and especially in recent years as the Programme has got fully into its stride. The Schedule now protects nearly 19,000 monuments, compared with about 12,400 in 1986. More significantly, the MPP's sophisticated database allows the major individual archaeological components of a single

scheduled monument to be identified separately. The nearly 19,000 Scheduled Monuments include over 32,000 separately identified and described Archaeological Items. As well as adding over 6000 new monuments to the Schedule, the MPP has also been revising and modernising maps databases and text entries for all existing scheduled monuments, thus creating a completely new Schedule for the 21st century. Though the greatest part of the increase in the number of Schedule entries is due to new monuments being added, MPP staff and consultants have also reviewed in detail the records of very nearly half of the monuments already scheduled before the MPP began. Those reports have been revised and extended where appropriate, often quite extensively or dramatically, as in the case of Rievaulx Abbey; this reflects archaeologists' enhanced understanding of the character and significance of the whole resource as much as it is does an improved knowledge of individual sites.

Regional and chronological balance

Another significant development concerns the internal balance of the Schedule, both regionally and chronologically. In regional terms there have been significant changes. West Yorkshire, for example, has seen a 229% increase in the number of scheduled monuments from 96 in 1984 to 316 in 2000. Other counties where the Schedule has more than doubled include Cheshire (128% increase), Cleveland (142%) and Durham (106%). These were some of the counties identified as most under-represented on the pre-MPP Schedule in England's *Archaeological Resource* (1984), a report that made the political case for the MPP to be considered as a major Schedule Enhancement Programme. Significant increases can also be seen further south. Devon, for example, has seen a 72% increase (from 919 to 1577 scheduled monuments), Cornwall 49%, Kent 24% and Suffolk 36%.

Changes by the MPP to the chronological breakdown of the Schedule, another weakness of the old Schedule as identified by *England's Archaeological Resource*, are also obvious. In particular, there is a significant increase in the percentage of medieval, post-medieval and modern sites, the result partly of prioritising MPP national evaluation towards the less well globally-understood types of monument, such as medieval settlements, industrial monuments and 20th century military sites. The next few years will see a similar focus on the late prehistoric and Roman periods as our Roman Settlement evaluation work reaches completion.

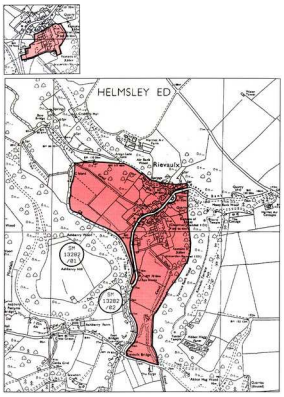
Other ways of site management

Not all of the MPP's work, however, leads to scheduling. Evaluations of the remains of industry, such as of the tin-mining or electricity industry, create a large number of suggestions for listing and identify many other sites where change is best managed solely through the local authority planning process using PPG 16 and PPG 15. The MPP also recognises that some types of site are best viewed primarily as a research resource. The recently published booklet, *Managing Lithic Scatters: Archaeological guidance for planning authorities and developers*, provides a starting point for assessing the importance of such prehistoric remains in relation to development proposals and suitable management options. More widely, the MPP's Historic Landscape Characterisation programme (see other article), financed through SMRs in county councils, is providing the information base essential for managing change sustainably within the ever-changing hedgescapes and stone-walled landscapes of the wider rural environment.

Looking ahead, the MPP's priorities and strategic directions can be re-affirmed:

Completing the programme of national evaluation in order to establish what is nationally important, even if it is not necessarily going to be scheduled

Continuing to maintain a planned but rapid programme of scheduling for those sites needing the protection of Scheduled Monument Consent
Extending the reach of the MPP by ever-more accessible and authoritative publications, of both methods and results
Scheduling is only one aspect of modern archaeological site management and conservation, and it must fit within a complex yet effective system including the planning process, listing, conservation area work, proactive management, research-led conservation, environmental land management schemes and new approaches to the landscape based on the concept of countryside and historic landscape character. The impact of new thinking on sustainability also needs to be taken into account. The MPP will continue to have an important role in the development of conservation theory and the implementation of the ideas and aspirations of *Power of Place*, underpinning the full range of conservation instruments.



These maps show the pre- and post-MPP scheduling boundaries at Rievaulx Abbey, Ryedale, North Yorkshire. Typically the pre-MPP scheduling (see detail) embraces only the core of the monastic site with its ruined buildings; MPP has extended the protection to include the original abbey precinct with its water management works and agricultural features

More particularly it will continue to reappraise the role of the Schedule to ensure that scheduling is not used where other measures would be equally or more appropriate.
In particular, the MPP wishes in future to offer more strategic advice to local authorities to explain clearly how MPP reaches its decisions. It will expand its dissemination both of the results of thematic evaluation and also of site-based survey and analysis, to help more people appreciate the character and importance of the archaeological dimension of the historic environment. Improved public recognition of such matters should reinforce the role of the planning process in providing alternatives to protection by scheduling.

Margaret R Nieke

Inspector of Ancient Monuments Monuments Protection Programme

See also New Publications, page 46. *Scheduled Monuments: an English Heritage guide for owners and occupiers* (free leaflet; Product Code XH10876) and *The Monuments Protection Programme: an introduction* (free leaflet; Product Code XH20031) may be ordered from English Heritage Postal Sales, Knights of Old Ltd, Kettering Parkway, Kettering, Northampton NN15 6XU.
Tel: 01536 533500 (24-hour service) Fax: 01536 533501 or from www.english-heritage.org.uk

BOUNDLESS HORIZONS

Historic Landscape Characterisation

The Historic Landscape Characterisation programme is a powerful tool that provides a framework for broadening our understanding of the whole landscape and contributes to decisions affecting tomorrows landscape

The designed landscape – jewel-like garden or panoramic vista – is but one of the ingredients of the English historic landscape. Most historic landscape lies beyond the park pale. This wider landscape is a fundamental aspect of the historic environment yet one of the least understood, though providing the setting for everything else and revealing the long interaction, sometimes harmonious but often not, of people with nature.
English Heritage's Historic Landscape Characterisation (HLC) programme is filling this gap in understanding. Moving beyond individual buildings, ornamental landscapes or archaeological sites, the programme establishes an over-arching view of the whole historic landscape. It provides a base map for a better appreciation of separate places, but also offers an overall understanding of the whole.
HLC focuses on aspects of the landscape that have not always been regarded as archaeological. It considers components of the landscape that are 'natural' but nevertheless the product of centuries of human action, such as hedgerows, woodland, ponds and modified watercourses.
It also takes account of more intangible matters reflected in its physical structure: time-depth, and patterns such as settlement, land-use and the mixture of enclosed and non-enclosed land, arable and grazing, woodland and parkland.

A landscape characterised by hedgerow patterns, largely post-medieval, in West Shropshire

Two national frameworks

HLC is carried out at county level within two national frameworks – the Countryside Agency's Countryside Character map and English Heritage's Atlas of Settlement Diversity. Both subdivide the country into discrete areas, each with distinctive character. The Countryside Character Map was produced by the Countryside Agency in collaboration with English Nature and English Heritage (Countryside Commission 1998, vols 1–3; Countryside Agency 1999, vols 4–8) and defines the country's landscape character by describing the scenic, natural and to a limited extent the cultural character of a single set of 159 distinctive Areas. The Settlement Atlas (Roberts and Wrathmell 2000) is more detailed, but concentrates on one main aspect, the deep-seated patterns of settlement first established at least a thousand years ago. The Atlas has a hierarchy of 3 levels of character areas: three major Provinces, 25 sub-provinces and 141 local regions, each layer defined by increasingly fine distinctions.

There is an historic dimension even of 'wild' areas: Quernmore, North Lancashire
HLC combines both these frameworks. It provides detail to support their use and to deepen our understanding of them. It also creates a basic understanding, lacking until now, of the historic dimension of the whole landscape.

Understanding the landscape's historic depth

HLC began by assessing the landscape architect's method of appreciating landscape character. During the 1990s this method reached maturity in the Countryside Commission's AONB assessments, the Countryside Character Map and county-wide assessments. Driven by aesthetic judgements, the method was based on an assumption that geology, soils and geomorphology determine a landscape's appearance. Between those poles of aesthetic and environmental factors, however, lies history and archaeology. Landscape assessment should include the contribution of human activity to the landscape's history and appearance.
Before HLC, no satisfactory method existed for identifying the historic character of the whole landscape. There were many exemplary local studies of landscape history and archaeological landscape work, but no overall view. There was a common belief, however, that the most important historic landscapes were simply the areas with the most and the best buildings or monuments – for a pre-historian, Dartmoor or Salisbury Plain, for an architectural historian, Bath or Westminster, for a garden historian, Blenheim or Chatsworth. The commonplace and the typical were overlooked, and there was a risk that the term 'Historic Landscape' would become just another badge of quality to pin on the already recognised special places such as National Parks or World Heritage Sites.
In HLC, English Heritage has adopted an approach that allows historic landscape character an independent existence, to be studied and understood, managed, protected or enhanced, on its own terms. Historic character can be appreciated through archaeological investigation – excavation, non-intrusive survey and scientific analysis of material remains. Characterisation also offers the potential to raise public awareness of the historic environment on everyone's doorstep, not just in designated areas. This understanding is the first step towards managing the landscape heritage, using it and possibly changing it, as explained at greater length in *Yesterday's World, Tomorrow's Landscape*.

Using counties as a midway scale

The ambitious scale of this objective has required a broad-brush approach and counties have been chosen as a suitable working scale. There are practical advantages for using counties, notably, consistency with other mainly county-based historic environment databases such as SMRs. The main reason, however, is not administrative convenience but the need for a scale of work midway between the local and the regional.
A regional or national scale for HLC would be too far removed from local distinctions and would not provide a useful level of detail.

Objectives of HLC

Creating a context for our knowledge of the rest of the historic environment, initially SMR data but eventually buildings, thereby integrating landscape scale with site-based conservation
Guiding future archaeological research by showing gaps in knowledge and posing new questions
Encouraging people to decide for themselves what they value in their historic landscape by raising awareness and asking residents and visitors to contribute their view of the evolution of HLC maps
Providing strategic information for development plans, detailed data for development control; helping to assess environmental impact of major developments; influencing the

character and location of landscape change and development; contributing to rural and urban planning and development policies
Informing agriculture and land-use, from national to farm and estate level, notably by understanding the historic landscape before deciding to change it (for example, woodland creation: where, how?) and by directing agri-environmental grants to achieve archaeological as well as ecological benefits
Integrating with other approaches to conservation; HLC was specifically designed to work with countryside, nature conservation and green conservation.
The priority rather is to amplify the two high-level national frameworks that already exist. On the other hand, we know from experience that landscape work at too local a scale lacks a context, cannot disentangle broad patterns and structures, and is slow. At county level, however, broad patterns and generalities can be identified without losing sight of the more detailed grain of the landscape. A jumping-off point is created for further work at local or regional scale in an assured context, and it becomes feasible to attempt coverage of the whole country, for the first time, within a decade, a timetable that can help to address current conservation priorities.

Historic Landscape Types

HLC works by using computerised Geographic Information Systems (GIS) that attributes each block of land to one of a range of landscape Types. The basic building block is a group of fields or other means of land parcel. The size of the blocks varies according to the grain of the landscape, itself a product of an area's history of land-use and settlement. GIS databases allow the judgement and interpretation that underlie the attribution of an area to a Type to be recorded and made explicit, thus helping to measure the subjectivity of the characterisation. Maps can be produced at whatever degree of certainty or detail is required for a particular purpose.
The Historic Landscape Types themselves are based on historic processes, land-use and appearance. Examples include different types of woodland (recent plantations, ancient woodland), heath-land and common (and sometimes former areas of heath and common), land used in the 20th century for military purposes (airfields) and still retaining military character, areas mainly characterised by mineral extraction or industry, and ornamental designed landscape. Most notably, HLC analyses the diversity of land enclosed by hedges, walls and other boundaries that forms perhaps the most important component of the English historic landscape.

Chalk downland and enclosure, North Wiltshire

Post-medieval enclosure of earlier open field and upland pasture at Edlingham, Northumberland

The Settlement Atlas (Roberts and Wrathmell, 2000) draws our attention to the more ancient character of settlement in the west and east of England. HLC demonstrates that those characteristics are, as expected, reflected in field shapes and other aspects of the farming landscape, including buildings. HCL also defines local and regional diversity of hedge patterns, attributing likely dates to types of field layout and assigning pre-medieval dates for more areas than might have been suspected. HLC gives a context for individual hedges, so that decisions about which hedges should be protected through the Hedgerow

Regulations can be taken in recognition of a hedge's historic significance, not only of how many rare birds or plants it might support.
The basic source for HLC is the landscape itself, as portrayed on the latest maps and aerial photographs. Other sources are used, mainly modern mapping or digital data, for example, of semi-natural woodland or current mineral sites. Some historic maps are consulted in an archaeological context because HLC is an archaeological technique used to analyse present-day rather than past landscape.

Progress and plans

Nearly half of England's historic counties now have an HLC integrated with the county SMR and available to district and unitary councils for conservation and planning work. Some offer HLC maps on-line via the Internet or in libraries.
It is an important aspect of HLCs that they are computerised on highly sophisticated GIS and can be used at local or county level at many different degrees of complexity: broad summaries of a county's historic landscape character, more detailed portrayals of aspects of it, explanations of the historic process that altered the landscape or reconstructions of past landscape appearance. HCLs can be laid over other maps, such as the first edition OS 6", and used with other data from archaeological sites, scheduled monuments, parks and gardens, conservation areas or nature conservation.
Finally, HLC captures a particular view of the present landscape, so periodic updating will be necessary as the landscape changes and our understanding and perceptions grow. Early projects will be brought up to date with the latest methods. HLC needs to expand too. Begun as a mainly rural exercise, it will work in urban areas and some of the groundwork for this has already been done. A greater challenge is to expand HLC to embrace the intangibles of landscape, such as cultural and psychological perceptions and historical associations: the ways in which 'landscape' embraces all the senses of belonging or alienation, familiarity or strangeness. HLC needs to incorporate how people react to landscape, often not through the accepted rules of aesthetics. The next stage of the HLC programme will include a review of current methods to identify the most useful future approaches as the programme moves towards national coverage.

Graham Fairclough

Head of Monuments and Countryside Protection Programmes

Yesterday's World, Tomorrows Landscape (L9.99; Product Code XC20041) and *An Atlas of Rural Settlement in England* (£25; Product Code XC20040) may be ordered from English Heritage Postal Sales, Knights of Old Ltd, Kettering Parkway, Kettering, Northampton NN15 6XU. Tel: 01536 533500 (24-hour service) Fax: 01536 533501 or from www.english-heritage.org.uk

LIVING HISTORY

Veteran trees and parkland habitat

Parkland and veteran trees have important historical and cultural resonances and are valuable habitats for rare species. New initiatives for conservation and management are being developed by government and English Heritage working in partnership with English Nature and the Countryside Agency

'...those grey old men of Moccas, those grey, gnarled, low-browed, knock-kneed, bowed, bent, huge, strange, long-armed, deformed, hunchbacked misshapen oak men that stand awaiting and watching century after century biding God's time with both feet in the grave and yet tiring down and seeing out generation after generation.'

The Reverend Francis Kílvert, 1876
Lowland wood pasture and parkland is unique among the 37 classified habitat types as a historic land management system and a vegetation structure rather than a plant community. The habitat is one of the UK's ten priorities because these lowland wood pasture and parkland sites are of international importance. Veteran trees of great age, size or condition are a key feature. Many have declined over the last 20 years and are potentially at risk. They are valuable habitats for insects, fungi, lichens and rare beetle species. They may also be of cultural and historical importance, such as the Royal Oak in which Charles II hid at Boscobel.

Action plan

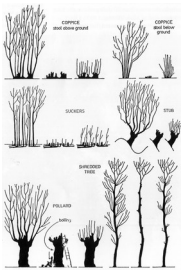
The UK Biodiversity Action Plan for Lowland Wood Pasture and Parkland forms part of the UK Government's commitment to take urgent action to secure the future of the earth's resources following the 1992 Earth Summit in Rio de Janeiro. Each action plan sets out the biological status of the habitats and links with threatened species. Factors affecting each habitat and its status are included as well as current and improved protection, best management practice, research and guidance. Objectives and targets have been identified to monitor progress in conserving these habitats.
The action plan includes wood pasture and parkland derived from medieval forests and emparkments, wooded commons, and parks and other veteran trees, and the various systems of wood and timber production. Oliver Rackham (1976) has pointed out that 'woodland and trees sometimes come within the archaeologist's province, because of their longevity and continuity and the many ways in which they interact with human affairs'. From the Middle Ages, buildings were the biggest single use of timber and, as Oliver Rackham notes, timbers and woodlands reveal the historic management techniques for producing fuel, wood and timbers. There are often other historic features associated with these sites such as preserved earthworks, boundary banks, trackways, ditches, ponds and pits, designed landscape components like ha-has and park pale fencing. Just as these elements reveal a site's history, so do the trees and their management, and the associated flora, and often archive documents like maps.

Bayham Abbey is a registered 18th-century historic park and includes this large veteran beech growing among the ruins

Designed landscapes

There is little data about the extent and condition of parklands, especially wood pasture, in the UK. Medieval deer parks would have been numerous and their imprint still exists in the landscape, for example, the more than 30 deer parks in the East Yorkshire Riding alone (Bettey, 1993). Oliver Rackham (1986) has estimated that there were probably 3200 parks around 1300, representing 2% of the area of England. English Heritage's *Register of Parks and Gardens of Special Historic Interest* identifies nearly 1300 sites meriting national recognition as designed landscapes. Most of these span from the 1700s to the post-World War II period but many incorporate earlier parks and wood pasture. Designers such as Capability Brown recorded and preserved many pollards, for example, at Heveningham in Suffolk, and veteran trees are as much part of the historic fabric of such sites as the

house, walls or monuments. There are 85 registered parks that are also designated as Sites of Special Scientific Interest. The nature conservation interest of a site often correlates with its continuous traditional management as a park or wood pasture.



Oliver Rackham s illustration of the different ways of growing wood-producing trees and the different forms created by these management practices

Parklands and wood pasture

Parklands and wood pasture, and remnant features such as veteran trees and parkland boundary walls and fences are far more widespread than deer parks, as illustrated in the Countryside Agency's map of the English countryside character. In collaboration with English Nature and English Heritage, the Countryside Agency correlated a number of data sets on the historic, physiographic and natural environment to produce the Countryside Character map. The current 1:50,000 Ordnance Survey maps were compared with the 1918 maps to generate a picture of the parkland features shaping countryside character. The Countryside Character map demonstrates the importance of parkland – a quintessentially English countryside feature – in shaping local landscape character. The action plan will produce a comprehensive list of all parkland and wood pasture sites to ensure that they are protected and maintained in a favourable condition. Of historic and cultural importance, the renowned 18th and 19th century landscaped parks are 'often said to be the only great aesthetic contribution to the arts by the English' (Miles Hadfield, 1977).

Veteran trees

It is important that we safeguard veteran trees as a genetic resource, provide habitat continuity and allow for succession to the next generation of maturing trees. In safekeeping them, we can also perpetuate traditional management practices and landscapes, important as places of historic, cultural or local features. The habitat action plan also identifies key concerns for maintaining the wildlife value of these sites. The lack of younger trees disturbs habitat continuity for dependent species, such as insects and lichens, threatening extinction. Where traditional tree and wood management techniques like pollarding have been neglected, veteran trees are unlikely to survive and may also be lost through disease, stress such as droughts and competition from surrounding younger trees. Decline in the vegetation structure will also affect the aesthetic and historic value of the site.

Changes in land use

Land use change poses a serious threat for parklands – both as designed landscapes, archaeological sites and wildlife habitats. Conversion to arable cropping, improvement of pasture, for example, by reseeding, deep ploughing, use of fertilisers, and changes in grazing stock levels, water levels and pollution can seriously affect the parks and the parkland habitat. At the other end of the scale, small changes such as visitor provision can have unintentional adverse impacts too. Clearing dead wood for safety and tidiness can be detrimental, and compaction and erosion caused by car parking and trampling will damage trees. The isolation and fragmentation of parklands and wood pasture sites makes this habitat more vulnerable as the dependent species are unable to transfer between sites.

New strategy

English Heritage is developing a strategy for historic parks and gardens at risk, and fragmentation and change of land use will be key criteria. The action plan demonstrates the interrelationship of the scientific, historic, landscape and design interests of parklands and the need for collaboration between wildlife specialists, landscape historians, landowners and managers. There is a strong correlation with the history of sites, their historic management and today's nature conservation status.

Developing a long-term plan is crucial for the future of these habitats and sites of historic interest – and their veteran trees. The agri-environment schemes such as Countryside Stewardship do offer grant aid for preparing plans and conservation management. For example, the owners of the 500-year-old park at Melbury in Dorset have combined Countryside Stewardship with other grants such as the Forestry Commission's Woodland Grant Scheme and English Nature's management agreements to carry out a large scale restoration, including conversion of arable leys back to pasture, new planting and work on lakes and other traditional park features. The restoration scheme is based on a plan developed by the estate after Melbury park was badly damaged in the 1990 storms.

The Veteran Trees Initiative has been set up to promote the conservation of these ancient trees and English Nature – with co-sponsorship from English Heritage – has produced a number of Veteran Tree Initiative publications about their care and practical management. The guide to good management offers advice on integrating veteran tree conservation and management of ancient monuments or designed landscapes.

2001 is the 350th anniversary of the future King Charles II hiding in the Royal Oak at Boscobel. Although the tree was severely storm-damaged last year, it has been saved and another successor planted to continue the tradition of the Royal Oak and its replanting

Jenifer White

Senior Landscape Advisor

Contacts

Ancient Tree Forum's website: http://www.woodland-trust.org.uk/ancient-tree-forum
English Nature's website: http://www.english-nature.org.uk
Veteran Tree Initiative publications: Telelink, PO Box 100, Fareham, Hants PO14 2SX tel. 01329 668600

References

English Heritage (1998) *The Register of Parks and Gardens: an introduction*. (XH20031)
English Heritage (2000) *The work of English Heritage: looking after historic parks and gardens*. (XH20157)
English Nature (1996) *Guide to the care of ancient trees*. ISBN 1 85716 252 8
English Nature (1998) *UK Biodiversity Group Tranche 2 Action Plans Volume II terrestrial and freshwater habitats*. ISBN 1 85716 422 9
English Nature (2000) *The future for veteran trees*. ISBN 1 85716 509 8
English Nature (2000) *Veteran Trees: a guide to good management*. ISBN 1 85716 474 1
English Nature (2000) *Veteran Trees: a guide to grants*. ISBN 1 85716 506 3
English Nature Enact (2000) 'Managing parkland and wood-pasture', in *Managing land for wildlife* **8**, no 3
JH Betteg (1993) *Estates and the English Countryside*. Batsford. ISBN 0 7134 6710X

Miles Hadfield (1977) *The English landscape garden*. Shire Garden History, Shire Publications Ltd (Aylesbury). ISBN 0 85263 919 8
Andrew Morton (1998) *Tree heritage of Britain and Ireland*. Swan Hill Press, Shrewsbury. ISBN 1 85310 559 7
Oliver Rackham (1976) *Trees and woodland in the British landscape*. JM Dent & Sons Ltd (London). ISBN 0 460 02223 7

USE OF PEAT

Landscape advice

The long-established extraction of peat in the UK for horticultural and landscaping industries has serious archaeological and ecological implications. English Heritage needed to have a clear policy on the use of peat both for the guidance of staff involved in horticultural and landscape works and for staff involved in advising external parties on these types of works and on matters involving peat deposits

English Heritage was represented on the Peat Working Group reconvened by the Department of the Environment, Transport and the Regions in 1997, and English Heritage's position regarding peat protection and conservation issues was outlined in the Group's report, *Peatland Issues: Report of the Working Group on Peat Extraction and Related Matters'* (DETR, 1999).

What is Peat

Peat forms naturally throughout the world. It is formed when *Sphagnum* moss species (moss peat), or *Carex* species in fens (sedge peat) are prevented from decomposing completely by the permanently wet conditions. Because of the unusual characteristics of these sites, they support unique suites of both plants and animals, and contain archaeologically important deposits. Only 4% of the lowland raised peat in the United Kingdom survives undamaged.
The rate of peat growth is very slow and sensitive to climate changes. For a number of years there has been concern that the demand for peat is leading to the destruction of important peat bog habitat, and rare species which are dependent on it.
Despite this concern, annual use of peat (including some imported from Ireland and countries around the Baltic Sea) is rising. This rise is due mainly to increased amateur interest in gardening, which accounts for the vast majority of growing media use.
Peat is mainly cut for use in the horticultural and landscape industries as a growing medium and as a component of composts for growing plants; it can also be used as a mulch and as a soil conditioner. In addition peat is extracted in some areas as a fuel, which although traditionally done on a small scale, could exacerbate the impact of large-scale extraction for horticultural purposes.

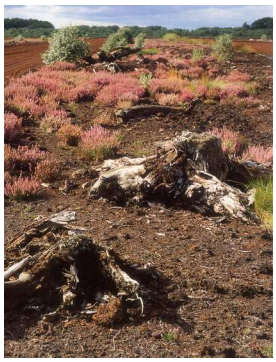
Archaeological Concerns

Because of the chemical properties of peat bogs and fens, important archaeological and palaeoenvironmental remains are preserved within them. Probably the best known examples are the well-preserved human remains and wooden trackways discovered in various bogs over the past few decades.
Peat deposits also contain a unique record of local and regional history that can extend back over thousands of years. This is because pollen from surrounding vegetation falls annually onto the peat surface and is preserved as the peat grows. Similarly insects from the surrounding habitats are also preserved. As a result, each slice of peat is a time

capsule that may contain evidence of the first farming in an area or the use of fire by prehistoric hunters. Peatlands may also be diaries of climatic change and volcanic activity. English Heritage's policy (see DETR 1999) is that this evidence is a valuable and non-renewable resource, and that it is best protected by being left in situ. Once exposed to air, decomposition may occur rapidly. Therefore, it is essential that a high water table be maintained to prevent these vulnerable remains from being lost.
English Heritage can only schedule an area of peat bog under its present statutory powers where archaeological remains are known to exist. The definition of a 'monument' under the 1979 Act does not extend to deposits of purely palaeoenvironmental importance – some sort of structure or 'work' must be involved. Planning Policy Guidance 16 (*Archaeology and Planning*, November 1990) does provide a mechanism to ensure that archaeological concern (including the palaeoenvironment) are considered prior to permission for peat extraction being given. However, this guidance does not apply to peat extraction permissions granted prior to November 1990.

Nature Conservation Concerns

The primary area of nature conservation concern over peat is that lowland peat bog is a rare and endangered habitat, and that the continued demand for peat is threatening the remaining relatively unspoilt sites.
Large-scale extraction of peat requires the lowering of the water table to allow the peat to dry out. This process can cause damage to the wildlife habitats outside the area to be mined.



Ancient bog pine stumps at Thome moor

English Nature is the statutory body responsible for the protection of peatland habitats in England. Under their statutory powers they can designate peat hogs as a Site of Special Scientific Interest (SSSI). However, a number of large peat extraction operations in England are on sites which received planning permission before being designated by English Nature as SSSI.
Therefore, one of the main strategies for protecting peat bog sites has been to work with extraction companies, encouraging use of less ecologically important areas, and rehabilitating sites where peat has already been removed. Of course archaeological/palaeoenvironmental losses cannot be 'rehabilitated' at all, in the sense that they return to being what they were like before mining began.
It is not currently possible to tell at purchase whether peat has been extracted from sites designated as SSSIs.

Peat Alternatives

Because of environmental concerns about use of peat, research into less damaging potential alternatives has been carried out.
A wide range of alternatives has been used successfully for mulches or soil conditioners. These include chipped bark, cocoa shell fibre, spent mushroom compost, paper waste and garden waste.

A number of alternatives to peat as a growing medium are also available, including products made from coir (coconut husks), bark or other wood fibres and seaweed. So far none of these products have been proved as versatile, consistent or reliable as peat, but research is continuing into their development.

Bog Rosemary and mire vegetation

One way of getting greater reliability while reducing peat consumption would be to sell mixtures of peat and alternatives. The peat industry has initially proposed adding 10% alternatives to some peat mixtures, but there is evidence that up to 40% alternatives could be added without affecting the quality of the product. Even at the 10% level, there could be a significant reduction in demand for peat. English Heritage welcomes research by ADAS, the RHS and the National Trust into peat alternatives.

Mike Corfield

Chief Scientist Conservation Department

Alan Cathersides

Senior Landscape Manager Gardens and Landscape Team

English Heritage Policies on Peat

l. English Heritage and English Nature have complementary interests in the protection of remaining peat bogs and fens and will continue working together to ensure that an holistic approach to protecting this cultural and natural resource is pursued despite the continuing demand for peat.
2. English Heritage will not purchase peat or peat products for direct use in horticultural or landscaping activities, including use in potting compost, as a soil ameliorant or as a mulching material, unless specifically required for a particular plant species where no suitable alternatives exist.
3. English Heritage will specifically exclude the use of peat or peat products in any contract for horticultural or landscape works on our own sites.
4. English Heritage will specify the use of peat alternatives in composts for all plants grown under contract specifically for our own sites.
5. English Heritage will endeavour to obtain all other plants in peat free or reduced peat composts where these are available and economically viable and will work to encourage nurseries to increase the range of plants grown in peat free compost.
6. If, in the future, it becomes feasible to determine the source of peat at time of purchase, English Heritage will avoid using peat extracted from areas of high ecological value or known archaeological interest.
7. Where appropriate in advisory work, staff will explain the problems caused by peat extraction and recommend the use of suitable alternatives where these exist.
8. English Heritage will specifically exclude the use of peat or peat products in any garden or landscape works supported by an English Heritage grant, unless there are overriding historical or cultural reasons for its inclusion.

9. English Heritage will continue to seek statutory protection for anthropogenic deposits of all kinds

GROUNDS FOR LEARNING

Teacher's guides

The Education team has developed valuable teacher's guides for using parks and gardens to explore a wide range of subjects in the National Curriculum

Parks and gardens are much under-valued as an educational resource. Education draws out new facts, skills and concepts from the starting point of the familiar, and gardens are something all children know about; even those who live in high rise flats visit their local park.

How do teachers, who live in a world where change is becoming the one constant, see the value of gardens as a teaching resource? One convincing argument for primary schools is to show how one visit can combine several subject areas: history, geography and science as well as English, maths and art. For older students doing history or geography, or for those following vocational 'A' levels and GCSE in tourism and related subjects, parks and gardens are excellent for individual assignments.

English Heritage Education has produced a book of useful information for teachers, *Using Historic Parks and Gardens* that contains practical suggestions on how to prepare pupils before a visit and what to do once they get to the site. It advocates an investigative approach, with a series of key questions that pupils need to address, such as:

Where is the park or garden sited? Why?

What is this place like now?

What was the original size and design? Why?

What has changed, and what has stayed the same? Why?

These questions demand interpretation of both physical and two-dimensional evidence, such as maps, plans, pictures and written accounts. Geographical skills are needed to consider why the site was originally chosen, with pupils looking for features such as a water supply, a communications network for bringing people in or taking produce out, a nearby settlement whose inhabitants, in the case of a public park, form the user group, or from which a labour force can be drawn, or the terrain itself, which may have topography or views important to the site.

Surveying the place as it is now calls for identification and recording of natural and artificial landforms, and features such as follies, statuary and boundaries. Flora and fauna can be studied, and follow-up investigation into the origins of some of them can lead to wider understanding of how much other countries have contributed to our own English scene. The people who visit the site or work there can be questioned, and the way in which it is now used, including the circulation routes, can be observed.

Looking at the original design brings pupils back to history and the people for whom the park or garden was first made. Gardens, as much as homes, reflect the taste as well as the economic, political and social situations of past generations. Think how the perceptions of a class of seven-year-olds could be changed at a stroke if they included in their study of the Roman period gardens as well as gladiators!

Looking at change and continuity in the garden the children are studying will, in the hands of a skillful teacher, bring them to ask questions about who protects and cares for our parks and gardens, and what their own role and responsibilities are now and in the future.

Liz Hollinshead

Further and Adult Education Officer Education

Pupils at All Saints Primary School, North Hyeham, Lincoln, investigated Hartsholme Hall and Park as part of the Schools Adopt Monuments scheme, run by English Heritage Education. After extensive research, including interviewing people whose memories stretched back to Hartsholme in its heyday, the pupils, with their teachers Jo Benton and Tina Sudell, applied for Heritage Lottery money to produce their own history trail of the hall and gardens

Using Historic Parks and Gardens, by Susanna Marcus and Rosie Barker, £6.99, ISBN 1 85074 510 2, Product Code XP10656, may be ordered from English Heritage Postal Sales, Knights of Old Ltd, Kettering Parkway, Kettering, Northampton NN15 6XU. Tel: 01536 533500 (24-hour service) Fax: 01536 533501 or from www.english-heritage.org.uk [K] English Heritage Education also publishes free booklets for teachers about a number of sites, including the gardens at Brodsworth Hall, South Yorkshire. For information please contact English Heritage Education, Freepost 22 (WD214), London W1E 7EZ or www.HeritageEducation.net or e-mail education@english-heritage.org.uk

STONEHENGE

Restoration of grassland setting

An extensive programme of repair and maintenance of grassland paths at Stonehenge has resulted in a vastly improved setting for the site and the visitor

Stonehenge circa 1870

Stonehenge is arguably the most well known ancient monument in this country, possibly in the world, and there is a long history of visitors. Writing of a visit in 1768 in his *Natural History of Selbourne*, Gilbert White described ‘that amazing work of antiquity’ and commented on the jackdaws nesting at the top of the upright stones that were tall enough to ‘secure those nests from the annoyance of shepherd-boys who are always idling round that place’. The Jackdaws remain, if not the shepherd boys. During the following centuries, visitors have continued to come; the first photographic record of visitors is dated to around 1870.

Since then, visitor numbers have risen dramatically and by 1999 the annual figure had reached 870,000. These numbers led to a major problem with the grass surface surrounding the stones, on what is actually a remarkably small area – the stone circle is only about 30 metres in diameter and the surrounding ditch and bank about 120 metres in diameter. After access to the centre circle was stopped in 1978, visitors leaving the tarmac pathway that cuts across part of the site were directed to the outside of the encircling ditch and bank on the grass, then to the fence by the Heel Stone and back again. That route, necessary because of the extremely sensitive archaeology of the Avenue area, resulted in doubling the wear on an area estimated at only 4000 sq m. This wear continued until the walkway across the Avenue was installed in 1995, thus reducing the wear problem on one side but greatly increasing it on a previously unused section.

Damage caused by visitors

Thousands or hundreds of thousands of pairs of feet walking over grass can cause damage in four ways:

Crushing grass blades, damaging their delicate internal structure, disrupting photosynthesis and possibly causing excessive moisture loss by damaging the external surfaces
Tearing leaves and stems as the foot ‘kicks back’ as it is lifted – especially when wearing deeply indented soles
Smearing mud over the leaf surface during wet weather, reducing the amount of sunlight that can penetrate into the leaf blade
Compacting the soil, destroying the soil structure and greatly reducing the amount of air spaces between soil particles which inhibits root respiration, makes physical root growth difficult and interferes with the movement and availability of water in the soil.

Wear pattern

At Stonehenge, the increasing number of visitors caused a rapid decline in the quality of the grass surface. The first indications were yellowing caused by damage to the leaf blades, followed by brown and patchy areas with some damage to stems and leaf sheaths. In terms of ‘limits of acceptable change’, this stage is the absolute limit at which recovery of the existing turf is possible but only if the source of wear is removed. If nothing is done at this stage the spiral downwards continues with large areas becoming bare, indicating complete loss of stems and leaf sheaths. Areas of wear spread further and further until the loss of vegetation leads to large areas of bare earth. Partial re-colonisation can occur during off-peak periods but generally only by broad-leaved and annual species with no wear tolerance. By 1987 the entire grass pathway was bare chalk or mud for most of the year, and by 1988 the situation was so bad that the call to extend the tarmac path was becoming increasingly insistent.

Road to success

For both archaeological and aesthetic reasons, an extension of the tarmac path was strongly opposed. Following a study of grass wear at a number of sites, commissioned by English Heritage and carried out by Land Use Consultants, Andy Wimble, then Chief Landscape Architect for English Heritage, introduced some trial areas of turf reinforcement materials (previously discussed at a seminar at Birmingham in 1992 and included in *Erosion on archaeological earthworks: its prevention, control and repair*). These were partially successful and provided a number of useful lessons on combating erosion. More importantly, they led to an acceptance within English Heritage that, given an appropriate management regime, it was possible to maintain a good quality grass surface at Stonehenge.

Aerial view of worn walkway 1987

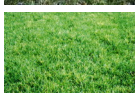
A decision was taken to re-turf the damaged area using more wear-tolerant grass species, implement a programme of high-intensity sports field maintenance and strictly manage the flow of visitors over the area. The success of this management regime was immediate and has been maintained; visitors to Stonehenge now walk on grass, not mud.

Management regime used at Stonehenge

There are three key turf management elements in the successful prevention of erosion at Stonehenge:

1. The use of wear-tolerant grass species. The whole area regularly used by visitors was re-turfed using 100% Ryegrass. To retain this homogeneous cover, any repairs are made using Ryegrass cultivars recommended for use on heavy-wear areas of sports fields, and regular overseeding of the whole area is carried out. Two photographs taken in January show the difference between the natural grass cover and the stronger growing Ryegrass.
2. Continuous maintenance consisting of:
Regular cutting using cylinder mowers to encourage a low, dense sward; arisings are removed to help reduce the build-up of a thatch layer
Aeration (or spiking) using a solid tine spiker to relieve compaction regularly and improve aeration and drainage
Regular fertilising in spring and summer with fertilisers high in nitrogen to encourage strong leaf growth and in autumn with fertilisers low in nitrogen but high in phosphorus and potassium to encourage root growth and slower, hardier leaf growth during winter
Light harrowing when necessary to disperse any worm casts and prevent mud being smeared over the leaf surface
Autumn restoration by scarifying to remove any thatch, followed by aeration, overseeding and topdressing, carried out over the whole area
Pest control, especially the removal of any molehills before these become spread out, smothering grass and providing seed beds for weeds
Weedkilling as necessary to remove broad-leaved weeds that have very low wear tolerance.
(It is interesting to note that all the preceding measures have produced a very dense, healthy grass sward that has prevented weed establishment; no weedkilling has been required for the last six years.)
Watering to prevent the drying out of the very thin soil on the exposed site. Grass is watered during dry spells using soaker hoses; the low water pressure on this site renders ordinary sprinklers ineffective
Early repair to prevent damage spreading and becoming further eroded.
3. Management of visitor flow. To spread wear and compaction, the area has been divided into approximately ten walkways using unobtrusive low-level ropes to encourage visitors to keep within the designated walkways; these may be changed daily during peak periods or every few days during off-peak periods.

'Sports field' walkways in 1995



Natural sward (above) and ryegrass sward (below) in January

Taken individually, any of these measures would help to reduce wear on turf and delay the onset of erosion to some degree. The success at Stonehenge, with such high visitor numbers, is due to the combination of them all. For sites where funds are limited, the single most beneficial maintenance is spiking or aeration. At Stonehenge, because of the archaeological implications and shallow nature of the topsoil, standard spiking equipment is used to give approximately 100mm penetration. For sites with a greater depth of topsoil and subsoil and no t archaeological implications, benefit can be obtained by annual or biannual use of a 'deep penetration spiker' or 'verti-drain' whose 300–400mm penetration and 'kick-back' action results in major drainage and aeration improvements.

Walkway across the Avenue

The introduction of a walkway across the Avenue (see above), while alleviating some problems, has created others because the area opened up was never prepared as a sports field and is only wide enough for four alternating walkways.
A permanent, reinforced path close to the fence is available during the winter season but leaves a dead area at the start of the summer season that needs annual reseeding. Ideally this reinforced path would be used for two to three years while the remaining area was worked on, but the massive losses of 'wands' (audio tour equipment) that had been passed through the fence as souvenirs prevents this, and we have to carry out intensive work in the autumn/winter of each year. Time will tell if this will prove sustainable.
The walkway itself was designed to be moved easily, but because of the limited number of positions available for grass pathways on either side, a series of pinch-points has developed. At these points we have introduced a non-invasive type of grass reinforcement with minimal fixing and therefore minimal archaeological disturbance; the grass can then grow through the reinforcement material, increasing the wear tolerance to some extent and also providing a sacrificial layer to prevent erosion worsening should the grass die off.

Conclusion

The nature of Stonehenge and sheer numbers of visitors cause problems but also help with some of the solutions. Site-based staff are required to prevent misuse of or damage to this important monument and to assist visitors: in addition, they help to ensure that walkways are used properly and rotated regularly. Large numbers of visitors undoubtedly cause wear and tear on the turf, but their entrance fees help to ensure that funds are more readily available to carry out the intensive maintenance necessary to reduce this problem.

Alan Cathersides

Senior Landscape Manager Gardens and Landscape

HISTORIC PUBLIC PARKS AND GARDENS

Regeneration programme

Following a long decline, historic public parks and gardens are benefiting from major repair and restoration programmes designed to ensure that they play an essential role again in urban life

No one in the world of urban conservation can be unaware by now that public parks and gardens have at last achieved a place on the national agenda. English Heritage has been playing an active part in the move for change in national and local government attitudes through its participation in the recent House of Commons Select Committee on Town and Country Parks and, on the more practical side, through the monitoring of Heritage Lottery Fund projects. Following from the Select Committee's report, published in November 1999, and from conclusions reached, through wide consultation, in *Power of Place: the future of the historic environment* (2000), English Heritage will shortly launch its own new strategies and initiatives for more intensive promotion of historic public parks and gardens.
Since their mid-19th century philanthropic inception, public parks and gardens have played a key role in civic life and formed a seamless part of a town or city's fabric. Although expectations and patterns of use have undoubtedly changed since then, the basic human needs to which their creation responded are surely the same: physical and spiritual refreshment and recreation, the enjoyment of space and fresh air and the sensory delights of the natural world. Their heritage value is enormous if they are understood as a

microcosm of the social, economic and aesthetic history of 19th- and early-20th century municipal development. They demonstrate how national trends and fashions in landscape design and horticulture were translated from the private estate to the realm of the Corporation and Parks Superintendent, although a number attracted designs from practitioners of the first rank such as Sir Joseph Paxton and Thomas Mawson. Gardens or garden squares were laid out as the centrepieces of many major residential schemes that are now highly valued conservation areas. Historic parks contain some unique recreational and commemorative structures such as bandstands and clock towers, occasionally provide the setting for an important listed house or contain significant botanical and horticultural collections. All were once supported by a vast range of traditional skills in both horticulture and hard landscape construction.

Decline of public parks

Historic public parks suffered a decline in the latter part of the 20th century, two fundamental reasons perhaps explaining their vulnerability. The first lay in the post-World War II government's decision not to include them in the standard spending assessment applied to local authority funding; the duty of care had no statutory imperative. The second was the absence of a national voice to champion and promote parks, alongside those for sport, libraries and museums.

The full impact of the lack of statutory spending came about in the early 1970s; local authority funding became evermore dependent upon central government, greater requirement to prove value for money led to cost-cutting, the contracting-out of park maintenance and sometimes even of the management of that maintenance. This led to the loss of any direct accountability between the supplier and user of services. New administrative systems led to the fragmentation of park management with, for example, sports facilities or a museum building being managed by a different department from the park's horticulture, the latter often left without a professional champion. Local plans may have included policies on parks – play, dogs, habitat improvement, tree management – but rarely, unless within a conservation area, was an historic park treated as the sum of its parts with a personal history.

The decline showed itself in the gradual disappearance of ornamental planting, of other than routine maintenance to shrubberies and structures (there are 57 park buildings on the Buildings at Risk Register), the absence of security and of responsive staff on site. Most serious though, was the loss of understanding and appreciation of the historic character of these parks which denied them a place within local heritage audits. The insensitive location of new facilities and new planting often ran roughshod over a fine, surviving design. Local people voiced concern through newly formed friends and user groups, but these rarely had sufficient clout to effect change by themselves. Passionate professionals organised key conferences and reports based on empirical study (for example, Public *Prospects, Historic Urban Parks under Threat*, Garden History Society and the Victorian Society, 1993, and *Park Life: Urban Parks and Social Renewal*, Comedia and Demos Group, 1995). As late as 1998, the extraordinary lacuna of baseline statistics on park health nationally was still only partially addressed by a Local Authority Needs Assessment Survey carried out by the Institute of Leisure and Amenity Management (ILAM), now extended to a second phase in 2000–01.

While 188 of the parks reported on were already on the *Register of Parks and Gardens of Historic Interest*, English Heritage responded quickly to the need to assess the genre more rigorously. A thematic study is well underway with the aim of adding some 75 more historic urban parks to the *Register*.

Detail of St Leonards Gardens, the centrepiece of a major residential scheme in Burton St Leonards conservation area, St Leonards, East Sussex, looking south to the Lodge, with the Royal Victoria Hotel and English Channel beyond

Repair and restoration

The most significant response, though, was the launch in 1996 of the Heritage Lottery Fund's Urban Parks Programme, which offered grants up to 75% for repairing and restoring historic public parks. The two-stage award process, which requires a conservation and management plan to be produced prior to approval for works, ensures that the historic character will be properly recognised and conserved. The success of the original £50 million, 3-year programme, which produced 500 applications by 2000 and grant offers to 161 parks (at an average spend of £1.4 million each), resulted in its extension to 2002 when it will be further reviewed. As the results of phase 1 of the ILAM survey identified 37% of urban parks still in decline, continuation of the Urban Parks programme in essential.

The HLF requires all urban park projects to be monitored to ensure they achieve the approved purposes. The five English Heritage landscape architects currently act as monitor for 40 projects nationally. English Heritage has advised the HLF on the approach to and form of the plan, which is modelled on guidance in English Heritage's *Conservation Plans in Action* (1999). The conservation plan is vital and should include sound research as well as identification of key character areas and historic significances.

For many smaller local authorities, the urban park bid is their first experience of a major project run in conjunction with specialist consultants. Experience again has shown that one of the most critical requirements for success is the identification of an internal 'project sponsor'. This will usually be a departmental director or principal officer who will champion the project, ensure that a project leader (funding for a project officer may form part of a bid) and an internal project team are appointed and supported, with experience in managing consultants and setting parameters for the project's operation and route through the authority's committees or cabinet. An early decision on the levels of staff and resources, with which the local authority itself wishes to support the project, is also critical. As park management inevitably crosses lines of departmental functions, it is vital that all appropriate officers, led by an internal 'project sponsor', take part in the consultation process throughout the project but especially in the formulation of the conservation policies. These will guide a park's long-term future management and development of new features and therefore must be capable of being sustained by all parties with management responsibilities.

A role for user groups

The HLF's requirement for user consultation presents exciting opportunities for park users to engage in the plan process; there are good examples of local friends groups carrying out primary research and oral history and participating in practical conservation and gardening work. User groups are amazingly diverse, so information is best transmitted in as many different forms as possible, from direct liaison to mail shots, project newsletters, noticeboards in parks and regular spots on local radio.

While the completion of an HLF project should achieve repair and restoration of the character and major structures of an historic park, local authorities need to address long-term future management and maintenance to safeguard the investment. The Select

Committee recognised this by key recommendations to government for better and more secure resources, for producing park strategies on management and funding, guiding best practice and training park staff to develop high quality services and skills. The Government's Urban White Paper (published 16 November 2000) built on this by promising to 'develop a programme for identifying and spreading good practice on the management and care of parks, play areas and open spaces to parks staff, professionals and user groups'. Its recommended Advisory Committee, chaired by the Minister of State, Beverly Hughes, has now been set up to pursue these aims, working in partnership with the local authorities' own advisory forum, the Urban Parks Forum.

The MORI survey carried out for the Review of the Historic Environment identified that 98% of people think 'that the heritage is important in teaching us about the past' and 76% think 'our lives are richer because of it'. Establishing a firm place for historic parks and gardens as part of that heritage enables many of the recommendations made in *Power of Place* to be directly implemented through their medium. A successful historic park restoration within a Conservation Area Partnership scheme, such as the People's Park in Halifax, can stimulate and promote the wider success of that scheme, encouraging and improving partnerships between heritage organisations and local groups. The contribution of historic parks to urban life also needs to be taken fully into account in current local cultural strategies.

Detail of the People's Park, Halifax, an historic park that has been successfully restored. View across the circular pool and fountain towards the bandstand

Campaign for public parks

English Heritage sees its prime role as identifying threats to historic public parks, highlighting best practice, helping to set standards and providing advice and guidance to local authorities, management trusts and the Heritage Lottery Fund. We propose launching a 'Campaign for Public Parks' – with an accompanying technical advice note, *Conservation plans for restoring historic parks and gardens* – in 2001 to aid understanding of the historical environment. An accompanying publication will illustrate the historical, cultural and social importance of public parks, record their decline and identify best practice and areas of excellence. The publication will be followed by a one-day conference aimed at identifying best practice in the maintenance and management of historic public parks.

Further guidance is planned over the next 2–3 years in a number of key publications, the first of which, *Guidelines for the production Conservation and Management*, to be launched in summer 2001, will guide the preparation of reports leading to the repair of public parks, gardens and landscapes. This will be followed by a methodology for determining *Gardens at Risk*, which will initially be applied to a thematic study on public parks. In 2002–3 it is proposed to publish a handbook on the maintenance and management of historic parks and gardens.

Virginia Hinze

Landscape Architect South East Region

The Urban Parks Forum has been appointed by a partnership of the Heritage Lottery Fund, Department of Environment, Transport and the Regions, Countryside Agency and

English Heritage to undertake Phase 2 of a nationwide study of local authority needs in relation to public parks. For further information about the Forum, please contact the Project Officer, Dave Tibbatts, Tel: 01235 533266, Fax: 01235 553203, or PO Box 266, York YO1 6YQ.

EARTHWORKS AND LANDSCAPE

A lost Elizabethan country mansion

Archaeological investigation has revealed the remains of a 16th century garden of great complexity and symbolism which in its day had a major impact on the surrounding landscape

Sir Henry Lee, 1568, Queen Elizabeth I's champion who created a residence suitable for her to visit, by Antonio Mor

The field evidence of former parks and gardens can survive as earthworks and in the fabric of surrounding farmland, no less than in buildings, planting and landscaping. Such remains may demand more effort to record and (perhaps) more imaginative insight to understand; but they are our access to an earlier world of garden design. They can even, through thoughtful investigation, reveal something of the ideas and aspirations of their creators. They can also demonstrate the impact of the creation of a country house and thereby – in modern conservation terms – give a sharp and specific focus to issues of the setting of a monument.

Immediately across the River Thame from the town of Aylesbury, Buckinghamshire, lies the parish of Quarrendon. In its south east corner, situated partly on the flood plain of the Thame and of a northern tributary, and partly on ground rising to the east, is an extensive and well-preserved complex of earthworks representing several phases of land use. In the early modern period these were rich grazing grounds for cattle, fattening for market at Aylesbury. The characteristic features of this regime were 'oxpens', one complete example of which is preserved within the earthworks. At an earlier stage, in the medieval period, the earthworks encompassed two separate settlements, situated 800m apart, each based loosely around a green and probably best thought of as hamlets or 'Ends' of the sort that form a characteristic part of the settlement pattern of adjacent parishes in the Vale of Aylesbury.

Between those medieval and early modern phases, the settlements were deserted and superseded by a 16th-century country mansion embellished with formal gardens and a designed setting.

Transformation

This transformation was wrought by the Lee family, the most notable of whom was Sir Henry (1533–1611) – courtier, poet, soldier, queen's champion and inventor in 1570 of the tournaments staged annually in Whitehall as a propaganda spectacular to mark the accession day of Queen Elizabeth, 17 November.

The Lees had been substantial merchant graziers in the 15th century, based in Warwick. Their family network had secured both supplies and distribution of wool, with an outlet in London as well as to the worsted trade of the West Midlands. At Quarrendon – just one of the estates they leased – they had overseen conversion from arable to pasture and desertion of the existing settlement pattern. By the reign of Henry VIII a branch of the family had a moated residence at Quarrendon and successive Lees were prominent figures in county society and court service.

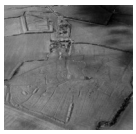
Sir Henry Lee created a residence suitable to host a visit by Queen Elizabeth and to stage entertainments to delight and divert her; though whether such a visit was made is disputed. The earthworks show how the moated residence and the ancient church were linked and surrounded by elaborate formal gardens. These included a water garden with ponds and islands, situated between the two. There was a massive three-sided arrangement of broad raised terraced walks, standing as earthwork constructions over 2m high and 10–12m broad and surrounded by water-filled canals. A diagonal channel within the complex probably served a mill, combining ornament with utility. The considerable amount of water within this complex fed subsidiary garden compartments to the south. A reliable and controlled supply was secured by a header-leat-cum-catch-water-drain some 1.5km long that drew from the tributary stream to the north and caught the downflow from the rising ground to the east. This piece of engineering at the same time transformed the valley bottom, formerly liable to disastrous inundation, into rich grazing meadows.
Sir Henry Lee built almshouses, whose building platform reveals their location along the southern edge of the churchyard. In that position, the almshouses would effectively have formed an element in the terraced garden. Furthermore, their length seems to have acted as a module for the garden layout, in that the lengths of the three unequal sides of raised terraces stand in the ratio 1:2:3 with that as the base measurement. An interest in geometric form and symbolic ratios appears to permeate this construction.

Simplified interpretation and phasing of the later 16th-century field remains
In contrast with the formal nature of the 16th-century gardens lying to the west of the mansion, to its east a large enclosure or park lay on the rising ground above the house. Within it, a distinctive group of mounds and banks made up a contemporary rabbit warren of perhaps several phases. The most prominent mounds are the earliest and occupy a precise skyline position when viewed from the site of the house and from the formal garden walks below. They ‘nail’ or badge the landscape as effectively as a group of prehistoric barrows or a medieval castle might be understood to. Closes around them on the slope mark out the lawn for the rabbits to feed and exercise.

Landscape and symbolism

Access to this great country house was very structured. The approach was from the west, by turning off the historic main road from Aylesbury to Banbury, Bicester and Buckingham. The tributary stream was crossed by what is known to have been a stone bridge (now replaced). On its east side, a length of broad causeway flanked by water channels survives, curiously distinct in the modern landscape. 16th-century visitors would have seen the west end of the church, the new almshouses, elaborate formal gardens to the right, the great house straight ahead and warren mounds on the skyline beyond. From the bridge they looked up and down stream at the grazing meadows or ‘leas’, source of the family wealth, and enjoyed the pun on the family name. The more learned might have noted a mill within the gardens and a hill beyond, badged by the warren mounds, and seen in the association an allusion to the place-name Quarrendon, as ‘mill hill’. The access route took them round the churchyard – past the chancel which Sir Henry Lee had fitted out with the tombs of his parents and destined to hold his own monument – to enter the complex on the gardens’ north-south axis. Then turning at right angles, they passed between garden compartments on the axis of the entrance to the moated mansion. There is a notable contrast between the formal, controlled landscape to the west of the house and a ‘natural’ landscape, equally carefully contrived to the east. Perhaps the architecture of the house contrasted in those two principal facades, in sympathy with the two contrasting designed ‘worlds’. What is certain, and instructive, is the distinctive sense of place resulting from the

close relationship between the location, its cultural associations and the designed 16th-century landscape. The impact of such a creation is also notable, in the extensive re-making of the tributary valley for water management and improved meadows. The archaeology of this now is the landscape. Such factors are entirely characteristic of parks-and-garden landscapes. They define both the need for, and the opportunity of, good conservation regimes to care for both site and setting.



Aerial photographic view of the earthworks at Quarrendon from the east, showing the Warren and earlier settlement remains in the foreground, the moat in the centre, formal garden terraces and the church ruins beyond, and further deserted settlement remains tap left beyond the stream

Paul Everson

Head of Archaeological Investigation

A detailed account of our understanding of the remains at Quarrendon will appear in 'Peasants, peers and graziers: the landscape of Quarrendon, Buckinghamshire transformed', *Records of Bucks*, **41**, 2001.

WIMPOLE

Understanding a parkland landscape

In parklands, gardens and buildings form part of a complex whole. Understanding them requires the detailed analysis of landscape form and built fabric coupled with an awareness of the wider physical and cultural setting. Investigation of Wimpole Park, a partnership project with the National Trust, is almost complete and will aid both landscape management and building refurbishment

The main tower of the Folly. The windows indicate four floors, of which the highest was added. The stair originally rose from the ground floor to the second-floor prospect room without an intervening storey

Wimpole Hall sits in the centre of a 600-acre park, an island of pasture in a sea of Cambridgeshire arable. The park embodies the development of designed landscapes in England from the mid-17th-century formal to the late-18th-/early-19th-century 'natural', with most of the usual names influencing its design – particularly Charles Bridgeman, Lancelot 'Capability' Brown and Humphry Repton. However, underlying this familiar sequence, a deeper understanding is emerging from the careful integration of systematic survey with documentary sources.

Medieval landscape

Expansion of the parkland over some 300 years took in much of Wimpole parish, radically altering both its social structure and the appearance of the landscape. It meant, for instance, the end of the common arable fields and of the hamlets whose families worked them. Paradoxically, emparkment fossilized parts of this later medieval landscape in

earthwork form, including extensive tracts of ridge and furrow and three deserted hamlets. By careful field survey, supplemented by evidence from maps and other documents, it has been possible not only to identify the structure of these hamlets right down to the sites of individual cottages, but also who lived in them in the mid 17th century. For the visitor today, standing on the site of a small cottage reading the will of its 17th-century tenant, which bequeaths her meagre belongings, brings a rare and tangible human element to what otherwise are simply grassy mounds.

Mapping this medieval landscape has revealed the extent to which it influenced the layout of the post-medieval park and gardens. The imprint of the existing landscape was such that it coloured but did not constrain the parkland planners, resulting in a striking fusion of design and practicality. Among many examples are a windmill mound turned into an ice house, a wandering lane straightened – not removed – in order to accommodate a formal garden, and the long plough headlands transformed into avenues and vistas, in one notable case terminating on a Gothick Folly.

Folly

This Gothic Folly was designed *c*1750 by the gentleman-architect Sanderson Miller but not begun until about 1767 while Brown was engaged at Wimpole by Philip Yorke, 2nd Earl of Hardwicke. Situated on Johnson's Hill, it formed the termination of the more naturalistic *clairvoyée* that superseded Bridgeman's North Avenue. Work continued until at least 1772, probably directed by a local architect, James Essex, under Brown's supervision.

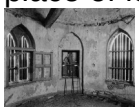
The design is a Gothick sham castle, functioning as an eye-catcher on northward views from the Hall. It consisted of a tall circular tower, linked by curtain walls to two smaller towers, forming an irregular 'V' on plan. The main tower was fitted out as a belvedere, with a prospect room in which refreshments could be served from a nearby kitchen. The room was reached by a dramatic spiral stair, the balustrade of which echoed Brown's Chinese bridge on the approach across the lake. Much of this interior survives. A further storey was added before 1772, apparently at Brown's instigation; initially just a shell, its purpose was simply to accentuate the tower's eye-catching quality. Architectural form was further set off by earthwork features. Terracing was employed to give the Folly greater elevation and a curving moat was cut along the southern flank of the site. Invisible from the Hall, the moat enhanced the outlook from the tower and may have functioned as a ha-ha.

The great house at Wimpole in its parkland, preserving extensive ridge-and-furrow cultivation from the former common arable fields

In 1801, following a period of neglect, Repton suggested improvements to the gardens, including converting the tower into a gamekeeper's lodge, capitalising on its commanding outlook. The prospect room became a parlour, two cramped bedrooms were inserted between it and the ground-floor kitchen, and the added storey was brought into use. 19th-century maps and photographs show the Folly surrounded by a workaday clutter of outbuildings and pheasant pens.

Since the loss of James 'Athenian' Stuart's Prospect House, and Sir John Soane's *Castello d'Acqua*, the Folly is the only garden building to survive from Wimpole's 18th-century heyday. Prominently placed and attractively detailed, it typifies the English folly. The term 'folly' tends to deflect scrutiny, however, implying that such buildings were merely whimsical in intention. Wimpole's Gothick Folly served a variety of leisurely pursuits, but for the newly wealthy Yorkes it had one further function, proclaiming a fictitious antiquity to travellers along the nearby Great North Road. Understanding such functions, and the

architectural vocabulary in which they are couched, helps us to map more precisely the place of leisure and ornament in late-18th- and early-19th-century landscape gardens.



The interior of the prospect room today. The right-hand window is aligned directly on the Hall

Management of the park

Such detailed survey and investigation are particularly important in a working park such as Wimpole. The land, actively managed as an English landscape park, is also put to a variety of purposes – from vintage car raffles to musical concerts – and buildings such as the Folly need to be used if their future is to be safeguarded. All of these activities are potentially damaging and it is only by knowing the location of important features – and understanding them – that the park can be truly understood, sympathetically managed and experienced by everyone with simple but accurate information.

Wimpole Park, with examples of how medieval landscape features influenced the design of the park: a lane (A) determined the boundary of the formal garden; a windmill mound (B) utilised as an ice house; plough headlands (C) made into tree-lined avenues and as a vista terminating on the Gothick Folly; an older field boundary (D) re-used as the park boundary

Adam Menuge

Senior Investigator, Architectural Investigation

Paul Pattison

Senior Investigator, Archaeological Investigation

Notes

The Valetta Convention

The European Convention on the Protection of the Archaeological Heritage (the Valetta Convention) came into force on the 20 March 2001. It sets best standards for understanding and conserving the historic environment, establishes a very wide definition for the archaeological heritage and requires inventory and designation of that heritage. It recommends the creation of archaeological reserves and the mandatory reporting of chance finds. It promotes high standards for all archaeological work, along with conservation of excavated sites and safe-keeping of material from excavations. The Convention follows closely current British practice for the protection, recording and funding of archaeology during development.

It urges governments to fund archaeological research adequately and promotes best practice for increasing understanding and publication of the archaeological heritage. It commits states to educational action to rouse and develop public awareness of the value of the archaeological heritage and also to increasing access to that heritage.

In broad terms English practice conforms with the Convention. Where legislation does not cover fully its provisions, there are generally in place effective systems for voluntary action. Overall the Convention matches well the aspirations of *Power of Place*, particularly in the breadth of its definition of archaeology and its emphasis on an integrated approach to understanding, conservation, education and awareness raising.
Over the next few months, English Heritage will examine with a variety of partners what now needs to be done to meet fully the requirements of the Convention. A further report will appear in the next issue of *Conservation Bulletin*.

From Finials to Footings

Practical solutions for projects large and small

The fourth National Conservation Conference will be held on 7 June 2001 at One Great George Street, London. Speakers include Sir Neil Cossons, Chairman of English Heritage, Herb Stovel, Director of the Heritage Settlements Programme at ICCROM, Donald Buttress, former Surveyor to the Fabric at Westminster Abbey and David Millar of BMP, Glasgow. The conference is supported by COTAC, English Heritage, ICOMOS, the Institute of Historic Building Conservation, the National Trust, the Royal Institute of Chartered Surveyors and SPAB. For further details, please contact Tel 01342 410242, Fax 01342 313493 or email conservation@btconnect.com.

Conservation Awards 2000

Following a record number of entries for this annual award of £15,000 – sponsored by the Pilgrim Trust, organised by Resource (Council for Museums, Archives and Libraries) in partnership with English Heritage and the National Preservation Office – the following projects have been shortlisted:
Hanna Conservation for analysis of factors leading to the deterioration and subsequent conservation of unique carvings of leaves and animals in the 13th-century Chapter House, Southwell Minster, Nottinghamshire
Britton and Storey for conservation of seven elaborate paper and wood crowns or ‘maidens’ garlands’ used at the funerals of young girls who died before they were married, displayed since the 18th century at Holy Trinity Church, Minsterley, Shropshire
Dover Museum for conservation of the world’s oldest seagoing boat, dating from around 1550 BC, following a conservation process pioneered by the Mary Rose Trust
Conservation Centre, Liverpool, for an exhibition featuring videos, x-rays and display panels explaining aspects of the conservation of ‘Nearing Camp Evening on the Upper Colorado River’, a 19th-century painting by Bolton-born American artist Thomas Moran, on display at the V&A from 5 April to 29 July
Tankerdale and English Heritage for the analysis, evaluation, treatment and presentation of two 18th-century gilded tables on display at Chiswick House, London
The Bartlett School of Architecture (UCL), in partnership with the Horniman Museum, Manchester Museum, Museum of London, V&A and Emcel Filters Ltd, for research in low-cost, energy-efficient ways of controlling air pollution in museums and galleries
The shortlist for the Student Conservator of the Year award – £5,000 for the winning student and £5,000 for the training organisation – includes Angels Arribas for a report on analysis and conservation of an 18th-century map of Newcastle-upon-Tyne, Shiho Sasaki for examining the use of red lead in 19th-century Japanese prints displayed at the V&A last autumn, and Mamiko Matsumura for a textile conservation investigation.
Loyd Grossman, Chairman of the Conservation Awards, said: Judges have an extremely tough challenge selecting the best from an exceptional shortlist. Never before have the awards attracted such a diversity of projects. Each is unique or groundbreaking in its own way and they all have a strong element of public participation.’

European funding for English Heritage projects

Culture 2000: Bob Bewley, Head of Aerial Survey, has been awarded approximately £80,000 for aerial photography training for archaeologists. The project began with a NATO-sponsored conference in Poland in November and finishes with a week-long training school in Sienna in June.

Culture 2000: Graham Fairclough, Head of Monuments and Countryside Protection Programme, is leading the UK team in a three-year project, *Pathways to the Cultural Landscape*, involving 10 countries with 12 separate projects which won funding of approximately £0.894 million. The lead agency is the city of Aschaffenburg in Germany and other partners include Eire, Estonia, Sweden and Italy. The English project will be undertaken in Lancashire in conjunction with the County Council.

IST research programme: Nigel Clubb, Director of the National Monuments Record, and Gillian Grayson, Head of Heritage Data, have been granted £165,000 for the HITITE project to develop an on-line thesaurus of monuments illustrated with images from the NMR archive in partnership with ADLIB systems in the UK.

IST Research programme: Michael Corbishley, Head of Education, is running a project, The People's Heritage Showcase, worth £90,000 in conjunction with TAG Learning. Its aim is to build and trial a user-friendly web-based system to automatically collect, create, collate and share visual and text-based information on buildings and objects that children consider to be of historical interest.

Building conservation masterclasses

WEST DEAN COLLEGE

Near Chichester, West Sussex

A collaboration in specialist training between West Dean College, English Heritage, and the Weald & Downland Open Air Museum, sponsored by the Radcliffe Trust

Courses for Summer/Autumn 2001

Cleaning Masonry Buildings
BC 3D29, 5–8 June • Residential £545

Care and Conservation of Wallcoverings
PC FD9, 17–22 June • Residential £595

Conservation and Repair of Timber
BC 3D30, 26–9 June • Residential £545

Conservation and Repair of Stone Masonry
BC 3D31, 11–14 September • Residential £545

Understanding and Using Architectural Paint Research
BC 3D32, 9–12 October • Residential £545

Specifying for Conservation Work
BC 3D33, 30 October–2 November • Residential £545

Mortars for Repair and Conservation
BC 2D8, 20–2 November • Residential £395

Care and Conservation of Historic Floors
PC 4D1, 25–8 November • Residential £480

For further information please contact the Building Conservation Masterclasses Co-ordinator:
Tel 01243 818294
isabel.thurston@westdean.org.uk

New Publications from English Heritage

Managing Lithic Scatters

Archaeological guidance for planning authorities and developers

This free 8-page leaflet provides a detailed background on the nature and significance of prehistoric lithic scatters. The leaflet discusses what lithic scatters are, why there is a need to understand these deposits as an integral part of our heritage and how they are identified, recorded and recovered. The document then highlights the vulnerability of lithic scatters and the constant threats to which they are exposed through agriculture, planning and development.

As part of its review of the country's archaeological resources – the Monuments Protection Programme – English Heritage has made a sample investigation of lithic scatters across four counties. This leaflet summaries the results of this investigation and the recommendations arising from it and it provides essential guidance for the management of lithic scatters for developers and planning authorities.

Product code ***XH2O158***

MPP 2000

A review of the Monuments Protection Programme

Compiled by John Schofield

The Monuments Protection Programme (MPP) assesses and evaluates England's archaeological resource. It aims to collect information to enhance the conservation, management and public appreciation of the archaeological heritage and to identify sites and monuments of significant national importance that merit some form of statutory protection.

This free, illustrated 24-page leaflet provides a review of the first fifteen years of the Monuments Protection Programme, and it replaces the previous version, *Monuments Protection Programme: 1986–96 in retrospect*. Like its predecessor, MPP 2000 summarises MPP's history, describes its aims and initiatives, and outlines the current progress of the programme. It also provides comprehensive information on the products of MPP and their current availability.

Product code ***XH2O161***

Anthrax and historic plaster

Managing minor risks in historic building refurbishment

This free illustrated four-page Technical advice note by English Heritage's Building Conservation and Research Team offers reassurance, supported by factual evidence, to anyone concerned with refurbishment of an historic building and its plaster finishes. Although historic plasterwork was traditionally reinforced with animal hair, the risk of contamination with anthrax from this source is very low indeed. (Of the handful of reported cases in the last ten years, all involved patients who had worked in farming, or in the meat,

leather or textile industries. There have been no reported cases of anthrax infecting anyone working on the conservation of any historic building.)
This leaflet gives advice on site hygiene and safe working practices to maintain what is already a very low risk at a negligible level. Organisations which can offer detailed information are listed as well as sources of appropriate equipment for use on site. There is a short bibliography and a list of relevant addresses.
This publication is an updated reprint of a leaflet first issued in autumn 1999.
Product Code ***XH20093***

Centre for Archaeology Guidelines: Archaeometallurgy

by Justine Bayley, David Dungworth and Sarah Poynter

Archaeometallurgy is the study of metalworking structures, tools, waste products and finished artefacts. Archaeometallurgical investigations can provide evidence both for the nature and scale of mining, smelting, refining and metalworking trades, and aid in understanding other structural and artefactual evidence.
These Guidelines aim to improve the retrieval of information about all aspects of metalworking from archaeological investigations They are written mainly for curators and contractors within archaeology in the UK and will help them to produce project brick, assessments and reports. The Guidelines are divided into sections: a summary of types of metallurgical finds, standards and good practice for archaeometallurgy, and illustrated sections describing archaeometallurgical processes and finds (iron, copper and its alloys, lead, silver and gold, tin and zinc). Following these are a glossary of terms, sections on the scientific techniques used in archaeometallurgy and a list of specialists to contact for advice on archaeometallurgical aspects of archaeological projects.
Product Code ***XH2O166***

Preserving Post War Heritage

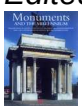
The care and conservation of mid-twentieth-century architecture

Edited by Susan Macdonald

This publication includes seventeen papers, originally presented in 1998 at the conference, Preserving Post War Heritage, which consider practical and philosophical issues encountered in preserving recent buildings of special architectural or historic interest. Subjects covered range from general structural issues, new materials, and the upgrading of services to the development, decay and repair of concrete, and various types of curtain walling. An invaluable guide for building professionals, conservation officers and building managers concerned with post war structures. In association with Donhead.
PRICE ***£37.50*** *ISBN* ***1 873 394 35 7*** *PRODUCT CODE* ***XC20021***

Monuments and the Millennium

Edited by Jeanne Marie Teutonico and John Fidler



Regarded as constant and enduring features of the built environment, public monuments have great historic, artistic and social value. Monuments and the Millennium, the second joint conference organised by English Heritage and the UKIC (with support from the Public

Monuments and Sculpture Association), held in May 1998, brought together international experts from a wide range of disciplines.
Papers cover art historical, philosophical, scientific, maintenance management and public policy issues. These proceedings will be of interest to architects, planners, artists, conservators and anyone interested in the field of public art. In association with James and James (Scientific Publishers) Ltd
PRICE ***£35*** *ISBN* ***1 873 936 97 4*** *PRODUCT CODE* ***XC20023***

Copies of free leaflets as well as the new *Publications Catalogue 2001–2002* and new *Catalogue of Free Publications* may be obtained free from English Heritage Customer Services Department, PO Box 569, Swindon SN2 2YR or Tel 01793 414 910. Priced publications may be ordered from English Heritage Post Sales, Knights of Old Ltd, Kettering Parkway, Kettering, Northampton NN15 6XU, Tel (24 hours) 01536 533500, Fax 01536 533501 or www.english-heritage.org.uk.

Osborne House

Restoration and exhibition

Detail from the Durbar Room interior showing the figure of Ganesha, the Elephant God, deity of prosperity and good fortune, on his Lotus Throne above the entrance. All Hindu journeys or projects begin with an invocation to Ganesha, deity of blessings and remover of obstacles
The extraordinary gifts presented by the people of the Indian Sub-Continent to Queen Victoria and works of art exhibiting the height of Indian craftsmanship today are the subject of an exhibition in the newly restored Durbar Room at Osborne House, Isle of Wight. The exhibition, in the centenary year of Queen Victoria's death, celebrates Britain's continuing fascination with India and its artistic tradition. Queen Victoria's gifts, on loan from the Royal Collection, are displayed alongside contemporary Indian works of art brought by English Heritage from India especially for the exhibition.
The gifts Queen Victoria received were the finest examples of miniature painting, ivory and marble inlay, silver engraving, embroidery, and sandalwood and soapstone carving. The contemporary works of art, according to Julius Bryant, Director of Collections for English Heritage, 'are museum-quality work. Ancient and elaborate skills that have been handed down through generations are thriving. By handling these contemporary objects at close quarters, visitors to the exhibition will enjoy more fully the royal gifts which, of necessity, are displayed in glass cases. Touch-screen captions provide information on the origin of the royal gifts, the craftsmen who made them and the people who gave them – and we have film footage of the contemporary pieces being made.'
Becoming Empress of India in 1876 was a highlight of Queen Victoria's reign. India appealed to the British then as now for its exoticism, colour and vibrancy, and its deep sense of history and tradition. Members of Britain's Asian community have been involved in the planning of the Osborne exhibition. They considered the stunning Anglo-Indian interior of the Durbar Room as an emblematic place in which the special relationship between British and Indian cultures could be explored. Their interest in the key Indian figures in Queen Victoria's life – Abdul Karim, whom the Queen appointed as secretary and teacher of Hindu, Bhai Ram Singh, who designed the Durbar Room, and Maharaja

Duleep Singh, who presented the Queen with the Koh-I-Noor diamond – has been addressed through portraits, gifts and architectural features.

To mark the centenary of Queen Victoria's death, English Heritage has undertaken a conservation programme at Osborne House, including restoration of the Durbar Room, the Durbar Gallery and the Dining Room and repainting the exterior walls. Julius Bryant has said that 'the crafts and skills involved in the redecoration and conservation at Osborne House demonstrate the role of English Heritage as a major patron today ... and have been used ... to balance conservation and aesthetic considerations with greater public understanding, access and enjoyment of Queen Victoria's seaside home. The Durbar Room restoration at Osborne House is part of a series of innovative projects carried out by English Heritage over the past six years, including major work at Kenwood House and Eltham Palace in London, Down House in Kent and Brodsworth Hall in Yorkshire.'

For information on opening hours, please contact English Heritage Customer Services on 0870 333 1181 or customers@english-heritage.org.uk. A new revised edition of the Osborne House souvenir guide (£2.95, Product Code FB3684), including a new section on the Durbar Room and Gallery, may be ordered from English Heritage Postal Sales, Knights of Old Ltd, Kettering Parkway, Kettering, Northampton NN15 6XU. Tel: 01536 533500 (24-hour service) Fax: 01536 533501 or www.english-heritage.org.uk