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

Saving the past for the future: our first ten years

English Heritage celebrates its tenth anniversary in 1994. In the first part of this issue we look back at ten years of achievements.

ANNIVERSARIES should be celebrated only in multiples of 50 years, the *Economist* recently suggested (and, even then, only if the Chairman parachutes into the party). English Heritage, however, has chosen to celebrate this, the tenth year of our existence, in order to mark achievements since 1984 and to share with an increasingly committed public both the past victories and the future battles on conservation.

Our celebrations began with a free open day at all our sites on Easter Saturday. A record 94,000 people, including many first-time visitors, defied horrendous weather to take part in the special events laid on. We will repeat the open day in future years to encourage more people to make acquaintance with their heritage on our sites.

We will mark our tenth anniversary in other ways through the year. As part of this process this edition of the Conservation Bulletin reviews the main strands of our activities and the developments in heritage and conservation that have taken place 'in our time'.

The beginning

We – the Historic Buildings and Monuments Commission for England – were established in 1984, with a 'shadow' running-in period after the passage of the National Heritage Act in 1983. In a White Paper issued in November 1981 government had set out its intentions in creating this new body. It is interesting to see how far events since 1984 have matched those expectations.

Our balloons, their heritage: the tenth anniversary special event at Stonehenge

It was the view of government in 1981 that an organisation devoted to the heritage would be better able to focus on the issues and command greater respect than would a subordinate activity somewhat lost within the large Department of the Environment. Inevitably, all connections with government could not be sundered. Ministers chose to provide greater independence in some areas, for example the giving of grants, than in others, for instance listing and scheduling, and in relation to planning, for which Ministers felt they must retain direct responsibility. Government sets the overall policy framework and requires us to account for the public money we receive. Within this framework, it is for English Heritage to decide on the strategies and develop the specific expert position.

Challenge

Throughout our existence English Heritage has been robust and independent on heritage matters. We have challenged local authorities on key heritage cases, for example a hugely inappropriate proposal to replace Westminster Pier.

We supported opposition to the government on the removal, without listed building consent, of Canova's Three Graces from Woburn. We fought various government proposals to achieve major policy changes, for instance recently in relation to conservation area controls. Our appearances at public inquiries, such as that into proposed developments on Hadrian's Wall, have helped local authorities in ways in which no government department ever could. We believe that our determined, responsible championship of the built heritage helps government to understand the strength of informed feeling, and that our ability to construct new approaches provides solutions in a changing world.

For there has been a quantum change since 1984 in the scale of the heritage, and in the number and nature of the active participants in heritage management. *Managing England's Heritage*, published in October 1992, eight years after our creation, represented our overview of the task and outlined the way ahead. We are now working to that agenda, with the assistance of our many partners at local and national level.

The second strand to government thinking in 1981 was that a new body could bring more professional expertise and entrepreneurial flair to the promotional and commercial side of the properties we are given to manage. Our first chairman, Lord Montagu, enthusiastically contributed his experience in the tourist and leisure business and the early years saw enormous changes to the presentation of our 400 properties. We earned nearly six times more in the last year than we did ten years ago.

We focus now on the visitor's enjoyment, with better trained and more welcoming custodians, more informative presentation on site, an expanding range of events designed to entertain and inform, and educational initiatives that have set us at the forefront of site-based teaching. With our early decision to abandon our statutory title – 15 dreary syllables long or yet another acronym – in favour of 'English Heritage' we led the way among quangoes adopting more accessible names and identities. Our continuing emphasis on the customer, whether at an historic property or as a grant applicant, and our dedication to Chartermark principles are part of the same commitment to accessibility.

The properties that we manage are among the most important in the country, particularly Stonehenge, Dover Castle, and the many important castles and ecclesiastical ruins in our care. While the majority have been with us or our predecessors for many years, there are opportunities to pass the management of some to competent local bodies and to take on new ones for which no other solution is possible.

Danson House, London (grade I, at risk): we lead the search for a rescue package

Aware, committed

Brodsworth came to us in March 1990, Clun Castle in May 1991, and we are currently battling with a number of intractable problems whose only solution may ultimately be acquisition by English Heritage, if only to secure repairs before transfer to another owner. The past decade has seen the expansion of conservation expertise and commitment outside English Heritage, providing welcome scope for an expanding range of solutions for the care of our heritage. In addition to the possibilities for alternative management arrangements for sites in our own care, other bodies have become increasingly willing and able to tackle major repair and management problems. This approach has often required help and advice from us.

Increasing in size, increasing in popularity, the heritage has grown also in the resources it attracts. Government grant to English Heritage has risen from £52m in 1984 to £102m in 1994–5. Earned income has increased from £2,055,000 to £12,050,000. Private sector investment in the built heritage, leveraged by our grants and by the enhanced attention and respect accorded to heritage properties, has increased and helped to satisfy the third original government ambition, that a new agency should attract increased financial support for the heritage from the private sector.

Key achievement

Our ability to facilitate imaginative private and voluntary sector solutions to problems – for example our encouragement of the Historic Chapels Trust – will increase community support. We are very keen that the heritage sector should obtain full benefit from the National Lottery returns and will give what help and guidance we can to projects funded. But the extent of the built heritage is now very large; more resources will be needed for some severe problems such as church repairs. We need to quantify what funds are required from whatever sources if we are not to lose valuable buildings to neglect and disrepair.

In retrospect, a key achievement of English Heritage, but one which was not identified as desirable before we began in 1984, has been our development of partnerships with so many others. We have had to become outward looking, to understand the points of view of other organisations, of developers, and, most importantly, of the individual in order to encourage everyone to participate in the defence of the heritage. Our outreach has developed through publications, seminars, and campaigns, such as Framing Opinions. We are concerned to listen and to share, as well as to lead where necessary. *Conservation Bulletin* itself is part of that process and we shall build on it in future issues.

Jennifer A Page

Chief Executive

Defining what we have... and how we protect it

Continuing work on surveys of buildings and monuments has refined standards for legal protection, management, and the allocation of resources.

OUR CONSERVATION work is founded on major survey programmes aimed at identifying sites and buildings for protection and on gaining insight into their condition and possible vulnerability to damage and decay.

Effective use of our resources to protect and enhance the historic environment depends upon a much better understanding than in 1984 of the extent and value of that environment. Our knowledge is still imperfect, but we have made great strides over the last decade, with cross-fertilisation between programmes that has an important bearing on policies for management.

Common themes

Different survey programmes necessarily progress at different rates depending on the complexity of the subject matter and its aims, but a number of common themes have emerged over the last decade.

The most obvious is that our determined effort to establish a sound basis for protecting monuments and buildings has brought an enormous increase in the numbers of listed buildings and scheduled monuments, as well as the development of a range of less formal designations, to encompass the expanding vision of the historic environment.

Keeling House, Tower Hamlets, London

Cogges Manor Farm, Oxfordshire: rare survival of eighteenth-century housing for draught oxen

A major resurvey of historic buildings, launched by Michael Heseltine in 1982, was well under way in 1984. Coupled with the list review, principally of the older urban lists, since 1989 it has already increased the number of list entries from 300,919 in 1984 to 443,470 in 1994. The pressure to make this huge volume of data more accessible has at last persuaded the government to computerise the lists – a project expected to be complete within two years. This will bring within our grasp further extensive information on different building types and their distributions.

It was our own decision in 1986 to embark on a parallel survey of archaeological sites to bring up to date the very patchy and inadequate schedule of ancient monuments, which has been growing slowly from 1882. While that process is not expected to be complete until after the turn of the century, some 1800 sites a year are now being added, compared with fewer than 100 in the 1980s. As a result of lessons learned from the list resurvey, substantial resources were invested at the outset in machine-based storage systems, both in the counties and at English Heritage, to facilitate data exchange between English Heritage, the Royal Commission on the Historical Monuments of England, and local bodies.

The Register of Parks and Gardens of Special Historic Interest in England was in its infancy in 1984, inherited from a base created by the Historic Buildings Council with a good deal of voluntary help at county level. By the time that the first complete set of county lists was published in 1988, the number of parks and gardens on the Register had reached 1085. The list proved invaluable in identifying important gardens for which financial help was urgently required following the storms of 1987 and 1990, and has also contributed significantly to protection through the planning process. Like all young ventures it has its imperfections, and we have begun a review due to be completed by the turn of the century.

Wider historic landscapes

Creating the Register of Historic Parks and Gardens is part of an important second development: greater understanding of the importance of wider historic landscapes and areas whose boundaries are not always easy to define but whose character is an essential component of our history and sense of place. We are still groping for the right way to

protect and enhance these wider landscapes, which need to be allowed to evolve naturally and which form part of the living rural and urban fabric.
Since 1984 we have been moving away from seeing scheduling as the right way to protect, for instance, extensive prehistoric field systems or relict industrial landscapes. Detailed scheduling cannot in itself secure the sympathetic management which is usually the key to survival of this kind of landscape.
The government invited us to consider a register of historic rural landscapes, analogous to that for historic parks and gardens. While superficially attractive, this approach has drawbacks. It is important, particularly with larger areas and building complexes, to consider the management needs of the area in deciding upon the most appropriate form of protection. The day-to-day management needs of farmers will, for instance, be quite different from strategic planning requirements.

Better than listing?

The development of a sound methodology for assessing the historic interest of landscapes at different levels may well be a more useful and flexible instrument than a single designation derived from one level of management demand. For battlefields, on which we expect to issue a consultation paper later this year, the answer may be a combination of designation and wider management plan.
A similar problem is evident in the urban context where economic change and development have constantly to be balanced with conservation. The development of detailed urban archaeological strategies for the main historic urban areas is intended to provide a soundly based tool for planning purposes that will highlight the constraints to development without 'freezing' large areas of land. The York strategy published in 1991 is the prototype, and 30 more urban strategy documents, tailored to the needs of individual towns and cities, are planned. The success of Planning Policy Guidance Note 16 (PPG16; see page 10) has demonstrated the power of planning to protect historic interests, provided the information base is sound.

Pear Textile Mill, Stockport, Greater Manchester

Planning and management controls may ultimately also prove more effective than listing for the conservation of major building complexes and townscapes. There are considerable practical difficulties in the application of listing to large repetitive complexes such as post-war housing estates, or even whole new towns. Is it really sensible to apply listing controls, with all that they entail for control of interior as well as exterior works, to buildings whose historic and architectural interest lies largely in their external features and their spatial relationship?
Listing does not protect urban spaces or landscape settings. This is part of the current debate on post-war listing, and this dilemma also underlies our determination to secure better controls in conservation areas, which might in some cases prove a better approach to management.
Longer lists and registers mean that controls affect more people. To sustain public support, it is essential that the criteria for selection for protection should be much better founded and better understood by the public. The post-war listing programme illustrates the difficulty of listing building types that are not well understood or instantly attractive. The seminars and exhibitions that accompany the research and selection process constitute the most intense effort we have put so far into carrying informed opinion and the public with us, but we are also developing published criteria for other periods and building types, for instance the recently launched leaflet on pubs (see page 33).

Protecting monuments

The Monuments Protection Programme (MPP) has also for the first time put scheduling on a clearly defined and academically rigorous basis. It was not until 1983 that broad criteria for scheduling were formally endorsed by ministers, and the first three years of the programme concentrated on defining the main monument types in consultation with experts, and on establishing objective thresholds for selection.

This programme is a hugely important professional achievement, of value in assessing a wide range of archaeological resource management issues as well as fulfilling its narrower purpose of selection for the schedule. Subject surveys and studies, for instance on industrial themes, continue to inform our judgement.

From the outset the approach to the MPP has been thematic, since the objective has been to select the best national examples of each monument type for inclusion on the register. The thematic approach is now also the preferred approach to listing.

When launching the resurvey and list review in the 1980s ministers expected that geographical survey programmes would reduce the flow of requests for spotlisting. We know now that that was an illusion. Buildings worth listing were inevitably missed by fieldworkers but, more important, our understanding of building types constantly improves, and tastes change. A large proportion of the new entries to the most recently revised lists will not surprisingly be Victorian buildings undervalued by our predecessors.

While the number of additions to the list will certainly be substantially reduced once the current list reviews have been completed, some building types remain at risk because they are underrepresented on existing lists and are not well understood. Extensive work is currently under way on textile mills, particularly in the north, of which many are threatened by redevelopment. We have been concerned for some time about farm buildings, identified in our national Buildings at Risk survey in 1992 as a building type particularly at risk from changing economic circumstances.

Waltham Abbey, London: Royal Gunpowder mills built between 1861 and 1888

Most recently, the proposed or actual sale of Crown property has shown the need for better coverage of hospitals, schools, and defence establishments. The last, which may be emerging from many decades of obscurity, constitute a huge field of research in themselves, from whole industrial sites as at Waltham Abbey Gunpowder Mills to Second World War pillboxes.

The last decade has seen a determined effort to establish a better understanding of the condition as well as the importance of historic buildings and areas as a framework for national and local management. The Buildings at Risk survey, published in 1992, constituted the first major national picture of the state of the listed building stock. We expect surveys on this pattern to become a regular feature of the local stock taking which should underlie conservation strategies.

The MPP will also provide extensive information on the state of scheduled sites and we will supplement its work by making a sample survey of the national archaeological resource over the next three years in order to obtain a broad picture of threats and the causes and rate of decay (see page 10). Apart from providing a baseline for the future, the survey should help discussion on the development of agri-environmental policies.

Jane Sharman

Director, Conservation Group

Seeing the wood for the trees

Added to a huge volume of casework, our role has expanded to include advice and support on standards, planning, and government initiatives on matters affecting the historic environment.

THE 1981 White Paper from which English Heritage sprang made no mention of the advice and support to owners, local authorities, and others which is now so important a part of English Heritage's work.

In part, perhaps, this was a reflection of uncertainty about the precise division of responsibilities between the new agency and its parent department (then the Department of the Environment), and in part it is explained by the growth in numbers of listed building, planning, and scheduled monument consent cases referred to us for advice.

We now handle some 900 scheduled monument consent, 8500 listed building consent, and 4000 planning applications a year. The figures increased significantly in 1986 when we inherited the conservation responsibilities of the Greater London Council, including consultation on all listed building and conservation area consent applications in London.

It has sometimes proved hard to stand back from this enormous volume of casework, and indeed from the constant stream of requests for help on every aspect of the built heritage. We have, however, increasingly to ask ourselves where we fit in the national picture, precisely what our objectives should be, and how we can best deploy our limited resources to help all those, from government through to individual owners, who most need guidance.

Apart from local authorities, with their front line responsibilities for conservation, there are many other bodies with a direct or indirect interest in the built heritage with whom we need to coordinate our activities.

Given the range and depth of our professional expertise and our national responsibility as advisers to government on the historic environment, we clearly have an important duty to establish and maintain standards of conservation. The direct input that we make to grant and statutory cases, particularly in relation to grade I and II* buildings and gardens and all listed buildings in many London boroughs, is an important aspect of this.

Since 1984, our status as a non-departmental body has enabled us to adopt a high profile in defence of important buildings and monuments. Losses, such as No 1 Poultry, have been balanced by significant victories in relation to other sensitive sites, including the unsuitable proposal for a new Westminster Pier in London or for development proposals in the Hadrian's Wall World Heritage Site.

Most historic buildings must stay in use if they are to survive, and the challenge is to establish standards that protect buildings from unnecessary alteration or unsympathetic repair while allowing their use to evolve.

Such standards cannot easily be expressed in terms of written guidance; they are a matter of experienced judgement, applied to the individual circumstances of each property. It is nonetheless essential that there should be public debate, both to increase professional competence to achieve the right balance and to secure public consensus and commitment to a system of controls that now affects a large number of owners and all local planning authorities.

Countryside links

English Heritage staff have contributed extensively to training courses and discussion of conservation philosophy and practice. While most have focused principally on conservation techniques and architectural history, we have widened the debate to cover the economics of listed buildings and a range of management issues – for instance links to countryside and wildlife.

We have also developed a range of publications: golf courses in historic parkland, barn conversions, church extensions, street improvements in historic towns, and, most recently,

insurance for historic buildings are only some of the topics. *Conservation Bulletin* itself was launched in 1987, and to this has been added a yearly *Scientific and Technical Review* to disseminate news from our works professionals and Ancient Monuments Laboratory, as well as special supplements on topical issues.

The local imperative

The largest single audience for our publications, and their main target, are local authority staff who are primarily responsible for conservation of the built heritage as well as for the planning context in which the successful protection and enhancement of the historic environment must be pursued.

The Hadrian's Wall landscape, looking east from Cawfields; recent rejection of proposals to drill for oil or gas or to mine coal have helped to create a framework for positive planning

Over the ten years of our existence there has been a welcome expansion in the number and expertise of local specialist conservation staff, a significant strengthening of archaeological expertise at county level, and an increase in the numbers of conservation officers. The picture at district level, however, remains patchy, and one of the key objectives for the 1990s is to strengthen competence at this level.

The process is complicated by proposals for local government reorganisation, but a number of initiatives are geared to this purpose. Conservation Area Partnerships introduced earlier this year (see page 26), are intended not only to channel financial assistance to areas of greatest need but to strengthen staffing resources, where necessary, to underpin detailed strategies. In London, where our intention is to delegate more casework to the London boroughs to match the national pattern, we are offering a training package for conservation and training staff. More generally we have lent support to consideration by the Association of Conservation Officers of the case for institute status to clarify the competence they require and the training opportunities they need to achieve generally recognised specialist skills.

Less directly, but equally importantly, our involvement with the planning framework has expanded significantly. The weight attached since 1990 to the content of unitary and local plans in the development control process has increased the need for specialist advice in both the preparation of the plan and any supplementary guidance on conservation matters. Our detailed scrutiny of draft plans has necessarily to concentrate on the most important historic areas, such as Chester or Bath, but we are increasingly concerned to address some of the strategic issues emerging from these plans, such as the function of green belts and the environmental capacity of historic towns.. The publication of *Conservation Issues in Strategic Plans* in 1993 marked a significant advance in terms both of general planning guidance to local authorities and a holistic approach to the overlapping interests of English Nature, the Countryside Commission, and English Heritage. Joint advice on conservation content of local plans will follow this year.

The national role

At the same time as reaching out to an ever broadening local constituency, English Heritage remains the national adviser to government, involved in detailed discussions over matters such as the ecclesiastical exemption, the outcome of which has yet to be tested over a significant period, the role of archaeology in the planning process, VAT and other tax reforms that might benefit the heritage, and, most recently, legislative amendments to improve the protection of the historic environment.

Jane Sharman

Keys to the cash: how grant schemes work

Overhaul of grant schemes management has helped to define and standardise the conditions for grants and make them more accessible.

ENGLISH Heritage in 1984 took over from the Department of the Environment the management of the five statutory repair grant schemes: Section 3A grants to outstanding buildings and to churches, Section 24 grants to ancient monuments, Section 10A grants to historic buildings in conservation areas, and Section 10B grants to town schemes. We were required to set up advisory committees on ancient monuments and historic buildings; these took over the advisory role of the Historic Buildings Council and Ancient Monuments Board for England.

Making order out of confusion and delay

The grant schemes had come into existence at various times since 1953 and for different reasons. They were set up under various statutory powers, handled procedurally in different ways and by different groups of staff. Differing aims, standards, and procedures, and complex administration, seemed almost designed to ensure delay. The history of our grant giving over the past ten years has been the transformation of this situation into one of coherently targeted grant schemes reflecting today's priorities, managed by a streamlined administrative system, as part of an overall strategy.

It was clear from the first that our inherited management structure needed a complete overhaul, and the management consultants moved in! The resulting restructuring led, in 1986, to the establishment of Conservation Group, which deals with everything other than the 400 or so properties previously in the care of the Secretary of State.

Conservation Group contained five divisions. Four dealt with specific functional areas: Ancient Monuments, Historic Buildings, Historic Areas, and the Chief Inspector's Division, which handled listing and scheduling. The fifth, London, handled all historic buildings and historic areas there.

Each functional division was responsible for one or more of the main grant schemes, together with associated statutory controls. The old separate professional and administrative chains of command were abolished, and each division contained a number of multifunctional geographical teams in which all aspects of a particular grant application were handled under a single line management.

The Crescent, Buxton, Derbyshire: a major grant-aided project

This change meant, however, that while an applicant would deal with a single team in respect of all aspects of a specific grant application, teams from separate divisions still operated in the same geographical area (eg an estate owner might have to deal with different people in respect of a historic buildings grant for the house, an ancient monuments grant for an archaeological site on the estate, and a conservation area grant for a property in the estate village).

This overlap continued to cause considerable problems for grant applicants and local authorities, which were reinforced by the parallel split in the handling of statutory casework. It was therefore decided (without the benefit of advice from management consultants!) that we would further restructure within Conservation Group on a regional basis. Since 1992, the only functions handled on a national basis have been listing,

scheduling, and archaeology; all others are handled within four regions: North, Midlands, South, and London.

Industrial and garden grants

Some major extensions of the grant schemes were also implemented. From 1985, English Heritage was given an initial £1m a year extra to spend on grant aid for industrial structures. In fact, grant aid to the relics of earlier industry has comfortably exceeded this total.

The great storm of October 1987 devastated many of the finest parks, gardens, and landscapes in southern England, the damage often being exacerbated by the decline in active woodland management since the Second World War. The government responded by offering substantial grants to English Heritage and to the Countryside Commission to repair storm damage.

We had recently completed the first edition of the Register of Historic Parks and Gardens, which provided a basis for assessing where help should go. We welcomed the opportunity not just to secure the repair and reinstatement of many important gardens, but also to provide a secure basis for their long-term conservation and management. By offering high grant rates for survey work and professional fees, we were able to ensure the systematic study of the history and development of individual designed landscapes and the accurate identification of what remained from historical plantings, as a basis for restoration. In terms of their historic interest, the last state of many of these gardens is now better than the first.

This storm damage scheme was extended after the 1990 storm and offers and payments are only now coming to an end. The enormous public interest in historic parks and gardens encouraged by these efforts has resulted in our setting up a pilot gardens grant scheme, drawing on the experience both of the storm damage schemes and of earlier involvement with gardens through grant aid for outstanding garden buildings. At present we offer about 10 to 15 grants a year, and hope to increase this number when resources permit.

Cathedral grants

The Cathedrals Grant Scheme was launched in 1991. The grant scheme for outstanding churches in use, set up in the late 1970s, omitted cathedrals because the greatest need lay with parish churches, and it was thought that cathedrals were able to fend for themselves. By the end of the 1980s, however, it became apparent that a number of cathedrals were suffering severe financial difficulties.

This was brought to a head by the decision of the Dean and Chapter of Hereford Cathedral to offer for sale Mappa Mundi, the great medieval world map housed for centuries within the cathedral, in part to meet the cost of their repair programme.

This highlighted both the lack of control within the ecclesiastical system over cathedral buildings and their contents and the need for public assistance. After long discussions between churches, government, and English Heritage, a cathedral grants scheme was established with £2m of new funding in the first year, rising to a steady level of about £4.5m. As a *quid pro quo*, the Church of England has put in place a formal system of control over the repair and alteration of cathedrals and the government is separately reviewing the ecclesiastical exemption.

Building grants

The recording of standing buildings has often been left to architects or others with a particular interest, with relatively little formalised philosophy or good practice. This increasingly unsatisfactory situation was recognised at the time English Heritage was established, and we have over the last ten years sought to integrate recording work increasingly with grant-aided repair, and to include the costs of recording as a grant eligible item in its own right.

We have also been making resources available for what might be called value added work, for example where the opportunity arises to integrate earlier work with new recording and to publish a consolidated report, or where repairs provide an opportunity for selective investigation.

Sutton: the water tower, St Philomena's School, Pound Road, Carshalton, (grade 11)*

Monitoring procedures

Following the first reorganisation in 1986 we introduced more sophisticated methods for monitoring and providing management information about grants casework progress. Computerisation of case monitoring led to an initial review of grants documentation with some improvements; but other grants procedures were at first unchanged – a reactive approach driven by applicants, the use of standard grant rates, and the continuation of a number of Byzantine (and to the outside world often incomprehensible) criteria and procedures. A number of these procedures have been reviewed and tackled.

The original scheme for grant aiding buildings, established in 1953, specified that to qualify for grant they should be of outstanding importance. The then Historic Buildings Council was given the responsibility of deciding whether particular buildings, including from the late 1970s places of worship, were outstanding or not. But by the late 1980s, with a much improved and enhanced list, decisions had become increasingly anachronistic. There was no clear definition of the distinction between 'outstandingness' and the higher categories of listed building. The decision was therefore taken to equate outstandingness with the bottom end of the grade II* category, making all grade I and grade II* buildings potentially eligible for grant.

A second area of reform was needs assessment. In making grants, we and our predecessors have always been required to take account of the financial need for a particular offer. By 1984 grant rates had become fossilised at fixed percentages of repair costs, and limited needs assessment tended to be done on an *ad hoc* basis.

During the 1980s it became clear that many offers were not sufficiently high to allow work to go ahead within a reasonable timescale, and some grants were clearly going to owners who would be well able to afford to carry out the work anyway. It proved relatively simple to put in place a procedure for assessing the need of parishes, based on criteria such as population, the electoral roll, annual financial turnover, and resources available to the parish.

The results have been obvious; churches now take up grants much more quickly and start and complete repairs sooner.

Needs assessment for secular properties is much more complex, because of their widely varying character, but broadly divides into two streams: market valuation and estate valuation. The former approach involves estimating the final value of the building once repaired, comparing this to the costs of repair, and offering grant where the value does not cover repair costs. But where a heritage entity exists, for example a great country house with its historically associated contents, estate buildings, and park, we would look at the resources and liabilities of the estate, assess a figure for reasonable annual repair expenditure, and compare this to the costs of the forward repair programme. Grant aid can be offered where a gap exists.

Eligibility

The issue of what is or is not eligible for grant aid has often been a matter of uncertainty. It will inevitably remain to some extent at the discretion of individual professional officers, but

we recognise the need for clear guidance for grant applicants and their advisers. In addition, we need to reflect key issues that have come to the fore in recent years, particularly fire precautions and health and safety requirements, the protection of buildings from vandalism and theft, and assistance for a much wider range of the built heritage, including machinery and fixtures often requiring specialist and expensive conservation techniques.
We have created new sources of advice by establishing industrial archaeology and contents panels, we are completing a revised list of eligible repairs, and we have produced more detailed information through the publication of books and leaflets relating to repair techniques.

Targeting grants – future ends

Where do we go from here? Over the last ten years English Heritage has managed to increase substantially the resources for existing grant schemes, as well as staffing new ones. Nevertheless, continued financial expansion cannot be guaranteed and resources are likely to dominate the future.
Our Buildings at Risk surveys have provided a more coherent basis for targeting grant aid, and encouraged closer working with local authorities. We shall be backing up with grant and other resources the greater powers of local authorities on buildings at risk. In particular we are expecting to develop the Conservation Area Partnership initiative, begun this year, which will give local authorities greater freedom in the allocation of grant aid.

Bethnal Green, London: Cluster Block

This will also attack the problems of conservation area grants schemes: rigid grant rates, a lack of commitment to identifiable and measurable targets, and excessive detail handling by English Heritage. Similarly, we are reviewing our relationships with building preservation trusts to see how we can help them tackle buildings at risk.
We are exploring ways of preventing the breakup of country house estates, where a heritage entity of land, house, and contents exists, and where private owners are under severe financial pressure. Historic churches are also an increasing concern. There are likely to be more redundant churches over the next ten years, particularly in rural and inner urban areas. Many will be of the highest quality and unsuitable for conversion to other uses; we will need to explore with the church and government how they can best be secured for the future, whether through the Churches Conservation Trust, local trusts, guardianship, or in some other fashion.
The listing of twentieth-century, and especially post-war, buildings raises the issue of the repair of modern materials, particularly reinforced concrete and cladding materials. There are many technical and other issues still to be addressed here; some buildings have been failing ever since they were completed, while others were deliberately designed for a short life or for architectural effect without consideration of issues of long-term survival. We are commissioning and carrying out research in the laboratory and on the ground to find some answers.
In addition to a permanent grant scheme for historic parks and gardens we are extending the scope of our existing grant schemes in both the range of repairs and the range of owners. The selling off of much of the government's estate has highlighted the poor state of repair and the lack of stewardship exercised by many government departments. English Heritage has been involved particularly with some of the Ministry of Defence disposals (eg at Chatham and Portsmouth) which involve grant aid.

Major grants offered

£m OFFERED	1984/85	1993/94
Buildings & monuments	8.9	13.7
Churches	5.0	12.5
Conservation Areas	7.5	10.6
Cathedrals		4.5
Parks & Gardens		0.4
TOTAL OFFERS	21.4	41.7

We are anxious now and will be in the future to ensure that the varied grant schemes, with their differing statutory powers, act to further our overall objectives, rather than, as has happened in the past, tailoring objectives to suit the idiosyncrasies of the schemes. Statutory change may in the long run be desirable, though difficult to achieve; in the short to medium term we have done much and will do more to make our grants easier to understand, easier to operate, and better targeted.

O H J Pearcey

Deputy Director, Conservation Group

Archaeology: define first, dig later

Our approach to our archaeological work has been conditioned by our decision to define the research and planning frameworks within which we operate. The establishment of the MPP and a new publications programme have also been highlights.

BEFORE 1984 the two main influences in archaeology policies were the decisions in 1980 to fund only specific archaeological projects of defined scope, duration, and cost, so as to ensure that funds went to projects that represented academic value for money, and to establish priorities in conjunction with national academic societies to guide the allocation of grants.

By 1984 the pursuit of these policies had been combined with the funding of County Sites and Monuments Records and the pump-priming of archaeological posts in planning authorities. After 1984, as a result of the increased availability of professional archaeological advice to local authorities and other bodies, archaeological considerations became integrated into the statutory processes of rural and urban planning.

Recognition of the importance of Sites and Monuments Records in the planning process was given in the General Development Order (1988). Our funding policies were framed to encourage the integration of archaeological considerations into planning, and this led the Department of the Environment to issue in 1990 the Planning Policy Guidance Note 16 (PPG16) on *Archaeology and planning*.

This document contains advice to developers, planning authorities, archaeologists, and other interested parties. When published it not only confirmed that archaeology is material to planning considerations, but it also, by emphasising the importance of archaeology and highlighting the need for serious consideration to be given to the preservation of important remains, placed archaeology firmly at the centre of planning.

In addition, PPG16 makes it clear that responsibility for any archaeological work made necessary by development falls on the developer. As a result, much archaeological work that would formerly have been funded centrally is now paid for by developers, with the work usually carried out by archaeological organisations working under contract to the developer.

Treselleris Farm, Bodmin Moor: later medieval farm and ring fence field system

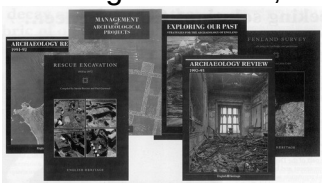
Policies into practice

English Heritage realigned its archaeological policies in 1991 to accord with the advice given on these matters in PPG16. In that year it published *Rescue archaeology funding, a policy statement*, which sets out the policy framework within which decisions on funding are taken. This was accompanied by *Exploring our past: strategies for the archaeology of England*, which was produced in collaboration with the archaeology profession.

This is a review of the previous decade of funding, together with a strategy, informed by the lessons learned in the 1980s, for dealing with the problems and opportunities to be encountered in the 1990s. These publications were accompanied by a manual, *Management of archaeological projects*, which sets out good practice in archaeological project management for recipients of our own grants and gives guidance to other financial sponsors. In addition, an annual account is published of all archaeological activities undertaken and grant-aided by English Heritage. *Archaeology Review* was first published in 1989 and contains descriptions of the work undertaken in the preceding year.

In 1986 a decision was taken to bring in-house the publication of the most important of our grant-aided archaeological investigations. The rese was the series of HBMCE Archaeological Reports, recently revamped as the English Heritage Archaeological Reports, now a well-established and highly regarded vehicle for the publication of important archaeological work.

The series now includes not only ‘traditional’ archaeological reports c grant-aided sites, but also reports on work carried out on properties in of care, archaeological survey work on standing structures, and synthetic approaches to the investigation of whole areas.



In 1984 the Ancient Monuments Advisory Committee (AMAC) reasserted its predecessor’s commitment to the importance of ensuring that the results of all government-funded archaeological work must be published, or at least brought into the public domain. AMAC set up a Backlog Working Party to monitor this procedure, and allocated staff and financial resources to make it possible. The results were published in May 1994 as the report *Rescue excavation 1938 to 1972*.

Of over 1100 sites covered by the programme, some 950 have been published or submitted for publication, reports are still expected for about 60 excavations, and some 270 sites have had their records copied into the National Archaeological Records of the Royal Commission on the Historical Monuments of England (RCHME), including many of the sites that have also been published; fewer than 20 can be said to have no clear resolution.

MPP – understanding our ancient monuments

In February 1984, the then Inspectorate of Ancient Monuments published a report, *England’s archaeological resource*, confirming that the existing Schedule of protected monuments was inadequate and unrepresentative. The proposed ‘Scheduling

Enhancement Programme' was an important early initiative for the newly formed English Heritage.

It proved difficult to get the programme off the ground quickly. Government was unable to allocate funding specifically for the work and this had to be made progressively available from elsewhere in English Heritage. Extensive preparation was required before scheduling could begin, including the completion of the grant-aid programme to the county Sites and Monuments Records, the design of computer systems to support scheduling procedures and to maintain records, the commissioning of monument class descriptions, and the development of more systematic evaluation procedures to identify consistently sites qualifying for scheduling. Staff had to be recruited and trained.

At the same time, the original concept of the programme was being revised and expanded, first to include a review of those monuments already scheduled and then to consider all aspects of the archaeological resource, including those parts where scheduling would not be appropriate and facing up to the limitations of existing knowledge. This expanded project was entitled the 'Monuments Protection Programme' (MPP).

Preparatory work commenced in September 1986 and scheduling fieldwork began in earnest in 1989. The flow of scheduling recommendations to the Department of National Heritage has increased as the programme has grown to full strength, from 400 recommendations in 1990–91 to 1240 in 1993–4; during the preceding six years the average was only about 50 recommendations a year. The work is programmed to run until 2007–8, by which time there will be an estimated 30–33,000 scheduled monuments covering some 45–50,000 individual archaeological sites.

The MPP covers much more than scheduling and is adding greatly to our understanding and appreciation of the archaeological resource. Sites and Monuments Records vary in quality and completeness and the archaeologists undertaking scheduling fieldwork are significantly enhancing the record, including identifying previously unrecorded sites. Industrial remains have not been systematically recorded; new syntheses are being compiled on an industry by industry basis. Work has been commissioned or requested from the RCHME to survey poorly studied areas (eg the Yorkshire Dales National Park) and to increase our understanding of unclassified sites revealed by aerial photography. Work is also proceeding to improve our understanding of both the urban archaeological resource and archaeological landscapes generally.

The challenge for the next decade will be to continue with the increase in our understanding of the resource to ensure that progress can also be maintained with its protection and management.

Geoffrey Wainwright

Chief Archaeologist

Seeking solutions from science...

English Heritage continues to develop a pragmatic approach and scientific techniques to answer archaeological questions. Alliances with universities, institutes, heritage organisations, and environmental groups are sought in pursuit of this goal.

THE CORE of what is now a comprehensive service using science to interpret and preserve the heritage had its beginning 40 years ago as part of the Ministry of Works. As the Ancient Monuments Laboratory, it became part of the Department of the Environment and built up its skills and reputation as a centre for archaeological science, which English Heritage took over in 1984.

In 1990 the service was extended to include two other branches from the Directing Architect's Division, both with a long pedigree in conservation work. The Research, Technical, and Advisory Service, now Architectural Conservation, had built up a core of

technical knowledge of great influence in that field, and the picture studio, responsible for conserving or advising on English Heritage's important stock of wall paintings, easel paintings, and structural decorative surfaces, was also in demand to advise other government departments and the royal palaces.

Research and training

Now, as part of the newly established Research and Professional Services Group, the function of Science and Conservation Services is not only to provide a specialist service for colleagues, but also to participate in general conservation and archaeological science, through standard setting, passing on scarce but essential skills, and, importantly, through establishing a research programme that will underpin English Heritage's duty to preserve and interpret.

Research for English Heritage must not usurp the functions of the research councils, universities, and other institutions dedicated to specific research programmes of their own. Instead, it must fill the need within archaeology and conservation sciences for pragmatic answers to specific questions – solutions that will-provide us with better tools with which to preserve or interpret, based on wide experience of materials and problems provided by our own estate and grant-giving activities.

Setting up equipment for site monitoring at Market Deeping, Lincolnshire

Some research is carried out in-house, for example when the experience of staff with access to a wide range of material is such that they have acquired special skills not readily available elsewhere. Some may be commissioned from universities through a network of contractors, from other research institutions or from specialist independent sector contractors.

In many cases we collaborate as the industrial partner in a research council funded Cooperative Awards in Sciences of the Environment (CASE) award, where doctoral students tackle problems using our access to heritage material and our experience as a resource. Recent examples of such cooperation include two studentships in archaeometallurgy that are attempting to unravel the technical practices used to produce ancient metalwork, and one that seeks to identify remains of animal activity in archaeological soils and sediments.

Our recently opened Fort Brockhurst Training Centre not only provides building professionals and craftspeople with a unique setting in which to practice conservation hand skills and laboratory techniques, but also provides an active test-bed for newly researched conservation methods and materials and for the development of new tools. For example, we expect to market special pointing tools for use with conservation mortars, and are testing the prototype of a mortar mill that can produce mortar in conservation rather than commercial quantities.

Stone and timber decay

A number of projects are funded specifically to backup grant-aid, most notably the £11m given by government for the repair of cathedrals. A small percentage devoted to finding the answers to generic problems that are common to most cathedrals and to many

churches may be of great value in the long term. Through our network of consultants we are investigating medieval pavement wear and tear, the deterioration of polishable limestone (eg purbeck marble), sandstone decay, masonry cleaning, and timber decay. Of 17 projects in a programme costing £500,000 over three years, most are commissioned from external consultants but all rely on the skills and practical knowledge of our in-house staff to supply the research brief and ensure that the outcome will be of use to English Heritage and to the building conservation community.

Geophysical techniques

Through our commissioned research on the mechanisms of timber decay we are also being assessed as participants in a European research project likely to be funded at 400,000 ecus and to provide us with links to others with Europe-wide experience of conservation problems.

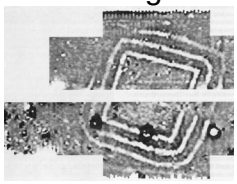
Through the improvement of geophysical prospection techniques we hope to provide better planning before excavation begins. For example, we are exploring the use of multi-probe arrays to give a three-dimensional plot of archaeological remains. Sophisticated computing facilities enhance our ability to capture and refine field information in order to display and interpret it with a high degree of accuracy.

Sandstone decay on a church tower

Our in-house team has recently produced guidelines for users of geophysical survey based on a wide experience of innovative field practice, and intends to extend its usefulness to planners by assembling a national database available to *bona fide* users. The team also offers an advisory dating service to users whose radiocarbon, dendrochronological, or archaeomagnetic dates are provided or purchased by English Heritage. Its recent geophysical survey of Stonehenge has provided the impetus for a series of dates, using different dating methods, and has created the opportunity for several major dating laboratories to collaborate.

Past environments

Much of our understanding of historic landscapes, husbandry, and the economic status of past communities has come from the analysis of the excavated remains of past environments. Specialists in the analysis of animal, human, or invertebrate remains, and of fossil plants, pollen, soils, and sediments, work within English Heritage or its network of university-based contractors to give the best possible advice on the potential of archaeological sites to yield information.



Lee's Rest, Oxfordshire: magnetometer survey shows a buried Roman or Iron Age enclosure

The science-based archaeology committee of the Natural Environment Research Council has given priority to a number of themes to take bioarchaeology forward, usually in universities. English Heritage's scientists, although contributing to the larger picture of more speculative science, are concentrating on synthesising the work they have done over

the past decade in order to identify regional priorities, and on better methods of analysis, a task for which the wide range of available sites makes them uniquely equipped.
When appropriate, they are partnered by other institutions; so, for example, the Natural History Museum is using human bone trace element analysis to complement the work carried out in-house on bone disease in order to provide information on diet and health at medieval Wharram Percy.
With the help of the Scottish Agricultural College we are making long-term measurements of the effects of breeding, castration, and pasture type on the development of Shetland sheep (an ancient breed). This will enable us to analyse sheep bones, one of the largest categories of excavated material, with a degree of accuracy not possible before; and it will offer insights into the development of the wealthy medieval wool trade. Interestingly, although alpha-rated, this project because of its length could not be funded by a research council.

Rose Theatre experience

Research on site preservation has come to the fore through our experience of a number of well-known waterlogged sites, perhaps most notably the Rose Theatre. English Heritage is currently funding a pilot study at Durham University to understand soil moisture fluctuations and the chemistry of buried sites. These are the next steps needed to understand the microbiological and chemical indicators of change in the complex environment of waterlogged burial, a much needed tool for excavators and planners who need to know the implications of reburial or continued burial of a waterlogged site.
We are also helping to research a new conservation treatment for some classes of waterlogged material, by part funding an investigation of a new method, supercritical drying. The work is being carried out at the University of St Andrews, with conservation advice from our in-house waterlogged material and wood specialist. There is a real possibility that this may be of use in the conservation of very delicate waterlogged material, such as jet, shale, and ivory.

Launceston Castle, Cornwall: cat mandible with cuts, showing evidence for the use of cat pelts

X-rays and analysis

English Heritage's own wall paintings provide a challenge for research, ranging from developing the use of the video microscope as an-on site tool to measuring the fading of aniline colours with newly developed monitoring equipment. Here our in-house equipment, the scanning electron microscope with energy dispersive X-ray analysis, X-ray fluorescence analyser, X-ray diffractometer, and a range of supporting techniques, has enabled us to carry out innovative interpretive work relating to historic and archaeological painted surfaces.

Photomicrograph of Roman iron smelting 'tap' slag

As well as providing an analytical facility for the research of others, our equipment is extensively used in our investigations of high temperature production processes: glass manufacture, copper alloy working, iron smelting, iron smithing, and non-ferrous alloy refining. These technologies are studied through the investigation of both artefacts and

waste products. (An excellent example of such research is described by Justine Bayley on the next page).
Our expertise in these fields allows us to offer an interpretative service for similar materials found on sites, helping archaeologists to gain fuller understanding of the technical sophistication and economic importance of the crafts or industries on the site.

Defining our niche

Over the past ten years the opportunity of operating in and advising on such a wide spectrum of archaeological science and conservation has made us appreciate the valuable resource of experience and knowledge that is accessible through our in-house team, our contractors, and our many contacts in the field. We have reached the point where we can define our niche in the spectrum of research needed to preserve the heritage.
Over the past three years a formal process of peer review through English Heritage's advisory Science and Conservation Panel has helped us to be clear that our role is to focus pragmatically on providing better tools for interpretation and preservation, to use our resources wisely to fund or pump-prime what we cannot do ourselves, and above all to seek out others – universities, research institutes, heritage organisations, natural environment groups, government bodies, and specially qualified individuals – with whom to build better, more imaginative, and more securely funded science to answer the questions being asked of us.

Kate Foley

Director, Science and Conservation Services

Understanding early metalworking

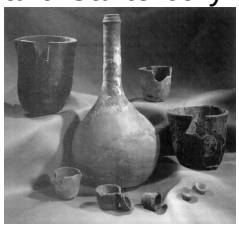
English Heritage research reveals new details of Roman and medieval metalworking technology.

IN THE LAST ten years our understanding of ancient technology has increased by leaps and bounds. Archaeologists have always studied the products of past industries, but we are now further forward in identifying both the materials used and how and where these objects were made. Within English Heritage, work in the Ancient Monuments Laboratory's Technology Section has concentrated on high temperature technologies, in particular metalworking.
For many years crucibles and slags have been recognised as indicators of metalworking, but linking individual finds to particular processes is a relatively recent development. In many older archaeological reports iron-working slags were normally equated with iron smelting, ie extracting the metal from its ores. More recent studies have shown that most of the slags found were produced during subsequent smithing operations when the smelted bloom – the rough mass of hammered iron – was consolidated and shaped into objects. Micro slags known as hammer scale, which are a byproduct of smithing, are better indicators of where smithing was carried out; their distribution at Burton Dassett, Warwickshire, has even been used to reconstruct the layout of a medieval smithy.

Brassmaking

With non-ferrous metalworking the increase in our knowledge has also been significant. The metal-rich deposits on crucibles are now routinely analysed by techniques, such as X-ray fluorescence, that indicate the elements present. Not only can we identify the composition of the metal or alloy that was being melted, but in some cases we have also been able to show that more complex processes than metal melting were being carried out. Three specific examples are the production of brass in Roman Britain, the parting of gold from silver, and the assaying of precious metals.

Brass, an alloy of copper and zinc, could not be made by melting the two metals together as metallic zinc was not known in Britain before the seventeenth century; this is because it vapourises as it is smelted. To get round this problem zinc ore was sealed into special crucibles together with thin pieces of metallic copper and charcoal, the crucible was heated, and the zinc vapour that formed diffused into the solid copper. When the temperature was raised further, the metal melted and homogenised; the product was brass. Early Roman crucibles used for brassmaking have been identified from Colchester and Canterbury.



Tudor crucibles, cupels (bottom right), and flask, from the Tower of London Mint

Separating gold from silver

The separation of gold from silver is another metallurgical operation where the ancient process was quite different. Sealed pots containing thin sheets of the mixed metal interleaved with powdered brick and common salt were heated to just below the metal's melting point. The silver and salt reacted, forming silver chloride, which was absorbed by the brick dust, leaving behind pure gold. The parting vessels have deposits on them that are quite unlike those on metal melting crucibles and have now been identified from several Roman and late Saxon sites.

Metal assaying

Fire assaying, to test the purity of gold or silver, is still carried out today. A small known weight of the precious metal is melted together with some lead on a cupel, a small shallow dish. The lead is oxidised to litharge and dissolves any base metal, such as copper, that was mixed with the gold or silver. The precious metal separates from the litharge and, when it resolidifies, can be weighed, the loss showing how impure it was. Cupels made of compacted bone ash, of Tudor date, are known from the Tower of London, then the Mint. Earlier cupels were made of ceramics and had been confused with metal melting crucibles until analytical work identified them.

In all these areas scientific examination of archaeological finds has thrown light on the skills of the craftsmen of the past.

Justine Bayley

Conservation of Artefacts and Technology, Head of Technology Section

Expanding our practical skills

Works Professional Services continue their work on the conservation of our properties, but have also developed a role in setting standards of excellence for building conservation countrywide.

SINCE the establishment of English Heritage the accelerating trend for Works Professional Services (WPS) has been the increasing range of services we provide for a wider range of customers both internal and external. At the same time we are focusing our range of expertise on conservation matters and issues affecting quality and value for money. WPS works closely with professional staff in other groups within English Heritage.

Some of the expertise now found within WPS was not available within English Heritage at its inception. The increasing recognition of the importance of landscape as an element in

the built heritage has led to the development of skills and services in landscape design and management and in ecology. These have paralleled other developments in English Heritage, such as the significance of landscape in new properties taken on, such as Kenwood, Osborne, and Brodsworth, and the compilation of the Register of Historic Parks and Gardens together with the inauguration of garden grants.
Much more attention has also been paid to the landscape aspects of our properties. We have introduced improved maintenance regimes for the management of trees and for planting and grass areas, including managed grazing, which have an application for other landscape managers.

Survey service

Since April this year English Heritage has had a fully integrated architectural and land survey service, generating survey data from a combination of the latest electronic measurement and conventional hand survey techniques and photogrammetry. Most information is now generated digitally and input directly into Computer Aided Drafting (CAD) systems, where it can be easily stored, readily transmitted, and directly manipulated by the users.

Little Moreton Hall, Cheshire: traditional buildings can accommodate structural movements far in excess of those acceptable to modern forms of construction

The balance of design services has altered as properties taken on by English Heritage have mainly been intact, roofed structures rather than ruined monuments; our architectural and survey services have as a result become increasingly concerned with the recording and conservation of interiors. The building services engineers have broadened their outlook from the pipes and wires of mechanical and electrical engineering into the wider world of environmental monitoring and control, and of energy efficiency. Monitoring also plays an increasing role in the work of the structural engineers and they too are increasingly using remote means of gathering digital data, then processing and presenting it by means of computer programs linking data from disparate sources.

Peverils' Tower, Dover Castle: cross section plotted in CAD from photogrammetry, reflectorless electronic distance measurement, and measured survey data

Balance of roles

Most WPS services are still directed towards the conservation of our own historic properties, but we are increasingly providing services in support of our statutory and grant-aid functions. The conservation engineering team already provides more support to these activities than to our own properties, since structural issues are frequently fundamental to grant and statutory cases. The building services engineering team is also now involved in such work; the architectural, survey, and landscape teams all provide services in support of statutory and grant-aid casework, undertaking feasibility studies and advising on applications.
There is now a regular input into grants casework from the Quantity Surveying and Contracts team, who are called upon to help ensure that projects receiving grants are offering value for money and achieving the same standards of financial control and probity that we expect to maintain on our own properties.

The effect of WPS input can be savings that substantially outweigh the cost of the input, and reduce the impact of interventions upon historic fabric.
Some of the WPS input to the control and support of casework is in effect grant in kind, especially where the building owner has no separate professional input, or where the grant is nearly or actually 100%, in which case we naturally expect similar standards of professional input to the project as those we would expect for expenditure on our own properties. In the same way, we are providing professional support to the Department of National Heritage in the new programme for the repair of the Albert Memorial.

Foundation of skills

Works Professional Services is no longer a simple provider of operational services, though these provide a secure foundation of skills and experience. The focus of our development is on enhancing the usability of historic buildings by reconciling potential conflicts of interest between the conservation of historic fabric and current requirements for health and safety, building standards, and environmental conditions.

Albert Memorial, London

The works professional branches are heavily committed to improving the practice of building conservation; better practice should produce better conservation as well as better value for money. We are particularly concerned to introduce the best management practice into conservation programmes; systems developed and tested on our own properties can be applied to conservation work generally and can have commercial potential.
Improved practice can only lead to improved conservation if there are people with the skills and experience to implement it, not just within English Heritage but in the works professions and the property industry at large. WPS is much concerned with the setting of standards and the means of accreditation for firms and individuals. We aim to support and encourage the setting of standards for, and the provision of, training opportunities. In setting standards we do not seek to dictate, but rather to act as a catalyst, working with industry, professional groups, and the providers of training.
Within English Heritage itself WPS aims to provide the means to assess the competence of agents that it proposes to employ; we are also developing and maintaining a suite of model commissions and contracts adapted to our particular requirements, which recognise changes in current practice within both the public and commercial sectors and in the relationships between them.

Alasdair Glass

Director, Works Professional Services

Keeping our house in order...

The development of a flexible approach to the conservation of our own properties, with decisions tailored to the individual cases, has created a more imaginative philosophy of conservation.

MANY of the key innovations introduced at English Heritage properties in the past ten years can be traced back to pioneering work carried out by our predecessors in the 1970s and early 1980s. The effect of the creation of English Heritage in 1984 has been to bring

our properties more into the mainstream of the conservation movement, encouraging a more liberal, imaginative, and less dogmatic approach to their treatment.
This does not mean that we have become cavalier about our responsibilities as archaeological and architectural curators: quite the reverse. It is now generally accepted that preservation by record is an impossibility, and as new techniques are always being developed, and as new research agenda are always being addressed, the only responsible curatorial position is a presumption in favour of preservation, whether in the context of PPG-16 or in looking after our own properties.
We therefore stick as closely as possible to one of the basic principles of conservation, the idea of reversibility. Keeping to such an ideal is not always possible, of course, particularly where structural repairs are concerned, but it is always worth aiming at. The old Ministry of Works approach to timber structures meant dismantling, repairing each member separately, and reassembly as a working structure in which each element performed its original function.

Preservation versus reconstruction

Now, where possible, we repair *in situ,* as at Leigh Court or Stokesay Castle, and keep dismantling to a minimum. Some structures that are too weak to do the job they were designed to do and that would not survive being brought up to strength are instead relieved of their functional duty.
This presumption in favour of preservation means that the Ministry philosophy of ‘conserve as found’ has a new and more accurate meaning. In the past it merely summarised a refusal to contemplate speculative reconstruction: what it emphatically did not mean was that sites and buildings were kept in their existing forms.
Far from it, for most sites were cleared of fallen rubble and buildings had all accretions later than a key date in their history ruthlessly stripped away. Monastic sites generally lost everything later than the Dissolution (1536–40). In extreme cases even roofs, floors, and windows were removed, and complete multi-period buildings were reduced to a single-period roofless ruin.
The alternative being followed today has been summarised in the phrase, ‘it’s all part of the history of the monument’. Nothing is demolished or removed unless it can be convincingly argued both that it is wholly insignificant in itself – ‘get rid of it before it becomes interesting!’ – and that what is left will be chronologically coherent; that if layers are to be peeled away, they are taken off in sequence, the latest first.
The results of this much lighter touch can be seen at all three of the properties taken on and conserved by English Heritage since 1984. At Clun, the temptation to carry out a major research excavation has been resisted and picturesque grass-covered mounds of fallen masonry survive as an archaeological data bank for future generations. At Stokesay the cottage garden admired by visitors to this most romantic of buildings has been retained even though it is neither thirteenth-century nor Jacobean; and at Brodsworth the interior decoration is being cleaned and conserved, but not returned to its pristine nineteenth-century appearance.

Recording our own interventions

Taking our responsibilities seriously has meant broadening our outlook and taking on new duties. One of the most significant changes has been in the management of our museum collections. These include archaeological, architectural, military, and social history material as well as works of art and the other contents of our historic houses. We are now a registered museum authority with qualified curators in each region; all aspects of collections management, in particular documentation and storage, have improved dramatically.

Audley End House, Essex: restoration of the parterre was completed in 1993 after a decade of research and reconstruction

We now place greater emphasis on the importance of documentary research, particularly (since it was often neglected in the past) into the later periods of a property's history. Brought together, as for example at Audley End, documentary and archaeological evidence can be impressively effective. Unfortunately the expertise to handle both types of evidence with equal facility is not easy to acquire, and we still face problems in finding sufficient consultants to carry out this type of research.

Southampton: interior of medieval merchant's house with children viewing artefacts

Scepticism about the ability of a building to be self-sufficient as an archaeological record has also led us to place increased emphasis on recording our own interventions. New techniques that we have been instrumental in helping to develop include paint research, not merely as a guide to aid redecoration but also as an essential archaeological tool in analysing the development of a building: the sequence of paint layers on different architectural elements can be used to work out the order in which they were added, altered, or, in some cases, brought from elsewhere. But it is garden archaeology that has produced some of the most spectacular results. In the past ten years it has played a critical part in our restoration of the gardens at Audley End, Kirby Hall, Chiswick, Mount Grace, and Wrest Park.

This widening of our interests underlines the point that we are interested in more than just archaeological sites and ruined buildings. Wherever possible we look on our properties as historic entities: buildings, with their contents, in their setting. Seen as a whole such entities are much more revealing than their individual components would be in isolation, and, not having effective statutory protection, they are one of the parts of our heritage most at risk.

Attention to context: sensitive reconstruction

It is all a matter of context. Reducing a monastic building to its medieval core creates a yawning gap between the Dissolution and the present that can destroy much of its meaning, for there is little point in studying history unless one gets some idea of the way in which things do (and do not) change, develop, and decay.

This means that we cannot avoid the linked questions of restoration and authenticity. However 'authentic' a restoration or recreation, true authenticity of experience can never be achieved. However scholarly the reconstruction of a sixteenth-century Mass, however careful the performance, however accurate the acoustics, we can never hear it with ears that never heard Mozart or with an understanding that has not been affected by the Enlightenment.

Living history can never actually recapture the life of the past. But reconstruction can be useful – extraordinarily vivid as an educational tool, and if it means realising a work of art, such as a landscape or an interior, it can be immensely satisfying aesthetically. We have started to do a great deal of non-destructive, generally reversible reconstruction, for example interiors at Boscobel, Audley End, Osborne, and Chiswick; the monk's cell at Mount Grace; the medieval merchant's house in Southampton; and the great garden at Kirby Hall.

Mount Grace Priory, N Yorks: the living room of the reconstructed cell

In restoration, as in repair, authenticity is important. It is the small details that make the most difference: the grass the right length, the planting using the right palette of colours, the right materials surfacing the paths, the right paint, the right texture of materials, the furniture correctly positioned, the hang of the pictures in harmony with the room. Such an approach can transform the appearance and character of a property, giving visitors great pleasure as well as a valuable insight into the past.

Clun Castle, Shropshire: aerial view

But there is no reason why it should have more claim to exclusivity than the traditional Office of Works mown lawns and empty interiors. We are trying to encourage many different types of creative response to our properties: opera at Kirby Hall using Nicholas Stone's loggia as a stage set; or contemporary sculpture at Rievaulx, Kenwood, Lincoln, and Wenlock. Our proposals for alternative management have opened the way to other imaginative possibilities, not least by making us think about the reason why properties are in our care.

Philosophy, presentation, interpretation

In the end, conservation philosophy cannot be separated from questions about site presentation and interpretation. In displaying a property to the public one has to start by asking what is important and interesting about it; only then can one relate it to the concerns and interests of visitors. Conservation decisions are based on exactly the same sort of reasoning, though perhaps with a larger public in mind and certainly with a longer-term view: what has been called the existence and bequest value of the heritage. Conservation is all about defining what is important about something, what is worth keeping.

It is about the impossible question that arises when one aspect of a building or monument – its design, its aesthetic, the archaeological evidence – can be preserved only at the expense of another. That is why the easy answer – that it's all part of the history of the monument – is only part of the story. The rest – the hard part – is about what has to be done when there is no easy answer, when something inevitably has to be lost and a value judgement cannot be shirked.

The imaginative and undogmatic approach that English Heritage is developing is all about facing that challenge head on; it is about keeping in mind a check list of criteria – the presumption in favour of preservation, reversibility, context, coherence – and making the judgement that is right in each particular case. If that produces a plurality of different approaches, of sites and buildings that are as unlike after conservation by English Heritage as they were before conservation, then that probably means that we are beginning to get the answers right.

Jeff West

Historic Properties Group, Regional Director, Midlands

Marketing the past – from bare stones to Tosca's leap

From ruins to tourist attractions, the changing image of English Heritage sites.

UNTIL the end of the nineteenth century many now-familiar monuments were buried beneath the soil or a tangle of scrub. But awareness of the past was growing, and the 1882 Ancient Monuments Protection Act was a watershed. From the turn of the century ancient monuments were studied more seriously and site after site was cleared or excavated.

The resulting ruins were conserved and presented for the interest of the discerning. By default, this work led to the familiar image of the British ancient monument: stonework surrounded by carefully mown grass, sometimes with a small wooden shed for a custodian.

After the Second World War the National Trust increasingly made great houses accessible to the visiting public. Usually richly furnished, they made ancient monuments look stark. During the 1970s the number and variety of museums grew, many developing new ways of displaying the objects in their care, and theme parks grew out of the traditional seaside funfair. In 1984, the Coppergate site in York produced the country's first 'dark ride' at the Jorvik Viking Centre. New technology began to be seen as the way forward for presenting ancient monuments.

A new relaxed image

When English Heritage was created in 1984 the presentation of government properties had changed little from the 1930s. Signs implied that visitors were tolerated rather than welcomed, with 'Do not' instructions outnumbering information about the history of the site. A sign at Tintagel saying 'Children should be kept under control' could only bring a nod of approval from a modern parent, while at Hailes Abbey the only information sign was in Latin. Some effort had been made to erect exhibitions at a few sites, but these too often misjudged visitors' level of knowledge.

English Heritage was set up with the specific remit of improving the presentation and marketing of the properties in its care, and needed to realise that it was in the tourism business and that the properties, valuable though they were as ancient monuments in their own right, had to compete as visitor attractions. We would have to explain and interpret the complex remains to a wider, less well-informed audience, and to combine conservation with a visitor-friendly approach.

The first signs of change were the appearance of site panels that used the word 'welcome'. The custodians' 'prison warder' uniforms were replaced with more relaxed pullovers, and customer care training was introduced. A membership scheme was started, replacing the old season ticket, and professional retailing and catering began. Soon over five million promotional leaflets a year were flooding the country.

Kenilworth Castle, Warwickshire: Civil War event on 1 May 1993

Mud floors or no roof

Presentation on site changed as well. Unlike the National Trust houses, many of the properties had no roofs or, if they did, these covered unfurnished spaces or floors of beaten mud. Large exhibitions were succeeded by site graphics using reconstruction illustrations to explain the remains. These are still the mainstay of our presentation programmes, but have had to overcome formidable technical problems resulting from the effects of weathering, illicit air rifle target practice, or vandalism.

Hailes Abbey, Glos: visitor uses audio tour while studying interpretative panel

The traditional publications changed too. The blue HMSO handbooks had been famous for their academic rigour and reliability, but were too inaccessible for the casual enjoyment of a property on a day out. New colourful souvenir guides were produced for the more important properties in a much livelier format. The handbooks also changed, being redesigned, sometimes rewritten, and in colour where budgets allowed.

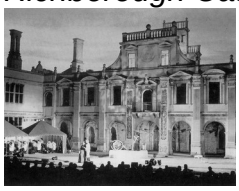
Graphics, printed matter, and exhibitions were supplemented by using costumed actors for historical interpretation. Early experiments in England had mixed success, but the growing network of historical re-enactment societies offered a better solution for the physical presentation of historical events. With the help of these dedicated amateurs, English Heritage was soon running the largest programme of special events in the country.

Along with these, a programme of concerts and recitals was inherited from the Greater London Council and expanded out of London to include opera at some smaller, regional properties. The sight of the heroine apparently throwing herself bodily 30 feet from the ramparts of Framlingham Castle brought a new realism to the final act of *Tosca.*

Technology and nature

New technologies have been used where they have been able to help visitor understanding. Portable audio guides have been enthusiastically taken up at many sites, and at Pendennis Castle in Falmouth large figures recreate the upper gun deck, with hidden technology providing the sounds and smells of the sixteenth century.

Richborough Castle, Kent: Roman invasion AD 43, re-enacted 1993



Kirby Hall, Northamptonshire: the Tosca concert on 14 August 1993

Words and pictures were not the only media of communication. Many small custodian's huts were swept away and replaced by shops where there were suitable roofed spaces. More sympathetic layout and conservation of the fabric has also helped, as has the better management of the natural landscape where large areas of grass at the site margins have been left to grow long or treated as meadow grass, producing a greater diversity of natural habitat and softer, more sympathetic lines. At some properties, the former parade-ground lawn has, in a wet spring, been replaced by a jungle of wildflowers.

After ten years, has it all been a success? The original remit given to English Heritage is being realised, as nearly a third of the population instantly think of English Heritage when asked to name a conservation body. Visitor numbers increased by 33% from 3,723,642 in 1986 to 4,954,521 in 1993, income between 1984 and 1993–4 rose over 486% from £2,055,000 to £12,050,000, membership stands at over 300,000 and manages a lively magazine, and the education programme, a leader in its field, attracts over 500,000 students each year. There are more English Heritage publications every year, and new gifts and souvenirs are introduced annually.

There is much still to do. Many properties still need basic information, and making our sites more accessible for the disabled remains a taxing priority, for special access arrangements raise difficult questions of authenticity. Involving the local community in the care and development of properties will also be essential in the future. But the main task for those within English Heritage who are involved in the presentation of our monuments to the public remains the achievement of the right balance between the conservation of the fabric and the interpretation of our sites to our growing numbers of visitors, while maintaining the ‘spirit of place’ which is the monuments themselves.

Reaching the children... through teaching the teachers

The English Heritage Education Service concentrates on informing teachers of the possibilities of the historic environment for teaching a wide range of subjects within the National Curriculum.

IN 1984 the English Heritage Education Service set itself the task of changing teachers’ attitudes and practice towards the historic environment. Through teachers, we expected to change the attitudes of pupils and students.

We inherited a service with one member of staff, virtually no support, and certainly no budget. However, teachers and their pupils did visit our sites, probably about 160,000 each year, though we were not able to offer much in the way of teaching resource material and certainly no on-site facilities.

Today we offer teachers 69 books, 40 videos, two computer programs, one audio tape, 18 posters, and two slide sets, as well as education centres at 20 of our sites. In 1993–4 we welcomed 507,767 pupils and teachers.

The service also has a national responsibility to comment on the teaching of the past and has been closely involved in monitoring, offering advice, and criticising the proposed syllabuses in the National Curriculum, especially in history and geography. It has worked closely with other organisations, the Council for British Archaeology in particular, to get prehistory into the National Curriculum history.

The National Curriculum

We believe making a visit to part of the historic environment is an essential part of education in a number of subjects. The official National Curriculum history stresses the importance of pupils being allowed opportunities to study the past from a range of historical sources including artefacts, buildings, and sites.

The educational free visit scheme for our sites helps introduce some of the monuments and buildings that are landmarks in England’s history. Much of our work since 1984 has been to provide site-specific publications and resources for schools that visit.

But we have always taken a broader view. In our termly journal for teachers we present case studies, ideas, and controversial views about the wider historic environment, for example post-war listing, rescue archaeology, conservation areas, and campaigns about replacement windows.

Targeting education

Because of limited staffing, a choice had to be made between spreading the message thinly to a wider public or making an effective impact on a much smaller section. We decided to target teachers, particularly of nine- to thirteen-year-olds, who traditionally make most trips out of school. Our aim is to offer advice and practical help in using the historic environment in their curriculum work.

Changing Places project: Bradninch County Primary School collecting information about old farms in their area

Publications and audiovisual material provide two efficient ways of doing this. Books such as *Using listed buildings, Geography and the historic environment*, and *Learning from objects* are just three of twelve books in a series called 'Education on site'. They aim to provide teachers with enough background information and suggestions for educational strategies to give them confidence to use the history on their doorsteps. The latest in the series, *Using school buildings*, means that they do not even need to leave the grounds. Future titles will look at conservation areas, industrial buildings, and World Heritage sites.

About 60% of our termly magazine for teachers, sent to almost every school in the country, is conservation led. As many articles as possible are by teachers who have tips and advice to pass on. Some 40 videos, which schools may borrow for up to two weeks without charge, look at types of building, such as church buildings in *Buildings and beliefs.*

Others help teachers to use the historic environment in meeting National Curriculum demands (eg *Doorstep discovery: working on a local history study)*. 'The archaeological detectives' series shows that investigating the evidence of the past can be both interesting and fun. The recent video, *History at home*, attempts to involve parents, and is presented by David Bellamy to give it popular appeal.

Archaeology and education

The fascination most children feel for archaeology has been capitalised on by bringing them to sites where excavations are in progress. Recently at Battle Abbey *(Conservation Bulletin* **21**, 12–13) a seconded teacher was brought in for six weeks to explain to teachers and pupils what the archaeologists were doing, and how a picture of the past was being pieced together. Pupils were given archaeological tasks on site and a booklet containing ideas for preparatory and follow-up work was given to teachers to make sure that the visits were treated seriously as part of curriculum work.

Similar exercises have been undertaken at Worth Matravers, Dorset, and at Raunds, Northants, where a seconded teacher funded by English Heritage helped establish courses for teachers and pupils using resources of the local archaeological unit and of the Sites and Monuments Record. This year seconded teachers will help schools to use excavations at Heybridge, at the new Gosbecks Archaeological Park, Colchester, and at Highcleere Castle, Hampshire; and the director of the Ancient Technology Centre in Cranborne, Dorset, will work on our behalf to develop an integrated approach to using ancient technology across the curriculum.

When possible, permanent teaching aids have been created. At Lincoln, a teacher was employed at Lawns Museum to create an interactive display on archaeological methods. Videos also play an important role in getting the archaeological message across. The work of school children in Roadford Valley, Devon, shown how to record as much as possible before flooding for a reservoir began, was filmed and is available to other schools to encourage them to study and record their own localities. Another series, called 'Archaeology at work', discusses archaeological methods and techniques. The first two films describe fieldwork and excavation. Further films on the archaeology of towns and on laboratory work are planned.

Working with others

We try to help organisations already receiving English Heritage assistance to achieve their full potential for educational work. The Fenland Archaeological Trust, for example, wanted

help to get information across to teachers and children. We made three videos for them, which we can use as an introduction to Bronze Age sites, one each for primary and secondary pupils, and one for teachers.
An on-going task is to encourage schools to recognise and use the potential of their immediate localities. When appropriate a high-profile campaign is mounted in a specific area.

Changing Places project: Summercourt County Primary pupils study a listed building
The emphasis is on setting up a system that will stand alone when a seconded teacher is no longer available. The focus is on ensuring the goodwill and enthusiasm of local education authority staff, on running teachers' courses, and on building up a legacy of printed material.
Specialist educationalists are sometimes used to run a project for us. In Canterbury, for example, a team called Arch Ed are working with a local primary school to study the development of a site adjacent to the school. This project may provide a template for similar work elsewhere in raising children's awareness of architecture and urban development issues.

In the news

Recently a joint project with the *Western Morning News* led to 20 schools across Devon and Cornwall researching and writing articles on local buildings or on conservation issues for a supplement, called *Changing Places*. A teacher was employed to guide the work and to provide practical help, and members of the South-west Conservation Team of English Heritage also gave their expertise. The supplement ran to a record-breaking 300,000 copies and was distributed in over 260,000 copies of local newspapers.
We have also worked closely with Accademia Italiana, who for the last two years have run competitions for innovative posters and videos on conservation themes. Our role has been to provide information on the issues involved, and guidelines on how to find out more. We will also soon join forces with the BBC to make two 30-minute programmes for schools on looking at the historic environment.

Another project is *a Heritage studies teaching pack*, for which the Department of Conservation Sciences at the University of Bournemouth has been commissioned. This is for tutors at sixth-form and further education colleges, to integrate teaching about the heritage and the issues involved, in recognised courses such as travel and tourism.
We believe that people need to discover that the historic environment belongs to everyone and that the past is an inheritance for future generations. Private or sectional interests must not be allowed to prevent general access to the historic environment nor must this irreplaceable environment be allowed to be destroyed. Our aim is, through education to create new generations of citizens who will better understand the value of the historic environment and continue to strive to care for it.

Mike Corbishley

Head of Education

Liz Hollinshead

Education Officer, Midlands

Archaeology at the edge...

An ever-changing coastline threatens England's coastal archaeological heritage. Now attempts are being made to plan future management.

THE HISTORY of Britain is inextricably linked to its island situation. Over many centuries the sea has played a major part in forging our national identity. Our coastline has been a threshold for settlers and a defence against invasion, our seas a route for goods and ideas and our coastal communities have a long tradition of trade, ship building, fishing and, most recently, recreation. So we have inherited a rich, complex and unique coastal archaeological heritage.

Our coastline has never been static and continues, even now, to evolve. At the end of the last ice age, some 10,000 years ago, sea levels were low and Britain was merely a peninsula on the western coast of the European landmass, joined to modern France, Belgium, Germany, and Denmark by a vast basin extending across much of what is now the North Sea. As the glaciers retreated, releasing their melt-waters, sea levels began a gradual rise, separating us from the continent by 6000 BC and inundating vast areas of low-lying land.

This process continues today, possibly accelerated by the effects of global warming and, in places, current sea levels are as much as 130m above their late-glacial counterparts.

Drowned landscapes

As a result, well preserved drowned prehistoric landscapes containing important evidence for early societies survive off our southern and eastern shores. Although largely inaccessible on the seabed, traces of this important heritage are often revealed along our coast in the zone between high and low water marks and occasionally as finds in the nets of fishermen.

Changes to the coastline are not only a one-way process, however. Released from the crushing weight of earlier glaciations, some parts of Britain, most notably the western coast of Scotland, have risen in relation to sea level, leaving former coastlines literally high and dry. More typical in England land reclamation schemes or centuries of estuarine silting push the coastline further seaward, so that, maritime artefacts such as the recently discovered Bronze Age boat in Dover can come to light some distance inland. Even more dramatically, whole coastal settlements such as the Cinque Ports of Romney and Rye are now stranded several miles from the sea.

St Martin's, Scilly Isles: prehistoric stone row now between high and low tide levels

Quarr Abbey, Isle of Wight: medieval tile kiln excavated before sea erosion

The material evidence of this historic legacy survive as an exceptionally wide range of archaeological remains. These include prehistoric features such as trackways and houses surviving in a better state of preservation than their terrestrial counterparts; industrial sites

such as salterns and quarries; defensive structures such as Martello towers, forts, and batteries; evidence for trade including harbour installations, wharves, and warehouses; historic sea defences and land reclamation works; evidence for shipbuilding in the form of slipways and ropeworks; and, of course, shipwrecks such as the celebrated Tudor warship, *Mary Rose.*

Dover Bronze Age boat under excavation

Submerged peat deposits and forests provide valuable evidence about the nature of earlier coastal environments. Apart from the intrinsic value of these remains and deposits, researchers predicting future sea-level rise are beginning to appreciate their importance as an index of historic environment and sea-level change, providing a crucial time-depth element to more recent data.

Continuous threat

This coastal heritage is under continual threat not only from natural processes, such as coastal erosion and marine incursion, but also, and perhaps principally, from human intervention, such as coastal and offshore development, flood defence works, marine aggregate and mineral extraction, water pollution, mechanised fishing, fish farming, and recreational activities.

While the threats are recognised, their severity and the overall rate of attrition of the coastal heritage remain unknown. In addition, because of the intensity and complexity of use of the coast and because of its scale (estimated length 8000km) management poses considerable problems.

In 1992, the government published its advice on planning and management in Planning Policy Guidance Note 20 (PPG20): *Coastal Planning*. This advocates an integrated approach to coastal zone land use with the multiplicity of its uses and resources taken into account. It also exhorts local authorities to produce management plans for their stretches of coastline. As a result of this and other initiatives, many authorities and government agencies are now beginning to consider this issue with great care and it is extremely important in this process that the coastal heritage is recognised as a material factor.

For some time English Heritage has recognised the importance, fragility, and vulnerability of coastal archaeological remains, particularly those in the inter-tidal zone, and has already sponsored survey work at locations including the Isles of Scilly, Northumberland, the Solent, and the Severn, Humber, and Blackwater estuaries. However, to provide a sound basis for future coastal management a national overview is necessary, so English Heritage, in collaboration with the Royal Commission on the Historical Monuments of England, has recently commissioned a rapid nationwide assessment of coastal archaeological issues from Reading and Southampton universities. The study will:

survey and consolidate recorded information from coastal areas and seek to characterise the nature of the archaeological resource

assess the nature and severity of threats to coastal archaeological remains

synthesise available evidence for historic sea-level change and assess implications of future change

examine the management frameworks for the coast and management initiatives established by other authorities and agencies

recommend future survey priorities and methods based on an assessment of importance and vulnerability
make recommendations on ways to integrate of heritage interests into coastal management plans
The study will be completed by the beginning of 1995 and its publication will serve to raise awareness of heritage interests among those responsible for managing our coasts and will be an important contribution to the assimilation of archaeological constraints and opportunities into coastal zone management plans.

Stephen Trow

Conservation Group, South

Increasing local conservation commitment... through partnership schemes

New schemes for partnerships and grant-giving to local authorities aim to clarify planning and give them more chance to be involved in conservation.

CONSERVATION Area Partnerships are a means of channelling resources from English Heritage and local authorities towards work that will preserve and enhance the conservation area concerned, mainly through schemes of building repair. These partnerships will in due course replace our current methods of funding in conservation areas, including ‘town schemes’.

Where partnership cash will go

The first 14 of English Heritage’s new Conservation Area Partnership schemes were launched in April this year, following wide consultation last summer. Several authorities volunteered last year to help us test the new arrangements, and a shortlist of projects was chosen to span the range of our traditional work in conservation areas, as well as to seek innovative schemes ready to begin. The list of schemes, with the English Heritage funding that has been promised for the first year of operation, is shown in the table below, and further details of the individual schemes are in the short appendix to this paper on pages 27 and 28.

Partnerships are a framework for concerted action by local authorities, aimed at conservation-led solutions to problems posed in some conservation areas by disrepair, dereliction, or the need for positive strategies for their preservation. We wish to encourage the authority to provide a means of identifying problems and opportunities for channelling resources from English Heritage and others to encourage the necessary remedial work, and for management and development controls to protect the overall character of the conservation area.

We propose that these partnerships should be a new and unified type of grant scheme, delegated as far as possible to the authorities themselves, and building on the strengths of our previous experience of grant programmes in conservation areas. Funding will be provided, where we have the resources, to agreed schemes of demonstrable quality, where there is a clear financial need for support.

Bacup, Lancs: the focus of a partnership scheme that follows on from a Civic Trust study on the regeneration of the town

Invitations to apply

Programmes of action, primarily repairs to buildings, should be based on analysis of the condition of the area. We expect strong local commitment to conservation and to the partnership scheme, with resources made available to it from ourselves and the local authority, and with the opportunity of attracting funding from other partners.

At the outset of a new scheme there is inevitably some uncertainty about the criteria or the approach to be adopted. We have written to all local authorities, describing the scheme and inviting them to consider applying to English Heritage for partnership in conservation areas that fit our criteria. We have asked for a brief but realistic appraisal of the quality of the conservation area concerned, the extent of repair it requires, whether this merits a scheme approach, and the financial need. We are looking for schemes that will take an overall view of the character and appearance of a conservation area, reinforced by the commitment of partner authorities to effective control measures.

The tight timescale needed to get 14 of these new schemes running by April 1994 was a real test of the robustness of the new arrangements, and there is no doubt much to be learned about our joint approach. A feature of the pilot exercise was the need to learn lessons for the future. Representatives from all the pilot authorities, as well as from the Local Authority Associations, were invited to a seminar in London in February 1994 at which we asked for feedback on the scheme itself, its implications for staff and other funding requirements, and the ease of complying with English Heritage's new requirements.

Newcastle City Council, Tyne and Wear	£325,000
Haltwhistle, Tynedale District Council	£100,000
Scarborough District Council, North Yorks	£35,500
Knaresborough, Harrogate District Council	£57,600
Bradford City Council	£130,000
Liverpool City Council	£372,000
Bacup & Rawtenstall, Rossendale BC, Lancs	£75,000
Lincoln City Council	£150,000
Wainfleet, E Lindsey District Council, Lincs	£76,000
Leamington Spa, Warwick DC	£45,000
Hove Borough Council, East Sussex	£200,000
Hastings Borough Council, East Suusex	£200,000
Wootton Bassett, North Wilts DC	£60,000
London Borough of Greenwich	£180,000
TOTAL	£2,006,100

The pilot schemes have been widely different in scope and application. They range from major inner city initiatives dealing with underuse or occupancy of major listed buildings in central Newcastle, to smaller scale, completely new initiatives, such as the scheme dealing with the small market town of Wainfleet St Mary in Lincolnshire.

English Heritage funds have been promised not only for the repair of buildings that make an important contribution to the conservation area, but also for the restoration of traditional features and, to a more limited extent, for encouraging environmental improvement.

Wide range of funds

The schemes have attracted funding from a wide range of partners, including the local or county authority budgets, City Challenge, and the Rural Development Commission, and have offered the prospect of links with other funding for the future, including English Partnerships and the Single Regeneration Budget.

We have been gratified by the enthusiasm and commitment shown by these pilot authorities in developing the processes of preliminary application, sifting, and action

planning, which had to be accomplished within the six months or so available at the end of the 1993–4 financial year.
It was not all plain sailing, however. For example, the proposal that there should be a lead authority – normally the local planning authority – to run the Partnership scheme forced a close examination in some areas of the service level agreement between the County conservation team and District authority staff in the running of the schemes. A model agreement now operating in North Yorkshire, whereby the County team provides the professional and technical support for the two Partnerships running in Knaresborough and Scarborough, may be of more widespread application.
Our intentions in setting up the new scheme have been to improve the thrust and direction of our funding in conservation areas into schemes where there is real need and where we can achieve measurable impact by helping with funding at the right levels. We will be looking carefully at how successfully the pilot schemes tackle these problems and at the levels of expenditure they achieve by following their action plans.
The level of resources we can provide is not likely to take a sudden upward turn, although we have increased the amounts significantly in the last two years. We also wish to make grants in conservation areas available to areas and authorities that have not necessarily come to us in the past, but are nevertheless clear candidates under our new criteria.
To do so, we may need to rethink our involvement in some areas where our grants have long been available. As ‘town schemes’ come up for review this will be an opportunity to consider whether they should be converted to the partnership approach.

Hove, Sussex: the Regency terraces are a prime target of the partnership

The challenge

The new scheme is as much a challenge for English Heritage as it is for the authorities who may be considering applying for a partnership. The starting of a new scheme is in keeping with parallel initiatives through Government Regional Offices and other organisations who are clearly thinking along similar lines. We hope that this provides an exciting opportunity to harness our resources to effective programmes of work that will help to repair and revitalise some of the country’s more significant conservation areas.

Stephen Johnson

Conservation Group, Regional Director, North

The first fourteen

Newcastle, Tyne and Wear

The scheme is based on the Grainger Town study, which revealed extensive decay in the fabric of central Newcastle. A conservation-based strategy has been formulated and adopted by the city. The focus of the scheme is on an area of Newcastle that was laid out between 1835 and 1842. It is an area of enormous character and quality, with a high proportion of listed buildings, which has more recently suffered from under-use, dereliction, and traffic nuisance. The proposed partnership aims to bring appropriate uses back into the upper floors above shop premises, as well as essential repairs to key buildings.
Viability studies have confirmed the need for grants at about 60%, and the action plan defines a programme of work that may require grants of about £325,000 from English Heritage for the first year of operation. The authority has promised £110,000, with a further

£485,000 of related local authority expenditure, mainly for property in the area owned by Newcastle City itself.

Haltwhistle, Northumberland

This scheme is based on the historic core of a recently designated conservation area focusing on the High Street and railway station. It proposes to tackle the town's 405 buildings in various degrees of risk under 'Buildings at Risk' criteria, and to make funding available for some associated enhancement work. An assessment of repair costs against the values of buildings at completion shows that grants of up to 70% may be required. A six-year programme is suggested, with an overall funding requirement of £1.87 million. Contributions for the first year, totalling £176,000, have been promised from the county and district authorities, the Rural Development Commission, EEC, and the Railway Heritage Trust for different aspects of the work. English Heritage will contribute £100,000 in the first year, primarily to the repair costs of buildings identified within the scheme.

Scarborough, N Yorks

The action plan for this scheme attempts to bring together a number of conservation initiatives into a coordinated strategy within a large conservation area centred on the heart of the area of medieval Scarborough. It combines a long-running town scheme, some individual grants to key buildings in the conservation area, and the 'features scheme', targeted on the repair of traditional doors and sash windows. The proposed grant rate is between 40% and 50%, to which English Heritage is contributing £35,500.

Partners – from Bradford to Brighton

Knaresborough, N Yorks

It is proposed that the existing town scheme in the centre of this small market town in the shadow of Harrogate should be converted into a more broadly based regeneration initiative. Some key buildings are identified as requiring repair, and there is a more general move to set the regeneration of the town on a more active footing. The plan also identifies necessary environmental improvements. Our funding is £57,600, and grants at 40–70% are proposed for problem buildings.

Bradford, West Yorks

The objective of this scheme is to concentrate action on tackling the long-term urban decay of the Victorian squares and terraces in the Manningham area of the city. Priorities have already been agreed as part of the existing agency agreement with the city. Further work needs to be done on methods for targeting resources where they can be most effective. English Heritage funding in the first year is £130,000.

Liverpool, Canning, Merseyside

A well structured and tightly drawn up programme has been agreed for dealing with the problem buildings remaining from the special scheme of the mid 1980s, accompanied by a number of environmental improvements, some of which are already under way. Overall funding for the programme, from all sources, including City Challenge, appears to be in the region of nearly £6.7 million over three years, of which English Heritage will contribute £1.53 million, mainly for 60% of grants for repairs to the remaining problem buildings. In the first year English Heritage has contributed £372,000.

Bacup and Rawtenstall, Lanes

Bacup's main economic base, cotton manufacture, has collapsed, leaving problems of building fabric decay and derelict land. Rawtenstall is similarly, though less, affected, but its problem buildings, particularly Ilex Mill, are more intractable and will be the key to the success of the scheme. The scheme identifies a need for 50% grants in Bacup for repair to buildings, and about 35% in Rawtenstall, where there is a greater need of enhancement. English Heritage is providing £75,000 per annum for three years, plus a tapering contribution to the project officer post.

Lincoln, Lincs

These proposals concentrate on the conservation-led regeneration of the upper town, but will also provide for assistance to properties in the High Street (south of the city centre). Grant rates of 40%–70% are proposed for most properties in need of repair, and £150,000 a year is being offered by English Heritage.

Haltwhistle, Northumberland: property near the Market Square will form an early focus for the proposed scheme

Wainfleet, Lincs

In this small market town the scheme addresses problems brought about by lack of commercial pressure, low property values, and incremental change, which is beginning to affect the character of the conservation area. It works with an economic regeneration programme to produce a viable approach, clearly stated targets, and a realistic funding package and timescale. Funding provided by English Heritage for the first year, including a contribution to the project officer required because of the location of the town, is £76,000.

Leamington, Warwicks

The action plan targets the restoration and enhancement of five areas, including some key buildings in Leamington, to enhance the conservation area, minimise the impact of detrimental features, promote a high standard of design, improve the environment, and encourage occupancy of underused buildings. It gives details of much of the work necessary, and defines the rates of grant (25%–60%, depending on area and type of work). English Heritage funding for the first year is £45,000.

Hove, East Sussex

This plan proposes concerted action on the repair of buildings and associated environmental improvements in central Hove over a three-year period, and addresses social and economic problems associated with a declining local economy and a population with a high proportion of elderly or unwaged. The scheme focuses on the preservation and restoration of the architectural unity of major building groups in the town, coupled with some restoration of architectural features, and recommends grants in the range 40%–75%. English Heritage is providing £200,000, matched by the local authority.

Hastings, East Sussex

The proposals focus on well-defined zones within the central conservation area. The old town has many historic buildings, some of which have medieval origins, and the scheme is intended to contribute to the regeneration of the town by combating the risk to important buildings of character caused by lack of investment, pockets of urban deprivation, and

relatively high unemployment levels. The action plan identifies an achievable programme of work targeted on important historic buildings, including some seriously at risk, coupled with some environmental enhancements. English Heritage will make up to £200,000 available for the first year of the scheme.

Wooton Bassett, Wilts

The action plan formulates a brief scheme to integrate necessary building repairs, currently grant-aided under the existing town scheme, with enhancement, traffic management arrangements, landscaping, shop front replacement, and the use of upper floors. English Heritage is providing £60,000 for the first year, focused mainly on the repair of buildings identified in the plan, with 40% grants for repairs and a maximum of 25% for enhancement work.

Greenwich, London

This scheme arises out of work done on the Greenwich Waterfront Development Partnership, which has analysed trends in the centre of Greenwich and identified a programme of regeneration for it. This can be achieved by securing repairs to the fabric of historic buildings, by renewing and repairing shop fronts, and by contributing to environmental improvements to front the spaces between the buildings, as part of an overall conservation strategy. Other work will be undertaken in conjunction with this approach, including traffic management, planning enforcement, and other local authority initiatives. A fabric audit is under way. The borough has a new, jointly funded English Heritage/Greenwich Conservation Officer post. English Heritage is providing £180,000 for the first year of the scheme.

Mars measures monuments at risk

Studies of the 1980s and early 1990s have emphasised the need for a comprehensive quantification of England's archaeological heritage; the MARS project aims to provide a database from which informed management can proceed with greater confidence.

ENGLAND'S archaeological resource is becoming increasingly well documented through the creation, curation, and enhancement of local sites and monuments records and the National Archaeological Record. Upwards of half a million sites and monuments have now been catalogued, and initiatives such as the Monuments Protection Programme have already gone a long way towards identifying and providing appropriate preservation measures for the most important examples.

But as archaeological resource management moves into a more mature phase, information about the dynamics of the resource itself and the way it is changing needs to be gathered together so that policies and approaches to conservation, curation, recording, analysis, research, and investigation can be developed against a background represented by the best possible current information. Yardsticks are also required for monitoring progress on current and future conservation and management initiatives and their long-term effect.

Filling a gap

A number of studies carried out over the last decade or so have underlined this need for quantified, nationwide information, particularly as archaeological considerations are an increasingly important aspect of such matters as environmental assessment, land-use planning, development control, and estate management. It is therefore crucial that information on the present condition of archaeological sites and impacts leading to this state is available for the extant resource.

The Monuments at Risk Survey (MARS) has been developed and tested to fill the present gap in knowledge. The overarching purpose is to provide up-to-date information on the general characteristics of the past and present states of the archaeological resource to inform debate about its future management and use. The project has been commissioned by English Heritage, in association with the Royal Commission on the Historical Monuments of England (RCHME), from the Conservation Sciences Department at Bournemouth University.

Monument at risk? Beech Pike barrow, Cowley, Gloucestershire

The aims of the MARS project are systematic quantification of England's archaeological resource

investigation into the implications of monument decay for different classes of monument (what information is preserved at different states of survival)

preparation of publications and presentational materials for a range of audiences

The systematic quantification of the archaeological resource should include:

the changing state of knowledge about the scale and nature of the archaeological resource, including levels of archaeological recording for single monuments, archaeologically defined landscapes, and historic urban areas

the scale and rate of physical impact on monuments since 1940 and the reasons and causes for this

the present condition and survival of the recorded archaeological resource and future projections of it

the effect of measures introduced to improve management of individual monuments, especially the role of site and area specific designations

Within these aims, MARS will be concerned with all archaeological monuments in England, whether scheduled or not, currently recorded in a national or local archaeological record. For analysis and study, such monuments will be divided into five main groups: small single monuments, large monuments, extensive monuments, linear monuments, and standing structures, and further subdivided by monument class. Historic buildings will be included where they have been incorporated on existing records, although inhabited domestic dwellings constructed after 1700 will be omitted.

Approaches and methodology

There are estimated to be about 600,000 sites and monuments in England. For the MARS programme a national sampling strategy has been developed in a pilot study in Wiltshire. Using this strategy, all monuments within approximately 1300 1km by 5km sample units will be studied in detail, giving a 5% sample of the land area of England. The individual sample units have been selected as a gridded random sample to allow the statistical comparison of data relating to key variables.

Data collection and analysis will proceed along three main lines of enquiry. First, the accumulated records in the National Archaeological Record and the local Sites and Monuments Records (SMRs) will be examined and the records relating to the sample units identified. All the recorded monuments in the sample units will be visited and key variables assessed to give a picture of the state of the resource at a single point in time (ie *c* 1995). Fifteen field staff in three regions (north, midlands, and south) will carry out this work. Second, using new interpretative skills, three specialists will examine aerial photographs, early descriptive accounts, and previous field survey records relating to the monuments identified within the sample units. They will assess the key variables as these can be determined for each of the five decades from the 1940s to the 1980s.

Third, six researchers, mainly based at Bournemouth University, will assemble general national statistics on the nature and extent of the recorded resource and study a series of detailed cases. These studies will examine the dynamics of the archaeological resource in a range of distinctive landscapes and urban areas, and in respect of a representative selection of monument classes.

Twenty-six key variables will be recorded for each monument, ranging from monument form and class to survival and decay. In a few cases it has been necessary to develop new ways of quantifying observable traits. The resulting database will be used as the basis for a wide-ranging series of analyses at national, regional, and sub-regional level before being copied back to the relevant local SMR. The aim is to develop a general understanding of the dynamics of the resource, not to identify particular monuments that are or might be at risk.

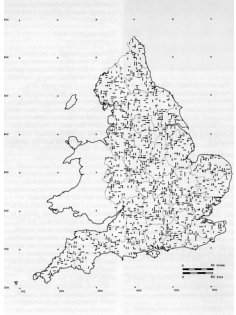
Level field for archaeology

A project of the scale and importance of MARS cannot stand in isolation. Related studies of land use, landscape, and countryside change include: *Landscape changes in Britain* (C J Barr and others); *Monitoring landscape change* (Central Government, 1986); *Land use change in England* (Statistical Bulletin no 7 (92)4, DoE, 1992); *Changes in land use in England* (no 6 (92)3, DoE, 1992); *Changes in land use in England in 1985 and 1986* (DoE, 1992); *Countryside survey 1990: main report* (C J Barr and others, Department of Environment, 1993); *Strategy for the 1990s: Natural Areas, setting nature conservation objectives. A consultation paper* (English Nature, 1993); and *New Map of England* (Countryside Commission, in progress).

The MARS database will ensure that archaeological interests can be judged at the same level as other countryside and urban interests. It will provide a base line for future periodic studies.

MARS is also complementary to the Monuments Protection Programme (MPP). In the short term, results from MARS will assist in targeting the resources of MPP towards those monuments and landscapes most at risk. Work on the MPP will provide data for monument classes and scheduled sites already covered by the long-term survey programme.

The aim of MARS is to provide nationwide information about the state of England's archaeological heritage, both recorded and extant, so that archaeological resource management can be better informed. The opportunities to use such information at strategic and operational levels are considerable, but at this stage can only be glimpsed. In archaeology it will provide support for positive approaches to the protection and management of archaeological remains and the baseline data to endorse professional convictions about the merits of specific judgements. In environmental conservation the project will help identify those areas where cooperation and the integration of policy initiatives can be most fruitful and of greatest benefit to the resource and to society.



The MARS project: map of randomly selected sample units

Geoffrey Wainwright

Chief Archaeologist

Timothy Darvill

Professor of Archaeology, University of Bournemouth

The year’s grants: who benefitted?

A roundup of repair grants offered by English Heritage in 1993–4.

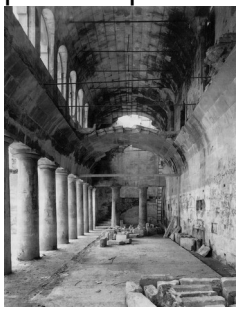
DURING the last financial year, we offered repair grants totalling around £14.1m to secular buildings and monuments, and gardens, £12.45m to churches, £4.5m to cathedrals, and £6.07m to buildings in conservation areas, over and above the allocation of £5m to town schemes. This is 35% more than in 1992–3 to secular buildings, 11% to churches, and 32% to conservation areas outside town schemes. As in previous years, we allocated a proportion of our offer budgets to make large grants: grants of £100,000 or more were made to 32 secular buildings, nine churches, and six buildings in conservation areas.

Stately homes... a school... a castle... a farmhouse...

All applications received within the twelve months from October 1992 to the end of September 1993 were determined within the 1993–4 financial year. Within this period, we received 430 applications and we reached a decision on 345 (80%) within the six-month target date set as a performance standard. In the event, we offered 406 new grants to historic properties in 1993–4, totalling some £13.1m, and 105 increases (about £900,000) on existing grant offers made in previous years.

A substantial proportion of the larger grants this year has gone to historic houses in private ownership or in institutional use: these include grants to Prior Park Gymnasium, Bath (£275,000), to Stowe School, Bucks (a total of £367,491 to the house and Leoni arches), to Cullacott Farmhouse, Werrington, Cornwall (£276,126), to Dartington Hall, Devon (£135,196), to Alder House, Allerton, Lancs (£136,000), to Lancin Farmhouse, Wambrook, Somerset (£130,566), to Harewood House, West Yorkshire (£211,000), and to Headstone Manor, Harrow (£212,500).

Grants were made to the National Trust for repairs at Cliveden, Bucks (£274,000), Hardwick Hall, Derbyshire (£341,000), the garden buildings at Stowe, Bucks (£188,000), and Ightham Mote, Kent (£130,000), as well as to Christchurch Borough Council (first phase repairs to Highcliffe Castle, Dorset £200,000).



The Gymnasium, Prior Park, Bath; a grant of £275,000

...churches... a chapel... a railway station...

At St Pancras Chambers, LB Camden, a total of £246,476 has been offered to help replace missing architectural details and conservation of wall paintings. Other major commitments include £1m to St Ann’s Crescent, Buxton and £698,500 for the remaining repairs to Acton Court, Avon, and associated garden structures.

Although we carried forward into 1993–4 commitments to offer grants to churches totalling around £4.5m that could not be offered in the previous financial year, we were able during the year to offer grants to all those churches that satisfied our criteria, and that were ready

to go ahead. As last year, we have ‘stockpiled’ a number of forward commitments of grant for 1994–5 totalling £2.3m, primarily to churches that required a few months before taking up our grant and matching it to their share of the costs.
We received 525 applications for church grants from October 1992 to September 1993, deciding on 420 of these (80%) within the six-month performance standard. During the year, we offered 444 new grants to churches, totalling just over £10m, and 229 increased grants on existing offers, totalling a further £2m.
The biggest church grant offered this year was to the Roman Catholic Church of St Walburge’s, Preston, a major grade I listed building of the 1850s, which needed comprehensive repairs to its roof and which received grant totalling £400,000. Other grants over £100,000 were made to the Round Chapel, Hackney (£156,394), to St Mary Magdalene, Southwark (£155,100), to St John with All Saints, Lambeth (£151,363), to St John the Baptist, Hatherleigh, Devon (£150,000), to All Saints’ Church, Hereford (£131,013), to St Mary the Virgin, Berkeley, Glos (£122,405), to St Mary the Virgin, Steeple Bumpstead, Essex (£120,773), and to St Mary the Virgin, Bishop’s Nympton, Devon (£108,533).
Much of our funding for work in conservation areas is carried out by means of joint schemes, run in conjunction with local authorities to target grants towards specific areas under the ‘town scheme’ programme. In this year’s review of 102 of the town schemes we recommended the renewal of 89 and the termination of 13. An invitation has now been sent to all local authorities to consider applying to English Heritage for Conservation Area Partnerships (see page 26), which are intended to take the place of town schemes during the next three years.
For conservation area grants outside the ‘town scheme’ programmes there were 479 applications to be decided on during the 1993–4 financial year; 66% were determined within the three-month target. We offered 389 conservation area grants in 19934, with 118 increases on offers in previous years. Among the largest were £201,400 for repair of the quayside area at Berwick-upon-Tweed, in conjunction with DoE, Northumberland County, and Berwick Borough Councils, and £120,000 for the derelict station at Hellifield, North Yorkshire.

Stately station canopies: Hellifield Station, North Yorkshire; £120,000 *for repairs*

...the arsenal... a terrace... an ancient barn

The London grants scheme is now targeted specifically at grade II buildings or structures at risk outside conservation areas. We were due to determine 83 applications in 1993–4, and reached a decision on 71 within the three-month target date set as our performance standard. There were 37 offers of grant aid, totalling about £539,000, and 21 increases, totalling about £54,000, were made in 1993–4. The grants are normally quite modest, though £100,000 was offered towards the repair of the former Woolwich Arsenal Gatehouse, £50,000 for the repair of eight early nineteenth-century terraced houses in Myrdle Street, Tower Hamlets, and about £30,000 for the repair of a timber-framed barn at Headstone Manor, Harrow.

Stephen Johnson

Conservation Group, Regional Director, North

Grade I Buildings at Risk Survey

AS ONE of the new initiatives funded as a result of savings within English Heritage in 1993–4, we commissioned a rapid national buildings at risk survey of all grade I listed buildings. This was undertaken during the early months of 1994. The initial findings of the survey are currently being verified, in consultation with the appropriate local authorities, to ensure that all the grade I buildings at risk have been correctly identified and that their condition is accurately reflected.

The main purpose of the survey is expected to establish a picture of the general condition of England's very best buildings, using the same criteria employed in the original Buildings at Risk survey. It provides us for the first time with a much wider, and reasonably reliable, assessment of the number and character of grade I buildings as a whole and of their locations. We are currently considering how this information might be most effectively published.

The intention of the survey is to ensure that not only are we aware of any grade I buildings at risk, but that where necessary we are initiating action to secure their preservation. Of course in many cases we have long been involved with the buildings identified by the survey and are already involved in detailed negotiations and discussions to find solutions to facilitate their repair.

Sally Embree

Conservation Group, Buildings at Risk

English Heritage props up a few bars

PUBS are one of England's favourite institutions. The pub's popularity depends on the successful combination of a lively social mix, good management, good-quality drink and entertainment, and the shape and texture of the building itself.

In a new leaflet, *Pubs, understanding listing**, English Heritage outlines the history of the public house in England and provides a set of guidelines for the selection of pubs for listing. The aim is to involve local authorities and interested groups and individuals in selecting the best examples in their areas.

The leaflet was launched by English Heritage's Chief Executive, Jennifer Page, at the Campaign for Real Ale (CAMRA) annual conference in Scarborough on 23 April 1994. It was prepared by English Heritage, from a draft by Mark Girouard, with help from Alan Crawford, CAMRA supporters, and The Brewers' and Licensed Retailers' Association.

Although English pubs are traditionally varied, there has been a recent trend towards standardisation. Tastes and fashions have changed rapidly between the 1960s and 1990s, and other changes have been imposed by regulations. The listing of a pub is not, however, meant to inhibit or prohibit change. The main reason for listing is to ensure that the architectural and historical interest of a building is taken into consideration when proposals are made to alter or demolish it.

Many hundreds of pubs are listed either because they are very old buildings in their own right or because they have outstanding architectural features that play an important role in their townscape. But because few pubs have been listed for their importance as pubs *per se*, many interiors with significant features have not been specified in the list descriptions, and many pubs that illustrate an important aspect of English history remain unprotected.

The leaflet describes the public house's development from the nineteenth century, including distinctions that make the pub different from the earlier alehouse and tavern, and discusses architectural plans and details such as the use of joinery, glass, tiles and mosaics, plaster, and metalwork.
Guidelines for listing include such features as elaborate external lettering or a full set of exterior wrought-iron lamps, datable interior fittings, 'boxes' (very small bars, now almost all gone), 'snob screens' (now rare; closeable, swivelling glass panels for privacy), an original billiard saloon or music room, or outbuildings and features such as a pleasure garden or bowling green, stables, a small-scale brewery, or maltings.

David M Jones

Publications Branch

*Available from Sylvia Archer, English Heritage, Room 237, 23 Savile Row, London W1X 1AB; telephone 071 973 302

Notes

Oversight

The editors would like to apologise for failing to acknowledge the photographer of the three splendid aerial views of the Metropolitan Cathedral, Liverpool in 'Cathedral grants', *Conservation Bulletin*, **22**, 1–2 and 27. The photographer is Brian Granger, proprietor of Van Rhijn Aerial Photography, Penley, Wrexham, Clwyd (0948 74210).

Cripplegate Roman barracks

In 1995 Museum of London archaeologists will also excavate the site of the Shelley House office building, City of London. A principal goal will be to search for remains of the Roman legionary barracks of Cripplegate. The explorations are part of a £20m scheme for demolition and redevelopment to be overseen by Gardiner & Theobald for The Royal London Mutual Assurance Society. Further information from Olivia Wheaton, Gardiner & Theobald (071 637 2468) or Patrick Gulley, Communications in Business (071 924 4043).

Heart of Roman London

Chief Archaeologist Dr Geoffrey Wainwright will direct 44 weeks of excavations at No 1 Poultry near Mansion House, London. Archaeologists from the Museum of London expect to find remains of medieval and Roman London to a depth of as much as seven metres. As well as a wealth of small finds they should uncover substantial remains of civic buildings, probably with mosaic floors. After meetings with English Heritage Chairman, Jocelyn Stevens, Lord Palumbo and the developers, Altstadbau, have agreed to fund the excavations at a cost of £2m. The artefacts will go to the Museum of London.

Heritage Grant Fund 19956

The Department of National Heritage seeks applications from voluntary organisations (ie those whose activities are carried out other than for profit) whose work relates to the DNH's objectives for the historic environment including buildings, gardens, and industrial and underwater archaeology. The DNH is particularly interested in projects directed towards encouraging good maintenance and repair, identifying, recording, and assisting neglected aspects of the historic environment, promoting understanding and enjoyment, looking at issues surrounding access, and promoting high standards in conservation practice. Projects should be of more than local importance.

Preference will be given to projects that demonstrate active use of volunteers and provide matching non-public sector support. Closing date for 1995–6 applications: 9 September 1994. Further information and application forms from Graham Bond, DNH, 3rd Floor, 2–4 Cockspur Street, London SW1Y 5DH; telephone 071 211 6367/8.

Award

The 1993 Medal of Honour of Europa Nostra and the International Castles Institute was awarded to HRH The Prince of Wales at a ceremony in Prague Castle on June 4. The award was approved at the General Assembly in Strasbourg in April 'in recognition of his outstanding achievement in the relentless promotion of good architecture, and for the good example set on his own estates, to persuade others of the practical ways to achieve a sustainable environment.'

New journals

Archaeological Prospection (John Wiley & Sons, Ltd) is dedicated to the practice and interpretation of scientific techniques applied to archaeological sites. International in scope, it includes all types of site (eg urban, rural, marine) and their underlying geology. Two issues will appear in 1994; thereafter it will be quarterly. For further information contact Nicky Slade, John Wiley & Sons, Ltd, Baffins Lane, Chichester P019 1UD; telephone 0243 779777; fax 0243 775878.

International Journal of Heritage Studies (Volume 1, number 1, spring 1994, University of Plymouth Press) covers 'the entire heritage field: from the natural heritage of land and species, to the cultural heritage of human artefacts, whether conserved on site or in museum collections.' The intended scope is to explore the common ground, from a multiplicity of disciplines, within conservation, presentation, and interpretation. For further details contact Dr Peter Howard, Editor, *International Journal of Heritage Studies*, ' University of Plymouth, Earl Richards Road North, Exeter EX2 6AS; telephone 0392 475101; fax 0392 475012.

Journal of Architectural Conservation (Donhead Publishing), an international, refereed publication, will begin in 1995. Academics and practitioners involved with historic buildings and their settings are invited to submit papers for early issues. For further information contact Jill Pearce, Donhead Publishing, 28 Southdean Gardens, Wimbledon, London SW19 6NU; telephone 081 789 0138; fax 081 789 9114.

International restoration, 1994

'Restoration 94', the international trade fair for the restoration and conservation of the cultural heritage, is being organised by Amsterdam RAI. Exhibition days will be Wednesday–Friday 12–14 October 1994. The exhibition programme includes products, materials, techniques, services, and information on the restoration and conservation of works of art, books, archives, furniture, carpets, tapestries, textiles, interior parts and ornaments, buildings, gardens, landscapes etc.

In conjunction with the trade fair there will be a conference entitled 'Risk-preparedness and the cultural heritage', to be held on 13–14 October. The conference will be held under the auspices of UNESCO, the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM), the International Council of Monuments and Sites (ICOMOS), and the International Council of Museums (ICOM).

The programme of the conference will concentrate on the establishment of a worldwide plan for combating disasters that threaten the cultural heritage. To this end attention will be focused on fundraising, training, and information systems.

For further information on these and other aspects of the conference contact Amsterdam RAI, PO Box 77777, NL–1070 MS, Amsterdam; telephone: 31 020 549 1212; fax 31 020 646 4469.

Other conferences

‘Churches: keeping in focus’ (Saturday, 15 October 1994) will be a one-day conference in Leicester organised by the Association of Conservation Officers East Midlands Branch. Speakers and discussion will address legal changes affecting churches, the opportunities presented by the most prominent building types, and solutions to the problems posed by church buildings. For further information telephone Richard Hobson, Hinckly and Bosworth Borough Council (0455 238141) or Michael Taylor, Leicester City Council (0533 527296).
ICOMOS UK Wood Committee will be holding a conference entitled ‘Joinery’ (Monday, 3 October 1994) at The Building of Bath Museum. Papers will include: ‘The carpenter’s square’, ‘A demarcation dispute: carpenters and joiners’, ‘The 18th century joiner in America’, ‘Casing-up: stiles, rails, and panels’, ‘Vernacular joinery in the Lake District’, and ‘The sash window and the development of specialist tools’. For further information contact ICOMOS UK, 10 Barley Mow Passage, Chiswick, London W4 4PH; telephone 081 994 6477; 081 747 8464.
‘Landscape conservation: conference on the cultural environment’ will be held at the University of Edinburgh on 21–3 September 1994. Intended for environmental consultants, landscape architects, surveyors, architects, planners, archaeologists, garden historians, and conservationists, papers will examine problems and conflicts encountered in practice throughout Europe, the role of law, and how members of each profession may best cooperate with and exploit the expertise of others. The goal is to promote understanding of the need to protect the historic, cultural, and artistic features of the landscape in the context of other environmental concerns. For further information and bookings contact Landscape Conservation Studio Limited, 10 Raeburn Street, Edinburgh EH4 1HY; telephone and fax 031 332 7410.
‘Making the point: pointing brick and stonework’ (13 September 1994) is the first of a series of one-day conferences on the theme of ‘Conservation in depth’ to be held at The Scientific Societies Lecture Theatre, 23 Savile Row, London W1. Papers will address conservation problems associated with the pointing of stone and brickwork. To book contact Dr Steven Parissien, English Heritage, Room 528, 429 Oxford Street, London W1R 2HD; telephone 071 973 3673. Further conferences will be ‘Going to blazes: fire control and prevention’ (20–21 October 1994), ‘Through the roof: underside roof corrosion’ (12 December 1994), ‘Timber decay’ (16 February 1995), ‘Cleaning old buildings’ (23 March 1995).

EH Masterclasses

EH masterclasses in practical building conservation have been scheduled through to the end of 1994. They are held at the Fort Brockhurst Training Centre in Gosport, Hants. For further details contact Sebastian Bulmer at English Heritage, 429 Oxford Street, London W1R 2HD; telephone 071 973 3821: **Sept 19–23** Dressed stone treatments, 27 Recording ancient monuments, 28–30 Non-destructive diagnostics in buildings; **Oct 3–4** Mortars, **5–7** The management of flora and fauna, **11** Ancient monuments as teaching aids, **17–21** The construction and repair of timber in historic buildings and structures (pt 1), **25** Structural engineering and ancient monuments; **Oct 31–Nov 4** Masonry – introductory and basic skills; **Nov 7–11** Stone: its nature, use, and repair in the conservation of historic buildings, **10** Ancient monuments legislation and practice, 15 Ground-based remote sensing for archaeometry; **Nov 28–Dec 2** Dressed stone treatment; **Dec 6** Safety on ruined sites.

Courses

Two short courses on the Management and Conservation of Historic Buildings and Landscapes will be run by the Centre of East Anglian Studies and the Short Course Development Office of the University of East Anglia, Norwich: ‘Pattern of local identity’

(University of East Anglia, Thursday 29 September 1994) and ‘The historic townscape – conservation and development’ (St Edmundsbury Cathedral Conference Centre, Bury St Edmunds, Suffolk, Tuesday 18 October 1994). Further details from UEA Short Course Development Office, telephone 0603 593016.

Heritage, education, and archaeology

British Council International Seminar no 9492 will be held in Southampton, 12–19 October. The theme of the conference will be to examine how the past is reconstructed from a diverse range of records, mediated through international, national, and regional presentation, and finally incorporated into formal and informal education. For further information contact the Marketing Manager, International Seminar Department, The British Council, 10 Spring Gardens, London SW1A 2BN; telephone 071 389 4264/4252/4226.

Reviews

Beresford Pite, Architect

The Golden City: essays on the architecture and imagination of Beresford Pite, edited by Brian Hanson, 1993, published by The Prince Of Wales Institute of Architecture, price £14.95

Without being familiar with the name of the architect Arthur Beresford Pite (1861–1934), many Londoners and visitors to London must have wondered about certain buildings in the capital. Who could have designed that gigantic stone-faced building near Euston Station, with the strange fan-shaped tops to the gate piers, the unfamiliar capitals on the columns, and the bizarre, rather scary ironwork? Who has not been puzzled when travelling along the dreary length of Brixton Road by the sudden appearance of Byzantium in the form of a domed church with stunning ornamental brickwork? And what are Michelangelo’s figures of Dawn and Dusk doing on top of a mass of stonework on a brick terraced house in Mortimer Street, off Regent Street?

These are all buildings erected to the designs of Beresford Pite: the London, Edinburgh and Glasgow Assurance offices (1906–08); Christ Church, Brixton (1896–1902) and 82 Mortimer Street (1893). Together they illustrate the sheer diversity, originality, and scholarliness of their author. This originality excited H S Goodhart-Rendel, who lectured and wrote on Pite in 1935, but despite the high survival rate of the buildings, the drawings in the Royal Institute of British Architects (RIBA), and the Pite Papers in the British Architectural Library, there has been no published monograph on Pite. Brian Hanson, Director of the Prince of Wales Institute of Architecture wrote an article on Pite in the Architects Journal in 1991 (May). He has since consolidated his interest by mounting an exhibition at the RIBA Heinz Gallery in 1993 and by commissioning a number of architectural writers and historians with specialist interests each to investigate a particular aspect of Pite’s work. The result is a volume of essays published to accompany the exhibition.

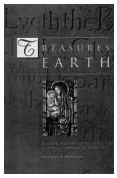
If we take the three buildings already referred to as subjects for inquiry, we find some of the answers to our initial questions. David Watkin, an academic with an interest in early nineteenth-century Greek Revival tells us that the ‘strange capitals’ are based on the order of the columns from the Bassae Temple in Greece, excavated and drawn by Professor C R Cockerell whom Pite deeply admired. Robert Thorne, an historian with a particular interest in the history of construction, focusses on the way in which the elevation of the

Euston building ‘is married to the use of classical masonary methods, of load bearing stone and brick with minimal reliance on ferrous cramps’. Pite was not himself an expert in the use of reinforced concrete, (what he referred to as ‘wire and stickjaw’), and Thorne discusses the contrast in structural techniques with the later extension to the building by Gunton and Gunton between 1931–33 with a stone-clad steel-frame building.
Maria Georgiou, with her interest in sculpture, suggests that the Michelangelesque figures above the window at Mortimer Street were inspired not only by the Renaissance giant on whom Pite was himself a considerable authority, but also by the work of the sculptor Alfred Stevens, who employed similar figures either side of a chimneypiece in Dorchester House in 1873. On the choice of Byzantine style at Christ Church, Brixton Road, the crude answer is that Pite had recently returned from his first visit to Jerusalem, the Holy City, during which a love of early Christian architecture had developed. This love was nurtured by a wider Byzantine revival in England from the 1870s, which culminated in Bentley’s design for Westminster Cathedral at the turn of the century.
These are a small selection of answers to the simple questions about Pite’s buildings; the essays go on to explore more complex and interesting ones such as Pite’s place in the history of recent architecture. This is clearly no easy task for someone whose buildings and drawings were unique, but Gavin Stamp rises brilliantly to the challenge in an essay that unravels the influences on Pite (Street and Burges), where he was at odds with his contemporaries, and how much he was actually in tune with the High Victorian Gothic Tradition. Brian Hanson explores Pite’s understanding of and aspirations for the city in an ethereal, symbolic sense; Elain Harwood, by contrast, analyses the nuts and bolts of Pite’s urban buildings on the Howard De Walden Estate in Marylebone. Mark Crinson writes about the foreign projects in Jerusalem, Kampala, and Uganda; Jill Lever explains the inspiration behind and the techniques of Pite’s extraordinary drawings; and Alan Powers assesses Pite’s career as an architectural teacher from 1900–1933.
All Pite is here. Hanson’s first-rate collection of essays meets in one place the need for information on Pite, and the format obviates the boredom factor of a purely chronological narrative (although a brief outline of Pite’s career and a list of works in the book would be helpful for quick reference). The combination of enthusiasm, erudition, and elegance of style in the writing is a joy to read. The photographs are clear, well-reproduced, and sensibly interspersed with the text. The thematic approach of the book satisfyingly mirrors the originality and versatility of the subject.

Susie Barson

Churches: inside and out

Treasures on earth, a good housekeeping guide to churches and their contents, edited by Peter Burman, 1994, published by Donhead Publishing Ltd, price £30



The conservation of church contents presents unique problems. Unlike museum objects or historic house furnishings the contents of churches are part of a living entity; they cannot be isolated from the world and their environment. The contents of churches may form part of the fabric and interact with the structure, or they may be used in church liturgy.
To avoid turning churches into museums or removing fixtures from their historic locations Peter Burman has brought together 16 specialist contributors to address these constraints, describe the nature of the features and factors that may have caused deterioration, in some cases the means by which features may be conserved, and how it should be cared for in the future. The contributions, on the whole, provide a comprehensive coverage, but

are inconsistent. For example the chapter on heating and ventilation gives no mention of the need for environmental monitoring to determine the performance of the heating system, but it is raised as an issue in the chapter on mural paintings.

The title is inaccurate. Although several contributors point out a direct relationship between the building and its contents there is little reference to the buildings themselves. The chapters are concerned with the conservation of contents.

Colin Bemrose discusses heating and ventilating, explaining briefly the relationship between heating and the preservation of the fabric and the effects of ventilation and humidity. Sensible advice is given on system selection and the complexity of church heating and the importance of using a suitable consultant are stressed. Bemrose describes the range of heating systems available and comments on the aesthetics of heating, but is generally uncritical. For example tariffs for off-peak heating are mentioned but the peaks and troughs associated with this system are not; freestanding gas heaters are also mentioned but there is no warning that in use they release considerable volumes of water vapour.

Painted ceilings and screens are described by Anna Hulbert, paintings on canvas and wood by Pauline Plummer, and murals by Donald Smith. Each describes the nature of such paintings and explains how they deteriorate. This information is comprehensive but somewhat repetitive. However, key information not repeated includes how blocked gutters cause deterioration of plasterwork and wood, the relationship between damp and biological deterioration, and the risk to ceilings from excessive heating. Hulbert also makes the salutary point that museum standards may not apply in churches; many wooden items in churches survive happily in humidities that would be considered impossibly high in a museum, an important point when a church treasure is loaned to a museum exhibition.

Advice on care and conservation is variable. Hulbert limits her advice to discussing the outcomes that might be expected of conservation, how to find a conservator, and what the conservator might require. Plummer advises church dressers not to fix their flowers, which they may spray to keep them fresh, to paintings and reminds us that painted fixtures should be carefully protected during building work. Smith explains that a balance must be sought between the requirement of a safe environment for the painting and the need for an acceptable regime for worship. He notes the need for long-term monitoring of the environment to obtain a good understanding of conditions.

Michael Eastham discusses stone sculpture, giving fairly detailed information about the conservation and repair of stone monuments, but no advice on the day-to-day care of stone monuments. It might have been useful to refer the reader to the later chapter on woodwork, where wooden sculpture is discussed.

Hazel Newey gives sound advice on the care of metalwork; in this chapter the reader is advised that repairs to historically important metalwork should only be undertaken by experienced conservators and detailed advice is given only on storage and care. The care of bells and bellframes is another area where preservation and use conflict. The increasing enthusiasm for change ringing puts early bellframes under great stress and English Heritage is criticised for insisting on the retention of what are described as frames of second and third rate interest and quality while first class ones are being lost. Disappointment is expressed that we are not taking the lead in organising a national survey of frames, although a decision on this awaits the outcome of a pilot survey undertaken by the Ancient Monuments Society and the Society for the Protection of Ancient Buildings in Essex.

Jane Fawcett tackles what is probably the most difficult area, that of church floors. She observes that until recently no-one has thought them worthy of serious consideration and that methods for recording or conserving them have not been developed. Work on floor conservation is being done as part of a major project in Winchester Cathedral, including a detailed recording programme, funded by English Heritage through the Cathedral Grants

programme. Historic Properties Group has also commissioned a photogrammetric survey of the Westminster Chapter House and is undertaking research on floor wear. Fawcett notes the dangers arising from the covering of vulnerable surfaces with carpets, in this case for brasses, but equally applicable to other materials, and that the importance of keeping them clean may seem obvious but is not always recognised.

Keith Barley's chapter on stained glass goes into further detail on conservation than do the other sections. These are methods that might be suggested and carried out by skilled conservators. Textiles and their care are discussed by Elizabeth Ingra, books and manuscripts by David Dorning, and organs by William Drake. A chapter on lighting covers various systems for making the most of the church and mentions briefly the risks to light sensitive materials.

In a final chapter, Peter Burman draws conclusions and gives sources of advice. The book, he says, has two main objectives. One is to direct enquirers who wish to know how best to look after their church towards a more fruitful and skilful course of action; the second is to provide a measure of encouragement, There are many valuable nuggets of sensible advice that will help parochial church council, churchwardens, and volunteers. Much technical information is aimed at the more technically qualified reader.

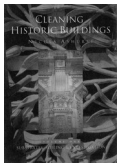
There are surprising omissions. English Heritage is identified as one organisation that must be consulted when demolition is proposed. Churches are urged to regard English Heritage officers as potential allies and to seek their advice on conservators, but nowhere is it stated that English Heritage is the principal source of funds for conservation of church buildings and their contents. Various bodies are suggested as providers of information about conservators, including the register of the Scottish Conservation Bureau, but the Conservation Register at the Museums and Galleries Commission's Conservation Unit, the foremost source of information for conservators in England and Wales, is not mentioned; nor is the United Kingdom Institute for Conservation.

Most parishes cherish their church and achieve great feats of fund raising to ensure its preservation. Will they be encouraged by this book? Like the curate's egg they will find some that is useful and some that is not. They will be reminded that the church is multifaceted, and especially that some of the contents taken for granted are of great artistic and historical interest and an essential part of the history of their community.

Mike Corfield

Squeaky clean

Cleaning historic buildings, vols I *&* II, by Nicola Ashurst, 1994, published by Donhead Publishing, price £32/volume or 358/set



There can be no more problematic area in building conservation than the cleaning of stone, brick, and terracotta. The average so-called specifications of the majority of architectural and surveying practices contain less than a page of technical requirements, hedged around with vague references to an unread and little understood British Standard. The majority of the responsibilities are firmly passed to the main contractor and his pet subs.

Into this sad state of affairs springs Nicola Ashurst with a constructive, well presented, and comprehensive two-volume set of guidelines. Jill Pearce of Donhead Publishing is to be congratulated once again for facilitating a timely and attractive pair of volumes.

Ms Ashurst runs a consultancy in Nottingham that specialises in giving expert advice on cleaning and other conservation treatments. Her long experience of troubleshooting when

at English Heritage shows in the precise nature of much of the books' advice and in the completeness of the references and bibliography. Volume one, subtitled *Substrates, soiling and investigation*, tackles much of the background needed by specifiers before they pursue a cleaning technique. Although the subtitle is logical, the discussion in the second chapter, 'Understanding surfaces', gets bogged down in analysis when such investigations are also relevant to the following text on the nature of soiling and on substrates. But there is a great deal of sense in what the author writes and there would be fewer law suits and arbitration cases if material characterisation became common parlance before and after cleaning treatments. Unfortunately, the jury is still out on what test criteria are most informative – chemistry is little understood in the industry – but at least an agreed dialogue can take place between specifiers and contractors.

Particular assets are varied and informative case studies that hark back to those in Practical Building Conservation upon which Ms Ashurst worked. It is a pity, however, that her description of the cleaning of London's Cleopatra's Needle stopped in the 1950s; the tests carried out by the Greater London Council's Historic Buildings Division there in the 1970s would have rounded off the story nicely. There is one gaff which must be put down to the sub-editor: the title of chapter 5 of Volume one is surely 'Cleaning metals and timber' not 'Cleaning materials and timber'.

For those looking for sound advice on the range of cleaning systems currently available, Volume two, *Cleaning materials and processes*, deals with them all in detail and includes practical clues to writing contract preliminaries. I am pleased to see Ms Ashurst has not been taken in by the rather superficial recent research on abrasives and chemicals by one UK academic establishment. She sets out all the parameters for good cleaning, even though, owing to the complexity of materials, pollutants and treatments, few of us achieve perfect results every time.

The author rightly warns against unthinking belief in proprietary systems and gives candid comments on the pros and cons of most cleaning techniques. I would quibble about what the marketplace is offering and calling a poultice but for the most part, the books are jargon free.

Nicola Ashurst updated the Society for the Protection of Ancient Buildings' short Technical Pamphlet No 4 on cleaning and has contributed recently to the redrafting of the relevant British Standard Code of Practice which she previews in her books. From someone so concerned for the care of historic buildings, I was surprised to find so little in the text on the doomsday question hanging over all our refurbishment heads: if (as they are) historic materials are so friable and sensitive to treatments, and if we as a nation continue to clean our buildings ever more frequently, what are the physical and chemical consequences of multiple recleaning? A quick scrub now may be efficient but rough, but if we keep scratching in the same old way what then will a flaying do for a work of art?

John Fidler

Crumbling in air

Crumbling heritage?: studies of stone weathering in polluted atmospheres, by Ron Cooke and Gerald Gibbs, 1993, published by National Power PLC and PowerGen PLC, price £10 (available from National Power 'Crumbling Heritage?', PO Box 200, Wetherby LS23 7JW

In the recent history of studies in building conservation there have been few opportunities for British research to reach an informed wider public audience. Most experiments are hidden away in musty laboratories and finished papers in obscure publications that only

the experts can find and understand. In 1984 the House of Commons Environment Committee criticised the lack of research in the United Kingdom on the relationship between atmospheric pollution and the damage to stonework on ancient monuments. Ask anyone in the street today and they will tell you that acid rainfall corrodes old buildings. It is an emotive subject where public perceptions have been reinforced by media hype, albeit in a direction favourable to conservation, yet we have always lacked really objective data upon which to advise government.

In response to this well-timed criticism the then Central Electricity Generating Board (CEGB) created a joint working party with the Cathedrals Advisory Commission for England and set to work a team of scientists to get to the heart of the matter. Over 70 research reports and papers were presented to the group, in a programme lasting seven years.

Crumbling heritage? is a synthesis of all these efforts put together by Ron Cooke, (formerly Professor of Geography at University College, London and now Vice Chancellor of York University) and Dr Gerald Gibbs (originally responsible for the research programme within the CEGB and now an independent adviser and consultant to the Global Environment Research Centre at Imperial College, London). With a simple format, lots of diagrams, and photographs and a studious avoidance of chemical equations (relegated to an annex at the back), the book goes a long way to being accessible to the layman. And almost uniquely for a scientific paper destined for a wider audience, the researchers have admitted where their knowledge stops and further research is needed.

Crumbling heritage? will help those interested in understanding how stone decays. Each chapter poses a key question, then provides the commonly held perception, and finally describes what the scientists actually found. The text is not designed to provide technical answers for architects and surveyors wishing to ameliorate or stop continuing decay. There are no recipes here for acid water repellency or for masonry consolidation.

In wide-ranging scope, researchers looked at historical studies of air pollution and stone decay data for the City of York (is today's pollution any worse or better than that in the past?), laboratory studies of simulated attacks on building stones, field tests on the decay of stones, and the monitoring of the local atmospheric pollution.

Most of the book and the research concentrates on oolitic limestone decay. Although ranging shots were taken for Magnesian limestone little work could be said to have been completed on this material or on sandstones in general. Those of course with calcitic binders will experience broadly similar decay to the classic limestones.

The main pollutant that increases the natural weathering rate of limestones remains sulphur dioxide and this forms sulphates by dry deposition, resulting in black crusts and the dissolution of the stone. However, concentrations of this pollutant in urban areas have now declined by a factor of ten. Other pollutants are unfortunately on the increase. In particular, nitrogen oxides and ozone are increasing because of the increasing number of motor vehicles. Although their direct impact on stones appears negligible they may indirectly affect the rate of sulphur dioxide absorption.

New stones put out today are likely to decay at a slower rate than their older neighbours. And even though sulphates are now in shorter supply, the influence of long exposures of the older fabric to the higher levels of pollution creates a 'memory effect' in weathering, and a higher level of decay is sustained in the cleaner air that now prevails.

In addition to changing the surface appearance and dissolving the stone, sulphates also cause damage by their salts crystallising on the surface and causing blisters. Researchers found that this process is enhanced at seaside locations where the sea salts attract and retain moisture on the surfaces for longer than at inland locations.

Crumbling heritage? is a lasting testimony to an enlightened partnership of polluters and conservators finding common ground. It is also, along with the government's Building Effects Research Group report, one of the last UK outputs we shall see for a while on acid

rainfall impacts on our heritage. Ministers have accepted that pollution levels must fall and are using market forces to help change energy sources and emission levels in line with international treaties.
Significant funds once directed towards monitoring building effects are now understandably being shifted to public health studies, as the threats to urban life from carbon monoxide gases and from diesel particulates in vehicle exhausts continue to grow. So those who are charged with the welfare of the country's great architectural legacy will no longer be able to review rates of erosion directly related to pollution. Will the 'memory effect' go on forever? Will background levels of acid rainfall dramatically increase with global warming as carbon dioxide levels rise and the temperature exponentially increases the effects of acids? Only time will tell. To the question, 'crumbling heritage?', the worrying answer must he, 'probably'.

John Fidler

Stone cleaning

Stone cleaning: a guide for practitioners, by Christopher Andrew with The Masonry Conservation Research Group, Robert Gordon University and in association with Ingval Maxwell, Historic Scotland, 1994, published by Historic Scotland and Robert Gordon University, price £15 plus £1.50 p & p (available from The Conservation Bureau, Historic Scotland, Steinhouse Mansion, 3, Steinhouse Mill Lane, Edinburgh EH11 3LR; telephone 031 443 1666

This interesting and useful publication in fact relates almost exclusively to advice on cleaning of sandstone. This is probable because when we think of Scotland, we think of sandstone and granite and so must the authors from Historic Scotland and the Masonry Conservation Research Group at Robert Gordon University. Yet despite its specific Scottish roots, the book has a wider application.
Stone cleaning has become an important issue in Scotland in recent years. Urban renewal grant aid and the general national environmental regeneration has poured enormous resources into masonry refurbishment, not always to best effect. To control the perceived damage in 1992, permitted development rights for cleaning listed buildings and unlisted buildings in conservation areas were withdrawn and Historic Scotland, among others, has sponsored research into sandstone cleaning, organised an international scientific conference in Edinburgh, and published a range of texts on the subject, culminating in this latest volume.
Christopher Andrew and his team have successfully managed to bridge the gap between an obscure scientific tome and an accessible textbook. Well presented in a thin architectural A4 format and lavishly illustrated with telling colour and black and white photographs, the practitioner's guide has many useful tips and explanations to help the contractor, client, specifier, or planner faced with the usual difficult dilemmas.
From the start the book calls for a balanced view of urban improvements, recognising the potential threat of irreversible damage to masonry from poorly specified and unskilled cleaning work generated by the lowest tender price. The authors suggest constructive action by local planning authorities to monitor cleaning in their areas by starting a reference database of buildings cleaned, identifying the treatment systems used, and assessing their effects. The book begs the question, however, of how competent conservation staff might be to evaluate the appropriateness or otherwise of cleaning generally. Real experts in the field are few.

In clear, precise terms the text leads the reader through sandstone geology and petrography to explain the different sensitivities of binding matrices to water, chemicals, and abrasives in various treatments. Ferruginous (iron oxide cement) sandstones, for example, will always be at risk from staining or bleaching of colours unless special care is taken.

On pollution soiling, however, there is no obvious reference to diesel particulates, the up and coming culprit of urban despoliation. And there is little discussion of surface roughness on stones as a factor in catching and holding dirt. However, the difference between patina and staining is well rehearsed and should now be engraved on every cleaner's helmet.

There is an excellent section on biological soiling, though with no reference to the fact that some microorganisms change colour and flower within the pore structure of stones. On biocides the information is a little out of date, but we are all await the next phase of replacements for the quaternary ammonium compounds now banned under toxic substances regulations. The case studies too are very useful.

All the relevant cleaning systems are described and their risks evaluated. In the discussion of abrasive cleaning, the cross overs in units of measurement can be confusing: industry uses pounds per square inch (PSI), the equipment manufacturers use bar, and the British Standards Institution uses megapascals (mPa), while our Scottish colleagues use kilopascals (kPa). The next edition should include a conversion table.

On chemical cleaning the Scots show their true colours: the 'potential pitfalls are enormous' and there are some wonderful horror photographs to show what not to do. But this reviewer found some of the advice on testing a little hard to take. True, there are plenty of laboratory tests that can be applied to characterise stone before and after cleaning. But by what criteria shall the results be judged? Just how little or much salt residue is permissible after cleaning? And sampling in one or two places across an entire building is not statistically indicative of the cleaning overall.

Historic Scotland and Robert Gordon University have produced a useful contribution to the ongoing and vexed debate about cleaning stone. If nothing else on reading this, practitioners will think twice before setting out to clean sandstone on the cheap.

John Fidler

The earliest European?

THE TIBIA (leg bone) of a fossil hominid 500,000 years old has been discovered in an excavation funded for ten years by English Heritage in a quarry at Boxgrove, near Halnaker, in West Sussex. Half a million years ago Britain was not an island but a peninsula of the European continent. The Boxgrove find has an international significance beyond documenting the oldest Englishman as it highlights the importance of Boxgrove as one of the most important localities for studying the behaviour of early man at this remote time.

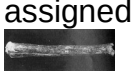
The dating of the tibia is based on associated finds of vole skeletons. Palaeontologists know that up to *c* 500,000 years ago these water voles had molars with roots. Thereafter, evolutionary changes led to molars without roots. The voles at Boxgrove have vestigial roots.

Reconstruction drawing of 'Boxgrove Man'

The Boxgrove tibia complements other human fossil evidence of the early colonisation of Europe from Africa. Finds in Israel, Georgia, Pakistan, and Java indicate an eastward spread out of eastern Africa; and finds from Spain, France, Greece, Hungary, and Germany trace the earliest movement of humans into western Europe. The Boxgrove tibia may prove to be from a hominid comparable to that of the jawbone found at Mauer near Heidelberg, Germany, in 1907. In an article in Nature (26 May 1994 ref 10101) the tibia is assigned to Homo cf *heidelbergensis.*

Reconstruction of the Boxgrove activity site

Surrounding the Boxgrove find were stone cutting tools and the bones of animals now extinct in southern England, such as elephants, rhinoceroses, bears, a species of deer, and mink, all of which were hunted for food. The fauna recovered from both Boxgrove and Mauer, including many extinct species, dates to the Cromerian interglacial period (*c* 700,000–c 450,000 years ago), and the two finds, in geological terms, may be more or less contemporary depending on where within this timespan the Mauer jaw is ultimately assigned.



The Boxgrove tibia

Using Neanderthal tibiae for comparison, the Boxgrove tibia, although it lacks both its proximal and distal ends, has been calculated to have been more than 355mm long. This measurement and the circumference at midshaft suggest that this early man was around six feet tall, weighed over 12 stone, and was powerfully built.

It is an exciting find of the earliest human ever found in Europe. Excavation at Boxgrove is expected to resume next year in the hope that other parts of the skeleton will be found.

Geoffrey Wainwright

Chief Archaeologist