Conservation Bulletin, Issue 28, March 1996

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

Helping to make it happen

Members of Professional Services will continue to visit sites and advise appropriate solutions for conservation issues. By redeploying, our professionals will be able to make their advice go further and provide vital support for English Heritage projects

Chief Executive Chris Green explains how experts within the private sector can help safeguard our heritage

I believe that we have a duty to champion our heritage for the enjoyment of future generations. To conserve our heritage we ultimately depend on the skills of the stonemason who repairs the ageing walls, the architect who diagnoses problems and finds solutions, the owner who maintains and imaginatively adapts a redundant building. This is the real frontline of conservation: in the field, on the scaffolding, at the drawing board.

It may seem ironic therefore that English Heritage is moving from a *doing* role to an *enabling* one. We have recently reorganised Historic Properties and now commission most of our professional work from outside consultants. We are also moving our directly employed craftsmen into the private sector. Yet perhaps the irony is not so great. The bulk of conservation skills lie in the outside world. Rather than rely on a wholly separate resource, how much better to commission those already working outside, to draw on their wider range of experience, and in doing so to concentrate and increase the overall skills in conservation?

English Heritage is already substantially an enabling organisation. The aim of our grants programme is to enable outside owners to keep their properties in good use and repair, drawing on outside skills and backed by advice from our own specialists.

As the national body for conservation we will always have a unique role: as expert adviser to Government, as champion of conservation, as provider of funds and knowledge, and not

least as owner of historic properties and client for conservation skills. In this role we are not a centre of all excellence, but a focus for excellence, using our position to gather and disseminate the experience of all conservation practitioners, to identify problems and to focus resources on their solutions.
The latest developments in our organisation are strengthening this role. For example, our Professional Services team, released from much of the work on our properties, is being redeployed to work on professional policies and standards with colleagues inside and outside English Heritage. And through a new Major Projects team we are using more of our resources to rescue key buildings at risk.
In this I see the beginnings of a virtuous circle, a partnership of public resources and private skills that will generate an ever-increasing effectiveness in protecting our heritage. I am determined that English Heritage will play its part as an outward-looking, receptive, and professional organisation.

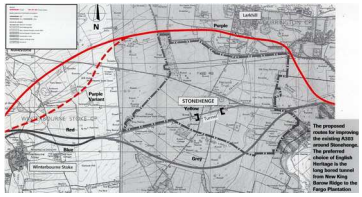
Chris Green

Chief Executive

Stonehenge: pushing for the tunnel option

Another paragraph in the long history of Stonehenge was written during one week in November 1995 when a conference was held to consider alternative routes for the improvement of the A303 trunk road

This aerial shot of Stonehenge shows how the roads carve up this magnificent prehistoric landscape
1 Stonehenge
2 The Avenue
3 The Cursus
4 Cursus Barrows
5 Coneybury Hill Barrows
6 Normanton Down Barrows



The proposed routes for improving the existing A303 around Stonehenge. The preferred choice of English Heritage is the long bored tunnel from New King Barrow Ridge to the Fargo Plantation

Another paragraph in the long history of Stonehenge was written during one week in November 1995 when a conference was held to consider alternative routes for the improvement of the A303 Trunk Road.

The A303 forms a strategic link between the M3 at Basingstoke and the M5 at Exeter, but between Amesbury and Berwick Down, where it passes through the Stonehenge World Heritage Site, the existing road is mainly single carriageway with poor alignment and visibility in places. The road also passes through the centre of the village of Winterbourne Stoke, much of which is a conservation area.

In April 1993 the Highways Agency undertook public consultation on alternative routes for improving the existing road and for bypassing Winterbourne Stoke, but the outcome was inconclusive in that none of the proposed alternatives received wholehearted support. English Heritage and the National Trust, in particular, opposed the so-called Yellow and Grey routes (the Yellow route is along the line of the present road; the Grey route is a detour to the south of Normanton Down) on the grounds that they were environmentally damaging. Subsequently, at an International Conference hosted by English Heritage and the National Trust in July 1994, both of these routes were withdrawn by the Transport Minister, Steven Norris, and the Highways Agency was asked to look again at northern routes, including tunnelling solutions. However, the Agency was unable to identify a proposal which it felt would receive general support and it proposed a planning conference which would be attended by all interested parties, to consider the way forward.

In spite of its name, a planning conference is not actually about ‘planning’ issues. Rather it is an informal and non-statutory forum for the discussion of transport issues in a particular area by interested groups or individuals, and is in addition to the normal statutory procedures under the Highways Act 1980. As John Watts, the minister for Railways and Roads, said in August 1994 ‘...the use of “round table” conferences will provide an excellent forum, for interested parties to express their points of view on road schemes. It should also shorten the time taken to reach decisions, reducing the period of uncertainty for people who might be affected by our proposals and help to speed up the delivery of the road programme.’

Prior to the Stonehenge Planning Conference only three such conferences had been held, but the extension of this type of forum to the complex environmental problems of a World Heritage Site was unprecedented and both English Heritage and the National Trust had considerable doubts about the ability of an informal conference to deal with the sensitive archaeological and other environmental issues presented by the Stonehenge landscape. As English Heritage and the National Trust said in a joint submission to the conference ‘It is clear, however, that the Conference cannot hear evidence and after proper examination reach conclusions on the balance of evidence nor can it arrive at any decision requiring an assessment of the weight to be attributed to the various relevant factors (for example, cost v heritage)... Thus, although the objectives of the Conference stated in the leaflet are to seek agreement on the need for improvement, the environmental constraints and an acceptable solution, these are decisions for the Secretary of State after completion of due procedures and the Conference must not seek to pre-empt his decision. No doubt opinions expressed and any consensus reached by the Conference will be a helpful stage in informing the Secretary of State but it is important that expectation should not be raised that any consensus of agreement will be determinative in the selection of a final route.’

The conference was opened under the chairmanship of Mr Robin Wilson CBE, F Eng, FICE on 6 November 1995. The tightly-packed conference room necessitated strictly allocated seating around the main table. In addition to the Highways Agency officials, English Heritage, and the National Trust, the conference was attended throughout the week by delegates representing a broad range of interests, including all the local authorities for the area, the Council for British Archaeology, Friends of the Earth, the Green Party, Transport 2000, the Royal Astronomical Society, Wessex Regional Guides,

as well as several local landowners. The Department of National Heritage, Ministry of Defence, ICOMOS, and the local MP, Robert Key, were also present for parts of the conference and gave evidence.
English Heritage and the National Trust argued forcefully that Stonehenge and the cultural landscape within which it stands is unique. Within an area of less than 2km radius, there are hundreds of prehistoric monuments built between 5,000 and 3,000 years ago, and at the centre of this landscape stand the remains of the Stone Circle itself.
Because of its particular international importance, Stonehenge and the surrounding land are part of a designated World Heritage Site. As such it is one of only 14 World Heritage Sites in the United Kingdom.
The impact of the A303 on Stonehenge, its associated monuments, and the landscape is therefore already severe. Together with the A344 the A303 represents a great threat to the stones, and the two roads together ruin the setting of Stonehenge, separate the landscape into three pieces, and undoubtedly spoil the experience of visitors.
In the leaflet published prior to the conference by the Highways Agency, various options were put forward. These included the Yellow and Grey routes, which had previously been withdrawn, and a new Purple route to the north (see map).
While these were the only options included on the conference agenda, English Heritage and the National Trust felt strongly that the conference should discuss other alternatives, in particular the option of a long bored tunnel of approximately 4km running from New King Barrow Ridge to the Fargo plantation, and a modification of the Purple route to make it more acceptable. Representatives from the two organisations argued very strongly that, although more expensive than other options, the tunnel solution was in fact technically feasible; it would have no impact on archaeology, landscape, environment, or local housing, and it was universally acknowledged as the best solution.
The conference concluded on 10 November. Throughout the week, the tunnel option gained the support of a substantial majority of those present and at the conclusion, a number of resolutions were agreed, as follows:

This Conference:

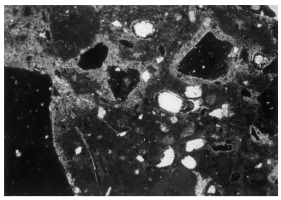
1 Considers there is an urgent and immediate need for a bypass of Winterbourne Stoke and supports a northern route for it which should be developed to mitigate its effect on local interests.
2 Endorses the Government's commitment to the UK obligations under the UNESCO Convention on World Heritage Sites to enhance the setting of Stonehenge, through the removal of adjacent roads and resiting of the visitor centre.
3 Supports the objectives of English Heritage and National Trust as managers of the Stonehenge Monument and owners of the surrounding land to seek the restoration of the Monument to its landscape through the closure and restoration to down land of the A303 between Stonehenge Cottages and Longbarrow Cross Roads, and the A344 between Stonehenge Bottom and Airman's Corner and the resiting of the present visitor facilities.
4 Considers that the closure of the A303 depends on there being an acceptable alternative route for this section of the A303 which satisfies County and District Planning Policies and guidelines and avoids the disruption of local communities.
5 Considers that subject to adequate safety provision, facilities for the traveller to stop and view Stonehenge in its landscape should be retained in addition to facilities for the visitor.
6 Considers that in the context of the A303 being part of a strategic route from London to the South West, the A303 between Amesbury and Berwick Down should be improved to dual two lane carriageway standards similar to the rest of the route.
7 Notes that if following the current debate on national transport policy it is decided to restrict road building in order to restrain traffic growth, growth of traffic on the A303 would

be less if those sections which are not already improved remained a single 7.3m carriageway.
8 Notes the various horizons visible from Stonehenge and agrees with the concept of a Stonehenge Bowl with the Monument at its centre as the area which gives Stonehenge its special setting, and which should be avoided by any route for the diverted A303.
9 Rejects the northern Purple Route, its variant and its proposed modification by English Heritage and National Trust, none of which are acceptable to local communities.
10 Does not support the southern Grey Route which passes through the southern limits of the Stonehenge Bowl and affects inalienable land owned by National Trust.
11 Supports in principle the proposal by English Heritage and National Trust for a long tunnel under the Stonehenge site but recommends further investigations are carried out to establish a portal west of the A360 so that it links into Winterbourne Stoke bypass.
12 Recognises that the cost of a long tunnel is far in excess of the funds likely to be available from the current transport budget and supports the efforts of English Heritage and National Trust to obtain government or other funding for the tunnel as part of the restoration of the World Heritage Site and the creation of the Stonehenge Millennium Park.
13 Recommends that in the interim traffic management measures are considered to reduce congestion on this section of the A303 but that the earliest opportunity should be taken to resite the Visitor Centre and green the A344.
The chairman of the conference now has to prepare a report for the Secretary of State for Transport on the outcome and this will be published in due course. In the meantime, and in the light of the conference conclusions, further discussions are continuing with the Highways Agency about ways of achieving a tunnel solution.

Michael Brainsby

Legal and Secretariat

Library stocked with sand



Thin section through Roman mortar showing aggregate fraction of brick fragments and contrasting clear quartz sand

Getting the right lime mortar aggregate is crucial in building conservation. The Architectural Conservation Branch of English Heritage is concentrating work in this area on several strands of research

People who use and work with traditional lime mortars recognise fully the importance of selecting the right aggregate. This renewed interest in the use of lime-based building materials has led English Heritage to initiate several research projects, for example the Smeaton Report, which discusses the performance of historic mortars.

The right mortar mix

Lime is one of the most important materials in building conservation. The constituents of a lime mortar affect not only the material's characteristics and behaviour but also its overall performance. Getting the mortar mix right is fundamental to good repointing. With these factors in mind a research project has been developed by English Heritage to find currently available sand and aggregate sources.

About £8m is spent in the UK each year on repointing, so getting the mortar mix wrong may ultimately lead to a large repair bill. The colour and texture of binders and aggregates in mortars, especially sands, are crucial to the colour of the pointing, and thus to the appearance of the wall as a whole. Yet today countless walls are repointed with no attempt to match the colour or texture of the existing mortar. This can be both destructive and visually disturbing to the overall reading of a building, and can confuse its architectural features.

Selecting specific aggregates is an important part of mortar specification. For example, a sand with fine, round grains often performs less well than a well graded, sharp, angular sand. The performance of a mortar can also be affected by using a sand that has clay coating the grains, which causes the aggregate to be more slippery and to form a weaker bond. At the opposite end of the scale, plasterwork often needs a fine, well rounded sand to give the material its required smoothness and evenness.

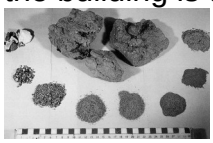
A library of mortar sands

The English Heritage Directory of Building Sands and Aggregates was initiated in 1993 to enable historic mortars on English Heritage sites to be matched effectively with sands that are currently available. The library includes a categorisation of all available sands and the data will be published as a directory, which can be updated every five years. The use of a database facilitates the manipulation of the data and although the directory will be a paper version of this, the aggregates are listed by county, by colour, and by supplier.

An often frustrating part of trying to match historic materials is the difficulty in finding certain products. It is pointless to analyse a mortar if it will not be possible to get replacement materials to form a suitable match.

The library consists of more than 500 samples of sand and aggregate collated from a near exhaustive list of suppliers. More samples will be added as we update our records. Part of the library is on display at English Heritage's Practical Building Training Centre at Fort Brockhurst, Hampshire, where the many training courses on offer make practical use of the library.

An interesting development is the recent listing of post-war buildings, which provides another avenue of use for the library. It is fairly contentious that we are now seeking ways to match areas of concrete on some of our 20th-century buildings. It is also interesting to note that certain concrete buildings had their aggregates specifically chosen for texture and colour. Therefore when repairs are done this level of detail must be acknowledged if the building is to be repaired sympathetically.



Sample of original mortar from a lime ash floor demonstrating that the importance of selecting a well graded aggregate has long been known.

Samples of sand in a laboratory, part of the English Heritage Directory of Building Sands and Aggregates

Organisation of the database

The performance and durability of a mortar is dependent on a number of factors. Sand, which plays such an important role in imparting the physical characteristics of any mortar (strength, porosity, permeability, and texture) clearly needs to be properly analysed and recorded.

Each sample has been given a personalised data sheet and has been logged onto a database system which can identify a specific sand. The data sheet records the regional origin – for simplicity's sake, the regions correspond to English Heritage regions – the quarry, and the sand name used by the quarry. Equally important, the colour of each sample is determined using the Munsell colour charts. A full record will enable more sand to be re-ordered from the same quarry.

Each aggregate sample has been sieved and graded, and the data recorded numerically and interpreted visually as a cumulative curve. This procedure corresponds with the British Standard for testing mortars so that at a glance it is possible to see if the sample complies with BS 1199:1976. It is also possible to overlay the cumulative curves to draw instant comparisons or detect discrepancies.

Each sample has also been analysed to identify the predominant minerals in the aggregate. Under cross-polarised light it is possible to detect even tiny amounts of each mineral present, as each mineral has different colour according to the mineralogical spectrum. In particular, any significant presence of clay minerals, feldspars, or iron oxides needs to be identified, as these may affect the behaviour of the mortar, causing leaching and staining of the surrounding brick or stonework.

When looking at aggregates with the naked eye, or even under the microscope, it is easy to be misled. For example, when looking at a very red aggregate under the microscope the overall granular shape is confused and uncertain, since the grains are coated in clay. However, under cross-polarised light this confusion is eliminated, because the outline of each grain becomes clear. Such information is important when trying to determine whether to use, for example, a soft sand for plastering or a sharp sand for a coarse mortar.

Testing mortar samples

In 1995 the project was taken further when selected aggregates from the collection were made into mortar samples using currently available limes, including two hydraulic limes. A total of 81 mortars were used in combinations of 27 aggregates and three limes. Each made-up mortar sample was placed on a panel to show the differences, between aggregates and different mortars, and to make it clear how different colours and grades of aggregates can be used to achieve variation. Even when the same aggregate is used the choice of lime can alter the colour.

At a recent course for the Royal Institute for Chartered Surveyors, held at Fort Brockhurst, such overwhelming interest in the database was expressed that English Heritage has made a poster of the board to highlight just what can be achieved by relying on traditional materials rather than pigments.

The library database will be published in the form of a directory in September 1996 and should form an important tool for specifiers, architects, and conservators working in the building industry.

Sasha Barnes

Architectural Conservator, Architectural Conservation Branch

Publications and recommended reading: *Smeaton report phase 1 – Historic mortars* English Heritage (available from English Heritage Architectural Conservation Branch, Room 520, 429 Oxford Street, London WIR 2HD, £10)

Making the point (leaflet, video, and exhibition; available through English Heritage Postal Sales, PO Box 229, Northampton NN6 9RY, telephone 01604 781163)

Ashurst, J, 1986 *Mortars, plasters, and renders in conservation*, Ecclesiastical Architects' and Surveyors Association (available through the RIBA bookshop)

Ashurst, J and Ashurst, N, 1988 *Practical building conservation, English Heritage technical handbook volume 2: brick, terracotta, and earth*, Gower Technical Press
Ashurst, J and Ashurst, N, 1988 *Practical building conservation, English Heritage technical handbook volume 3: mortars, plasters, and renders* (both available through English Heritage Postal Sales, PO Box 229, Northampton NN6 9RY; telephone 01604 781163)

Putting lottery money to good use

Above and opposite: the Chiswick House Cascade, built in 1738, is a Grade I listed structure in the house grounds, and has received a Heritage Lottery Fund grant of £111,700 towards its repair and conservation and the reintroduction of water.
Left: Highcliffe Castle, Christchurch, Dorset: a £2.65m Heritage Lottery Fund grant will fund the final phase of a comprehensive programme of repair and restoration of the remarkable Grade I listed ruin

Using the large sums of money being generated for the heritage by the National Lottery requires good ideas and wise investment

In its first year of operation the Heritage Lottery Fund has received more than 1,000 applications and allocated over £95m to a wide variety of large and small projects across the country.
Highcliffe Castle, Dorset, a Grade I building at risk, received one of the largest grant. Though work to secure this outstanding castle started three years ago – with financial help from English Heritage – full repairs were beyond our means and those of the owner, the district council. Now, the £2.65m lottery grant will ensure the completion of the repairs. However, there are no set maximum or minimum limits and the smallest grant allocated, at the time of going to press, was £1,500 towards the conservation of a Burne-Jones memorial in St Andrew's Church, Mells.
The Heritage Lottery Fund offers an exciting opportunity to make a real difference to the heritage. The sums generated by the National Lottery are exceeding all expectations and it is important that we ensure that this money is invested wisely to protect, understand, and enjoy our national heritage. English Heritage is keen to encourage new ideas and galvanise thinking about how such funding might be exploited.

The purpose of funding

The purpose of the National Heritage Memorial Fund (NHMF), through the Heritage Lottery Fund, is to help organisations in their work to preserve, restore, or acquire for education and for public enjoyment national and local heritage sites that make up the fabric of our history and culture. These may be a national asset, such as a great park or a painting, or one of regional or local value, such as a village green, a parish church, or a local museum collection. This means that lottery funds can be used to assist with projects outside the grant schemes operated by English Heritage and other heritage organisations. Indeed, it is a government requirement that the NHMF should be able to show that lottery expenditure is not a substitute for existing public funding and that it supports projects that otherwise would be unlikely to go ahead. The NHMF assists not only with Grade I and

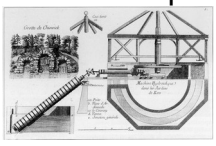
Grade II* listed buildings and Scheduled Ancient Monuments but also with Grade II and unlisted buildings. It can also consider projects to increase public access to, and enjoyment of, the heritage, as well as conservation projects.

Eligibility for funding

The Heritage Lottery Fund is able to fund any public sector or charitable organisation that has the preservation of the heritage or nature conservation among its objectives. Unlike English Heritage and other agencies, the NHMF cannot fund private individuals or commercial organisations. Not all charities can be considered for grants under the terms of the NHMF's legislation. If the applicant's trust deed does not include among its purposes the preservation of the heritage, or nature conservation, or the provision of amenities to be enjoyed by the public, it may not be eligible. The heritage assets for support have to be in, or be in the process of being brought into, eligible ownership, but this does not have to be freehold in all cases.

Every project has to be directly related to a tangible heritage asset and the starting point in considering any application is the heritage merit of the building, land, or object for which the grant is being requested. It should be of demonstrable importance or interest in historical, artistic, or scientific terms and it is up to the applicant to provide a statement on the heritage merit of the subject of their application. The Heritage Lottery Fund is not able to support completely new works, for example the commissioning of new stained glass windows or memorials. Equally the NHMF will not normally expect to see applications with a total project cost of less than £10,000. However, if a project falls below this threshold, is of clear importance to the heritage, and has no other source of funding to help it to succeed, the NHMF is often willing to consider it. Above all, the NHMF is looking for quality of architectural design and craftsmanship.

Grant-aid is normally for capital projects only and the NHMF has taken a broad view of what constitutes a capital project, requiring that the works are one-offs with a clear beginning and end and separately identified from routine maintenance and day-to-day running costs. In exceptional circumstances they may also support revenue costs through endowment. The Heritage Lottery Fund cannot bear the full cost of any project and all applicants are expected to contribute something from their own resources or efforts and to support the running costs once completed. While there are no fixed rules about apportionment, as a rough guide the NHMF will normally expect partnership funding of at least 25–30 per cent. A lower figure may be accepted in areas of particular social and economic need. In some circumstances partnership may be accepted in the form of contributions in kind, for example the cost of building materials, voluntary assistance, or even an undertaking to meet future costs. Most commonly, however, partnership funding has come from private sector sponsorship, public appeals, local and central government, or the European Union. The average level of partnership among all projects funded to date is about 50 per cent.



English Heritage's advisory role

The NHMF has always acted as a reactive body. Unlike the Arts and Sports Councils, it does not have a formal role in providing advice on the heritage, nor is it responsible for promoting particular strategies. This means that it relies heavily on external sources of advice and particularly from the relevant publicly funded specialist agencies such as English Heritage, the British Library, and the Area Museum Councils.

English Heritage is asked to advise on English applications relating to ancient monuments, sites of archaeological importance, historic buildings and their contents, design and landscape, and industrial archaeology. Our role is initially to advise on the heritage importance of the building or structure and the acceptability of the proposals in heritage terms. This will include advising on whether the proposals could be carried out in a better or more appropriate manner, for instance ensuring that the most urgent works will be tackled first. As well as advising on the technical viability of a project, we are also asked to look at the organisational and financial viability of a project. In particular we are asked to comment on the reasonableness of the cost assumptions and this may mean seeking advice from our quantity surveyors where appropriate. Obviously for some projects the NHMF will need to consult more than one advisory body and we are working to establish closer links with the other organisations. We are currently discussing with the NHMF the arrangements for providing post-offer monitoring, which may include providing detailed architectural input to specifications and schedules, monitoring works, and authorising payments to the NHMF. Where we are already involved with grants this is likely to be as an extension of our own monitoring, but in some cases it may be more appropriate to look to local authority conservation officers or other local professionally qualified individuals on a commercial basis to oversee the work.

To date English Heritage has been asked to advise or comment on more than 300 applications. While many of the projects were already known to us, it has been most encouraging to see new ideas and projects coming forward and we are keen to encourage more. The Heritage Lottery Fund is providing an unprecedented opportunity for a major pooling of heritage expertise and it is essential that we exploit this fully. The NHMF takes account of the standards and strategies which bodies such as English Heritage promote and is keen to work closely with us to achieve our common objective of safeguarding the heritage.

Priorities and balance of funding

In addition, over time the NHMF's Trustees are required by government to achieve a reasonable balance and coverage with the grants, addressing large and small projects, projects in every heritage field, and across the UK. While they do not attempt a strict allocation in advance based on relative populations or subject areas, that is not to say that they will never plan the spend. The Trustees have recognised that they may need to give particular encouragement to certain types of projects or areas if they see that projects are not coming forward, and they will determine priorities for segments of spending from time to time based on what they have learnt about need.

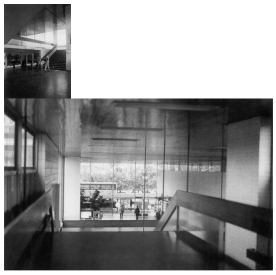
The recently launched Urban Parks Initiative is likely to be the first of a number of such special themes for lottery funding which the NHMF will promote in the future. The Parks Initiative covers projects aimed at preserving and enhancing public enjoyment of urban parks. Gardens and open spaces play a significant part in enhancing the quality of life of millions of people but many parks are now in a deplorable state. Their regeneration is something that will make a real and tangible difference to people's lives.

While English Heritage's main involvement with the Lottery is as an adviser to the NHMF, we are also applying to the Heritage Lottery Fund for assistance towards certain projects which we are unable to afford. To date two of our projects have been awarded grants: £111,700 to the restoration of the Chiswick House Cascade and £300,000 towards the acquisition of the Pool House at Willey. Further applications are in hand.

Sally Embree

Conservation, Policy and Research

Taking the mystery out of listing



Coventry Station (1962) a high quality, pioneering Modern design built by London Midland Region's in-house architectural team

The process of listing post-war buildings has been opened up to public consultation by the Department of National Heritage, a decision which English Heritage welcomes

In March 1995, Stephen Dorrell, then Secretary of State for National Heritage, announced that he was going to open up the listing of post-war buildings to public consultation. This welcome initiative, starting with commercial, industrial, and railway buildings, was designed to remove some of the mystique from the listing process and to take the debate more fully into the public domain. It built on foundations already laid by English Heritage, whose exhibitions ('A Change of Heart' and 'The Age of Optimism'), conferences, and publications had already gone a long way to explaining the basis upon which post-war listing recommendations were made. Released from the shackles of confidentiality, all interested parties were able to debate the issues and, for the first time, make specific reference to the individual buildings being recommended for listing. Media coverage was extensive – the *Evening Standard* devoted four pages to the subject, almost unprecedented for a conservation issue – and many hundreds of letters were written by members of the public and by owners.

It was recognised that openness exposed a building to the risk of demolition or alteration before a decision about listing was reached, and the emergency spot listing of one building under threat was required before the consultation period had run its course. The question of a temporary form of listing during this period is likely to be addressed in the forthcoming heritage Green Paper.

The Secretary of State's decision to list 21 of the 35 post-war buildings proposed on this occasion by English Heritage (see following page) received a reception as mixed as the buildings themselves. Ranging from apoplectic outrage to enthusiastic support, there was much thoughtful debate in between, although this was often concerned more with the practicalities of management and the effect of listing on values than on the intrinsic merit of the buildings themselves. Important though these aspects are – English Heritage's contributions to the debate, such as *The investment performance of listed buildings* (1993, with the RIGS) and *Developing guidelines for the management of listed buildings* (1995), will be familiar to many readers – the crucial issue is the cultural importance society places on the best buildings of our recent past.

This year will provide plenty of opportunity to carry the debate further. The rest of English Heritage's recommendations for post-war listings will be announced in three batches, each accompanied by a full photographic exhibition to be held in conjunction with the Royal Institute of British Architects' (RIBA) Architecture Centre. Owners and the general public will be welcome to enter the debate: is the best of English post-war architecture something worth keeping?

Public consultation on post-war churches, bridges, public buildings such as libraries and town halls, and a number of higher educational establishments will take place between 1 March and 30 April 1996; on public sculpture, and entertainment, transport, and

communication buildings from 1 June to 12 August; and on private houses and public housing developments from 2 September to 4 November.
The first exhibition, ‘Something Worth Keeping?’, will take place at the RIBA Architecture Centre, 66 Portland Place, London W1 between 1 and 23 March. Entry will be free, as will the booklets on the subject; these will be available at the exhibition and (after 1 March) on request from Customer Services, English Heritage, 429 Oxford Street, London W1R 2HD, telephone 0171 973 3434.
The results of the consultation exercises, and of a MORI poll on attitudes towards listing and modern buildings, specially commissioned by English Heritage, will be published in Conservation Bulletin in due course.

Martin Cherry

Head of Listing Branch

Post-war buildings listed after full public consultation 24 November 1995

Commercial

100 Pall Mall, London SW1	McMorran & D Armstrong	1956–58	II
New Zealand House, Haymarket, London SW1	Robert Matthew Johnson-Marshall	1959–63	II
Millbank Tower, Millbank, London SW1	Ronald Ward & Partners	1959–63	II
CIS Building, Peter Street, Manchester/New Century House, Corporation St, Manchester	Sir John Burnet, Tait & Partners with GS Hay	1962	II
Former Offices of Yorke, Rosenberg & Mardell, Greystoke Place EC4	Yorke Rosenberg& Mardell (YRM)	1961	II
41 Albermarle Street, London W1	Peter Moro	1963	II
Sekers, 170–172 Sloane St, London SW1	Brett & Pollen	1963–64	II
Centre Point, Charing Cross Road, London WC2	Seifert and Partners	1961–65	II
Carr and Co, Cranmore Boulevard, Shirley, Birmingham	E Goldfinger	1955	II
Head Offices, Pilkington Glassworks, Borough Road, St Helen, Lancs	Fry, Drew and Partners	1959–63	II
Bird’s Eye, Station Ave, Walton on Thames, Surrey	Sir John Burnet, Tait & Partners	1960–61	II
Heinz Headquarters Bldg, Hayes Park, Hayes End Lane, Hillingdon, Middlesex	Bunshaft of Skidmore Owings and Merril with Matthews Ryan and Simpson	1962	II*
23 St George’s Street, Canterbury, Kent	Robert Paine & Partners	1954	II

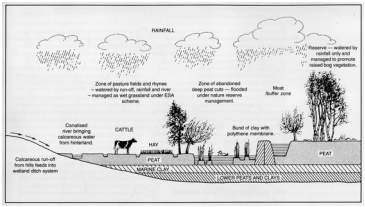
Industrial

Canteen at Rhone Poulenc, Rainham Rd, Dagenham, Essex	Edward Mills	1954 extended 1955	II
John Lewis Warehouse, Gunnels Wood Road, Stevenage, Hertfordshire	YRM (in collaboration with the engineer Felix Candela)	1963	II
Sheldon Bush Shot Tower, Cheese Lane, Bristol	EN Underwood & Partners (Engineers)	1968	II

Railway buildings

Harlow Town Station	HH Powell, E Regional Project Architect, Paul Hamilton	1960	II
Manchester Oxford Road Station	WR Headley, London Midland Region Project Architect, Max Glendinning	1960	II
Barking Station Booking Hall	HH Powell, Hall E Region; Project Architect John Ward	1961	II
Coventry Station	WR Headley London Midland Region Project Architect Derrick Shorten	1962	II
Birmingham New Street Signal Box	Bicknell and Hamilton with WR Headley, London Midland Region	1964	II

Wetlands in danger



Hypothetical cross-section of the Somerset Levels under nature conservation management; archaeological evidence in the remaining peats and clays will benefit from the switch from peat-cutting to protection

Bryony Coles, who was commissioned by English Heritage to make a survey of wetlands, writes on the threats to their archaeology and wildlife

Wetland management for nature conservation was the focus of a survey which I carried out recently for English Heritage, beginning in 1993 and published early in 1995. In the course of the survey, I learnt about the many threats to wetlands in addition to the peat-cutting that I knew well from archaeological fieldwork in the Somerset Levels. I was able to study field techniques of wetland management at first hand in reserves in Britain and abroad, and I was made aware of the significance of environmental legislation for the protection of sites. Here, I will concentrate on some of the threats to wetland archaeology and on the potential for working with nature conservation bodies to counteract them. Wetland archaeology, as many readers will know, is characterised by the good preservation of organic materials such as wood and by the equally good preservation of palaeoenvironmental evidence. Moreover, the archaeological and the

palaeoenvironmental evidence are likely to be directly associated in an undisturbed context with good stratigraphic resolution, and there is often abundant material for precise dating. The wetland archaeological resource is understandably a valued part of our past, and one that English Heritage has supported in a substantial way.

One aspect of support, alongside site identification, and excavation where necessary, is the protection of carefully chosen sites *in situ*, buried, invisible and undisturbed, and above all waterlogged. The main reason for the survey was to learn more about the management of wetland sites, in the well-founded belief that the same principles would apply whether wildlife or archaeology was the main interest.

Threats to wetlands can broadly be divided into those that are predominantly of natural origin and those that emanate from human activity. The natural threats include climate change and sea-level rise. It is easy to appreciate that drought is a threat to wetlands and to organic archaeological deposits that have survived through waterlogging.

Flooding, to my surprise, was also cited as a threat, mainly because it can swamp the delicately-balanced ecosystem of a wetland reserve with pollutants, and also because it can lead to severe erosion. Pollutants such as nitrates or sewage can alter both the vegetation cover and the chemistry of a wetland, and they will potentially accelerate the decay of buried materials. Erosion removes the physical protection of overlying layers, and while it may expose artefactual material for discovery, at the same time it leaves it vulnerable to weathering and further erosion.

Sea-level rise, a possible consequence of climate change, will affect low-lying wetlands through erosion by wave action and through increased flooding. It is thought that it may also lead to the salination of aquifers, thereby affecting wetlands beyond the direct reach of the sea. The effects of salivation on waterlogged archaeological deposits are uncertain, but wave erosion is known to be a serious hazard, often leading to the destruction of structures and features hard on the heels of their initial exposure and discovery by archaeologists – the east coast of England has seen many such instances.

A number of wetland SSSIs are being adversely affected by acid rain, a compound of natural and humanly induced threat. Quite what is happening depends on the character of the wetland, the local geology, and the amount of acid deposition. Perhaps the most dramatic result is the erosion of blanket peats as their vegetation cover dies; in fens and on raised bogs the changes may be more subtle, but they could be equally destructive in the long run.

Human threats to wetlands, such as water abstraction, gravel, and peat extraction, and drainage for agriculture, are familiar to archaeologists, and I will not dwell on them here. What matters in the context of wetland management is to recognise that all threats, whatever their origin, reach as far as the hydrological system which they affect. Pump out water to extend a gravel quarry, and you may desiccate a wetland several kilometres distant, leading to the decay of flora, fauna, and organic deposits alike. Take water from a river to irrigate crops, and downstream the river valley wetlands suffer...

Management responses to the threats to wetlands can be broadly divided into those that seek to protect a specific reserve from the surrounding dangers, and those that seek to control the threat at source. Both approaches are appropriate to archaeology, but most of us are perhaps more familiar with site-specific action than with more drastic and fundamental moves.

In the course of the survey, I came across a number of archaeological sites which had been protected in a manner very similar to the protection of wildlife sites. Stonea Camp in the Cambridgeshire Fens, for example, has waterlogged ditches which are kept wet by the insertion of a vertical plastic membrane in the ground beyond the ditches, to halt the run-off of rainwater into the surrounding low, drained farmland. In the same county, the National Trust’s nature reserve at Wicken Fen is likewise protected by a buried vertical plastic membrane which helps to hold water within the fen that would otherwise drain out

to the low surrounding arable fields. Wicken Fen is a much larger site than Stonea Camp, but the general principle is the same.

There are many other field techniques for keeping a wetland wet with an appropriate supply of water, some of which are described in the publication of the survey. Nature conservation bodies also have long experience of site interpretation and visitor control in different types of wetland, aspects of which are relevant to archaeology. But, above all, they have an appreciation of the value of tackling threats at source, and this is another area where we, as archaeologists, can perhaps learn from our nature conservation colleagues and maybe join forces with them when appropriate.

Bodies such as the County Wildlife Trusts, or the Royal Society for the Protection of Birds, have been effective campaigners for wetland protection, raising funds, lobbying for better environmental legislation and for its implementation, and often buying land the better to protect it. Being the owner of a site will usually make it easier to put the interests of wildlife (or archaeology) to the fore, and the costs of management may be defrayed by grants such as the annual payments made under ESA schemes.

Ownership can also bring the right to be represented on, or to stand for election to, a range of boards and committees whose decisions influence the state of the land, for example the Internal Drainage Boards, which take decisions about water levels in farmed wetlands. Both in Britain and abroad, I came across cases where a conservation organisation was buying any land that became available in an area, whether or not the specific fields were of wildlife interest. This gave the new owners a say in the management of water for the overall catchment, thereby indirectly improving conditions for the particular habitat or species that they sought to protect. It also gave them fields to bargain with, to tempt the owners of prime wildlife sites into an exchange of land, a more successful strategy than simply offering cash to a farmer who might have less need of capital than of grazing land. Wetland archaeology can be protected by adopting a similar approach, as indeed is happening now in southern Germany.

By now, some readers may be thinking this is all very well, but where is the cash to come from? For the wildlife organisations, it has come in part from a large and supportive membership that pays subscriptions, leaves legacies, and lobbies forcefully. Lobbying has helped to create a political will, particularly at European level, for environmental legislation and for the grants needed to support its implementation.

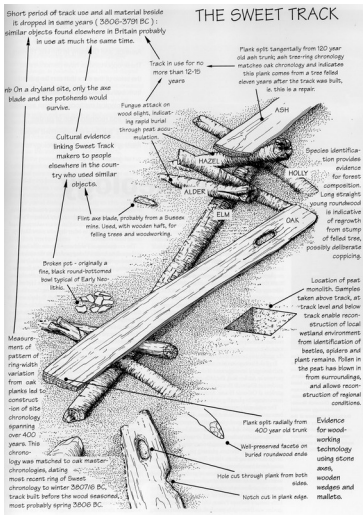
The potential for managing wetlands to benefit archaeology and wildlife alike can be seen in the Somerset Levels. From the early 1980s, management of the Shapwick Heath National Nature Reserve has taken account of the buried wooden trackway that runs through the reserve, as well as the flora and fauna on its surface. The presence of the trackway, the Neolithic Sweet Track, helped to bring in the grants required to buy the reserve. Now, the surrounding peat cuts have also been taken into nature conservation management, and their flooding contributes to the protection of the wooden trackway.

There will no doubt be occasional conflict between the short-term requirements of archaeology and those of nature conservation, but the protection of both has been strengthened by cooperation. Our basic aims are, after all, very similar: keep things wet, undisturbed, and free from pollution.

Bryony Coles

Department of History and Archaeology, University of Exeter

Wetland Management: a survey for English Heritage is available from WARP, Dept History and Archaeology, The University, Exeter EX4 4QH. Cost £10 inclusive of p&p. Please enclose cheques, made payable to WARP, with orders.



The Sweet Track, annotated to underline the significant characteristics of wetland archaeology

Garden archaeology


Osborne House: garden archaeology revealed the geometric layout of Queen Victoria's gardens, which have now been restored, on the terrace adjoining the house.


Chiswick House: archaeology revealed the buried structure of the 18th-century cascade and set the constraints for new work to re-introduce water following a successful lottery bid in 1996

The concepts and techniques of garden archaeology have made a significant impact on garden restoration in the UK, America, and Germany in the last 15 years. These opportunities have demonstrated the value of the data that can be gained from both destructive and non-destructive archaeological methods to inform accurate repair and reconstruction of garden features, but have also identified issues relating the science of archaeology to the art of garden design

Development and recognition of garden archaeology

In 1995 the restoration of the Privy Garden, Hampton Court was an impressive example of what can be achieved by exhaustive research and extensive garden archaeology. The scale of the work caught the public's imagination and was reported in the national media. However, English Heritage, The National Trust, local authorities and even private owners have been employing archaeologists in garden restoration for more than 15 years. Even earlier, in the 1930s, the Ministry of Works used archaeology in advance of a reconstruction of Kirby Hall's 17th-century Great Garden. Now managed by English Heritage, these gardens were the subject of additional research in 1987 when Brian Dix of Northamptonshire Archaeology evaluated the site prior to further restoration. The data obtained have proved valuable to the continuing reconstruction programme, enabling features to be located accurately and the design and construction of the gardens to be well understood.

English Heritage has also commissioned archaeological investigations of the 1830s flower parterre at Audley End, the 18th-century Burlington gardens at Chiswick House, and the 1850s terrace gardens at Osborne House. Archaeology has been instrumental in planning accurate restorations.

The academic interest of garden history has only been recognised in the last 30 years. Though earlier garden archaeological investigations were intended to ensure that work did not interfere with buried remains, the information gathered proved so useful that it soon became the primary purpose for carrying out such work. Previously, borders, planting pits, gravels, and hedge lines dating from 100 to 500 years ago had been considered too ephemeral and unlikely to have survived the continuing process of gardening. Deposits were stripped to medieval or earlier layers and in some cases the gardens were considered unimportant. For example, when the Society of Antiquaries excavated 12th-century Bishops Palace, Old Sarum, in 1914, ‘the garden was thoroughly trenched, but afforded nothing beyond the appearance of what we supposed it to be.’ When the garden of the 11th-century Bishops Palace was identified, excavation in that area was stopped and attentions transferred to other deposits more likely to reveal built evidence.

The excavations at Fishbourne Roman villa have perhaps done more to bring gardens to the notice of archaeologists than any other site in England. It is interesting that although the buildings of the Roman palace have not been reconstructed, the gardens have. The work of the Royal Commission on the Historical Monuments of England to record the earthworks of lost gardens, in particular Christopher Taylor’s work in the East Midlands in the 1970s, has brought to notice the extent of the survival of these gardens and their historical value. This was re-enforced by the growing interest in field archaeology and the study of aerial photos to locate medieval sites. In sorne cases features that had been interpreted as fish ponds or defensive works proved to be the remains of gardens, as at, for example, Bodiam Castle in East Sussex.

Techniques

Archaeologists are now much more skilled in recognising the deposits that locate the features and materials of gardens and in identifying the methods by which whole gardens were constructed. The Northamptonshire Archaeology team successfully identified and interpreted such evidence during the 1993–4 excavations at the Privy Garden, Hampton Court. Nevertheless, the high risk of soil contamination and rarity of datable small finds in gardens have meant that dating must rely mostly on stratigraphic position.

Non-destructive geophysical techniques are being used increasingly and there have been improvements in technology and computer mapping. The relationship between soil conditions and the successful application of non-destructive geophysical techniques is better understood. English Heritage’s Archaeometry Branch used such techniques to identify an earlier garden design at Wilton House, shown by the layout of features now lost under the lawns. Painstaking field surveys of hollows and humps, parch marks, or changes in grass and flora, which may indicate the previous location of trees, paths, or borders, can be very cost effective in contributing evidence. When accurately mapped such features reveal the layouts of earlier designs.

The study of species, clones, form, and branch structure of surviving trees and bushes can give evidence of the past function and use of plants in garden design, as pollards, pleached lines, or clipped topiary. Dates for planting or changes in pruning can be estimated, and surviving evidence of root structures and forms of planting pits can show methods of cultivation. The least successful has been seeking evidence for the more ephemeral flowers and shrubs, through pollen and seed analysis. Soil conditions are rarely suitable and the risk of contamination of deposits by continuous gardening is high. Christopher Currie, who has done extensive work for the Castle Bromwich Hall Gardens Trust, has received a Liverhulme award to pursue this and other soil-related research.

With the growing realisation of the survival and value of garden evidence, information is sometimes collected prior to development, to conserve or at least record the evidence before it is destroyed. This was done at Officers Terrace, Chatham Dockyard, where a line of walled 18th-century gardens was recorded prior to their partial destruction. Similarly an 18th-century garden layout was discovered and recorded at Eagle House, Wimbledon during an archaeological assessment by the Museum of London.

Garden restoration

Archaeological techniques have also proved informative in the restoration of individual features within gardens where full-scale investigations were impractical and documentary evidence fragmentary. English Heritage has encouraged owners seeking grant aid for restoration projects to use the services of an experienced garden archaeologist to guide the project. For example, Rob Bell of Bath Archaeological Trust undertook excavations for Lord Dickinson prior to restoration in the Rococo garden at Painswick in Gloucestershire, previously only known through paintings. Similarly, over the last 10 years Lesley Howes has carried out a series of excavations for the Painshill Park Trust, Surrey, where many features of Hamilton's 18th-century pleasure grounds are being restored.

The National Trust regularly uses archaeology before restoration. Excavations at Biddulph Grange, Staffordshire, proved invaluable when locating lost features within the gardens. Assessments are being used increasingly at the earlier planning stages of projects, as at Ham House, Richmond upon Thames. By using archaeological techniques earlier in the design process people can make informed decisions about the period, layout, and detail of the proposed restoration.

Formal recognition

Garden Archaeology received formal recognition in 1986 when the Council for British Archaeology supported a major conference on the subject at Leicester. The proceedings, edited by Tony Brown, were published in 1989. (CBA report 78.)

The growth of popular interest in garden history and the current marketable value of heritage gardens has led many organisations to realise that investment in restoration or reconstruction has a value beyond academic research. Recording and research have been aided by the development, since 1985, of the English Heritage *Register of parks and gardens of special historic interest* and by the growth of the Garden History Society and the county Garden Trusts. These organisations have produced valuable information for county Sites and Monuments Records (SMRs).

The Strawberry Hill Conference

Confirmation that garden archaeology had come of age was seen last June when English Heritage and ICOMOS UK sponsored a three-day international conference, 'Techniques and uses of garden archaeology'.

The conference attracted 124 delegates from as far afield as Poland, Sri Lanka, the USA, Israel, and Slovenia. It was a great opportunity for garden designers and historians, archaeologists, landscape architects, owners, and managers, to discuss the issues underlying the work through a series of workshops organised by garden consultant David Jacques.

Delegates discussed a number of topics including the need for clear and early project planning, the benefits of involving archaeologists in interpretation of information, the subjective quality of choice in deciding on the period for restoration, and the potential for damage to historic evidence caused by destructive techniques or new work in the cause of restoration. What was clear was that almost all of the archaeological work being carried out in gardens was to inform restoration or reconstruction and that as yet there had been very few research projects or analysis of results to compare different techniques.

Future communication

Papers from the main speakers and the results of the workshops will be published in 1996 as a special issue of the Journal of Garden History USA, supported by grants from the US National Park Service and the National Centre for Preservation Technology and Training, USA, and will be available through ICOMOS UK. ICOMOS is also preparing guidelines for garden archaeology, which will be considered by English Heritage before preparing their own policies.

There remains a need for better communication between specialists and professionals, further opportunities for discussion, and a requirement to collate, disseminate, and use the information already available. Current garden archaeology projects are often inaccessible to non-archaeologists and difficult to interpret by designers and garden managers. Many projects are not published at all: the research is commissioned as part of a management plan and the resulting archaeological report given to the owner. Thus it remains inaccessible to all but the most determined researchers.

The Gardens and Landscape Team at English Heritage is currently setting up a simple, easily accessible database to record, by site, information on assessment, field study, techniques used, and features identified. It will also hold detailed published and unpublished reports. This database will be compatible with that held by York University for the Inventory of Historic Parks and Gardens and will interest all involved in garden restoration. A newsletter will be sent out later this year, initially to conference delegates, but eventually to any interested parties, to keep readers in touch with current projects and to encourage them to contribute news and views and provide information for the database.

Lorna McRobie

Director, Gardens and Landscape

Revealed between the tides

Excavations in progress at low tide at the Neolithic site of The Stumble, Blackwater Estuary; Osea Island is visible in the background

English Heritage is supporting archaeological research in intertidal zones of the coastline. Here we focus on the Hullbridge Survey in Essex

Evidence for rising sea levels provided by the existence of archaeological sites within the intertidal zone of the English coast has been appreciated since the late 19th century. In Essex a classic study of prehistoric sites on a submerged land surface (the so called 'Lyonesse surface') was undertaken in the early 20th century by SH Warren and his colleagues.[1] With a few exceptions, however, intertidal sites were thereafter neglected by professional archaeologists until the 1980s. Since then, intertidal survey and excavation projects have been supported by English Heritage and other bodies in several areas, including the coast of Essex (the Hullbridge Survey and, more recently, at the large complex of Anglo-Saxon fish traps at Collins Creek), Lincolnshire (the Humber Wetlands Project), Isle of Wight (the Wooton-Quarr Project), and the Severn Estuary. Survey results from the first of these projects have been published, and a second volume will follow.[2]

While intertidal archaeology often presents problems of access and exceptionally difficult working conditions, it offers archaeologists unparalleled opportunities for research. Site preservation is commonly excellent. In Essex land surfaces and archaeological sites on them, predating flooding caused by relative sea-level rise, are sealed by thick deposits of estuarine sediments and peats. These were originally dry-land sites when occupied, so there is rarely any preservation of contemporary waterlogged deposits. The thick sedimentary cover has, however, protected these sites from weathering, truncation by ploughing, and disturbance by roots and faunal burrowing: processes which cause extensive damage to similar sites that remain on dry-land. In the overlying sediment, wooden structures and artefacts are well preserved by waterlogging.

Essex survey

In Essex extensive areas of well-preserved Neolithic land surfaces have been shown to survive in the intertidal zone. Studies of soil structure, pollen, charred crop remains, and animal bones have yielded a detailed picture of the Neolithic environment and of the economy of its inhabitants. One settlement site located by the survey, now on an open mudflat known as The Stumble, was shown to have been located in a landscape of woodland, dominated by oak, lime, and hazel when occupied. A radiocarbon date of 3640–3140 BC on charred grains of emmer wheat provided evidence for early cereal production, but charred remains of hazelnuts, sloe, and other wild fruits indicated substantial reliance by the Neolithic community on wild plant food collection.

Radiocarbon dating shows that the lance surface began to be submerged by rising relative sea-level about 2500–2000 BC. Studies of the sediments deposited have given a picture of a changing coastal environment, with phases of retreat by the sea, when freshwater conditions were established. From the Bronze Age onwards, sites located by the survey were clearly coastal rather than terrestrial in character and were exploiting marine resources. Bronze Age sites included a salt-evaporating hearth, fuelled partly with cereal waste, a 2m long oak paddle, and numerous wooden structures representing trackways, platforms, and probable landing stages. Similar wooden structures were constructed on the foreshore throughout later prehistory and into the post-medieval period.

In the Late Iron Age and the early Roman periods the Blackwater Estuary in particular was the focus for large-scale salt production, and many of the saltern sites, known locally as ‘Red Hills’, associated with this industry were recorded. On Canvey Island, Roman and medieval shelly deposits were recorded; in part these seem to have been middens, though material was also dumped to raise the ground level. The deposits produced abundant remains of shellfish and fishbones, including cod, whiting, haddock, herring, and eel, as well as a mammal bone assemblage dominated by sheep and/or goat – perhaps some indication of the beginnings of the large-scale sheep grazing on coastal marshes recorded in Domesday.

Part of an Iron Age roundwood ‘bridge’ under excavation at The Stumble

Bronze Age wooden paddle under excavation at Canewdon, Crouch Estuary

Protecting intertidal sites

The practical problems of locating and recording intertidal sites are considerable. Sites are exposed twice daily, but those low on the shore are accessible only for short periods between tides. Planning, photography, and collection of artefacts and soil samples have to be completed rapidly and efficiently. Many sites can be reached only by crossing mudflats, which limit the equipment that can be used, or by boat on a falling tide. Working conditions on an exposed mudflat are often exceedingly unpleasant, even in summer. However, the discomfort is amply justified by the results.

The survey report is already being used to aid decisions on site management in Essex. Threats to intertidal sites are many. First, and foremost, there is continued marine erosion. Sites are only visible on the foreshore and in creek sections because they are being actively eroded: many other sites must exist on accretional and stable coastlines but these are currently concealed by sediments and are unknown to us. The results of the survey demonstrated that many of the prehistoric sites recorded by Warren up to the 1930s had been almost totally destroyed by erosion by the 1980s. Direct observations showed that a substantial prehistoric wooden structure was destroyed almost entirely within three years of its first detection, and that an exposed Neolithic level lost 1–2 cm per annum from its surface. Loss of archaeological information can be countered by continued monitoring and recording of sites as they continue to erode, but active measures to stop erosion would inevitably be very expensive and could only be justified for sites of very high importance.

A second threat can be caused by construction work on the foreshore: for example the excavation of basins for marinas and improvement of concrete sea defences. Damage is not just restricted to that caused by the operation of heavy machinery at a particular site: new sea defences may result in a reduction of sediment supply and hence accelerated erosion elsewhere, at some distance from the scheme. Other types of ‘soft’ coastal protection involving beach nourishment could well be advantageous for site survival, by introducing an artificial sedimentary cover. There is clearly scope here for collaboration with coastal managers, and for using archaeological survey reports as a contribution to Environmental Impact Assessments when changes to coastal defences are proposed.

Besides processes resulting in the wholesale removal of archaeological deposits, alterations to the hydrology of the intertidal zone may also be damaging, particularly to organic deposits and wooden structures. Where coastal wetlands are being embanked and drained, there is the familiar problem of ‘de-watering’. Managed coastal setback may also have archaeological impacts. At present only in an experimental stage, this strategy may involve breaching existing sea walls considered to be indefensible, and allowing the coastline to develop naturally. This will cause re-wetting of deposits behind sea walls which at present are at least partly dewatered, with unknown effects and unpredictable chemical and physical changes to archaeological remains in the areas relinquished. Preliminary site investigation is required to evaluate sedimentary stratigraphy and archaeology prior to any scheme involving flooding of currently reclaimed areas.

Intertidal sites represent an important but diminishing source of information on the lives of past coastal communities and provide near-optimal preservation conditions for organic materials. The priority now must be to ensure that representative examples survive for future investigators.

Notes

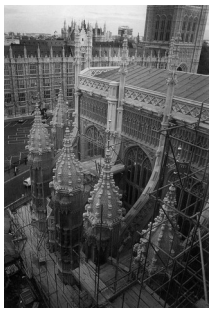
1 SH Warren, S Piggott, JGD Clark, MC Burkitt, H Godwin, and M E Godwin 1936, Archaeology of the submerged land-surface of the Essex coast, *Proceedings of the Prehistoric Society*, **2**(2), 178–210

2 TJ Wilkinson and PL Murphy 1995, *The archaeology of the Essex coast, volume 1: the Hullbridge Survey*, East Anglian Archaeology, **71**, Chelmsford

Peter Murphy

Centre of East Anglian Studies, University of East Anglia EH Ancient Monuments Laboratory, Contractor

Churches and listing: the Ecclesiastical Exemption Order



The Henry VII Chapel, Westminster Abbey, recently restored: controls over church buildings outside the faculty jurisdiction system still have to be resolved

More than a year has passed since the Ecclesiastical Exemption Order took effect in October 1994. We assess English Heritage's experience so far

Although the details are complex, the principle of the Order is simple: ecclesiastical exemption from listed building control is confined to those denominations who had agreed to operate in accordance with the Government's Code of Practice, set out in *Planning Policy Guidance Note 15* (PPG15). These include the Church of England, the Church in Wales, the Roman Catholic Church, the Methodist Church, the United Reformed Church, and the Baptist Union. Churches of some Scottish denominations situated in England also keep the exemption at present, as no parallel Order has been made in Scotland. All other denominations and faiths now need listed building consent from the secular planning authority.

The Department of National Heritage indicated, when the Order was made, that they proposed to review the operation of the exemption after two years and that the Order can be changed, subject to Parliamentary procedure, either to amend the list of exempt denominations or by altering the works exempted from listed building control. The Secretary of State can also withdraw the exemption in individual cases.

The key requirements of the Code of Practice are that:

proposals are considered by a body independent of the individual church, with expertise in historic church buildings and members selected in consultation with local authority associations, English Heritage, and the amenity societies

proposals are publicly advertised, and the comments received considered

decisions take into account the desirability of preserving historic church buildings and their contents

there is provision for appeals or further representations

a record of decisions is kept, and notified to amenity bodies

Individual denominations

The Church of England's faculty jurisdiction system covers works for which listed building consent would be required under the secular system; it also covers repairs and new contents and furnishings (eg altar frontals) which would not be subject to secular control. The Diocesan Chancellor decides the faculty application, taking advice from the Diocesan Advisory Committee (DAC). Changes to faculty jurisdiction, introduced in 1993, require English Heritage, local authorities, and the national amenity societies to be especially 'cited' (ie notified) on proposals affecting the character of a listed church or its

archaeological importance, or on the demolition of an unlisted church in a conservation area, before the Chancellor decides a faculty application.
While this should ensure that we are adequately consulted (and, following liaison with individual dioceses, the situation is gradually improving), proposals can fall between two stools so that the relevant bodies are not notified at all. Another problem is that English Heritage may comment to the parish at an early stage, but not be notified later of changes to proposals. English Heritage now has 'link members', some of whom are members of staff, on almost all DACs. We value this link very much, and it helps to foster mutual understanding, but we also recognise the considerable demands placed upon DACs, most of whose members are effectively voluntary, with an increasing volume of business and the need to obtain the right balance of expertise.
The Roman Catholic Church is setting up Historic Churches Committees (HCC) to decide applications for their dioceses. All but two English dioceses had set up committees – or were in the process of doing so – a year after the Order came into force (ie end of September 1995). However, not all committees had dealt with applications by that date as some dioceses have only a few listed churches. Thus far about half the notifications to English Heritage have concerned repairs and the rest have been reorderings, including furnishings. The HCCs also deal with cathedrals.
The Methodists have a single Listed Building Advisory Committee, which advises the General Secretary of the Property Division. The notification procedures are handled efficiently: English Heritage had been notified of more than 50 applications by the end of September. Many proposals were modified in the light of comments from consultees, although English Heritage was concerned that its advice, and that of the Committee, was overruled in major reordering proposals affecting Barnby Gate Chapel, Newark.
The United Reformed Church has 11 Provinces within England. Each of these has set up a Listed Buildings Advisory Committee, whose advice on proposals is considered by the Provincial Property Committee. The few cases notifed to English Heritage by the end of September were not generally controversial: we are making contact with all the Provincial Secretaries to discuss how the notification system is working in practice.
Congregations belonging to the Baptist Union send all proposals affecting their buildings to the appropriate Trust Corporation for their area. The Corporations then send proposals affecting listed buildings to a single national Listed Buildings Advisory Committee. By the end of September 1995 14 listed building cases had been dealt with, most of them relating to minor alterations. Three of these required substantive English Heritage comment, and we sought further negotiation. One proposal to insert pvcU doors was refused following English Heritage comments. Because of the low caseload the Committee has met irregularly, and by September had not produced the promised guidance document on the approval procedures. Notification procedures, however, seem to be working adequately.

The future

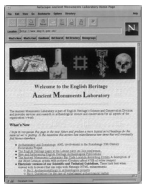
It is perhaps not surprising that those denominations introducing new controls over their historic buildings have taken some time to begin implementing them. The small caseload of some of them in the first year also makes it difficult to draw conclusions. Much has been done, and much expertise harnessed. We hope that as 1996 continues procedural teething troubles can be resolved. But the procedures are not there for their own sakes: conservation bodies, including English Heritage, will also wish to be confident that the procedures are being operated in a way that gives adequate weight to the conservation considerations. The issue of Peculiars (ecclesiastical buildings not subject either to listed building control or to the denomination's own control, such as many school, university, or hospital chapels, and religious communities) also needs to be resolved.
With greater experience of the procedures, denominations will no doubt wish to look carefully both at the benefit of retaining the exemption and the work involved in

maintaining their own internal systems. We await the outcome of the second year with great interest.

Paula Griffiths

Secretary, Cathedrals and Churches Advisory Committee

Global interaction



The English Heritage Archaeology Division World Wide Web Home Page

News from English Heritage's Archaeology Division which now has a World Wide Web server on the Internet

English Heritage's Archaeology Division has a World Wide Web server on the Internet at URL: **http://www.eng-h.gov.uk/**. At present the server provides information about the work of the Ancient Monuments Laboratory (AML) and includes: access to the database of geophysical surveys carried out by the Archaeometry Branch (with hypertext copies of recent reports), electronic versions of our scientific and technical guidelines series, an online copy of the six-monthly AML report summaries listing, a presentation describing the scientific work carried out by the AML for the Stonehenge 20th Century Excavations project, and a selected list of English Heritage archaeological publications.
The service, which attracts around 2,000 queries per week, has been running for over a year as a pilot exercise for a broader English Heritage Internet strategy. Later this year it will be re-launched in conjunction with a second server to form a comprehensive English Heritage Web site. The new server will provide general information about all the activities of English Heritage, including details of our historic properties, press releases and position statements, publications and educational resources, and information about membership and events. At the same time, the existing server will be furnished with additional material to cover the full range of English Heritage's archaeological work, including an electronic version of the 1995 *Archaeology review* and details of the Archaeology Commissions programme.

Paul Linford

AML, Archaeometry Branch

MPP and scheduling

Many factors have changed since the Monuments Protection Programme was established in 1986 but even after a decade, scheduling remains a daunting task

The Monuments Protection Programme was established in 1986 to assess the importance of England's ancient monuments. It aims to determine which nationally important sites would benefit from the specialised protection of scheduling. This task also includes overhauling the existing schedule which has been increased from about 12,500 sites to more than 16,000, largely by adding new monuments and by confirming or revising a large number of schedulings.

Scheduling is only possible because of the MPP's desk-based evaluation of monuments in over 200 classes using SMR data and working in partnership with local authorities, and of other major classes of monument using specially commissioned projects, eg medieval rural settlement in 'Who settled where, and why?' (*Conserv Bull*, **26**), 20th century defences in 'Defining our defence heritage' (*Conserv Bull*, **27**), and industrial archaeology in 'Choosing industrial monuments' (*Conserv Bull*, **27**).

An end to the process of evaluation is coming into view but scheduling remains daunting. Many factors have changed since 1986 and more changes lie ahead, including the impact on SMRs of local government reorganisation, the Green Paper on heritage conservation, and the imminent availability of indicators from the MARS project. This changing context is causing a reappraisal of objectives and approaches. As part of this, new emphasis is needed on publicising the MPP and disseminating its results.

A first step (following an article in *Country Landowner* on the MPP) is the publication in spring of advice for owners and occupiers on the effects of scheduling. The new guide will supplement the EH leaflet *Introduction to the Monuments Protection Programme* and will cover the scheduled monument consent system and the desirability of sympathetic management.

Graham Fairclough

Head of Monuments Protection

Planning for the past

English Heritage has issued new guidance for local authorities about how best to deal with important archaeological remains which might be affected by development

The issuing of Planning Policy Guidance Note 16: Archaeology and planning (PPG16) in 1990 ensured that archaeological site management was placed firmly within the framework of the Town and Country planning system. The guidance confirms that important archaeological remains should be preserved *in situ* wherever feasible and advises local authorities that planning decisions should be informed by an understanding of the character and significance of any remains likely to be affected by development. In this way they can ensure that irreplaceable evidence for our past is not needlessly or thoughtlessly destroyed.

The effectiveness of this archaeological contribution to the planning process depends on three factors: first, archaeological advice provided by staff of local Sites and Monuments Records; second, the inclusion within development plans of sound archaeological policies; third, archaeological assessment procedures designed to ascertain the archaeological sensitivity of individual development proposals. These procedures include *desk-based assessment* (studies of existing information) and *field evaluation* (specifically commissioned fieldwork, which often includes sample excavation).

We have already assisted with the establishment of Sites and Monuments Records in every county and have published advice on model development plan policies for archaeology. We are now addressing point three of the archaeological planning process by means of our *Planning for the past* project, commissioned jointly from the universities of Bournemouth and Southampton, which provides a preliminary survey and analysis of archaeological assessment procedures in England. Bournemouth University conducted a nationwide survey and analysis of archaeological assessment and evaluation procedures in the period leading up to and immediately after the publication of PPG16, while the University of Southampton studied the archaeological input into the planning system in Berkshire and Hampshire, two counties which were implementing exemplary archaeological assessment procedures prior to the release of PPG16.

English Heritage has published reports on the project as *Planning for the past, volumes 2 and 3*, as well as providing a policy statement and non-technical summary of its results, aimed at planners, developers, and others outside the archaeological profession, in volume 1. We have also assisted publication of the gazetteer of archaeological assessment work up to 1991 as a supplement to British Archaeological Bibliography. The project has identified a number of methodological and procedural challenges which face archaeologists engaged in commissioning or undertaking assessment work. Additionally, it has illustrated the body of archaeological investigative work which is now carried out under the umbrella of the planning process and has served to highlight its academic as well as practical value. In order to ensure that the full benefit of this work continues to be widely available for future research and continuing scrutiny, we have already commissioned work aimed at updating the survey to 1995 and intend to undertake further periodic reviews.

Stephen Trow

Conservation Group

Copies of *Planning for the past* from English Heritage Postal Sales, PO Box 229, Northampton NN6 9RY; phone orders on 01604 781163; fax orders on 01604 781714. Vol 1 is free (quote product code XC10701); vols 2 (XC10702) and 3 (XC10703) are £12 each.

BOOKS

Garden research explained

Researching a garden's history: a guide to documentary and published sources by David Lambert, Peter Goodchild, and Judith Roberts, 2nd ed 1995, published by Landscape Design Trust and the Institute of Advanced Architectural Studies, University of York, £6

I consider *Researching a garden's history: a guide to documentary and published sources* an absolute must for anyone interested in starting garden history research, for example local authority staff, new consultants, and voluntary county recorders working on either single sites or on county inventories of historic parks and gardens. Although the title might suggest a mere list of sources, the publication is in fact a practical guide on how, what, why, and where to carry out research, including field survey, and how best to present the results as a valuable archive of use to others.

It is a 28-page magazine-style publication, written by leaders in the field from the Landscapes and Gardens Section, IoAAS, University of York. The writers have 15 years experience in carrying out this type of work and in training others in MA and shorter courses in the conservation of historic parks and gardens. These guidelines should establish national standards for this type of research, which will facilitate the national inventory of gardens being developed at IoAAS.

The booklet is clearly and simply written, with tables, checklists, and references for each section, placed in boxes for clarity, and illustrated with the range of sources available. It is equally suitable for encouraging absolute beginners to get started, as well as more experienced researchers who are new to this particular field.

Starting with 10 practical applications for historical research into gardens, the book immediately establishes a tone not of a dry academic exercise, but of an important first step towards action. It suggests how to carry out a broad county or area survey of parks and gardens, then, in more detail, the research practice required for a single site.

The primary sources of maps, illustrations, and estate and family papers are well described, together with other wider textual and oral sources. The need for elementary fieldwork to supplement desk research is also emphasised. A short section, new in this second edition, on sources in Europe outside the UK is a thin but useful start, which is being developed through a growing network of contacts and will no doubt be expanded in the next edition.
The section on 'Repositories' is particularly useful, not only for giving the materials available in each type, but also for advice on how to gain access to repositories, although there are no details about the opening hours and procedures of some repositories. The bibliography is necessarily selective but is an excellent start from which further references and bibliographies can be approached.

Lorna McRobie

Director of Gardens and Landscape

If walls could talk

Tracing the history of your house by Brenda Greysmith, 1994, published by Hodder and Stoughton, £8.99

If you are the type of person who finds it fascinating to wonder about the history of a particular old building, to imagine what kind of life its previous occupants had, and to ponder on what has happened within its walls in the distant past, then this book will be of interest to you.
Written by Brenda Greysmith, who edited *Traditional Homes Magazine* for a number of years, *Tracing the history of your house* gives some guidance on how to go about finding out such details. The book is well illustrated with many good-quality photographs and clear, precise line drawings. A bibliography of architectural books and list of useful addresses is also included.
Tracing the history of your house is a practical guide, providing information on building styles, materials, and other architectural developments through time. It includes some coverage of all periods up to the 1930s and even has sections on the suburban semi. One chapter is devoted to the various main elements of building construction, detailing specific points to observe and to help you understand a building's history and any changes that may have been made to its structure.
The book seems to have been written to appeal to the enthusiastic amateur and home owner. It contains many snippets of interesting information but overall is rather frustrating because it tries to cover too much ground and lacks the detail that would make it really useful. Yet despite these limitations it is a useful addition to homeowners' libraries.

Nigel Oxley

Architectural Conservation

Money matters

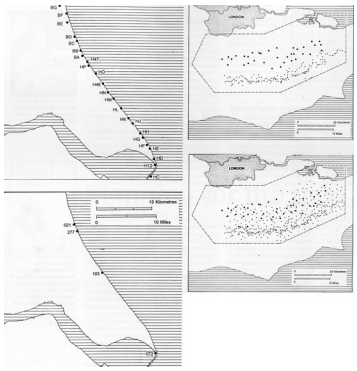
The economics of architectural conservation. Based on the proceedings of a consultation at the King's Manor, York, 13–14 February 1995, edited by Peter Burman., Rob Pickard, and Sue Taylor, 1995, published by the University of York, £20

This book has been produced by the Institute of Advanced Architectural Studies and is a summary of the papers presented at the consultation entitled 'The Economics of Architectural Conservation' held in February 1995. The book is divided into three sections: the first, entitled 'Current perspectives', contains six papers covering a range of highly topical current issues; the second details examples of conservation from six different European cities; the third section, entitled 'Practice issues', deals with detailed practical issues.
The publication is designed to stimulate thought around the issues of conservation and it is clearly targeted at practitioners within the field. It is not designed as a text book and many of the papers would merit further research.
I found the format attractive. The papers are well presented and supported by illustrations. The text is very readable and full of stimulating ideas which are highly practical in their application. This is a document that is well worth including in the practitioner library. It should be read by practitioners as a catalyst in promoting new ideas for taking conservation issues forward in a commercial world where conservation and business economics must exist hand in hand.

Richard Whittaker

Chief Quantity Surveyor

Corrections



The maps, left, show Operation Diver sites in Holderness: at the top left are sites recorded through the documentary survey; at the bottom left are those located by fieldwork in 1992; sites BG, BF, and BE on the top map lay outside the fieldwork survey area. The maps, right, show the Kentish Gun Belt: HAA (large spots) and LAA (small spots) distribution, 25 June 1944 (top right) and 27 June 1944 (bottom right)

The editors wish to apologise to the authors for two unfortunate errors in the November 1995 issue of *Conservation Bulletin* (no **27**).
The first error is in the title of the article on page 20, by Anthony Streeten. The correct title should read: 'Planning consultations (not consultants) for historic parks and gardens'.
The second error relates to the two maps on pages 12 and 13 in the article 'Defining our defence heritage' by John Schofield and Jeremy Lake. The caption refers to 'top' and 'bottom' parts of each of the maps. There should in fact have been four maps, ie two sets of two maps each. For clarity, the *four* maps and the appropriate caption are here reprinted.

NOTES

Conferences

International sympos UM on timber framed buildings, 14–20 April 1996: ICOMOS UK will host a symposium to provide an opportunity to look at a selection of outstanding timber buildings, to see different regional traditions, and to discuss conservation strategies with leading international and British specialists. The emphasis will be on visits around England, to observe work in progress. There will also be discussions on conservation techniques during the day and lectures in the evenings. The organising panel comprises Richard Harris, Prof Dr Knut Einar Larsen, Peter McCurdy, Nils Marstein, David Michelmore, Graham Moss, and Dr David Yeomans. Further information from ICOMOS UK, 10 Barley Mow Passage, Chiswick, London W4 4PH, tel 0181 994 6477, fax 0181 747 8464.

XIX Congress of the International Union of Architects, first week of July 1996. This year's title is 'Present and futures: architecture in cities' and the congress will include formal presentations, seminars and debates, exhibitions, architectural tours, and competitions for professional architects and students. Principal exhibitions and debates will focus on the title theme and on contemporary Barcelona. Exhibitions will include 'European architecture 1984–1994', 'Twenty years of architecture in Madrid', 'Art-chitectures', 'Museums: from temples of art to art dissemination centres', 'Less is more: minimalism and architecture', 'Salvador Dalí and the architectural metaphor', 'Urban revisions: current projects for the public realm', 'Catalan architecture', and 'Ten years of Spanish architecture'. Further information and preliminary programmes available from UIA Barcelona 96, Plaça Nova, 5, E 08002 Barcelona, tel (34 3) 301 50 00, fax (34 3) 318 60 29; email uiabarcelona96@servicom.es.

Courses

Copies of *MasterClass*, the English Heritage programme of courses for 1995–1996 at the Building Conservation Training Centre, Fort Brockhurst, Gosport, Hampshire, were distributed with the July 1995 issue of *Conservation Bulletin* (no **26**). Further copies and updated information are available from Architectural Conservation Branch, Room 528, 429 Oxford Street, London W1R 2HD, tel 0171 973 3668.

'Resolving conflicts in building conservation', 11–14 April 1996; non-residential and day-school options: Association of Conservation Offices Annual School, Keble College, Oxford, Presentations and discussions will address working with fellow professionals to ensure that the advice given to the owners of historic buildings produces solutions which are acceptable to all. Details and registration from Louise Cella, 11 Chapel Close, South Stoke, Oxon RG8 WW, tel 01491 872223.

'Structure and style: conserving mainstream architecture of the twentieth century', 23–24 May 1996: the University of York's Institute of Advanced Architectural Studies, Centre for Conservation Studies will host this course at the King's Manor, York. The course will address the challenge of conserving offices, factories, public buildings, and housing; contributors will evaluate building stock, the use of steel and concrete, and cladding materials, as well as debating philosophical issues in evaluating and conserving buildings of this century. Contributors will include Prof Andrew Saint (Cambridge), Ken Powell (Chairman, Twentieth Century Society), Robert Thorne (Alan Baxter & Associates), Peter Ross (Ove Arup), Dr Bill Addis, and Susan Macdonald (English Heritage). Details from Ms Therese Tooms, Events Administrator, IoAAS, The King's Manor, York YO1 2EP, tel 01904 433975, fax 01904 433949.

'Building survey and recording week', 3–7 June 1996: the University of Oxford's Department for Continuing Education, in association with the Royal Commission on the

Historical Monuments of England, will provide an intensive training course designed to introduce students to skills and methods suitable for surveying and interpreting historic buildings, and will also show them how best to present the results. Further information from: Historic Conservation Course Secretary, Oxford University, Dept for Continuing Education, 1 Wellington Square, Oxford OX1 2JA, te1 01865 270360.
The South Eastern Museums Service will hold several one and two-day courses from March to July 1996: ‘Object handling and packing’ (14 March), ‘Caring for ceramics, glass, and plastic’ (19 March), ‘Managing volunteers’ (23 April), ‘Risk assessment and insurance’ (30 April; 4 June), ‘Disaster planning’ (14 May), ‘Caring for wood’ (21 May), ‘Fundraising’ (23 May), ‘Registration phase II’ (30 May), ‘Marketing your collection to schools’ (11 June), ‘Basic design and display’ (25–26 June), ‘NVQs’ (27 June), ‘Project planning for an exhibition’ (1 July), ‘An attendant’s guide to schoolchildren’ (9 July), ‘Training non-specialist staff to work with schoolchildren’ (11 July). Further information and booking forms are available from Carolyne Roberts, South Eastern Museums Service, Ferroners House, Barbican, London EC2Y 8AA, tel 0171 600 0219, fax 0171 600 2581.

Publications

Repair of ancient buildings by AR Powys, first published in 1929 by the Society for the Protection of Ancient Buildings (SPAB), has been reprinted by SPAB, reproducing the original text and update notes added to the edition of 1981. This classic book describes methods established in accordance with the principles of SPAB as laid down in 1877 by its founders, who included John Ruskin and William Morris. Available from SPAB, 37 Spital Square, London E1 6DY for £12 (hardback) + £1.50 p&p.
A substantially revised edition of *Conservation Area Practice: English Heritage guidance on the management of Conservation Areas*, first published in June 1993, is now available from our Customer Services Department, tel 0171 973 3434. The revision takes account of the publication of PPG15: *Planning and the historic environment* and the introduction of Article 4(2) directions, but the substance of our advice remains unchanged.
The Georgian Group has compiled and published lists of specialist craftsmen and suppliers of conservation materials, concentrating on six main areas: metalwork, glass suppliers, joinery, lime suppliers, paint suppliers, and wallpaper suppliers. These are free to members of the Georgian Group and cost £5 (incl p&p)to non-members, and can be obtained from Jo Brown, The Georgian Group, 6 Fitzroy Square, London W1P 6DX, tel 0171 387 1720, fax, 0171 387 1721.

English Heritage membership

As guardian of more than 400 historic properties, English Heritage is responsible for the conservation of such outstanding monuments as Wigmore Castle, above. Proceeds from membership help fund the rescue of this and other important sites
Since our foundation in 1984 our membership scheme has grown dramatically and we now have some 360,000 members. We offer both annual and life membership in a range of categories, and for convenience people can join at all staffed sites or through the membership department itself.
The main benefit of membership is free entry to English Heritage sites. Other benefits include free admission to all special events and reduced price concert tickets. Reciprocal agreements offer free or discounted entry to sites in the care of our Scottish, Welsh, Manx,

Australian, and New Zealand counterparts. Members receive a free quarterly magazine, *Heritage Today*, and are regularly offered exclusive open days, lectures, and other promotions. Regular information on conservation issues is supplied, mainly through the magazine, because we are aware that the majority of our members join us in order to support our work as well as for the direct benefits conferred by membership.

A recent addition to the membership department is the customer services function, which is the clearing house for all enquiries to the organisation. The staff prides itself on usually being able to direct a query to the most appropriate section of English Heritage. The team answers queries about our special events and concert programmes, is responsible for administering English Heritage's complaints procedure, and sends out almost all our free and promotional literature, including advice and guidance notes on conservation issues and policy.

Membership is available at a wide variety of cost; full details are available from English Heritage Customer Services, 429 Oxford Street, Room 305, London W1R 2HD, telephone 0171 973 3434.

As a guide, the various types of annual membership include: individual adult (£18.50), two adults at same address (£31), individual child under 16 years (£9), young person age 16–20 years (£12.50), family (£36), single-parent family (£20.50), senior citizen 60 years or more (£12.50), one adult and one senior citizen at the same address (£26), and two senior citizens at the same address (£21). Life memberships include: individual (£365), joint (£525), senior citizen (£220), and joint senior citizen (£315). These prices are valid until 31 March 1996.

Peter Tyrrell

Membership Manager, Customer Services

Obituary: Francis G Dimes

For many years Francis G Dimes, who died at the age of 75 on 8 October 1995, was English Heritage's consultant geologist. He worked for the Architectural Conservation Branch on many problems concerning the identification, sourcing, and supply of good stone for repair and maintenance of historic buildings and monuments in private hands and in state care.

In addition, Frank was formerly Keeper of Building Stones in the Geological Collection of the Natural History Museum, London, and although he retired from the civil service some 15 years ago, he remained active and increased his specialist services for conservation. He wrote many publications and was contributor and co-editor with Professor John Ashurst (formerly of English Heritage) of *Stone in Britain* in 1978. Their joint publication, *Conservation of building and decorative stone* attracted wide acclaim in 1991.

Many professionals at English Heritage will know of Frank because of his highly informative and entertaining courses on 'Nature and use of stone for building and decoration' with the Standing Joint Committee on Natural Stone, of which Frank was a founding member with architect Donovan Purcell.

While a consultant geologist at English Heritage Frank helped collect, catalogue, and record our geological collection of historic building stones, housed on the fifth floor at 429 Oxford Street.

He will be remembered for his vast knowledge and unerring modesty, and for his sense of humour. Frank will be missed by all within the Architectural Conservation Branch: we all feel privileged to have worked with such a personable scientist.

Sasha Barnes

Architectural Conservator, Architectural Conservation Branch