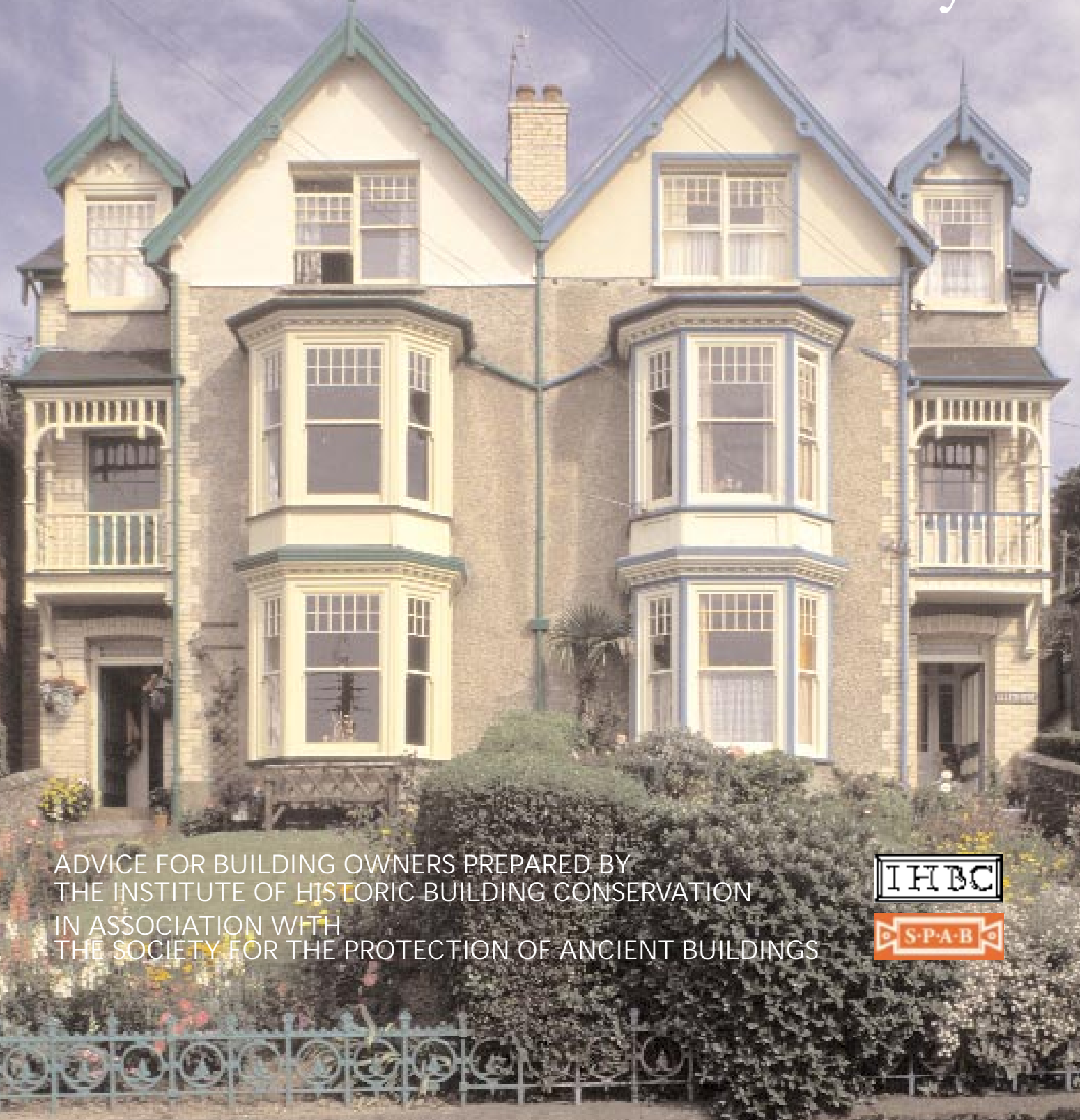
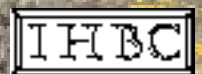


A STITCH IN TIME

Maintaining Your Property
Makes Good Sense and Saves Money



ADVICE FOR BUILDING OWNERS PREPARED BY
THE INSTITUTE OF HISTORIC BUILDING CONSERVATION
IN ASSOCIATION WITH
THE SOCIETY FOR THE PROTECTION OF ANCIENT BUILDINGS





THE INSTITUTE OF HISTORIC BUILDING CONSERVATION

MAINTAINING STANDARDS

The Institute is the principal body representing professionals and specialists involved in the conservation of historic buildings and their surroundings throughout the UK. The membership includes most local authority conservation officers, staff in central government, English Heritage and the Heritage Lottery Fund as well as practising architects, surveyors, engineers and other consultants.

The objects of the Institute include the promotion of training and education, providing advice and publishing guidance. Membership is subject to passing a threshold of competence achieved through a combination of formal study and practical experience. This is designed to ensure that all members of the Institute are equipped with the necessary skills for safeguarding and promoting the historic environment.

If you would like to know more, please contact
the Institute at Jubilee House, High Street, Tisbury, Wiltshire SP3 6HA.
Website: www.ihbc.org.uk
Company no: 3333780 Charity no: 1061593



DAILY CARE

On founding The Society for the Protection of Ancient Buildings in 1877, William Morris spoke of the need to “stave off decay by daily care, to prop a perilous wall or mend a leaky roof”. Maintenance is important to buildings of all ages and types and is as vital today as it was in Morris’s time. In November 2002 the SPAB launched the first National Maintenance Week to focus owners’ attention on the care of their buildings. Checking your gutters, drains, walls and roofs will keep your building healthy and save you trouble and money. This guide will help you achieve this.

The SPAB remains true to William Morris’s principles. In the 21st century we are still a charity, reliant on members and supporters. We advise owners, we lobby and we are involved in a huge range of issues affecting old buildings. The Society has helped save countless beautiful buildings, and has trained many professionals currently involved in their care.

Information about maintaining your building is available from the SPAB through publications, courses, and lectures. Members receive a quarterly magazine, a list of historic properties in need of repair that are for sale, and have the opportunity to take part in events.

If you would like to know more, please contact the Society at 37, Spital Square, London E1 6DY
Website: www.spab.org.uk
Charity no: 231307

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Author: David Wrightson, Acanthus Lawrence & Wrightson architects
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Further copies of this guide can be obtained from the IHBC and the SPAB at the addresses above, at £3 per copy, including postage and packing.

This guide may be downloaded free of charge from the following websites:
www.ihbc.org.uk
www.maintainyourbuilding.org.uk
www.english-heritage.org.uk



Edifice

STAY SAFE

Ensure that you carry out any building maintenance safely. Ladders, lofts and roofs present particular hazards. Watch where you tread, especially in roof spaces, and make sure you have enough light to see what you are doing. It is best not to work alone, but think of the safety of helpers and others beneath if working above ground level. Safety equipment is needed for some jobs, including gloves for clearing drains or removing pigeon droppings from gutters.

If in any doubt about safe access, particularly on roofs and in attics, use a reputable, professional builder for the inspection or work.

Do not touch old electrical cabling. Leave it to a qualified electrician to determine its condition. Oil and gas installations can also be dangerous if mishandled, and these too should be left to qualified technicians for repair.

For further advice, contact the Health and Safety Executive (see Useful Addresses, pages 22–24). Guidance on working at height is included in their document Health and Safety in Construction (see Further Reading, page 24).

Whether your house is a country cottage, in an urban terrace or a suburban semi, the same principles of good maintenance apply

Cover picture: These semi-detached houses in Devon demonstrate the benefits of regular and careful maintenance



Edifice



Edifice

Unless otherwise stated, the conservation treatments and repair methods described in this guide are not intended as specifications for remedial work. IHBC, SPAB, English Heritage, their agents and publisher cannot be held responsible for any misuse or misapplication of information contained in this publication. The inclusion of the name of any company, group or individual, or any product or service in this publication should not be regarded as either a recommendation or endorsement by IHBC, SPAB, English Heritage or their agents. Your attention is also drawn to the safety advice above. Building maintenance can be hazardous and care should be taken to ensure safe access at all times. If in doubt, use a reputable professional builder, or in the case of gas, oil and electrical installations, a qualified operative.



MAINTENANCE: WHY BOTHER?

FOR MOST OF US, MAINTENANCE CAN SEEM A REAL CHORE: SO WHY BOTHER? For example, mowing lawns or painting fences can seem unduly repetitious and boring until the finished result is seen and we gain satisfaction from their neat and tidy appearance. But there are other good reasons why property maintenance is worthwhile and can make sound economic sense.

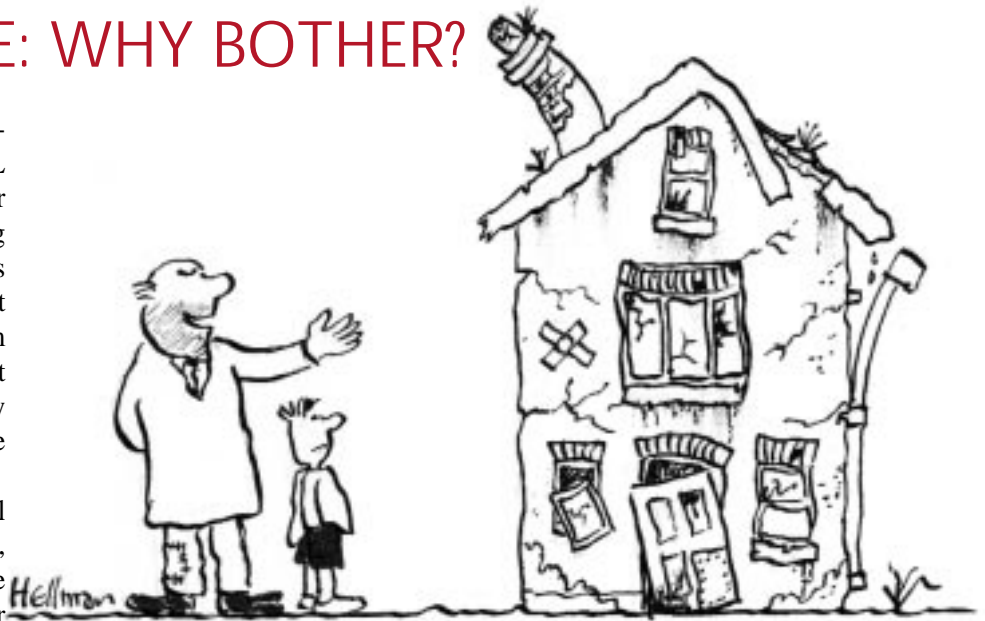
A well-looked-after building will almost always retain maximum value, but the cost of regular maintenance will more than repay itself whether or not you sell your property: for one thing, you will feel better not having to live with problems such as mould growing in the kitchen or water dripping through the roof. Regular inspections of older property can also help safeguard personal and public safety, particularly where there are ageing electricity and gas installations.

A small regular investment in maintenance can limit the need for, or extent of, expensive repairs: the annual cleaning of gutters and drains can be much cheaper and less inconvenient than having to cope with a serious outbreak of dry rot in timber roof trusses following years of neglect.

Old buildings also contain 'embodied energy'. All the effort and materials it took to build them in the past will be wasted if they are allowed to rot, which is hardly a sustainable position in the Age of Sustainability.

Well-maintained old buildings enrich the quality of life. They help preserve a sense of place at a time when familiar, cherished neighbourhoods are often under pressure to change. They foster a sense of continuity with the past. Or, to look at it

In this west London street, the exteriors of the houses are painted so as to preserve the architectural character of the terrace



'One day, Son, all this will be yours!'



Limewash is a traditional finish on rural cottages

another way, we are simply looking after these buildings for our children, and their children, so that they will have something worthwhile to inherit.

This guide is intended to encourage and help building owners to look after their property. Modest amounts of inspection, maintenance and repair carried out on a regular basis can safeguard the well-being and condition

"Just as most of us have our cars serviced at regular intervals, we need to take regular care of our buildings"

of a building, while failure to identify problems early enough can lead to major faults and damage, which may then be extremely expensive to put right. Just as most of us have our cars serviced at regular intervals, we need to take regular care of our buildings, because a few pounds promptly spent mending a leaky gutter can save many hundreds, or indeed thousands, of pounds that might have to be spent on repairs if the leak is ignored.

The subject of building maintenance is so vast that this guide can only offer a series of pointers to steer you in the right direction. It is intended chiefly for owners of old or traditionally-built structures, though much of its content may be relevant to newer building types. Although brief, the text is designed to give you a better insight into potential problems. If in any doubt, professional advice should always be taken.

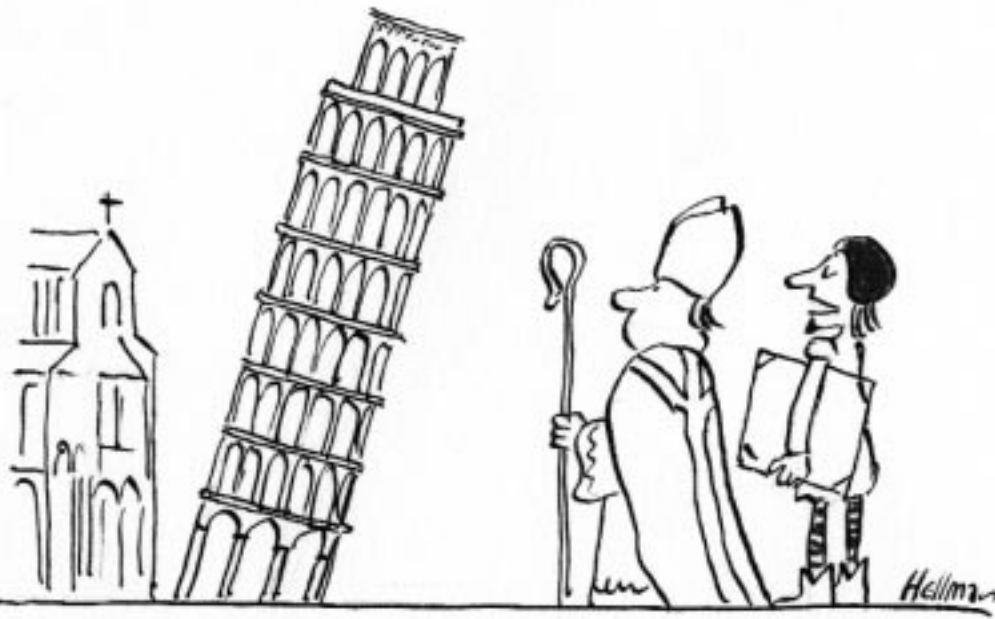
FIRST STEPS

START OFF BY CARRYING OUT, OR COMMISSIONING, REGULAR INSPECTIONS OF YOUR PROPERTY. Early warning of impending decay and deterioration makes it easier for you to take timely remedial action. The Church of England carries out thorough inspections of its churches every five years and most Government departments do the same with their properties every four years.

Owners of small properties can carry out inspections themselves. The work is not very difficult if you equip yourself properly and use a suitable checklist to investigate methodically the condition of key elements of construction. You can do a little basic maintenance as you go along: for example, if gutters are blocked with moss and leaves it is not difficult to clean them out and to check that rainwater flows to the drains without interruption.

If you find evidence of problems when you make the inspection, and do not know what to do next, you may need professional advice from a suitably qualified independent person, such as an architect, building surveyor or structural engineer. Try to find one who understands traditional buildings and specialises in their repair and refurbishment (not, for example, an architect who designs new office blocks for a living). Ask to see examples of their work and talk to past clients about their experiences.

If you are buying an old house for the first time, be aware that a building society or bank valuation report is not the same thing as a full building survey by a competent and suitably qualified professional. You can commission such a survey yourself. Alternatively, many mortgage companies now offer the full survey as an option. The extra cost is well worth it.



'No, it's perfectly stable...'

THE PROFESSIONAL APPROACH

The best way to avoid 'cowboy' companies is to hire experienced professionals, independent advisers and competent tradespeople who are knowledgeable about old buildings and trained in working with them.

A professional will look after your interests and steer you clear of people who will sell you things you do not need.

There are also reliable independent experts in various fields such as timber decay, rot and infestation, who have nothing to sell you but their advice. They will help you avoid unnecessary or inappropriate remedial treatments and guide you towards responsible specialist contractors and targeted repairs. A suitably qualified professional person will analyse the problems, specify the work to be carried out, and obtain a firm price from a suitable builder.

Contact details for some of the major professional and trade organisations involved in building repair are given in Useful Addresses, pages 22–24).



David Wrightson

An obvious problem with a simple remedy: no special skills or equipment are needed to remove this blockage and allow the water to flow freely into the hopper again

FINDING THE RIGHT HELP

IT CAN BE A DAUNTING TASK TO FIND THE RIGHT PROFESSIONAL HELP TO UNDERTAKE A MAINTENANCE INSPECTION, produce a report that recommends repairs in order of priority, and then over-see the repairs, but the following advice should make the process easier. Your adviser should be independent and objective, and should have devoted the greater part of his or her professional life to working with old buildings. An experienced architect, or a building surveyor who has had specialist training in



SPAB

Some architects, surveyors and engineers specialise in old building work

“Many building professionals are trained and experienced only in modern building construction methods and generally this makes them unable to deal with an old building satisfactorily”



Ahlburg Keate Photography

Owners learn about repointing with lime mortar on a course run by the SPAB

CHOOSING A BUILDER

Builders can carry out simple inspections and alert you to items requiring immediate attention. Unfortunately, however, there are many unscrupulous individuals and companies operating as builders whose sole interest is in taking your money in return for the least possible service.

Cold-calling and doorstep salesmen offer free surveys in return for the commission on any work. ‘Cowboy’ firms offer cash-only work with supposed discounts to avoid VAT charges. They have a vested interest in finding faults with your building and charging extortionate amounts to put things

right. Yet the repairs tend to be shoddily undertaken or grossly unsuitable and so cost even more to sort out when, inevitably, they fail.

If you suspect a builder of serving his own interests rather than yours by proposing unnecessary work, you should seek independent professional advice. It is always best to use registered companies belonging to major trade associations to do the work, as these tend to be the most responsible and are not likely to recommend unnecessary or inappropriate work. The Heritage Building Contractors Group and the Federation of Master Builders both have lists of member companies: see Useful Addresses, pages 22–24.

building conservation, would be ideal.

Many building professionals are trained and experienced only in modern building construction methods and, generally, this makes them unable to deal with an old building satisfactorily. They may not know what they are looking for, and for the most part will not have knowledge or experience of cost-effective and appropriate repairs.

The Clients Advisory Service of the Royal Institute of British Architects may be able to help you find someone suitable, as can the Information Service of the Royal Institution of Chartered Surveyors (see Useful Addresses, pages 22–24).

A short cut is to ask the Conservation Officer in your local planning department whether he or she can make local recommendations or steer you in the right direction. Another approach is to seek the advice of The Society for the Protection of Ancient Buildings (SPAB), which, in addition to putting you in touch with professionals, may also be able to suggest builders or specialist suppliers.



Ahlburg Keate Photography

Tradesmen and women can still be found with the skills for traditional building crafts, such as lime plastering

SOURCES OF INFORMATION

THERE IS A LIST OF USEFUL BOOKS ABOUT GENERAL BUILDING MAINTENANCE in Further Reading (page 24). Many of these publications (even some that are now out of print) are available from the SPAB. Many other more specialist books on subjects such as timber-framed buildings and cob (earth) buildings are stocked by the SPAB as well. Good public libraries will also have copies of these books, or will be able to acquire them at short notice via inter-library loans.

There are also books and pamphlets about building maintenance written by specialists using rather more technical language. The British Standards Institution (BSI) and the Building Research Establishment (BRE) publish many useful titles. The BRE publications in particular are to be recommended for their authoritative text and clear presentation.

The English Heritage publication *The Repair of Historic Buildings: Advice on Principles and Methods* is also clear and informative, and is

especially valuable if you are dealing with a Listed Building. The SPAB's own range of inexpensive technical pamphlets provides an excellent introduction to various aspects of building repair.

“The SPAB's own range of inexpensive technical pamphlets provides an excellent introduction to various aspects of building repair”



English Heritage also publishes more specific free guidance leaflets on a number of selected topics, such as maintaining traditional timber windows. Guidance documents are also available from Historic Scotland, Cadw and the Department of the Environment, Northern Ireland.

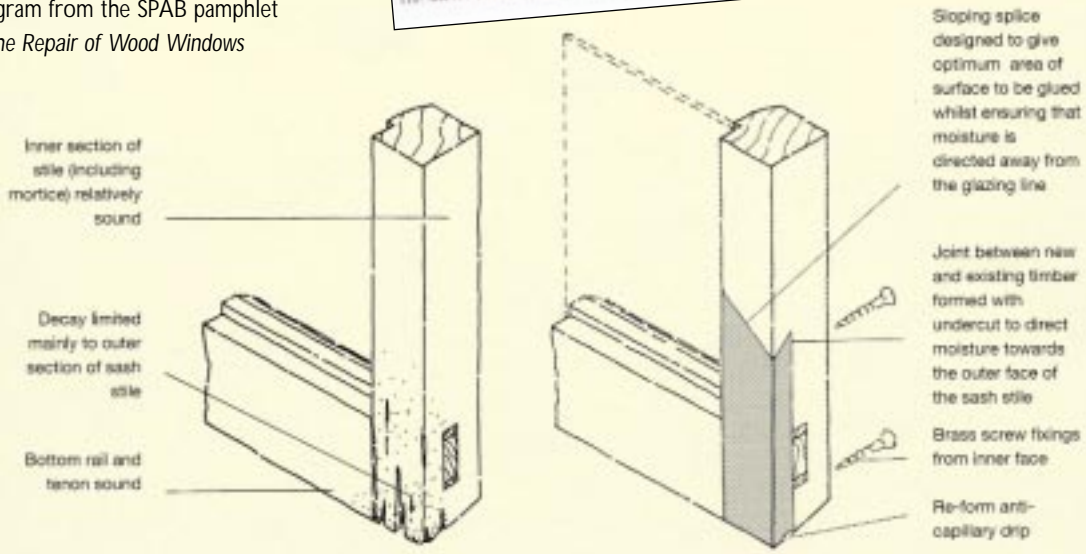
In addition, many local planning authorities issue guidance leaflets on repair techniques and local building methods.

A very useful publication is the *Directory of Building Conservation*, which lists a number of specialists in various fields. It also gives the names of trade organisations that can put you in touch with suitable local craftspeople.

The internet provides another source of information and guidance. Not all the information offered on-line is reliable, but sound advice is available on the IHBC's own site (www.ihbc.org.uk), which also has useful links to other sites.

Building Conservation (www.buildingconservation.com), the Internet sister of *The Building Conservation Directory*, contains a selection of articles and useful databases providing contact details for all the main advisory bodies in the United Kingdom.

A diagram from the SPAB pamphlet *The Repair of Wood Windows*

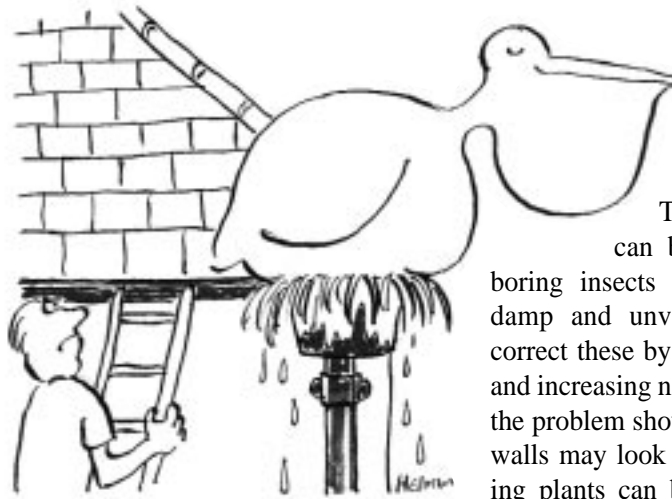


CAUSES OF BUILDING FAILURE OR DECAY

THE MOST NOTABLE CAUSES OF BUILDING FAILURE OR DECAY are poor construction, inappropriate repair, or neglect. For example, the hard cement mortar pointing used in many ill-judged 20th-century 'repairs' can exacerbate decay in relatively soft old brickwork. The chief cause of problems, however, is neglect, which can result in trees growing out of brickwork, overflowing gutters and blocked ventilation grilles.

Other important causes of deterioration and decay are the weather and its effects. Prolonged wetting by acid rain can dissolve limestone and corrode metal fastenings. Condensation inside a poorly ventilated building can cause mould growth or, in extreme cases, timber rot.

Frost and changes in temperature or moisture levels also play their part.



Frost can shatter the surface of old bricks and tiles. High moisture contents in materials caused by rising damp and excessive fluctuations in heating can result in damage by salts, which will disrupt plaster and paint. Other problems are caused by air pollution, formation of rust, or combinations of materials that are chemically incompatible. For example, rainwater washing over copper roof flashings can corrode lead-lined gutters below.

Problems caused by plants include tree roots damaging foundations — but removing fully-grown

trees can also do serious harm in areas with clay soils, by causing 'ground heave'.

Tremendous damage can be caused by wood-boring insects and fungi in warm, damp and unventilated conditions; correct these by eliminating moisture and increasing natural ventilation, and the problem should go away. Ivy-clad walls may look attractive, but climbing plants can both create and conceal serious problems. For example, mature ivy growing behind rainwater pipes can force them off the wall and crack them, causing water to soak undetected into the masonry. Ivy should be removed from buildings by cutting it at the base and leaving it to wither, rather than wrenching it from the wall and risking further damage.

This is not to say that all climbing plants cause problems. Some species, such as Virginia creeper, are far less damaging than others. Nevertheless, do have a good look behind the wisteria and other climbing plants during the winter when their leaves have dropped off, to check that nothing undesirable is going on.

You will find that things are not always as they seem. For instance, a one-off flood of water, although its immediate effects are dramatic, may cause less damage than an undetected constant drip over many years. The drip is the thing you should look for — the cause not the symptom of potential decay.

Simply cleaning leaves, pollen, seeds and mosses out of gutters, hopper heads, rainwater pipes, gullies and drains every Spring and Autumn can prevent many of the most obvious decay problems. You can avoid rising damp by ensuring that the level of the soil in the garden does not rise above the damp proof course (if there is one). Soil levels must, in any case, be kept below the internal floor level.



Climbing plants can quickly get out of hand unless they are carefully controlled. This creeper may be concealing minor defects that require swift attention if they are not to become serious problems



YOUR BUILDING'S HISTORY

START OFF BY LEARNING ABOUT THE HISTORY OF YOUR BUILDING, in particular how it has changed over time, and identify its important features. Alterations or additions to the original structure sometimes cause defects: for example, misaligned gutters will soon start to drip.

If possible, compare your building with similar ones nearby for signs of structural deformation or irregularity, missing features and so on. Keep your eyes open for physical clues, such as changes in brickwork or openings that do not match or line up, both inside and outside the building.

If your building is a listed one, you can get a brief description of it from your local authority planning department or local reference library. The National Monuments Record also holds this information and sometimes even has early photographs (see Useful Addresses, pages 22–24). Your

If your house stands within a conservation area, there may be special rules about what kind of changes you can make to it. Always check with your local planning department before you start work

LISTED BUILDINGS AND CONSERVATION AREAS

If your property is a Listed Building, then all of it – the interior as well as the exterior – is protected by law. Listed Building Consent will be needed from the local planning authority for all but the most minor works of maintenance or repair, and especially for any demolition or major alterations.

If some part of the building is not



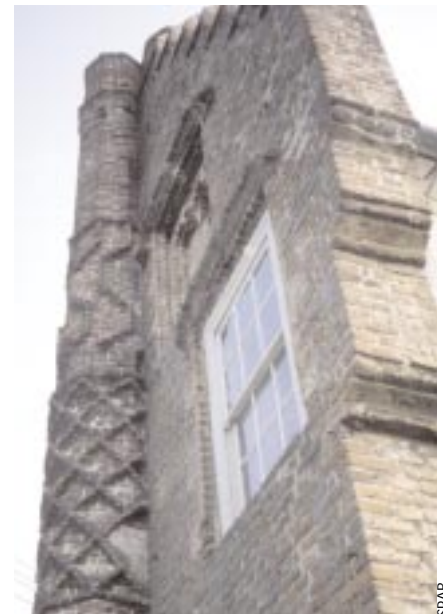
A decayed timber framed wall with infill panels of original wattle and daub and later brick

“If your building is a listed one, you can get a brief description of it from your local authority planning department or local reference library”

local library may also have a photographic archive, which might include your property. All this information should help you to understand your property and enable you to make more informed decisions about maintenance and repair.

mentioned in the listing description (the official document describing the building), it does not mean that it is not important: ask the Conservation Officer at the local planning authority about the need for Listed Building Consent before you start work.

Some restrictions may also apply to unlisted properties that stand within Conservation Areas. It is wise to check whether you need permission before starting work.



A sash window inserted into an early 16th-century brick facade

CARRYING OUT YOUR OWN INSPECTION

THERE IS A DIFFERENCE BETWEEN A CASUAL INSPECTION, EVERYDAY MAINTENANCE, AND PLANNED PERIODIC INSPECTION. The last should be undertaken at least once a year, ideally during rainy weather: there is nothing like a downpour for identifying roof defects or blocked gutters.

Prepare a file that includes a list of items from previous inspections (to recheck), the results of your researches into the building's physical history, sketches of the outside of the building and floor plans. A roof plan is also useful. You will need to wear old clothes and to carry a notepad or clipboard, pencils, eraser, flashlight, binoculars, pocket knife, hand mirror, a magnet for identifying iron and steel, and a small camera with flash (high speed film gives better details in large, dark spaces). Your photographs will be useful if you have to discuss the problems you find with someone else, as it is much easier to show a picture of a defect than to describe it. Start at the roof and then work downwards outside



“You will need to wear old clothes and to carry a notepad or clipboard, pencils, eraser, flashlight, binoculars, pocket knife, hand mirror, a magnet for identifying iron and steel, and a small camera with flash”

Be aware that legislation protects certain kinds of wildlife. That relating to bats has a particular bearing on maintenance. Under the Wildlife and Countryside Act 1981, all bats have protection. It is illegal to kill, injure, capture or disturb bats; and to obstruct access, or cause damage to roosts. It is no defence to claim that harmful actions against bats were not intentional. For further information contact the Bat Conservation Trust (see Useful Addresses pages 22–24).

the building. Use binoculars to pick up detail at high level. Then move inside the building and start in the roof space, moving down floor by floor and room by room, taking in any ‘hidden’ spaces in cupboards on the way and finishing in the cellar or basement (if there is one).

Check all pipework for leaks; poke a knife into timber beams, floorboards, window cills and frames, and any other wood that has cracked or crazed paintwork. If the wood is very soft there may be an outbreak of wet rot to be dealt with. Record the condition of paintwork everywhere, and record any fungal or insect infestation you find. Do not be despondent – it would be unusual not to find some of these problems in an old building. The challenge is to determine whether the defects are historic and of no consequence, of a minor nature and therefore of no immediate risk, or warrant further investigation by professional advisers.

Use the checklist which follows to make sure you go over your building thoroughly, and from it make your own list of things that need doing. Remember that not everything will have to be tackled at the same time, although it can often make economic sense to do so. Some things can be put off for a short time, and dealt with when there are enough similar jobs to warrant the expenditure — to justify the cost of scaffolding, for instance.

STAY SAFE

Ensure that you carry out any building maintenance safely. Ladders, lofts and roofs present particular hazards. Watch where you tread, especially in roof spaces, and make sure you have enough light to see what you are doing. It is best not to work alone, but think of the safety of helpers and others beneath if working above ground level. Safety equipment is needed for some jobs, including gloves for clearing drains or removing pigeon droppings from gutters.

If in any doubt about safe access, particularly on roofs and in attics, use a

reputable, professional builder for the inspection or work.

Do not touch old electrical cabling. Leave it to a qualified electrician to determine its condition. Oil and gas installations can also be dangerous if mishandled, and these too should be left to qualified technicians for repair.

For further advice, contact the Health and Safety Executive (see Useful Addresses, page 22–24). Guidance on working at height is included in their document Health and Safety in Construction (see Further Reading, page 24).

INSPECTION CHECKLIST

WHERE TO LOOK

WHAT TO LOOK FOR

WHAT TO DO

Roof coverings

Natural slate and stone

Cracks and splits
Slippage
Missing slates
Moss growth
Vegetation
Colour change
Delamination
Creepers

Not all colour changes, minor cracks or delamination (flaking slates) mean that the roof is in poor repair or needs replacing.

Re-use existing sound slates. Any replacement slates should be of matching colour, size and thickness, and, where possible, from the same source as the original slates.

If many slates are loose or have slipped, check the condition of battens and nails. 'Tingles' (narrow strips of copper or lead, or galvanised steel wire) can provide an acceptable temporary repair for slipped slates. The tingle is nailed to, or hooks over, the batten and is bent back over the bottom edge of the slate, holding it in place at the centre. Replace rusted iron nails and fixings with copper, aluminium alloy or galvanised equivalents. Replace any battens that are defective or weakened by previous nailings.

Moss can harbour damp and cause slates to deteriorate. Moss-removing washes are available from garden centres. Ivy and other climbing plants can grow branches thick enough to crack slates. Their stems should be cut as close to the root as possible and they should be allowed to wither before being gently pulled free.

Do not use sticky bitumen-coated fabric (applied over the roof) as a temporary repair, and avoid spray-on coating systems (on the underside of the roof): these will make it difficult to trace any further leaks to their source. They may also hinder re-use of slates.

It is common practice to introduce a layer of roofing felt under the slates when replacing whole roofs, but it is not absolutely essential. It is more important to ventilate the roof adequately. The introduction of insulation into any roof can bring with it unexpected problems; ventilation must be considered very carefully if damp and mould growth are to be avoided.

Stone slates can last for hundreds of years and are usually re-usable. Because the trade in second-hand materials has led to the unnecessary destruction of roofs, you should salvage what you can from the existing structure and use only new stone slates for supplementary repairs. Substitute materials, such as artificial slates made of fibre resin, concrete or 'reconstituted stone', are not a match for natural materials, and should be avoided on historic buildings. A specialist local roofing contractor is essential, as materials and traditions vary from place to place.



Climbing plants trap moisture against the building and can lift or crack roof coverings



Stone slate roofing is a skilled trade, although replacing a single broken or missing slate can be done by the untrained

Clay tiles

Cracks
Slippage
Broken nibs
Missing tiles
Moss growth
Vegetation
Erosion
Creepers

Most of the comments above apply also to tiles.

Various fixing methods are used. Some clay tiles are not even nailed into place, but have 'nibs' on the back which hook over the battens.

There is a big difference between hand-made and machine-made tiles in overall appearance and, in some cases, durability. New replacement tiles should match the colour of the existing tiles as they were when first laid: they will blend in after a few years of exposure to the weather.

Ridges and hips

Erosion
Cracks
Missing tiles
Missing mortar

Most shapes of clay ridge and hip tiles are easily obtainable. Make sure you get the same shape (V-shaped, half-round, or bonnet tiles) and colour. Replicas of ornamental ('crested') ridge tiles are readily available, and even cast iron cresting can be obtained easily.

Retain and reinstate lead roll details.

Mortar pointing in these exposed locations can often fail: repoint with a suitable, durable mix (which should be lime-based for older buildings).

Wooden shingles

Curling edges
Rusting nails
Cracks
Missing shingles
Moss growth
Wet Rot
Insect attack
Bird damage

Shingle roofs are found in the Home Counties and the South of England. Oak, chestnut, and cedar shingles are available for replacements, which should match the existing roof.

Do not replace riven (i.e. split) shingles with sawn versions. Sawn shingles seldom look the same and may not last as long.

It can be difficult to prevent woodpeckers from hunting for insects between the shingles. Try occasionally spraying with insecticide or placing tin shingles underneath the wooden ones to deter the birds from pecking.

Choose copper or stainless steel nails for fixing shingles.

Metal roofs and flashings

Splits
Creep
Pitting
Rucks
Wind damage
Rippling
Pinholes
Flattened upstands

Keep roofs free from debris, leaves and build-up of moss.

A 'flat' roof should have a slight fall so that water can drain away.

Mastics and repair tapes are short-lived and may conceal the real sources of leaks without fixing them.

Employ a specialist to carry out proper repairs to lead or zinc roof coverings and valley gutters. Splits and pinholes in lead can be patch-repaired by 'burning in' a new piece. This sort of work requires an experienced contractor, who will take all the necessary fire precautions.

You will probably find that your chimney has lead or zinc flashings (metal covers at the



Shingles damaged by woodpeckers



A specialist leadwork contractor finishing a patch repair

WHERE TO LOOK WHAT TO LOOK FOR WHAT TO DO

Thatch



Chris Wood/
English Heritage

A sympathetic repair on a combed wheat reed roof, which will soon blend in with the surrounding thatch

Holes
Grooves
Decay
Moss growth
Fixings visible

junction of the chimney stack and the roof). Underneath these are 'soakers', which tuck under the slates or tiles. To keep water out effectively, these must be kept in good repair. Sometimes there is a cement 'fillet' instead: this may be appropriate on some buildings but if you have to replace it, you should incorporate soakers underneath (if the type of roof covering allows it).

Thatch is usually of long straw, combed wheat reed or water reed, depending on the regional building tradition. The material demands a high degree of craftsmanship and the advice of a local thatcher of proven ability is essential. Any re-thatching should always be carried out in the local tradition, preferably using local materials. Any changes to the design and character of the roof may need Listed Building Consent if the building is listed.

It is not always necessary to dismantle and recover the entire roof. Patch repairs and overlays are both possible without wholesale stripping, depending on the condition of the roof. Do not worry about the roof looking patchy; repairs will soon blend in.

If you think moss growth may be a problem, seek the advice of a thatcher; you may do harm by trying to remove it yourself.

Galvanised wire netting can prevent birds and vermin stealing the straw for their nests.

Fire prevention: keep the roof space draught-free and clear of straw dust and old thatch. Ensure that there is a suitably sized access hatch for fire fighting. Chimney stacks, whether inside or outside roof spaces, should be inspected for thin walls, or holes which could leak hot gases which might set light to the thatch. Electrical wiring in roof spaces should be checked by a qualified electrician. Fit a smoke alarm and check the batteries regularly. Spray-on chemicals to increase fire resistance or spread of flame characteristics are not recommended.

Specific guidance on thatch is published by English Heritage and the SPAB (see Further Reading, page 24).

Asphalt

Cracks
Blistering
Ponding
Shrinkage
Splitting
Tearing

Bituminous compounds have been in use in buildings for centuries, and on roofs for at least 150 years. Failure is usually caused by poor design and workmanship. Some of these can be corrected if they are letting water into the building, but do not assume that all unsightly faults, such as blisters and bumps, need immediate attention.

Roof structure

Roof timbers



Chris Wood/
English Heritage

Blocked rainwater pipes led to an outbreak of dry rot under this water-logged flat roof

Fungal attack
Insect attack
Open joints
Corroded metal fixings
Sagging
Broken timbers
Distorted timbers

If you find dry rot fungi, wet rot or insect attack, call in an independent specialist, who will identify the cause (usually a leaking gutter or rainwater pipe, combined with warmth and inadequate ventilation) and suggest a remedy, preferably not one involving excessive use of chemical treatments. If cutting out and replacing affected structural timber members is suggested, seek professional advice from someone used to dealing with traditional buildings. An expert may advise selective and targeted rather than wholesale treatment.

'Defrassing' timbers to remove superficially infected outer sapwood or insect damage is not recommended. Valuable historic evidence can be lost in this way, and the treatment is worse than the deterioration.

Structural faults need to be analysed before action is taken. Traditional carpentry methods should be used to repair old timber roof structures, retaining as much of the existing material as possible and introducing the minimum amount of new timber. Sometimes the use of steel plate repairs, or resin repairs using polyester, carbon fibre or stainless steel rod reinforcement may be justified, if this helps to retain historic timbers. Expert advice is needed in such cases.

It is generally unwise to attempt to 'straighten up' crooked roofs on historic buildings: it can lead to redistribution of loads, which can adversely affect other parts of the structure.

While in the roof space, look at the condition of the chimney flues. If the chimney breast has been removed, inspect the means of support for the remaining chimney stack (usually a steel 'gallows bracket') and check for signs of deformation or rusting.



SPAB

Slight warping or unevenness in an old roof does not always indicate a structural problem

Chimney stacks

Damaged pointing
Cracked pots
Leaning
Cracks
Vents
Decayed bricks
Leaks

While inspecting the roof coverings take a look at the chimney stacks. Bent or leaning chimneys are caused by differential expansion, and erosion in the mortar joints attacked by sulphurous gases in the flue. A leaning or cracked stack may not be dangerous, but get professional advice. Broken pots can be replaced (many of the old patterns are still made). Ensure that the mortar flaunching – which holds the pot in place and sheds water – is in good condition (see also Flashings, page 11). If the roof is thatched check the chimney flues for smoke leakage (see Thatch, above).

If the stack is disused it can be capped off, but make sure that the flue is ventilated in some way.

WHERE TO LOOK WHAT TO LOOK FOR WHAT TO DO

Rainwater disposal system

Gutters
Hopper heads
Rainwater pipes



Rainwater gullies should be regularly cleared of blockages such as dead leaves

Cracks
Silt
Leaf blockage
Nests
Displaced fixings
Leaks
Inadequate falls
Missing gutters
Missing sections of pipe



A blocked downpipe has leaked, causing damage and staining to the brickwork and encouraging the growth of vegetation

Every Spring and Autumn, clear any plants, leaves and silt from gutters, hopper heads, flat roofs and drainage channels. Look for blocked downpipes (best done during heavy rain as you will see water coming out of any leaky joints). In dry weather look for stained brickwork. Keep gullies (at ground level) clear, and have them cleaned out if necessary. Snow should be cleared from valleys, parapet gutters and flat roofs; use wooden or plastic shovels to avoid puncturing lead or zinc linings. Consider having an electrician install electric heating tapes for snow protection, especially in inaccessible places. Activated by low temperatures on an external thermostat, the tapes warm up sufficiently to melt the ice and snow, preventing build-ups around flashings and hopper heads.

Remove vegetation from behind downpipes by cutting back or by removing the plant altogether. Use a hand mirror to look behind rainwater pipes, as splits and cracks in old cast iron and aluminium often occur there and are not easily noticed. Fit bird/leaf guards to the tops of soil pipes and to rainwater outlets to prevent blockages.

Check that gutter junctions are watertight by watching them in rainy conditions. Have gutters refixed if they are sloping the wrong way or discharging water onto the wall. If sections are beyond repair, make sure that any replacements are made of the same material as the originals (on older houses, this is sometimes lead but more usually cast iron). Regular painting of cast iron is essential to prevent rust.

External Walls and coverings

Brickwork



Repainting a cast-iron downpipe

Pointing Cracks
Spalling Bulges
Dropped arches
Efflorescence
Vegetation: lichens, moulds, mosses
Dampness Stains
Graffiti
Flaking paint



Chris Wood/
English Heritage

Inappropriate and unnecessary repointing carried out in cement. The original penmanship pointing is shown to the left

Some builders are too ready to repoint brickwork without first carefully considering whether it is really necessary. Seek professional advice before repointing, and look for the cause of damage (often water penetration) so that you can rectify it before going any further.

Another problem is the tendency for builders to use hard cement mortar instead of the softer, more 'forgiving' traditional lime mortar that allows old walls to 'breathe'. Using the wrong mortar can accelerate decay in the bricks themselves.

If you do decide to repoint, match adjacent work in colour and traditional joint type (profile). Cracks and open joints will need attention, as they permit water penetration, especially when frost occurs: the freezing water expands and may open the crack further or shatter the brick face (this is known as 'spalling'). If necessary, whole bricks can be cut out and replaced; sometimes it is possible to turn existing bricks around and refix them.

Cracks caused by structural movement should be investigated by a suitably qualified structural engineer, as should bulges or other evidence of large-scale movement. Do not be panicked into dismantling and rebuilding without taking professional advice, as a slightly bulging wall may be perfectly stable. Similarly, dropped brick arches need not always cause concern. There will usually be a lintel behind, which is actually holding the wall up, but occasionally builders in the past would expect the window frame to give support, which is often a cause of failure. Regularly monitor all structural deformations over time (at least for one whole year) before jumping to conclusions. Removing stains and graffiti can be difficult. It is best to seek professional help otherwise you can make matters worse and disfigure a wall forever. Cleaning brickwork should be considered very carefully. Is it really necessary? What method should be used? Will it cause damage? Will it stand out too much against nearby brickwork? The mellow, weathered appearance of an old wall is impossible to reproduce, and may well be the most attractive feature of the building.

It is almost never a good idea to paint brickwork. Any removal of paint will require independent specialist advice. Remember that you may need Listed Building Consent for cleaning masonry, even if you only intend to remove unsuitable paint. Avoid using colourless water-repellent coatings on masonry: they have a limited life and rarely provide a cure.

Stone



A skilled mason using specialised tools to clean a stone joint

Pointing
Cracks
Erosion
Efflorescence
Vegetation
Lichens, moulds and mosses
Dampness
Stains
Graffiti

Most of the comments on brickwork (above) also apply to stonework.

Cleaning can be carried out using water and bristle brushes, water jets, steam, chemicals, or abrasives. However, such treatments may not always be necessary or desirable, and can cause irreversible damage if inexpertly or inappropriately applied. Trials in an inconspicuous place are always recommended. Any method that is adopted must avoid damaging the face of the material. Discuss the matter with your local planning authority's Conservation Officer or professional adviser, especially if your building is listed (in which case you will probably need Listed Building Consent).

Repairs to stonework can be carried out by piecing in new stone to match the original or by 'plastic' (i.e. moulded or shaped) repair using a lime-based mortar. Replacement should be carried out only by a stonemason who knows how to select and bed stone properly. 'Plastic' repairs should be carried out by trained experts using lime-based mortars, but only when absolutely necessary.

The decay mechanisms of stone are not generally well understood, and it is advisable to obtain expert advice from an experienced conservator.

WHERE TO LOOK

WHAT TO LOOK FOR

WHAT TO DO

Mortar

Chris Wood/English Heritage



If you are chopping out failed or cement pointing, make sure that the chisel is narrower than the width of the joint, so that the edge of the brick does not get damaged

Type
Colour
Texture
Joint
Erosion
Open joints
Mortar standing proud of masonry

Chris Wood/English Heritage



Hand-finishing new lime mortar pointing with a churn brush, to reveal aggregates and ensure that the arrises (edges) of the bricks are clearly defined

Timber

SPAB



Detail of a timber-framed building, showing movement in the frame, deterioration of the brick infill panels and poor previous repairs

Chris Wood/English Heritage



Dry rot is a symptom of water getting into the building, coupled with poor ventilation

Insect attack
Mould
Rot
Fractures
Splits
Loose boards
Distortion

In order to be able to assess the condition of mortar, it is necessary to understand the role that it plays in the construction of a wall.

The purpose of mortar is not to stick bricks together but to keep them apart, and to distribute loads by filling the spaces between them.

Mortar should not be any harder than the masonry itself, otherwise it can cause damage. It is intended to degrade in preference to the wall material. When a mortar is harder than the brick or stone (which is often the case when cement is used), the wall material will degrade, leaving the mortar standing proud. The reasons for this are complicated, partly to do with salts in the wall material, and partly to do with frost action when water collects behind the hard mortar.

Mortar has been made of lime and sand for the last few thousand years; cement has only been in use since the mid-19th century. Good mortar mixes contain well-graded aggregates, i.e. both small and large particles of sand. Over time, the mortar surface weathers away and exposes the particles, giving a rough-textured appearance. The face of a joint can lose several millimetres without affecting the structural soundness of the wall. However, receding pointing can often encourage damp penetration.

The colour of mortar can vary according to the colour of sand and lime. Tinting additives were seldom used in the past, although sometimes ashes from blacksmiths' forges were used to make a black mortar. Cement mortars are often a very ugly, lifeless grey. The colour of any mortar will have a very significant effect on the appearance of brickwork, since mortar joints constitute nearly 20% of the surface of a brick wall. This should be remembered when repointing.

So – inspect carefully and do not repoint unnecessarily. Do not worry if your pointing is not quite flush with the bricks or if it seems soft. Use lime mortar. Try to match the colour and texture of the existing pointing (unless it has been done badly), and remember that the new work will tone down in time.

Failure of the mortar itself is most often caused by water penetration. This occurs mostly in walls exposed to the elements on both sides, such as garden and parapet walls, where the capping is damaged or otherwise ineffective. Pay particular attention to the condition of cappings and copings.

Structural timber in walls, floors and roofs can last indefinitely if properly maintained. The same applies to non-structural elements such as window and door framing, floorboards and cladding. Defects are commonly caused by dampness (direct penetration or migration from adjacent materials), fungal infestation, wood-boring insects, ground movement or structural failure.

Oak, chestnut and other hardwoods are extremely durable and grow very hard with age, but may still be vulnerable to insect attack. Detection of pests may be difficult because they may be hidden beneath a sound-looking surface. Distortion of old timber is generally not a sign of weakness but of natural movement while the timber was still 'green' (unseasoned timber was very commonly used in the past).

Failure in heavy timber framing often occurs at the joints, especially where they have been exposed to the weather, or where they are carrying too much weight (perhaps because of previous alterations or where new walls or very heavy objects have been placed over them). In timber-framed buildings, the infilling of panels with replacement materials (panels of brick instead of wattle and daub, for instance) can also sometimes cause failure due to excessive loading or water getting in.

If you are contemplating cleaning a timber-framed building, you should get expert advice and the work should only be carried out by competent tradespeople.

The aim of timber preservation and conservation should be to prevent dampness, insect or fungal attack by careful analysis of the problem and non-destructive treatments where possible, rather than wholesale renewal or indiscriminate and excessive use of chemicals. Bonding timbers should not be taken out of brickwork or masonry unless they are being replaced because they have decayed beyond repair.

Specialist advice on timber decay from an independent expert (not a salesman employed by a remedial treatment company) should not be confused with the design or execution of repairs. Both require different knowledge and experience. A good surveyor or specialist should be able to determine how much of the timber is still sound, but may not be competent to say whether or not it is structurally adequate. Simple repairs can be carried out by someone with a sound knowledge of traditional carpentry, but do consult a suitably qualified structural engineer before permitting work on any timbers that might be structurally significant.

Timber windows and doors, given suitable initial protection and subsequent maintenance, will last indefinitely. As with all original or old materials, periodic conservation measures may be necessary, but are always preferable to wholesale replacement. You can make your house more comfortable, reduce heat loss and cut fuel bills by overhauling and weatherstripping ill-fitting or draughty windows and doors. This makes better economic and environmental sense than fitting new double-glazed windows (quite apart from the fact that, in the case of most historic buildings, replacement windows are thoroughly inappropriate in planning terms). Do not try to seal the building completely – a degree of ventilation is beneficial in keeping rot and fungus at bay.

WHERE TO LOOK

WHAT TO LOOK FOR

WHAT TO DO

Earth structures

Erosion
Cracks
Holes
Rat runs
Dampness
Leaning
Cracked render

Various terms for earth walling are in use: 'clay', 'cob', and 'mud' are the most general. Also used are 'clay dabbin', 'dab', 'clay lump', 'chalk mud', 'rammed earth', and 'wichert' ('white earth'), according to which part of the country you live in. For example, if you live in Lincolnshire you may have an interesting variant called 'mud and stud', which is part earth, part timber frame.

More than any other form of construction, earth walling requires a good protective permeable coat and regular maintenance, especially at roof level. Leaning walls are common, and corners are particularly vulnerable to collapse and abrasion if not protected. Earth walls cannot be treated like other walls – fixing things to the wall with nails or screws can cause damage. Trying to insert a new damp-proof course is not encouraged because the load-carrying capacity of the wall may be reduced as the earth dries out. Injected damp-proof courses are usually ineffective and can be damaging. A bad infestation of rat-runs can cause total collapse. It is said that earth structures are like babies: keep their heads warm (with thatch) and their bottoms dry (with a stone base course), and all will be well.

The knowledge and practice of these traditional methods of construction is not entirely lost, but is in the hands of a very few specialists. Ask your local Conservation Officer for guidance. Any problems found during inspection should be referred to an experienced specialist.

Render

Erosion
Cracks
Dampness
Lichens, mosses, moulds
Bulges
Hollow-sounding areas

Most traditional renders were lime-based, and soft compared with modern cement-based wall coverings, which can be extremely dense and impermeable. When rain hits a soft, permeable render it is absorbed for a time but then dries out naturally. Such renders are also flexible and will accommodate movement in the wall, whereas a hard render will crack and allow moisture in. If the moisture cannot evaporate through the render it will accumulate behind it, and may then travel to the inside of the building and cause further problems.

Traditional lime renders come in a range of textures. The term 'stucco' is generally used for the smoothest lime render (confusingly, it may also apply to proprietary mid-18th-century renders such as Parker's Roman Cement – which is not the same as modern Portland Cement). Stucco renders were often scored or 'rusticated' to imitate stonework. Rougher finishes (called 'pebbledash', 'roughcast', 'wet-dash', 'dry dash' or 'harling') incorporate pebbles or small stones with the intention of making a tougher covering for the masonry.

Cracks in any kind of render can allow moisture penetration and may lead to render being forced off the wall by frost action. Tap the wall near any obvious damage: a hollow sound tells you that the render is loose. This can be patched or consolidated. Missing areas of mouldings can also be replaced using 'plastic' lime-based mortar repairs, as for stone (see page 13).

The traditional final coating for a lime render is usually limewash, which allows the wall to 'breathe'. This means that rain may be absorbed but can dry out later. Impermeable paints (ones which do not allow moisture either in or out) should never be used. Especially to be avoided are those which claim a very long life; they tend to be irreversible and particularly damaging. During the Regency period, oil paint began to be used instead of limewash on stuccoed terraces in urban areas, and this tradition persists.

Limewash is still readily available (the SPAB publishes a leaflet on its use). In addition, some non-cementitious modern masonry paints may be suitable on some renders. Ask your Conservation Officer for advice.

When repainting, it is best to use the existing type of paint (limewash or oil paint), as not all coatings are compatible with each other (see Limewash below). Expect to paint stucco every 5 to 8 years.

Wattle and daub

Erosion
Cracks
Dampness

The walls of timber-framed buildings were usually made wind- and watertight by infill panels of wattle and daub. These were woven from oak staves and hazel withies, then covered by daub – mud made from sand, clay and cow-dung, mixed with chopped straw or animal hair for reinforcement. Where these panels still exist, every effort should be made to retain and repair them (which is a specialist job), as they are an important part of the historic fabric.

It may be permissible, in appropriate cases, to replace with new, lightweight, insulated panels finished with lime render, especially where the original woven panels have been attacked by fungal decay or beetle attack. Listed Building Consent should be sought for any changes.

Limewash

Deterioration
Staining

There is no reason why you should not re-coat a rendered wall using a traditional limewash. Except in cases of heavy build-up of coatings, or where impermeable modern paints have been applied, there is no need to remove existing coats: just remove loose and flaking material, dampen, and reapply. Slaked lime is now easily obtainable and when mixed with various additives (linseed oil or tallow, and pigment) makes limewash. Suppliers of lime will give you recipes, or mix it for you. Some have a standard range of colours.

Limewash will not adhere well to cement render and, if applied, will erode more quickly there and on faces of buildings that are most exposed to the weather. Expert advice is recommended on the correct coating for your substrate. You should expect to reapply limewash more often than you would repaint. Traditionally, limewashing was carried out every Spring.



A lime-based render is flexible, so that it can accommodate movement in the underlying timber frame, and allows the wall to 'breathe' so that moisture does not get trapped



Lime-coated wattle and daub panelling is quite rare. Although poor maintenance has led to decay in this case, the damage can be repaired

Tile hanging
Slate hanging

External joinery and ironwork

Doors
Doorcases
Fanlights
Porches
Windows
Shutters
Blind boxes
Dormers

Decayed cills
Open joints
Door fit
Cracked/broken glass
Cracked/missing putty
Broken sash cords
Rot
Insect attack



A cill and window now decaying because of missing paint and putty

SPAB

A loose lead covering on this Georgian door hood has allowed water in, causing damage to the joints



SPAB



Fanlights, such as the one over this early 19th-century door in Islington, North London, can be repaired

John Fidler/
English Heritage

Ironwork (balconies, railings, gates, rainwater goods)

Rust
Cracks
Damaged fixings and hinges
Flaking paint

Internal fabric

Walls

Damp
Staining
Mould
Cracks
Bulges

All the faults we find in roof coverings of tile or slate can be present in wall coverings of the same materials. These originally gave protection against wind and rain, sometimes just on an exposed face, but later came simply to be a fashion, their original purpose forgotten. Nail sickness (rust) is not uncommon.

Timber door and window cills are more exposed to weather than any other element of joinery and tend to deteriorate more quickly, even when made of hardwood. Any cracks or open joints should be filled to stop water getting in and causing rot through fungal decay. Open joints also allow, or cause, the frame of a door or window to sag, making opening and closing difficult. Broken or missing putty should be replaced, otherwise water may rot the glazing bars.

Do not automatically assume that a damaged door or window must be replaced. Most historic timber doors and windows can be repaired adequately for far less cost. If replacement is absolutely necessary, have a replica made. (Check with your local authority's Building Control Department in case approval is needed).

Do not automatically replace old glass which has hairline cracks. It may be of a type which is irreplaceable now, and the imperfections in old glass add greatly to the character of a building. Broken or missing panes can be replaced with a modern cylinder glass version from a specialist supplier. Whilst perhaps lacking the character of historic glass, this is better than the absolutely flat modern material.

Georgian fanlights are a special case. They may be of wood or of various kinds of metal. Find a specialist conservator if you need repairs.

Metal windows can also be repaired unless they are very badly corroded (like external joinery, they need to be regularly repainted to keep them in good condition). If necessary, replacements can be easily obtained: many traditional types, including 1930s curved windows (and the curved panes to fit them) are readily available (again check with Building Control – see above).

The tops of large doorcases and porches need protection from the weather. Make sure any metal coverings and flashings are intact (see Roof Coverings, page 11). Where the original design omitted these and damage is occurring as a result, consider introducing them.

Dormer windows can suffer from all the faults associated with external joinery and roofs, together with some of the faults found in some walls (dormer 'cheeks' – the sides – are of timber and are usually clad in timber boarding, tiles, slates, lead, or zinc sheet).

Softwood joinery needs to be protected with a paint finish. Joinery that is exposed to the elements needs to be repainted more often than interior joinery – on average every 5 to 7 years.

Both cast and wrought iron need the protection of a regular coat of paint, especially near the sea. Do not paint over rusty iron — clean off the rust first. Extensively corroded cast iron can be sandblasted and wrought iron flame cleaned before being primed and repainted. Badly corroded fixings can be dangerous, so check these carefully. Rusting iron can also expand and shatter stonework around it.

Broken sections of wrought iron can be welded, and it is even possible to 'cold stitch' cast iron. If replacement becomes necessary, there are plenty of cast iron firms that will supply railings and balconies to traditional patterns. They can also cast a replica from an original element, as long as it can be dismantled and transported. Castings can also be made from a timber pattern. Very small repairs can be carried out using a metal-rich epoxy resin.

Stains and damp patches on the inside of external walls may indicate that something is wrong within the wall or outside the building. Look for leaking cistern overflow pipes, cracked rainwater pipes or defective gutters. Mould grows on damp patches where there is not enough ventilation. In some old buildings the original walls have an inside lining of lath and lime plaster on timber battens. These battens (and the laths) can rot if not kept dry – and the rot can spread unnoticed very quickly.

Not all inside walls constructed of brick or stone are structural (though most are), and some timber 'partition' walls are load bearing and contain important bracing elements, which can fail if the wall is tampered with unwisely. If you find unusual cracks in a 'partition' wall, look for evidence of newer openings, or doors of a different type from the others in the house.

Some cracks are 'historic' (i.e. not likely to be moving any more). Others may be seasonal and cyclical, caused by movement in clay soil as it dries out or absorbs moisture. If you find cracks that are not just superficial seek professional advice; do not rely on a builder alone.

If you live in a very old house, be prepared for unexpected finds behind the existing wall surfaces. Structural investigation often brings to light evidence of early decorative schemes which have been covered up for centuries (and which should be preserved wherever possible).

WHERE TO LOOK

WHAT TO LOOK FOR

WHAT TO DO

Ceilings and floors

Cracks
Bulges
Stains
Damp
Detachment

In most buildings, the ceiling on the top floor is attached to the roof timbers, so cracks in the plaster may indicate problems with the roof structure. Water damage on a ceiling is evidence that roof coverings are damaged or missing.

Generally, other ceilings are part of the floor above (the ceilings are attached directly to the underside of the floor joists). Cracks will appear if the floor joists are over-stressed for any reason, and damp patches are likely to indicate leaking internal pipe-work, although water from a leaking roof will travel right through the building in time. Lath-and-plaster ceilings, cornices and other enrichments can be re-attached fairly easily by a skilled plasterer and will be preferable to modern alternatives, such as plasterboard. In many cases there is no need to replace whole ceilings, even those which are extensively cracked and loose.

It is possible for an expert to replace a missing or damaged plaster ornament or cornice by taking a rubber 'squeeze' of the remaining ornament and casting a new section, or by 're-running' a length of plain cornice.

The choice of plaster for repairs is very important, and should be based on analysis of the original material. Do not assume that all decorative work is plaster; it could be papier-mâché, or a substance known as 'compo' (a mixture of powdered chalk and linseed oil). These will require expert attention if they are to be cleaned or repaired.

Square-edged floorboards can be repaired satisfactorily; the SPAB leaflet *Patching Old Floorboards* (see Further Reading, page 24) describes techniques that will ensure minimum damage during the process. Worn floorboards or past beetle attack do not necessarily need repair. The boards may be perfectly sound, and are important historic features. A sloping floor may have been caused by movement in the structure and has now become a feature of the building. Gaps in floorboards can be repaired by inserting a timber slip. Never be tempted to replace a floor without investigating repair.

Sand old floorboards only as a last resort. Paint can be removed by use of proprietary paint strippers. Varnishes and stains can be removed most effectively by the application of a solvent poultice. If scrubbing with water is involved in the cleaning process, then minimum amounts of water should be used to avoid warping the boards and lifting the timber grain. The final treatment should be a traditional wax finish, not a modern polyurethane varnish. The latter tend to produce an unsatisfactory high gloss finish that soon chinks when exposed to ultraviolet light through sunny windows.

Many timber ground floors are 'suspended', and have an air gap or void below; these must be ventilated to the outside air. The through-vents must be kept clear in order to avoid fungal infestation and timber rot.

Modern solid floors have a damp-proof membrane. These are better avoided in buildings with traditionally constructed walls, as they are likely to cause the moisture to travel higher up the wall, taking the wallpaper or plaster off with it as it goes. A ventilated ground floor is nearly always a good idea, unless you already have a flagstone floor, which should of course be retained. Flagstone floors need to 'breathe', so do not fill in the joints between the flags with cement or seal the surface with wax or oil.

English Heritage



Historic decoration is sometimes revealed during the course of repair work. Here, a conservator salvages a fragment of historic wallpaper

Internal joinery

Doors
Staircases
Balustrades
Panelling



Openings
Worn nosings
Loose joints
Rot
Insect attack

It should be possible to open and close a door easily, without using any force. Badly fitted hinges can damage both door and frame. Check to see whether the door has warped or deformed due to joint failure. Problems like these can be put right by an experienced joiner – do not assume you need a new door.

Worn stair nosings and loose handrails or balusters can be dangerous. They can be easily repaired, or replaced if damaged beyond repair. Take the broken baluster to a wood turner and get a copy made. Some companies even have copy lathes, which will turn out the same shape automatically.

The principle to adopt in all joinery repairs is to retain as much of the original as possible and to replace only what is necessary, using matching timber. This is called 'piecing-in' and is second nature to a skilled joiner (but not to every jobbing builder). Joinery affected by fungal rot or insect attack may not need to be removed, provided that the leak or damp outbreak that caused the problem has been rectified.

Careful piecing-in of new timber to repair the base of an early oak door



SPAB

WHERE TO LOOK

WHAT TO LOOK FOR

WHAT TO DO

Fireplaces

Marble and stone
fire surrounds

Chips Cracks
Damage
Missing sections
Discoloration
Paint

If your marble fire surround has been painted, it can be stripped and cleaned using a variety of easily obtainable paint removers (a test in an inconspicuous area of the fireplace should be carried out first). Before you start, make sure that the surround is not in fact made of wood or slate with a marbled paint finish (real marble – and slate – will feel cold to the touch). Some stains on marble can be removed using a poultice of fuller's earth or talc mixed with water. Damage can usually be repaired, but it is best to entrust this, and the cleaning of top quality marble fireplaces, to an experienced conservator.

Tiled fireplaces

Cracked tiles
Paint

In the 18th century
fireplaces were often
lined with Delftware
tiles; where found,
these should be retained

Matching tiles are readily available, but modern tiles are often thinner than their historical counterparts, so that dabs of plaster of Paris are needed to keep them in place in their cast-iron frame. For complete replacement the entire fireplace has to be removed, as the tiles are always fitted from the back. A small repair can be done from the front using a tile cut down in size. Paint can be removed from cast iron using a proprietary paint stripper or heat gun. Scrape off the old paint with plastic or wooden implements, to avoid scratching smooth metal surfaces.



Steven Parrissien

Fire grates

Paint
Cracks
Missing components

If the grate can be taken out, it can be cleaned commercially, which may involve controlled abrasive cleaning. Broken components can be welded, and missing parts replaced. Specialist suppliers can provide parts for old grates. Steel was used for some grates from Georgian times onwards. Cleaning and restoring these is a job for a specialist.

Chimney flues

Smoking
Lack of updraught

Have the chimney swept first of all. Raise the fire-bed if possible, and if this does not work, consider fitting a baffle at the top of the fireplace opening (if a glass plate is used, it should be made of 'toughened glass'). A warm flue draws better than a cold one so the more fires you have, the better your fire will perform. It may take some time to warm the flue if your chimney breast backs onto an outside wall, and especially if the flue is damp (and therefore colder than it would be if dry).

The gases from gas fires are very corrosive, and attack lime mortar joints inside the flue; the solution is to have a flexible steel flue liner fitted.

Central heating and hot water supply

Boiler
Radiators
Pipework
Hot water cylinder

Leaks
Faulty controls
Missing insulation

Check pipe-work, valves, radiators, taps, and all joints (where visible) for leaks. Cast-iron radiators add to the interest of a building so retain them where possible; if necessary they can be reconditioned. Do not block up grilles, especially where they supply air to the boiler, or in locations such as kitchens or bathrooms where their purpose is to reduce the risk of condensation. Check that your hot water cylinder has an insulating jacket, and, where possible, insulate all hot water pipe-work. Save energy by having your boiler serviced regularly, and by fitting sophisticated modern timer and temperature controls.

Keep temperatures reasonably low and constant if you have historic panelling, as it can dry out and shrink if kept too hot for too long. Radiators should never be hung on panelling; the floor-mounted type is preferable and can be braced back to panelling at a single point, if necessary, without imposing any great strain on the timber. The low, squat, traditional type of cast iron radiator needs no bracing; this also applies to certain modern radiators.

Electrical installation

Power supply
Lighting circuits
Fittings
Appliances

Wrong fuses
Damaged wiring
Too few socket
outlets
Flickering lights

Early electrical wiring was nearly always unsafe by modern standards. Have your installation checked by a qualified electrician.

Most wiring is hidden within floor and roof voids, where rats and mice can get at it. They like to gnaw on the plastic insulated covering, exposing the wires, which can cause electrical shorting leading to fires. It is very important, particularly in thatched properties, to inspect regularly the condition of any wiring within the roof void.

Avoid burying electric cables in roof or floor insulation, as this can cause overheating and fires. Putting too many electrical adapters in one socket is also dangerous, and indicates that you need to install more outlets.

Fuses are there to make sure your wiring does not overheat and set fire to your building, so treat them with the respect they deserve. Fuses in plugs should have the correct rating for the appliance, and fuse wire in distribution boards should be checked. Ideally, a circuit-breaker type of board should be fitted instead, as these are not open to abuse.

Deal immediately with problems such as flickering lights or the smell of singed plastic. Both are strong indications that something is wrong. Frayed cable or worn wiring on table lamps or electrical appliances should be replaced. Never use an antique light fitting without first having it checked by a qualified electrician.

Cutting chases in plaster for cables and pipes needs careful thought, especially in certain types of old building, where there could be wall paintings hidden by later layers of paint or paper. If the services are to be installed behind timber panelling, specialist joiners may be needed to remove the panelling without damage and put it back without signs of disturbance.

The simple act of installing electric cables or central heating pipes can seriously weaken floor joists and beams. Notches for services should never be at the centre of the floor but kept near the edges, where the effects on the structural properties of the joists are much less significant. Ideally, cables should be threaded through holes drilled for the purpose at mid-depth through the joists.

Sanitary facilities

| | |
|---------|-----------|
| Basins | Leaks |
| Baths | Blockages |
| WCs | Cracks |
| Bidets | Chips |
| Showers | |

Check both supply and waste pipe-work for leaks. Fix defective valves in WC cisterns — leaking overflows can cause permanent damage to walls. Ensure that traps and outlets are kept clear by periodically applying strong bleach, and occasionally caustic soda.

Chipped porcelain or damaged vitreous enamel (on metal baths) are difficult to repair satisfactorily. If the item is historic, and the damage is not too extensive, it might be better to live with it rather than replace with a new fitting. Stains and discoloration can usually be dealt with by using a variety of non-abrasive preparations. Limescale can be removed using a proprietary descaler.

Fire precautions

Check electrical installation (see Electrical Installation, page 18). Fit battery-operated smoke alarms (or, preferably, mains-operated alarms, particularly if your property is extensive). The installers of alarm systems should be instructed to fit the necessary wiring in the least obtrusive way (this may involve other tradespeople, such as a joiner or plasterer), and should be closely supervised to ensure that they comply. Consider using a radio-operated system, which largely cuts out the need for cables.

Keep a fire extinguisher in the kitchen, and in the boiler-room if that is separate. Make sure you buy the right type of extinguisher — there are several types according to the likely cause of the fire. Replace the extinguisher before the expiry date.

If you have open fires, install a fender and keep a fireguard handy in case you need to leave the room for any length of time. Have chimneys swept regularly, so that there is no build-up of soot to catch fire. If you put in a gas fire use a fitter approved by the Council of Registered Gas Installers (CORGI).

When working on an old property avoid using a blowlamp (several historic properties have been destroyed by fires started by careless plumbers or painters). Even hot air paint strippers should be used with caution, as they can ignite dust hidden inside voids behind joinery, which may smoulder for some time before catching light. If you do decide to burn paint off your windows, always use a heat deflector to prevent accidental cracking of the glass panes. Fires can also be caused by painters' rags soaked in white spirit, which have been known to combust spontaneously.

External areas

| | |
|-------------|------------|
| Gardens | Damp walls |
| Paths | Ponding |
| Paved areas | |
| Drives | |
| Walls | |
| Gates | |



The principles of good maintenance apply to the external areas, as well as to the house itself

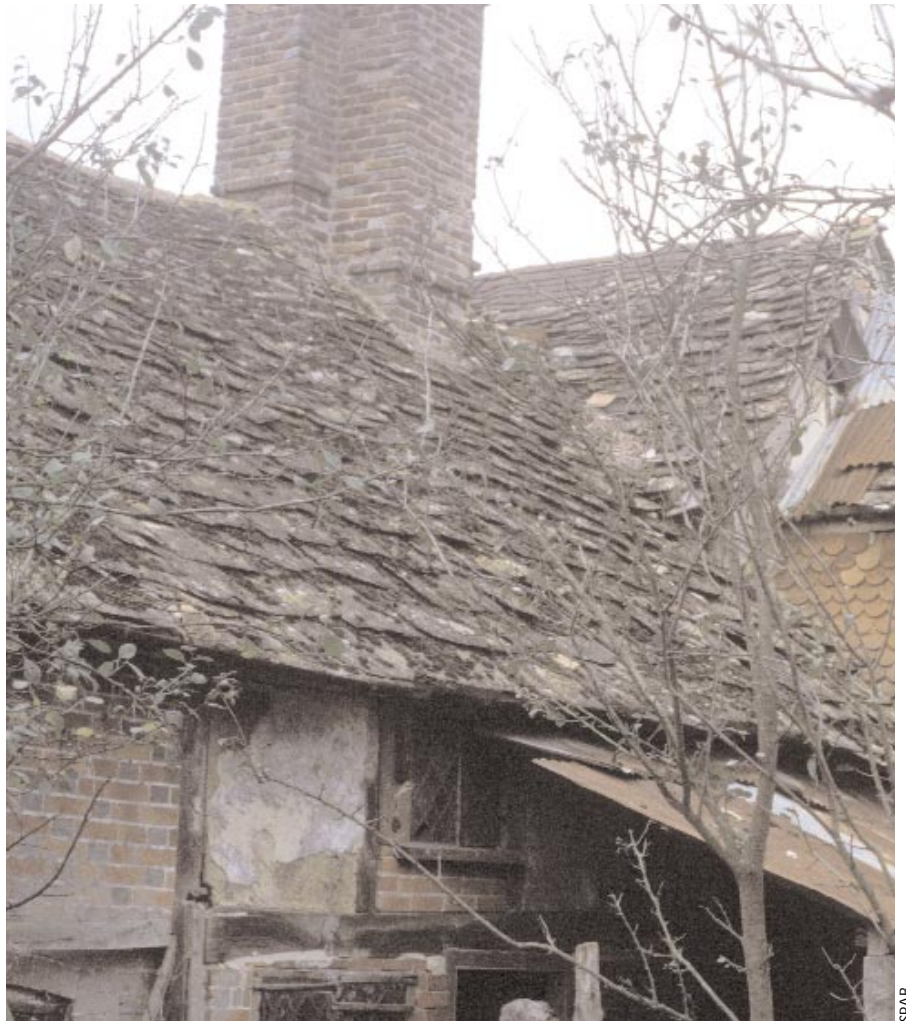
Have rainwater gullies cleaned out regularly. Clear blockages in channels. Remove anything blocking low level ventilators in walls (these allow air into the floor void and help prevent dry rot). Make sure that the ground level outside the building is lower than the inside level, and always below the damp-proof course (if there is one). See that the ground slopes away from the building and not towards it — a simple precaution that is often overlooked. Large paved areas should be drained to a soakaway well away from the building. Hard surfaces at the base of a wall can result in damp, due to splash-back of rainwater; consider replacing with a channel of pea-shingle. If the walls of your building and the ground nearby are permanently damp, you might consider installing a French drain. This is a trench filled with gravel, with perforated pipes which can take the water away and which should be fitted with rodding points for cleaning blockages. Although French drains are traditionally located next to walls, there are arguments for locating them a little distance away from the building. Expert guidance should be sought.

Inspect garden walls and painted timber surfaces, and treat as described above.

HOW TO ORGANISE REPAIRS

FIRSTLY, MAKE A LIST OF THE DEFECTS YOU HAVE FOUND AND TRY TO LIST THEM IN ORDER OF PRIORITY. Then group them together according to trades, so that you can decide whether a general builder is appropriate or whether you need only a joiner or other specialist (for something such as repairing stained glass).

At present, there is no comprehensive central register of builders experienced in carrying out sensitive conservation repairs. However, a new organisation, the Heritage Information Exchange, is due to open in 2003 (see Useful Addresses, pages 22–24). This will provide a one-stop shop for easy access to valuable conservation information. The service aims to include a vetted register of contractors, consultants and craftspeople, a database of product and materials suppliers, an on-line conservation bookshop, and a database of specialist sources of information, courses, seminars and lectures.



SPAB

A roof overdue for repair. Many of the stone slates could be salvaged and re-used, preserving the historic integrity of the building and saving the cost of replacement materials

THE RIGHT WAY TO REPAIR

Broadly speaking, use only traditional materials and techniques, tried and tested by time. Replace like with like as far as possible, unless you are remedying a defective past alteration or poor repair. The SPAB will give advice over the telephone (or can sell you the appropriate leaflets). You can get excellent and reasonably priced guidance notes from the SPAB, The Georgian Group and The Victorian Society, and your local planning authority probably issues pamphlets on many aspects of traditional building and repair methods. You may also have a



SPAB

Repointing with an inappropriate hard cement mortar has caused the bricks themselves to decay

local amenity society; these sometimes issue leaflets on the appropriate repair methods for your area.

Newsagents carry a number of magazines devoted to traditional or period homes and these often have useful articles that will generally point you in the right direction (be aware, however, that some articles are advertisements in disguise and may not reflect best practice). High quality repair skills are still available and good craftsmen still exist, although sadly not in large numbers. You can also acquire the practical skills for do-it-yourself repairs by going on one of the hands-on courses run by the SPAB.

NEW OR SECOND-HAND MATERIALS?

Most advisory organisations nowadays discourage the use of salvaged materials (other than from your own building).

This is because of an increase in the theft of building materials, and the inappropriate stripping or demolition of buildings in order to supply the market in valuable architectural salvage. You should investigate the possibility of using newly-made traditional materials instead.

Because stone roofing slates are particularly sought after, local small-scale quarries – for example, sandstone quarries in Herefordshire – have been encouraged to open up again to meet the demand. Such initiatives deserve support.

Avoid synthetic and substitute materials (such as concrete roofing ‘slates’). New natural materials will always weather down in time and blend in with the original in a way which artificial products never can.

Your local Conservation Officer may be able to help you find a suitable contractor. If you use an architect or surveyor for the inspection, and retain him or her to run the building contract, this problem will be taken away from you. Your architect or surveyor will write a repair specification which the builder must follow to the letter, and will also decide whether or not you need approvals (if your building is listed, for instance, even painting it a different colour can require consent). Unless you have professional help, you will need to find out if permission is required, including Listed Building Consent or Conservation Area Consent, before you start work. This may include repairs as well as replacements or alterations. Structural repairs and replacing windows



Chris Wood/English Heritage

It is worth seeking out the craftspeople with the right skills for the job

“Your local Conservation Officer may be able to help you find a suitable contractor.”

may need Building Regulation Approval.

You may need to get a number of estimates and then re-assess your priorities. Take time to do this and do not rush into things unnecessarily. For large repair projects (involving a builder rather than just a specialist) you should discuss with your professional adviser the possibility of using one of the standard building contracts produced by the Joint Contracts Tribunal (JCT) (see Further Reading, page 24). These confirm the precise arrangements for the work to be done, how payments should be made, what to do if you want to make changes to the work, how to resolve disputes if they arise, and so on. If your builder shies away from this, then you will know that he was the wrong choice in the first place.

GRANTS FOR REPAIRS

Grant aid is not currently available for routine maintenance work. Your local authority may have funds available for renovation or repair of historic buildings, including schemes run in partnership with English Heritage in Conservation Areas (Heritage Economic Regeneration Schemes). Ask your local planning authority Conservation Officer what is available in your area.

English Heritage may help with grants for major repairs if your building is listed Grade I or II*, and if urgent work is needed to keep it structurally stable and watertight. Other conditions also apply. In the first instance you should contact your Conservation Officer, who may refer you on to the English Heritage Regional Office.

The Architectural Heritage Fund publishes *Funds for Historic Buildings in England and Wales – A Directory of Sources* (see Further Reading, page 24), which includes a number of statutory, public and other sources. Most are designed to help charitable and public bodies, but a few will apply to individual owners of historic buildings.

SUMMARY: DO'S AND DON'TS

DO

carry out regular inspection and maintenance

seek advice from suitability qualified professionals

repair rather than restore or replace

respect the building's character and history and make sure new work is sympathetic to it

avoid unnecessary work

study the history of the building and how it has changed

analyse the cause of the defects

use only traditional materials and proven techniques

re-use materials salvaged from your own building

remedy previous bad repairs

remove disfiguring alterations or additions

adopt correct priorities for repairs

use only reliable contractors or craftspeople

obtain necessary planning and legal consents

DON'T

allow serious defects to remain

expect independent advice from someone who has something to sell you

repair in unsympathetic materials

attempt to 'improve' by altering the original appearance

clad walls with artificial stone or other modern materials

use unsuitable 'off the peg' architectural elements

rely on commercially based claims for any product or technique

use so-called 'maintenance free' products

waste re-usable materials

bodge repairs

remove or demolish any original element

replace windows or doors in non-original patterns or materials

employ anyone without seeing references or inspecting their work

do any work without the required consent

All over the country, there are professionals and craftsmen who have devoted their working lives to getting things right. Seek them out, pay them for their advice and skills, and it will repay you many times over.

USEFUL ADDRESSES

Ancient Monuments Society
St Ann's Vestry Hall
2 Church Entry
London
EC4V 5HB
Tel: 020 7236 3934
Fax: 020 7329 3677
Email: office@ancientmonumentsociety.org.uk
Website: www.ancientmonumentsociety.org.uk
The Friends of Friendless Churches may be contacted at this address

Bat Conservation Trust
15 Cloisters House
8 Battersea Park Road
London SW8 4BG
Tel: 020 7627 2629
Fax: 020 7627 2628
Website: www.bats.org.uk

British Standards Institution
BSI Group HQ
389 Chiswick High Road
London W4 4AL
Tel: 020 8996 9000
Fax: 020 8996 7001
Email: cservices@bsi-global.com
Website: www.bsi.org.uk

The Brooking Collection
University of Greenwich
Oakfield Lane
Dartford
Kent DA1 2SZ
Tel: 020 8331 9897
Fax: 020 8331 9305
Ironmongery and other building elements, which may be visited by appointment

The Building Centre
26 Store Street
London WC1E 7BT

Tel: 020 7692 4000
Fax: 020 7580 9641
Email: information@buildingcentre.co.uk
Website: www.buildingcentre.co.uk
Extensive reference library provides information on the building and home improvement industries, including products and materials, manufacturers' literature, standards, regulations and codes of practice. Information line for all product information and reference library: 0906 516 1136. Calls are charged at £1.50 per minute to cover postage and research costs (average call duration is 2.5 minutes)

The Building Conservation Directory
Cathedral Communications Ltd
High Street
Tisbury

Wiltshire SP3 6HA
Tel: 01747 871717
Fax: 01747 871718
Website: www.buildingconservation.co.uk
E-mail: bcd@cathcomm.demon.co.uk
Source book and on-line system for finding specialist products & services

Building Research Establishment (BRE)
Garston
Watford
Hertfordshire WD25 9XX
Tel: 01923 664000
Fax: 01923 664 010
Email: enquiries@bre.co.uk
Website: www.bre.co.uk

BRE Scotland
Kelvin Road
East Kilbride
Glasgow G75 0RZ

el: 01355 576200
 Fax: 01355 576210
 Email: eastkilbride@bre.co.uk
 Website: www.bre.co.uk

Cadw: Welsh Historic Monuments

Crown Building
 Cathays Park
 Cardiff
 CF10 3NQ
 Tel: 029 2050 0200
 Fax: 029 2082 6375
 Email: cadw@wales.gsi.gov.uk
 Website: www.cadw.wales.gov.uk

Council for the Care of Churches

Church House
 Great Smith Street
 London SW1 P3NZ
 Tel: 020 7898 1866
 Fax: 020 7898 1881

English Heritage

Customer Services Department
 PO Box 569
 Swindon SN2 2YP
 Tel: 0870 333 1181
 Fax: 01793 414 926
 Email: customers@
 english-heritage.org.uk
 Website: www.english-heritage.org.uk

Environment and Heritage Service Northern Ireland

5-33 Hill Street
 Belfast
 BT1 2LA
 Tel: 028 9054 3034
 Fax: 028 9054 3111
 Email: bh@doeni.gov.uk
 Website: www.ehsni.gov.uk

Federation of Master Builders

Gordon Fisher House
 14/15 Great James Street
 London
 WC1N 3DP
 Tel: 020 7242 7583
 Fax: 020 7404 0296
 Email: central@ifmb.org
 Website: www.fmb.org
 (See especially 'How to avoid
 cowboy builders' at www.
 fmb.org.uk/cnsumers/fmb/1398.org)

The Georgian Group

6 Fitzroy Square
 London W1T 5DX
 Tel: 020 7529 8920
 Fax: 020 7529 8939
 Email: info@georgiangroup.org.uk
 Website: www.georgiangroup.org.uk

Health and Safety Executive

Sheffield Information Centre
 Broad Lane
 Sheffield
 S3 7HQ
 Tel: 08701 545500
 Fax: 02920 859260
 Email: hseinformationservices@
 natbrit.com
 Website: www.hse.gov.uk

To order publications:

HSE Books

PO Box 1999
 Sudbury
 Suffolk
 CO10 2WA
 Tel: 01787 881165
 Fax: 01787 313 995
 Email: hsebooks@prolog.uk.com
 Website: www.hsebooks.co.uk

Heritage Building Contractors Group

c/o Linford Group Ltd
 Quonians
 Lichfield
 Staffordshire
 WS13 7LB
 Tel: 01543 414234
 Fax: 01543 410065
 Email: dlinford@
 linford-bridgeman.co.uk
 Website: www.
 buildingconservation.com

Heritage Information Exchange

15 Kensington Palace Gardens
 London
 W8 4QG
 Tel: 020 7243 5888
 Fax: 020 7243 5889
 Email: info@
 heritageinformation.org.uk
 Website: www.
 heritageinformation.org.uk

Historic Scotland

Longmore House
 Salisbury Place
 Edinburgh
 EH9 1SH
 Tel: 0131 668 8600
 Fax: 0131 668 8788
 Email: hs.website@
 scotland.gsi.gov.uk
 Website: www.
 historic-scotland.gov.uk
 Historic Scotland's Scottish
 Conservation Bureau
 provides information and
 advice on artefacts and
 building conservation

Institute of Historic Building Conservation

Jubilee House
 High Street
 Tisbury
 Wiltshire
 SP3 6HA
 Tel: 01747 871717
 Fax: 01747 871718
 Email: admin@ihbc.org.uk
 Website: www.ihbc.co.uk

Institution of Structural Engineers

11 Upper Belgrave Street
 London SW1X 8BM
 Tel: 020 7235 4535
 Fax: 020 7235 4294
 Email: mail@istructe.org.uk
 Website: www.istructe.org.uk

Maintain our Heritage

Timothy Cantell
 Project Co-ordinator
 Weymouth House
 Beechen Cliff Road
 Bath BA2 4QS
 Tel: 01225 482228
 Fax: 0870 137 3805
 Email: tcantell@
 maintainourheritage.co.uk
 Website: www.
 maintainourheritage.co.uk
 MoH is running an experimental
 not-for-profit maintenance service
 covering Bath and North East
 Somerset until early 2003,
 offering inspection, a report on
 priorities for maintenance work
 and a limited amount of first-aid
 on-the-spot repair

National Federation of Builders

c/o The Construction Confederation
 Construction House
 56-64 Leonard Street
 London EC2A 4JX
 Tel: 020 7608 5000
 Fax: 020 7608 5001
 Email: enquiries@theCC.org.uk
 Website: www.theCC.org.uk

National Monuments Record Centre (NMRC)

English Heritage
 Great Western Village
 Kemble Drive
 Swindon
 SN2 2GZ
 Tel: 01793 414600
 Fax: 01793 414606
 Email: info@rchme.co.uk
 Website: www.english-heritage.org.uk

Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS)

John Sinclair House
 16 Bernard Terrace
 Edinburgh EH8 9NX
 Tel: 0131 6621456
 Fax: 0131 662 1499
 Email: nmrs@rcahms.gov.uk
 Website: www.rcahms.gov.uk

Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW)

Crown Buildings
 Plas Crug, Aberystwyth
 Ceredigion SY23 1NJ
 Tel: 01970 621200
 Fax: 01970 627701
 Email: nmr.wales@rcahmw.org.uk
 Website: www.rcahmw.org.uk

Royal Incorporation of Architects in Scotland (RIAS)

15 Rutland Square
 Edinburgh EH1 2BE
 Tel: 0131 229 7545
 Fax: 0131 228 2188
 Email: info@rias.org.uk
 Website: www.rias.org.uk

Royal Institute of British Architects (RIBA)

Clients Advisory Service
 66 Portland Place
 London W1B 1AD
 Tel: 020 7580 5533
 Fax: 020 7436 9112
 E-mail: cas@inst.riba.org
 Website: www.riba.org

Royal Institution of Chartered Surveyors (RICS)

Information Service
 12 Great George Street
 London SW1P 3AD
 Tel: 020 7222 7000
 Fax: 020 7222 9430
 E-mail: conservation@rics.org.uk
 Website: www.rics.org.uk

Scottish Society for Conservation and Restoration (SSCR)

Chantstoun
 Tartraven
 Bathgate Hills
 West Lothian EH48 4NP
 Tel: 01506 811 777
 Fax: 01506 811 888
 E-mail: admin@sscr.demon.co.uk
 Website: www.sscr.demon.co.uk

The Society for the Protection of Ancient Buildings (SPAB)

37 Spital Square
London E1 6DY
Tel: 020 7377 1644
Fax: 020 7247 5296
Email: info@spab.org.uk
Website: www.spab.org.uk

Twentieth Century Society

70 Cowcross Street
London EC1M 6EJ
Tel: 020 7250 3857

Fax: 020 7251 8985
Email: coordinator@c20society.demon.co.uk
Website: www.c20society.demon.co.uk

United Kingdom Institute for Conservation (UKIC)

109 The Chandlery
50 Westminster Bridge Road
London SE1 7QY
Tel. 020 7721 8721
Fax: 020 7721 8722

E-mail: ukic@ukic.org.uk
Website: www.ukic.org.uk
UKIC maintains The Conservation Register, a list of accredited conservators for cleaning and repair of historic materials

Upkeep: The Care of Buildings Exhibition

Room 203
South Bank University
Wandsworth Road
London SW8 2JZ

Tel: 020 7815 7212
Fax: 020 7815 7213
Email: upkeep@sbu.ac.uk
Website: www.sbu.ac.uk/upkeep

Victorian Society

1 Priory Gardens
Bedford Park
London W4 1TT
Tel: 020 8994 1019
Fax: 020 8995 4895
Email: admin@victorian-society.org.uk
Website: www.victorian-society.org.uk

FURTHER READING**General titles**

Christopher Brereton, *The Repair of Historic Buildings: Advice on Principles and Methods*, London: English Heritage, 2nd edn., 1995. (Especially valuable when dealing with a Listed Building. £9 per copy. To order, tel: 01761 452 966 and quote order code 1 85074 5327 7)

Cathedral Communications Ltd, *The Building Conservation Directory*, Tisbury, Wiltshire: Cathedral Communications, published annually. (Directory of products and services for the conservation and repair of old buildings, from Cathedral Communications Ltd — see Useful Addresses.)

Janet Collings, *Old House Care and Repair*, Shaftesbury: Donhead, 2002.

Pamela Cunningham, *Caring for Old Buildings*, Marston House Publishing, 2002.

Davey, Heath, Hodge, Ketchin and Milne, *The Care and Conservation of Georgian Houses*, London: Architectural Press, 1986.

Georgian Group Guides. (Advisory booklets on aspects of Georgian houses and interiors; mail order from the Georgian Group — see Useful Addresses.)

Health and Safety Executive, *Health and Safety in Construction*. (Includes guidance on working at height; mail order from HSE — see Useful Addresses.)

Jeff Howell, *The Sunday Telegraph Guide to Looking After Your Property*, London: Pan, 2002.

Donald Insall, *The Care of Old Buildings Today*, London: Architectural Press, 1972.

Albert Jackson and David Day, *Collins Complete Home Restoration Manual*, London: HarperCollins, 1994.

Albert Jackson and David Day, *Collins Period House*, London: HarperCollins, 2002.

Alan Johnson, *How to Restore and Improve your Victorian House*, Newton Abbot: David and Charles, 1984.

Judith L Kitchen, *Caring for Your Old House: A Guide for Owners and Residents* (Respectful Rehabilitation), Washington, D.C.: Preservation Press/Wiley, 1996.

Hugh Lander, *The House Restorer's Guide*, Newton Abbot: David & Charles, 1986.

Melville and Gordon, *The Repair and Maintenance of Houses*, London: Estates Gazette, 1973.

Steven Parissien, *The Georgian Group Book of the Georgian House*, London: Aurum, 1995.

Gordon T Pearson, *The Conservation of Clay and Chalk Buildings*, Shaftesbury: Donhead, 1992.

Matthew Saunders, *The Historic Home Owner's Companion*, London: Batsford, 1987.

Scott and Maclean, *The Penguin Dictionary of Building*, London: Penguin, 1993.

Society for the Protection of Ancient Buildings (SPAB) *Technical Pamphlets, Information Sheets*, and *Guides* (see Useful Addresses)

The Victorian Society, *Care for Victorian Houses* (Advisory booklets on aspects of Victorian and Edwardian houses and interiors, available by mail order from the Victorian Society — see Useful Addresses.)

Kit Wedd, *The Victorian Society Book of the Victorian House*, London: Aurum Press, 2002.

Harriet Whelchel, *Caring for your Historic House*, Washington DC: Preservation Press, 1998.

Technical publications

The following organisations produce useful technical literature about various aspects of building maintenance. For catalogues and ordering information, contact them at the addresses given:

The British Standards Institution produces Standards for building materials and Codes of Practice for their use. Particularly recommended: British Standards Institution, *Guide to Building Maintenance Management (BS 8210)*, London: BSI, 1986. The Building Research Establishment offers a vast range of very useful material with authoritative, clear and simple presentation, including series of Good Building Guides, Good Repair Guides and Information Papers. Particularly recommended: BRE Information Paper IP19/88: *Building Inspection for Dampness*, Watford: BRE, 1988. English Heritage sells books on architectural history and conservation, and also offers free technical guidance publications and campaign documents. The SPAB run a mail-order bookshop, offering several hard-to-find titles alongside their own range of excellent Technical Pamphlets. In addition, most local planning authorities issue guidance leaflets on the repair and restoration of old buildings. These usually describe local methods of building as well as general matters, and many are of very high quality.

Standard contracts for building work and maintenance

Joint Contracts Tribunal, *Building Contract for Home Owner/ Occupier* (where the client deals directly with the builder), London: JCT, 1999.

Joint Contracts Tribunal, *Building Contract for Home Owner/ Occupier* (who has appointed a consultant), London: JCT, 2001.

Joint Contracts Tribunal, *Contract for Home Repairs and Maintenance*, London: JCT, 2002.

JCT does not sell contracts directly, but through three approved resellers: RIBA Publications (Tel: 020 7251 0791, Fax: 020 7608 2375, Email: sales@ribabooks.com); RICS Books (Tel: 024 7669 4757, Fax: 020 7334 3851, Email: mailorder@rics.org.uk); CIP Ltd (Tel: 0121 722 8200, Fax: 0121 722 8201, Email: sales@cip-books.com)

Daily Care



The Society for the Protection of Ancient Buildings



On founding the SPAB in 1877, William Morris spoke of the need to "stave off decay by daily care, to prop a perilous wall or mend a leaky roof." Maintenance is important to buildings of all ages and types and is as vital today as it was in Morris's time. In November 2002 the SPAB launched the first National Maintenance Week to focus owners' attention on the care of their buildings. Checking your gutters, drains, walls and roofs will keep your building healthy and save you trouble and money. This guide will help you achieve this.

The SPAB remains true to William Morris's principles. In the 21st century we are still a charity, reliant on members and supporters. We advise owners, we lobby and we are involved in a huge range of issues affecting old buildings. The Society has helped save countless beautiful buildings, and has trained many of the professionals currently involved in their care.

Information about maintaining your building is available from the SPAB through publications, courses and lectures. Members receive a quarterly magazine, a list of historic properties in need of repair that are for sale, and have the opportunity to take part in events.

www.spab.org.uk

37 Spital Square, London, E1 6DY Charity number: 231 307

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