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The principles of the conservation of historic buildings

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Committees responsible for this British Standard

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Council for the Care of Churches
Crown Estate Office
Department of National Heritage
Department of the Environment (Building Research Establishment; Property and Buildings Directorate)
Department of the Environment for Northern Ireland
English Heritage
Historic Scotland
Institute of Clerks of Works
Institution of Civil Engineers
International Council on Monuments and Sites
Loss Prevention Council
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Foreword

This British Standard has been prepared by Subcommittee B/209/12.

This guide is intended to provide building owners, managers, archaeologists, architects, engineers, surveyors, contractors, conservators and local authority building control officers with general background information on the principles of the conservation of historic buildings, when considering conservation policy, strategy and procedures.

It is important that this guide should be read in the context of the historical development of the theory and principles of conservation. When using the guide it should be recognized that the principles enunciated neither conform precisely to any previous manifesto or charter, nor are they intended to be definitive or prescriptive. It is inevitable that conservation theory will continue to evolve and that this guide will itself become historical and be subject to review in due course.

The guide stems from and has been prepared at the request of English Heritage, Historic Scotland, Cadw (Welsh Historic Monuments) and the Environment and Heritage Service of the Department of the Environment (NI).

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 26, an inside back cover and a back cover.

Guide

1 Introduction

1.1 General

The immediate and obvious objective of building conservation is to secure the preservation of the nation's stock of buildings, and in particular its historic buildings and fine architecture, in the long term interest of society.

The underlying objectives are cultural, economic and environmental.

Attempts to separate out the objectives of conservation into distinct components, however, are usually unsatisfactory, since the issues are complex and often interlocked.

1.2 Vernacular building

When people first began to build, they built for themselves, without the aid of specialist builders. What they built was, in the precise meaning of the term, 'vernacular', that is native or of the country (in French 'du pays') and the system by which the people of a particular place built was developed empirically over many generations; interlocked with land use and seasonal patterns. Ways of building varied more or less from settlement to settlement, following variations of topographical, geological, climate and transport limitations and other geographic, social and ethnographic factors. Even the more refined ways of building were, until very recently, subject to the same local and vernacular influences. Such is the basis of what can be termed the architectural geography of the United Kingdom. It is the local and vernacular materials and construction of buildings of all sorts which reflect local geology, climate and culture and which contribute to a sense of place.

1.3 Architecture as cultural expression

The aim of good builders throughout the ages has been to produce buildings which were as well built as they could be with whatever materials and skills were available. Such buildings served the needs of the people who required them, and their form and decoration were refined as a means of cultural expression. In the first century BC the Roman architect Vitruvius defined the three essential attributes of architecture, and these were translated into English in the seventeenth century as 'commodity, firmness and delight'. The integration and balancing of function, sound construction and aesthetics remains the essential objective of all architectural activity. Buildings of all sorts and of all periods contain information about the way in which people lived, worked and worshipped, about how they built and about how they thought and wished to present their own culture, or even their spiritual values. They can also be beautiful, or potentially so, either in a formal way as fine architecture, or in a narrative, picturesque way, or in both ways.

1.4 The artisan tradition

With the development of specialization, and particularly with the growth of the trades in the well-ordered burghs, or boroughs, of mediaeval and post-mediaeval Britain, building practice advanced steadily and became more standardized and subject to regional, national and, indeed, international cultural influences. While some rural buildings, particularly in more remote parts of the country, remained self-built in the local tradition and thus genuinely vernacular until the beginning of the twentieth century, most ordinary town, village and estate building in the post-mediaeval period was by carpenters (or wrights), masons and bricklayers, often with the aid of pattern books, and should properly be termed artisan. The empirical development and refinement of building practice in response to changing needs and circumstances was continued by the trades until the onset of the industrial age and beyond. The architecture and the craftsmanship of many of these buildings are of a very high order.

1.5 Fine architecture

Societies, communities and powerful people of all periods have used their principal buildings as a means of expressing their authority, sanctity, wealth or sophistication, and often all of these things at the same time. The fine architecture which a society produces is as much a reflection of its culture and ethos as dress is an expression of individual personality. Whether major churches, public or institutional buildings or private houses, such buildings, although commonly built of local materials and by the local trades, were characteristically designed by people who could be described as architects. The architecture of such buildings tended to be sophisticated, fashionable, to express national cultural characteristics and often international influences which were representative of the intellectual orientation, political or trading alliances of the time. Fine architecture, as much as painting and sculpture, literature and music represents the high culture of the age in which it was created.

1.6 The age of industry

The rapid development of Britain's power in the nineteenth century through a combination of empire and industrialization led to a major increase in the total quantity of building, largely but not only in the cities. This in turn led to major technical advances in the mechanization of building in traditional materials, through the introduction of Portland cement and through the use of iron and steel, most notably in large engineering structures such as bridges and train sheds, but also in the development of framed buildings. Throughout much of the country, however, the artisan building tradition was largely unaffected and most ordinary buildings continued to be built by hand from basic unprocessed materials until well into the twentieth century. Nineteenth century buildings of all sorts survive in use throughout the country in very large numbers and make up a substantial part of the fabric of present day towns and cities.

1.7 War, modernism and planning

Largely as a consequence of the two world wars, the twentieth century has seen development and change at a rate which is of a different order to that of any previous period. In the course of the century, the building trades, ways of building and attitudes to urban development have changed substantially. As the cost of labour and skill increased, and the price of energy fell dramatically, builders turned increasingly to mechanized and industrialized methods based on the rapid assembly of large and small factory-made components and cast-in-situ concrete. Such was the confidence in the possibilities which the new technology offered that it was believed for a time that in the future all buildings would be replaced by new ones at least once and perhaps twice per century. Traditional building methods were rejected, misunderstood or forgotten. Maintenance was to be superseded by renewal and towns were threatened with wholesale redevelopment. The rapid growth of the architectural conservation movement was in response to this threat, and became part of a wider environmental movement. Pressure for renewal receded and the desirability of retaining sound buildings, particularly historic buildings, gained wide acceptance. The best modern architecture, as much as that of any other period, evokes the spirit of the age which produced it. Paradoxically, since much of it was designed neither to last nor to be maintained, the conservation of post-war listed buildings presents new technical challenges.

1.8 The conservation movement

The conservation movement has its origins in eighteenth century enlightenment, antiquarianism and romanticism and developed in the nineteenth century through the writings of Scott, Pugin and Ruskin, the manifesto written in 1877 by William Morris for the Society for the Protection of Ancient Buildings, the first Ancient Monuments Act and the founding of the National Trust.

In the twentieth century, the consolidation of ruins and the care of ancient sites by the State was developed by HM Office of Works, while accelerating change led to the growth of preservation and amenity societies. After 1945 the listing and legal protection of buildings was established through a succession of Town and Country Planning Acts. This growth of interest in buildings and landscapes of cultural heritage was matched by increasing concern for the natural heritage and pressure to control pollution, ecological damage and resource consumption. These once separate strands together make up the modern conservation movement.

International recognition of the importance of building conservation was achieved in 1966 with the publication of the Venice Charter by ICOMOS, followed in 1981 by the Burra Charter of ICOMOS Australia.

2 Scope

This guide provides information, advice and guidance on the principles of the conservation of historic buildings, and is thus applicable to buildings, civil engineering and other standing structures which are either included in the statutory list of buildings of special architectural or historic interest or are scheduled ancient monuments.

It also gives information on the settings of these buildings and structures, their interiors and associated contents, fixtures and fittings, and the design of new work in the context of historic buildings. Some of the information given can also be of relevance in assessing proposals for buildings of architectural or historic interest which are not listed or scheduled, particularly those which contribute to the special interest of conservation areas.

3 Informative references

This British Standard refers to other publications that provide information or guidance.

Editions of these publications current at the time of issue of this standard are listed in informative annexes A, B and C, and on the inside back cover, but reference should be made to the latest editions.

4 Definitions

For the purposes of this British Standard, the definitions given in BS 6100 apply, together with the following.

NOTE. The terms defined are those which can be regarded as having precise or technical meanings in the context of building conservation. No definitions are offered for such general terms as refurbishment, rehabilitation or renovation.

4.1 alteration

Work the object of which is to change or improve the function of a building or artefact or to modify its appearance.

4.2 archaeology

Scientific study and interpretation of the past, based on the uncovering, retrieval, recording and interpretation of information from physical evidence.

NOTE 1. Archaeological evidence in buildings is as likely to be visible or concealed in the superstructure as below the ground.

NOTE 2. Archaeological investigation can be destructive.

4.3 conservation

Action to secure the survival or preservation of buildings, cultural artefacts, natural resources, energy or any other thing of acknowledged value for the future.

NOTE. Where buildings or artefacts are involved, such actions should avoid significant loss of authenticity or essential qualities.

4.4 conservation area

Area of special architectural or historic interest, the character or appearance of which is desirable to preserve or enhance.

4.5 conversion

Alteration, the object of which is a change of use of a building or artefact, from one use or type to another.

4.6 design

Abstract concept of a building or artefact. It can exist in the mind or on paper and if realized, it can be represented in the building or artefact itself.

NOTE. The design of a building can be original and unaltered, or it can be a composite made up of a series of successive designs.

4.7 fabric

Physical material of which a building or artefact is made.

NOTE. Its state at any particular time will be a product of the original design and of everything to which it has been subject in the course of its history, including deliberate alterations based on well considered secondary or subsequent designs, careless changes, the effects over time of weather and use, damage and decay.

4.8 intervention

Any action which has a physical effect on the fabric of a building or artefact.

4.9 maintenance

Routine work necessary to keep the fabric of a building, the moving parts of machinery, grounds, gardens or any other artefact, in good order.

4.10 preservation

State of survival of a building or artefact, whether by historical accident or through a combination of protection and active conservation.

4.11 protection

Provision of legal restraints or controls on the destruction or damaging of buildings or artefacts, natural features, systems, sites, areas or other things of acknowledged value, with a view to their survival or preservation for the future.

NOTE. Any intervention or work likely to affect the essential qualities of a building or its character, land or anything which is legally protected would normally require a consent to be obtained through a procedure established by the relevant legislation (see annex A).

4.12 rebuilding

Remaking, on the basis of a recorded or reconstructed design, a building or part of a building or artefact which has been irretrievably damaged or destroyed.

4.13 reconstruction

Re-establishment of what occurred or what existed in the past, on the basis of documentary or physical evidence.

NOTE. The strength of this evidence determines how accurate or hypothetical the reconstruction is.

4.14 repair

Work beyond the scope of regular maintenance to remedy defects, significant decay or damage caused deliberately or by accident, neglect, normal weathering or wear and tear, the object of which is to return the building or artefact to good order, without alteration or restoration.

NOTE. Most repair work should be anticipated and planned, but occasionally it can be required in response to a specific event, such as a storm or accident.

4.15 replication

Making an exact copy or copies of a building or artefact.

4.16 restoration

Alteration of a building, part of a building or artefact which has decayed, been lost or damaged or is thought to have been inappropriately repaired or altered in the past, the objective of which is to make it conform again to its design or appearance at a previous date.

NOTE. The accuracy of any restoration depends on the extent to which the original design or appearance at a previous date is known, or can be established by research.

4.17 reversibility

Concept of work to a building, part of a building or artefact being carried out in such a way that it can be reversed at some future time, without any significant damage having being done.

5 Legislation and standards

5.1 Legal protection of buildings and sites

Structures, including buildings and buried archaeological remains, can be given legal protection by scheduling under ancient monuments legislation, or by inclusion in the statutory list of buildings of special architectural or historical interest, or by inclusion in a conservation area under planning legislation (see annex A).

NOTE. Ecclesiastical buildings in use for ecclesiastical purposes may be exempt from listed buildings and conservation area legislation, particularly those of the Church of England. However, listed ecclesiastical buildings are subject to their own legislation (see **A.14**) and advice should be sought from the Advisory Committee of the Diocese (DAC).

Areas and sites can be protected under natural heritage legislation.

NOTE. Where buildings or sites are protected, intervention can require a formal consent to be obtained, through a procedure established by the relevant legislation.

5.2 Application of standards and codes of practice

Old buildings that have stood the test of time require judgement to be exercised when decisions are being made about their conservation. This judgement should be based on an understanding of principles informed by experience and knowledge, including that of relevant legislation. British Standards and other specifications and codes of practice should not be applied unthinkingly, in the context of building conservation. While the application of particular specifications, structural design codes and calculations can be appropriate in many circumstances, there can be other circumstances where it will be necessary to follow professional experience and judgement, on the basis of what has been proved to work.

6 The objectives of conservation

6.1 General

The conservation of buildings can be justified on cultural, economic and environmental grounds, usually in combination. Well researched analysis of the reasons for conservation will often help to resolve conflicting pressures, between which balances should be struck and assist good decision making.

6.2 Cultural objectives

6.2.1 *Analysis of cultural objectives*

There are two general reasons for the preservation of a building on cultural grounds:

a) historical: for the information or evidence of the past embodied in it; and

b) aesthetic: for its beauty, its value as a work of fine architecture, or for the works of craftsmanship or art incorporated in it.

A building should always be considered with regard to its history and as a whole, interior as well as exterior. Where appropriate, its setting, fixtures, fittings and associated contents should also be taken into account.

6.2.2 *The historical component*

An understanding of contemporary society as a basis for contemplating the future depends to a significant extent on knowledge of the past. Proper understanding and interpretation of history depends crucially on the evidence of primary sources, including original documents, artefacts and the results of archaeological investigation. Complete buildings and the remains of buildings incorporated within later structures are almost always of value as primary source material.

The more rare a building is (and older buildings tend to be rarer) the more valuable can be the evidence which it contains. However, many buildings are more complex than they appear and can contain work of several periods overlaid one upon the other, and it is often difficult to know what evidence the fabric can contain.

Consideration of the historical component of cultural value leads to the following general principles.

a) Much work to historic buildings is of a specialist nature, and requires skills that are attained by specialist conservation training and by experience. The need for this expertise applies to all aspects of the work, including survey and archaeological investigation, design and specification, and any building and artefact conservation involving historic fabric.

b) Authentic material within the fabric, fixtures and fittings from any period or phase of building is always of potential value and should be treated with respect.

NOTE. Where buildings or artefacts are involved, conservation should avoid significant loss of authenticity or essential qualities.

c) In advance of any building operation, sufficient survey, investigation, evaluation and recording should be undertaken to give reasonable confidence that the building, its development and historical importance are sufficiently understood, that nothing of significant value is likely to be inadvertently damaged or destroyed, and work appropriately designed and specified.

NOTE. Such work should be designed, specified and carried out by people with appropriate knowledge and experience.

d) As far as practicable, material should be left undisturbed and in situ.

e) Material containing significant information which cannot, for any reason, be left in situ, should be carefully recorded and, if appropriate, separately preserved. The destruction of significant historical evidence without adequate recording is never acceptable.

f) Any new work which is matched to the old for aesthetic reasons should be recorded and should be finished in such a way that it can be distinguished from the original by discreet dating or other means.

g) Evidence and information retrieved in the course of work should be carefully logged. A proper record of the building and the work done should be made. In the case of particularly sensitive or significant buildings, this should be written up into a report, one copy of which should be kept in the building or with other building documentation and another deposited in an appropriate archive.

6.2.3 *Human settlement patterns*

Evidence of the past can lie in the way in which human settlements have developed, in property boundaries, the disposition of buildings within settlements and in the buildings themselves. Over time, and particularly in the twentieth century, there has been a tendency for plots to be aggregated and for large new buildings to replace groups of small ones. Where settlement patterns are of historical significance, it should be an objective that plot boundaries and the general scale and form of development are maintained. Buildings or ancillary structures which are neither old nor of intrinsic historical interest can nevertheless be significant because of their relationship with the principal building or the settlement as a whole and should not be disregarded or undervalued.

6.2.4 *The aesthetic component*

Nearly all buildings were built with the intention that they should look well, in addition to being sound and useful. Some were built with serious artistic intent. The beauty of a building, or a work of architecture, can depend on these intended or formal qualities of its design, or it can depend on the informal qualities which are derived from age, maturity, patina and the accidents of history. The beauty of a building as a component of its cultural value is quite independent of the contribution which that beauty can make to the immediate environment. It is intrinsic to the building, like that of a painting or a piece of sculpture.

Buildings also behave in different ways in response to the passage of time. Some survive unchanged, others are altered repeatedly; some are tolerant of change, others are not. Some, mainly older buildings, decay in a graceful way, others degenerate into ugly dereliction. Often, in the case of buildings of recent origin, using modern materials, little is known about their long-term performance; great care is needed to determine appropriate methods of repair. Unlike historical authenticity, which once lost can never be regained, the lost or buried beauty of a building can often be recovered, through a combination of conservative repair and, where appropriate, restoration.

Consideration of the aesthetic component of cultural value leads to the following general conclusions.

a) The aesthetic response to a building can depend on:

1) a single dominant architectural design;

2) the interaction between two or more designs;

3) an attractive or picturesque quality deriving from the juxtaposition of vernacular or artisan work;

4) incorporated art or craft work;

5) an archaeological approach to its narrative qualities and its legibility;

6) an art historical approach, based on knowledge of other work by the same architect, its place in architectural history etc;

7) the quality of its materials and craftsmanship;

8) patina and other qualities associated with age and long use;

9) historical or romantic associations;

10) setting or context;

11) fixtures, fittings and associated contents.

b) Before any decisions are made on an approach to conservation work, an appraisal of the aesthetic qualities of the building and aesthetic objectives of the work should be made.

c) Where the aesthetic and sensuous appeal of a building derives from the quality of its materials and craftsmanship, patina, etc., as well as its narrative power, the fact that it is picturesque, pretty and so on, the approach should be firmly based on the principles of minimum intervention and conservative repair.

d) While light cleaning and redecoration can form part of a normal maintenance regime, wholesale cleaning should seldom be undertaken on aesthetic grounds alone, and should be considered only where surface deposits can be shown to be harmful to the fabric.

e) Only on genuine structural or constructional grounds, or where beauty clearly depends on formal design qualities which have been compromised by changes not themselves of significant merit, should restoration be considered.

f) Aesthetic decisions should be based on an understanding of the history of the building and on an analysis of its aesthetic qualities and the objectives of the work.

g) It should be an objective that the building functions well, is structurally sound and looks well on completion of the work, and that these three aspects are well balanced and seamlessly integrated.

h) For the building to look well as a whole, new work should not attract more attention than the work of any other period. Whether it is carefully matched or discreetly contrasted, therefore, the composite result should be a well integrated whole.

i) New work should be carried out in such a way that the building is easy to maintain, and will age and weather gracefully.

6.2.5 *Interpretation and education*

The enjoyment derived from examining and understanding historic buildings can be enhanced by the availability of interpretative information. Its value will depend on its accessibility and reliability, and it should not interfere with the appearance of the building itself.

6.3 Economic objectives

6.3.1 *Analysis of economic objectives*

There are two ways in which conservation of a building can be of economic value:

a) directly, in that it has a function and thus represents a positive asset; and

b) indirectly, in that its character, quality, interest or beauty enhances the value of the immediate area in which it is set, or of the wider area or country as a whole.

Apart from scheduled ancient monuments, whose preservation, whether as complete or ruinous structures, can be justified on cultural grounds alone, the survival or preservation of a building ultimately depends on its continued use and its ability to 'earn its keep'.

Buildings of quality and in good order can also contribute to the quality of the environment and the economic health of the area and the country as a whole. Old buildings in good order and everyday use also create a sense of stability, continuity and confident well-being.

6.3.2 *Using the building stock*

Almost all buildings are capable of beneficial use, whether this is the use for which they were first designed, an existing secondary use, or some new or alternative use. To survive and to be of economic value they need to be used. Most buildings, however, need to be altered from time to time, and some require to be converted from one use to another.

Alteration should always be kept to a minimum and should, if possible, be reversible. With skill and understanding, alteration should not result in significant or unacceptable loss of cultural value.

6.3.3 *Long life, stability and continuity*

While flexibility, mobility and change have been features of life in the twentieth century, experience has shown that the frequent replacement of short life buildings incurs social, cultural and environmental costs, which have economic consequences. Conversely, stability and continuity, through buildings which last and continue to be useful, can bring economic benefits in a variety of ways. Conservation policies can generate a perception of stability and continuity, confidence and a climate in which economic activity can flourish.

6.3.4 *The value of good environment*

Fine architecture and good buildings in sound condition can be of great importance to the establishment and maintenance of good environment, both as an indicator of economic health and a stimulus to economic activity. There is ample evidence that environment affects human happiness and that people like living, working and simply being in beautiful, established places, in which buildings, trees and landscape have had time to mature together. That such places are perceived to be desirable means that they have economic value. Even in places where poor environment is associated with a lack of building maintenance and general decay, the buildings can have the potential to contribute very positively to the environment, and conservation can be an effective instrument of economic regeneration.

6.3.5 *Employment and training*

The general care, maintenance and repair of buildings depends mainly on labour and skill. Older buildings in particular are almost infinitely maintainable and repairable, using simple materials and tools, and require a minimum of energy and other non-renewable resources. Such work requires dedication, skill, care and craftsmanship to various degrees. The results will often be visible and can give pleasure and satisfaction.

6.3.6 *Travel and tourism*

Older buildings, whether vernacular, artisan or fine architecture, have come to symbolize the relationship between the physical and economic geography of a place, its people and its culture. This sense of place derived from buildings has also been a major factor in the growth of tourism and one of the main objectives of many overseas visitors to the UK is to visit historic towns and buildings. Historic buildings can thus be of considerable economic value to the community as generators of income from tourism.

Where tourism is regarded as the primary justification for conservation, there is often a danger of more traditional and commonplace activities being displaced. Difficulties can then arise should the tourist trade fail to materialize. Older buildings are likely to be much more attractive to visitors if they are seen to be working parts of an active local economy which reflects the culture of a living society.

6.4 Environmental objectives

6.4.1 *Analysis of environmental objectives*

In the relatively recent past, people living in simple societies everywhere took for granted the right to enjoy as good a living environment as they could create for themselves, within a stable, secure, global environment, upon which their buildings and way of life made few demands. Their material standard of living, health and life expectancy, on the other hand, were generally poor by twentieth century standards.

In the modern world, people in developed societies have become accustomed to relatively high material standards of living and levels of consumption. At the same time it has become increasingly clear that the environmental consequences of development have not always been well understood. Good living and working environments are difficult to create yet easy to destroy and are frequently dependent on good buildings, mature landscape and established social and economic structures. The maintenance of such qualities, wherever they exist and whether or not in the context of a conservation area, should be an objective of conservation actions.

6.4.2 *The global component*

In environmental terms, the continued use of existing building stock, whether or not of particular architectural merit or historic interest, coupled with measures to improve energy efficiency, is a global priority. New build construction, by comparison, is a major user of non-renewable resources and energy.

The relative cheapness of new construction, as an alternative to the re-use of existing buildings, is often derived from scale, mechanization of the process and from the relatively low cost of labour and resources needed. While the conservation and continued use of existing buildings can depend disproportionately on the use of skilled craftsmen and traditional building methods.

Existing buildings, by comparison, contain embodied energy, derived largely from the labour invested in them when they were built, which is dissipated and lost when they are destroyed. The materials and traditional building methods used in conservation, although demanding of labour and skill, are, nevertheless, economical in terms of non-renewable energy resources. They are also inherently maintainable and almost entirely benign in terms of toxicity.

However, improvements to the thermal insulation properties of existing buildings, to enable them to match the low levels of energy usage achieved in many new buildings, can often be difficult to achieve. In the case of architecturally or historically important buildings, such improvements can often be impossible without alterations that can be unacceptably damaging in other ways. Nevertheless, in global environmental terms, the balance of advantage strongly favours the retention of existing building stock, particularly where performance in terms of energy consumption in use can be improved.

6.4.3 *The local component*

The local environment of a neighbourhood or area is the immediate setting for the lives of the people who live and work there. The elements which give a place its particular qualities and character are many and varied, but in any settlement, whether rural or urban, the buildings, their layout, their form and materials are all important. Fine buildings of any type, style or age can by establishing or enhancing the visual environment contribute to a sense of community.

Existing buildings can have strong cultural meaning for people, whether residents or visitors in an area, because of their architectural quality, character or history; because they are built of local materials in a local way; or simply because they are familiar and are a known and recognizable feature of a place. They can also play a role in functional terms in the life of the community, or in the local economy, in ways which may not be immediately obvious.

Settlements of all sorts are complex organisms which can react to surgery in unpredictable ways. The continued use or re-use of existing buildings, if repairs and other work are well executed, will almost always make a positive contribution to the local environment. If the area or place has special historic or architectural qualities, the proper conservation of buildings becomes even more important.

6.4.4 *Conservation areas*

Conservation areas were established under the 1967 Civic Amenities Act, at a time when it was believed that it would neither be possible nor desirable to retain the existing, traditional building stock and that much of it would be replaced within a generation or two. The post-war comprehensive development areas, in which large, sometimes historic urban areas were completely cleared of building and redeveloped, were seen as the first stage in what would be a continuing process.

It was soon recognized, though, that there were certain historic areas in villages, towns and cities whose special qualities would be irretrievably lost in the comprehensive redevelopment process. Conservation areas were therefore designated to protect them from wholesale redevelopment.

Initially it was the intention to preserve and enhance the architectural character of an area rather than the fabric of individual buildings. It was perceived that these could be renewed on a piecemeal basis over an extended period, while the visual character of the area remained the same. However, the character of a conservation area is now seen to be inseparable from the physical fabric of which it is made.

While there is always much to be said for leaving things alone in conservation, there are some buildings in conservation areas which are unacceptably intrusive, the replacement or substantial alteration of which can improve the area as a whole. In general, however, it is a clear objective that buildings in conservation areas should be properly preserved and their settings enhanced.

6.5 Achieving a balance of objectives

Whether the primary motivation for a particular conservation project is cultural, economic or environmental, there are likely to be secondary or supporting aims, and a clear analysis is always desirable as an aid to the decision making process. It is easy to see that there can be conflict between objectives. For example, the need for a building to earn its keep can require damaging alterations; or there can be economic pressures to carry out work rapidly, when a more cautious approach would expose the historic fabric to less risk. There are many other possible conflicts. It is always desirable to identify and balance objectives in principle before attempting to resolve issues which can arise in practice.

7 Conservation in practice

7.1 The conservative approach

7.1.1 *General*

A building in its townscape or landscape setting together with its interior decoration, fixtures and fittings can be regarded as a composite work of art and document of history. The construction of a traditional building, therefore, should be considered as a whole and treated in a holistic way. Its structure, materials and method of construction and patterns of air and moisture movement should be properly understood. All significant work should be preceded by thorough documentary research and physical investigation. Where possible, work should be reversible, with a minimum of damage.

7.1.2 *Minimum intervention*

A conservative approach of minimal intervention and disturbance to the fabric of an historic building in which there is a presumption against restoration is fundamental to good conservation. The stock of historic buildings is finite and every loss significant. The destruction, alteration or renewal of parts of a building can be similarly damaging and should always be carefully considered and properly justified. It is important to understand and work with the fabric of a building, not against it, and to be flexible and imaginative.

The principle of minimum intervention in conservation is well established. Ideally a building should be used, kept in good order and maintained on a regular basis. If a building can no longer be used for its present or former purpose, more substantial alterations can become necessary, amounting to a conversion of the building from one use to another. Exceptionally, if a building has been ill-treated or abandoned for a time, it can be appropriate to restore it, or parts of it, according to its original or to a subsequent design. A conservative approach is therefore fundamental to good conservation.

7.1.3 *Knowledge, experience and skill*

The responsibility placed on the owners and occupiers of historic buildings is made clear in the legislation governing their protection. All buildings should be systematically maintained and it is desirable for such maintenance, including every day husbandry, to be planned as a regular routine, usually on a five-year cycle. Some understanding of the nature of the building and its actual or potential problems will be of great advantage to the owner and occupiers in devising such routines, coupled with good specialist advice.

When more substantial repairs or alterations are required, the most important factor in ensuring appropriate standards and therefore good value in the longer term, is the quality of the professional advice, decision-making and direction of the work that is obtained. As building conservation becomes more science-based, so an understanding of the objective basis of the relevant treatments and processes increases in importance. This understanding needs to be added to the traditional skills of methodical recording and analysis, clear exposition and comprehension of instructions, sound craftsmanship, and appropriate experience encompassed by the project team.

7.2 Systematic care

7.2.1 *Routine maintenance and housekeeping*

Systematic care based on good maintenance and housekeeping is both cost-effective and fundamental to good conservation. Early action can often prevent decay and avoid the need for major intervention later. Any building is best and most economically maintained by establishing a consistent level of good repair by a carefully thought out, and intelligently applied routine of maintenance and housekeeping. It is essential that there should be easy and safe access to all parts of a building for maintenance purposes.

Essential information about each building, including materials, construction, services, maintenance and housekeeping procedures, should be maintained and regularly updated in a conservation manual. Regular inspections and checks and the results of these, along with a note of any work carried out on the building should be recorded in a log book.

The following procedures should be included:

a) checking, testing and servicing of building services installations;

b) at least twice yearly cleaning of gutters and checking of roofs, rainwater disposal systems and drains;

c) checking of all rooms, particularly little frequented areas such as attics, cellars, roof spaces and other voids;

d) sweeping of chimneys, window cleaning etc.; and

e) checking of underfloor vents and other natural ventilation.

7.2.2 *Protection against fire*

Fire is the greatest single threat to the fabric and contents of any building and, in the case of an historic building, the loss of authentic fabric in a fire is irretrievable. Much can and should be done to minimize the likelihood of fire by the early elimination of major risks and by the management and control of those risks that cannot be eliminated. Professional advice should be sought on fire recautions, particularly where large, complex or important buildings are concerned. Fire safety and protection measures and insurance arrangements should be regularly reviewed, at least every five years.

The following specific measures should be considered:

a) establishment of a written fire safety policy;

b) appointment of a named person to be responsible for all fire matters;

c) preparation of a fire safety manual;

d) preparation of a fire risk assessment;

e) installation of a fire detection and alarm system;

f) reviewing fire separation and compartmentation, and improving standards as necessary;

g) obtaining a fire certificate and complying with its requirements, if the use is subject to current legislation;

h) provision and maintenance of appropriate first aid firefighting equipment;

i) ensuring that access for firefighting is always available to all parts of the building and site;

j) fire training for all staff;

k) regular inspections of residential apartments;

l) ensuring that all building and maintenance contracts contain clear fire safety requirements, including hot work procedures, and that these are enforced;

m) formation of a salvage and damage control team, if appropriate;

n) regular liaison with the local fire brigade;

o) establishing that work is desirable or justified in terms of cost/benefit and disruption to historic fabric;

p) maintenance of proper records, including inventories, drawings and photographs, with copies securely stored off-site;

q) consideration of the need for lightning protection;

r) regular inspection and maintenance of any heating systems, including boilers, chimneys, flues etc.;

s) regular testing of all electrical wiring and equipment, repairing or renewing as necessary.

It is important to give regard to the history of fires in the building and in buildings of a similar type and to consider whether the introduction of particular fire safety measures would cause irreversible damage to the historic fabric; it will also often be appropriate to consider alternative approaches to fire safety. Apart from the direct impact, fire safety improvements can affect the fabric of a building indirectly, for example by inhibiting air movement through concealed voids, which is necessary to keep the timbers dry.

7.2.3 *Protection against other disasters*

Consideration should be given to the need to be prepared for, and to take precautions against, other sorts of disaster. Individual buildings can be more than normally vulnerable to flooding, extreme winds, coastal erosion, landslides or earthquakes, while some disasters can be entirely unpredictable. In certain circumstances professional advice should be sought on preventive or precautionary measures or on the need for a disaster plan.

NOTE. It is important that consideration be given to the different aspects of insurance cover and the appropriate advice be sought.

7.2.4 *Conservation manuals*

As an aid to the proper care of any building, particularly a large and/or complex historic building, a conservation manual should be prepared. This should be a permanent and accessible document containing essential information on the building, guidance on appropriate maintenance, management and housekeeping procedures, essential health and safety information and reference to the constraints to which any proposed work may be subject (see annex D).

7.2.5 *Log books*

It is recommended that a log book be maintained in which current information and a record of events, procedures carried out and work done is routinely made. There may also be a legal obligation to maintain a health and safety file, which can usefully be incorporated with the log book (see annex D).

7.2.6 *The five-yearly cycle*

It is recommended that the condition of any building be reviewed every five years. Quinquennial maintenance cycles have had statutory recognition with regard to English parish churches for some forty years, but as a tradition, based perhaps on the commonly expected life of outside paintwork, it is much older. While there is no magic about the number five, there are many tasks for which annual repetition is too frequent and ten yearly is not frequent enough. Other intervals can be appropriate in certain circumstances, but the twice in a decade rhythm is a natural one to adopt; it has precedent, and it is recommended on that basis. Any large, complex or significant building should be inspected every five years, the general condition of all visible parts of the building assessed and recommendations made for repairs, with orders of priority, in a five-yearly inspection report (see annex D).

7.2.7 *Planning for repairs and other works*

When work is proposed, whether or not arising from a five-yearly inspection report, it should be well planned. Simple, small or urgent tasks, subject to funding and consents, can often be authorized immediately, though such works should not be undertaken without proper advice. More substantial or complex packages of work may require further investigation, outline specification and cost planning to enable funding to be secured, consents obtained and other arrangements made. To minimize disturbance to the fabric of the building, alterations and new work should wherever possible be integrated with repair work. In the case of particularly sensitive or significant buildings there may be a need for archaeological considerations, above and below ground, to be taken into account at the planning stage.

Care should be taken to identify any hazardous substances in the construction, to assess any risks associated with them, if disturbed or left undisturbed and to plan appropriate precautions. Where necessary to avoid accidental damage, vulnerable finishes or parts of a building should be physically protected.

7.3 Repair and restoration work

7.3.1 *Conservative repair*

A conservative approach to repair is fundamental to good conservation. This means that no building or part of a building should be repaired before such repair is strictly necessary or unless there is a good reason; for example, when it is necessary to provide scaffold access to a high or otherwise inaccessible part of a building, it might be sensible to carry out more repairs to that part of the building than were strictly necessary at the time if these additional repairs are likely to become necessary within the foreseeable future.

Some types of building decay can be fast, for example, where water penetration affects internal plaster or timber, but most building decay is significantly slower than is often imagined. Conclusions as to the extent of decay and the significance and speed of deterioration, and decisions as to the urgency or necessary extent of repair work, can often only be reached on the basis of knowledge, experience and professional judgement.

A traditional craft-based approach to repair, replacing decayed material on a like for like basis is preferred, although there are occasions when it is more appropriate to use non-traditional materials and methods if these are more discreet and allow more existing fabric to remain in situ, undisturbed.

7.3.2 *Restoration*

7.3.2.1 *The presumption against restoration*

A presumption against restoration is a hallmark of the British approach to building conservation. Restoration can diminish:

a) the authenticity and thus the historic value of a building; and

b) the aesthetic value of a building, especially one which depends for its interest more on its narrative or picturesque qualities and on the patina of age than on its formal qualities of design.

7.3.2.2 *The case for restoration*

A case for restoration can be made in certain circumstances, particularly in the case of younger buildings of formal, perhaps classical, design in which significant work is of a single period. The following factors support the case for restoration of a building as a whole, or part, or feature of it:

a) the existence of a lacuna or void in an otherwise complete or coherent design, whether of a house in a terrace, a wall in a house, a door in a wall, or a moulding on a door;

b) the absence or failure of significant secondary or later work which would have to be destroyed;

c) the existence of a known or proven design for the missing building, element, feature or detail; or

d) a functional, structural or constructional reason for the missing element.

7.3.2.3 *Controls and records in restoration work*

New work should be carefully matched and blended with the old in order to achieve an architectural whole, but it should not be the intention to deceive or to falsify the historical record as to the age or authenticity of any part of the work. As much old work as possible should be retained, and where it survives, even in the form of small or detached fragments, it should, if reasonably possible, be incorporated with the new, both for its authenticity and as a form of control. Substantial new or relocated work should be discreetly dated, separated from the old or otherwise made distinguishable to a discerning eye. Such identification should not, though, be visually distracting. Records of work done, and of the fabric before, during and after the work should be maintained, and properly deposited and stored.

7.3.2.4 *Materials and details in repair and restoration work*

To be compatible with the existing fabric, new material introduced in the course of like for like repair and restoration should match the original materials as closely as possible. Consideration should always be given to the desirability of sustaining sources of materials and craftsmanship. Matching should not be merely in terms of colour and appearance, but of physical and chemical characteristics, composition, species, source and method of processing, as appropriate. Identical material used in repair can initially present a raw appearance in its context but will weather sympathetically over time. Different materials, chosen to match at the outset, will, on the contrary, match less well as they age.

Where material identical to the original cannot be obtained, the most similar available material, providing the match is reasonable, should be used. The detailing of repair and restoration work should normally match the original or existing work exactly, except where the earlier detail is manifestly bad practice and has been the cause of failure, in which case, if it is possible to improve the detail, such improvement would be justified. Where no suitable material is available, a strategy other than like for like repair might have to be adopted.

The use of modern substitutes or synthetic 'look alike' materials and the introduction of impermeable materials or membranes into permeable traditional construction is not usually good practice. Where the long term or side effects of materials or processes on a building or its occupants are not fully understood, they should normally be avoided. Sometimes, though, new materials used skilfully in non-traditional ways can facilitate the most conservative and economical repair. Untried materials and techniques, however, should be used with caution, monitored and the results made known. Previous repairs should be treated with respect, with a willingness to learn from them.

7.3.2.5 *Systems of construction*

There are fundamental differences between, for example, the soft, weak, permeable materials and the patterns of air and moisture movement in the various types of traditional building, and the hard, strong, impervious materials and patterns of air and moisture movement in modern construction. It is therefore important that, before any work is carried out to a building, its system of construction and the way in which that system may have been modified over time requires to be understood. Changes should be compatible with the system of construction.

7.3.2.6 *Salvage, re-use and recycling*

The continued use of a building and of its components and materials in situ is, in environmental and cultural terms, almost always the most desirable option. The stripping of disused buildings in response to a demand for reusable materials is almost always undesirable. Components and worked materials necessarily detached in the course of work should, if possible, be reused within the building, subject always to conscientious avoidance of deception, or reclaimed for use elsewhere. The disassembly of components and the recycling of materials is preferable in environmental terms to burning for energy recovery. Dumping is always the most wasteful and least desirable option.

7.4 New works

7.4.1 *Alterations, extensions and new buildings*

To enable a building to continue in use and to earn its keep it is sometimes necessary to alter or extend it, or to erect a new building within its curtilage, or close enough to it to affect its setting. It is also frequently necessary for new buildings to be erected within historic settlements or conservation areas. In some circumstances, for example when there is an obvious or identifiable gap in a larger formal or informal composition, such new work may be positively desirable on broad architectural grounds; in other circumstances it is less desirable, but necessary. However, there are some buildings and settings in which no alterations or new work of any sort should be acceptable; care should always be taken to ensure that such work is genuinely necessary and that the end result could not be achieved in an easier or less damaging way by other means.

7.4.2 *The juxtaposition of old and new work*

The design of new work in close association with existing work of quality, always requires particular architectural knowledge, judgement, skill and care. There may be several appropriate ways of carrying out such work, the relative advantages of which will depend on the weighting attached to particular criteria.

New work should not damage, mask or devalue the old, either physically or visually. It should be of appropriate quality and should complement the old. It should be reversible and, whether carefully matched, blended or contrasted with old work, should combine to form a composite building or group of buildings of overall architectural and visual integrity. Even when a particular approach is judged to satisfy all the relevant criteria, the success of the work as a whole can often depend on the fine detail, and on the skill and scholarly, aesthetic sensitivity with which it is carried out.

7.4.3 *Criteria for alteration work*

Regard should be given to the following criteria when undertaking alteration work.

a) Sufficient survey, investigation, recording, documentary research and analysis should be undertaken in advance of design work, to ensure that the building is as well understood as reasonably possible and that the risks of accidental damage, destruction, missed opportunities or unexpected discoveries are minimized.

b) Disturbance of significant existing fabric should be avoided and any unsound work retained and repaired in association with alteration work wherever possible. The need for alterations should not be used to justify avoidable damage or destruction. The level of intervention should be the lowest appropriate level, and this should be capable of being substantiated.

c) Some buildings or parts of buildings are of such quality, importance or completeness that they should not be altered at all except in the most exceptional circumstances.

d) The need for alteration can, nevertheless, sometimes justify the removal of earlier work which, though part of the history of the building, is not of appropriate quality, is not well integrated architecturally, and manifestly detracts from the overall quality of the architecture.

e) The need for alteration can also sometimes justify the restoration of the layout or of missing parts of the building according to an original or earlier design.

f) Even materials now regarded as hazardous can be of historical significance, and if so may best be left undisturbed.

g) New work in alterations should always be of appropriate quality, should not draw attention disproportionately, and should contribute to the architectural integrity of the altered building as a whole. In many circumstances it is appropriate for new work to be different and distinguishable from pre-existing work and to be in a natural contemporary manner. Such work should be well designed and of commensurate quality in terms of materials and attention to detail. In other circumstances it may be appropriate for new work, even when it is not restoration according to an original or earlier design, to be carefully matched in materials, construction and details to existing work (see **6.3.2.4**), subject to appropriate identification and records (see **6.3.2.3**).

h) Consideration should always be given to the desirability of carrying out alterations in such a way that they could be reversed quite easily; that is, that new work could be removed and the building reinstated to its previous state without further significant damage to the pre-existing fabric. This is particularly desirable in alterations like the installation of services, where the life of such services is likely to be short compared with that of the building as a whole.

7.4.4 *Criteria for additions*

The criteria for alteration work (**6.4.3**) apply equally to additions. Careful regard should also be given to the following aspects when considering the construction of new additions.

a) Buildings whose external form and elevations have been carefully contrived, or whose settings are particularly sensitive, may not be capable of being extended in an architecturally satisfactory way.

b) Where, for example, ground that is of archaeological interest is likely to be disturbed for foundations or services, expert advice should be sought before the extension is designed, and research, investigation, monitoring and/or excavation undertaken.

c) It is sometimes appropriate for an addition to be different and distinguishable from the existing building, in which case the materials and detailing might be quite distinct. In other circumstances it may be appropriate to match the new work to the existing, in which case the new materials should be carefully matched (see **6.3.2.4**).

d) Where an addition is blended with existing work, its design should not be perceived as an end in itself, to be regarded in isolation. The composite building should be of appropriate quality throughout and should have architectural integrity as a whole and in its setting. The component parts should be maintainable and should be expected to age, weather and generally to grow together.

e) Additions should neither dominate, mask nor challenge the authority of the old, nor detract architecturally or visually from it.

7.4.5 *Historic settlements and conservation areas*

It is possible to regard an historic settlement or a conservation area as a large or complex building, which is entirely or substantially of a single or unified design, or which is layered and narrative, made up of diverse components, yet having an overall integrity. Many such settlements or historic areas have elements of unity and diversity in different ways and to different degrees. The consistent use of a limited range of materials for roof coverings, walls, ground surfaces, and for other elements and details, can be vital to the integrity of an area. In this respect, settlements or areas may often have to accommodate relatively more change than individual buildings, in order to live and thrive.

Whilst there will always be a strong presumption in favour of retaining existing buildings which contribute to the special interest of the area, the replacement of individual buildings can sometimes be justified. Moreover, the erection of new buildings in gap sites, to provide enclosure, to enhance townscape, to provide for specific functions or for economic reasons, can also be desirable.

7.4.6 *Criteria for new buildings in historic settings*

The architecture of any new building should be appropriate to, and influenced by, its site. In addition to the criteria listed in **6.4.3** and **6.4.4**, the following points are recommended.

a) Such buildings should be designed for a long life and soundly constructed of durable materials chosen to suit their context. They should be so planned that they are capable of alteration and adaptation in response to changing needs in the future.

b) Wherever possible, existing cellars, foundations and other remains should be retained, incorporated and used, and archaeological disturbance kept to a minimum.

c) Historic settlement patterns, plot boundaries, pedestrian routes and enclosures should be respected, as should the form, texture, grain and general character of the site, settlement or conservation area as a whole.

d) New buildings should be designed with due regard to their site and surroundings using materials that will weather and age well and settle into their place in the townscape.

e) In exceptional circumstances, where there is a gap in a formal scheme, for example, it may be appropriate to rebuild or build anew to a pre-existing or reconstructed design.

There can be no simple prescription for good architecture beyond the Vitruvian precepts of 'commodity, firmness and delight'. Good new buildings in historic settings should not merely be fashionable or photogenic, but should stand the test of time. Mere conformity to restrictive formulae or the dressing of modern structures in traditional guises may fail to produce architecture of good repute. Consistency and continuity can, on the other hand, be as important within a group of buildings as within a single building and, as with alterations, new buildings should not draw attention to themselves disproportionately.

In much the same way that successful artists have regard to the settings in which their works are to be placed and respond positively to the constraints which these contexts impose, so good buildings in historic settings depend ultimately on the knowledge, ability and intellectual ambition of the architect.

7.5 The preparation and management of repair and other work

7.5.1 *Inspection, survey, research and investigation*

The specification of repair and other work should be based on a genuine understanding of the building as a whole. It should follow from an inspection, such as a five-yearly inspection, and be informed by adequate measured survey drawings. If this basic information does not exist, the necessary inspection and measured survey work should be undertaken.
It will frequently be necessary, particularly where complex historic buildings are concerned, to undertake documentary research and physical investigation of the fabric, and of the site, including, in some cases, above and below ground archaeology, so that the historical development and construction of the building can be understood. Such physical investigation should be careful and as non-destructive as possible, and the results should be properly recorded. Preliminary investigation can, however, never entirely eliminate the possibility of unexpected discoveries during the course of building operations.

It may also be necessary to carry out more detailed survey work and to produce large scale measured drawings of details, as a basis for the detailed design and specification of work.

7.5.2 *Approvals and consents*

When a package of work, which can include elements of repair, restoration, alteration and new work, has been conceived, it can be described by means of small scale drawings and an outline specification. These should provide a basis for consultations with statutory and other bodies, and for any necessary approvals, clearances or statutory consent procedures.

7.5.3 *Costs, funding and feasibility*

Outline proposals can also provide a basis for the preparation of an initial cost plan from which initial cost for the work as a whole can be built up by estimating costs of the various elements within it.

NOTE. The initial cost plan can provide a reasonable basis for assessing whether the work can be afforded, and for seeking funds if necessary. Assembling finance can be a long task, and allowance may need to be made for inflation. The cost of professional and statutory fees, as well as VAT, should not be neglected. (See annex B.)

7.5.4 ***Specification and preparation of contracts***

As in new construction, the purpose of drawings, specifications and descriptions of work or bills of quantities is to describe the work in qualitative and quantitative terms so that:

a) it can be executed in precisely the manner intended; and

b) it can be properly priced, cost controlled and accounted for.

The documents should, however, also provide for changes to the scope of the work owing to characteristics of the building that could not have been ascertained at the outset of the contract and for the proper financial control of these changes. They should be concise, comprehensive and easy to use in the course of the work as well as for accounting purposes, but should be so constructed as to underline the significance of the various operations to be carried out. Redundant or irrelevant material should be rigorously excluded.

7.5.5 ***Preliminary contracts***

It can sometimes be desirable to instruct a package of work to be undertaken in advance of a main contract. This will usually be for one or more of the following reasons:

a) to carry out emergency repairs in order to prevent rapid deterioration, while the often long drawn out process of obtaining funding and consents and the preparation of contract documents is in progress;

b) to provide protection for vulnerable parts of the fabric, including decorative finishes, during the course of works;

c) to remove rubbish and rotten material, material that is clearly of no historical significance, or hazardous material such as asbestos;

d) to give a building that has become very wet as long as possible to dry out;

e) to investigate a building for archaeological reasons, above or below ground, so that it can be as well understood as possible before work is specified, and to minimize the need for changes to the scope of work once a start is made, arising from unexpected discoveries;

f) to investigate the construction and the building generally, to assess its condition more precisely and generally to eliminate or minimize uncertainty, enabling the work to be more accurately specified;

g) to establish by trial, testing and analysis appropriate specifications, particularly for sensitive work;

h) to trace or record drains or services, routes or concealed voids within the fabric;

i) to provide temporary security and fire precautions;

j) to improve the immediate appearance of a building in decay and to give reassurance that proper repair will be undertaken.

All such work, including investigation, should be carried out as non-destructively as possible. It may sometimes be appropriate simply to instruct preliminary work on a time and materials basis, or, if the work is substantial, it may be desirable to negotiate or obtain tenders on the basis of a simple specification and description of work, with or without bills of quantities.

7.5.6 ***Administration and overseeing of repair contracts***

The administration of a repair contract may not be significantly different from that of any other building contract. However, in some repair projects, particularly where historic buildings are concerned, closer and sometimes extra supervision may be necessary; certainly more than the inspection from time to time considered appropriate to new building. The need for close attention in the course of work can be reduced by accurate surveys, thorough research and investigation in the preliminary stages of the project and by the preparation of good contract documents. Even with great care at the pre-contract stages, the need for close supervision and frequent decision making in the course of work is likely to be a feature of the more complex type of repair projects. No matter how thorough the preparatory work, unexpected discoveries, major and minor, good and bad, are features of almost every historic building repair contract.

Good communication is vital, particularly with regard to the financial implications of unexpected or forced changes, and an ability to administer such complex contracts effectively is an important professional skill.

7.6 Research, investigation and recording

There are sound practical as well as academic reasons for the maintenance of good records. Measured surveys are expensive to undertake, so survey drawings are valuable. Knowledge of the structure, construction and sometimes complex nature of the fabric of a historic building can suggest opportunities and preclude mistakes. Survey drawings and written accounts should, therefore, always be kept up to date and maintained as part of the permanent documentation of the building. The results of any research or investigation of the building should be carefully recorded. Methods of recording available include: photogrammetry, rectified photography, hand-measurement and thermography. Other more sophisticated non-destructive investigation techniques will also have applications in recording historic buildings.

When work is in progress in any historic building, and particularly in a building of significant age or complexity, any disturbance of the fabric or of the ground in the vicinity of the building in the course of work should be carefully watched. In particularly significant or sensitive buildings this can amount to archaeological monitoring, and in such cases information retrieved should be written up in a report, one copy of which should be kept in the building or with other building documentation, and another deposited in an appropriate archive within a year of completion of the work.

7.7 Interiors, fittings and associated contents

In any good building or work of architecture, the interior is integral with the exterior. Listing and other forms of protection normally apply to whole buildings, interiors as well as exteriors. Decoration, fixtures and fittings, services, plant and machinery can all be of importance. In some circumstances, textiles and furniture may have been made or acquired for the building, or be historically linked with it. Care should always be taken to ensure that significant schemes of decoration are retained, if necessary covered up rather than destroyed and, where appropriate, recorded. In some circumstances, the uncovering or restoration of historic schemes of decoration and furnishing can be desirable. Furniture and textiles historically associated with a building can occasionally be protected and should, wherever possible, be kept with it. Such interiors, fittings and contents should be recorded in the conservation manual for the building.

Annexes

Annex A (informative)
Legislation and guidance

A.1 England and Wales

A.1.1 *Legislation*

Ancient Monuments and Archaeological Areas Act 1979. London: The Stationery Office.

Building Regulations 1991. London: The Stationery Office.

Chemical Hazard, Information and Packaging Regulations 1994, Amendment 1996. London: The Stationery Office.

Civic Amenities Act 1967. London: The Stationery Office.

Construction (Design and Management) Regulations 1994. London: The Stationery Office.

Construction (General Provisions) Regulations 1961. London: The Stationery Office.

Control of Substances Hazardous to Health Regulations 1994. London: The Stationery Office.

Ecclesiastical Exemption (Listed Buildings and Conservation Areas) Order 1994. London: The Stationery Office.

Environmental Protection Act 1990. London: The Stationery Office.

Fire Precautions Act 1971. London: The Stationery Office.

Health and Safety at Work etc. Act 1974. London: The Stationery Office.

Historic Buildings and Ancient Monuments Act 1953. London: The Stationery Office.

Housing and Planning Act 1986. London: The Stationery Office.

Local Authorities (Capital Finance) Regulations 1990. London: The Stationery Office.

Local Government Act 1985. London: The Stationery Office.

National Heritage Act 1983. London: The Stationery Office.

Planning (Listed Buildings and Conservation Areas) Act 1990. London: The Stationery Office.

Planning and Compensation Act 1991. London: The Stationery Office.

Town and Country Amenities Act 1974. London: The Stationery Office.

Town and Country Planning (Control of Advertising) Regulations 1992. London: The Stationery Office.

Town and Country Planning (Development Plans) Regulations 1991. London: The Stationery Office.

Town and Country Planning (General Development Procedure) Order 1995. London: The Stationery Office.

Town and Country Planning (General Permitted Development) Order 1995. London: The Stationery Office.

Transport and Works Application (Listed Buildings, Conservation Areas and Ancient Monuments Procedures) Regulations 1992. London: The Stationery Office.

A.1.2 *Department of the Environment, Transport and Regions, circulars and planning guidance*

DETR. Circular 18/84. *Crown land and Crown development*. London: The Stationery Office, 1984.

DETR. Circular 6/85. *Compulsory purchase orders — Procedures*. London: The Stationery Office, 1985.

DETR. Circular 15/88. *Environmental assessment*. London: The Stationery Office, 1988.

DETR. Circular 18/88. *Painting of listed buildings*. London: The Stationery Office, 1988.

DETR. Circular 22/88. *General development order consolidation*. London: The Stationery Office, 1988.

DETR. Circular 20/92. *Responsibilities for conservation policy and casework*. London: The Stationery Office, 1992.

DETR. Circular 26/92. *Planning controls over demolition*. London: The Stationery Office, 1992.

DETR. PPG 1. *General policy and principles*. London: The Stationery Office, 1992.

DETR. PPG 2. *Green belts*. London: The Stationery Office, 1995.

DETR. PPG 6. *Town centres and retail developments*. London: The Stationery Office, 1993.

DETR. PPG 7. *The countryside and the rural economy*. London: The Stationery Office, 1992.

DETR. PPG 12. *Development plans and regional planning guidance*. London: The Stationery Office, 1992.

DETR. PPG 13. *Transport*. London: The Stationery Office, 1994.

DETR. PPG 15. *Planning and the historic environment*. London: The Stationery Office, 1994.

DETR. PPG 16. *Archaeology and planning*. London: The Stationery Office, 1990.

DETR. PPG 19. *Outdoor advertisement control*. London: The Stationery Office, 1992.

DETR. PPG 21. *Tourism*. London: The Stationery Office, 1992.

A.1.3 *Welsh Office circulars*

WO Circular 60/96. *Planning and the historic environment: Archaeology*, London, The Stationery Office, 1996.

WO Circular 61/96. *Planning and the historic environment: Historic buildings and conservation areas*, London, The Stationery Office 1996.

A.1.4 *Ecclesiastical legislation for England*

The Care of Cathedrals (Supplementary Provisions) Measure 1994. London: The Stationery Office.

The Care of Cathedrals Measure 1990 and 1994 Supplement. London: The Stationery Office.

The Care of Cathedrals Rules 1990. London: The Stationery Office.

The Care of Churches and Ecclesiastical Jurisdiction Measure 1991. London: The Stationery Office.

The Ecclesiastical Exemption (Listed Buildings and Conservation Areas) Order 1994. London: The Stationery Office.

The Faculty Jurisdiction (Injunctions and Restoration Orders) Rules 1992. London: The Stationery Office.

The Faculty Jurisdiction Measure 1964. London: The Stationery Office.

The Faculty Jurisdiction Rules 1992. London: The Stationery Office.

A.2 Scotland

A.2.1 *Legislation*

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Annex B (informative)
Sources of finance

B.1 Grants available in England through English Heritage

These include:

Buildings at risk grants: for the making safe, structurally sound and weathertight of listed buildings in poor condition and at risk of further decay.

Church grants: for the urgently needed repair of historically important churches, which are normally listed buildings in grades I and II*. There is a separate scheme of grants for cathedrals.

Conservation area grants: for the repair of buildings or to preserve or improve the character or appearance of those conservation areas in which there are agreed schemes or programmes of work, usually in partnership with local authorities.

Historic buildings and monuments grants: for the repair of the most significant sites and buildings, which will normally be either scheduled ancient monuments or listed buildings in grades I or II*.

London grants: for buildings in London that are at risk and occasionally for the preservation or reinstatement of architectural features.

B.2 Grants available in Scotland, through Historic Scotland

These include:

Ancient monument grants: grants for the upkeep of ancient monuments in private ownership or local authority control.

Building repair grants: grants and loans for the repair of buildings of outstanding historic or architectural interest.

Conservation area grants: grants for the preservation or enhancement of outstanding conservation areas.

B.3 Grants available in Scotland, from local authorities

These include:

Historic building grants: for the repair or restoration of historic buildings, which will normally be listed buildings or those within a conservation area.

B.4 Grants available in Wales, through Cadw

These include:

Conservation area grants: for the preservation or enhancement of designated conservation areas.

Grants to outstanding buildings: for the repair of buildings of outstanding historic or architectural interest.

B.5 Grants available in Northern Ireland, through DOE (Northern Ireland)

These include:

Grants for the repair of listed buildings and of buildings within conservation areas.

B.6 Other sources of finance

These include:

Architectural heritage fund loans: for the provision of working capital to charitable building preservation trusts at low interest. Also, small grants for feasibility studies. Information from the Architectural Heritage Fund.

Charitable trusts and foundations: including Belfast Civic Trust, the Getty Foundation, the Historic Chapels Trust, the Historic Churches Preservation Trust, the Landmark Trust, the Pilgrim Trust, the Scottish Churches Architectural Heritage Trust, etc.

Farm building conservation grants: information from the Ministry of Agriculture, Fisheries and Food (MAFF), from the Department of Agriculture and Fisheries for Scotland (DAFS).

Heritage lottery fund grants: for the conservation and improvement of locally, regionally or nationally important assets, including land, buildings and objects. Information from the National Heritage Memorial Fund (NHMF).

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Annex D (informative)
Conservation manuals, log books and five-yearly inspections

D.1 Introduction

This annex offers a basis for the systematic care of buildings based on a 5 year cycle. While it is intended primarily for significant buildings in institutional ownership or care, the principles embodied in it can be applied in a simplified form and are relevant and applicable to the conservation of any building, however modest.

D.2 Conservation manuals

It is good practice for the person responsible for any building to establish a conservation manual. This is a permanent, standing document, containing essential information on the building, its history and architecture, materials and construction. It should also contain guidance on routine housekeeping, management and maintenance procedures and on the constraints which would be likely to be applied to any proposed repair or alteration work. Its content should be reviewed every five years, but only amended with good reason. A conservation manual should contain the following.

a) An introduction setting out its purpose, which is to inform the building owner or manager about the building and its historical or architectural importance, if any, and to describe a housekeeping and management regime which would keep it on the 'plateau of good repair' and protect it from avoidable damage or decay.

b) A written description of the building and its various parts, accompanied, if possible, by plans, sections and elevations together with drawings or diagrams of services installations. Architectural drawings are important records which are costly to prepare and likely to be of use in the future. They should be valued and kept carefully and securely.

c) Specific guidance on management, housekeeping and maintenance procedures, cross referenced to the descriptive section.

d) A conclusion, summarizing the contents of the manual and giving emphasis to the principal recommendations.

D.3 Log books

A log book should be kept for every building in which current information, such as the names, addresses and telephone numbers, including emergency numbers, of key people, including tradesmen and maintenance contractors, should be listed. It should also contain concise instructions on maintenance and inspection routines and on actions to take in an emergency. Routine diary entries should be made recording inspections etc. and noting the results. A record of any work carried out on the building should be entered. Completed log books should not be destroyed, but should be kept as part of the permanent record of the building.

D.4 Five-yearly inspections

Important buildings should be professionally inspected every five years, or at some other appropriate interval. It is preferable for the inspector to know the building and have some continuing responsibility for its care and conservation. Before undertaking the inspection, the inspector should be familiar with the contents of the conservation manual, the log book and the previous five-yearly inspection report. The purpose of the inspection is to establish, on the basis of visual inspection from reasonably accessible points, the following information:

a) the general condition of all parts of the building;

b) the progress of repairs carried out since the previous inspection;

c) the need for further repairs and, where appropriate, other works;

d) the urgency and importance of such works, under four degrees of priority;

The inspection should be carried out in a logical sequence. A complex building can be broken down into wings or sections. Individual inspectors will have their own methods, but, in the interests of consistency, it is suggested that the outside of a building rather than the inside should normally be inspected first, and that the sequence should generally be from top to bottom, starting from the same point on the floorplan at each level and working clockwise from room to room and within each room or volume. The materials and construction of each element should be described in as concise a way as possible and their general condition and any defects recorded separately. Fairly extensive 'snapshot' photographic coverage, particularly of defects, is likely to be helpful.

D.5 Five-yearly inspection reports

Reports should be written up by the inspector as soon as possible after the inspection. The report should contain three main sections, and appendices if necessary. The three main sections should consist of an introduction, a description of the fabric and its condition, together with recommendations for repairs for this and other works, if appropriate.

The record of the inspection, that is the descriptive section, should be written first. This is followed by the analysis and then the recommendations. Items of work required should be either identified individually or grouped into packages and arranged in four degrees of urgency or priority categories:

Priority 1 — Immediate

Work which should be put in hand without delay for public safety or health and safety reasons, to prevent imminent damage or to arrest rapid deterioration. This can include immediate further investigation.

Priority 2 — Urgent

Work which should be put in hand within weeks or months, or a year and a half at most. Failure to do so would be likely to result in significant further damage or deterioration and increased cost.

Priority 3 — Necessary

Work which should be carried out before the next five-yearly inspection, for which there is time to plan, and which can be integrated with other work. This is work which is due in order to keep the building in a state of good repair and to maintain the value and usefulness of the estate. Most repair work should come into this category.

Priority 4 — Desirable

Work which is desirable, if not strictly necessary, but which may improve the functioning or performance of the building or enhance its architectural or aesthetic qualities. Alternatively, work which is not due, but is likely to become so before the next five-yearly inspection and which can sensibly be incorporated with other work. Much minor restoration work, such as the reinstatement, where appropriate, of suitable windows, should come into this category.

In deciding on the priority or degree of urgency of any item of work, or the extent or type of repair which should be recommended, or the way in which individual items should be grouped into packages, considerations of access and accessibility are vital. Recommendations can also include further investigation, supplementary technical or specialist reports. It is important to bear in mind that it is wasteful not to allow materials to live out their useful lives and to repair or replace them before it is necessary to do so. On the other hand it is even more wasteful to allow serious consequential decay to develop for want of a simple repair. Decisions on the timing and packaging of repair works require careful judgement. Approximate costs should be set against each package.

The introduction to the report, which is likely to be the last section to be written, should include general information about the building and a statement outlining the purpose of the inspection. It should also include a note of any limitations or exclusions, an account of works carried out since the previous inspection and a brief summary of the conclusions and recommendations contained in the report.

Annex E (informative)

Useful names and addresses

Advisory Board for Redundant Churches, Fielden House, Little College Street, London SW1P 3SH. Tel: 0171 222 9603.

Ancient Monuments Society, St Ann's Vestry Hall, 2 Church Entry, London EC4V 5HB. Tel: 0171 236 3934.

Ancient Monuments Board for Scotland, 20 Brandon Street, Edinburgh EH3 5RA. Tel: 0131 224 3076.

Ancient Monuments Board for Wales, Brunel House, 2 Fitzalan Road, Cardiff CF2 1UX. Tel: 01222 465511.

Architects and Surveyors Institute, 15 St Mary Street, Chippenham, Wilts SN15 3WD. Tel: 01249 444505.

Architectural Heritage Fund, 27 John Adam Street, London WC2N 6HZ. Tel: 0171 925 0199.

Architectural Heritage Society of Scotland, The Glasite Meeting House, 33 Barony Street, Edinburgh EH3 6NX. Tel: 0131 557 0019.

Association for Studies in the Conservation of Historic Buildings, Institute of Archaeology, 31–34 Gordon Square, London WC1H 0PY. Tel: 0171 737 1743.

Association of Preservation Trusts, 27 John Adam Street, London WC2N 6HZ. Tel: 0171 930 629.

British Standards Institution, 389 Chiswick High Road, London W4 4AL. Tel: 0181 996 9000.

Building Crafts and Conservation Trust, Kings Gate, Dover Castle, Dover, Kent CT16 1HU. Tel: 01304 225066.

Building Conservation Trust, Apartment 39, Hampton Court Palace, East Molesey, Surrey KT8 9BS . Tel: 0181 943 2277.

Building Research Establishment, Garston, Watford WD2 7JR. Tel: 01923 664664.

British Wood Preserving and Damp-proofing Association, PO Box 894, London E15 4ED. Tel: 0181 519 2588.

Cadw, 9th Floor, Brunel House, 2 Fitzalan Road, Cardiff, Wales CF2 1UY. Tel: 01222 465511.

Chapels Society, Rookery Farmhouse, Laxfield, Woodbridge, Suffolk IP13 8JA. Tel: 01986 98308.

Chartered Institute of Building, Englemere, Kings Ride, Ascot, Berks SL5 8BJ. Tel: 01990 23355.

The Civic Trust, 17 Carlton House Terrace, London SW1Y 5AW. Tel: 0171 930 0914.

Civic Trust for Wales, 4th Floor, Empire House, Mount Stewart Square, The Docks, Cardiff CF1 6DN. Tel: 01222 484 4606.

Council for British Archaeology, 112 Kennington Road, London SE11 6RE. Tel: 0171 582 0494.

Council for the Care of Churches, Fielden House, Little College Street, London SW1P 3SH. Tel: 0171 222 3793.

English Heritage, 23 Savile Row, London W1X 1AB. Tel: 0171 973 3000.

Fire Protection Association, Fire Protection Division, Melrose Avenue, Borehamwood, Herts WD6 2BJ. Tel: 0181 207 2345.

The Georgian Group, 6 Fitzroy Square, London W1P 6DX. Tel: 0171 387 1720.

Garden History Society, 5 The Knoll, Hereford HR1 1RU. Tel: 01432 354479.

Historic Scotland, Longmore House, Salisbury Place, Edinburgh EH9 1SH. Tel: 0131 668 8600.

Historic Churches Preservation Trust, Fulham Palace, London SW6 6EA. Tel: 0171 736 3054.

Historic Houses Association, 2 Chester Street, London SW1X 7BB. Tel: 0171 259 5688.

ICOMOS UK (International Council on Monuments and Sites), 10 Barley Mow Passage, London W4 4PH. Tel: 0181 994 6477.

Institute of Field Archaeologists, University of Manchester, Oxford Road, Manchester M13 9PL. Tel: 0161 275 2304.

Institution of Civil Engineers, Great George Street, London SW1P 3AA. Tel: 0171 222 7722.

Institution of Structural Engineers, 11 Upper Belgrave Street, London SW1X 8SH. Tel: 0171 235 4535.

National Heritage Memorial Fund, 10 St James's Street, London SW1A 1EF. Tel: 0171 930 0963.

National Trust, 36 Queen Anne's Gate, London SW1H 9AS. Tel: 0171 222 9251.

National Trust for Scotland, 5 Charlotte Square, Edinburgh EH2 4DU. Tel: 0131 226 5922.

Northern Ireland Historic Buildings Council, Northern Ireland Historic Monuments Council, Department of the Environment, 23 Castle Place, Belfast BT1 1FY. Tel: 01232 230 0560.

Royal Commission on the Ancient and Historical Monuments of Scotland/National Monuments Record of Scotland, John Sinclair House, 16 Bernard Terrace, Edinburgh EH8 9NX. Tel: 0131 662 1456.

Royal Commission on the Ancient and Historical Monuments of Wales/National Monuments Record of Wales, Crown Buildings, Plas Crug, Aberystwyth, Dyfed SY23 1NJ. Tel: 01970 624381.

RCHME/National Monuments Record, Kemble Drive, Swindon, Wilts SN2 2GZ. Tel: 01793 414600.

Royal Incorporation of Architects in Scotland, 15 Rutland Square, Edinburgh EH1 2BE. Tel: 0131 229 7545.

Royal Institute of British Architects, 66 Portland Place, London W1N 4AD. Tel: 0171 580 5533.

Royal Institution of Chartered Surveyors Building Conservation Group, Building Surveyors Division, 12 Great George Street, London SW1P 3AD. Tel: 0171 222 7000.

Rural Development Commission, 141 Castle Street, Salisbury, Wilts SP1 3TP. Tel: 01722 336255.

SAVE: Save Britain's Heritage, 68 Battersea High Street, London SW11 3HX. Tel: 0171 228 3336.

Scottish Churches Architectural Heritage Trust, 15 North Bank Street, Edinburgh EH1 2LP. Tel: 0131 225 8644.

Scottish Civic Trust, 24 George Square, Glasgow G2 1EF. Tel: 0141 221 1466.

Society for the Protection of Ancient Buildings, 37 Spital Square, London E1 6DY. Tel: 0171 377 1644.

The Stone Federation of Great Britain, 18 Mansfield Street, London W1M 9FG. Tel: 0171 580 5404.

The Twentieth Century Society, 70 Cowcroft Street, London EC1M 6BP. Tel: 0171 250 3857.

Victorian Society, 1 Priory Gardens, London W4 1TT. Tl: 0181 994 1019.

List of references (see clause 2)

Informative references

BSI publications

BRITISH STANDARDS INSTITUTION, London

BS 5268 :	*Structural use of timber*
BS 5268 : Part 5 : 1989	*Code of practice for the preservative treatment of structural timber*
BS 5390 : 1976	*Code of practice for stone masonry*
BS 5839 :	*Fire detection and alarm systems for buildings*
BS 5839 : Part 1 : 1998	*Code of practice for system design, installation and servicing*
BS 5974 : 1990	*Code of practice for temporarily installed suspended scaffolds and access equipment*
BS 6100 :	*Glossary of building and civil engineering terms*
BS 6150 : 1991	*Code of practice for painting of buildings*
BS 6213 : 1982	*Guide to the selection of constructional sealants*
BS 6229 : 1982	*Code of practice for flat roofs with continuously supported coverings*
BS 6270 :	*Code of practice for cleaning and surface repair of buildings*
BS 6270 : Part 3 : 1990	*Metals (cleaning only)*
(*) BS 6270 : Part 4	*Surface repair of natural stones, brick and terracotta*
(*) BS 6270 : Part 5	*Cleaning of natural stones, brick, terracotta and concrete*
BS 6799 : 1986	*Code of practice for wire-free intruder alarm systems*
BS 6953 : 1988	*Glossary of terms for procedures for setting out, measurement and surveying in building construction*
BS 7671 : 1992	*Regulations for electrical installations. IEE Wiring Regulations*
BS 8000 :	*Workmanship on building sites*
BS 8000 : Part 3 : 1989	*Code of practice for masonry*
BS 8000 : Part 4 : 1989	*Code of practice for waterproofing*
BS 8000 : Part 5 : 1990	*Code of practice for carpentry, joinery and general fixings*
BS 8000 : Part 6 : 1990	*Code of practice for slating and tiling of roofs and cladding*
BS 8000 : Part 7 : 1990	*Code of practice for glazing*
BS 8000 : Part 10 : 1989	*Code of practice for plastering and rendering*
BS 8000 : Part 11 :	*Code of practice for wall and floor tiling*
BS 8000 : Section 11.1 : 1989	*Ceramic tiles, terrazzo tiles and mosaics*
BS 8000 : Section 11.2 : 1990	*Natural stone tiles*
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BS 8206 : Part 1 : 1985	*Code of practice for artificial lighting*
BS 8207 : 1985	*Code of practice for energy efficiency in buildings*
BS 8208 :	*Guide to assessment of suitability of external cavity walls for filling with thermal insulants*
BS 8208 : Part 1 : 1985	*Existing traditional cavity construction*
BS 8210 : 1986	*Guide to building maintenance management*
BS 8211 :	*Energy efficiency in housing*
BS 8211 : Part 1 : 1988	*Code of practice for energy efficient refurbishment of housing*
BS 8215 : 1991	*Code of practice for design and installation of damp-proof courses in masonry construction*
BS 8216 : 1991	*Code of practice for uses of sprayed lightweight mineral coatings for thermal insulation and sound absorption in buildings*
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BS 8233 : 1987	*Code of practice for sound insulation and noise reduction for buildings*
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(*) In the course of preparation.

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