# Cskills Awards Level 3 Award in Understanding Repair & Maintenance of Traditional (Pre-1919) Buildings

# COURSE HANDBOOK

(November 2011)

**This document provides underpinning information to assist training providers in the delivery of a 2-day course to support achievement of the Cskills Awards Level 3 Award in Understanding Repair & Maintenance of Traditional (pre-1919) Buildings. It also aims to offer useful guidance to learners on generic, over-arching knowledge aspects required to undertake repair and maintenance on pre-1919 traditional buildings in a competent and sympathetic manner.**

Prepared by:
CITB-ConstructionSkills National Specialist Team in conjunction with English Heritage, National Trust and Ann Cook Associates



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Course organisers are responsible for complying with all applicable legislation, ensuring that all necessary welfare requirements for delegates are met, that such insurances as may be necessary or advisable are in place and for carrying out risk assessments where appropriate.

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# 1. The Historic Built Environment

**1.1** The historic environment is what our ancestors have made of the places in which they lived and how they shaped the landscape and created settlements, villages, towns and cities. This includes both the natural and man-made environments and above and below ground archaeology (including under the sea), that has cultural value and significance worthy of sustainable management and conservation.

**1.2** The countryside and most towns and cities contain evidence of where our ancestors have left their mark and this contributes to our sense of identity, quality of life, education, well-being and economic prosperity.

**1.3** The built heritage is largely defined as traditional (pre-1919) buildings of solid wall construction. The number of pre-1919 buildings in the UK is in excess of 25% of the total building stock which makes this a major irreplaceable asset. It also has a direct benefit to our national and international economy through tourism.

**1.4** Our built heritage is all around us, either as places in which we work and live in, or visit and enjoy, but we get on with our lives without continually enjoying our surroundings. Many people visit historic properties, join heritage organisations and see the built heritage and historic environment as an educational means of understanding our history, origins and identity.

**1.5** Without this we would lose a vital link with our past and a missing built heritage would leave a large void in our evolution. It is our responsibility to promote, safeguard, repair, maintain and protect this physical asset to pass on to the next generation in as good a condition as possible for them to interpret, use and enjoy. We are merely its custodians and much town and rural planning of the 20th century ignored its significance resulting in a loss of individual buildings, areas and historic context.

**1.6** Legislation and control exists to ensure the development of new buildings and infrastructure minimises damage to our historic environment. Well designed new buildings can sit happily with our historic villages, towns and cities and we need to embrace change as a positive force, but with respect and sensitivity to the past.

**1.7** Decaying or dilapidated buildings do nothing to enhance our built heritage and neglect is often followed by demolition. Careful adaptation, renewal, re-use or regeneration may be the only means of survival, but maintaining the context is vital to

preserve the distinctive regional styles and variations which so enrich the UK's land and townscapes.

**1.8** We need to present the past as a vibrant part of our present and future. Sources of advice and assistance are available to help owners of traditional buildings and properties and those entrusted with their conservation, repair and maintenance to help care for these in an appropriate manner.

**1.9** It is essential to maintain, develop and pass on the specialist knowledge and skills necessary to properly maintain traditional buildings. Such learning raises awareness of the original methods of construction, the significance of these buildings and their related components and their role, purpose and contribution to our overall built environment.

**1.10** The most important consideration from a heritage perspective when deciding if a building is worth saving is it significance. The aim is to preserve such buildings to maintain our culture and once a building is lost it can never be regained and its relevance in our link to the past is also destroyed.

## 1.2 Managing our Built Heritage Sustainably

**1.2.1** The historic built environment is not a static thing it is the result of change and new buildings and structures continue to be added to the list of buildings worthy of legal protection. Today's best buildings will be part of our future heritage.

**1.2.2** Advances in science, technology and knowledge gained over time means that the past is also being interpreted and understood in different ways. Those working within this field are continually defining, characterising and analysing the significance of these buildings and related materials. This knowledge increases understanding and influences decisions and underpins sustainable management.

**1.2.3** As buildings are situated in an outdoor environment they are subject to extremes of natural weathering and decay processes which changes in appearance and requires practical intervention to maintain the life of these buildings.

**1.2.4** Building conservation is the process of managing change by actions which ensure its survival or preservation within its setting and sustaining its heritage values, whilst recognising opportunities to reveal or reinforce those values for present and future generations.

**1.2.5** Conservation is achieved by understanding its significance; determining what aspects are vulnerable to change and taking well-informed actions within the constraints necessary to sustain, reveal and reinforce the buildings value. This might include

evaluating different conservation options to ensure one action to sustain the historic value does not conflict with an action to sustain another.

**1.2.6** It is crucial that the building retains its authenticity, that is, the attributes and elements which most truthfully reflect the historic values attached to it.

**1.2.7** Action taken to counter harmful effects of natural change or to minimise the risk of serious physical loss or irreparable damage must consider the consequences and how this might alter the building and its historic value, but also be sustainable and not adversely affect future decisions and intervention.

**1.2.8** Intervention may be justified if it -

- increases understanding of the past
- reveals or reinforces particular historic values of a place, or
- is necessary to sustain those values for present and future generations, as long as any resulting "harm" is decisively outweighed by the benefits.

**1.2.9** New work should be designed and executed in such a way as to be valued now and in the future using materials compatible with and not detrimental to the original materials or construction and respecting the significance of the building in its setting.

**1.2.10** Decisions about change are governed by sound judgement executed in a consistent, transparent manner and guided by legal and/or public policy to justify the required decisions. ***Proportionality governs the use of statutory controls –*** that is, the weight given to historic value of the building and its components should be proportionate to the significance of the building and its setting place, and include the impact of the proposed change on that significance.

**1.2.11** Potential conflict between sustaining the historic value and any changes or alterations can be minimised by following the practice of '***minimum intervention'*** whereby the least amount of work possible is carried out and has the least physical and visual effect on the building/structure/fabric and retains the maximum amount of original material.

# 2. Scheduled Monuments, Listed Buildings and Conservation Areas

## 2.1 Scheduled Monuments

**2.1.1** Scheduled monuments are not always ancient, or visible above ground. These range from pre-historic standing stones and burial mounds to many types of medieval sites (castles, monasteries, abandoned farmsteads and villages) and more recent industrial heritage buildings.

**2.1.2** Scheduling is applied only to sites of national importance, and even then only if it is the best means of protection (*see* 'Alternatives to scheduling below'). Only deliberately created structures, features and remains can be scheduled.

**2.1.3** Decisions on national importance are guided by established criteria:
Extent of survival; current condition; rarity; representivity (through its range of features or because of its exemplary importance); importance of the period to which the monument dates; fragility; connection to other monuments, or group value; potential to contribute to our information, understanding and appreciation; extent of documentation enhancing the monument's significance, whether through related archival material or through the fruits of subsequent research

**Alternatives to scheduling**

Even nationally important sites are scheduled only if this is the best means of protecting them. Sometimes, for example, in towns and city centres, the best means of protecting sites from building and infrastructure development is to use the system of local authority control over planning applications. The planners can make sure that development proposals take archaeology fully into account.

## 2.2 Listed Buildings

**2.2.1** A "**listed building**" is a building or structure which is considered to be of 'special architectural or historic interest', not only within its local environment, but also having significance for the whole nation. A wide variety of structures and buildings ranging from Royal Palaces, cathedrals, monuments, ruins, archaeological sites and milestones, as well as residential properties, can be "listed"

**2.2.2** Buildings and structures are carefully assessed to define their significance. Many old buildings and indeed recent buildings are interesting, but "listing" identifies only those which are of national 'special interest' using the following main criteria:

- ***Age and Rarity*****:** all buildings before 1700 which survive in anything like their original condition are listed, and all built between 1700 and 1840 are highly likely to be listed and after 1840 the criteria for listing is more selective.
- ***Advancement of Time:*** the criteria become tighter with time, so that buildings built within the last 30 years have to be exceptionally important to be listed, and be "under threat" also. A building has to be over 10 years old to be eligible for listing
- ***Architectural Interest*****:** buildings which are nationally important for the interest of their architectural design, decoration and craftsmanship; also, important examples of particular building types and techniques
- ***Historic Interest*****:** this includes buildings which relate to important aspects of the Nation's social, economic, cultural or military history
- ***Close Historical* Association:** with nationally important people or events
- ***Group Value*****:** especially where buildings are part of an important architectural or historic group, or are a fine example of planning (such as squares, terraces and model villages)

**2.2.3** Anyone can suggest a building they think is suitable for "listing" to the home country heritage body (Cadw, English Heritage, Historic Scotland, Northern Ireland Environment Agency) who examine the case and which may involve consultation with the local planning authority, the owner and d make a recommendation which is put forward as a formal listing, de-listing or new category.

**2.2.4** When a building is assessed for 'listing', both its historic interest and its architectural interest are considered. Its structural or aesthetic condition is not an important consideration, and a building may be listed even though it is in poor condition.

**2.2.5** Listed buildings are graded to show their relative national importance as follows:

**England and Wales -** Grades I, II* and II.

(***Grade I buildings*** - of exceptional interest, sometimes considered to be internationally important
***Grade II* buildings*** – of particularly importance and of more than special interest
***Grade II buildings*** – special interest warranting preservation.)

**Northern Ireland -** Grades A, B+, B1 and B2

(***Grade A*** – buildings of national importance, including both outstanding grand buildings and the fine, little-altered example of some important style or date.
***Grade B+*** - buildings that might have merited A status but for relatively minor detracting features or alterations; also buildings which stand out above the general mass of Grade B1 buildings
***Grade BI and B2*** – buildings of local importance of good examples of some period or style; some degree of alteration or imperfection may be acceptable.)

***Scotland*** **-** Grades A, B, and C(S)

(**Category A - b**uildings of national or international importance, either architectural or historic, or fine little-altered examples of some particular period, style or building type; **Category B -** Buildings of regional or more than local importance, or major examples of some particular period, style or building type which may have been altered; C**ategory C(S) -** Buildings of local importance, lesser examples of any period, style, or building type, as originally constructed or moderately altered; and simple traditional buildings which group well with others in categories A and B.)

**2.2.6** For all grades of listing, the whole building or structure is "listed", including both its interior and exterior. Boundary walls and other structures within the building or structure's historic curtilage may also be included. There is no such thing as a "listed façade" or a "listed interior" only, and even modern elements of a building added at later times are included. It should also be assumed that fixtures and fittings are listed.

**2.2.7** If in doubt, advice should be sought on individual cases from the conservation planner.

## 2.3 Conservation Areas

**2.3.1** These are designated for their special architectural and historic interest and include:

- the centres of historic towns and cities
- fishing and mining villages
- 18th and 19th-century suburbs
- model housing estates
- country houses set in their historic parks
- historic transport links and their environs, such as stretches of canal.

**2.3.2** Most conservation areas are designated by the council as the local planning authority. In Northern Ireland, the designation and management of conservation areas is the responsibility of the Planning Department within the Northern Ireland environment Agency (NIEA). This role is due to devolve to local district councils after 2012.

**Property Alterations:** If you live in or run a business from a property in a conservation area you may need permission from the Council before making alterations such as cladding, inserting windows, installing satellite dishes and solar panels, adding conservatories or other extensions, laying paving or building walls.

**Trees:** If you are thinking of cutting down a tree or doing any pruning work you must notify the council 6 weeks in advance. This is to give the council time to assess the contribution the tree makes to the character of the conservation area and decide whether to make a Tree Preservation Order.

**2.3.3** Local authorities can enhance the appearance of conservation areas by:

- Preparing an audit or character appraisal of those buildings, structures and features which make the area special
- Preparing special Development Briefs for sites they identify as detracting from the character or appearance of the area
- Ensuring that new buildings harmonize with or complement their neighbours in scale, style and use of materials
- Making environmental improvements, for example by reinstating historic paving materials, sympathetic landscaping and planting, or removing unsightly elements such as hoardings
- Integrating road signs and markings as far as possible with the character of the street
- Controlling the position and design of advertisements and shop signs
- Ensuring that traffic safety and control measures harmonize with the landscape
- Making grants available for the repair of buildings.

# 3. Building Legislation

## 3.1 Scheduled Monument Consent

**3.1.1** A monument which has been scheduled is protected against disturbance or unlicensed metal detecting. Application for Scheduled Monument Consent must be made before any work can be carried out which might affect a monument either above or below ground level.

**3.1.2** In assessing applications, the aim is to ensure that the significance of protected sites is safeguarded for the long-term future.

**3.1.3** Written consent must always be obtained before any work on a scheduled monument can begin. Some development may also need planning permission, which will need to be obtained from the Local Planning Authority.

**3.1.4** Some types of work generally related to agriculture or gardening, where these activities are already being carried out, are allowed to go ahead without consent.

**3.1.5** It is against the law to:

- disturb a scheduled monument by carrying out works without consent
- cause reckless or deliberate damage to a monument
- use a metal detector or remove an object found at one without a licence.

**Conviction for these offences can lead to fines**

**For more information on scheduled monuments in the four UK home countries follow the web links below:**

England:

http://www.english-heritage.org.uk/professional/advice/our-planning-role/consent/conservationareaconsent/

Northern Ireland:

http://www.doeni.gov.uk/niea/built-home/protection/scheduled_monuments-2.htm

Scotland:

http://www.historic-scotland.gov.uk/index/heritage/searchmonuments/scheduling.htm

Wales:

http://cadw.wales.gov.uk/historicenvironment/protection/monuments/

## 3.2 Listed Building Consent

**3.2.1** Alterations, extension of a listed building in a way that affects its character as a building of special interest or demolition requires **Listed Building Consent** from the local planning authority.

**3.2.2** Common works requiring **Listed Building Consent** might include the replacement of windows or doors, knocking down internal walls, painting over brickwork or altering fireplaces. It is always advisable to take the advice of the conservation officer at your local authority.

**3.2.3** Listed Building Consent is administered by your local planning authority or Council. Forms are available online or in hard copy. It usually takes between eight and 13 weeks for a decision to be made, depending on the size and complexity of the proposal.

**3.2.4** When a Council considers whether to grant or to refuse an application it must take into account the desirability of preserving the building, its setting and those features which make it special. Therefore you should consider these factors when planning proposed changes to your property.

**3.2.5** Listed Building Consent aims to prevent people from unknowingly de-valuing their home and taking away the features that make it important. **Carrying out unauthorized works to a listed building is a criminal offence and owners can be prosecuted**. A planning authority can insist that all work undertaken without consent is reversed.

**3.2.6** You can apply for Listed Building Consent retrospectively but there is a risk that it will be rejected for reasons that could have been easily resolved at an early stage. An owner will have trouble selling a property where work has been undertaken without Listed Building Consent.

**For more information in listed buildings and consent in the four UK home countries follow the web links below:**

England:
http://www.english-heritage.org.uk/caring/listing/listed-buildings/how-do-buildings-become-listed/

Northern Ireland:
http://www.doeni.gov.uk/niea/built-home/protection/listed_buildings_p.htm

Scotland:

http://www.historic-scotland.gov.uk/index/heritage/historicandlistedbuildings/the-listing-process.htm

Wales:
http://cadw.wales.gov.uk/historicenvironment/help-advice-and-grants/makingchanges/listedbuildconsent/?skip=1&lang=en

### 3.3 Conservation Area Consent

**3.3.1** The streets and buildings of our towns and villages are part of the historic character of our country. Where these places are of special architectural or historic interest or deserve to receive careful protection, they can be designated as conservation areas. However, this does not mean that they have to remain frozen in time, change is often necessary to accommodate the demands of modern living.

**3.3.2** When historic areas are the subject of proposals for new development, the challenge is how to preserve or enhance, rather than harm, their special character.

**3.3.3** Conservation Area Consent is required for the total or substantial demolition of any building within a conservation area.

**3.3.4** Conservation Area Consent is administered by the local authority. It is recommended that you first contact the local authority Conservation Officer or Development Control Officer to discuss what work you are proposing to carry out. They will be able to advise on whether or not you will need Conservation Area Consent (as well as any other permissions that may be relevant).

**3.3.5** This simple act could save a lot of time and money. Local authorities often prepare Supplementary Planning Documents for their conservation areas to assist residents and developers, so it is worth checking with the Conservation Officer to see if one exists for the conservation area in question.

**3.3.6** Application forms are available either to download from their web sites or in paper form. It usually takes between 8 and 13 weeks for a decision to be made, depending on the size and complexity of the proposal. If consent is refused you have six months in which you can appeal, or you can alter your plans, based on the written advice provided, and re-apply. Applying for Conservation Area Consent is free.

**3.3.7** When a Council considers whether to grant or to refuse an application, it must have special regard to the desirability of preserving or enhancing the conservation area, and the features which make it special. These things should be considered when planning proposed changes.

# 4. Planning Work on Historic Buildings

## 4.1 Conservation Based Research and Analysis (CoBRA)

**4.1.1** Because there is no single word or academic discipline which describes the special skill of analysing a building and/or landscape for conservation purposes, the term **Conservation-Based Research and Analysis (CoBRA)** has been used to refer to:

***The research, analysis, survey and investigation needed to understand the significance of a building and its landscape and thus inform decisions about repair, alteration, use and management.***

**4.1.2** The reason we protect historic buildings is primarily so we can pass on to future generations those buildings, monuments, landscapes, etc. that for what ever reasons, have a value worthy of saving.

Conservation in today's environment has evolved. It is as much about repair and maintenance as it is about preservation, and rather than preventing new life being fed into old buildings, it is about finding appropriate new uses which can help a building survive. Detailed research into buildings and their environments can help the Conservation processes take place, and enable decisions to be made which both protect the important aspects having value and significance, and balance these changes, enabling viable new use but not at the expense of it its significance and value.

## 4.2 Conservation Plan

**4.2.1** A "Conservation Plan" is a document that explains:

- *what* a site is (referred to as a '*place*')
- *why* it is culturally significant
- *how* that significance is vulnerable or sensitive to change and
- *sets out the policies* for managing that significance in any future use or development.

**4.2.2** It is often the case that conflicts of interest can develop over a '*place*', but these conflicts might only become apparent when change is proposed. The Conservation Plan presents the different and sometimes conflicting values attached to a *place*, and proposes policies that remove or lessen those conflicts. Even where conflicts between values cannot be removed, the policies aim to establish principles and policies that can be shared by all the stakeholders. It is a particularly useful tool for large or complex *places* made up from more than one cultural asset.

**4.2.3** A Conservation Plan should encompass the many different aspects of heritage interest attached to a *place*, defined as four principal "value groups":

- Historic, scientific, aesthetic and social; 0ther values should also be considered, including economic and ecological value where they occur as part of the *place*.

**4.2.4** The Plan should cover every aspect of the cultural significance of the *place*, including associated collections which may be housed in several locations, and must aim to encompass those aspects of the *place* that identify local and intangible (hard to understand) values. The reason for this is that stakeholders attach intangible values and meanings (identity, sense of place etc) to tangible objects.

**A Conservation Plan provides:**

**4.2.5** A single approach to understanding and managing the cultural significance of a *place*. The primary value of a Conservation Plan is that it allows the participants to balance and assess 'cultural significance' against proposed 'use'; it does not accept that *places* and landscape can be 'frozen'. A Conservation Plan aims to give understanding as to why a *place* is culturally significant, and sets out to show how the significance of the place will be managed.

**4.2.6** The first step in preparing the following:

- Management proposals
- Major repair or restoration schemes
- New developments
- Maintenance programmes

**4.2.7** When proposing any works to modify an older building it is important that it should first be properly "understood". This means understanding its construction, condition, and the way it functions within its locality. It also means understanding the building's qualities i.e. those which make it "special" such as original doors, windows, decoration, etc. In many cases, far more damage has been caused to historic buildings by hasty, ill-informed alterations than by simple neglect.

**4.2.8** If a building is properly "understood", works can be targeted to the places where this is most needed or, in the case of major changes, where least harm may be done. Not only is such an approach better for the building, it can also be more cost-effective.

**4.2.9** Very few historic buildings or places survive as originally built. The majority will have alterations and changes from different time periods and these are significant as evidence of different use and values of previous generations who used and altered these.

**4.2.10** When simple modifications are proposed to individual building elements such as walls, windows and floors, the significance may well seem obvious and uncomplicated. This may well be so, but caution is still recommended, as things are not always what they may seem at first sight. The full consequences of proposed

changes may be more extensive and potentially damaging than first anticipated, and there is also the danger that a range of small individual modifications, each of which may be quite acceptable in its own right, can together cause unacceptable damage.

## 4.3 Value and Significance

**4.3.1** The significance of traditional buildings clearly encompasses the more obvious architectural and aesthetic values, but it also includes less tangible issues such as associations with historic people and events, examples of technological innovations, aspects of social history and links with a building's setting and other heritage assets.

**4.3.2** English Heritage's ***Conservation Principles Policies and Guidance*** (2008) which has been used as the basis to inform this part of the handbook lists four primary categories of heritage value:

***Evidential value -*** derives from the potential of a *place* to yield evidence about past human activity. This aspect is of particular relevance in places where there may be archaeological remains, but the archaeology within the structure of a building, whilst less familiar, may be every bit as important.

***Historical value -*** derives from the ways in which past people, events and aspects of life can be connected through a *place* to the present. This may be illustrative - by demonstrating important aspects of past lives and assisting the interpretation of the historic environment; or it may be associative - through being linked to a notable historical person or event.

***Aesthetic value -*** derives from the ways in which people draw sensory and intellectual stimulation from a *place*. This will include both the fortuitous qualities which have evolved naturally in a place over time, as well as the design values attached to a deliberately created building, group of buildings or landscape.

***Communal value -*** derives from the meanings of a *place* for the people who relate to it, or for whom it figures in their collective experience or memory. This can cover *commemorative and symbolic* values important to collective memory, *social* values which contribute to people's identification with particular places, or the *spiritual* values people associate with special buildings and places, whether attached to organised religions or not.

**4.3.3** Any fixed part of the historic environment being perceived by people as having a distinctive identity, can be considered as a "**place**".

**4.3.4** The significance of a place embraces all the diverse cultural and natural heritage values that people associate with it, or which prompt them to respond to it. These values tend to grow in strength and complexity over time, as understanding deepens and people's perceptions of a "place" evolve.

**4.3.5** In order to identify a “place" as having “**significance**”, it is necessary to understand its fabric (walls, roof and structure), how and why it has changed over time, and then consider:

- who values the place, and why they do so
- how those values (usefulness, importance, serving a purpose or creating an effect) relate to its fabric
- their relative importance to the community
- whether associated objects contribute to those values
- the contribution made by the setting and context of the place
- how the place compares with others sharing similar values.

**4.3.6** Understanding the connection between the values and significance of a place is necessary to inform decisions about its future. The degree of significance determines what, if any, protection (including statutory designation) is appropriate under law and policy.

## 4.4 Assessment of Significance

**4.4.1** The actual assessment of significance is a key task in the process of planning any work on historic buildings, and should be carried out and documented prior to the design or preparation of any proposals for work to be done. An “assessment of significance” should not be required retrospectively, for instance as a condition attached to the granting of Listed Building Consent; it should always take place as close to the beginning of the process as possible.

**4.4.2** “Assessments of significance” can vary considerably in scope and detail, from the large and complex to the small and simple. The degree of understanding, and the care and complexity of the assessment required should be decided from the size, overall significance and complexity of the building or place in question. In each case, from the largest to the smallest, a suitably proportionate approach is encouraged.

**4.4.3** Where only local, small-scale changes are anticipated, such as the upgrading of an individual element in a simple building such as a window, an assessment of significance need not be an onerous task. If the matter can be adequately documented with perhaps a photograph and a paragraph or two of text, there need be no requirement to make the process any more complicated. Once this is established and agreed, the design and development of upgrading proposals may proceed directly.

**4.4.4** On the other hand, at the highest level, and for the most complex sites and buildings, the best way of assessing significance is through the preparation of a “Statement of Significance” and “Conservation Plan”, of which the assessment of significance will

form the pivotal part. This can be a large, complex and inevitably expensive process, but will normally have been carried out at the outset of the project, before obtaining relevant consents. The methodology for a plan's preparation is a widely accepted process for the understanding and long-term management of historic buildings and places, but it will normally need to be prepared by suitably qualified and experienced historic buildings specialists, possibly from a variety of different areas of expertise.

**4.4.5** For less complex listed buildings the preparation of a conservation statement may be sufficient, normally requiring less depth of research, and generally following the format of a Conservation Plan. Non-specialists may well be able to do this, although greater expertise will probably be needed on more complex issues.

**4.4.6** Within Conservation Areas, Local Authorities are obliged to prepare and publish conservation area "appraisals" to identify the physical features which contribute to the character of a *place*. These appraisals will often contain sufficient information to enable an assessment of significance to be a simple and straightforward exercise. Similarly, World Heritage Sites, registered parks and gardens, and areas of outstanding natural beauty should have adopted management plans which will already include, or directly refer to, much of the relevant information.

## 4.5 Identifying Special Elements

**4.5.1** Before considering any alteration to a building, it is essential to assess the elements that make up its special character and interest (its significance) including:

***External features –*** Such as a decorative façade, windows and doors

***The spaces and internal layout –*** plan of a building is one of its most important characteristics; interior plans should be respected, and as far as possible, left unaltered.

**Internal features –** such as decorated plaster surfaces, panelling, floors, window shutters, doors and door-cases.

***Details –*** such as mouldings, stucco-work, wall and ceiling decorations, etc. can be just as valuable in simple vernacular and functional buildings as in grander architecture, and can be a building's most important features. Besides the historical or aesthetic importance of a building and its fixtures, the archaeological or technological interest of the surviving structure and surfaces may also be significant.

## 4.6 Impact Assessment

**4.6.1** To enable a conservation adviser to produce an "**impact assessment**", sufficient detailed information is required on the value and significance of a building prior to any work being carried out. Equally detailed information on any proposed work (e.g.

alteration, conservation, service upgrades, work adjacent to the building, road improvements) must also be available.

**4.6.2** Once this information has been collected it allows the conservation adviser to assess the impact of any work, and this complete understanding of the issues allows an informed judgement to be made as to whether the proposals are beneficial or not.

**4.6.3** Project organisers must ensure that "Impact Assessments" are **ongoing** processes throughout the duration of the project, and not something which is only done before work commences. As problems arise, their impact on the project must be realised, and informed judgments and decisions made as to the best way forward and any required adjustments to the conservation pan.

**4.6.4** These decisions should be linked to the principles of **"minimum intervention"** whereby the least amount of work possible is carried out and has the least physical and visual effect on the building/structure/fabric and retains the maximum amount of original material.

## 4.7 Documenting Decisions and Work Undertaken

**4.7.1** A record must be kept of the decisions and actions and the justification for these to form an account of what has happened over time, and to understanding how and why the building and its significance may have been altered.

**4.7.2** Owners or property managers should monitor and regularly evaluate the effects of change and the responses to it, and use the results to assist in future decisions, which will be related to any future changes in policies, guidance and best practice.

**4.7.3** If all or part of a building will be lost, due to decisions made or natural decay process, then any information about the past this may reveal requires investigation and analysis, followed by archiving and dissemination of the results to those concerned.

# 5. Specialist Investigation Techniques

## 5.1 Archaeological Investigations

**5.1.1** Archaeological investigation is a programme of controlled, intrusive fieldwork with defined research objectives, which:

- examines, records and interprets archaeological deposits, features and structures and, as appropriate
- retrieves artefacts, eco-facts and other remains within a specified area or site on land, inter-tidal zone or underwater.

**5.1.2** The records made, and objects gathered during "fieldwork" are studied and the results are published in detail, appropriate to the objectives of the project.

**5.1.3** The purpose of excavation is defined by its research objectives, but aims to:

- examine the archaeology within a given area or site to establish a better understanding
- compile a lasting record of the revealed evidence
- analyse and interpret the results, and disseminate these to interested parties.

## 5.2 Architectural Paint Analysis and Research

**5.2.1** Architectural paint research incorporates microscopic examination of paint layers and other applied finishes from current surface to original substrate. It can be combined with research into documentation to provide insight into:

- changes in aesthetic tastes
- paint technology
- usage and
- structural alteration

It has great potential in providing information, allowing the comparison of - layers of paint, the types of coatings, their sequence and their relationship to other parts of the building.

**5.2.2** This very specialist work needs to be carried out by highly qualified consultants with the appropriate experience and equipment. They will have considerable knowledge of building archaeology and architectural history, as well as understanding chemical analysis and the use and development of colour in historic buildings.

**5.2.3** In the past paint scrapes were used as a simplistic way of accessing information on different decorative schemes, but this is no longer considered appropriate without the additional information provided by microscopic paint analysis.

## 5.3 Dendrochronology

**5.3.1** Dendrochronology, also known as “tree ring dating”, is a scientific method of dating the timbers of a wooden building or structure. The technique has been in existence for almost fifty years and is extremely accurate and can help date to within a very narrow time period in time.

**5.3.2** Dendrochronology relies on the fact that trees grow more in seasons when the weather conditions promote growth and grow less when conditions are poor. Within a given geographic area, every tree of the same species will respond identically to these conditions.

**5.3.3** A dendrochronologist will start work by establishing a “master chronology”. The master chronology is created by finding a very old oak tree and taking a small, thin core that goes to the centre of the tree, and ideally includes every ring of the tree. This core will be carefully dried, measured, and polished and the rings in the core are measured and the relative width of each year’s growth plotted. A host of historical samples from other trees and early buildings will also be compared, and slowly a “fingerprint” develops to establishe a unique pattern from which any good historic oak timber can be dated. As older and older pieces of timber are found, their overlap in time periods with existing samples will be plotted, and the ability to date timber goes further and further back.

## 5.4 Keyhole Investigations and Remote Sensing

**5.4.1** A variety of geophysical, ‘keyhole’ and remote sensing techniques are used to analyse buildings and their fabric, and landscapes. For buildings, magnetometry, ultra sound, radar, radio detection and thermography are techniques whereby it is possible to “see through” fabrics, whilst endoscopy involves very small scale interventions.

**5.4.2** Such techniques can be used to understand the performance and the current condition of finishes, materials, components, elements and structures as well as the physical, chemical and biological environments of and within buildings.

**5.4.3** Such investigative techniques and scientific analysis of the building materials can map and understand the original source, manufacture, construction method, life-span, and changes which have occurred during the building’s history. This can contribute to their future survival, maintenance and well being.

## 5.5 Physical Investigations

**5.5.1** Sometimes, only limited information about a building’s history can be established without controlled physical removal of later features or finishes, this process is known as ***‘opening up’***. In the case of a listed building or scheduled ancient monument this will require consent.

**5.5.2** ***"Opening up"*** can be a valid technique, but must be limited to the investigation of features that are essential to understand the building or components to be treated and as part of the overall controlled management of the site or project. As this is an invasive techniques, as much information as possible must be obtained by non-interventional methods, such as, documentary research and site surveys - before any ***"opening up"*** is even considered .

**5.5.3** In removing a building's fabric, it is important to be aware of the possible long-term consequences. The exposure of timber framing, or the loss of historically protective finishes, can create problems for the building which may need to be resolved through further intervention.

# 6. Principles of Alteration

## 6.1 Guiding Principles

**6.1.1** The stock of traditional buildings is finite, and every loss or major alteration to fabric is significant. Therefore a conservative approach is needed, using knowledge and experience to determine what is important, and how changes can be made with the least effect on the character of the building.

**6.1.2** When alterations are being considered, English Heritage's *Conservation Principles* and other heritage bodies' advice and guidance recommends:

- There is sufficient comprehensive information available to understand the impacts of the proposal on the significance of the place
- The proposal would not materially harm the values of the place, which, where appropriate, would be reinforced or further revealed
- The proposals aspire to a quality of design and execution which may be valued now and in the future
- The long-term consequences of the proposals can, from experience, be demonstrated to be benign, or the proposals are designed not to prejudice alternative solutions in the future.

## 6.2 Conservative Repair and Maintenance

**6.2.1** The principle was pioneered by the Society for the Protection of Ancient Buildings (SPAB) which was founded in 1877. Broadly speaking, *conservative repair* is a coherent philosophy in itself, which calls for the following:

- Respect for the age and character of the building, and for the physical evidence of its history
- The preservation of as much original fabric as possible in the repair process
- That repairs should be carried out with materials and craft techniques as close as possible to the originals
- That new work should always be subservient to the old, both practically and aesthetically
- That all new work should be carried out honestly, without pretending to be older or of a different type than it is
- That any repairs should not preclude later repairs when they become necessary.

**6.2.2** A basic principle of building conservation is to ensure that buildings are maintained as well as possible, in order to prevent decay damaging their fabric. Traditionally constructed buildings are generally capable of lasting indefinitely, with moderate amounts of regular care and maintenance.

**6.2.3** Basic “maintenance” should include regular inspections so that defects can be discovered at the earliest possible stage and has the advantage of preserving as much as possible of the original building fabric; limiting the need for major works (which could trigger the need to comply with Part L of the Building Regulations) preserving historic fabric; minimising cost and disruption to the owner or building occupants.

**6.2.4** Colloquial use of the word ‘restoration’ (the act of returning a place to a known earlier state, on the basis of compelling evidence, without conjecture) is often indicative of the assumption that all historic buildings need periodic campaigns of significant work, to return them to an ideal condition. In reality however, the need for such restoration usually results from a consistent long-term lack of regular maintenance.

**6.2.5** Regular maintenance is also effective in maintaining the building’s originally-intended environmental performance. Damp and significant draughts are more often the result of inadequate maintenance or ill-considered changes, rather than original defects in the design and construction of the building.

**6.2.6** This conservative approach also embodies the principle of “**minimum intervention**” applies at all scales, from an individual brick to works of significant alteration. If all works are kept to the absolute minimum required, then a maximum historic fabric will be preserved, and thus the *significance* which it embodies.

## 6.3 Compatibility

**6.3.1** All changes, whether small-scale repairs or larger alterations, should be made using materials and techniques which are compatible with the historic fabric.

**6.3.2** Modern materials tend to be harder, less flexible, and less moisture permeable than traditional ones, and when used in direct conjunction with historic fabric they can greatly accelerate decay in the original work.

**6.3.3** It is generally best practice for all new work placed directly adjacent to historic fabric, to be slightly weaker and more permeable, to ensure that it will weather preferentially to the more significant older work.

## 6.4 Reversibility or Re-Treatability

**6.4.1** Where changes which may be detrimental to the significance of a building are unavoidable, they should, wherever possible, be made to be as **“reversible”** as possible or allow the building or its affected elements to treated at a future date without adverse effects.

**6.4.2** Adopting this principle means that even if the significance is obscured, the valuable historic fabric can be returned to its original state without damage, after the lifetime of

the relevant addition has expired. This principle can also be applied at the full range of scales of changes, from individual localised repairs to major building extensions.

## 6.5 Authenticity

**6.5.1** The principle of "authenticity" requires that the history and fabric of the building should be respected and implies the following:

- That all new work should appear as of its time (but it is nevertheless recommended that it should be subservient to the old)
- That all past phases of the building's history should be allowed to be clearly read
- That speculative restoration should be avoided (although it may be justified where clear documentary and/or physical evidence of previous form is available)
- That nothing important to the significance should be removed.

**6.5.2** This principle should be applied to all levels of changes or alteration.

# 7. Understanding Traditional Buildings

## 7.1 Over-arching Principles

**7.1.1** Whilst the principle of understanding what is important about an historic building before altering it is generally well established, there is also an equivalent need to understand the physical behaviour of traditionally constructed buildings.

**7.1.2** Understanding the nature and characteristics of different traditional building materials and their relationship to one another, their physical properties and likely deterioration processes provides the necessary background to identify and diagnose the condition and problems affecting a building or monument.

**7.1.3** The purpose of this type of understanding is to minimise the risk of causing damage to the physical fabric of the building, rather than its character and appearance. Buildings have always been designed and constructed specifically to filter the extremes of the external environment, and provide more benign internal conditions. This is a fundamental function of all habitable buildings except, perhaps, those which have a primarily religious purpose. This environmental filtration is provided in the first instance by the entire external envelope (walls, roofs, windows, doors), which keeps out rain, snow and wind; keeps in warmth, and moderates the entry of both light and air.

**7.1.4** The internal structure of most buildings of traditional construction is also moderated by internal characteristics and features such as chimney stacks, cellular room plans, draught lobbies and the like, which provide additional thermal mass, and limit heat loss through cold air infiltration.

**7.1.5** Whilst this environmental performance cannot compare in efficiency with that available from modern materials and services, it was nevertheless often effective in its day, and may still be able to make a valuable contribution. It can also be an inherent part of a building's significance.

## 7.2 Need for Traditional Buildings to Breathe

**7.2.1** As already discussed, traditional buildings are characterised by the widespread use of "breathable", moisture-permeable materials, which allow moisture within the building fabric to pass to evaporate freely. This is particularly relevant to the widespread use of solid masonry external walls (whether of brick or stone), but is also very relevant to earth buildings, infill panels in timber-framed construction, solid ground floors, plastering and rendering, and internal and external decorative finishes.

**7.2.2** Whilst 'breathability' may seem to be a simple matter, the actual behaviour of liquid water and water vapour, and their effects on other aspects of the performance of both the building envelope and the internal environment, can in reality be very complex.

## 7.3 Sources of Moisture

Four principal sources of moisture are likely to affect a traditional building:

### 7.3.1 Rain

- Most traditional buildings are capable of resisting rain effectively if they are kept in good order. Generally it will be absorbed into the outer layers of permeable material, and will then safely evaporate back out again when the weather changes. Particular problems may arise, however, if wall heads and similar details are less well protected than was originally intended.

- In addition, where water achieves ingress through absorption, failure of structural components such as cracked or missing roof tiles, broken panes of glass, failed lead flashings etc., can contribute greatly to water ingress. These will quite often cause more rapid and severe damage, but can be prevented fairly easily with regular inspection and maintenance.

### 7.3.2 Rising Damp

- Traditional buildings are normally also capable of dealing with rising damp surprisingly well. However, this is achieved mainly by balancing the capillary water ingress, with suitable evaporation to keep overall moisture levels within tolerable limits. Problems tend to occur when circumstances change, particularly if exterior ground levels are raised, impermeable materials such as cement renders are added, or a building is converted to a more intensive use.

### 7.3.3 Internal Moisture Vapour

- Building occupants can generate a considerable amount of moisture through breathing, cooking, washing etc. This is initially carried as vapour in the internal air, which itself is normally warmer than the external atmosphere. This moisture can condense when it comes into contact with cold surfaces or, in permeable construction, within the body of a wall, or similar. This is not normally a problem if the water absorbed by the wall is adequately balanced by suitable evaporation over time.

- When consideration is given to upgrading the energy efficiency of an historic building, it is recommended that its originally-intended environmental performance should be researched and understood, as a vital part of its potential performance. This will enable upgrading proposals to be developed, which will be as far as possible naturally compatible with the existing fabric.

### 7.3.4 Damaged Rainwater Services

- Water from damaged pipe-work is a self-evident but often overlooked problem, which can and should be resolved by normal routine maintenance.

## 7.4 Permeability

**7.4.1** The permeability of the external surfaces of traditional building materials is perhaps the most important aspect of this phenomenon and the one with which most people are familiar. It applies to traditional bricks, building stones (except perhaps slate and granite), traditional mortars, plasters and renders, unglazed tiles, cob, earth and early concretes. It also applies to timber, although the linear, cellular nature of wood makes its response directional: very permeable in the end grain, but less so to the sides. Reed and thatch tend to behave similarly to timber. Lime washes, distempers and similar traditional finishes are also permeable.

**7.4.2** Permeability is a variable quality, not an absolute one. Many materials (particularly modern ones) state that they are permeable, but the actual permeability is considerably less than that which is optimally required when repairing traditional buildings. Traditional materials can also vary considerably in their permeability, and this can also be modified in use, such as in the degree of polish which might be applied to a lime plaster or render.

**7.4.3** When permeable materials are wetted by rain, a proportion of the rain soaks into the surface. The depth of penetration can vary considerably with the porosity of the material and the degree of exposure, but experience over hundreds of years in most parts of the UK has generally developed effective techniques to deal with the prevailing local conditions and materials. When excess damp penetration does occur, it is more often due to a lack of maintenance, rather than faulty original construction. For instance, open joints in masonry can encourage considerable water ingress, which is effectively resolved by normal maintenance.

**7.4.4** The permeability of the outer surface of these materials allows the moisture absorbed in poor weather, to evaporate out again rapidly when the rain stops. This two-way flow is vital for the health of the building, as it ensures that the overall moisture load never reaches a high enough level to cause damage to the building fabric. However, not all materials have equal permeability; brick and stone rely heavily on the more permeable nature of lime mortars to increase the overall amount of evaporation. In addition, the greater the evaporative area available, the drier any particular part of a building will tend to be.

**7.4.5** For many years it has been assumed that permeable walling and other surfaces should be sealed in some way, to prevent the water getting in. However, such treatments which include cement rendering, silicone (and other) sealants and “plastic” surface decoration materials, etc are rarely fully effective. In most cases,

some water will be absorbed through the finish into the permeable material behind, often through cracks or decayed patches (these treatments often have limited lives), but will be unable to freely evaporate out again. The result is a build-up of trapped moisture in the wall thickness, which is detrimental both the health of the building and its thermal performance.

**7.4.6** The absorbency of the permeable materials also has the beneficial side effect of reducing run-off from the face of the building during rain. This significantly reduces the wetting of lower parts of the building, including details, flashings and so on. If an area of permeable walling is treated or re-finished to make it impervious, it can often trigger rapid erosion and failure of parts of the building at a lower level, which were never intended to carry a high degree of run-off.

## 7.5 External Moisture Barriers

**7.5.1** The danger of applying impervious treatments to the outside face of permeable construction has already been mentioned. Rainwater, which would otherwise be partially absorbed and then evaporate harmlessly away, can be trapped behind such treatments in large quantities over time. The impervious treatment tends to actually exaggerate the absorption through cracks, because of the water pressure caused by the surface run-off. Fully saturated walls can therefore easily result.

**7.5.2** This will be highly detrimental to the health of the fabric, by causing rot in built-in timbers and holding water in places where it can both mobilise soluble salts, and freeze. In addition, dampness in walls causes increased heat loss through the fabric, and prevents 'moisture buffering' in internal spaces, making buildings feel cold and clammy. The normal (and entirely understandable) human response is to turn up the heating, thus seriously compromising the energy efficiency of the building.

**7.5.3** External moisture barriers also effectively trap condensation from the internal environment within the building envelope. Whilst the majority of internal condensation is buffered and released back to internal spaces later, a proportion can easily build up within the fabric over time, to levels which cause damage. Allowing this to also evaporate away from the external face can be very helpful in preserving both the building fabric and its performance.

## 7.6 Damp-proof Courses and Membranes

**7.6.1** Moisture barriers within the construction, such as damp proof membranes (DPMs), damp proof courses (DPCs) and localised "separating" membranes, are also commonplace both in modern construction and in converted traditional buildings. However, these also need to be treated with care.

**7.6.2** Traditional breathable solid ground floors have often been "broken out" and replaced with modern concrete constructions, which include a damp proof membrane. Whilst

this is effective in producing a dry floor, the moisture which previously evaporated harmlessly from the old floor, can be driven to the perimeter, causing significantly increased concentrations of dampness there, which can then rise up the walls.

## 7.7 Ventilation

**7.7.1** Historic buildings usually need more ventilation than modern buildings. In the past, they were often more ventilated than strictly necessary because of loose-fitting doors, windows and other openings. In addition, open fires created generous rates of exhaust ventilation through chimneys at times when condensation risk might otherwise have been high.

**7.7.2** If ventilation of an historic or traditional building is reduced too much, condensation, mould and fungal growth may occur, leading to deterioration of the fabric and contents, and possibly health problems for occupants. Great care is therefore required in selecting an appropriate ventilation rate for a historic building. A rule of thumb used by some designers is ‘twice as much as required’, although the actual amount needed varies with context, and particularly with the amount of evaporation occurring from the fabric.

# 8. Low Carbon and Traditional Buildings

## 8.1 Energy Efficiency in Traditional Buildings

**8.1.1** Energy efficiency and conservation of fuel and power of existing traditional buildings is controlled by Part L of the Building Regulations. Many improvements can be carried out, often at a relatively low cost, significantly enhancing the comfort of the building for its users, as well as providing savings on fuel bills. Such improvements can also help in reducing greenhouse gas emissions. However, reducing carbon emissions from buildings is not just about heating and insulating the building fabric. Much can be achieved by changing behaviour, avoiding waste, using energy efficient controls and equipment, managing the building to its optimum performance, all of which is as relevant to older buildings as new ones.

**8.1.2** For historic buildings and those of traditional construction, an appropriate balance needs to be achieved between conservation requirements, and measures to improve energy efficiency, if lasting damage is to be avoided both to the building's character and significance, and its fabric. For example, it would be neither sustainable nor cost effective to replace a 200-year-old window, that is capable of repair and upgrading, with a new double glazed alternative; and even less so if the new window were to have an anticipated lifespan of only 20 - 30 years, as some do. Depending on the circumstances, a good case might be made for well designed and carefully installed draught-proofing or secondary glazing.

**8.1.3** An informed approach can achieve significant energy efficiency improvements in most cases, although not always to the standards recommended in the Regulations. Achieving an informed *appropriate balance* (as above), requires an understanding of both the Regulations, and the building's structure; particularly:

**8.1.4** Understanding the energy efficiency requirements as set out in the *Approved Documents - for Part L of the Building Regulations*, which should be applied as far as is practicable up to the point at which alteration to the building's character, appearance and performance becomes unacceptable.

**8.1.5** Understanding the point at which alteration to the building's character, appearance and performance will become unacceptable, depends on understanding the significance of the building, and how the building works as an environmental "system".

**8.1.6** Once the building's significance, construction and the way it performs have been fully understood, then the *appropriate balance* can be determined from a position of knowledge. The Approved Documents make it clear that a reasonable compromise on the energy efficiency targets may be acceptable, to preserve its *character and appearance* and to avoid technical risks.

## 8.2 Building Regulations

**8.2.1** The Building Regulations set standards for how buildings must be constructed to achieve a minimum level of acceptable performance which typically cover:

- health
- safety
- energy performance and
- accessibility requirements for buildings.

**8.2.2** The Regulations apply mainly to new buildings and there is no general requirement for all existing buildings to be upgraded to meet these standards. However, certain changes, such as the use of the building, can trigger the need for existing buildings to comply with the Building Regulations.

## 8.3 Part L of the Building Regulations

**8.3.1** **Part L** of the Building Regulations covers the conservation of fuel and energy. Although the Building Regulations themselves only state general requirements, they are supported by "*Approved Documents"* which set practical guidance as a response to these requirements. The **Approved Document (Part L)** for energy efficiency is in four sections:

- New dwellings (L1A)
- Work to existing dwellings (L1B )
- New buildings that are not dwellings (L2A)
- Existing buildings that are not dwellings (L2B).

**8.3.2** The Approved Documents are not the Regulations, but are intended to provide guidance for complying with the more common forms of building construction. Applicants are under no obligation to adopt any particular solution from an Approved Document, if they prefer to meet the relevant requirement in some other way. Approved Documents Parts L1B and L2B also make clear that the characteristics of historic and traditionally constructed buildings warrant some exemptions and special consideration in reaching appropriate solutions. They do this by specifically including some *exemptions* and circumstances where *special considerations* apply for historic buildings and those of traditional construction.

**8.3.3** An understanding of what constitutes the special interest or significance of an historic building requires experience. Very often technical, philosophical and aesthetic

conflicts will need to be resolved, and on occasions highly creative solutions to problems will be necessary. In such circumstances there is no substitute for the knowledge, skill and judgement of a qualified and experienced professional advisor, such as an architect or surveyor who is experienced with historic buildings. Such people have both the technical ability and wide working knowledge of historic buildings, for their maintenance and adaptation, and their advice can thus prevent damage and unnecessary expense and heartache.

**8.3.4** In each case the *appropriate balance* should be discussed early in the design process, by consultation between the Local Authority's Building Control Officer or Approved Inspector, and the Conservation Officer.

## 8.4 Background to the Legislation

### 8.4.1 Carbon Emissions form Buildings

- Energy used in running buildings is responsible for nearly half of this country's total carbon dioxide emissions. About 27% of these emissions are produced by domestic buildings and around 22% by public and commercial buildings.

- 75% of carbon emissions produced by dwellings come from space and water heating requirements, with the remainder coming largely from lighting and household appliances.

### 8.4.2 Sustainability and Historic Buildings

- Sustainability is broadly divided into three overlapping aspects covering environmental, social and economic requirements, and the need to bring them all into harmony. All of these are relevant to older buildings, but for the purposes of **Part L** of the Building Regulations, the greatest emphasis must lie on the environmental aspect, particularly the use of fossil fuelled energy. This is closely allied to the generation of carbon dioxide, both from the production of buildings and from their daily use.

- When first built and inhabited, all pre-industrial buildings were, by definition, sustainable and zero-carbon in both construction and use. The primary energy sources available for the conversion and transport of building materials were human and animal power, and the biomass of available locally grown timber.

- Building, heating and cooking were almost entirely fuelled by sustainably sourced biomass. However, where water and wind power were available they could be used, for instance, for the conversion of timber or the transport of materials by water, and in areas where peat was available it was a popular heating and cooking fuel.

**There is no inherent conflict between the retention of older buildings and the principles of sustainability. In environmental terms, the continued use of existing building stock, coupled with measures to improve energy efficiency, is a global priority.**

**Replacing an existing building with a new one requires a considerable investment of 'embodied' energy in materials, transport and construction – typically equivalent to five or ten years of building.**

**In global environmental terms, the balance of advantage strongly favours the retention of existing building stock, particularly when performance in terms of energy consumption in use can be improved.**

- The retention of older buildings, either in their entirety, or simply by re-using components in-situ and allowing for their thermal upgrading in benign and sympathetic ways, can provide excellent finished results which are fully in accordance with the principles of building conservation and sustainability. In many cases, the process of careful adaptation and re-use of resources can produce new buildings, and spaces of the highest architectural quality.

### 8.4.3 Buildings Exempt from the Requirements

- Certain classes of "*historic buildings"* are expressly exempted from the need to comply with the energy efficiency requirements of the Regulations, where compliance with the energy efficiency requirements would unacceptably alter their character and appearance. These are listed in Regulation 21(2), (c) and Regulation 21(3), and comprise buildings which are:

    - Scheduled Ancient Monuments
    - Listed Buildings
    - Buildings in Conservation Areas

- This exemption is **not unconditional.** The Regulations therefore require that these buildings should be upgraded in accordance with the *energy efficiency requirements* set out in Approved Documents L1B and L2B up to, but not necessarily beyond, the point at which the relevant alterations would become *unacceptable*.

- The definition of this point requires both an understanding of what qualities of character and appearance are significant in each case, as well as an effective assessment of the degree to which alterations to these qualities will be unacceptable.

- For the above designations where consent is required, the Local Authority is required to assess proposals for any impact on the significance of the heritage asset, using the

criteria set out in "*Planning Policy Statement 5*, *Planning for the Historic Environment*".

### 8.4.4 Building where Special Conditions Apply

- Paragraph 3.8 in both Approved Documents L1B and L2B lists three further classes of buildings where *special considerations* apply in making reasonable provision for the conservation of fuel or power:

**Locally Listed Buildings**

***"Buildings which are of architectural and historical interest and which are referred to as a material consideration in a Local Authority's development plan or local development framework"***

- This category includes a Local Authority's 'local list' or 'supplementary list' of historic buildings, which has been included in their unitary or local plan (known as the "development plan"). Inclusion within the plan means that any list of this kind has been subject to public consultation and is a material planning consideration in the determination of applications under the Town and Country Planning Acts.

- Most buildings on these lists are good examples of a particular design or style of construction, e.g. buildings of the Arts and Crafts movement of the late 19th and early 20th centuries, the work of a noted local architect, or a building associated with a local historical figure. They could well become the listed buildings of the future.

- These buildings have no statutory protection unless they are within a conservation area. Nonetheless, if they are to retain their significance, it is often essential that original features and fabric are preserved in any schemes of alteration or extension.

**Buildings in National Parks and other Historic Areas**

***"Buildings which are of architectural and historical interest within national parks, areas of outstanding natural beauty, registered historic parks and gardens, registered battlefields, the curtilages of scheduled ancient monuments, and world heritage sites"***

- Buildings often help to create the townscape and landscape qualities which were amongst the original reasons why an area or a site achieved its designation of significance. They use local materials and highlight vernacular traditions, with roofs, windows, roof lights and doors typifying their period, age and style.

- While these designated areas do provide slightly more control over 'permitted developments' than elsewhere, many important features on unlisted buildings make a contribution to the historic significance of statutorily designated heritage assets, but are not safeguarded. Therefore improvements to energy efficiency must avoid

harming them. Other buildings in these areas may be relatively modern or much altered, and may accommodate energy-saving upgrading more easily.

**Traditionally Constructed Buildings**

***"Buildings of traditional construction with permeable fabric that both absorbs and readily allows the evaporation of moisture"***

- Most traditional buildings were designed and built before the development of reliable and cost-effective impermeable membranes or moisture barriers. They rely instead on their ability to allow such moisture to evaporate rapidly away, and thus prevent the damaging build-up of damp and resulting physical decay. Whilst the majority of *historic buildings* are traditional, there are many thousands of *traditional buildings* which are not legally protected or designated.

- This category includes nearly all buildings constructed prior to 1919, as well a significant proportion of those built before 1945. It is essential that adaptations made to improve the energy efficiency of these structures should take into account the traditional technology and characteristic behaviour of the building fabric, otherwise very real damage can be caused. Well-meaning attempts to keep moisture out of these buildings using modern methods tend to have the unfortunate effect of preventing the vital evaporation, thus causing or accelerating moisture-related decay to the fabric.

**The Approved Documents states**:

***3.9 When undertaking work on or in connection with a building that falls within one of the classes listed [in paragraph 3.8] above, the aim should be to improve energy efficiency as far as is reasonably practical. The work should not prejudice the character of the host building or increase the risk of long-term deterioration of the building fabric or fittings.***

**The Approved Documents then state**:

***3.10 The guidance given by English Heritage should be taken into account in determining appropriate energy performance standards for building work in historic buildings.***

# 9. Glossary and Websites

## Glossary

The following are words or terms encountered within this handbook and this glossary is intended to assist with the understanding of the meaning(s) of these words or terms. Many of the words and terms have variations in meaning, but the one(s) given in this glossary are used in the context of conservation, repair and maintenance of historic or traditional buildings and structures. This is offered as a guide, but cross-reference can also be made to other historic building publications and architectural glossaries.

| | |
|---|---|
| ***Aesthetic*** | Relating to the architectural beauty of a building, structure or place and the structural features or components. |
| ***Alteration*** | Work intended to change the function or appearance of a building, site or place. |
| ***Appraisals*** | Estimations of the value(s) of a building or its setting. |
| ***Archaeological*** | A careful scientific study and interpretation of the past to establish significance, usually by excavation to uncover, recoding and interpretation of revealed information. |
| ***Archives*** | A collection of historical documents or records of a community or topic. |
| ***Authenticity*** | Characteristics that most truthfully reflect and embody the cultural heritage values of a place. |
| ***Benign*** | Having a neutral effect. |
| ***Breathability*** | The ability to absorb moisture from, and release it back to, the atmosphere. |
| ***Building Regulations*** | A set of legal "rules" laid down by National and Local Government to ensure structures conform to acceptable standards. |
| ***Capillary (action)*** | The ability of a material to absorb water against the force of gravity due to the "tube - like" nature of its pores. |
| ***Character (of a building)*** | It's distinguishing qualities or features. |
| ***Cob*** | A construction (walling) material made from compressed clay, sand and straw. |
| ***Colloquial*** | Ordinary or local term. |
| ***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. |
| ***Conservation area*** | An area of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance, designated under what is now S69 of the Planning (Listed Buildings and Conservation Areas) Act 1990. |
| ***Conservative (repair)*** | Avoiding extreme measures when considering alterations or |

| | |
|---|---|
| | changes to a significant building by using a “minimalist” approach. |
| ***Context*** | Any relationship between a place and other places, relevant to the values of that place. |
| ***Criteria*** | Principles or standards by which things are judged. |
| ***Curtilage*** | Legal term to define the land immediately surrounding a house or dwelling - can be an important legal concept in relation to Planning Controls. |
| ***Dendrochronology*** | A method of dating timber by the study of its annual growth rings. |
| ***Designation*** | The recognition of particular heritage value(s) of a significant place by giving it formal status under law or policy, intended to sustain those values. |
| ***Dissemination*** | The process of distributing information on a wide scale. |
| ***Eco-fact*** | An object found at an archaeological site, which comes from something living, but which has not been modified by human activity. |
| ***Ecological*** | Related to the scientific study of things having respect for each other and their natural environment. |
| ***Endoscopy*** | The process of using instruments to examine the interior of a hollow space or cavity through a small entry hole. |
| ***Epoch*** | A period of time in history. |
| ***Expert*** | Highly practiced and/or well informed in aspects of conservation, repair and maintenance of historic or traditional buildings. |
| ***Fabric*** | The physical material of which places are formed, including geology, archaeological deposits, structures and buildings, and flora. |
| ***Harm*** | Change for the worse, primarily in this handbook referring to the effect of inappropriate interventions on the physical and other values of a building or place. |
| ***Heritage*** | All inherited resources which people value for reasons beyond mere utility. |
| ***Heritage, cultural*** | Inherited assets which people identify and value as a reflection and expression of their evolving knowledge, beliefs and traditions, and of their understanding of the beliefs and traditions of others. |
| ***Heritage, natural*** | Inherited habitats, species, ecosystems, geology and landforms, including those in and under water, to which people attach value. |
| ***Historic environment*** | All aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible or buried, and deliberately planted or managed flora. |
| ***Historic Environment Record*** | A public, map-based data set, primarily intended to inform the management of the historic environment. |
| ***Impact Assessment*** | This identifies the main options for achieving the objectives, and analysing their likely impact on the work proposed. |
| ***Impervious*** | A material which will not let water pass all the way through its molecular structure. |
| ***Integrity*** | Wholeness, honesty. |

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| ***Intervention*** | Any action which has a physical effect on the fabric of a building or place and individual components. |
| ***Keyhole Investigation*** | Those made using minimally invasive techniques (see "minimal intervention") which will create the least damage to the fabric of a building. |
| ***Legislation*** | Legal "rules"; laws. |
| ***Listed*** | Having official protection from demolition or from alteration or extension which may affect its character. |
| ***Magnetometry*** | A process used to detect archaeological sites and other buried or submerged objects (using more sensitive equipment than a metal detector). |
| ***Maintenance*** | Routine work regularly carried out to maintain the fabric of a building or place in good order and prevent deterioration. |
| ***Material*** | Relevant to and having a substantial effect on, demanding consideration. |
| ***Membrane*** | A layer of material which can be a selective barrier impermeable to specific substances (e.g. rainwater), but can also be designed to allow controlled passage of substances (e.g. moisture vapour). |
| ***Monument*** | A structure preserved because of its historical importance. |
| ***Moisture Barriers*** | Structural membranes to prevent the passage of moisture through a structural component. |
| ***Minimal Intervention*** | The concept of making repairs or alterations to a structure without resorting to major works. |
| ***Natural change*** | Change which takes place in the historic environment without human intervention, which may require specific management responses (particularly maintenance or periodic renewal) in order to sustain the significance of a building or place. |
| ***Object*** | Anything not (now) fixed to or incorporated within the structure of a place, but historically associated with it. |
| ***Permeable*** | A material whose molecular structure (porosity) allows moisture to pass through it. |
| ***Place*** | Any part of the historic environment, of any scale, that has a distinctive identity perceived by people. |
| ***Preservation*** | State of survival of a building or artefact, whether by historical accident or through a combination of protection and active conservation. |
| ***Preserve*** | To stave off decay and maintain a building or elements in a stable condition. |
| ***Proportionality*** | The quality of being appropriately related to something else in size, degree, or other measurable characteristics. |
| ***Public*** | Working on behalf of or for people as a whole. |
| ***Renewal*** | Comprehensive dismantling and replacement of an element of a building and in the case of structures normally reincorporating sound elements. |
| ***Repair*** | Work beyond the scope of maintenance, to remedy defects caused |

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| | by decay, damage or use, including minor adaptation to achieve a sustainable outcome, but not involving restoration or alteration. |
| ***Restoration*** | To return a place to a known earlier state, on the basis of compelling evidence, without conjecture. |
| ***Retrospectively*** | Dealing with events which have happened in the past. |
| ***Reversible*** | Capable of being reversed to a previous state without any significant damage having being done. |
| ***Scheduled Building*** | Considered to be of national importance. |
| ***Setting*** | The surroundings in which a place is experienced, its local context, embracing present and past relationships to the adjacent landscape. |
| ***Significance (of a place)*** | The sum of the cultural and natural heritage values of a place often set out in a statement of significance. |
| ***Significant place*** | A place which has heritage value(s). |
| ***Stewardship*** | The role of managing a property on behalf of another. |
| ***Substrate*** | The underlying surface or interior of a material or component. |
| ***Sustain*** | Maintain, nurture and affirm validity. |
| ***Sustainable*** | Capable of meeting present needs without compromising the ability to meet future needs. |
| ***Tangible*** | Can be seen clearly and definitely; not imaginary. |
| ***Traditional Buildings*** | Of an early period and generally referred to before 1919. |
| ***Transparent (process)*** | Open to public scrutiny. |
| ***Value*** | An aspect of worth or importance, here attached by people to qualities of places. |
| ***Value, aesthetic*** | Value deriving from the ways in which people draw sensory and intellectual stimulation from a place. |
| ***Value, communal*** | Value deriving from the meanings of a place for the people who relate to it, or for whom it figures in their collective experience or memory. |
| ***Value, evidential*** | Value deriving from the potential of a place to yield evidence about past human activity. |
| ***Value, historical*** | Value deriving from the ways in which past people, events and aspects of life can be connected through a place to the present. |
| ***Value-based judgement*** | An assessment that reflects the values of the person or group making the assessment. |
| ***Ventilation*** | Allowing the free circulation of air which can be beneficial in the control of atmospheric moisture and condensation. |
| ***Vernacular*** | Relating to our native country; local / regional style or material |

# Websites

The following website addresses are useful for further information relating to work on historic or traditional buildings, but this list is not exhaustive:

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| BS 7913: Principles of the Conservation of Historic Buildings | http://shop.bsigroup.com/ |
| Building Conservation Directory | www.buildingconservation.com |
| CADW | www.cadw.wales.gov.uk |
| ConstructionSkills | www.cskills.org |
| English Heritage | www.english-heritage.org.uk |
| Historic Scotland | www.historic-scotland.gov.uk |
| Institute of Conservation | www.icon.org.uk |
| Institute of Historic Building Conservation | www.ihbc.org.uk |
| National Heritage Training Group | www.nhtg.org.uk |
| National Trust | www.nationaltrust.org.uk |
| Northern Ireland Environment Agency | www.ni-environment.gov.uk |
| Project Book | www.projectbook.co.uk |
| SPAB | www.spab.org.uk |
| Ulster Architectural Heritage Society | www.uahs.org.uk |
| Understanding Conservation | www.understandingconservation.org |