# The Sustainability of Traditional Buildings
# STBA Policy Mapping

**This paper summarises current policy and regulatory landscape in all areas which have an impact on the sustainability of the built environment, and examines any consequences relating to traditional buildings.**

## Contents





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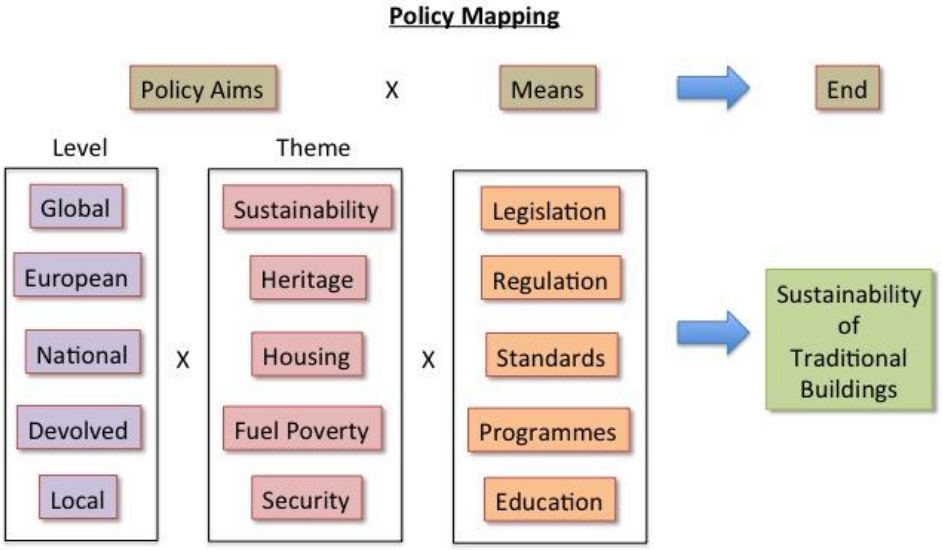
# 1. Introduction

The sustainability of the traditional built environment is not in itself an object of current policy but is to a large extent an outcome of other policy aims in heritage and the green agenda.




Policies not directed either at sustainability or conservation of the traditional built environment can also affect the stock or condition of old buildings. For example, housing policies that allow or promote change of use, the clearance of traditional buildings for new housing, policies designed to encourage economic growth, or even transport policies can all have considerable impacts.

Sustainability policy at Global, European and National level has not given sufficient consideration to the traditional built environment, either to its specific needs, or to what it can teach us about sustainability. On the other hand, policy regarding the conservation of the traditional built environment has occasionally conflicted with sustainability measures and opportunities and there can be very real challenges of realigning policies both with each other and with the reality of the traditional built environment. The STBA was formed specifically to address these challenges.

It is worth noting that although the early commitments to sustainability were wide-ranging, recent legislation and almost all efforts at implementation have been focused on the narrow agenda of climate change and not the broad agenda of sustainability. As will be clear from this document, this has arisen to some degree from the direction of European policy and legislation, to which the UK is of course still subject during the negotiation period for Brexit.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# 2. Sustainability and Climate Change Policy

## 2.1. Global Sustainability and Climate Change Policy

Sustainability is an emerging discipline; its definition and focus have shifted markedly over the last few decades.

The Brundtland definition of sustainable development (1987) is as follows:

> "Sustainable development is the kind of development that meets the needs of the present without compromising the ability of future generations to meet their own needs."[1]

This definition is useful because it is intergenerational – when looking at traditional buildings we are automatically considering history and how much should be conserved for the future. It is also broad, and based on the concept of need.

The Earth Summit (Rio, 1992) adopted three major agreements:[2]

- Agenda 21 – an action plan for all areas of sustainable development
- Rio Declaration on Environment and Development
- Statement of Forest Principles

Since Rio, policy has segmented between sustainability and climate change. For sustainability, the "triple bottom line" of environmental, economic and social factors emerged, reflecting the need for sustainability to take account of a wider set of factors, later reflected in the Millennium Development Goals. Sustainability policy at high level is now developing into a wider agenda based on human rights and this was formally adopted at the Rio+20 summit in 2012.

At the same time, the climate change agenda has emerged strongly. This is very different from sustainability policy as it has a narrow focus policy goal – the reduction of anthropogenic greenhouse gas emissions to limit global warming. The Kyoto Protocol of 1997 introduced a binding commitment to reduce greenhouse gas emissions by 5.2% by 2010 compared to a 1990 base. In Paris in 2015 (COP21), 195 countries signed a legally binding agreement to limit global temperature rises to below 2°C. The UK government is a signatory to both these agreements. These agreements do not define targets for specific sectors within economies. It is the responsibility of national governments to set appropriate reduction targets and then to work out how to achieve these reductions.

The narrow focus of the climate change agenda of course does not take into account the many other aspects of sustainability that are important. However, in much policy development, the two have become conflated, and sustainability has become defined as carbon emissions reduction. We then run the risk of doing damage to the wider environment and to our shared inheritance in the name of a single focus policy goal. Ill-considered mitigation measures can even lead to increased energy use and associated emissions – a negative result even using the narrow metric.

[1] Our Common Future – 1987 http://www.un-documents.net/our-common-future.pdf
[2] http://www.un.org/geninfo/bp/envirp2.html


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## 2.2. EU Sustainability and Climate Change Policy

**1997: Treaty of Amsterdam**

- Includes sustainable development as an overarching objective

**2001: EU Sustainable Development Strategy[3].** The core objectives are:

- Climate change and clean energy
- Sustainable transport
- Sustainable consumption & production
- Conservation and management of natural resources
- Public Health
- Social inclusion, demography and migration
- Global poverty and sustainable development challenges

**2006: Current EU Sustainable Development Strategy** adopted – minor changes to the 2001 Strategy

**2007:** European Council adopted energy and climate change objectives for 2020 – to reduce greenhouse gas emissions by 20%, to increase the share of renewable energy to 20% and to reach 20% energy efficiency. These targets were reconfirmed in 2010 in the Europe 2020 Strategy.

**2009:** The EU renewed its commitment to the goal of keeping global warming below 2°C over pre-industrial levels. EU Heads of State and Government also formally adopted the objective to reduce emissions by 80-95% by 2050 in comparison to 1990 levels

**2011: Roadmap 2050**: The EC Roadmap sets interim reduction targets:

- 25% in 2020
- 40% in 2030
- 60% in 2040
- 80-95% in 2050

There is no mention of culture or heritage in any of these commitments. Although at the level of Global policy the sustainability agenda remains separate from the climate change agenda, in the sphere of European policy the drive to combat climate change appears to have taken precedence and there is no reference to wider policy goals within the commitments to mitigate greenhouse gas emissions. Thus a potential conflict emerges. As the UK is a member of the EU, the problem is repeated at national level.

[3] http://ec.europa.eu/environment/sustainable-development/strategy/index_en.htm


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## 2.3. UK Sustainability and Climate Change Policy

### 2.3.1 Strategy for Sustainable Development

The UK first developed a National Strategy for Sustainable Development (NSDS) in 1994, after the 1992 Rio UN Conference on Environment and Development and the adoption of Agenda 21.

In 2005, the UK Government and Devolved Administrations published a shared framework for sustainable development in the UK, including common goals and challenges for England, Scotland, Wales and Northern Ireland, and five shared principles:

- Living Within Environmental Limits;
- Ensuring a Strong, Healthy and Just Society;
- Achieving a Sustainable Economy;
- Using Sound Science Responsibly; and
- Promoting Good Governance.

In February 2011, the Coalition Government published "Mainstreaming sustainable development - The Government's vision and what this means in practice". It includes a package of measures to deliver it through the Green Economy, action to tackle climate change, protecting and enhancing the natural environment, fairness and improving wellbeing, and building a Big Society. Ministers have agreed an approach for mainstreaming sustainable development which in broad terms consists of providing Ministerial leadership and oversight, leading by example, embedding sustainable development into policy, and transparent and independent scrutiny.

### 2.3.2: Climate Change Act (2008)[4]

There are four main provisions of the Climate Change Act:

- **2050 Target.** The act commits the UK to reducing emissions by at least 80% in 2050 from 1990 levels. This target was based on advice from the CCC report: Building a Low-carbon Economy.
- **Carbon Budgets.** The Act requires the Government to set legally binding 'carbon budgets'. A carbon budget is a cap on the amount of greenhouse gases emitted in the UK over a five-year period. The first four carbon budgets have been put into legislation and run up to 2027.
- **The Committee on Climate Change** was set up to advise the Government on emissions targets, and report to Parliament on progress made in reducing greenhouse gas emissions. It includes the Adaptation Sub-Committee (ASC) which scrutinises and advises on the Government's programme for adapting to climate change.
- **A National Adaptation Plan** requires the Government to assess the UK's risks from climate change, prepare a strategy to address them, and encourage critical organisations to do the same.

[4] https://www.theccc.org.uk/tackling-climate-change/the-legal-landscape/global-action-on-climate-change/


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## 2.4. Devolved Sustainability Policy in the UK

### 2.4.1 Scotland

The Climate Change (Scotland) Act was passed in 2009 and is thought to be the most ambitious climate change legislation anywhere in the world. This Act sets an interim 42% target for greenhouse gas reduction for 2020 (with the power for this to be varied based on expert advice) and an 80% reduction target for 2050. To help ensure the delivery of these targets, the Act also requires that the Scottish Ministers set annual targets, in secondary legislation, for Scottish emissions from 2010 to 2050, running at least 12 years in advance.

In 2013, the Scottish Government published "Low Carbon Scotland: Meeting our emissions reduction targets 2013-2027". This document contains a series of commitments on renewable energy and a reference to the Energy Efficiency Action Plan ("Conserve and Save", 2010) with a target of 12% reduction in demand by 2020. Among the key commitments in "Conserve and Save" are:

- improve the energy efficiency of all our housing stock to meet the demands of the future;
- establish a single energy and resource efficiency service for Scottish businesses;
- develop a public sector that leads the way through exemplary energy performance and provides the blueprint for a low carbon Scotland;

Importantly, under the domestic energy section, Action 2.5 states that "Historic Scotland will take the lead in researching and promoting energy efficiency in traditional buildings. As part of this it will:

- carry out research and case study projects, and disseminate findings to and through relevant partners, publications and digital media in order to improve advice provision, skills and qualifications for the public and professionals on energy efficiency improvement of traditional housing;
- include energy efficiency in domestic properties in its existing and future regeneration and grants programmes, such as the Conservation Area Regeneration Scheme."

Social housing in Scotland is addressed by means of the Energy Efficiency Standard for Social Housing (EESSH). The background document[5] published in 2014 sets a single minimum Energy Efficiency (EE) rating for landlords to achieve that varies dependent upon the dwelling type and the fuel type used to heat it. This is based on the EPC ratings system and the minimum standard is set at either C or D, reflecting the fact that some dwelling types are more challenging to improve than others. All social landlords will be expected to achieve the new standard by 2020. It is worth noting that "*Solid wall insulation was not modelled as a reasonable upgrade for pre-1919 buildings, due to the potential technical challenges (although it may be suitable for some buildings).*"

[5] http://www.gov.scot/Publications/2014/03/3154


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### 2.4.2 Wales

Wales has certain devolved powers but some of its controls are limited to its sphere of influence on statutory bodies rather than members of the Welsh populace.

The overarching piece of legislation is now **the Well-being of Future Generations (Wales) Act**[6]. This Act came into law on 29th April 2015 and aims to improve the social, economic, environmental and cultural well-being of Wales. It will make the public bodies listed in the Act think more about the long-term, work better with people and communities and each other, look to prevent problems and take a more joined-up approach.

The aims of the Act include (selected aims only):

- A prosperous Wales: An innovative, productive and **low carbon** society which recognises the limits of the global environment and therefore uses resources efficiently and proportionately (including acting on **climate change**); and which develops a skilled and well-educated population in an economy which generates wealth and provides employment opportunities, allowing people to take advantage of the wealth generated through securing decent work.
- A resilient Wales: A nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to **adapt to change** (for example climate change).

These Aims have to be met using the following sustainable development principles:

- Long term: The importance of balancing short-term needs with the need to safeguard the ability to also meet long-term needs.
- Prevention: How acting to prevent problems occurring or getting worse may help public bodies meet their objectives.
- Integration: Considering how the public body's well-being objectives may impact upon each of the well-being goals, on their other objectives, or on the objectives of other public bodies.
- Collaboration: Acting in collaboration with any other person (or different parts of the body itself) that could help the body to meet its well-being objectives.
- Involvement: The importance of involving people with an interest in achieving the well-being goals, and ensuring that those people reflect the diversity of the area which the body serves.

Other Acts / Requirements from the National Assembly for Wales are subsidiary to this Act and include the **Housing (Wales) Act 2014**. This Act introduces significant improvements across the housing sector to ensure that people have access to a decent, affordable home and better housing-related services - particularly for those who are vulnerable or homeless.

The **Planning (Wales) Act 2015** came into law on the 6th July 2015. The Act will deliver a planning system which is fair, resilient and enables development, helping to create sustainable places where citizens have improved access to quality homes, jobs and infrastructure, whilst protecting our most important built and natural environments.

[6] http://gov.wales/docs/dsjlg/publications/150623-guide-to-the-fg-act-en.pdf


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**Planning Policy Wales** is issued in a series of editions, the most recent being November 2016. Chapter 6 (The Historic Environment) has been extensively revised in the latest edition in conjunction with Cadw. The guidance is supplemented by a series of Technical Advice Notes; TAN24 (The Historic Environment) is currently under review following consultation.

The **Historic Environment (Wales) Act 2016** became law in Wales on 21 March 2016. The historic environment of Wales encompasses archaeological sites, monuments and **historic buildings** and the landscapes in which they are found. The Act will support the positive management of change in the Welsh historic environment. The Act will:

- make decisions on the historic environment more open and transparent by introducing formal consultation and review processes for the designation of historic assets
- enable the Welsh Ministers to recognise and protect any nationally important sites where there is evidence of past human activity
- give authorities greater powers to take action to protect nationally important historic assets
- improve the sustainable management of the historic environment
- put the Welsh historic environment records on a more secure footing
- provide advice on the historic environment to the Welsh Ministers by establishing an independent advisory panel.

**The Environment (Wales) Act 2016** became law in Wales on 21 March 2016. The Act puts in place the legislation needed to plan and manage Wales' natural resources in a more proactive, sustainable and joined-up way. The Act enables us to:

- help tackle the environmental challenges we face and focus on the opportunities our resources provide
- establish statutory **emission reduction targets and carbon budgeting** to support their delivery
- improve waste management processes
- clarify the law for environmental regulatory regimes including flood risk management and land drainage.

**The Renting Homes (Wales) Act 2016** became law in Wales on 18 January 2016. Among other provisions, the Act requires Landlords to carry out repairs and ensure rental properties are fit for human habitation. More specifically, [92(3)] the "standard of repair . . . is **that which is reasonable** having regard to the age and character of the dwelling, and the period during which the dwelling is likely to be available for occupation as a home."

The **Welsh Housing Quality Standards** (WHQS)[7] were introduced in 2008. 'Better Homes for People in Wales' states the National Assembly for Wales' vision that *"all households in Wales … shall have the opportunity to live in good quality dwellings that are:*

1. *in a good state of repair*
2. *safe and secure*
3. ***adequately heated, fuel efficient and well insulated***
4. *contain up-to-date kitchens and bathrooms*
5. *well managed (for rented housing)*
6. *located in attractive and safe environments*

[7] http://gov.wales/docs/desh/publications/141030-whqs-guide-for-social-landlords-en.pdf


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7. *as far as possible suit the specific requirements of the household (e.g. specific disabilities)"*

It is essential for all social landlords to meet and maintain the WHQS as soon as possible, but in any event no later than 2020.

The **Housing Health and Safety Rating System (Wales) Regulations 2006** came into force on 30th June 2006. This lists a range of topics that fall into two categories. Category 1 issues (like **damp**) must have been solved in order for the **WHQS** requirements to be satisfied.

Wales has taken a lead in the implementation of changes to traditional buildings by developing the **Planning Guide for External Solid Wall Insulation**, which was published in 2013. Designed for householders and part of a wider series on energy, this 24 page document is focused upon permitted development rights and identifying the ways to reduce the impact of external solid wall insulation upon the local built environment. The Guide also flags up other regulatory issues including party wall considerations and Building Regulations.

### 2.4.3 Northern Ireland

In Northern Ireland, clear and effective guidance has been provided by the Department of the Environment NI in a 2012 publication entitled "**Building on Tradition**". To quote a key section:

> *"Retrofitting vernacular buildings to high standards of energy efficiency and sustainable design requires the applicant to deal sensitively with an existing structure. Notwithstanding this requirement, greater energy efficiency gains can come from the refurbishment of an existing building compared to its demolition and replacement.*
>
> *Not all measures to improve energy efficiency are consistent with preserving and enhancing the character of historic buildings and a balanced approach to accommodating these arrangements is needed. The starting point should be the question of character; what is authentic, unique and significant about the building?*
>
> *Upgrading thermal efficiency should also focus on areas where heat loss is most pronounced such as roofs, walls, floor, doors and windows. To achieve this, an important distinction between traditional and modern construction should be made- some modern materials are impermeable and can result in trapped moisture and condensation within the building.*
>
> *Although more flexibility will apply to retrofitting vernacular buildings as compared to the listed structures, specialist advice should be sought when retrofitting historic buildings generally. The broad principle of minimal intervention and preserving and enhancing the character of a building should still apply."*[8]

[8] https://www.planningni.gov.uk/index/policy/supplementary_guidance/guides/building_on_tradition_-_full_version.pdf


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## 2.5. Local Authority Planning Guidance

The 2011 Localism Act aimed to *"facilitate the devolution of decision-making powers from central government control to individuals and communities"*. Although there have been few examples of true localism resulting from the Act, it should be noted that Part 6 (Planning) provides for the establishment and adoption of Neighbourhood Plans. Although these are still emerging, in time they could have a significant influence on the management of heritage and the implementation of sustainability strategies.

It should be noted that deregulation has had a considerable impact both within Building Control (approved inspectors and licensed installers) and through "permitted development" within Planning. This means that there is no longer such a strong connection between conservation, development control and building control. These linkages and their benefits are not recognised either in current policy or performance standards.

Where retrofit is concerned, several local authorities have taken a lead in this area and produced their own **Planning Guidance** on some of the most contentious areas of retrofit – usually Solid Wall Insulation. STBA has been involved in some of this work. However, these councils only represent a small proportion of the UK.

- **Bristol** – Bristolian's Guide to Solid Wall Insulation – work by STBA .[9]
- **Blackpool** – Decision making protocol for Solid Wall Insulation – work by STBA.
- **City of Westminster** – The City of Westminster published a guide entitled "Retrofitting Historic buildings for Sustainability" in 2013.[10]
- **London Borough of Camden** – Camden has published its own Retrofitting Planning Guidance 2011[11], not replacing any existing guidance but using a case study format to show how retrofit can be carried out within the current regulatory structure.
- **Bath & North East Somerset** – Energy Efficiency and Renewable Energy Guidance for Listed Buildings and Undesignated Historic Buildings[12]. Importantly this document contains detailed guidance, examples of best practice (e.g. slim profile double glazing) and a clear explanation of the energy hierarchy.

[9] https://issuu.com/bristolcitycouncil/docs/a_bristolian_s_guide_to_solid_wall_?workerAddress=ec2-184-72-82-39.compute-1.amazonaws.com

[10] http://transact.westminster.gov.uk/docstores/publications_store/Retrofitting_Historic_Buildings_for_Sustainability_January_2013.pdf

[11] https://www.camden.gov.uk/ccm/content/environment/planning-and-built-environment/two/planning-policy/supplementary-planning-documents/filestorage/retrofitting-planning-guidance/

[12] http://www.bathnes.gov.uk/sites/default/files/sitedocuments/Planning-and-Building-Control/Planning-Policy/Sustainable-and-Retrofitting/listed_building_guidance_-_energy.pdf


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# 3. Heritage Policy

## 3.1. Global Heritage Policy

Global policy on Heritage is not widely known or discussed. Policy, protection and publicity tend to be focused on ancient monuments and high profile heritage sites.

The **Venice Charter** for the Conservation and Restoration of Monuments and Sites (1964) is a code of professional standards that gives an international framework for the conservation and restoration of ancient buildings. Beginning with the World Heritage Convention (1972), some of the limited explanations in the Venice Charter were revised. In 1972, UNESCO adopted a "Convention Concerning the Protection of the World Cultural and Natural Heritage".

Despite continuing work by the World Heritage Convention,

> *"Heritage has been absent from the mainstream sustainable development debate despite its crucial importance to societies and the wide acknowledgment of its great potential to contribute to social, economic and environmental goals."*[13]

The **Nara Document on Authenticity** produced in 1994 states that:

> *"The protection and enhancement of cultural and heritage diversity in our world should be actively promoted as an essential aspect of human development"*

This document was signed by representatives from 28 countries but is not binding in any way.

The UNESCO **Hangzhou Declaration** of 2013 states:

> *"We affirm that culture should be considered as a fundamental enabler of sustainability, being a source of meaning and energy, a wellspring of creativity and innovation, and a resource to address challenges and find appropriate solutions. The extraordinary power of culture to foster and enable truly sustainable development is especially evident when a people-centred and place-based approach is integrated into development programs and peace-building initiatives"*

There has been little other formal commitment at global level to the protection of heritage, and nothing on the importance of traditional buildings[14]. Vernacular buildings (the majority of traditional construction) are everywhere ignored.

[13] http://whc.unesco.org/en/sustainabledevelopment/

[14] One exception is the World Bank report "The Economics of Uniqueness - Investing in Historic City Cores and Cultural Heritage Assets for Sustainable Development" http://siteresources.worldbank.org/EXTSDNET/Resources/Economics_of_Uniqueness.pdf


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## 3.2. Heritage Policy in Europe

### 3.2.1 Convention for the Protection of the Architectural Heritage of Europe (Granada, 1985)

The Granada Convention was adopted on 3 October 1985 in Granada (Spain) and came into force on 1 December 1987 (Council of Europe Treaty Series no. 121). It is open for signature by member states and for accession by non-member states and the European Community.

In practice the Granada convention changed little in the UK as we had substantially the same commitments in place in the UK since 1947, but it remains a landmark in European policy development on heritage.

### 3.2.2 Faro Convention (2005)[15]

The Framework Convention on the Value of Cultural Heritage for Society was adopted by the Committee of Ministers of the Council of Europe on 13 October 2005, and opened for signature to member States in Faro (Portugal) on 27 October of the same year. It entered into force on 1 June 2011. To date, 17 member States have ratified it but not yet the UK, perhaps because it contains an explicit link to human rights, which does not always play well with the UK establishment.

During its plenary meeting on 27-29 May 2013, the Steering Committee for Culture, Heritage and Landscape (CDCPP) adopted the Faro Action Plan which started a series of actions aimed at promoting the Faro Convention in order to increase the number of ratifications and to ensure the implementation of the Convention's principles.

Although the UK has not ratified the Faro convention, its principles are reflected in the UK's Culture White Paper of March 2016.

### 3.2.3 The Madrid Document (2011, 2014, 2017 forthcoming) – Approaches for the Conservation of 20th Century Architectural Heritage

The ICOMOS International Scientific Committee on 20th Century Heritage (ISC20C) has recently requested input from the ICOMOS National Scientific Committees on Energy, Sustainability and Climate Change on Article 8 of the Madrid Document for its forthcoming 2017 revision, which currently reads:

> *"8.1: Care must be taken to achieve an appropriate balance between environmental sustainability and the conservation of cultural significance. Pressure for architectural heritage sites to become more energy efficient will increase over time. Cultural significance should not be adversely impacted by energy conservation measures.*

[15] http://www.coe.int/t/dg4/cultureheritage/heritage/Identities/default_en.asp


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*Conservation should take into account contemporary approaches to environmental sustainability. Interventions to a heritage site should be executed with sustainable methods and support its development and management. To achieve a practical and balanced solution, consultation with all stakeholders is needed to ensure sustainability of the heritage site. All possible options in terms of intervening, managing and interpreting the heritage site, its wider setting and its cultural significance must be retained for future generations."*

### 3.2.4 European Committee for Standardization (CEN) Guidelines

Within the European Committee for Standardization (CEN), the technical body for the Conservation of Cultural Heritage is also currently drafting guidelines for improving the energy performance of historically, architecturally or culturally valuable buildings based on the standards of its 34 European national members. Though it has yet to be published, it is expected to outline procedures to guide the selection of appropriate measures to improve the energy performance of heritage buildings and methods to assess the impact of those measures through pre-application risk assessments and post-intervention monitoring.


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## 3.3. UK Heritage Policy

### 3.3.1 Planning, Listed Building and Conservation Areas Act 1990

This Act consolidated existing legislation relating to the historic environment in the UK. It sets out the procedures for the listing of buildings and the protection which they then receive. It also sets out the procedures for the designation of conservation areas and the duties of Local Planning Authorities to preserve and enhance these areas.

Listed buildings (and to a lesser degree those in conservation areas) are exempted from many of the requirements of legislation to improve the energy efficiency of buildings, including Building Regulations and the more recent Private Rented Sector (PRS) legislation. These designations are therefore an important form of protection against ill-considered attempts to improve efficiency through measures which could harm historic fabric or the character of the building. However, traditional buildings that lack either of these designations do not have any such protection.

The assessment of applications for works to buildings that are listed or in conservation areas is carried out by conservation officers employed by Local Authorities. In recent years, cuts to local government have resulted in a significant reduction in the number of conservation officers (1/3 lost since 2006[16]), and it may be argued that they do not now have sufficient resource to carry out the duty of local authorities to protect and enhance heritage assets. This is critical as conservation officers are on the front line of the battle to protect traditional buildings in the context of the demands of the climate change agenda.

### 3.3.2 White Paper "Heritage Protection for the 21st Century (2007)

The key provisions of the White Paper are to:

- promote a new holistic approach towards the historic environment by creating a single designation regime that is simple and easy to understand
- improve designation by involving the public in decisions about what is protected and how, and by making the process simpler and quicker;
- support sustainable communities by putting the historic environment at the heart of an effective planning system;
- improve the heritage protection system by raising the profile of the historic environment, promoting a more joined-up approach, and increasing capacity at local level.

Although this remained a White Paper (i.e. was never enacted), its contents have been substantially implemented in all but law. One way in which this implementation was carried out was the introduction of PPG15 and PPG16 (see below).

[16] http://ihbconline.co.uk/newsachive/?p=6410


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### 3.3.3 Planning Policy Guidance, Planning Policy Statements, Advice Notes

PPG15 and PPG16 were superseded in 2010 by PPS5 Planning for the Historic Environment, which gave substantial official policy recognition to significance-based heritage assessment as pioneered by the 1979 Burra Charter (which interprets the Venice Charter in an Australian context). PPS5 was in turn rapidly superseded by three good practice advice notes:[17]

- The Historic Environment in Local Plans
- Managing Significance in Decision-Taking
- The Setting of Heritage Assets

These guidance notes are the **effective policy documents** operative in this field at present in the UK.

### 3.3.4 National Planning Policy Framework (NPPF) 2012

The NPPF replaced Planning Policy Guidance (PPG) which was expressed in a series of (numbered) PPG Notes. It should be noted that not all NPPF documents apply in Wales.

The NPPF contains numerous references to conservation of heritage assets. Section 12 (Conserving and Enhancing the Historic Environment) gives weight to the conservation of heritage assets but there is no recognition of the importance of vernacular buildings – the majority of the traditional built environment.

It is important to note that, while both the Good Practice Guidance and the NPPF are based on significance, policy is still based on special historic interest as defined by the Planning, Listed Building and Conservation Areas Act. This effectively limits special consideration to building in Conservation areas and AONBs plus Scheduled Monuments and World Heritage sites.

With the move from PPGs to NPPF, the onus for producing specific guidance has passed to individual councils – who are increasingly resource-constrained. While some councils have produced Sustainable Development Supplementary Planning Documents (SPDs) as part of their new Local Plans, this is by no means a national trend.

### 3.3.5 2016 Culture White Paper (DCMS)

The introduction to the historic built environment section of this white paper states:

> *"Our historic built environment is a unique asset and local communities will be supported to make the most of the buildings they cherish."*

The White Paper also states: *"The development of our historic built environment can drive wider regeneration, job creation, business growth and prosperity."* This is followed by a series of commitments to support developers and local authorities to *"transform their historic places, ensuring that new development supports and enhances what is distinct and special about them."*

[17] https://historicengland.org.uk/images-books/publications/pps-practice-guide/


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### 3.3.6 Standards: BS7913: Guide to the principles of the conservation of historic buildings (2013)

Standards have developed from ensuring consistency in fixtures/fittings to promoting minimum quality in both methods and materials, thereby contributing to policy development. Standards and codes of practice also enable specifications to be written in a clear and concise manner.

BS7913 covers 13 areas (key areas for this summary highlighted in **bold**):

1) Description of buildings/Architecture & conservation history
2) **Significance, conservation principles and values**
3) Heritage management – pro-active & re-active – reconciling values
4) Historic areas as well as structures / buildings
5) Condition surveys, inspections, investigations and pathology
6) Common defects & their assessment
7) Common repair issues
8) New development & adaptation
9) Maintenance
10) **Sustainability and energy efficiency**
11) Project Management
12) Project Supervision
13) Competence & Accreditation

The key change from BS7913 (1998) is that decision-making is now based on significance rather than traditional conservation values. It takes a non-prescriptive building-specific approach - so becomes crucial when flexibility is needed in the application of a wide range of standards, including other British Standards. Its reach and force therefore go beyond the limited heritage-sector-specific reach of conservation principles or guidance from Historic England and SPAB, and can be used to deal with inflexible application of standards by others, especially where conservation principles could perhaps be dismissed as irrelevant.


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# 4. Implementation of Sustainability & Climate Change Policy

## 4.1. EU Implementation of Climate Change Policy

### 4.1.1 Energy Efficiency Directive

The 2012 Energy Efficiency Directive (replacing the 2006 Energy Services Directive) establishes a set of binding measures to help the EU reach its 20% energy efficiency target by 2020. Under the Directive, all EU countries are required to use energy more efficiently at all stages of the energy chain from its production to its final consumption. EU countries were required to transpose the Directive's provisions into their national laws by 5 June 2014.[18]

Under Article 4 of the EED, Member States are required to define long-term strategies for stimulating renovations in their building sector. Importantly, this applies to the entire building stock rather than being limited to public buildings, which are covered under Article 5.

Measures include (but are not limited to):

- Energy distributors or retail energy sales companies have to achieve 1.5% energy savings per year through the implementation of energy efficiency measures.
    - This gave rise to CERT, CESP and now ECO in the UK.
- Every year, EU governments will carry out energy efficient renovations on at least 3% of the buildings they own and occupy, by floor area.
    - This is significant as governments own many old buildings.
- National incentives for SMEs to undergo energy audits. Large companies will make audits of their energy consumption to help them identify ways to reduce it.
    - This gives rise to ESOS in the UK.
- A requirement to produce National Energy Efficiency Action Plans (NEEAPs)
    - There is no mention of traditional buildings in UK NEEAP despite these making up 25% of the domestic stock and an even higher percentage of buildings which require retrofit. NEEAPs are framed entirely in terms of end-use of energy and based around the 80% reduction target for 2050.

### 4.1.2 Energy Performance of Buildings Directive (EPBD)

Originally adopted in 2002, the Energy Performance of Buildings Directive (EPBD) was recast and adopted in 2010[19]. The key points of the Directive are as follows:

- When buildings are advertised for sale or rent, energy performance certificates (EPCs) are to be included.
- Larger public buildings must display a Display Energy Certificate (DEC).
- Inspection schemes must be established for heating and air conditioning systems or measures put in place with equivalent effect.
- All new buildings must be nearly zero energy buildings by 31 December 2020 (public buildings by 31 December 2018).

[18] https://ec.europa.eu/energy/en/topics/energy-efficiency/energy-efficiency-directive
[19] http://www.designingbuildings.co.uk/wiki/Energy_Performance_of_Buildings_Directive


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- EU countries must set **minimum energy performance requirements** for new buildings, for buildings that undergo major renovations and for the replacement or retrofit of building elements (heating and cooling systems, roofs, walls, etc.)
    - Note that this second part is an elemental approach
- EU countries have to draw up lists of national financial measures to improve the energy efficiency of buildings.

The energy performance standards are subject to a calculation methodology which needs to be consistent with the requirements of the EPBD. In the UK, SAP already existed for domestic buildings and was adapted to meet these new requirements. For non-domestic buildings, SBEM was developed.

## 4.2. UK Implementation of Sustainability and Climate Change Policy

### 4.2.1 Building Regulations

Sustainability is covered in part in the Building Regulations but not in a comprehensive way. This is because Building Regulations were first introduced to ensure the safety of buildings, and then further obligations such as conservation of fuel and power were added later. From 2006, Part L included the requirements of the EPBD for new buildings to be constructed in accordance with the minimum energy performance standards, using the agreed calculation methodology. In Part L, this was expressed in terms of $CO_2$ emissions from the building.

**Part L (Conservation of fuel and power)** is the key document which enforces the energy efficiency regulations for buildings in England and Wales. (Section 6 in Scotland is similar but there are some important differences). Part L is split into four parts:

- L1A New Dwellings
- **L1B Existing Dwellings**
- L2A New Non-domestic Buildings
- **L2B Existing Non-domestic Buildings**

It is therefore Parts L1B and L2B that are of relevance to existing buildings. The reason that Part L is so important is that it imposes minimum standards of energy efficiency which must be attained when specific thermal elements are renovated. For example, when a new finished surface is applied to an existing thermal element (inside or out), the entire element must be insulated in accordance with the maximum u-value set out in the Regulations. There are other triggers for these requirements such as change of use – for example a change from commercial to domestic use.

The importance of Building Regulations is that they introduce an element of compulsion into the retrofit process for existing buildings. This is particularly critical as the minimum standards specified are inappropriate to traditional buildings, as are some of the standard details for installation. For example, Building Inspectors typically insist on a vapour-proof membrane where IWI is being applied – and this is against the advice of experts in traditional buildings, who generally recommend that a vapour-open structure is maintained in any retrofit measures.


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However, a key clause was added to Part L1B and L2B from 2011:

> ***Historic and traditional buildings where special considerations may apply***
>
> ***3.8*** *There are three further classes of buildings where special considerations in making reasonable provision for the conservation of fuel or power may apply:*
> *a) 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;*
> *b) 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;*
> *c)* ***buildings of traditional construction*** *with permeable fabric that both absorbs and readily allows the evaporation of moisture.*
>
> ***3.9*** *When undertaking work on or in connection with a building that falls within one of the classes listed above, the aim should be to improve energy efficiency as far as is* ***reasonably practicable****. 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.*
>
> ***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.*

(The English Heritage Guidance referred to is "Energy Efficiency and Historic Buildings, English Heritage, 2011".)

> "Consequential improvements" may have an impact on traditional buildings. Where a significant alteration to a building is planned – such as an extension or loft conversion – the owners may be required to bring the rest of the building up to modern thermal standards. Consequential improvements have been in and out of the Regulations – at present they are out – but some elements of the construction industry and the sustainability sector continue to lobby for their re-inclusion, so this should be kept under review.

### 4.2.2 UK Standards and Conventions

#### 4.2.2.i) Thermal conventions:

- **BR443: Conventions for U-Value Calculations**. This is critical as u-value calculations underpin the estimation of savings achievable from retrofit measures.

- **BR497: Conventions for calculating linear thermal transmittance and temperature factors** - Chris Sanders & Tim Ward – withdrawn and amended version due April 2016.


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- **SAP: The Standard Assessment Procedure used to compare the energy and environmental performance of dwellings in the UK.** It is now widely known that models overestimate the savings achievable from retrofit measures. In part this is due to the comfort factor. However, for traditional buildings the problem is compounded by the fact that the assumed u-value of solid walls (2.1W/m$^2$K) in SAP is incorrect - it is far too high. In other words, SAP overestimates the rate of heat loss through solid walls and overestimates the savings that can be gained through solid wall insulation. Two papers from BRE[20] and UCL[21] confirm this and the measured value is in **fact closer to 1.5W/m$^2$K,** though of course this varies by type of construction. The BRE paper implies that SAP needs to revised and contains the following clear statement:

  > *"The results suggest that uninsulated walls perform better, and insulated walls perform worse, than currently assumed."*

  Changes to SAP are currently (January 2017) under consideration and the revised value proposed for 9-inch brick solid walls is 1.7W/m$^2$K.

- **SBEM: The Simplified Building Energy Model is a UK Government approved calculation methodology for generating EPCs for <u>non-domestic</u> buildings.** It can also be used to demonstrate compliance with Part L of the Building Regulations in England & Wales. Like SAP, it also rests on BR443 (Conventions for u-value calculations) so it use is questionable for traditional buildings.

### 4.2.2.ii) Moisture conventions

As noted in STBA's draft Moisture Guidance, "the existing standard BS5250 and the standardised modelling method ISO13788, which are the main guidance for moisture risk assessment in standards and regulations in the UK, are not sufficient, in many situations, to deal with a proper moisture risk assessment."

Amendments have now been made to BS5250 – most importantly the guidance on IWI has been altered away from wholesale prescription of vapour barriers to a more open approach based on context.

The main amendments are as follows:

- A fuller discussion is provided of the more complex heat and moisture processes involved in the methodology of BS EN 15026, compared to the much simpler methods of BS EN ISO 13788 that are currently recommended. (Section D.3)

- Tables F.1, G.1 and H.1 are introduced to cover the recommended assessment methods for different types of floors, walls and roofs respectively. There had been some confusion about when the different methods that were available should be used and complex calculations were required for situations where the straightforward guidance in BS 5250 can be followed

- The most significant change comes in G.4.1.4. The addition of a vapour control layer (VCL) inside internal insulation (IWI) on solid walls was regarded as essential. However it is now agreed that, in many cases, this may cause more harm than good. The revised guidance in G.4.1.4 essentially says 'be careful' and consider all the issues when installing IWI. Work to clarify these issues will continue for the full revision of BS 5250.

[20] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/409428/In-situ_u-values_final_report.pdf
[21] http://www.tandfonline.com/doi/full/10.1080/09613218.2014.967977


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BS5250 will be fully revised in 2018[22]. This revision will build upon the BSI White Paper on Moisture in Buildings: An Integrated approach to risk Assessment and Guidance[23], by Neil May and Chris Sanders. This not only integrates different moisture mechanisms and effects but also considers systemic effects, effects at junctions and As Built In Service (ABIS) conditions.

#### 4.2.2.iii) Energy Efficiency

**PAS 2030: 2014 Improving the energy efficiency of existing buildings: Specification for installation process, process management and service provision.** PAS2030 sets out requirements that installers will follow to ensure that the installation of new energy efficiency measures related to the Green Deal scheme are completed properly. Of course, what constitutes "properly" is open to debate and the Green Deal is defunct, but this standard remains relevant as it is used for installations under ECO. It is currently under review again at present, though the draft new standard includes a design section with references to heritage, thermal bridging and moisture. It also introduces a measures interaction matrix, along the lines of the STBA's Guidance Wheel.

### 4.2.3 UK Programmes and Incentives to reduce energy use

The UK has had a changing landscape of programmes and incentives over the last decade as policy in this area has developed. While a lot has been achieved, at times, this has led to short-termism, market distortions and an uncertain landscape for investors. There are also questions about the quality of some of the retrofit work that has been carried out with assistance from these schemes.

#### 4.2.3.i) ECO

The **Energy Company Obligation (ECO)** replaced CERT and CESP from 2013. The ECO has three obligations:

- **Carbon Emissions Reduction:** obligated suppliers must promote 'primary measures', including roof and wall insulation and connections to district heating systems. Other 'secondary measures', which improve the insulating properties of a premise, can also be installed at the same premises as primary measures.

- **Carbon Saving Community Obligation:** obligated suppliers must promote insulation measures and connections to district heating systems in areas of low income. The CSCO target has a sub-obligation, which requires that at least 15% of a supplier's CSCO must be achieved by promoting measures to low income and vulnerable households in rural areas or deprived rural areas.
- **Home Heating Cost Reduction Obligation:** obligated suppliers must promote measures which improve the ability of low income and vulnerable households (the 'affordable warmth group') to heat their homes. This includes actions that result in heating savings, such as the replacement or repair of a boiler.

[22] http://shop.bsigroup.com/ProductDetail?pid=000000000030339579
[23] http://shop.bsigroup.com/Browse-by-Sector/Building--Construction/Whitepaper-Moisture-in-buildings/


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Only 11% of measures under the Carbon Emissions Reduction Obligation (CERO) were Solid Wall Insulation but under ECO2 there is a provisional solid wall minimum requirement (PSWMR) of 4 $MtCO_2$ carbon savings to be achieved across all energy companies between January 2013 and March 2017, equivalent to approximately 100,000 solid wall insulation measures.

The ECO3 consultation concluded in January 2017. The requirement to deliver a minimum level of solid wall insulation was increased from 17,000 per annum to 21,000 per annum. The focus is now clearly on Affordable Warmth but the push for insulation measures without an understanding of building physics and a whole house approach will not achieve this. At best this will provide a small improvement in thermal efficiency but could (and will) lead to the unintended consequences already becoming apparent.

### 4.2.3.ii) Climate Change Agreements (CCAs)

CCAs are voluntary agreements made by UK industry and the Environment Agency to reduce energy use and $CO_2$ emissions. In return, operators receive a discount on the **Climate Change Levy** (CCL), a tax added to electricity and fuel bills. The Environment Agency administers the CCA scheme on behalf of the whole of the UK.

There are two types of CCAs – umbrella agreements and underlying agreements. Industry sectors negotiate umbrella agreements (with BEIS, after DECC). Together they agree the energy efficiency targets for a sector – the sector commitment. The agreement is then held between the sector association and the EA. Umbrella agreements also list the processes that are eligible for a CCA. An underlying agreement is held by a site, or group of sites, owned by an operator within a particular sector. This contains energy or carbon efficiency targets appropriate for their type of operation. CCAs run until 2023.

### 4.2.3.iii) Energy Saving Opportunity Scheme (ESOS)

ESOS was established to meet the UK's commitments under the EPBD. It is a mandatory energy assessment scheme for organisations with over 250 employees or with a turnover exceeding €50m. Under the scheme, organisations must carry out an audit every 4 years – although this is not required if the organisation is fully covered by ISO50001. The first compliance deadline was at the end of 2015 – and the majority of qualifying organisations have carried out an assessment. The assessment procedure contains no guidelines for traditional buildings, but it does require energy saving opportunities to be identified. The scheme is administered by the Environment Agency.


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### 4.2.3.iv) Resource Efficient Scotland (RES) Programme

RES provides support to public and private sector organisations to help them reduce overheads through improved energy, material resource and water efficiency, "and in doing so it will help cut carbon." Although it is run by Zero Waste Scotland and has cross-cutting aims in terms of materials, waste and water, the RES programme has carbon as its primary focus. The three main elements of the programme are:

- An advice and support service
- Sector-focussed activities
- Integrated business and public sector intelligence strand (monitoring and evaluation)

### 4.2.3.v) ARBED

"Arbed" is the Welsh word for "save" and is a domestic energy efficiency scheme funded by Welsh Government and the ERDF, aimed at areas of multiple deprivation in convergence areas in Wales. Under the scheme, communities have undergone extensive retrofit including fuel switching and external wall insulation. The majority of buildings retrofitted are post-war construction but a few traditional buildings have been addressed under the scheme. Arbed Phase 2 ended in 2016.

### 4.2.3.vi) The Green Deal

The Green Deal is mentioned here as, although scrapped in 2015, it has had an impact on subsequent initiatives and policy.

It was introduced in 2012 as a pay-as-you save scheme designed to enable people to borrow money to fund energy saving improvements and repay the loan through the energy bill. The scheme was cumbersome to apply for and to administer, the interest rate was too high and there were complications on the sale of properties with a Green Deal attached. As a result, take-up was low and the scheme was scrapped in 2015.

The Green Deal was set up in part to remove barriers to measures with a long payback such as fabric insulation improvements. Encouragingly, and perhaps following pressure from the sector, traditional buildings were given protection in the Green Deal Code of Practice, framed around the term "vulnerable buildings":

> *"When installation of energy improvements under a Green Deal Plan is being considered, the Green Deal Provider must consider whether the building is a "vulnerable building" . . . A "vulnerable building" is –*
>
> *a) a "historic building" (as defined in Building Regulations Approved Document L1B, 2010), or*
>
> *b) a building which is constructed in a way which means that special care is required to ensure that the installation of improvements does not result in damage to or deterioration of the building fabric (this is likely to include most buildings constructed prior to 1914).*
>
> *Where the Green Deal Provider considers that the building is a vulnerable building, the Green Deal Provider must –*
>
> *a) inform the improver and keep a written record that the building is a vulnerable building;*


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*b) take particular care to ensure that –*

*i. the proposed improvements are appropriate for the building;*

*ii. the finishes and fabric of the building are protected from damage resulting from installation of the improvements, by using appropriate materials, products and specifications; and*

*c) advise the improver to enquire whether Listed Building Consent or any other approval is required before any work is carried out.*

*Where the Green Deal Provider considers that the building is a vulnerable building, the Green Deal Provider must also consider whether an architect or surveyor with* ***specialist skills in respect of vulnerable buildings*** *should be consulted. If the Green Deal Provider is in any doubt about this, they must consult the local authority historic buildings or conservation officer."*

This highlights the continuing importance of the role of the conservation officer in managing change to traditional buildings. Although the Green Deal has been scrapped, the fact that these clauses were introduced in the Green Deal Code of Practice indicates a recognition at government level of the particular needs of traditional buildings.

It is not yet known what will replace the Green Deal - see 4.2.8 below on review of implementation.

### 4.2.3.vii) Other Historic Initiatives

The following are no longer active but had an influence on policy in this area:

- **Carbon Reduction Commitment (CRC)** is (was) a mandatory UK scheme aimed at improving energy efficiency and cutting carbon dioxide (CO2) emissions in large (over 6,000Mwhpa) public and private sector organisations. It was designed to reduce emissions from organisations not already covered by CCAs, mainly by improving energy management. The CRC began in 2010 but was viewed as heavily bureaucratic and was scrapped in the 2016 budget (in favour of a strengthened ESOS scheme – see below), although the CRC continues to run until 2019.

- **Carbon Emissions Reduction Target (CERT).** From April 2008 to December 2012 CERT was the main legislative driver for improving the energy efficiency of existing households in Great Britain and contributed to the UK's legally binding emissions reduction commitments. From April 2008, it placed an obligation on the six major gas and electricity suppliers (British Gas, EDF Energy, E.ON, npower, Scottish Power and SSE) to meet a carbon emissions reduction target.

- **Community Energy Savings Programme (CESP).** CESP, which also ran until 2012, was designed as a pilot to trial new approaches to delivering energy efficiency measures to inform the development of future energy efficiency policy. Like CERT, it was funded by a new obligation on energy suppliers but, unlike CERT, it also included an obligation on electricity generators. CESP required that energy saving measures were delivered in geographical areas selected using the


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Income Domain of the Indices of Multiple Deprivation (IMD) in England, Scotland and Wales. [24]

Both CERT and CESP included a wide variety of measures by which energy suppliers could demonstrate compliance, including loft insulation, cavity wall insulation, SWI, lighting, heating (including fuel switching), microgeneration, CHP, behavioural measures, demonstration actions and appliances. This was the first large-scale subsidy for sold wall insulation, 26% of CESP measures were SWI (mostly external) although some of this was applied to non-traditional buildings.

### 4.2.4 Renewables

#### 4.2.4 i) Programme Renewable Heat Incentive (RHI)

This commenced in 2011 and is ongoing. The RHI provides a subsidy for the production of renewable heat in both domestic and non-domestic buildings. The RHI covers a wide range of heat technologies but the majority of installations are biomass boilers, heat pumps and solar water heating. The RHI is funded through general taxation. Payments for non-domestic installations last 20 years, domestic 7 years. Renewable heating systems are often appropriate for traditional buildings in rural areas or off gas grid.

#### 4.2.4 ii) Feed-in Tariff (FiT)

This commenced in 2010 and is ongoing, funded by a levy on electricity bills. It provides a subsidy for the renewable generation (and export) of electricity through various means but the vast majority of installations have been PV. This includes building-mounted systems and solar farms, both of which are supported by the scheme, although subsidies have been cut substantially as take-up from speculators was so high. Payments last for 20 years. There is a visual impact from the panels when installed on traditional buildings.

#### 4.2.4 iii) Low Carbon Buildings Programme

This ran from 2006 to 2010 (for domestic and non-domestic buildings) but its focus was on renewable energy rather than reducing heat losses, although it did require certain energy conservation standards to be met for eligibility.

### 4.2.5 Certification

#### 4.2.5 i) Energy Performance Certificates (EPCs)

Introduced in the UK to comply with the European Performance of Buildings Directive (EPBD). Based on the theoretical energy use of a building, they provide an energy efficiency rating from A (most efficient) to G (least efficient) and are required whenever a property is built, sold or rented. They are very limited, using a assessment protocol based on SAP, which has well documented shortcomings when used to evaluate traditional buildings. While EPCs were not designed to be used as a policy tool, the requirement to reach a certain level of EPC rating is now integral to the new PRS regulations (see below). They are accompanied by an advisory report, which provides recommendations on how to improve energy performance. Solid wall insulation comes

[24] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/350722/CERT_CESP_Evaluation_FINAL_Report.pdf


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out as a standard recommendation for any solid walled building, regardless of its condition or heritage value.

### 4.2.5 ii)Display Energy Certificates (DECs)

These were also introduced in the UK to comply with the European Performance of Buildings Directive (EPBD). Public buildings in the UK over 250m$^2$ must display DEC prominently at all times. DECs are based on actual energy consumption, rather than theoretical – as for EPCs. Like EPCs, they are accompanied by an advisory report, which is valid for 7 years.

### 4.2.6 Codes and Assessment

The family of assessment methodologies based on the Building Research Establishment Environmental Assessment Method (BREEAM) system is unique in the current landscape in the UK because it considers a wide range of aspects of sustainability, unlike almost all policy, which focuses on energy and carbon emissions from buildings in use. BREEAM is used to assess plans for both new and existing non-domestic buildings.

Until recently, new domestic property could be assessed through the Code for Sustainable Homes, which had nine categories of assessment, similar to BREEAM:

- Water
- Materials
- Surface Water Run-off
- Waste
- Pollution
- Health and Wellbeing
- Management
- Ecology

The use of the Code as a policy tool was limited to the requirement for publicly funded housing (i.e. social housing) to be built to a certain level of the Code (until recently, Level 4). However, this requirement has now been removed and the requirement to comply with any level of the Code can no longer be used in planning consents. Nonetheless, the Code has been instrumental in getting developers to think about sustainability and some elements of best practice (such as sustainable timber sourcing) have been retained under CSR commitments even where the Code was not mandatory.

For existing buildings, there are requirements for some renovations to achieve a certain level under the BREEAM system. For example, the Government estate must achieve BREEAM "very good" whenever major refurbishment is carried out[25]. BREEAM can still be used as a planning target for non-domestic development.

[25] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/61172/Greening_20Government_20Commitments_20-_20guidance_20on_20measurement_20and_20reporting.pdf


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### 4.2.7 Private Rented Sector (PRS) legislation

The 2011 Energy Act has two main strands relating to the Private Rented Sector[26]:

- From April 2016, a tenant will be able to request consent to install energy efficiency measures at a property as long as:
  - the measure is one of the energy efficiency measures listed in the Schedule to the Green Deal (Qualifying Energy Improvements) Order 2012, or is a measure to be installed in order to connect to the gas network; and
  - the tenant has a way of funding the measure at no cost to the landlord (e.g. by using Green Deal finance, government grants or incentives, ECO, other grant funding from third parties or local authorities, or paying for the measures themselves).

  There are various safeguards including provisions for reasonable refusal and for appeal; in some circumstances Landlords are able to propose a counter offer.

- From April 2018, when a new tenancy is granted (including to existing tenants), the property will have to achieve a minimum EPC rating of 'E'.

- From 1 April 2020, the regulations will apply to all privately rented property in scope of the regulations. In other words, the regulations are not triggered by a new tenancy – the building has to meet the EPC rating from that time.

  Again, there are various safeguards. The regulations have not yet been finalised but they "will include a number of safeguards to ensure that only appropriate, permissible and cost effective improvements are required under the regulations. "The **PRS Guidance** (issued March 2016) does not address the funding issue but indicates that a replacement for Green Deal will cover this.

The PRS regulations may serve to drive up the pace of retrofit, but this is unlikely to happen whilst there is no effective funding mechanism in place. Conservation bodies in the UK have responded to the legislation, pointing out the importance of maintenance and repair and that these are not included as Green Deal measures. They have also pointed out that the underlying assessment programme (RDSAP) contains incorrect assumptions about the thermal performance of solid walls, leading to serious over-estimations of the savings to be achieved through solid wall insulation.

### 4.2.8 Reviews of Implementation

#### 4.2.8.i) Hansford Review

A review into solid wall insulation was commissioned by the Green Construction Board in 2015 under the chairmanship of Peter Hansford (the Government's Chief Construction Adviser). The resulting publication was entitled "Solid Wall Insulation: unlocking demand and driving up innovation."

In terms of the issues raised by traditional buildings, positive results include:

[26] https://www.gov.uk/government/consultations/private-rented-sector-energy-efficiency-regulations-domestic


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- Technical challenges and past failures are acknowledged
- The whole house approach is endorsed
- The importance of ventilation is stressed
- An archetype-based approach is recommended, taking into account types of ownership, age, exposure
- It is recognised that IWI and EWI have different challenges
- It is acknowledged that PAS2030, SAP, BS5250 and Building Regulations are not fit for purpose where SWI is concerned
- The input of the STBA is acknowledged in the list of contributors

However, it is worth noting the following points

- Most of the images in the report (and the case studies) are not of traditional buildings. Many are not of solid wall buildings but of cavity wall buildings. This is important – as the figure of 8m solid wall buildings is used to justify the approach.
- There is no attempt to quantify the savings which might be achieved, just an assertion that there are "numerous benefits".
- The "validation" of the results comes entirely from a "cross-section of industry players".
- The Review is focussed on "grasping the business opportunities" rather than encouraging a sustainable built environment and the report is framed around business and growth.

### 4.2.8.ii) "Each Home Counts" (Bonfield Review)

An Independent Review of Consumer Advice, Protection, Standards and Enforcement for Energy Efficiency and Renewable Energy" was published in December 2016.

Its remit was as follows:

- Consumer advice and protection: what supports consumers' decisions ahead of an installation and what assistance is available when things go wrong?
- Standards framework: what ensures that the right products are fitted to the right properties in the right way during the installation?
- Monitoring and enforcement: what ensures that poor quality work is dealt with effectively, and do the arrangements for audit, compliance-checking and sanctions provide sufficient assurance of this?

The report represents a significant step forward in the UK government's approach to retrofit because it very clearly espouses a "whole-building" context-specific approach, largely as a result of lobbying on the part of the STBA. However, there is little mention of the need for special consideration of traditional buildings, which is surprising as they constitute such a high proportion of buildings requiring retrofit. There is also no mention of the importance of maintenance in delivering a sustainable (traditional) built environment.

The Review now moves to an Implementation Phase with a number of work streams to which the STBA will contribute and spell out the particular needs of traditional buildings.


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#### 4.2.8.iii) Consultation on Reform of Business Energy Tax landscape

This review (Sept-Nov 2015) considered the interactions between business energy efficiency policies and regulations, including:

- Climate Change Levy (CCL),
- Carbon Reduction Commitment Energy Efficiency Scheme (CRC),
- Taxes on other fuels – e.g. heating oils,
- Climate Change Agreements (CCA)
- Mandatory greenhouse gas (GHG) reporting
- Energy Saving Opportunity Scheme (ESOS)
- Enhanced Capital Allowances (ECAs)
- Electricity Demand Reduction (EDR) pilot.

The proposals set out approaches to improving the policy framework by:

- simplifying reporting and taxes to reduce administrative burdens;
- targeting policy levers at cost-effective energy efficiency potential identified in business sectors and heat use;
- using policy instruments to help raise the profile of energy efficiency and carbon reduction with decision makers; and
- improving the case for investments in energy efficiency and low carbon alternatives.

The 2016 budget duly scrapped the CRC (from 2019) and toughened up the CCL.


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# Appendix: Political and Regulatory Structure in the UK

The political and regulatory structure for sustainability and heritage in the UK is complex because several different departments share responsibility for the former. In addition, agencies and quangos play key roles.

## A1: Department of Business, Energy and Industrial Strategy (BEIS)

BEIS has taken on the responsibilities of the former DECC – Department of Energy and Climate Change. It thus has responsibility for energy policy and for policy on climate change.

## A2: Department of Communities and Local Government (CLG)

Among other responsibilities, CLG is responsible for Planning and for Building Regulations. CLG is also responsible for the implementation of the EPBD.

## A3: Department of Farming and Rural Affairs (Defra)

"*Defra leads on the UK's domestic* ***adaptation*** *policy. It is responsible for developing a National Adaptation Programme to address the risks set out in the first Climate Change Risk Assessment.*" Defra also leads on the Market Transformation Programme[27] which covers all products that fall under the Ecodesign Directive, including boilers and heat pumps.

## A4: Department of Culture, Media and Sport (DCMS)

DCMS has the responsibility to "*protect and promote our cultural and artistic heritage*". Historic England is the government's statutory adviser on the historic environment, championing historic places and helping people to understand, value and care for them. HE is an executive non-departmental public body, sponsored by DCMS.

## A5: Environment Agency

The Environment Agency has responsibility for a wide variety of services but specifically three programmes relating to energy efficiency[28]:

- Energy Saving Opportunity Scheme (ESOS)
- Carbon Reduction Commitment (CRC)
- Climate Change Agreements (CCAs)[29]

These programmes, and their implications for traditional buildings, are discussed in the main body of this paper. In addition, the EA has responsibility for the Transition National Plan and the EU Emissions Trading Scheme.

## A6: Ofgem

Ofgem is the government regulator for the electricity and downstream gas markets in Great Britain. In addition to its regulatory responsibilities it also administers a number of environmental programmes, reporting to BEIS:

- Energy Company Obligation (ECO)
- Warm Home Discount

[27] http://efficient-products.ghkint.eu

[28] https://www.gov.uk/government/organisations/environment-agency/services-information

[29] Industry sectors negotiate umbrella agreements with DECC but the agreement is held between the sector organisation and the EA.


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- Renewable Heat Incentive (RHI) (domestic and non-domestic)
- Feed-in-Tariff (FiT)
- Climate Change Levy (CCL) exemption

These programmes, and their implications for traditional buildings, are discussed in the main body of this paper.

## A7: Committee on Climate Change

The Committee on Climate Change (the CCC) is an independent, statutory body whose purpose is to advise the UK Government and Devolved Administrations on emissions targets and report to Parliament on progress made in reducing greenhouse gas emissions and preparing for climate change.

## A8: Energy Saving Trust

The EST, as its name suggests, is about helping people to save energy, and is primarily aimed at the domestic sector. In general its work is framed in energy terms although it has a carbon footprint calculator. Recently it has added a water efficiency tool but otherwise does not consider any wider aspects of sustainability, even embodied energy and there is currently no mention of the need for a special approach in traditional buildings. Established in 1993, it is now an independent body.

## A9: Carbon Trust

The Carbon Trust's mission is to "*accelerate the move to a sustainable, low carbon economy*". Created in 2001, they are now an independent consultancy and a venture capital investment organisation. The Carbon Trust was originally funded by UK government and developed a library of research and guidance which has been widely used. In some cases this has been the best technical guidance available and it has had a significant influence on the industry. However, the savings suggested in these guides[30] tend to be unrealistically high and are not always underpinned by empirical evidence. There is also no mention in these guides of the special approach needed for traditional buildings.

## A10: Other policy agendas and key actors

In addition, it is necessary to bear in mind that there is a health and fuel poverty agenda which has an impact on traditional buildings, as many fuel-poor people live in traditional buildings. Councils and social landlords often take steps to "improve" their housing stock in the name of reducing fuel poverty. This may result in energy efficiency measures being "applied" without a full understanding of the pathology of traditional buildings.

[30] https://www.carbontrust.com/resources/guides/energy-efficiency/buildings-energy-efficiency/


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