Briefing Paper: Energy and Sustainability Standards in Planning in England

Image: Arlington County[17]

Adam Harper

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Issue Date	Version	Revision
8.4.16	RevA	
20.4.16	RevB	Minor corrections
8.7.16	RevC	Addition of section 7 'On-site Renewable Technologies' and section 8 'The EU Energy Performance of Buildings Directive'
16.9.16	RevD	Correction to reference to the first UK certified Passive House

Executive Summary

Significant changes to energy and sustainability standards in spatial planning were made by the government in 2015 and 2016. These changes included the end of the Code for Sustainable Homes, an amendment to The Energy and Planning Act which removed council's power to set energy efficiency standards and abandoning of 'Zero Carbon Homes' which was due to be introduced by the end of 2016. Both standards were very important for decarbonising new housing in England and Wales, as such there is now a lack of government supported standards to drive this agenda forward. Government changes have created uncertainty for the construction industry and have been opposed by many construction companies, developers and environmental groups.

Following the referendum result for the UK's exit from the EU, it is not yet known whether the EU Energy Performance of Buildings Directive will be adopted by the UK government, or whether it will no longer apply.

At a local authority level energy performance standards can still be promoted up to a point for domestic developments, and there is still considerable scope to promote better energy performance for commercial developments. Where a Planning Authority has relied on the Code for Sustainable Homes to deliver sustainability standards for domestic developments, new locally determined sustainability standards will need to be written into Local Plans or associated supplementary planning guidance where possible.

For commercial developments the BREEAM sustainability standard is a very useful tool to promote sustainability and energy efficiency and it is highly recommended that Planning Authorities include BREEAM in planning policy and apply it to planning applications.

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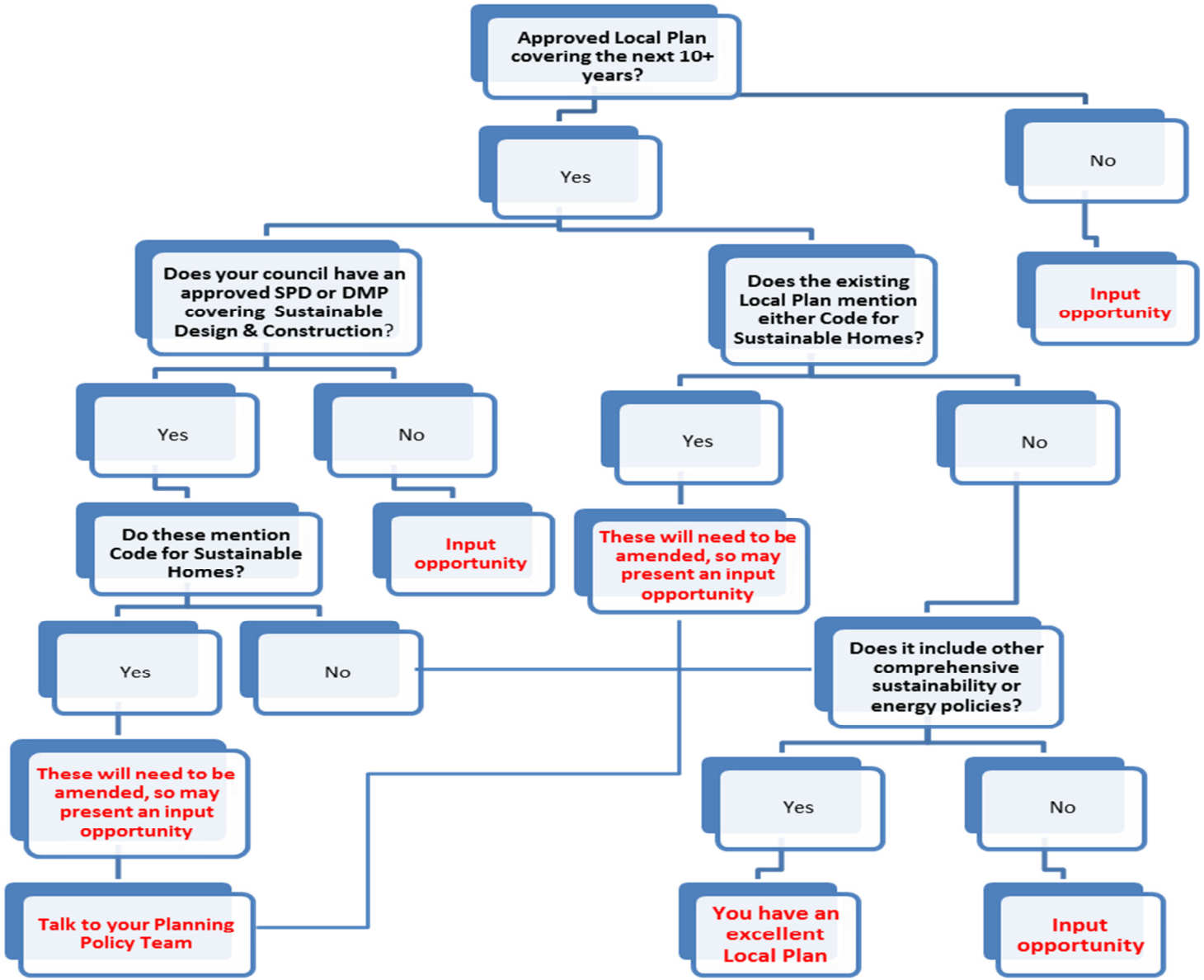


2. Aim of this document

This briefing paper is primarily for use by Principle Authority Officers and Councillors in England and has two principle aims:

1. Help Council Officers and Councillors to understand and navigate the complexity of energy performance and sustainability standards in spatial planning for buildings in England.
2. Help Council Officers and Councillors to ensure that Local Plans and planning departments are delivering the best energy and sustainability outcomes permissible under current government and planning policy.

Please note: Wales has its own separate planning system and guidance directed by the Welsh Assembly and is not covered by this briefing.

3. Timeline

2003
- Merton rule first adopted requiring new developments to produce 10% of energy from on-site renewables[1].

2006
- DCLG proposed the Code for Sustainable Homes and it becomes operational in 2007[2]
- Proposed that from 2016 new homes would be 'Zero Carbon'[3]

2009
- The first certified Passive House is completed in Machynlleth, Wales[4]

2010
- EU Energy Performance of Buildings Directive adopted - mandates all new buildings must be nearly zero energy after 2021[5]

2013
- 2013 Building Regulations L1A improved by 6%, (40% was expected)

March 2015
- Code for Sustainable Homes scrapped[6]
- Zero Carbon Homes scrapped for sites of <10 ten homes[6]

July 2015
- Zero Carbon Homes scrapped for all homes[7]

March 2016
- Advisory body on Zero Carbon Standards, The Zero Carbon Hub is closed down[18]

4. Changes taking affect from 2015

Prior to March 2015, Local Authorities were able to require a specific level of the Code for Sustainable Homes (CSH) and specific energy requirements for onsite renewable energy, carbon reduction and energy efficiency for housing.

An example of energy requirements imposed via planning consent was a requirement for 10% of energy needs to be met using onsite renewable energy technologies, commonly known as the Merton Rule.

5. 25.3.15 – Ministerial Statement by Eric Pickles, Department for Communities and Local Government[8]

Eric Pickles made a series of announcements in a Ministerial Statement in March 2015 which put an end to a number of sustainability and energy measures which Local Authorities could require for planning applications. It stated the following changes applying to **new housing developments**:

- As part of The Deregulation Bill 2015, The Code for Sustainable Homes (CSH) was withdrawn.
- CSH can no longer be applied to new housing applications, or emerging planning polices, except for developments receiving planning permission before the 27th March 2015 which are still supposed to comply with related CSH planning conditions.
- New National Technical Standards were introduced, intended to replace the CSH.
- Limited energy performance standards to a 19% improvement in the Dwelling Emission Rate (DER) equivalent to the CSH Level 4 energy standard. This is likely to be applicable until late 2016.*
- In late 2016 an amendment to the Planning & Energy Act 2008 is expected to come into force and will prevent local authorities from applying energy efficiency measures better than those within Building Regulations for 'dwellings'.

*Forward thinking councils are requesting/enforcing the 19% reduction in the Dwelling Emission Rate (DER), but many are not requiring this.

5.1. Policy Implications

Many developers challenged planning conditions relating to CSH which were imposed from late 2014 until 27th March 2015 and many planning departments removed conditions relating to CSH, on the grounds that they did not want to have to fight planning appeals, because of the time and cost involved. Developers were also able to make an application to the planning authority under the Planning Act to have existing conditions relating to CSH removed.[12] CSH is also no longer applicable for social housing developments funded by the Homes and Communities Agency.[13]

Within the Greater London Authority area, Councils can request/enforce a 40% Dwelling Emission Rate (CO_2) reduction over the 2010 Building Regulations (a 35% improvement on 2013 Building Regulations) since the London Plan makes provision for this. For political reasons the Mayor of London was given dispensation to ignore the Ministerial Statement and set higher energy standards than the rest of England.

6. 10.7.15- "Fixing the foundations: Creating a more prosperous nation", HM Treasury Report[10.]

The HM Treasury Report led to the following changes:

- The Treasury announced it was scrapping both the 'Allowable Solutions' carbon offsetting mechanism and energy efficiency components of the Zero Carbon Homes standard.
- The proposed Zero Carbon Homes standards had been a culmination of 10 years research and work by The Zero Carbon Hub, NHBC and other bodies.
- The Treasury justified the decision based on a single research paper[11] which suggested that delays in processing planning applications may slow the rate of house building; however these research findings did not apply to Zero Carbon Homes because the policy was not yet in use by planning authorities.

6.1. Policy implications

It is suspected that halting of Zero Carbon Homes and the ending of the Code for Sustainable Homes announcements were the result of the government's desire to remove what they saw as 'Red Tape' as well as suspected lobbying from large house builders.

The construction industry and planners have now been left in a difficult position, where it is not clear how Zero Carbon Homes will be taken forward and confidence in government policy is damaged. Some construction industry figures openly criticised the governments' decision to remove these standards.

The UK Green Building Council described the announcement as: "*short-sighted, unnecessary, retrograde and damaging to the housebuilding industry which has invested heavily in delivering energy-efficient homes.*"[7]

Building Contractor Willmott Dixon stated: "*This announcement seriously undermines industry confidence in government policy and will diminish future investment.*" [7]

British Property Federation chief executive Melanie Leech said: "*The abandonment of the Allowable Solutions mechanism is short-sighted with respect to both the government's long-term carbon budgets and the European Union's obligations for nearly-zero energy buildings from 2020. Keeping the onsite energy efficiency regulations 'under review', with no discernible end in sight, undermines the regulatory certainty that industry requires.*" [7]

From 31.3.16 the body responsible for creating the Zero Carbon Homes Standards the *Zero Carbon Hub* has been disbanded, although its reports will still be available to download from their website.[18]

7. On-site Renewable Technologies and The Planning and Energy Act 2008.

7.1. Background

The Merton Rule was the first on-site renewable energy policy introduced by a council, introduced by Merton Council (hence the name) in 2003. It requires buildings to:
"*incorporate renewable energy production equipment to provide at least 10% of predicted energy requirements*"[19].

The Merton Rule was originally applied to non-domestic buildings, but the rule has since been adopted for domestic developments. Council's up and down the country have since included on-site renewable energy requirements for new buildings within their Core Strategies or Supplementary Planning Guidance.

Local Authority policies primarily fall into two different categories:

- A proportion of a buildings' energy demand to be supplied by on-site renewable energy technologies typically between 10-15%
  OR
- A proportion of a buildings' operational CO_2 emission to be offset using on-site renewable energy technologies. The CO_2 offset is typically between 10-20%. This policy originated from the Code for Sustainable Homes, which had a section (Energy 7) which required that a proportion of CO_2 emissions was offset using low or zero carbon technologies.

Council policies vary in the technologies which are allowable for example some councils in urban areas do not permit biomass boilers or wood burners for air quality reasons. Some policies only mention renewable technologies, whereas others also include 'low carbon technologies'. The term 'low carbon technologies' has been included within some Local Plans in order to encourage natural gas district heating networks and gas Combined Heat and Power units, which provide net carbon savings when compared to individual heating systems.

Calculation methodologies also vary, with some council's only requiring Regulated Energy (heating, ventilation and fixed lighting) to be included in energy calculations, whereas best practice is to also include non-regulated energy (cooking, appliances and non-fixed lighting).

7.2. The Planning and Energy Act 2008 and The Deregulation Act 2015

The conclusion of the Housing Standards Review and The Deregulation Act 2015, seem to have caused some uncertainty surrounding the status of the Merton Rule and local planning policies regarding on-site renewable energy.

The Deregulation Act 2015 amended The Planning and Energy Act 2008, which removed the text in red:

1) *A local planning authority in England may in their development plan document include policies imposing reasonable requirements for:*

   (c) development in their area to comply with energy efficiency standards that exceed the energy requirements of building regulations.[20 . 21]

The red text was removed when the Deregulation Act 2015 came into force in autumn 2015 and therefore energy efficiency standards beyond Building Regulations can no longer by applied (notwithstanding the 19% DER improvement over 2013 building regulations, allowed where a council had a pre-existing policy on the Code for Sustainable Homes).

There remains provision within the Planning and Energy Act 2008 for council's to continue to apply on-site renewable energy policies within Local Plans. The provisions below were NOT altered by The Deregulation Act.

The other parts of the Planning and Energy Act 2008 read:

A local planning authority in England may in their development plan document include policies imposing reasonable requirements for—

(a) a proportion of energy used in development in their area to be energy from renewable sources in the locality of the development;
(b) a proportion of energy used in development in their area to be low carbon energy from sources in the locality of the development;[21]

8. The EU Energy Performance of Buildings Directive

The European Union *Energy Performance of Buildings Directive*[4]*(EPBD)* was introduced in 2010. It requires (amongst other things) that:

- Buildings being sold or rented must have an Energy Performance Certificate
- That new buildings must be 'nearly zero energy' by the end of 2020, and public buildings 'nearly zero energy' by the end of 2018.
- Member countries must minimum energy performance standards for new buildings, for major refurbishments and for replacement of building elements.

The government Zero Carbon Homes policy originated from *Energy Performance in Buildings Directive.* Although the Treasury effectively halted the Zero Carbon Homes policy in July 2015, had the UK voted to stay in the EU we would have still had to comply with the directive by 2020.

8.1. The UK's withdrawal from the EU

The UK is likely to formally exit the EU by the end of 2018, however it is as yet unclear whether the government will incorporate the EPBD into UK policy or whether it will no longer apply. The latter option is a significant possibility given the ending of the CSH and halting of Zero Carbon Homes.

9. The new National Technical Standards for Housing

The National Technical Standards are supposed to replace the Code for Sustainable Homes by simplifying building standards. In reality the new National Technical Standards are not comparable to the CSH as they do not address most sustainability issues previously covered by CSH. Crucial issues such as ecology, environmental impact of materials, energy efficiency and pollution are not covered by the new standards.

The National Technical Standards allow councils to apply discretionary standards on water use, accessibility (e.g. wheel chair accessible) and space standards, however councils have to provide evidence to justify using these standards. The evidence requirements are detailed here: http://planningguidance.communities.gov.uk/blog/guidance/housing-optional-technical-standards/

Sustainable Urban Drainage Systems (SuDS) requirements can be incorporated into local plans without having to justify these with evidence.

For an overview of the National Technical Standards refer to Appendix 5 here: https://www.gov.uk/government/publications/2010-to-2015-government-policy-building-regulation/2010-to-2015-government-policy-building-regulation#appendix-5-technical-housing-standards-review

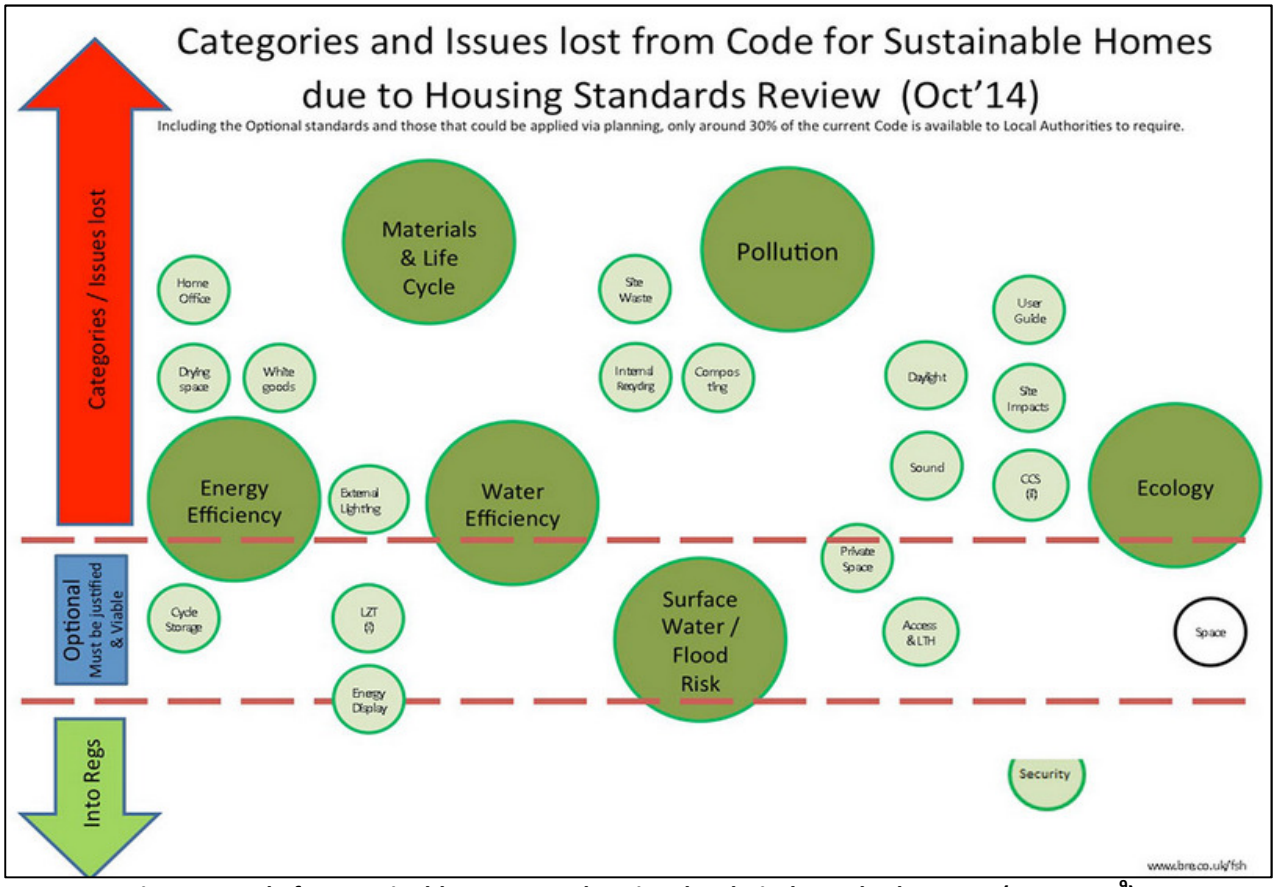
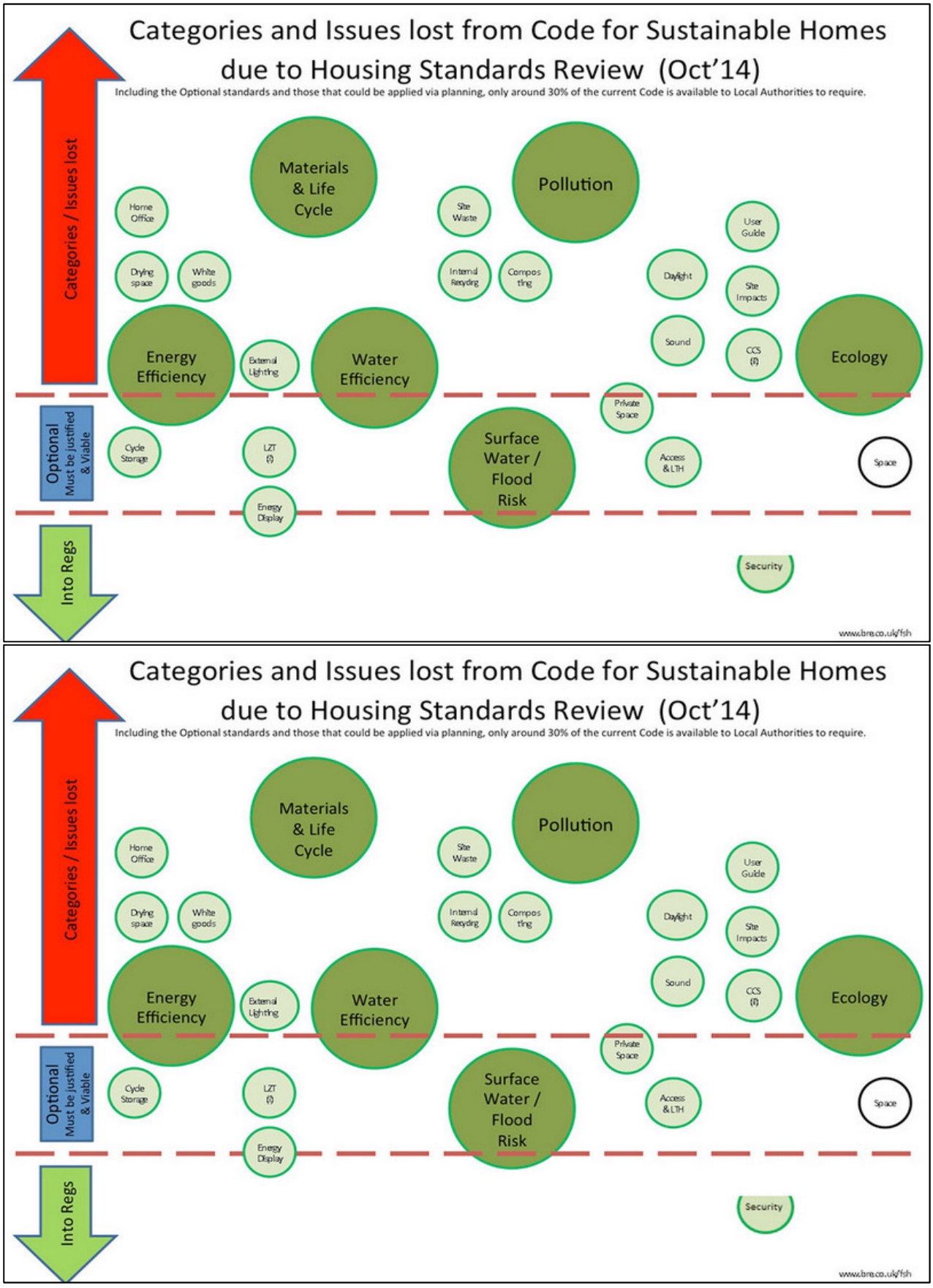


Figure 1: Code for Sustainable Homes and National technical Standards Image: (BRE, 2015[9])



Categories and Issues lost from Code for Sustainable Homes due to Housing Standards Review (Oct'14)
Including the Optional standards and those that could be applied via planning, only around 30% of the current Code is available to Local Authorities to require.
Categories / Issues lost
Optional Must be justified & Viable
Into Regs
Materials & Life Cycle
Pollution
Energy Efficiency
Water Efficiency
Surface Water / Flood Risk
Ecology
Home Office
Drying space
White goods
Site Waste
Internal Recyclng
Compos ting
Daylight
User Guide
Site Impacts
Sound
CCS (f)
External Lighting
Private Space
Cycle Storage
LZT (f)
Energy Display
Access & LTH
Space
Security
www.bre.co.uk/fsh

Figure **1** shows all the categories within the Code for Sustainable Homes and what happened to these as a result of policy changes:

a) Abandoned (red section, top)
b) Incorporated into the optional National Technical Standards (blue section, middle)

c) Incorporated into the Building Regulations (green section, bottom)

9.1. National Technical Standards documents

Accessibility:
http://www.planningportal.gov.uk/buildingregulations/approveddocuments/partm/adm/admvol1

http://www.planningportal.gov.uk/buildingregulations/approveddocuments/partm/adm/admvol2

Space standards:
https://www.gov.uk/government/publications/technical-housing-standards-nationally-described-space-standard

Water use:
http://www.planningportal.gov.uk/buildingregulations/approveddocuments/partg/approved

Sustainable Urban Drainage Systems SuDS:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/415773/sustainable-drainage-technical-standards.pdf

10. What can your council do?

The sections below give practical suggestions for including sustainability and energy requirements in Local Plans and Neighbourhood Plans and ensuring that planning departments are doing as much as they can to promote sustainable construction through the planning system.

10.1. Energy Performance for Housing

- Until late 2016 and the expected government announcement on zero carbon buildings, councils which had the Code for Sustainable Homes in their Local Plans (Core Strategy, Development Management Plan or Supplementary Planning Document), can and should require/enforce a 19% Dwelling Emission Rate (DER) improvement on 2013 Building Regulations. In practice this will mean developers have to better insulate homes and/or install renewable technologies such as solar PV panels, solar water heaters, wood burning stoves or heat pumps.
- London Councils can require/enforce a 40% Dwelling Emission Rate (CO_2) reduction over the 2010 Building Regulations (35% reduction for 2013 building regs).
- Where a council has an existing policy requiring new dwellings to have on-site renewable energy, this should continue to be applied or strengthened.
- Where a council does not have a policy requirement for on-site renewable energy for dwellings, it should include one in its Local Plan or SPD. Best practice is a 15% offset of total CO_2 emissions (including unregulated energy) using Low and/or Zero Carbon Technologies. See for example: https://www.eastleigh.gov.uk/media/28934/PPI_RevPreSubLocalPlan_Feb2014.pdf
- Although Councils cannot require that developments meet the Passive House standard, planning policies can include looser wording in attempt to encourage use of the standard. For example, Richmond Upon Thames Council's policy state: "*Where deemed feasible developments are actively encouraged to pursue accreditation with the Home Quality Mark or Passivhaus standard.*[16]

- Councils could require any buildings constructed on Council land to be built to Passive House standards and impose a covenant on any land sold by a Council for development that it must be built to the Passive House standard. There is already precedent for this in Kirklees Council, in West Yorkshire.
- Where the council is the client for developments such as council housing or new council buildings, these can be built either to the Passive House Standard or using Passive House principles. Norwich's Councillors adopted for their new Council Housing to be built to Passive House Standard. There is a template motion in the flat pack campaign above to put to your council to ensure this happens.

10.2. Energy Performance for Commercial buildings (including halls of residents, care homes and medical facilities)

- Energy performance standards can and should still be applied to commercial developments as the government **policy changes outlined above only apply to housing developments.**
- The London Plan for example, requires that commercial developments achieve a 40% Building Emission Rate (CO_2) improvement over the 2010 Building Regulations. The London Plan is often considered best practice in terms of Planning Policy[15] and other councils can incorporate the same target in Local Plans or associated guidance.
- In practice a 40% BER improvement means that commercial developments will probably have to incorporate one or a combination of the following:
    a) highly insulated building fabric
    b) photovoltaic arrays
    c) a CHP unit or connection to an existing District Heat Network
- Applications for commercial developments can be required to meet BREEAM standards, which include specific energy standards, where provision for this is contained within a Local Plan (see section below).
- It is possible that the Passive House standard could be required for commercial developments where included in a Local Plan, but this would be need to checked with your Council's Head of Planning Policy and possibly the Councils' legal department to determine its feasibility.

10.3. Sustainability for Housing (including flats)

- Where specific sustainability requirement are included within local plans these can be applied to Planning Applications (see below).
- **The following sustainability requirements are recommended for inclusion in Local Plans: Considerate Constructors Scheme registration, cycle storage standards, minimum daylighting standards, ecological mitigation and enhancement, environmental impact of materials, external lighting (low energy), flood risk assessments (FRA) and site waste management plans (SWMP).**
- The above requirements can be implemented through a Sustainability Checklist. Applicants would be required to must submit a completed sustainability checklist when a planning application is made. Richmond Upon Thames Council has successfully operated such a checklist for a number years[16] (see resources section).
- Ecological requirements can include (but are not limited to): tree/hedge planting, green roofs, native plant species, nectar producing planet species (for pollinating insects), avoiding peat compost, provision of bird & bat boxes, provision of log piles and gaps in fences for hedgehogs.

- Councils can and should incorporate requirements for Sustainable Urban Drainage Systems (SuDS) into Local Plans, with reference to the National Technical Standards on SuDS above.
- Higher standards on internal water use can be able to be applied in water stressed regions of the country which are: The South East, East Anglia and The Thames Valley.
- For London Councils, The London Plan requires a water use (including external water use) of below 110 litres/person/day. London Council's should be actively applying this standard.
- Higher accessibility and space standards can be applied where a 'local need' can be demonstrated.
- Where Councils are commissioning new Council Housing they may wish to consider using the BRE's *Home Quality Mark* sustainability standard: http://www.homequalitymark.com/
- For refurbishment planning applications, the BREEAM for Domestic Refurbishment standard can be applied if included in the Local Plan or associated guidance. As a minimum it is recommended that housing undergoing refurbishment achieves a BREEAM 'Very Good' rating: http://www.breeam.com/index.jsp?id=1182

10.4. Sustainability for commercial buildings (including halls of residents, care homes and medical facilities)

- Where specific sustainability requirements are included within local plans these can be required/enforced for planning applications (as per the housing section above.)
- Planning authorities can require commercial buildings to meet BREEAM sustainability standards.
- As a **minimum** we recommend that new Minor Developments meet BREEAM *'Very Good'* level and new Major Developments should meet BREEAM *'Excellent'* level, however ambitious councils may wish to opt for BREEAM '*Outstanding'* for Major Developments: http://www.breeam.com/
- Local authorities can require commercial refurbishments to meet BREEAM *Refurbishment and Fit-Out* standards, as a minimum BREEAM *'Very Good'* is recommended: http://www.breeam.com/refurbishment-and-fit-out

11. Checking compliance

11.1. Sustainability compliance

A significant advantage of the Code for Sustainable Homes and BREEAM is that an independent accredited assessor(s) has to check that building contractors have met the standards, by carrying out site inspections and collecting documentary evidence. This evidence is then audited by BRE, providing a second level of compliance checking and upon complying, a certificate will be issued.

Whilst this will continue for BREEAM, however CSH can no longer be applied to new planning applications. This means that for domestic developments Planning Officers will have to check compliance for individual sustainability policies themselves, which adds to the existing burden of work and budget pressures. One solution to this may be for Planning Officers to work closely with Local Authority Building Control Officers so that Building Control Officers carry out some of the sustainability compliance checks, since they have to visit construction sites regularly anyway. As suggested above a sustainability checklist will simplify and speed up compliance checking, although it may be necessary to ask developers to provide additional documentary evidence.

It is highly recommended that 'compliance' with the Considerate Constructors Scheme (CCS) is included in local planning policies. CCS is an independent certification scheme covering five categories: site appearance, respecting the community, protecting the environment, ensuring safety and valuing the workforce. The cost of registering for the scheme falls on the building contractor or developer and is relatively modest. Achieving compliance requires a minimum number of points to be achieved and this will be assessed by an independent CCS inspector. If a building contractor achieves compliance they will be issued with a 'Certificate of Compliance' which can be presented to the Local Authority Planning Department.

11.2. Energy compliance

For domestic buildings a Dwelling Emission Rate improvement (usually 19% or 35% in London) should be demonstrated through providing SAP calculations, undertaken by a licensed SAP assessor. SAP is the governments' official method for energy calculations for domestic buildings. It is usually the case that Building Control will ask for these calculations; however they are usually only looking for Building Regulations Compliance and not a specific DER improvement as specified by a Local Plan.

For non-domestic buildings (commercial) a Building Emission Rate improvement should be demonstrated through provision of SBEM calculations. As with SAP, SBEM is governments' official method for energy calculations for non-domestic buildings and calculations should be undertaken by a licensed SBEM assessor.

Where a commercial building is required to achieve the Passive House standard, a Planning Authority may wish to ask for final certificate to show that a building has been independently verified as achieving the standard or alternatively ask for 'design final' calculations.

12. Credits and advice

Briefing written by Adam Harper.

Adam is Sustainable Buildings Consultant. His work involved undertaking sustainability assessments (Code for Sustainable Homes & BREEAM) for new build and refurbishment housing projects, and wrote sustainability and energy strategies for developments. He has also managed a number of Post Occupancy Evaluation research projects investigating the energy performance and water consumption of new homes.

If you would like further advice or clarification please contact Adam Harper: adam.harper@hotmail.co.uk

Thanks to the following people for their advice and comments:

Sam Paine, SRE Ltd.
Tom Chance
Helen Watkinson

13. Acronyms

Acronym	Explanation
BER	Building Emission Rate (CO_2). This is a measure of the Carbon Dioxide that a non-domestic building will generate from its use of heating, lighting and building services. It is expressed as an annual figure.
BRE	The Building Research Establishment – the principle research, standards and certification body of the Construction Industry, which is independent of government.
BREEAM	Building Research Establishment Environmental Assessment Methodology established in 1990. There are various different methodologies for differing building types, refurbishment and for Communities.
CHP	Combined Heat and Power unit – a natural gas power unit which produces both heat and electricity, they are highly efficient and reduce CO_2 emissions compared to standard gas boilers.
CSH	Code for Sustainable Homes, a sustainability assessment scheme for new housing developments covering nine categories including energy, water use, environmental impact of materials, waste & recycling and ecology. It is now closed to new projects from 27.3.15, although operational for legacy projects.
DER	Dwelling Emission Rate (CO_2). This is a measure of the Carbon Dioxide that a domestic building will generate from its use of heating, lighting and building services. It is expressed as an annual figure.
DMP	Development Management Plan, contains detailed planning requirements for a specific of planning such as Heritage, or geographical location.
SPD	Supplementary Planning Document, a guidance document covering a more detailed explanation of an area planning policy, a common example is a '*Sustainable Design and Construction SPD'* .
EPBD	The EU Energy Performance of Buildings Directive, introduced in 2010.
SuDS	Sustainable Urban Drainage Systems, incorporates various technologies for reducing surface water runoff in order to mitigate flooding. E.g. soakaways, swales, etc.

14. Resources and further information

AECB	**http://www.aecb.net/#**
BREEAM	**http://www.breeam.com**
Home Quality Mark	**http://www.homequalitymark.com**
London Plan	**https://www.london.gov.uk/what-we-do/planning/london-plan**
Passive House	**http://www.passivhaustrust.org.uk**
Richmond Upon Thames Planning Policy	**http://www.richmond.gov.uk/home/services/planning/planning_policy/local_plan.htm**

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