

Building Certification & Legislation Update

CIBSE National Conference

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Aims of this presentation

- Give an overview of current position re:-
- The PPS on Climate Change
- The Energy Performance Buildings Directive Mark 1 and 2
- The Code for Sustainable Homes
- The “Code” for sustainable new non-domestic bldgs.
- Part L etc

PPS on climate change

- Tackling climate change is at the heart of what Govt expects from good planning.
 - Supported by new duty on climate change in Planning Bill.
 - Climate change – both mitigation and adaptation – should be a key and integrating theme in plans and planning decisions.
- Planning expected to be a positive force for change by creating attractive environment for innovation & private sector investment in LZO systems and zero carbon development.
 - The “Merton-plus approach”
- Practice guidance supporting the PPS is being drafted – **see end slides.**

EPBD status update

- There are three for England and Wales, for Scotland and for Northern Ireland.
- The technical provisions in Articles 3 to 6 have been implemented through the 3 sets of Bldg Regs – not that much variance.
- The procedural provisions in articles 7 to 10 are in course of implementation at different stages. There are important differences.
- The regulatory package for England and Wales is listed **in the end slides**.
- The following detail slides show only for England and Wales.

EPCs for dwellings

- EPCs are produced using SAP or RdSAP methodologies
- EPCs for marketed sales were phased in from August 2007.
- EPCs for homes when constructed commenced on 6 April 2008
- EPCs for homes when rented and non-marketed sales are required from 1 October 2008
- EPCS are lodged in the national register

www.epcregister.com

Energy Performance Certificate

17 Any Street,
Any Town,
County,
YY3 5XX

Dwelling type: Detached house
Date of assessment: 02 February 2007
Date of certificate: [dd mmmm yyyy]
Reference number: 0000-0000-0000-0000-0000
Total floor area: 166 m²

This home's performance is rated in terms of the energy use per square metre of floor area, energy efficiency based on fuel costs and environmental impact based on carbon dioxide (CO₂) emissions.

Energy Efficiency Rating

	Current	Potential
Very energy efficient - lower running costs		
(92-100) A		
(81-91) B		
(69-80) C		
(55-68) D		
(39-54) E		
(21-38) F	37	
(1-20) G		
Not energy efficient - higher running costs		

England & Wales EU Directive 2002/91/EC

The energy efficiency rating is a measure of the overall efficiency of a home. The higher the rating the more energy efficient the home is and the lower the fuel bills will be.

Environmental Impact (CO₂) Rating

	Current	Potential
Very environmentally friendly - lower CO ₂ emissions		
(92-100) A		
(81-91) B		
(69-80) C		
(55-68) D		
(39-54) E		
(21-38) F	31	
(1-20) G		
Not environmentally friendly - higher CO ₂ emissions		

England & Wales EU Directive 2002/91/EC

The environmental impact rating is a measure of a home's impact on the environment in terms of carbon dioxide (CO₂) emissions. The higher the rating the less impact it has on the environment.

Estimated energy use, carbon dioxide (CO₂) emissions and fuel costs of this home

	Current	Potential
Energy Use	453 kWh/m ² per year	178 kWh/m ² per year
Carbon dioxide emissions	13 tonnes per year	4.9 tonnes per year
Lighting	£81 per year	£65 per year
Heating	£1173 per year	£457 per year
Hot water	£219 per year	£104 per year

Based on standardised assumptions about occupancy, heating patterns and geographical location, the above table provides an indication of how much it will cost to provide lighting, heating and hot water to this home. The fuel costs only take into account the cost of fuel and not any associated service, maintenance or safety inspection. This certificate has been provided for comparative purposes only and enables one home to be compared with another. Always check the date the certificate was issued, because fuel prices can increase over time and energy saving recommendations will evolve.

To see how this home can achieve its potential rating please see the recommended measures.

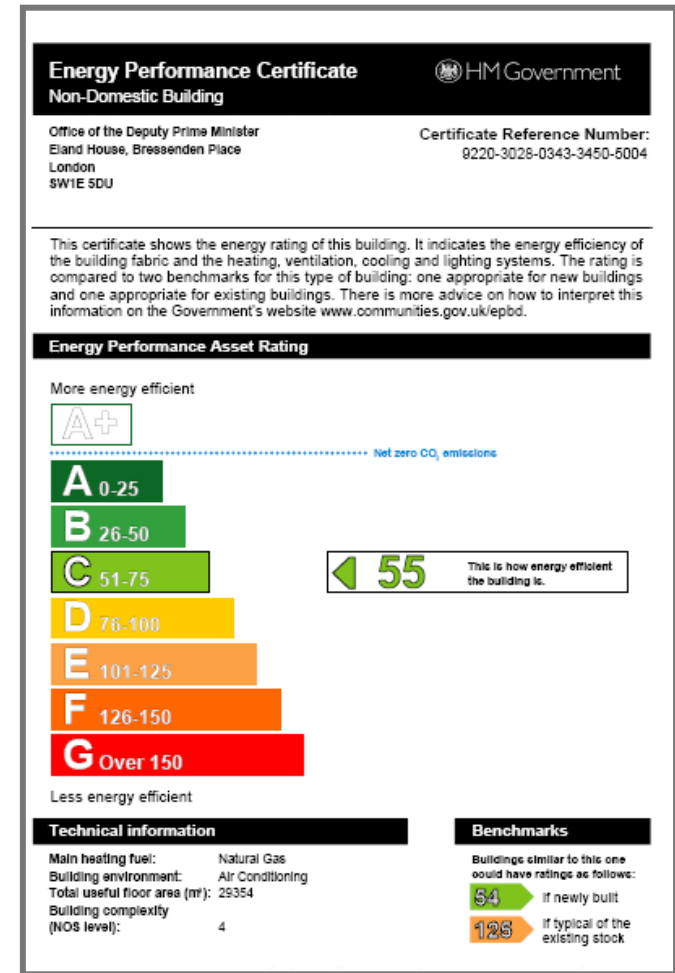
Remember to look for the energy saving recommended logo when buying energy-efficient products. It's a quick and easy way to identify the most energy-efficient products on the market. For advice on how to take action and to find out about offers available to help make your home more energy efficient, call 0800 512 012 or visit www.energysavingtrust.org.uk/myhome

EPCs valid for 10 years – except for marketed sales within a HIP where they are valid for 1 year

EPCs for bldgs other than dwellings

- EPCs are:-
 - produced using SBEM or DSM software.
 - accompanied by Recommendation Reports on improvement.
- EPCs for construction, sale or rent of bldgs:-
 - > 10,000 m² are reqd from 06 Apr 2008.
 - > 2,500 m² are reqd from 01 Jul 2008.
 - For all other bldgs are reqd from 01 Oct 2008.
- EPCS are lodged in the national register
www.ndepcregister.com

EPCs and Recommendation Reports valid for 10 years



Eland House – March 2008


Display Energy Certificates (DECs)

- DECs are:-
 - **only** required for **public bldgs** *.
 - Produced using Govt software or approved equivalent.
 - reqd to be **displayed** in a prominent place visible to the public.
 - accompanied by Advisory Reports.
- Occupiers are responsible for acquiring and displaying DECs.
- DECs are lodged in the national register www.ndepcregister.com

DECs valid for 1 year. Advisory Reports are valid for 7 years.

Display Energy Certificate

How efficiently is this building being used?



A Government Dept
12th & 13th Floor
Jubilee House
High Street
Anytown
A1 2CD

Certificate Reference Number:
1234-1234-1234-1234

This certificate indicates how much energy is being used to operate this building. The operational rating is based on meter readings of all the energy actually used in the building. It is compared to a benchmark that represents performance indicative of all buildings of this type. There is more advice on how to interpret this information on the Government's website www.communities.gov.uk/depd.

Energy Performance Operational Rating

This tells you how efficiently energy has been used in the building. The numbers do not represent a actual units of energy consumed; they represent comparative energy efficiency. 100 would be typical for this kind of building.

More energy efficient

A

0-25

B

26-50

C

51-75

D

76-100

100 would be typical

E

101-125

F

126-150

G

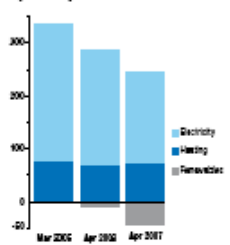
Over 150

108

Less energy efficient

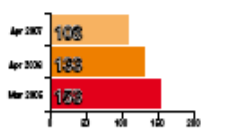
Total CO₂ Emissions

This tells you how much carbon dioxide the building emits. It shows tonnes per year of CO₂.



Previous Operational Ratings

This tells you how efficiently energy has been used in this building over the last three accounting periods.



Technical information

This tells you technical information about how energy is used in this building. Consumption data based on actual readings.

Main heating fuel: Gas

Building Environment: Air Conditioned

Total useful floor area (m²): 2927

Asset Rating: B

	Heating	Electrical
Annual Energy Use (kWh/m ² /year)	126	126
Typical Energy Use (kWh/m ² /year)	120	95
Energy from renewables	0%	20%

Administrative information

This is a Display Energy Certificate as defined in BS2007:2001 as amended.

Assessment Software: CR v1

Property Reference: 024122776612

Assessor Name: John Smith

Assessor Number: ABC12345

Accreditation Scheme: ABC Accreditation Ltd

Employer/Trading Name: EnergyWatch Ltd

Employer/Trading Address: Alpha House, New Way, Birmingham, B2 1AA

Issue Date: 12 May 2007

Revised Date: 04 Apr 2007

Valid Until: 31 Mar 2008

Related Party Disclosure: EnergyWatch are contracted as energy managers

Recommendations for improving the energy efficiency of the building are contained in Report Reference Number 1234-1234-1234-1234

- 5 areas for new consideration:-
 - Reducing or removing the 1000 m² threshold;
 - Tougher provisions on take-up and enforcement;
 - Minimum standards across Europe;
 - Strengthening the provisions on air conditioning; and
 - making boiler inspections mandatory.
- See Koskimaki and Elsberger slide shows at:-
<http://www.managenergy.net/conference/2008epbd.html#epbd>
- Outline programme envisages implementation of the outcome of debate by 2013-2014. Development work with MSs now in train.

End slides include:-

- List of the items in the regulatory package for E&W.
- List of guidance publications.
- List of published leaflets.
- Advertorial campaign outlets.

Future of building control

The Future of Building Control (BC)

- An effective and efficient BC service is key to delivering house building targets and sustainable building commitments.
- This consultation (published 18th March, closes 10th June), proposes practical, short-medium term solutions to:-
 - improve levels of compliance;
 - reduce burden and cost to industry; and
 - deliver a customer focussed service.
- It is not a 'blank sheet review' but is open to pick up suggestions for longer term changes.

- Better regulation with regular reviews.
- Better guidance – improve existing and introduce new guidance inc more “horizontal ADs.
- Modernise inspection and enforcement..
- Provide more alternative routes to compliance.
- Reform the existing disputes procedures.
- Help Building Control manage better.
- See:-

<http://www.communities.gov.uk/publications/planningandbuilding/futurebuildingcontrol>



- The national standard for the design and construction of sustainable new homes.
- **What are the key objectives?**
- Encourage home builders to construct more sustainable homes
- Empower home buyers to drive demand for more sustainable homes
- Signal the direction of future regulations and give certainty
- **What are the key features?**
- Tackles sustainability ‘in the round’
- ‘Whole house’ approach
- Minimum standards ensure environmental robustness
- Flexibility for developers
- Star rating system – a tool for marketing.

Govt:-

- will be making a Code rating mandatory for all new build homes.
- has announced that these ratings will become mandatory from May 2008.
- This means sellers of new homes will have to provide buyers with either a Code certificate or a nil-rated certificate of non-assessment.
- For further information see www.communities.gov.uk/thecode

“Code” for sustainable buildings other than dwellings

- Govt's ambition : new bldgs other than dwellings to be zero carbon from 2019.
- Consult this year on timeline and feasibility, and review progress in 2013.
- Committed to lead the way with an ambition for new public sector buildings to be zero carbon from 2018.
- A Taskforce will be established to advise on timeline, intermediate steps and the particular challenges faced in some public sector areas such as hospitals, prisons and defence establishments.

- Improving energy efficiency and achieving CO₂ emission reductions.
- Working with the UK Green Building Council and other experts.
- More complicated than homes due to diverse building types and uses but report published; see:-
<http://www.communities.gov.uk/publications/planningandbuilding/carbonreductions>

Review of Part L – the energy efficiency requirements (and Part F, ventilation requirements)

- **Responding to:-**
 - *“Building a Greener Future”, July 2007*
 - *“Report on carbon reductions in new non-domestic buildings”, Dec 2007*
 - *“The Budget Report 2008”*
- **One amendment laid in 2009** that brings into effect:-
- **In 2010:-**
 - 25% higher stds for new dwellings;
 - 25% (*or perhaps a bit higher*) stds for bldgs other than dwellings.
- **In 2013:-**
 - 44% higher stds for new dwellings
 - 44% higher stds for bldgs other than dwellings (*possibly defer this to 2016 and set a much higher step*)
- **Separate project later to look at 2016 and 2019.**

Development work to consultation package	By early 2009
Consultation period	3 months
Post-consultation review	By around $\frac{3}{4}$ 2009
Lay amendment	By end of 2009
Coming into force	2010

- The following slides are somewhat speculative.
- But they represent current thinking amongst our technical team and the Industry Advisory Groups that met at the end of February.
- The development work, consultation and review are there to test and flesh out these ideas.

- For dwellings:-
 - 2010/2013 to be achieved mainly through improved energy efficiency and lower carbon systems ?
 - For 2016 to be achieved by renewables and more lower carbon systems supplying highly efficient buildings with low energy demands ?
- For other bldgs:-
 - Ditto 2010 and [2013 /2016] ?
 - Ditto for 2018/2019.

- Upgrading National Calculation Methodology.
- Handling Low and Zero Carbon systems.
- Avoiding double-counting renewables contributions..
- Revising limits on design flexibility.
- Handling solar over-heating.
- Measuring Quality of construction.
- Provision of information.
- Targeting guidance.

- See the issues in a bit more detail in your Delegate Packs
- The key messages are:-
 - simple answers are not available
 - Consultation and consensus is essential
- It takes 2 to tango !
 - Check out who's representing you on the IAGs and their expert working parties.
 - Respond in due course to our consultation package.
 - Design and installation people – make yourselves ready.

Concluding remarks

Programme of national policy consultations

Can't work in isolation !

Future of Building Control	18 March
Minor amendments to the current Part L ADs	April 08
Part G	Spring 08
Definition of net zero annual carbon emissions	Summer 08
Improving sustainability of existing non-domestic buildings.	Summer 08
Part L 2010 and 2013	Early 2009

- Some **significant** challenges ahead !
- **Need to keep clear vision of roadmap to 2016 and 2019.**
- Other consultations will produce key elements late.
- New build is strategically important.
- But must find wins in existing stock too.
- **Must keep things practical, cost-effective and within reach of average builders in average circumstances.**
- **Hearts and minds persuasion** essential to success as well as **stronger building control.**

END