

AECB the sustainable building association
2009 Annual Conference

Building for a Sustainable Future
Policy | Research | Practice

Oxford Brookes University | 11-12 June 2009
Optional tours of local renovations: 13 June 2009

Organised by:



Academic Partner:



Principal Sponsor:



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Welcome

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Sustainable Homes and related consultations



Are you having your say?

- Building Regulations 2010
- SAP revisions
- Zero carbon definition
- Review of the Code for Sustainable Homes

To say nothing of.....

- **CERT**
- **CESP**
- **HESS**

Old Home Superhome

SEA is partnering with NEF to deliver Old Home, SuperHome - a programme to transform energy efficiency within existing housing stock.



What does what and how well

1. Focus on housing
2. Functions /relationships/changes
3. Consultation methodology – Code Review
4. Future and workshop debate – main issues

Building Regulations

- The mandatory basic requirements
- Next update 2010
- Consultation on proposed changes out soon

Standard Assessment Procedure

- The method for Building Regulations approval and the Code
- Based on aged database
- Regularly updated by BRE
- Not necessarily good for low heat demand buildings

**PROJECTING ENERGY USE AND CO2 EMISSIONS FROM
LOW ENERGY BUILDINGS
A COMPARISON OF THE PASSIVHAUS PLANNING
PACKAGE (PHPP) AND SAP**



SAP consultation now

**The Government's Standard Assessment
Procedure for Energy Rating of Dwellings**

DRAFT

2009 edition

<http://www.bre.co.uk/sap2009/page.jsp?id=1642>

Discussion on changes

- Monthly calculation method
- Weather by region
- CO₂ emissions methodology
- Fuel types
- Boiler efficiencies changes, summer/winter differences
- CHP and pipe losses
- Thermal mass and cooling
- DHW and primary pipe losses
- Lower internal gains
- Changed occupancy

Send your comments

Deadline 12th August

What should Zero Carbon mean?

DEFINING ZERO CARBON HOMES

HAVE YOUR SAY





DEFINING ZERO CARBON HOMES HAVE YOUR SAY

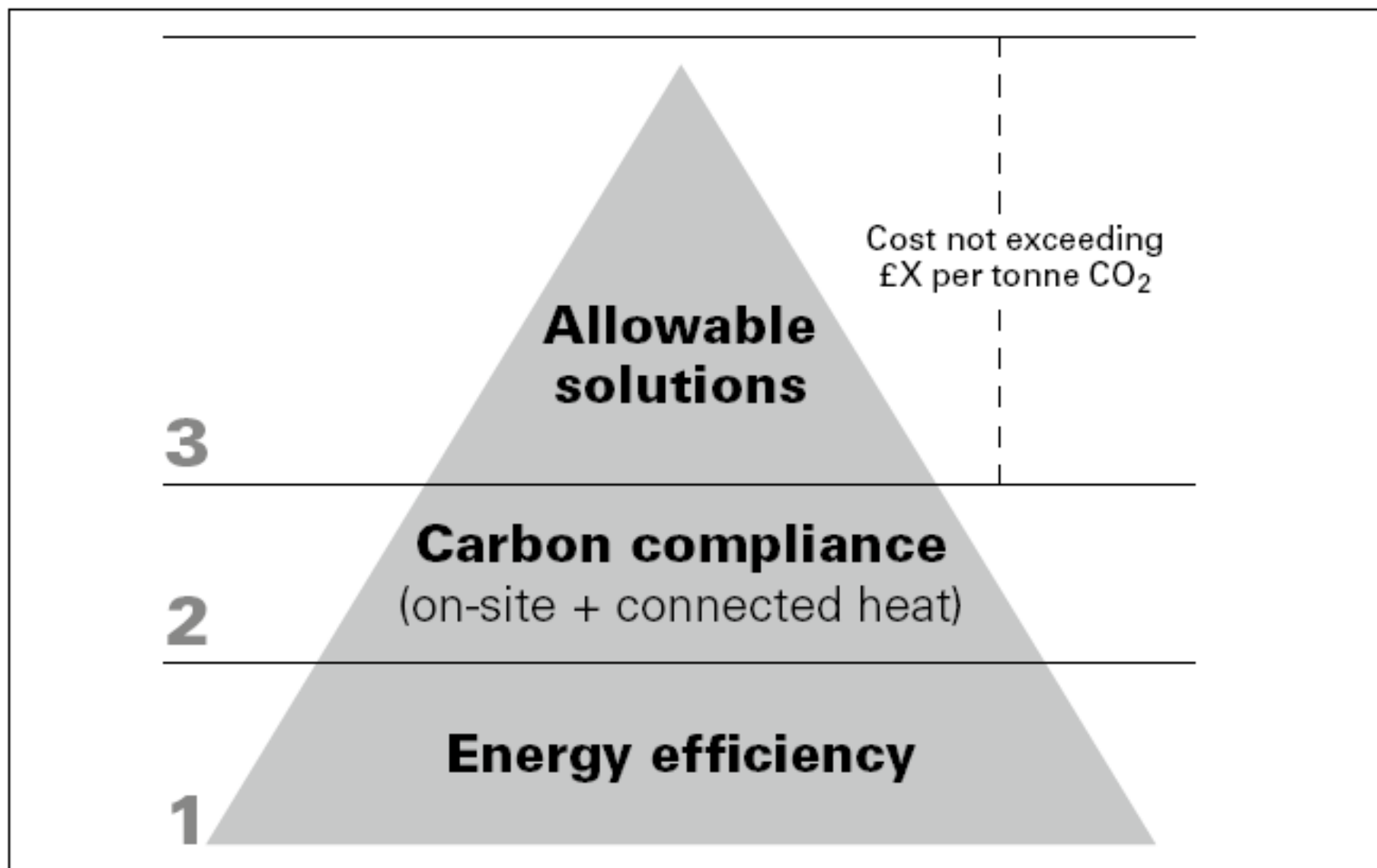


FACILITATING THE MAINSTREAM DELIVERY OF LOW AND ZERO CARBON HOMES

“Zero carbon” refers to:

- In-use, not embodied energy
- All energy use –allowance for appliances
- Net zero carbon across the year
- Allows for imported / exported energy

Fig 1: Government's preferred hierarchy



Minimum level of Carbon Compliance?

44%, 70% or 100% emissions reduction is key



Allowable solutions ?

- Carbon compliance beyond the minimum standard
- Credit for energy efficient appliances or advanced forms of building control system.
- Exports of low carbon / renewable heat or cooling.
- S106 contributions towards local LZC infrastructure.
- Retrofitting of existing buildings (not „low hanging fruit“).
- Investments in LZC energy infrastructure –benefits transferred to the buyer of the home.
- Offsite renewable electricity via direct physical connection.
- Anything else the Government announces in the future.

What next?

- This consultation set up for new housing
- Thoughts on non-domestic buildings next
- Conflicts with the Code level 6 definition of zero carbon





**THE CODE FOR
SUSTAINABLE
HOMES**

The Code

- The Code was developed by BRE for Communities and Local Government and adopted in 2007.
- Its use is voluntary although RSLs who are building with public finance are required to achieve Code level 3 for funding period 2008-2011.
- Several Local Authority Planning Departments require achievement of different Code Levels to get planning permission for new housing development.

CLG sees the Code is a very important tool for driving forward improvement in the sustainability of new homes.

Case studies published

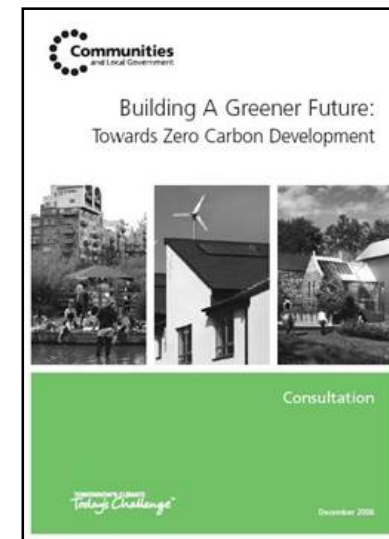
As part of the process of learning from the first Code developments and to disseminate information about building sustainable homes, Communities and Local Government commissioned the Good Homes Alliance to research and develop case studies on some of the first Code homes built.

The case studies cover a range of social and private housing, using a variety of different build systems or materials, and that achieved a range of Code standards.

Why review and changes are necessary

| Date | 2010 | 2013 | 2016 |
|--|--------------|--------------|--------------|
| Improvement as compared to Part L 2006 | 25% | 44% | zero carbon |
| Equivalent carbon standard in Code for Sustainable Homes | Code Level 3 | Code Level 4 | Code Level 6 |

- 2010 - Code Level 3 for energy
- Code Levels 1 and 2 below minimum national standards
- Considering the definition of “Zero Carbon”
- Opportunity to consider other beneficial changes to the Code



Other beneficial changes under consideration

- requirement to have **site waste management plans** for all sites
- **water efficiency** now included in Building Regulations
- some areas of the Code that are not widely adopted because the points available do not adequately reward the costs of adopting the standards.
- The Government has also already confirmed the **Lifetime Homes** element of the Code will become a minimum mandatory requirement at Level 4 of the Code from 2010.

Options

Different options have been considered:

- Minor changes in 2010
- Significant changes (if necessary) in 2013 and 2016

Code has been in use for a short time - small amount of experience in its use

What the review process involved

Separate meetings with different sectors

- Code assessors
- House builders and designers
- Local Authorities
- RSLs
- Product manufacturers
- Two Code Groups - the Code Technical Guide Group and the Code Implementation Advisory Group

Issues arising, some long term

- Change/simplify assessment methodology;
- Areas where credits are not being taken up;
- Including adaptation to climate change;
- Mandatory and discretionary components;
- Presentational style issues on the Technical Guide.

Programme of review and revision of the Code

- Discussion of possible changes – November/December 2008
- Production of consultation package - spring 2009
- **Formal consultation process - July 2009?**
- Analysis of responses and report – Autumn 2009
- Policy response including analysis of technical and administrative amendments – Autumn 2009
- Revision of the Code Technical Guide – December 2009
- Publication – Early 2010

Respond to the Consultation!

Another consultation!

This consultation on the Government's **Heat and Energy Saving Strategy** sets out an aim for emissions from **existing buildings** to be approaching zero by 2050. This means increasing the scope and ambition of our energy saving measures, as well as decarbonising the generation and supply of heat.

Closed 8th May 2009

What happens in the future, some issues

Who here responds to consultations?

- Mainstreaming environmentally conscious buildings
 - Government desire
- Calculated energy use versus actual use
- How do we get users to minimise energy use?
- ZCD – even if we minimise demand, a lot of renewable energy needed. Where will this come from?
- Will sustainable refurbishment of existing buildings take off?

Driving forward sustainable housing – how?

- Code for sustainable homes?
- Occupier demand – any good experiences?
- Lifestyle changes
- Government legislation?

