

Part L 2010

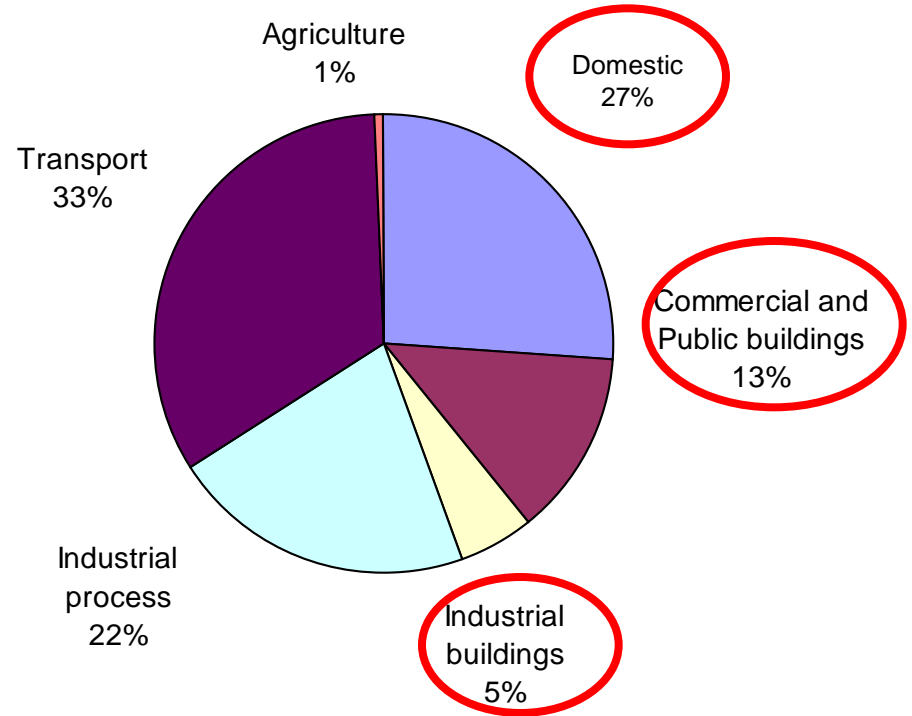
Consultation Update

Paul DeCort – 29 April 2009

- Part L 2010
 - Policy drivers
 - Proposed new standards
 - Scope of Review
 - Correlation between Part L & F
 - Programme
- EPBD 2010

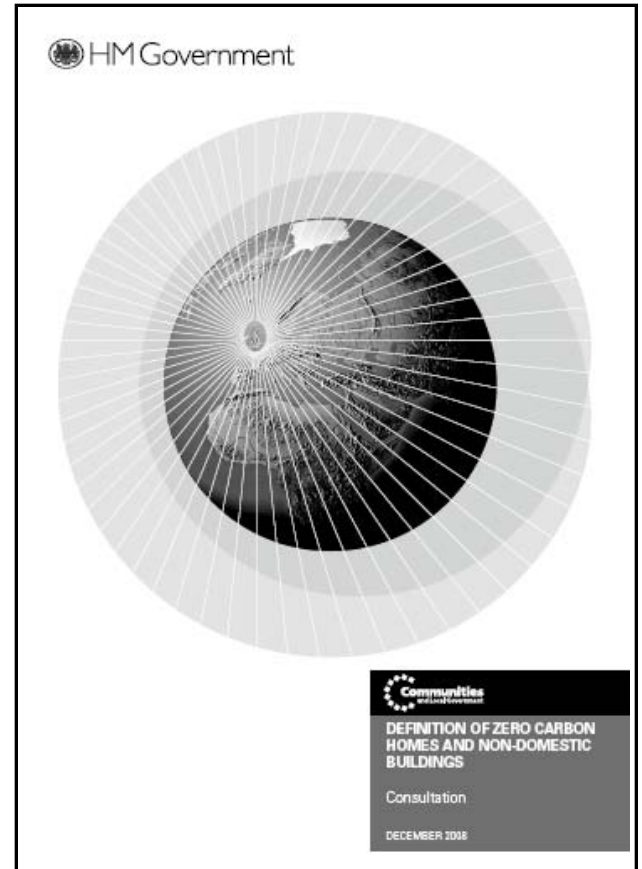
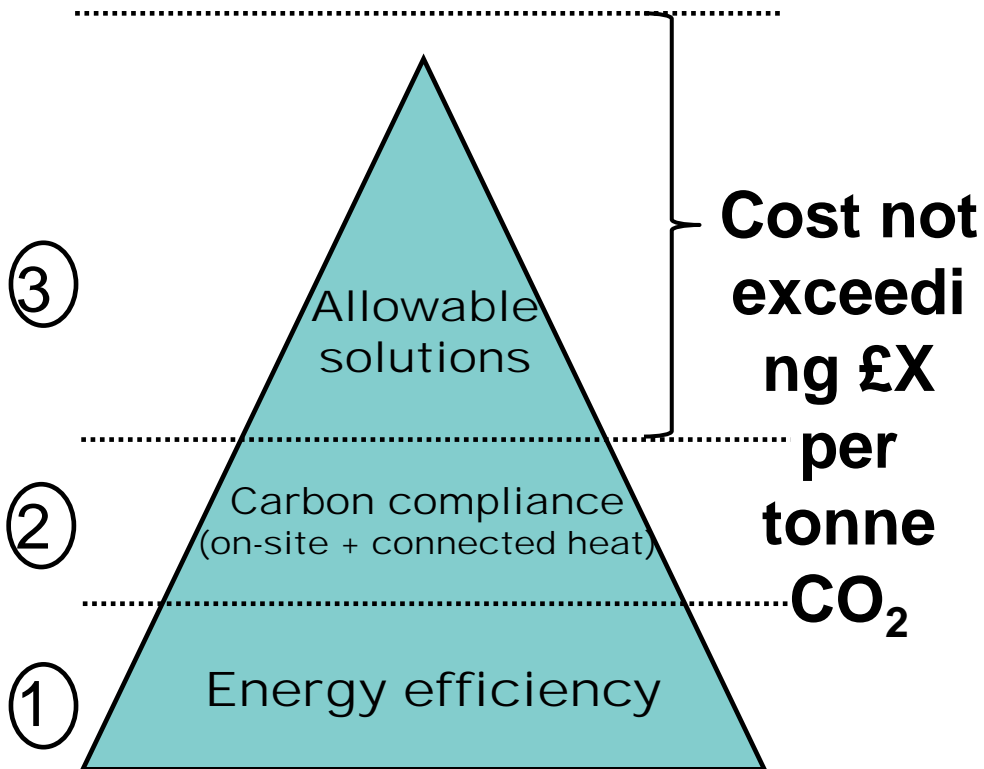
- Buildings account for 45% of UK carbon emissions
- Energy White Paper 2007 sets out energy strategy
- Raising energy efficiency standards via Building Regulations is key
- Ensure health standards not compromised

In 2005, the UK emitted 550m tonnes of CO₂⁽¹⁾



- Climate Change Act: legal obligation on Government to reduce emissions by 80% by 2050
- Building a Greener Future Policy Statement 2007: new homes to be Net Zero Carbon by 2016
- Heat and Energy Saving Strategy: 12 Feb 2009
- EC initiatives: Energy Using Products Directive, proposals to strengthen EPBD
- Response to Future of Building Control consultation
- CLG consultation on Zero Carbon Definition / new non-domestic buildings

Zero Carbon Definition



Scope of Part L 2010 Review

- Performance targets for new build
- Limits on design flexibility
- Strategy for work in existing buildings
- Development of calculation tools
- Measures for further improving compliance
- Correlation with Part F (ventilation)

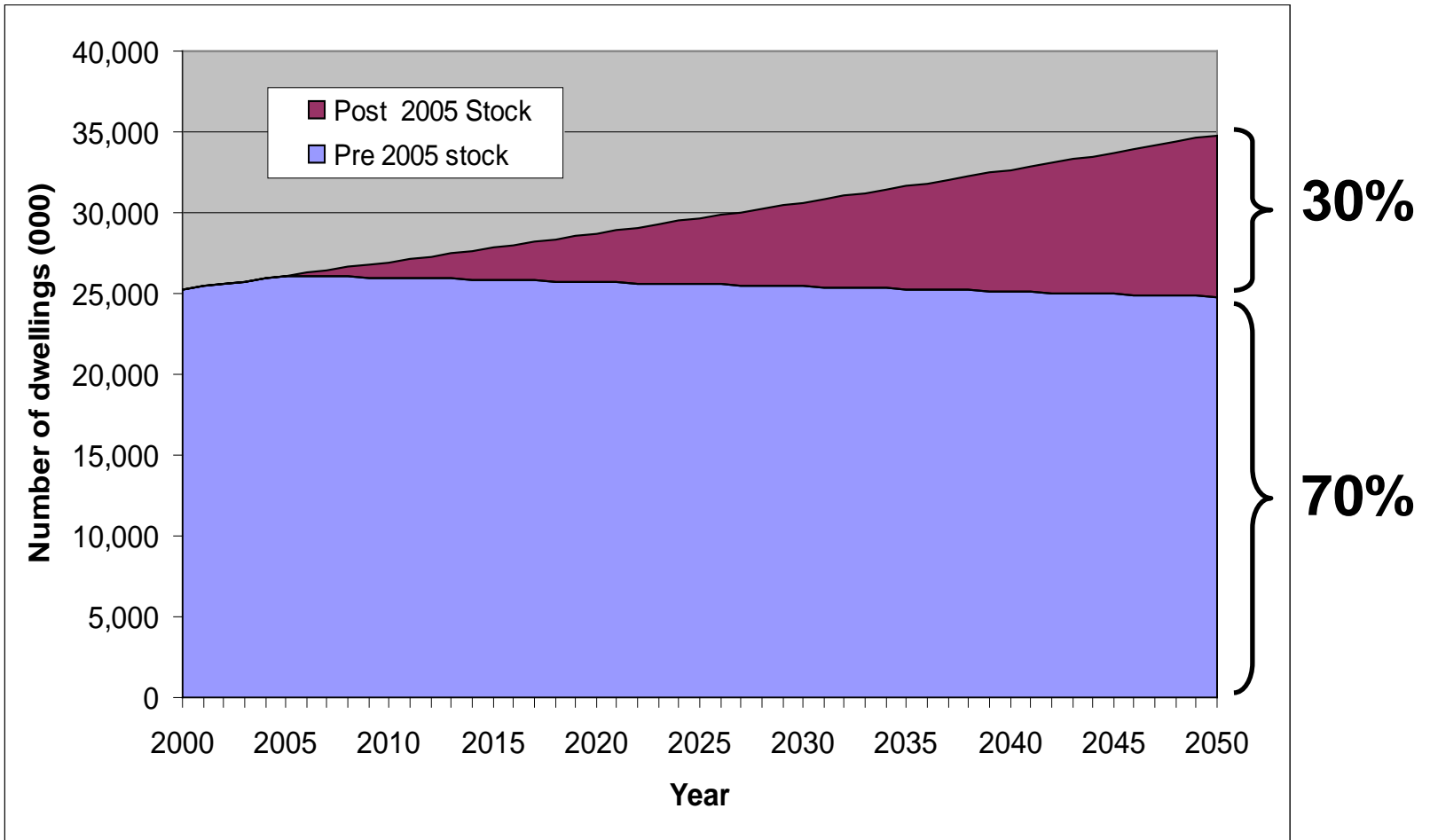
Timetable for new homes:

- 25% improvement in 2010 CSH energy level 3
- 44% improvement in 2013 CSH energy level 4
- Zero carbon by 2016 CSH energy level 6

Non-Domestic:

- Budget 2008: ambition for all new non domestic buildings to be zero carbon by 2019
- Ambition for new schools and public buildings is 2016 and 2018 respectively
- Important to take progressive steps towards this to decrease carbon and to stimulate innovation and new technologies
- ***Current thinking*** is to adopt similar phased reductions for non-domestic buildings i.e. 25% in 2010

Importance of Existing Stock



Source: Housing Statistics – ODPM 2004

Part L 2010 Review: New Build

- Current thinking is to keep same regulatory and compliance framework but the key issue is mechanism for target setting
- Option to retain a 2002 notional building plus further improvement factor i.e. a flat 25% improvement for each building
- Has familiarity but takes no account of difficulties or opportunities for improving performance in different types of building
- So developed alternative option to provide 25% on aggregate overall rather than per building
- 2010 notional (TER) with no improvement factor based on relative cost effectiveness of making energy efficiency improvements for typical building components
- Some buildings deliver more than 25%, some less, but optimised to deliver national target of 25% when applied across build mix - separate aggregates for domestic and non domestic buildings
- Maximises CO₂ reduction per unit investment, more pronounced for non domestic, seek feedback on the options in consultation

Part L 2010 Review: Calculation Tools

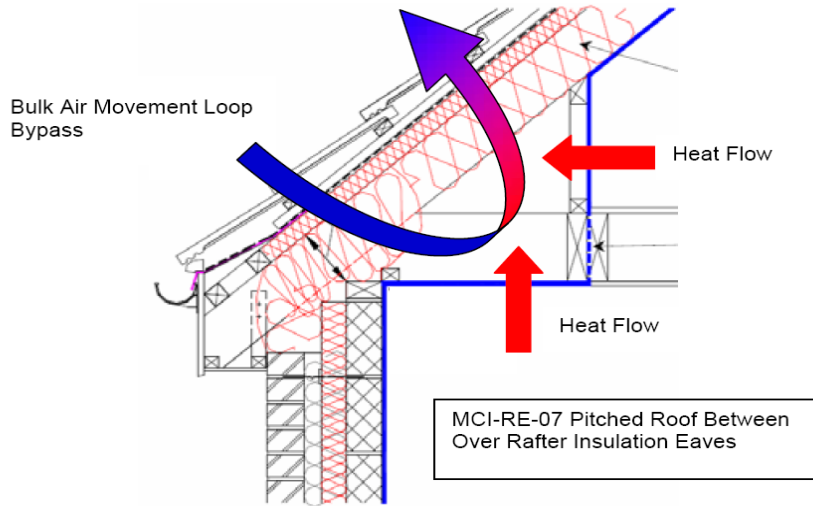
- Building Research Establishment developing SAP and SBEM drafts to support Part L consultation package
- Impact of Part G (water efficiency) and associated reduction of hot water energy demand for new homes
- Propose SAP software core plus interface for consultation and considering options for implementation
- SAP moving to monthly rather than annual calculation with factors to address thermal mass
- SBEM focus is on convergence of results with Dynamic Simulation Models (DSMs)
- SBEM building typology linked to planning classes with simplified activity types below this

2010 Review: Existing Buildings

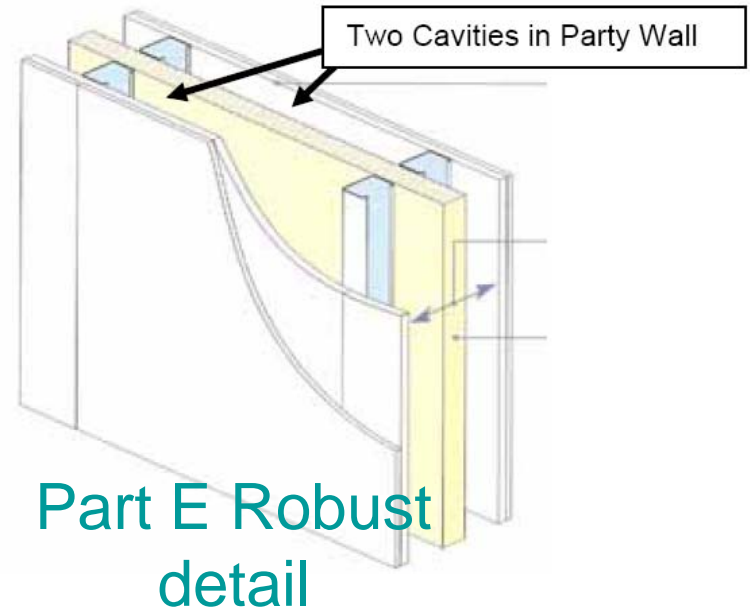
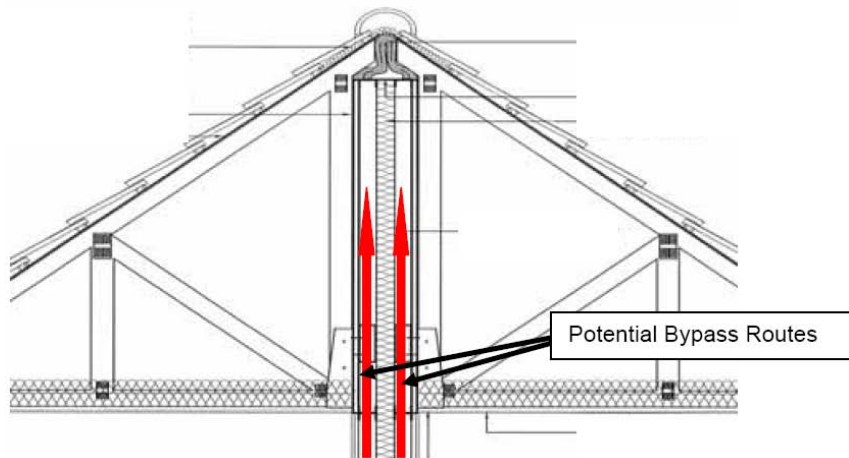
- Review consequentialials for buildings <1000m² - links to EPBD2 and EPC list of measures
- Extensions use elemental approach or SAP/SBEM for greater flexibility but issues of trade-off and consequentialials
- General raising of standards and seek to capture more work e.g. swimming pool basins ...
- More focussed guidance on thermal elements
- Compliance guides widened to cover all buildings services including lighting, ventilation, pumps and Low or Zero Carbon (LZC) technologies

- Improving connection between NCM calculation inputs and information on construction
- Option of adopting Accredited Construction Details (ACDs) with enhanced quality control to claim higher performance
- Wider use of Competent Persons Schemes
- More focussed guidance for renovation work
- Also performance issues e.g. party wall and other thermal bypasses
- Substantial training and dissemination campaign

Thermal Bypassing



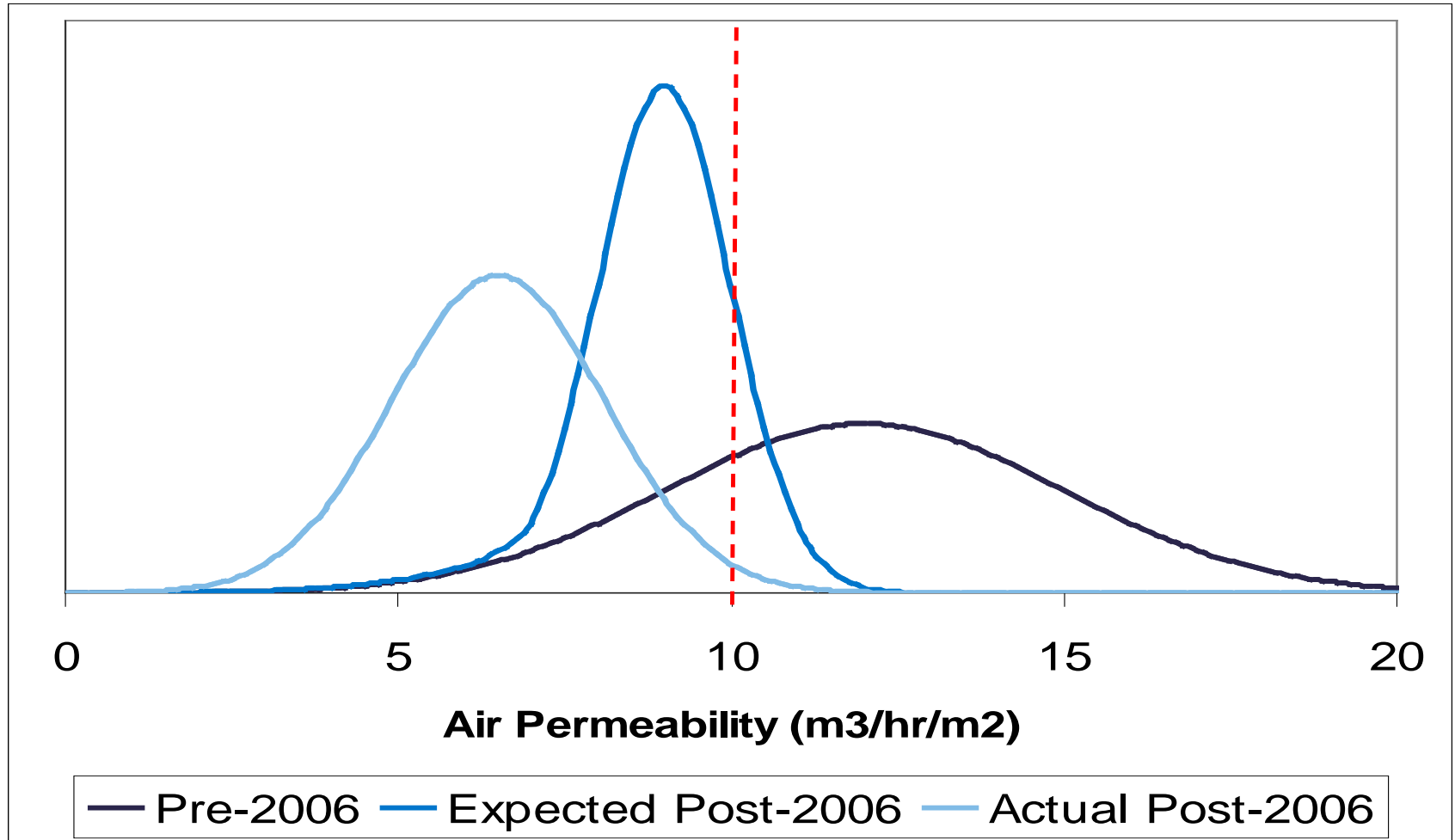
Knee wall loop bypass
in accredited detail MCI-
RE-07



Building Services Compliance Guides

- New Domestic and Non-Domestic Building Services Compliance Guides
- Guides provide limits of design flexibility for new build and standards of energy efficiency for replacements
- Include improved standards for the services included in the previous guides and updating in line with BS ENs
- New sections to cover energy standards for ventilation, lighting, air conditioning, pumps and LZCs.
- Will, as far as possible, be generic so that they can be adapted for use in all regions of the UK.

- Part L is main bulk of the review but need to ensure health standards are not undermined
- Key issue is for new homes rather than non-domestic
- Airtightness test results indicate we are approaching assumed levels of permeability
- NV (with local intermittent fans) is main form of domestic ventilation but expect greater trend to MV
- Guidance for more airtight homes with different provisions for homes with high and low permeability
- Guidance for installation and commissioning of fixed ventilation systems with advice on operation and maintenance



- Consultation, draft technical guidance and calculation tools to focus on 2010 with best understanding for 2013
- Impractical to develop detail for 2013 right now given ongoing zero carbon discussions
- Part L 2010 will major on energy efficiency improvements and on-site LZC systems in a performance based way that does not stifle innovation or future allowable solutions
- Start reporting energy demand and unregulated energy uses etc.
- Aim to consult soon and introduce changes in April 2010
- Recognise this is challenging and will keep under review with potential rescheduling to Oct 2010 – plan to ask for views on timing in consultation

Timeline – Building Regulations and Code for Sustainable Homes



Year	2008	2009	2010	2011	2012	2013	2014	2015	2016
Review	Parts L&F & J, A&C Code*	Part P		Parts L&F Code*			Parts L&F Code*		
Consult	Part G <i>Zero carbon definition</i>	Parts A&C J&P L&F Code*			Parts L&F Code*			Parts L&F Code*	
Change		Part G	Parts A&C L&F, J & P Code*			Parts L&F, Code*			Parts L&F Code*

In 2010 will confirm what will be reviewed for 2013; give indication of 2016 changes

*Code for Sustainable Homes

- Purpose is to extend scope, strengthen certain provisions, and clarify other aspects. Key proposals include:
 - Energy certificates to be displayed in all public buildings over 250m² and all other buildings frequently visited by public;
 - Existing buildings that undergo major renovation to meet minimum energy performance requirements – 1,000m² threshold dropped;
 - Targets for increase in LZC buildings – to be set using definitions developed by Commission;
 - Calculation methodology to take account of new European Standards;
 - Member States to aim for cost optimal levels of energy performance of their buildings using a methodology developed by the Commission
- Challenging timescale. EC proposing implementation by 31/12/10 for public sector and 31/01/12 for other buildings.

Thank you for listening

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