

# Building Regulations Part L 2013 Wales Wider Engagement Event

Existing Non Domestic Buildings – Part L2B

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## Wales Part L – Energy Efficiency Standards for Existing Non-Domestic Buildings

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## Wales Part L – Energy Efficiency Standards for Existing Non-Domestic Buildings

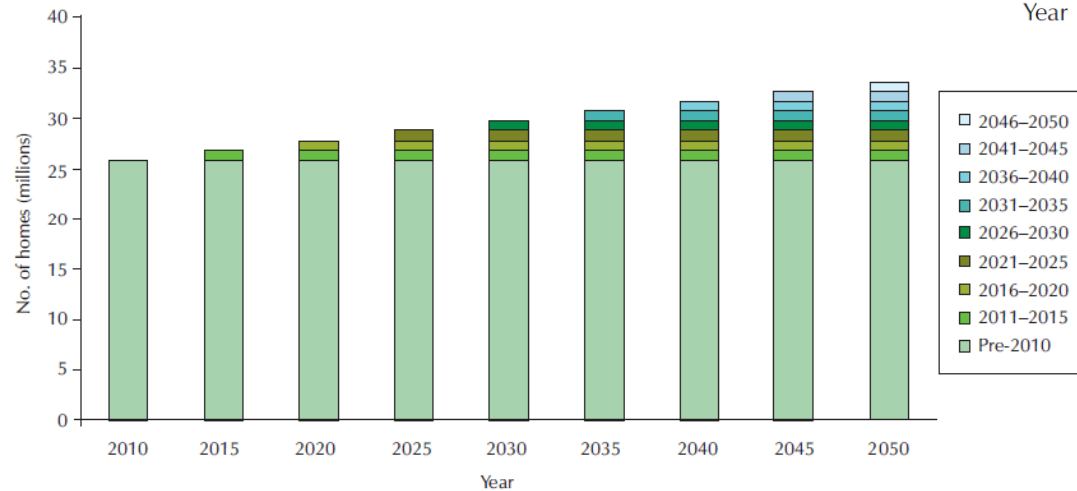
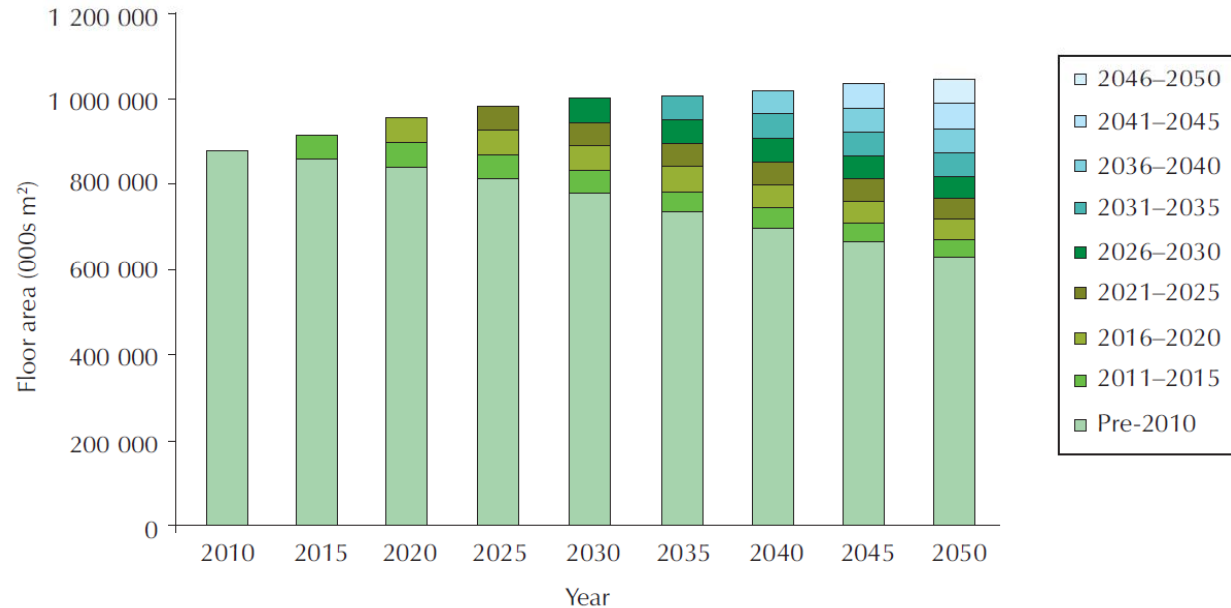
### Introduction

- Most attention is usually given to the energy performance standards of new buildings
- The real opportunity for reducing national CO<sub>2</sub> emissions from the built environment is to improve the existing stock:
  - there are around 50 million m<sup>2</sup> existing non-domestic building floor space in Wales
  - the new build rate has historically been ~600,000m<sup>2</sup> per annum.

# Wales Part L – Energy Efficiency Standards for Existing Non-Domestic Buildings

## Introduction

Non-Domestic



Domestic

Source: "energy efficiency in new and existing buildings: comparative costs and CO<sub>2</sub> savings", BRE Trust



## Wales Part L – Energy Efficiency Standards for Existing Non-Domestic Buildings

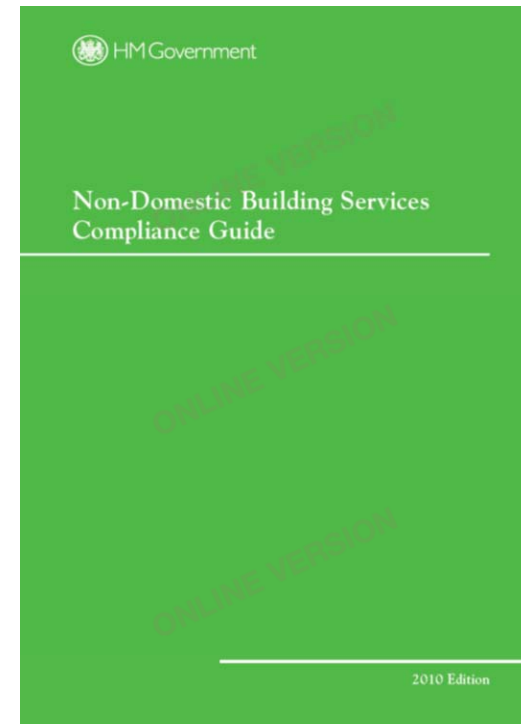
### Introduction – Part L for existing non-domestic buildings

- At the strategic level, there are three main questions to achieving greater energy efficiency via Part L.
  - Can we improve the standards of energy efficiency required by Part L?
  - Can we improve levels of compliance?
  - Can we bring more building work into scope?
- In particular the first two issues are related
  - If the standards are set too high, building owners might seek to evade the regulations in order to avoid the “perceived” costs of compliance

## Wales Part L – Energy Efficiency Standards for Existing Non-Domestic Buildings

### Improvements to current energy efficiency standards

- **Replacement of controlled fittings and services**
  - This typically comprises window and boiler replacement
  - ADL2B recommends minimum energy efficiency for replacements
  - Generally close to new-build standards:
    - Efficiency gain is locked into the product
    - No/little additional hassle for installer
    - Will undertake cost-benefit analysis of potential improvements
  - Need for Wales-specific *non-domestic compliance guide*?



## Wales Part L – Energy Efficiency Standards for Existing Non-Domestic Buildings

### Improvements to current energy efficiency standards

- **Construction of extension**

- If Extension:

- >100m<sup>2</sup> *and*
- >25% floor area existing
- ADL2A applies

- **Also provision of new thermal elements**

- ADL2B recommends minimum energy efficiencies for thermal elements, glazing and additional fixed building services

- Again, it may be reasonable to achieve close to new-build standards

- Constructing an extension involves few constraints on design or specification of the thermal envelope
- To undertake cost-benefit analysis of incrementally improving standards

## Wales Part L – Energy Efficiency Standards for Existing Non-Domestic Buildings

### Improvements to current energy efficiency standards

- **Renovation of a thermal element**

- ADL2B recommends minimum energy efficiencies where there is a significant renovation of a thermal element
  - 50% surface of element (or 25% of building envelope)
  - e.g. cladding/rendering external surface or dry-lining existing surface
- In these cases, greater argument for not setting the bar too high
  - Anecdotally, this is an area of poorer compliance
  - Greater expertise needed on part of the installer
  - Practical guidance may achieve greater carbon savings
  - However, usually only one opportunity to install additional insulation
  - Next step is to consider the costs and benefits of different approaches

## Wales Part L – Energy Efficiency Standards for Existing Non-Domestic Buildings

### Conservatories

- Currently, conservatories below 30m<sup>2</sup> are exempt from Part L1B and L2B
- However, why should conservatories be excluded but extensions included?
  - Conservatories mainly in domestic-style non-domestic buildings (i.e. Care home, hotel, etc)
  - Generally heated (i.e. Part of thermal envelope)
  - Often having no door between the conservatory and the rest of the building and, anecdotally, any connecting doorway is often left open
- The intention is to consider options e.g.
  - Setting minimum energy efficiency standards for glazing
  - Requirements for additional ventilation to avoid tendency to install portable air conditioning

## Wales Part L – Energy Efficiency Standards for Existing Non-Domestic Buildings

### Consequential Improvements and the Green Deal

- For buildings > 1000m<sup>2</sup>, increasing the carbon footprint of the building requires consequential energy efficiency improvements
- Triggers are
  - An extension
  - Initial provision of a fixed building service
  - An increase in the installed capacity of any fixed building service
- Consequential measures are
  - Extensions: Select from measures in a table, minimum of 10% of value of principal works. Measures selected to achieve payback in 15 years.
  - Services: Improve fabric in serviced areas and included additional measures as per extensions.

## Wales Part L – Energy Efficiency Standards for Existing Non-Domestic Buildings

### Consequential Improvements and the Green Deal

- Green Deal is to be introduced in October 2012
- Private firms to offer energy efficiency improvements at no upfront cost.
- Payments recouped through a charge in installments via energy bills

## Wales Part L – Energy Efficiency Standards for Existing Non-Domestic Buildings

### Consequential Improvements and the Green Deal

- Given the introduction of Green Deal, we are investigating the extension of Consequential Improvements to <1000m<sup>2</sup>.
- In all cases, the Consequential Improvements would be ‘Green Dealable’
- What would be the trigger(s) for improvement?
  - Increasing the carbon footprint of the building?
  - Extending to include other building works?
- What Consequential Improvement measures should be included?
  - Should they continue to be minimum of 10% of principal works?
  - Should they be linked to the same contractor as carries out the principal works?
  - In at least some cases, would it be better to simply require a Green Deal assessment?