

# SCOTTISH BUILDING STANDARDS SECTION 6: ENERGY

## KEY CHANGES EXPLAINED

As part of the Government's long term plan to reduce carbon emissions, Section 6 2010 of the Building Regulations has come into force this month.

The following is a brief summary of the changes. For further, in depth, information the SIG Insulations comprehensive Guide to Section 6 will be available shortly – you can order your free copy now via our website.

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### NEW BUILD

#### New Limiting Fabric U values

- 30% less CO<sub>2</sub> emissions than 2007.

It is a 'flat' rate which applies to all private new build dwellings.

For new non-domestic buildings an 'aggregate' approach is taken based upon building type, meaning some will require more than 30% reduction in CO<sub>2</sub> and some less.

#### Max (area-weighted average) U values

New Build	2007	2010
<b>Domestic</b>		
Wall	0.30	0.25
Floor	0.25	0.20
Roof	0.20	0.18
Windows	2.20	1.80
<b>Non-domestic</b>		
Wall	0.30	0.27
Floor	0.25	0.22
Roof	0.25	0.20
Windows	2.20	2.00

## Greater emphasis on quality of construction

Aiming to improve quality of construction in order to close the gap between designed and delivered performance in new buildings, the most significant changes are:

## What the changes mean

## EXISTING BUILDINGS

### New Limiting Fabric U values

#### Mandatory 'Design' as well as 'As Built' Submissions

A SAP/SBEM calculation and complete list of specifications must now be submitted to Building Control at design stage before work commences, along with the additional calculation once work is complete.

#### Air Permeability

A phased introduction of air tightness testing from April 2011.

#### Thermal Bypass - Cavity Party Walls

Effective sealing is now required in order to claim zero heat loss.

#### Thermal Bridges – 0.08 for ACDs no longer an option

As from April 2011, claiming 0.08 W/m<sup>2</sup>K Y value if using Accredited Construction Details (ACDs) will no be longer possible, due to the introduction of the new Government Enhanced ACD Scheme which requires third party site checks. Instead, three method options are offered to state the Y value, achieving more accurate thermal bridging detail.

#### Thermal bridging delay within SAP

Until the Government Enhanced ACD & ACD Schemes are approved in 2011, thermal bridging will continue to follow current SAP 2005 requirements.

NB: Calculated linear bridges requiring the length of each individual building junction to be measured will be a new requirement in 2011.

- Significantly better U value performance for all new buildings
- Increased insulation thickness and wider construction footprints
- The need to embrace innovative products and systems to aid compliance
- Much earlier involvement of specialists for the necessary technical input
- Mandatory 'Design stage' and 'As built' SAP/SBEM calculations
- New, more complicated and in depth calculation tools such as SAP 2009
- Greater complexity with thermal bridges and added risk of failing SAP/SBEM
- Additional emphasis on quality of construction and on site guidance
- More stringent on-site testing and checking regimes

## Max (area-weighted average) U values (domestic only)

New Thermal Elements	2007	2010*
Wall	0.30	0.22
Floor	0.25	0.18
Pitched roof (ceiling level)	0.20	0.15
Pitched roof (between rafters) or Flat roof	0.20	0.18

\* (Dependent on energy performance of existing building; refer to Building Standard Section of 6 2010)

Insulation is still the most cost effective way of improving the performance of a building.

SIG Insulations can help you every step of the way.

Not only do we offer the widest product ranges via our nationwide branch network, but also unrivalled specialist expertise and a range of technical services including:

- Specification support
- Impartial interpretation of the new Section 6 Regulations
- Guidance in achieving compliance in your projects
- Technical services including:
  - The two mandatory SAP calculations (Design and As built)
  - Higher performing U values (BBA accredited) calculations and advice
  - Y values calculations
  - Thermal bridging quantity take-off calculations
  - Thermal modelling to calculate bespoke Y values, e.g. Y values achieving 0.04.
  - Pressure testing – advice and onsite testing.

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