



Carrickfergus Borough

Insulation of Domestic Extensions and Alterations

On 30 November 2006 major changes to Part F of the Building Regulations came into force. For extensions to domestic properties, the approach stays the same, in that you may still follow a standard based approach to demonstrate compliance. As the required insulation levels have been substantially increased; please refer to the table below as a guide to some of the acceptable methods for meeting the required standards. Note there are many other methods of achieving compliance, and the systems shown in the table below are only a small selection of approved solutions.

Wall U-value 0.30

215mm solid brick	dry line	70mm Kingspan or Celotex
Cavity brick & block	dry line	70mm Kingspan or Celotex
	full fill	100mm Platinum polystyrene beads
	full fill	100mm Drytherm or Moytherm
	full fill	100mm Platinum polystyrene board
	partial fill	50mm Kingspan or Celotex

Pitched Roof

Pitched roof U-value 0.16 (insulation at ceiling joist level)	100mm glassfibre quilt between joists + 170mm quilt above	
Pitched roof U-value 0.2 (insulation at rafter level)	above rafters	30mm Triso-super 10
	below rafters	30mm Triso-super 10
	between rafters	150mm Celotex or Kingspan
	between and below rafters	150mm Celotex or Kingspan
	between and below rafters	180mm expanded polystyrene
	below rafters	180mm expanded polystyrene

Flat Roof U-value 0.20

Cold ventilated roof	160mm expanded polystyrene between joists + 50mm below
	170mm Celotex or Kingspan between joists
	100mm Celotex or Kingspan between joists + 50mm below

Ground Floor U-value 0.22

Suspended Timber perimeter/ area ratio of 0.5	125mm expanded polystyrene
	200mm glassfibre quilt
	100mm Kingspan or Celotex
Solid Ground bearing perimeter/ area ratio of 0.5	100mm expanded polystyrene
	65mm Kingspan or Celotex

Windows and Rooflights U-value 1.8

Double glazed units with 16mm cavity and low-E coating	Vistatherm
	Pilkington K glass (with Argon filled units)

Continued Overleaf



Carrickfergus Borough

Where it is difficult to demonstrate compliance using the elemental approach, then there are two optional approaches.

The **calculated trade-off approach** will allow simple trade-offs between elements providing certain limiting standards are met.

Alternatively, a **SAP 2005 calculation** can be used to show that the calculated CO2 emission rate from the dwelling with its proposed extension is no greater than for the dwelling plus a notional extension of the same size built to the new elemental standard. If improvements are proposed to the existing dwelling to achieve compliance with the SAP calculation, then they should be to the new standard for existing thermal elements as outlined in the Technical booklet F1.

Carrickfergus Borough Council Building Control

Tel: (028) 9335 8000

Fax: (028) 9335 8088

Email: buildingcontrol@carrickfergus.org

Web: www.carrickfergus.org

Carrickfergus Borough Council, Museum & Civic Centre, 11 Antrim Street, Carrickfergus, BT38 7DG Tel: (028) 9335 8000
Further information can be obtained from your Building Control Officer. All views expressed in this document are those of the Council and do not necessarily reflect those of the Department of Finance and Personnel or any other Local Authority. In the event of any dispute arising, reference should be made to the relevant Statutory Document, which contains a full statement of the Law.