

Thermal performance of buildings: non-domestic construction GD 21

Fabric Element	England (effective April 2013) & Northern Ireland						Wales (effective July 2014)						Scotland (effective Oct 2015)						
	New buildings				Existing buildings		New buildings				Existing buildings		New buildings				Existing buildings		
	Notional Building (heated & natural ventilation)	Notional Building (mech. ventilated & cooled)	Notional Building (top-lit)	Backstop value	Extensions	Renovation	Notional Building (heated & natural ventilation)	Notional Building (mech. ventilated & cooled)	Notional Building (top-lit)	Backstop value	Extensions (domestic in character)	Extensions (other than domestic in character)	Renovation	Notional Building (heated & natural ventilation)	Notional Building (mech. ventilated & cooled)	Backstop value - area weighted	Backstop value - area weighted (shell only)	Extensions	Renovation
Pitched roof U value (Insulated at ceiling)	0.18	0.18	0.18	0.25	0.16	0.16	0.18	0.18	0.18	0.25	0.15	0.15	0.16	0.18	0.16	0.20	0.15	0.15	0.25
Pitched roof U value (Insulated at rafter)	0.18	0.18	0.18	0.25	0.18	0.18	0.18	0.18	0.25	0.15	0.18	0.18	0.18	0.16	0.20	0.20	0.15	0.15	0.25
Flat roof U value	0.18	0.18	0.18	0.25	0.18	0.18	0.18	0.18	0.25	0.15	0.18	0.18	0.18	0.16	0.20	0.20	0.15	0.15	0.25
Wall U value	0.26	0.26	0.26	0.35	0.28	0.30/0.55	0.26	0.26	0.26	0.35	0.21	0.26	0.30/0.55	0.23	0.20	0.27	0.23	0.25	0.30
Floor U-value	0.22	0.22	0.22	0.25	0.22	0.25	0.22	0.22	0.22	0.25	0.18	0.22	0.25	0.22	0.20	0.22	0.20	0.20	0.25
Rooflight U value (Frame Factor %)			1.8 (15)	2.2 (15)	1.8 (15)	1.8 (15)			1.8 (15)	2.2 (15)	1.8 (15)	1.8 (15)	1.8 (15)	1.8 (15)	1.8 (15)	2.0 (15)	1.6 (15)	1.6 (15)	1.6 (15)
Rooflight G value (%)			55						55					52	52				
Rooflight transmittance (%)			60						60					57	57				
Window U value (Frame Factor %)	1.6 (10)	1.6 (10)		2.2 (10)	1.8 (10)	1.8 (10)	1.6 (10)	1.8 (10)	2.2 (10)	1.6 (10)	1.8 (10)	1.6/1.8 (10)	1.8 (10)	1.6 (10)	2.0 (10)	1.6 (10)	1.6 (10)	1.6 (10)	1.6 (10)
Window G value (%)	40	40					40	40					60	50					
Window transmittance (%)	71	71					71	71					71	71					
Pedestrian door U value				2.2	1.8	1.8			2.2	1.8	1.8	1.8	2.2	2.2	2.0	1.6	1.6	1.6	1.6
High usage door U value				3.5	3.5	3.5			3.5	3.5	3.5	3.5	2.2	2.2	2.0	1.6	1.6	1.6	1.6
Vehicle access door U value				1.5	1.5	1.5			1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6
Other door U value				2.2	1.8	1.8			2.2	1.8	1.8	1.8	2.2	2.2	2.0	1.6	1.6	1.6	1.6
Air tightness > 10000 m ² floor area	3	3	3	10			3	5	3	10				5	3	10	7		
Air tightness 3500 - 10000 m ² floor area	3	3	5	10			3	5	5	10				5	3	10	7		
Air tightness 250 - 3500 m ² floor area	3	3	7	10			3	5	7	10				5	3	10	7		
Air tightness < 250 m ² floor area	5	5	7	10			5	5	7	10				5	3	10	7		
Lighting efficiency (lm/circuit watt)	60	60	60	60			65	65	65	65				60	65	65	65		
Renewable energy contribution (PV based)							5.3% of floor area						4.5% of floor area						
NOTES Air permeability (m ² /m ³ /hr @ 50 Pa) U value (W/m ² k)	NOTES						NOTES Target Primary Energy Consumption (TPEC) must also be achieved. Include consequential improvements for existing buildings						NOTES						