

SAP 2009 Overheating Assessment

Calculated by Stroma FSAP 2009 program, produced and printed on 28 March 2012

Property Details: Triangular Brick Semi worst case

Dwelling type:	Semi-detached House
Located in:	England
Region:	Midlands
Cross ventilation possible:	Yes
Number of storeys:	2
Front of dwelling faces:	South
Overshading:	Average or unknown
Overhangs:	None
Thermal mass parameter:	0
Night ventilation:	False
Blinds, curtains, shutters:	Net curtain (covering half window)
Ventilation rate during hot weather (ach):	0.8 (Windows slightly open (50 mm))

Overheating Details:

Summer ventilation heat loss coefficient:	138.02	(P1)
Transmission heat loss coefficient:	198.1	
Summer heat loss coefficient:	336.11	(P2)

Overhangs:

Orientation:	Ratio:	Z_overhangs:
North (North Windows)	0	1
South (South Windows)	0	1
East (East Windows)	0	1

Solar shading:

Orientation:	Z blinds:	Solar access:	Overhangs:	Z summer:	
North (North Windows)	0.9	0.9	1	0.81	(P8)
South (South Windows)	0.8	0.9	1	0.72	(P8)
East (East Windows)	0.8	0.9	1	0.72	(P8)

Solar gains:

Orientation	Area	Flux	g_	FF	Shading	Gains
North (North Windows)	0.9 x	5.73	79.85	0.76	0.76	192.66
South (South Windows)	0.9 x	7.13	106.3	0.76	0.76	283.67
East (East Windows)	0.9 x	1.15	112.4	0.76	0.76	48.38
Total						524.71 (P3/P4)

Internal gains:

	June	July	August
Internal gains	758.95	731.82	747.37
Total summer gains	1310.9	1256.53	1222.99 (P5)
Summer gain/loss ratio	3.9	3.74	3.64 (P6)
Mean summer external temperature (Midlands)	14.9	17.2	17.1
Thermal mass temperature increment	1.33	1.33	1.33
Threshold temperature	20.13	22.27	22.07 (P7)
Likelihood of high internal temperature	Not significant	Medium	Medium

Assessment of likelihood of high internal temperature: Medium