SAP 2009 Overheating Assessment

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

Property Details: 1980s 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):	1 (Windows slightly open (50 mm))

Overheating Details:

Summer ventilation heat loss coefficient:	119.21	**(P1)**
Transmission heat loss coefficient:	153.6	
Summer heat loss coefficient:	272.79	**(P2)**

Overhangs:

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

Solar shading:

Orientation:	Z blinds:	Solar access:	Overhangs:	Z summer:	
South (North)	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	
South (North)	0.9 x	6.79	106.3	0.76	0.76	0.81	303.91	
South (South Windows)	0.9 x	4.5	106.3	0.76	0.76	0.72	179.03	
East (East Windows)	0.9 x	0.84	112.4	0.76	0.76	0.72	35.34	
						Total	518.28	**(P3/P4)**

Internal gains:

	June	July	August	
Internal gains	691.94	668.46	681.87	
Total summer gains	1228.42	1186.74	1188.99	**(P5)**
Summer gain/loss ratio	4.5	4.35	4.36	**(P6)**
Mean summer external temperature (Midlands)	14.9	17.2	17.1	
Thermal mass temperature increment	1.15	1.15	1.15	
Threshold temperature	20.55	22.7	22.61	**(P7)**
Likelihood of high internal temperature	**Slight**	**Medium**	**Medium**	

Assessment of likelihood of high internal temperature: <u>Medium</u>