

SAP 2009 Overheating Assessment

Calculated by Stroma FSAP 2009 program, produced and printed on 21 September 2016

Property Details: 22 ASHP

Dwelling type:	Flat
Located in:	England
Region:	Thames valley
Cross ventilation possible:	Yes
Number of storeys:	1
Front of dwelling faces:	North East
Overshading:	Average or unknown
Overhangs:	None
Thermal mass parameter:	Indicative Value Low
Night ventilation:	False
Blinds, curtains, shutters:	Light-coloured curtain or roller blind
Ventilation rate during hot weather (ach):	6 (Windows fully open)

Overheating Details:

Summer ventilation heat loss coefficient:	940.74	(P1)
Transmission heat loss coefficient:	276	
Summer heat loss coefficient:	1216.77	(P2)

Overhangs:

Orientation:	Ratio:	Z_overhangs:
North East (FRONT curtain wall)	1	1
North East (FRONT bi fold)	0.57	0.82
North West (SIDE A Curtain wall)	1	1
South West (BACK Curtain)	1	1
South East (SIDE B Curtain Wall)	1	1
Horizontal (Roof light)	0	1

Solar shading:

Orientation:	Z blinds:	Solar access:	Overhangs:	Z summer:	
North East (FRONT curtain wall)	0.9	0.9	1	0.72	(P8)
North East (FRONT bi fold)	0.8	0.9	0.82	0.57	(P8)
North West (SIDE A Curtain wall)	0.9	0.9	1	0.72	(P8)
South West (BACK Curtain)	0.8	0.9	1	0.72	(P8)
South East (SIDE B Curtain Wall)	0.8	0.9	1	0.72	(P8)
Horizontal (Roof light)	1	1	1	1	(P8)

Solar gains:

Orientation	Area	Flux	g_g	FF	Shading	Gains
North East (FRONT curtain wall)	30.97	98.96	0.63	0.8	0.72	1000.9
North East (FRONT bi fold) 9 x	18.5	98.96	0.63	0.8	0.57	475.32
North West (SIDE A Curtain wall)	2.23	98.96	0.63	0.8	0.72	72.07
South West (BACK Curtain) 9 x	63.46	116.76	0.63	0.8	0.72	2419.94
South East (SIDE B Curtain Wall)	2.23	116.76	0.63	0.8	0.72	85.04
1 x	4.32	204	0.63	0.8	1	399.75
Total						4453.02 (P3/P4)

Internal gains:

	June	July	August
Internal gains	687.97	660.95	671.23
Total summer gains	5350.3	5113.97	4669.78 (P5)

SAP 2009 Overheating Assessment

Summer gain/loss ratio	4.4	4.2	3.84	(P6)
Mean summer external temperature (Thames valley)	15.4	17.8	17.8	
Thermal mass temperature increment	1.3	1.3	1.3	
Threshold temperature	21.1	23.3	22.94	(P7)
Likelihood of high internal temperature	Slight	Medium	Medium	
Assessment of likelihood of high internal temperature:	<u>Medium</u>			