SAP 2012 Overheating Assessment

Calculated by Stroma FSAP 2012 program, produced and printed on 24 September 2021

Property Details: 13049 - 5 Mechanical Ventilation

Dwelling type:	Flat
Located in:	England
Region:	Thames valley
Cross ventilation possible:	Yes
Number of storeys:	1
Front of dwelling faces:	North
Overshading:	Average or unknown
Overhangs:	None
Thermal mass parameter:	Indicative Value Medium
Night ventilation:	False
Blinds, curtains, shutters:	None
Ventilation rate during hot weather (ach):	0.8 (Windows slightly open (50 mm))

Overheating Details:

Summer ventilation heat loss coefficient:	80.41	**(P1)**
Transmission heat loss coefficient:	99.9	
Summer heat loss coefficient:	180.35	**(P2)**

Overhangs:

Orientation:	**Ratio:**	**Z_overhangs:**
South (Rear Windows)	0	1
East (E Windows)	0	1
North (Front Windows)	0	1

Solar shading:

Orientation:	**Z blinds:**	**Solar access:**	**Overhangs:**	**Z summer:**	
South (Rear Windows)	1	0.9	1	0.9	**(P8)**
East (E Windows)	1	0.9	1	0.9	**(P8)**
North (Front Windows)	1	0.9	1	0.9	**(P8)**

Solar gains:

Orientation		**Area**	**Flux**	**g_**	**FF**	**Shading**	**Gains**	
South (Rear Windows)	0.9 x	13.51	112.21	0.76	0.7	0.9	653.23	
East (E Windows)	0.9 x	6.85	117.51	0.76	0.7	0.9	346.86	
North (Front Windows)	0.9 x	4.91	81.19	0.76	0.7	0.9	171.77	
						Total	1171.86	**(P3/P4)**

Internal gains:

	June	**July**	**August**	
Internal gains	549.57	526.84	537.04	
Total summer gains	1780.73	1698.7	1626.36	**(P5)**
Summer gain/loss ratio	9.87	9.42	9.02	**(P6)**
Mean summer external temperature (Thames valley)	16	17.9	17.8	
Thermal mass temperature increment	0.25	0.25	0.25	
Threshold temperature	26.12	27.57	27.07	**(P7)**
Likelihood of high internal temperature	**High**	**High**	**High**	

Assessment of likelihood of high internal temperature: High