

FULL SAP CALCULATION PRINTOUT

Calculation Type: New Build (As Designed)

Property Reference	P1 Riley	Issued on Date	12/09/2022
Assessment Reference	P1 Riley	Prop Type Ref	
Property	Plot 1, Riley Road, Reading		
SAP Rating	88 B	DER	13.27
Environmental	89 B	% DER<TER	19.95
CO ₂ Emissions (t/year)	1.00	DFEE	45.30
General Requirements Compliance	Pass	% DFEE<TFEE	9.63
Assessor Details	Mr. Alan Ironmonger, Forum Energy Consultants, Tel: 01303 260656, forumenergy@btinternet.com		Assessor ID
Client	L609-0001		

SAP 2012 OVERHEATING ASSESSMENT FOR New Build (As Designed) 9.92

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Overheating Calculation Input Data

Dwelling type	SemiDetached House
Number of storeys	2
Cross ventilation possible	Yes
SAP Region	Thames Valley
Front of dwelling faces	South West
Overshading	Average or unknown
Thermal mass parameter	240.8 (calculated from construction elements)
Night ventilation	Yes
Ventilation rate during hot weather (ach)	4.00 (Windows half open)

Overheating Calculation

Summer ventilation heat loss coefficient	326.05 (P1)
Transmission heat loss coefficient	74.87 (37)
Summer heat loss coefficient	400.92 (P2)

Overhangs	Ratio	Z_overhangs	Overhang type
Orientation			
South East	0.050	0.960	Normal overhang
South West	0.050	0.960	Normal overhang
North West	0.050	0.978	Normal overhang

Solar shading	Z blinds	Solar access	Z overhangs	Z summer
Orientation				
South East	1.000	0.90	0.960	0.860 (P8)
South West	1.000	0.90	0.960	0.860 (P8)
North West	1.000	0.90	0.978	0.878 (P8)

[Jul]	Area m2	Solar flux Table 6a W/m2	Specific data g or Table 6b	FF Specific data or Table 6c	Shading	Gains W
South East	5.9000	119.9223	0.7200	0.7000	0.8600	276.0092
South West	9.6300	119.9223	0.7200	0.7000	0.8600	450.5032
North West	5.2100	98.8453	0.7200	0.7000	0.8775	204.9811
total:						931.4936

Solar gains	Jun 984	Jul 931	Aug 845	(P3)
Internal gains	540	520	529	
Total summer gains	1524	1452	1374	(P5)
Summer gain/loss ratio	3.80	3.62	3.43	(P6)
Summer external temperature	16.00	17.90	17.80	
Thermal mass temperature increment (TMP = 240.8)	0.31	0.31	0.31	
Threshold temperature	20.12	21.83	21.54	(P7)
Likelihood of high internal temperature	Not significant	Slight	Slight	
Assessment of likelihood of high internal temperature:	Slight			