

Ritchie
+

Daffin

32 a&b Glenilla Road
Overheating Risk Assessment

02 February 2017

SAP 2012 Overheating Assessment

Calculated by Stroma FSAP 2012 program, produced and printed on 01 February 2017

Property Details: 32a - GSHP

Dwelling type:	Semi-detached House
Located in:	England
Region:	South East England
Cross ventilation possible:	No
Number of storeys:	4
Front of dwelling faces:	North East
Overshading:	Average or unknown
Overhangs:	None
Thermal mass parameter:	Indicative Value Medium
Night ventilation:	True
Blinds, curtains, shutters:	Light-coloured curtain or roller blind
Ventilation rate during hot weather (ach):	2.5 (Windows open half the time)

Overheating Details:

Summer ventilation heat loss coefficient:	831.46	(P1)
Transmission heat loss coefficient:	246.7	
Summer heat loss coefficient:	1078.12	(P2)

Overhangs:

Orientation:	Ratio:	Z_overhangs:
South West (O-B-3)	0	1
North West (O-B-4)	0	1
North East (O-B-5)	0	1
North East (O-G-2)	0	1
North West (O-G-3)	0	1
South West (O-G-4)	0	1
North West (O-G-5)	0	1
North East (O-G-6)	0	1
North West (O-G-7)	0	1
South West (O-G-9)	0	1
North East (O-1-1)	0	1
North East (O-1-2)	0	1
South West (O-1-4)	0	1
South West (O-1-5)	0	1
North East (O-2-1)	0	1
South West (O-2-5)	0	1
North West (O-1-3)	0	1
North West (O-2-2)	0	1
North West (O-2-3)	0	1
North West (O-2-4)	0	1
South East (O-G-5)	0	1

Solar shading:

Orientation:	Z blinds:	Solar access:	Overhangs:	Z summer:	
South West (O-B-3)	0.6	0.7	1	0.42	(P8)
North West (O-B-4)	0.6	0.9	1	0.54	(P8)
North East (O-B-5)	0.6	0.9	1	0.54	(P8)
North East (O-G-2)	0.6	0.9	1	0.54	(P8)
North West (O-G-3)	0.6	0.9	1	0.54	(P8)
South West (O-G-4)	0.6	0.9	1	0.54	(P8)

SAP 2012 Overheating Assessment

North West (O-G-5)	0.6	0.9	1	0.54	(P8)
North East (O-G-6)	0.6	0.9	1	0.54	(P8)
North West (O-G-7)	0.6	0.9	1	0.54	(P8)
South West (O-G-9)	0.6	0.9	1	0.54	(P8)
North East (O-1-1)	0.6	0.9	1	0.54	(P8)
North East (O-1-2)	0.6	0.9	1	0.54	(P8)
South West (O-1-4)	0.6	0.9	1	0.54	(P8)
South West (O-1-5)	0.6	0.9	1	0.54	(P8)
North East (O-2-1)	0.6	0.9	1	0.54	(P8)
South West (O-2-5)	0.6	0.9	1	0.54	(P8)
North West (O-1-3)	0.6	1	1	0.6	(P8)
North West (O-2-2)	0.6	1	1	0.6	(P8)
North West (O-2-3)	0.6	1	1	0.6	(P8)
North West (O-2-4)	0.6	1	1	0.6	(P8)
South East (O-G-5)	0.6	1	1	0.6	(P8)

Solar gains:

Orientation		Area	Flux	g _u	FF	Shading	Gains
South West (O-B-3)	0.7 x	3.46	126.97	0.63	0.8	0.42	83.7
North West (O-B-4)	0.9 x	5.15	105.45	0.63	0.8	0.54	133.02
North East (O-B-5)	0.9 x	2.04	105.45	0.63	0.8	0.54	52.69
North East (O-G-2)	0.9 x	6.1	105.45	0.63	0.8	0.54	157.56
North West (O-G-3)	0.9 x	8.05	105.45	0.63	0.8	0.54	207.93
South West (O-G-4)	0.9 x	5.84	126.97	0.63	0.8	0.54	181.63
North West (O-G-5)	0.9 x	5.84	105.45	0.63	0.8	0.54	150.85
North East (O-G-6)	0.9 x	4.4	105.45	0.63	0.8	0.54	113.65
North West (O-G-7)	0.9 x	2.99	105.45	0.63	0.8	0.54	77.23
South West (O-G-9)	0.9 x	5.98	126.97	0.63	0.8	0.54	185.98
North East (O-1-1)	0.9 x	2.65	105.45	0.63	0.8	0.54	68.45
North East (O-1-2)	0.9 x	3.11	105.45	0.63	0.8	0.54	80.33
South West (O-1-4)	0.9 x	3.74	126.97	0.63	0.8	0.54	116.32
South West (O-1-5)	0.9 x	3.94	126.97	0.63	0.8	0.54	122.54
North East (O-2-1)	0.9 x	3.74	105.45	0.63	0.8	0.54	96.6
South West (O-2-5)	0.9 x	3.74	126.97	0.63	0.8	0.54	116.32
	1 x	3.61	145.26	0.63	0.8	0.6	142.72
	1 x	1.21	145.26	0.63	0.8	0.6	47.84
	1 x	1.21	145.26	0.63	0.8	0.6	47.84
	1 x	8.41	145.26	0.63	0.8	0.6	332.48
	1 x	4	200.32	0.63	0.8	0.6	218.08
Total							2733.74 (P3/P4)

Internal gains:

	June	July	August
Internal gains	884.57	849.24	861.1
Total summer gains	3810.22	3582.99	3174.24 (P5)
Summer gain/loss ratio	3.53	3.32	2.94 (P6)
Mean summer external temperature (South East England)	15.4	17.4	17.5
Thermal mass temperature increment	0.25	0.25	0.25
Threshold temperature	19.18	20.97	20.69 (P7)
Likelihood of high internal temperature	Not significant	Slight	Slight

Assessment of likelihood of high internal temperature: Slight

SAP 2012 Overheating Assessment

Calculated by Stroma FSAP 2012 program, produced and printed on 01 February 2017

Property Details: 32b - GSHP

Dwelling type:	Semi-detached House
Located in:	England
Region:	South East England
Cross ventilation possible:	No
Number of storeys:	4
Front of dwelling faces:	North East
Overshading:	Average or unknown
Overhangs:	None
Thermal mass parameter:	Indicative Value Medium
Night ventilation:	True
Blinds, curtains, shutters:	Light-coloured curtain or roller blind
Ventilation rate during hot weather (ach):	2.5 (Windows open half the time)

Overheating Details:

Summer ventilation heat loss coefficient:	843.01	(P1)
Transmission heat loss coefficient:	241.3	
Summer heat loss coefficient:	1084.29	(P2)

Overhangs:

Orientation:	Ratio:	Z_overhangs:
South East (O-B-1)	0	1
South West (O-B-3)	0	1
South East (O-B-4)	0	1
North East (O-B-5)	0	1
North East (O-G-2)	0	1
South East (O-G-3)	0	1
South West (O-G-4)	0	1
South East (O-G-5)	0	1
South East (O-G-6)	0	1
South East (O-G-7)	0	1
South East (O-G-8)	0	1
South West (O-G-9)	0	1
North East (O-1-1)	0	1
North East (O-1-2)	0	1
South West (O-1-4)	0	1
South West (O-1-5)	0	1
North East (O-2-1)	0	1
South West (O-2-5)	0	1
South East (O-1-3)	0	1
South East (O-2-3)	0	1
South East (O-2-2)	0	1
South East (O-2-4)	0	1

Solar shading:

Orientation:	Z blinds:	Solar access:	Overhangs:	Z summer:	
South East (O-B-1)	0.6	0.7	1	0.42	(P8)
South West (O-B-3)	0.6	0.7	1	0.42	(P8)
South East (O-B-4)	0.6	0.9	1	0.54	(P8)
North East (O-B-5)	0.6	0.9	1	0.54	(P8)
North East (O-G-2)	0.6	0.9	1	0.54	(P8)

SAP 2012 Overheating Assessment

South East (O-G-3)	0.6	0.9	1	0.54	(P8)
South West (O-G-4)	0.6	0.9	1	0.54	(P8)
South East (O-G-5)	0.6	0.9	1	0.54	(P8)
South East (O-G-6)	0.6	0.9	1	0.54	(P8)
South East (O-G-7)	0.6	0.9	1	0.54	(P8)
South East (O-G-8)	0.6	0.9	1	0.54	(P8)
South West (O-G-9)	0.6	0.9	1	0.54	(P8)
North East (O-1-1)	0.6	0.9	1	0.54	(P8)
North East (O-1-2)	0.6	0.9	1	0.54	(P8)
South West (O-1-4)	0.6	0.9	1	0.54	(P8)
South West (O-1-5)	0.6	0.9	1	0.54	(P8)
North East (O-2-1)	0.6	0.9	1	0.54	(P8)
South West (O-2-5)	0.6	0.9	1	0.54	(P8)
South East (O-1-3)	0.6	1	1	0.6	(P8)
South East (O-2-3)	0.6	1	1	0.6	(P8)
South East (O-2-2)	0.6	1	1	0.6	(P8)
South East (O-2-4)	0.6	1	1	0.6	(P8)

Solar gains:

Orientation		Area	Flux	g _u	FF	Shading	Gains
South East (O-B-1)	0.7 x	1.36	126.97	0.63	0.8	0.42	32.9
South West (O-B-3)	0.7 x	5.15	126.97	0.63	0.8	0.42	124.58
South East (O-B-4)	0.9 x	5.15	126.97	0.63	0.8	0.54	160.17
North East (O-B-5)	0.9 x	2.04	105.45	0.63	0.8	0.54	52.69
North East (O-G-2)	0.9 x	5.08	105.45	0.63	0.8	0.54	131.21
South East (O-G-3)	0.9 x	3.41	126.97	0.63	0.8	0.54	106.05
South West (O-G-4)	0.9 x	5.84	126.97	0.63	0.8	0.54	181.63
South East (O-G-5)	0.9 x	5.84	126.97	0.63	0.8	0.54	181.63
South East (O-G-6)	0.9 x	2.99	126.97	0.63	0.8	0.54	92.99
South East (O-G-7)	0.9 x	2.99	126.97	0.63	0.8	0.54	92.99
South East (O-G-8)	0.9 x	2.99	126.97	0.63	0.8	0.54	92.99
South West (O-G-9)	0.9 x	5.84	126.97	0.63	0.8	0.54	181.63
North East (O-1-1)	0.9 x	3.94	105.45	0.63	0.8	0.54	101.77
North East (O-1-2)	0.9 x	1.31	105.45	0.63	0.8	0.54	33.84
South West (O-1-4)	0.9 x	3.74	126.97	0.63	0.8	0.54	116.32
South West (O-1-5)	0.9 x	3.94	126.97	0.63	0.8	0.54	122.54
North East (O-2-1)	0.9 x	3.74	105.45	0.63	0.8	0.54	96.6
South West (O-2-5)	0.9 x	3.74	126.97	0.63	0.8	0.54	116.32
	1 x	1.21	180.78	0.63	0.8	0.6	59.53
	1 x	1.21	180.78	0.63	0.8	0.6	59.53
	1 x	5.8	126.97	0.63	0.8	0.6	200.43
	1 x	4.85	126.97	0.63	0.8	0.6	167.6
Total							2505.95 (P3/P4)

Internal gains:

	June	July	August
Internal gains	889.62	854.06	865.96
Total summer gains	3535.46	3360.01	3123.47 (P5)
Summer gain/loss ratio	3.26	3.1	2.88 (P6)
Mean summer external temperature (South East England)	15.4	17.4	17.5
Thermal mass temperature increment	0.25	0.25	0.25
Threshold temperature	18.91	20.75	20.63 (P7)

SAP 2012 Overheating Assessment

Likelihood of high internal temperature

Not significant

Slight

Slight

Assessment of likelihood of high internal temperature:

Slight