Approved Document Part O Simplified overheating Calculations

Site Address

Name/Number	Plot at No. 9
Street	Park Hill
Town	Falmouth
County	Cornwall
Postcode	TR11 3QH

Results

		Target	Result	Pass/Fail
Maximum Glazing Area	**must be less than**	4.1679	**3.8**	PASS
Maximum area of glazing in the most glazed room		4.1426	**2.43**	PASS
Total Minimum Free Area (% of the floor area)		> 9%	**18.31618**	PASS
Total Minimum Free Area (% of the glazing area)		> 55%	**182.6316**	PASS
Bedroom Minimum Free Area		> 4%	See blow	PASS
	Bed 1			
	15.60044893			

Does the dwelling meet the simplified requirements for moderate risk with cross Ventilation? PASS

Building Details

Use	Residential dwelling
Site Location	Cornwall
Risk	Moderate
Cross Ventilation	Yes

Part O Simplified Method Overheating Assessor

Name	Stuart Thomas BSc(Hons) C.Build E FCABE		
Orginisation	Energy Access		
Email address	s.thomas@energyaccess.org.uk		
Date of assessment	1st	March	2024

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				Glazing Permitted Table 1.1 (% Floor area)		Area of glazing allowed on this project
Floor Area of House	LGF	0		North	18	
	GF	26		East	18	
	FF	11.89		South	15	
	SF	0		West	11	**11**
						11
	Total	**37.89**				

Largest Glazed Façade -		permitted	4.1679	***Notes***
Elevation - Galzing m2	N	6.8202		
	NE	6.8202	*take North as worse case	
	E	6.8202		
	SE	5.6835	*take South as worse case	
	S	5.6835		
	SW	4.1679	*take West as worse case	
	W	4.1679		
	NW	4.1679	*take West as worse case	
		0		
		0		

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Maximum area of glazing in the most glazed room (%floor area of room)

			%Glazing Permitted Table 1.1		Area of glazing on this project
Most glazed room is	Liv Kit Din	18.83	North	37	
			East	37	
			South	30	
area of the room			West	22	22
					22
	Total	**18.83**			

Largest Glazed Façade -	Proposed	Glazing	permitted	4.1426	
Elevation - Galzing m2	N		6.9671		
	NE		6.9671	*take North as worse case	
	E		6.9671		
	SE		5.649	*take South as worse case	
	S		5.649		
	SW	2.43	4.1426	*take West as worse case	
	W		4.1426		
	NW		4.1426	*take West as worse case	
			2.43		
		2.43			

Notes

opening siz h	w	area
W1	0.8	0.6	0.48
W2	0.8	0.6	0.48
W3	0.8	0.6	0.48
W4	1.1	0.9	0.99
W5	0	0	0
	total		2.43

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Calculator 2a - Minimum free area for the whole dwelling

Free area or equivalent area of windows	6.94		
Floor area of Whole dwelling	37.89		
Glazing area of whole dwelling	3.8		
Free Area as a % of floor area	18.31618	%	target is > than 9% of the floor area
Free Area as a % of the glazing area	182.6316	%	target is > than 55% of the glazed area

Calculator 2b - Minimum free area for the bedrooms

Bedroom 1

Free area or equivalent area of windows for the bedroom	1.39	
Floor area of the bedroom	8.91	
% of floor area	**15.60045**	

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Whole Dwelling Equivalent Free Area *assumed 50mm frame around glazing

	Window Location	Window Reference	Window Orientation	Glazing* Height	Glazing* Width	Glazing Areas	Opening Angle	Equivilent Area (tables D1-D9)	Structural Op Height	Structural Op Width
1	Kit Liv Din		North West	0.8	0.6	0.48	90	1.77	2.1	0.9
2	Bathroom		North West	0.2	1	0.2	45	0.24	0.4	1.2
									Total area	**0.68**
3	Kit Liv Din		South West	0.8	0.6	0.48	90	1.77	2.1	0.9
4	Bedroom		South West	1	0.7	0.7	45	0.74	1.2	0.9
5	Bedroom		South West			0.47	90	0.65	1.18	0.66
									Total area	**1.65**
6	Kit Liv Din		Flat	1.1	0.9	0.99	0	0	1.2	1
									Total area	**0.99**
7	Kit Liv Din		South East	0.8	0.6	0.48	90	1.77	2.1	0.9
									Total area	**0.48**

						3.8		6.94		

Notes

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Bedroom - Equivalent Free Area

	Window Reference	Window Orientation	Glazing Height	Glazing Width	Glazing Area	Opening Angle	Equivilent Area (tables D1-D9)
Bedroom 1							
	1	South West	1	0.7	0.7	45	0.74
	2	South West			0.47	90	0.65
	3						
	4						
	5						
					1.17		1.39

The Equivalent Areas have also been Derived using Dr B Jones Window Discharge Coefficient calculator

The window discharge coefficient calculator was developed by
Dr Benjamin Jones of Nottingham University.
And is a copy of the calculator found on the governement website here.