Section 1: Buildings or parts of buildings with cross-ventilation should not exceed the maximum glazing areas

Section 1a: Limiting solar gains - Maximum glazing area for the dwelling

1. Use 'Calculator 1a- Maximum glazing area for dwelling'
2. Select from the drop down list the orientation of the most glazed façade
3. This will highlight the cell in Table 1 you need to enter once calculated
4. Enter the floor area and glazing area
5. Take the calculated Area of glazing (% floor area) and put it into the now teal coloured box in Table 1.
6. If this stays teal with green front then it meets the standard, if it turns red the the value exceeds the standards (see reference table).

Calculator 1a- Maximum glazing area for dwelling	
Orientation of the façade that has the largest glazing area	East
Floor area of dwelling	112.01
Glazing area of most glazed orientation	6.35
Area of glazing (% floor area)	5.67

Section 1b: Limiting solar gains - Maximum glazing area in the most glazed room

1. Use 'Calculator 1b - Maximum glazing area for most glazed room'
2. Select from the drop down list the orientation of the most glazed façade (does not have to be the same orientation as calculation 1a)
3. This will highlight the cell in Table 1 you need to enter once calculated
4. Enter the floor area and glazing area
5. Take the calculated area of glazing (%floor area) and put it into the now teal coloures box in Table 1,
6. If this stays teal with green front then it meets the standard, if it turns red the the value exceeds the standards (see reference table).

Calculator 1b- Maximum glazing area for most glazed room	
Orientation of the façade that has the largest glazing area in most glazed room	East
Floor area of most glazed room	25.60
Glazing area of most glazed room	3.80
Maximum area of glazing in the most glazed room (% floor area of room)	14.84

Table 1: Enter your dwellings data (see instructions)			Reference Table: Limits taken from Approved Document O		
Section 1: Buildings or parts of buildings with cross-ventilation should not exceed the maximum glazing areas			Section 1: Buildings or parts of buildings with cross-ventilation should not exceed the maximum glazing areas		
Largest glazed façade orientation	Maximum area of glazing (% floor area)	Maximum area of glazing in the most glazed room (% floor area of room)	Largest glazed façade orientation	Maximum area of glazing (% floor area)	Maximum area of glazing in the most glazed room (% floor
North	0.00	0.00	North	18	37
East	5.67	14.84	East	18	37
South	0.00	0.00	South	15	30
West	0.00	0.00	West	11	22
Pass/Fail?	Pass	Pass			
Section 1 maximum glazed area (pass/fail?)		Pass			

Section 2: Buildings or parts of buildings with cross-ventilation should be equal to or exceed the minimum free areas

Section 2a: Removing excess heat - Minimum free area for whole dwelling

1. Use 'Calculator 2a - Minimum Free Area for Whole Dwelling'
2. Calculate the equivalent area of all the openings in the dwelling (to do this you can use tab 'Free Eqv Area')
3. Enter the floor area and glazing area
4. Table 2 will then calculate the minimum free area and compare this to the equivalent area
5. If it meets requirements the cell will go green and if does not meet the requirements the cell will go red.

Calculator 2a - Minimum Free Area for Whole Dwelling	
Equivalent area of openings	11.57
Floor area of whole dwelling	112.01
Glazing area of whole dwelling	13.64

Section 2b: Removing excess heat - Minimum free area for bedrooms

1. Use 'Calculator 2b - Minimum free area for bedrooms'
2. Calculate the equivalent area of all the bedroom openings (to do this you can use tab 'Free Eqv Area')
3. Enter the floor area of the bedroom
4. Table 2 will then calculate the minimum free area and compare this to the equivalent area
5. If it meets requirements the cell will go green and if does not meet the requirements the cell will go red.

Calculator 2b - Minimum free area for bedrooms

Bedroom 1		*Bedroom 2 - Only enter if present*		*Bedroom 3 - Only enter if present*	
Free area or Equivalent area of windows for	1.45	Free area or Equivalent area of windows for	0.75	Free area or Equivalent area of windows for	1.45
Floor area of bedroom	9.33	Floor area of bedroom	12.70	Floor area of bedroom	12.45
Bedroom 4 - Only enter if present		*Bedroom 5 - Only enter if present*			
Free area or Equivalent area of windows for	0.00	Free area or Equivalent area of windows for	0.00		
Floor area of bedroom		Floor area of bedroom			

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Table 2: Enter your dwellings data (see instructions)			Reference Table: Limits taken from Approved Document O	
Section 2: Buildings or parts of buildings with cross-ventilation should equal or exceed the minimum free areas			Section 2: Buildings or parts of buildings with cross-ventilation should equal or exceed the minimum free areas	
The greater of the following:	Minumum Free Area (m2)	welling Equivallent area (m2		The greater of the following:
Floor area	10.08	11.57	Total mimimum free area*	a. 9% of the floor area
Glazing Area	7.50	11.57		b. 55% of the glazing area
Bedroom 1	0.37	1.45		
Bedroom 2	0.51	0.75		
Bedroom 3	0.50	1.45	edroom minimum free are	4% of the floor area of the room
Bedroom 4	0.00	0.00		
Bedroom 5	0.00	0.00		
Total Minimum Free Area		**Pass**		
Bedrooms minimum Free Area Result		**Pass**		
Section 2: Minimum Free Area (pass/fail)		**Pass**		

Does the dwelling meet the simplified requirments for moderate risk with cross ventilation?	**Pass**

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Approved Document O - Simplified Method Report

The Assessment for Land Adjacent to 30 Eggars Field is currently passing the simplified overheating risk assessment for the following reasons:

- The glazing surface area of the most glazed orientation of the dwelling, does not exceed the maximum allowable area of glazing.

- The actual free area of all the openings combined is more than the target free area of all the openings combined (as a percentage of the floor area).

- The actual free area of all the openings combined is more than the target free area of all the openings combined (as a percentage of the glazing area)

- The Actual free area of the opening in any or all of the bedrooms is more than the target free area (target is 4.00% of the floor area of the specific bedroom).

Because the assessment achieves compliance with Approved Document O, no further action is required and this can now be signed off by building control.

Building and Site Details	
Residential building name/number	Land Adjacent to 30
Street	Eggars Field
Town	Fareham
County	Hampshire
Postcode	GU10 5LD
Proposed building use/type of building	Dwelling
Are there any security, noise or pollution issues?	N/A
Site Details	N/A
Is this building high risk and shading stategy required?	Mod Risk | No
Shading strategy included? (Give details)	No shading strategy Included

Results

	Target	Result	Pass/Fail?	
Maximum area of glazing (%)	18	5.67	**Pass**	
Maximum area of glazing in the most glazed room (%)	37	14.84	**Pass**	
Total minimum free area as % floor area (m²)	10.08		11.57	**Pass**
Total minimum free area % glazing area (m²)	7.50		11.57	**Pass**
The greater of the minimum free area(floor area or glazing area) should pass - Highlighted yellow				
Bed 1 min free area (m²)	0.37		1.45	**Pass**
Bed 2 min free area (m²)	0.51		0.75	**Pass**
Bed 3 min free area (m²)	0.50		1.45	**Pass**
Bed 4 min free area (m²)	0.00		0.00	**Pass**
Bed 5 min free area (m²)	0.00		0.00	**Pass**
Dwelling overall result		**Pass**		

Designer's declaration	
Designer's name	
Designer's organisation	
Deginers email	
Designers contact number	
Designer's signature	
Registration number (if applicable)	
Date of design	

Approved Document O - Simplified Method Frequently Used Terms

Cross-ventilation The ability to ventilate using openings on opposite façades of a dwelling. Having openings on façades that are not opposite is not allowing cross-ventilation, e.g. in a corner flat.
Effective area The area through which air flows after the resistance of airflow has been taken into account.
Equivalent area A measure of the aerodynamic performance of an opening. It is the area of a sharp-edged circular orifice through which air would pass at the same volume or rate, under an identically applied pressure difference, as through the opening under consideration.
Free area The geometric open area of a ventilation opening. This area assumes a clear sharp-edged orifice that would have a coeffcient of discharge (Cd) of 0.62.
Floor area The area of the residential unit, measured to the internal face of the perimeter walls at each floor level.
Glazing area The area of transparent material, not including the window frame.
Dynamic thermal modelling A method of building modelling that predicts the internal conditions and energy demands of a building at short time intervals using weather data and building characteristics.