

Design Navigator H1 Compliance Report

Project Summary

H1 Report created by: Homeworx Design and Build Limited

Project Name: Ashworth Home

Client: Leith and Tracy Ashworth

Lot 1 DP28080

Comment: 619 Kereru Road

Maraekakaho

Hastings

Project Id: 108372

Report Date: 21/01/2018

Compliance Result

This report shows compliance of the design with Clause H1 Fourth edition Amendment 3 from January 2017 and the R-value targets of Clause E3 Second edition Amendment 6 from January 2017.

This building complies with H1 via the following methods:

• the Calculation Method in NZS4218:2009

H1 Compliance Details

NZS4218:2009 Calculation Method Compliance

The use of the Calculation Method is permitted .

In order to comply the Actual Heat Loss must be the same or smaller than the Reference Heat Loss AND all component R-values must be the same or larger than 50% of the R-values in the '50% Rule' table below. This design **complies** with the NZS4218:2009 Calculation Method.

HeatLoss:

Reference Proposed building building 587 555

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Minimum R-values ("50% rule"):

Permitted Proposed Minimum Minimum

Floor: 0.65 1.97

Non-solid Walls: 0.95 2.01

Roof: 1.45 3.1

The Reference building has the following areas and R-values.

		Non-solid	Solid Timber	Other Solid
		100.0	0.0%	0.0%
Floor:	Area: 201 m² R-values:	1.3	1.3	1.5
Walls excl. glazing:	Area: 126.1 m² R-values:	1.9	1.2	1
Glazing (up to 30%):	Area: 63.2 m² R-values:	0.26	0.26	0.26
Glazing (surplus of 30%):	Area: 21.4 m² R-values:	0.4	0.34	0.31
Roof:	Area: 201 m² R-values:	2.9	3.5	3.5
Heat Loss:		587	623	630

For mixed constructions the heat loss of the reference building is calculated as the sum of the heat losses for each type of wall construction multiplied by the fraction of the wall area of each type. This approach is based on clause 4.2.6 of NZS4218:2009. There are no skylights in the reference building. The reference building roof area is the sum of the proposed building roof and skylight areas.

Compliance with Clause E3

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This building complies with the R-value targets in NZBC Clause ${\sf E3}$.

Component	Minimum R-value	,
Framed wall constructions with cavities	1.5	
Single skin masonry wall without a cavity	0.6	
Solid timber wall no less than 60 mm thick	0.6	
Roof or ceilings	1.5	

Design Details

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Building Dimensions	
Floor Area	$\boxed{201}$ m ²
Gross Wall Area	210.7 m ²
Net Wall Area	126.1 m ²
Wall (North) Area	36.2 m ²
Wall (East, South and West) Area	89.9 m²
Gross Roof Area	201 m²
Net Roof Area	201 m²
Glazing Area	84.6 m²
Window (North) Area	39.4 m²
Window (East, South and West) Area	45.2 m ²
Skylight Area	0 m^2
Glazing Areas	
Total Vertical Glazing Percentage	40.1 %
East, South and West Window Percentage	
Total over 30%	yes
East, South and West over 30%	yes
Total over 50%	no
max. Skylight Area for Schedule Method	3.01 m ²
Skylights over Schedule Method Limit	no
Decorative Glazing	0 m^2
Decorative Glazing over 3m ²	no
Information required for BPI calculation	201 mg² Nicks. This is also does also inhomed flagge
Living Floor Area	201 m² Note: This includes also internal floors.
Average Room Height	2.6 m
Thermal Mass Level	Heavy weight Slab floor with substantial floor areas polished or tiled, some heavy mass solar facing walls.
Climate	Haskin na
Location	Hastings
Climate Zone	2

Heat Loss Details

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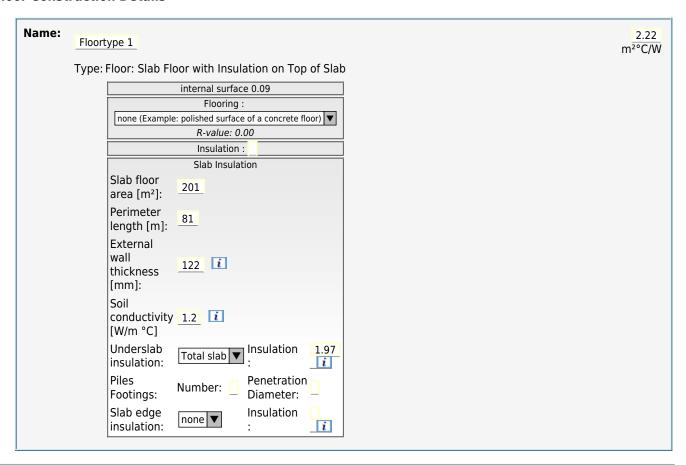
	ID	Orient.	Width	Height	Gross Area	Net Area	R-value*	Heat Loss	Shad. Solid Coeff.** Wall***
<u>Floors</u>									
Floor 1	Main Floor				201.0	201.0	1.97	102.0	
<u>Walls</u>									
Wall 1	North	N	29.6	2.5	75.6	36.2	2.01	18.0	С
Window 1-1	Windows & Doo		17.9	2.2		39.4	0.26	151.5	0.53
Wall 2	East	Е	14.5	2.5	37.0	21.6	2.01	10.7	С
Window 2-1	Windows and D		7.0	2.2		15.4	0.26	59.2	0.53
Wall 3	South	S	23.9	2.5	61.1	39.4	2.01	19.6	С
Window 3-1	Windows and D		9.8	2.2		21.6	0.26	83.2	0.53
Wall 4	West	W	14.5	2.5	37.0	28.8	2.01	14.3	С
Window 4-1	Windows and D		3.7	2.2		8.1	0.26	31.3	0.53
<u>Roofs</u>									
Roof 1	Whole Roof				201.0	201.0	3.10	64.8	
Total Heat Lo	SS							554.8	

^{*} Any concrete slab-on-ground floor regardless of its dimensions can be assumed to have an R-value of at least R-1.3 $(H1/AS1\ 2.1.5)$.

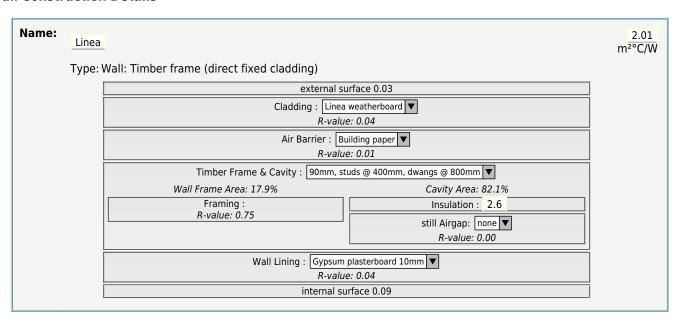
^{**} The Shading Coefficient is only required for BPI calculations.

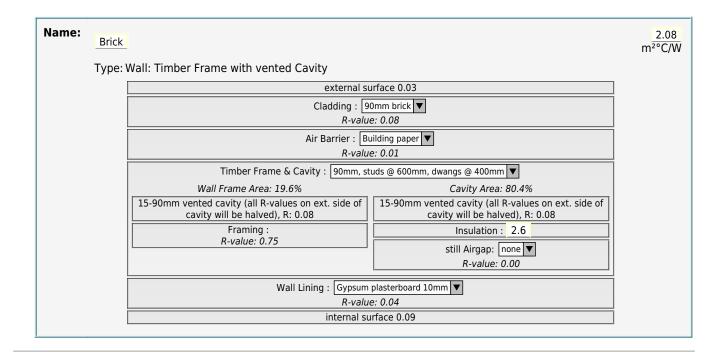
^{***} C: Cavity Construction (any construction that is not solid), T: Solid Timber, S: Other Solid Construction (Note that the use of solid timber and other solid construction types is discretional, i.e. solid timber walls and other solid walls can be treated as if they are non-solid (NZS4218:2009 section 4.1.3.).)

Floor Construction Details



Wall Construction Details





Roof Construction Details

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