

JOB INFORMATION

Job Reference	12345	¹ AVG TIMBER % ALL 40.20%
Customer	PlaceMakers Frame & Truss	
Project Name	-	¹ AVG TIMBER % ALL w/o NOGS N/A
Site Address	Lot 1, 123 Street, Auckland	
Stud Spacings	300 / 400	² AVG TIMBER % SELECT 26.85%
Nog Spacings	800	
# of External Frames	43	

PANEL INFORMATION

Panel Name	Insulatable Area (m2)	Timber %	Stud Spacing (mm)	Nog Spacing (mm)
E-1	9.37	33.90%	300	800
E-6	0.19	100.00%	300	-
E-10	1.14	47.58%	300	800
E-11	11.83	24.69%	300	800
E-12	9.35	36.16%	300	800
E-13	0.35	72.76%	300	800
E-15	0.21	100.00%	300	-
E-17	0.22	100.00%	300	-
E-18	5.81	43.55%	300	800
E-19	7.91	48.88%	300	800
E-20	5.27	42.92%	300	800
E-21	12.31	32.68%	300	800
E-22	12.48	33.13%	300	800
E-23	11.52	40.00%	300	800
E-24	5.81	50.32%	300	800
E-25	6.30	37.63%	300	800
E-26	5.27	50.19%	300	800
E-27	5.23	34.52%	300	800
E-30	0.48	100.00%	400	-
E-31	1.64	39.80%	400	-
E-32	0.78	46.62%	400	800
E-33	8.87	36.73%	400	800
E-34	4.93	35.80%	400	800
E-35	2.15	63.48%	400	800
E-36	7.02	20.69%	400	800
E-37	8.93	38.26%	300	800
E-38	8.45	34.78%	300	800
E-39	5.78	37.07%	400	800
E-40	8.21	33.55%	400	800
E-41	10.87	19.71%	400	800
E-42	4.58	37.66%	400	800
E-43	10.30	35.64%	400	800
E-44	12.69	33.91%	400	800
E-45	6.49	23.07%	400	-
E-46	4.60	23.75%	400	-
E-48	2.91	24.44%	400	-
E-49	4.21	24.78%	400	-
E-50	2.96	26.72%	400	-
E-2	5.44	40.24%	300	800
E-3	4.62	51.08%	300	-

GENERAL INFORMATION

1. PlaceMakers Framology timber percentage report (Avg Timber % ALL figure 1) encapsulates ALL timber members contained within the wall framing across the build that contribute to thermal bridging. This is to a higher standard than is requested in H1/VM1 5th edition amendment 1. Section 2.1.3.3 (b)* This approach of including ALL timber components aligns with the encouraged BRANZ best practice. The frame by frame breakdown percentages listed include ALL timber components.
2. PlaceMakers Framology timber percentage report (Avg Timber % Select figure 2) encapsulates ONLY the following timber components: Studs, Dwargs, Top plates & Bottom. ALL other timber components are EXCLUDED from the computation.

(H1/VM1 5th edition amendment 1. Section 2.1.3.3 (b)* states the following: For framed walls, the R-value shall include the effects of studs, dwangs, top plates and bottom plates, but may exclude the effects of lintels and sills, and additional studs that support lintels and sills, and additional studs at corners and junctions)
3. PlaceMakers Framology timber percentage report carries a practical application accuracy of [+/- 1%].
4. PlaceMakers Framology timber percentage report is based on the specifications included in the architectural & engineering plans as well as NZS:3604 minimum construction standards.
5. The calculation is based on timber component square area as a percentage of the overall exterior wall area excluding glazing.
6. Situations that could impact on its applicable accuracy include but are not limited to:
 - I. Builds with parapet or gable wall framing that extends above the ceiling line due to the framing that sits above the thermal envelope being included in the calculation.
 - II. Uninsulated exterior garage walls. The Tool only takes into consideration walls marked as exterior.
 - III. Top plate configuration. If a 140x35 capping plate is to be site fitted then it will not have been accounted for in the PlaceMakers Framology timber percentage.
 - IV. Transversely, if a decision is made at a later stage to supply & fit a secondary top plate at manufacturing plant then this could increase PlaceMakers Framology timber percentage ratio figure post detailing versus the figure provided at point of estimation.
7. The calculation is based on timber component square area as a percentage of the overall exterior wall area excluding glazing.
8. PlaceMakers Framology timber percentage report is based on the information provided at the time the calculation was done. Any changes to the initial information may give rise to a different outcome. A revised computation is required for a more accurate percentage ratio, for example specification changes often occur between concept vs pre consent vs stamped consented plans, all of which can impact on framing percentages. It is advised that you always use the percentages provided as a general guide rather than an absolute figure.
9. The figures outlined in the PlaceMakers Framology timber percentage report (the "Tool") is true and accurate ONLY for frames designed and manufactured by PlaceMakers Frame and Truss. It should NOT be taken as a universal reflection of timber content for the stated build.

PlaceMakers Framology timber percentage report (the "Tool") is used to calculate PlaceMakers Framology timber percentage ratio

* H1/VM1 5th edition amendment 1 is a verification method issued under section 22(1) of the Building Act 2004.

SO WHAT IS IT?

Not all timber frames are created equal, and many new homes contain far more timber than designers might assume. This became evident following a 2020 report commissioned by BRANZ showing that the wall area of new dwellings consisted of on average 34% timber, around double what was often assumed in R-value calculations. When individual house levels across a sample were looked at, the minimum percentage of timber framing found was 24% while the maximum was slightly over 57% (see BRANZ ER53).

Since then, BRANZ has updated their House Insulation Guide to help designers account for varying levels of timber fraction when calculating effective R-value for H1 Energy Efficiency compliance. But this still leaves the question of how to calculate the timber fraction, The Timber Percentage Report by PlaceMakers Framology provides designers this important piece of information.

WHAT DOES THE INFORMATION WITHIN THE REPORT MEAN?

H1/VM1 5th edition amendment 1 states the following:

2.1.3.3 (b) For framed walls, the R-value shall include the effects of studs, dwangs, top plates, and bottom plates but may exclude the effects of lintels, sills, additional studs that support lintels and sills, and additional studs at corners and junctions...

However we also know that all timber within wall framing contributes to thermal bridging, impacting on the true achieved construction R-value

¹
**AVG TIMBER %
ALL 40.20%**

As you can see here in the top box - this is all timber within the wall framing as a percentage of the overall exterior wall area (ex glazing)

In this bottom box we have measured only the following components - studs, noggs, and plates as a percentage of the overall exterior wall area (ex glazing)

²
**AVG TIMBER %
SELECT 26.85%**

The report will also include a wall by wall breakdown with its own percentage, this will enable designers to hone in on specific areas of the build. *Note the wall by wall breakdown percentage accounts for all timber within the framing*

For more information on the PlaceMakers Framology Timber Percentage Report; please read the General Information section of the report