HOW CAN NORTHPINE SG10 HELP?

CONSIDER SG10

- Use our unique SG8/SG10 Span Tables to calculate what works best for your project www.northpine.co.nz/span-tables
- 3.6m to 7.2m lengths, treated up to H5
- Specify Northbeam on plans
- Bespoke orders via merchants nationwide
- Available within reasonable timeframes

LESS TIMBER VOLUME

- Environmental benefits
- Cost-effective choice
- Saves time and labour

LESS THERMAL BRIDGING

- Achieved by increasing stud and rafter centres
- Insulation is easier to install
- Up to 50% fewer studs required

BETTER CONSTRUCTION R-VALUES (See Back Page for calculation)

- To meet new H1 requirements effective since May 2023

MEETING NEW H1 REQUIREMENTS

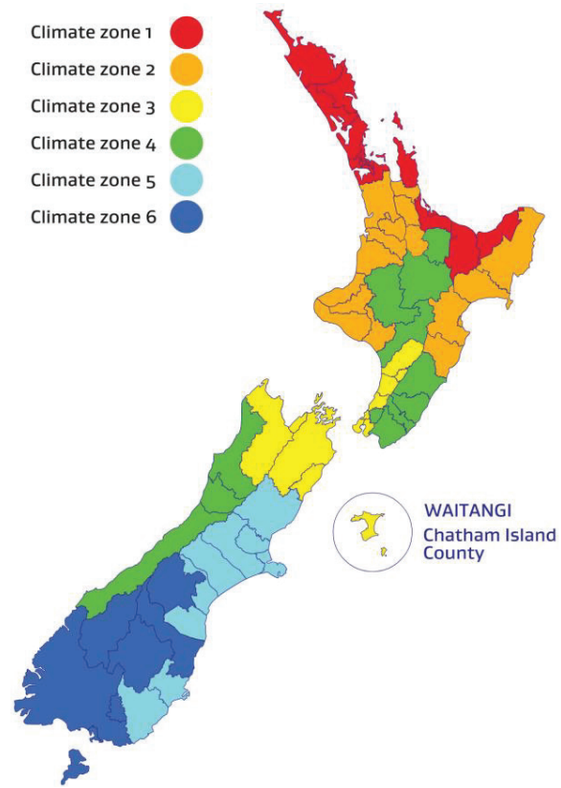
The thermal resistance (R-value) of a 90 x 45 timber member is currently R1.0 Under the new Building Code rules since May 2023, the least required R-value of a wall is R2.0.

ENERGY EFFICIENCY FOR LARGE BUILDINGS (OVER 300M²) EXCLUDING INDUSTRIAL

Building element	Climate zone					
	1	2	3	4	5	6
Roof	R3.5	R4.0	R5.0	R5.4	R6.0	R7.0
Windows	R0.33		R0.37		R0.40	
Wall	R2.2	R2.4	R2.7	R3.0		R3.2
Underfloor	R2.2			R2.4	R2.5	R2.6

ENERGY EFFICIENCY FOR SMALL BUILDINGS (UNDER 300M²)

Building element	Climate zone					
	1	2	3	4	5	6
Roof	R6.6					
Windows	R0.37		R0.46		R0.50	
Wall	R2.0			R2.0		
Slab-on-ground floors	R1.5			R1.5	R1.6	R1.7
Other floors	R2.5			R2.8	R3.0	



NORTHBEAM

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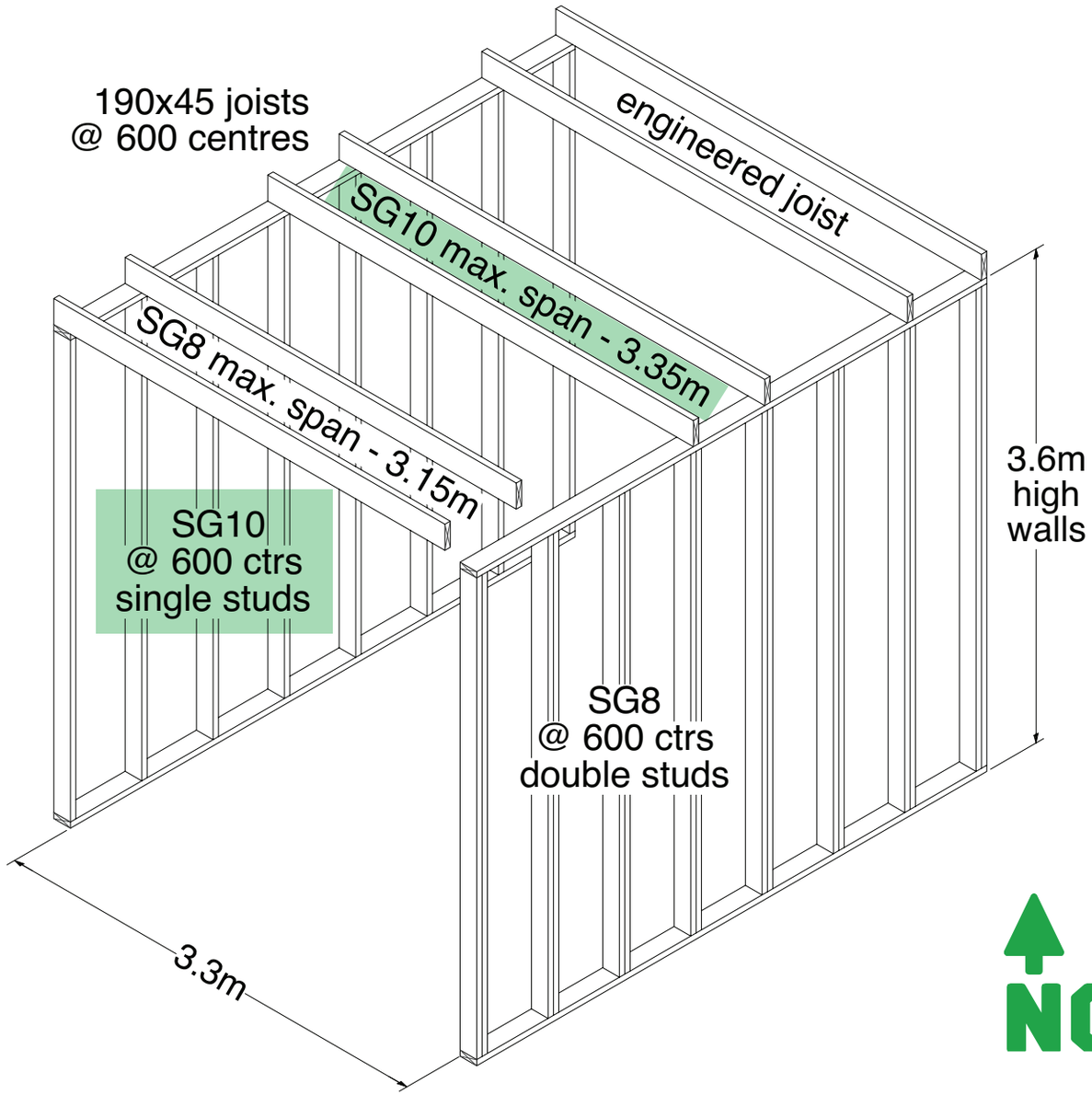
JOISTS & STUDS



VALUE EQUATION

If SG8 costs 100%
SG10 costs 125%
and Engineered timber costs 180%*

SG10 single stud wall cost about 65% less than SG8 double stud wall and is much lighter to maneouvre on site.

***Indicative only, based on prices current July 2023**

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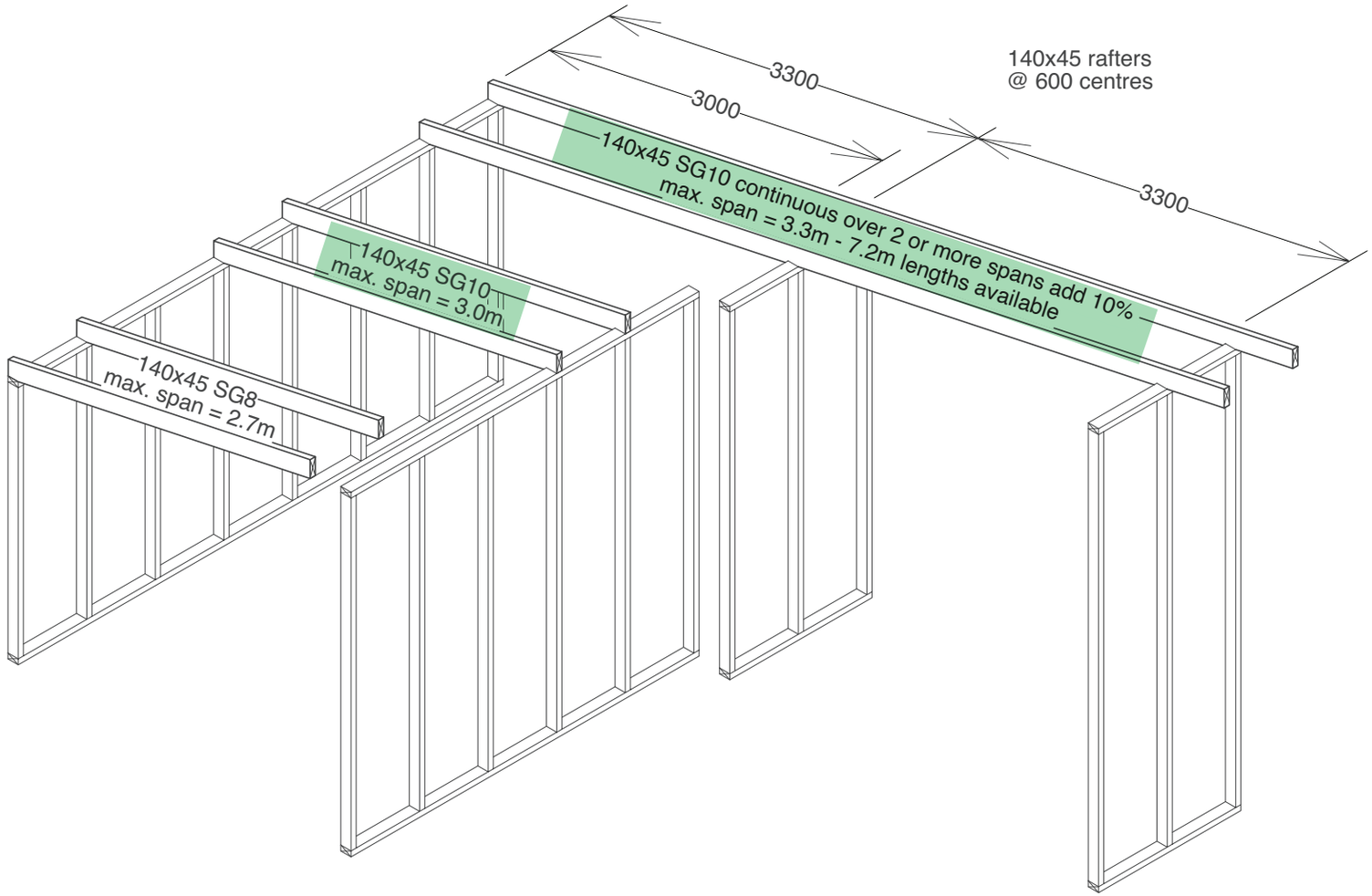
BRANZ Appraised
Appraisal No.986 [2017]

RAFTERS



VALUE EQUATION

If SG8 costs 100%
SG10 costs 125%
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CONSTRUCTION R-VALUE CALCULATION

Timber frame wall with insulation between timber framing 90mm x 45mm @ 600 ctrs - **DOUBLE STUD (SG8)**

External description	Thickness (mm)	R-value(m^2K/W)
External surface resistance		0.030
Layer 1 - Bevel-backed weatherboard	19	0.152
Layer 2 - Knauf Insulation between timber framing		1.991
Layer 3 - Plasterboard lining	13	0.062
Internal surface resistance		0.090
TOTAL CONSTRUCTION R-VALUE		2.325

CONSTRUCTION R-VALUE CALCULATION

Timber frame wall with insulation between timber framing 90mm x 45mm @ 600 ctrs - **SINGLE STUD (SG10)**

External description	Thickness (mm)	R-value(m^2K/W)
External surface resistance		0.030
Layer 1 - Bevel-backed weatherboard	19	0.152
Layer 2 - Knauf Insulation between timber framing		2.332
Layer 3 - Plasterboard lining	13	0.062
Internal surface resistance		0.090
TOTAL CONSTRUCTION R-VALUE		2.666

CONCLUSION: Using single stud SG10 in place of double stud SG8 can increase construction R-values by over 14% in walls.

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