

# U-VALUE CALCULATOR REPORT

Property Reference	P2312002	Issued on Date	02/01/2024
Assessment Reference		Prop Type Ref	
Project	Langata, Tregadillett, Launceston, Cornwall, PL15 7EX		
Calculation Type	New Build (As Designed)		

SAP Rating		DER		TER	
Environmental		% DER<TER			
CO <sub>2</sub> Emissions (t/year)		DFEE		TFEE	
General Requirements Compliance		% DFEE<TFEE			

Assessor Details	Mr. Stuart Foster, Stuart Foster, Tel: 01872 211 433, energy@stuartfoster.co.uk	Assessor ID	CK03-0001
Client			

## Building Elements

### Wall Typical Wall

#### Wall Type: Timber framed Wall with I-beams

Layer	Description	Thickness (mm)	Conductivity (W/m <sup>2</sup> K)	Resistance (m <sup>2</sup> K/W)	Fraction (%)
Ext surface				0.0400	
Layer 1	<b>Softwood, dry</b>				
	Main construction	22	0.1300	0.1692	100.00
Layer 2	<b>airspace/timber battens</b>				
	Main construction	22	0.1222	0.1800	89.63
	Main construction	22	0.1243	0.1770	10.37
	Corrections - Cavity Unventilated, Emissivity: Normal				
Layer 3	<b>airspace/timber battens</b>				
	Main construction	22	0.1222	0.1800	89.63
	Main construction	22	0.1243	0.1770	10.37
	Corrections - Cavity Unventilated, Emissivity: Normal				
Layer 4	<b>Breather membrane</b>				
	Main construction	1	0.0000	0.0000	100.00
Layer 5	<b>Orientated Strand Board</b>				
	Main construction	9	0.1300	0.0692	100.00
Layer 6	<b>Celotex XR4000</b>				
	Main construction	140	0.0220	6.3636	92.64
	Main construction	140	0.1300	1.0769	7.36
	Corrections - Air Gap: Level 1, Fasteners: None or plastic				
Layer 7	<b>Polythene,1000 gauge</b>				
	Main construction	1	0.0000	0.0000	100.00
Layer 8	<b>Thermawall TW50 zero ODP</b>				
	Main construction	25	0.0220	1.1364	96.83
	Main construction	25	0.1300	0.1923	3.17
	Corrections - Air Gap: Level 1, Fasteners: None or plastic				
Layer 9	<b>Plasterboard, standard</b>				
	Main construction	12.5	0.2100	0.0595	100.00
Int surface				0.1300	

<b>Total resistance:</b>	<b>Upper limit =</b> 7.340 m <sup>2</sup> K/W	<b>Lower limit =</b> 6.486 m <sup>2</sup> K/W	<b>Average =</b> 6.913 m <sup>2</sup> K/W
	<b>Total correction =</b> 0.0048 m <sup>2</sup> K/W	<b>U-value (unrounded) =</b> 0.15 W/m <sup>2</sup> K	

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Unheated space: None

**Total thickness: 255 mm**

**U-value: 0.15 W/m<sup>2</sup> K**

**Kappa: n/a**