

U-VALUE CALCULATOR REPORT

Property Reference	21124	Issued on Date	20/12/2021
Assessment Reference		Prop Type Ref	u-values
Project	Re-Purposed PIR Insulation		
Calculation Type	Conversion (As Designed)		

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

Assessor Details	Mrs. Susan Fox, SF Energy Limited, Tel: 07825 631518, suzi@sfenergy.co.uk	Assessor ID	C358-0001
Client	MAC Architects, M151		

Building Elements

Wall Block Render Wall column B - 130mm + 50mm Repurposed PIR

Wall Type: Standard Wall

Layer	Description	Thickness (mm)	Conductivity (W/m ² K)	Resistance (m ² K/W)	Fraction (%)
Ext surface				0.0400	
Layer 1	Render				
	Main construction	20	1.0000	0.0200	100.00
Layer 2	Blockwork				
	Main construction	100	1.5900	0.0629	100.00
Layer 3	ventilated cavity				
	Main construction	50	0.5556	0.0900	100.00
	Corrections - Cavity Slightly ventilated, Openings Area: 1000 mm, Emissivity: Normal				
Layer 4	Proctor Frameshield 100				
	Main construction	0.5	0.0000	0.0000	100.00
Layer 5	Orientated Strand Board				
	Main construction	9	0.1300	0.0692	100.00
Layer 6	KR Cladding Repurposed PIR / studs				
	Main construction	140	0.0310	4.5161	85.00
	Main construction	140	0.1300	1.0769	15.00
	Corrections - Air Gap: Level 1, Fasteners: None or plastic				
Layer 7	airspace / studs				
	Main construction	5	0.0455	0.1100	85.00
	Main construction	5	0.1300	0.0385	15.00
	Corrections - Cavity Unventilated, Emissivity: Normal				
Layer 8	Reflectatherm				
	Main construction	0.5	0.0000	0.0000	100.00
Layer 9	service void				
	Main construction	35	0.0449	0.7800	92.17
	Main construction	35	0.1300	0.2692	7.83
	Corrections - Cavity Unventilated, Emissivity: Normal				
Layer 10	Plasterboard, standard				
	Main construction	12.5	0.2100	0.0595	100.00
Int surface				0.1300	

Total resistance:	Upper limit = 4.784 m ² K/W	Lower limit = 4.290 m ² K/W	Average = 4.537 m ² K/W
	Total correction = 0.0045 m ² K/W	U-value (unrounded) = 0.22 W/m ² K	

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Unheated space: None

Total thickness: 373 mm

U-value: 0.22 W/m² K

Kappa: n/a