

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 Boundary Wall column A - 90mm + 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	Blockwork				
	Main construction	215	1.5900	0.1352	100.00
Layer 2	Bituminous DPC strip				
	Main construction	1	0.5000	0.0020	100.00
Layer 3	timber battens				
	Main construction	20	0.1143	0.1750	92.17
	Main construction	20	0.1300	0.1538	7.83
	Corrections - Cavity Unventilated, Emissivity: Normal				
Layer 4	KR Cladding Repurposed PIR				
	Main construction	90	0.0310	2.9032	100.00
	Corrections - Air Gap: Level 0, Fasteners: None or plastic				
Layer 5	KR Cladding Repurposed PIR				
	Main construction	50	0.0310	1.6129	100.00
	Corrections - Air Gap: Level 0, Fasteners: None or plastic				
Layer 6	Reflectatherm				
	Main construction	0.5	0.0000	0.0000	100.00
Layer 7	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 8	Plasterboard, standard				
	Main construction	12.5	0.2100	0.0595	100.00
Int surface				0.1300	

Total resistance: Upper limit = 5.793 m² K/W Lower limit = 5.735 m² K/W Average = 5.764 m² K/W
 Total correction = 0.0000 m² K/W U-value (unrounded) = 0.17 W/m² K

Unheated space: None

Total thickness: 424 mm

U-value: 0.17 W/m² K

Kappa: n/a