

Back to Earth SW Ltd

7 Tuns Lane
Silverton
Exeter
EX5 4HY

Project Information

Reference

Date 4 December 2023

Construction Type

Element : Wall - Wall-masonry-solid-internal-lime plaster

Internal surface emissivity : High External surface emissivity : High

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Pitch (°)	Bridge details Air gaps (Level, Delta U")
Outside surface resistance	-	-	0.040		
Brick outer leaf	105.0	0.770	0.136		
Brick inner leaf	105.0	0.560	0.188		
Clay Plaster	10.0	0.800	0.013		
UdiTHERM	80.0	0.038	2.100		L:0 0.000W/m ² K
Baumit RK70N	5.0	0.900	0.006		
Inside surface resistance	-	-	0.130		
Total thickness	305.0mm				

U-value = 0.38W/m²K

U-value, Combined Method : 0.383W/m²K (upper/lower limit 2.612 / 2.612m²K/W, dUf 0.0060, dUg 0.0000, dUp0.0000, dUr0.0000, dUrc1 0.0000, dUrc2 0.0000)

Correction factors

Mechanical fasteners :-

Insulation Fixings

Point thermal transmittance : 0.0010W/K nf : 6.000 per m²

Delta Uf for UdiTHERM : 0.0060

nf = fasteners per m² Af = fasteners cross-sectional area

Air gaps, Delta Ug = 0.000W/m²K

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Thermal Mass Details

	Thickness assessed (actual) (mm)	Density (kg/m ³)	Specific heat capacity (J/kgK)	Heat capacity (kJ/m ² K)
Brick outer leaf	0.0 (105.0)	1700.0	840.0	0.0
Brick inner leaf	0.0 (105.0)	1700.0	840.0	0.0
Clay Plaster	0.0 (10.0)	1700.0	1000.0	0.0
UdiTHERM	0.0 (80.0)	160.0	2100.0	0.0
Baumit RK70N	5.0 (5.0)	1300.0	1000.0	6500000.0
Total				6500000.0
kappa value				6.5000
Limiting condition:	insulation			

Admittance : 1.15 W/m²K Decrement : 0.22 factor Decrement delay : -11.34 hours