

Back to Earth SW Ltd

7 Tuns Lane
Silverton
Exeter
EX5 4HY

Project Information

Reference

Date 8 May 2024

Construction Type

Element : Basement wall - Basement Walls - 100mm

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")
Inside surface	-	-	0.130		
Baumit RK70N	5.0	0.900	0.006		
Multipor Adhesive	5.0	0.180	0.028		
Multipor	100.0	0.040	2.500		L:0 0.000W/m ² K
Multipor Adhesive	5.0	0.180	0.028		
Polypropylene	1.5	0.220	0.007		
Brick outer leaf	225.0	0.770	0.292		
Ground	-	-	0.040		
Total thickness	341.5mm				

Basement Details

Calculation method : BS EN ISO 13370:2007

P/A : 0.650

Element : Basement wall

Average basement depth : 2.5m

Earth conductivity : 1.7

Basement floor insulation

Insulation : Geocell Foamglas

Insulation thickness : 200.0mm

Insulation conductivity : 0.080W/mK

U-value = 0.23W/m²K

U-value, Combined Method : 0.228W/m²K (upper/lower limit 3.031 / 3.031m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000, dUrc1 0.0000, dUrc2 0.0000)

Correction factors

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)
Baunit RK70N	5.0 (5.0)	1300.0	1000.0	6500000.0
Multipor Adhesive	5.0 (5.0)	800.0	1000.0	4000000.0
Multipor	0.0 (100.0)	220.0	1000.0	0.0
Multipor Adhesive	0.0 (5.0)	800.0	1000.0	0.0
Polypropylene	0.0 (1.5)	910.0	1800.0	0.0
Brick outer leaf	0.0 (225.0)	1700.0	840.0	0.0
Total				10500000.0
kappa value				10.5000
Limiting condition:	insulation			

Admittance : 7.14 W/m²K Decrement : 0.22 factor Decrement delay : -11.19 hours