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 - 80mm
Internal surface emissivity : High External surface emissivity : High

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m²K/W)	Pitch (º)	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	80.0	0.040	2.000		L:0 0.000W/m²K
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	**321.5mm**				

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 = 0.26W/m²K

U-value, Combined Method : 0.261W/m²K (upper/lower limit 2.531 / 2.531m²K/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/m³)	Specific heat capacity (J/kgK)	Heat capacity (kJ/m²K)
Baumit 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 (80.0)	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 : 7.15 W/m²K Decrement : 0.24 factor Decrement delay : -10.25 hours