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 - 120mm - Untanked
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 - High moisture	120.0	0.060	2.000		L:0 0.000W/m²K
Multipor Adhesive	5.0	0.180	0.028		
Brick outer leaf	225.0	0.770	0.292		
Ground	-	-	0.040		
Total thickness	**360.0mm**				

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 : 0.262W/m²K (upper/lower limit 2.524 / 2.524m²K/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 - High moisture	0.0 (120.0)	220.0	1000.0	0.0
Multipor Adhesive	0.0 (5.0)	800.0	1000.0	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 : 0.23 factor Decrement delay : -11.08 hours