U-VALUE CALCULATOR REPORT

Design SAP
elmhurst energy

Property Reference	P22691	Issued on Date	10/06/2025
Assessment Reference		Prop Type Ref	
Project	Mount Pleasant		
Calculation Type	New Build (As Built)		

SAP Rating		DER		TER	
Environmental		% DER<TER			
CO_2 Emissions (t/year)		DFEE		TFEE	
General Requirements Compliance		% DFEE<TFEE			

Assessor Details	Mr. Malcolm Lisle, Malcolm Lisle, Tel: 01142521995, malcolm@saps4u.com	Assessor ID	P736-0001
Client			

Building Elements

Floor Ground Floor 13.11.2024

Floor Type: Slab On Ground Floor
Area = 29.56 m², Perimeter = 15.80 m, Wall thickness = 275.00 mm, Soil: Unknown
Horizontal edge insulation: none
Vertical edge insulation: none

Layer	Description	Thickness (mm)	Conductivity (W/m²K)	Resistance (m²K/W)	Fraction (%)	Density (kg/m³)	Heat Cap. (J/kgK)
Ext surface				0.0400			
Layer 1	**Celotex XR4000**						
	Main construction	150	0.0220	6.8182	100.00	30	1400
	Corrections - Air Gap: Level 1, Fasteners: None or plastic						
Int surface				0.1700			

Total resistance: **Upper limit =** 6.818 m² K/W **Lower limit =** 6.818 m² K/W **Average =** 6.818 m² K/W

Total correction = 0.0100 m² K/W **U-value (unrounded) =** 0.13 W/m² K

Unheated space: None

Total thickness: 150 mm **U-value: 0.13 W/m² K** **Kappa: 0.00 kJ/m² K**

CONDENSATION RISK ANALYSIS

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Floor - Ground Floor 13.11.2024

Environmental conditions

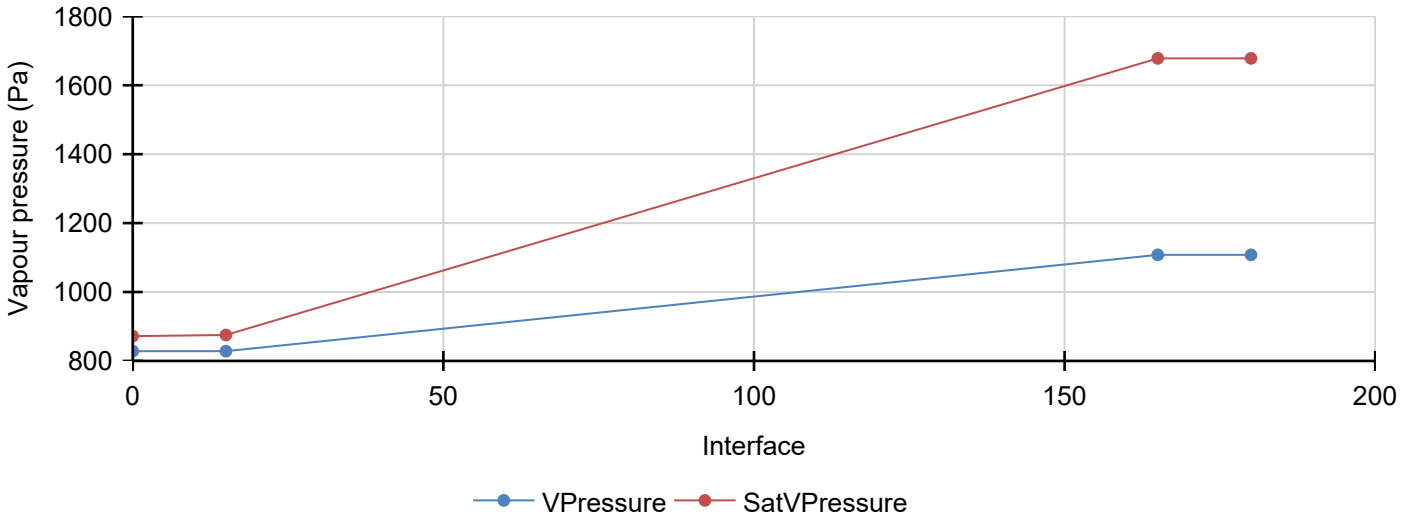
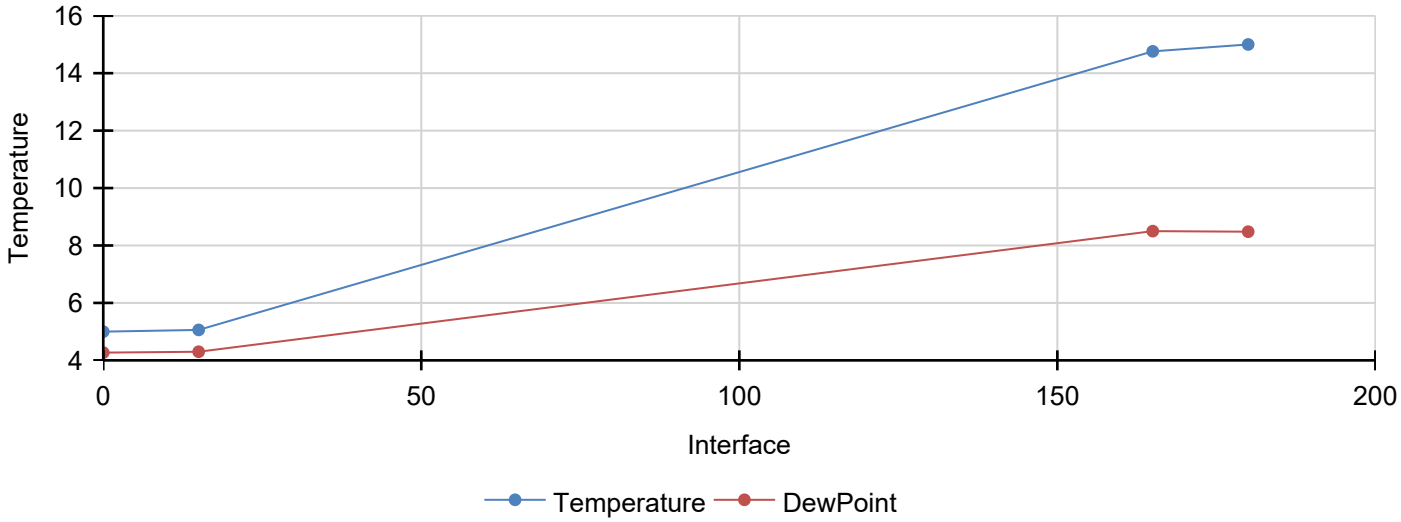
External conditions	Temperature:	5	°C	Relative Humidity:	95 %
Internal conditions	Temperature:	15	°C	Relative Humidity:	65 %

Table of layers

Layer	Thickness mm	Thermal conduct. W/m.K	Thermal resistance m².K/W	Cumulative thermal resistance m².K/W	Vapour resistivity GN.s/kg.m	Vapour resistance GN.s/kg.m	Cumulative vapourt resistance GN.s/kg.m
External surface	-	0.0000	0.0400	0.0400	0.0	0.00	0.00
1.Celotex XR4000	150.0	0.0220	6.8182	6.8582	0.000	300.00	300.00
Internal surface	-	0.0000	0.1700	6.8582	0.0	0.00	300.00

Vapour pressure table

Interface - between layers	Interface temp. °C	Vapour pressure Pa	Satur. vapour pressure Pa	Dew point °C	Cond. rate g/m² h	Cond. rate 60 days g/m² h	Cond. risk Y/N
External surface	5.00	828.3	871.9	4.27	0.00	0.00	No
1. External surface / Celotex XR4000	5.06	828.3	875.3	4.3	0.00	0.00	No
Celotex XR4000 / Internal surface	14.76	1107.9	1678.0	8.5	0.00	0.00	No
Internal surface	15.00	1107.9	1678.0	8.48	0.00	0.00	No



Interface temperature / Dew point graphical representation