

Project Information

Client : Grahame White, OWLarchitecture.com

Date : 22 February 2021

Address : 25 Crescent View, Leeds, LS17 7QF

Project : loft, west Yoks

Construction Type : Ceilings > Insulation between & below joists > Conventional Insulation Options - Mechanical Fix

	Thickness (m)	Thermal conductivity (W/mK)	Thermal resistance (m ² K/W)	Bridge details air gaps
Outside surface resistance	0.0000	0.0000	0.0400	—
Tiling including batten space	—	—	—	—
Loft space	—	—	0.2000	—
Insulation between joists <i>Celotex GA4000 100.0mm</i>	0.1000	0.0220	4.5455	0.8820
Timber with joist spacing	0.1000	0.1300	0.7692	0.1180
Insulation below joists, taped joints as VCL + Air Leakage Barrier <i>Celotex GA4000 50.0mm</i>	0.0500	0.0220	2.2727	—
25 x 47mm service void fixing batten	0.0250	0.1300	0.1923	0.1180
25mm service void air space	0.0250	—	0.4538	0.8820
12.5mm Gyproc Wallboard	0.0125	0.1900	0.0658	—
Inside surface resistance	0.0000	0.0000	0.1000	—

U-value = 0.16 W/m²K (combined method : 0.160 W/m²K, upper limit : 6.856m²K/W, lower limit : 5.948m²K/W)

Correction Factors

Mechanical Fasteners : N/A

Air Gap Corrections : Delta Ug = 0.0035 W/m²K

(Based on the combined method for determining U-values of structures containing repeating thermal bridges)