

Project Information

Date 2014
 Client Grahame White,
 OWLarchitecture.com
 25 Crescent View, Leeds, LS17 7QF

Project
 General Refurbishment

Celotex Limited

Lady Lane Industrial Estate
 Hadleigh, Ipswich
 Suffolk IP7 6BA
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Construction Type

Element : Pitched roof, ceiling at rafter line – Merged in – 2 Pitched Roofs –
 Un-ventilated – Insulation Between & Below Rafters 400mm Rafter Spacing
 Internal surface emissivity : High External surface emissivity : High

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Pitch Bridge Details (°)
Outside surface resistance	–	–	–	
Tiling including batten space	–	0.040		
Breather membrane draped	–	–		
Cavity (low emissivity) between rafters @ 400 ctrs minimum 25mm	–	0.120	–	11.7% Timber (25.0mm)
Celotex GA4000 between rafters @ 400 ctr	25.0	–		11.7% Timber (50.0mm)
		0.454		
Celotex GA4000 beneath rafters taped joints as VCL	50.0	–		
Cavity – 25 x 47mm fixing batten between plasterboard and under rafter insulation		2.273		11.7% Timber (25.0mm)
Knauf Wallboard	50.0	–		
Inside surface resistance		2.273		
U-value = 0.20W/m²K				
	25.0	–		
		0.454		
	12.5	–		
		0.066		
	–	–		
		0.100		

U-value, Combined Method : 0.20W/m²K (upper/lower limit 5.370 / 4.823m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000, dUrc0.0000)

(Correction for mechanical fasteners, Delta Uf = 0.000W/m²K)

(Correction for air gaps, Delta Ug = 0.000W/m²K)

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