

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 : Wall – Partial Fill Cavity Wall – Plasterboard on Dabs – Block Inner – Brick
 Outer

Internal surface emissivity : High External surface emissivity : High

Correction for mechanical fasteners :-

Alpha : 0.8 per m Thermal conductivity of fastener : 17.00 W/mK
 Fasteners per square metre : 2.50 off Fasteners cross-sectional area : 8.55 mm²

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Pitch Bridge Details (°)
Outside surface resistance	–	–	0.040	
Brickwork	103.0	0.770	0.134	17.2% Mortar (103.0mm)
Cavity (low emissivity)	50.0	–	0.665	
Celotex CW4000	50.0	–	2.273	
Stock Blocks – Lyta (lambda = 0.56)	100.0	0.560	0.179	6.6% Mortar (100.0mm)
Plaster Dabs Cavity	15.0	–	0.170	20.0% Plaster Dabs (15.0mm)
Knauf Wallboard	12.5	–	0.066	
Inside surface resistance	–	–	0.130	

U-value = 0.28W/m²K

U-value, Combined Method : 0.28W/m²K (upper/lower limit 3.620 / 3.571 m²K/W, dUf 0.0022, dUg 0.0000, dUp0.0000, dUr0.0000, dUrc0.0000)

(Correction for mechanical fasteners, Delta Uf = 0.002W/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)