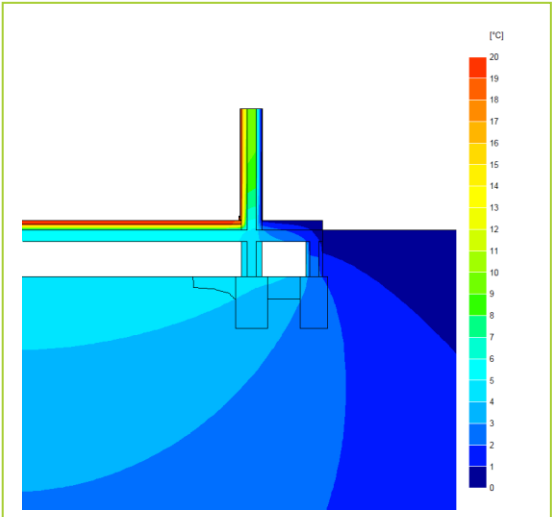
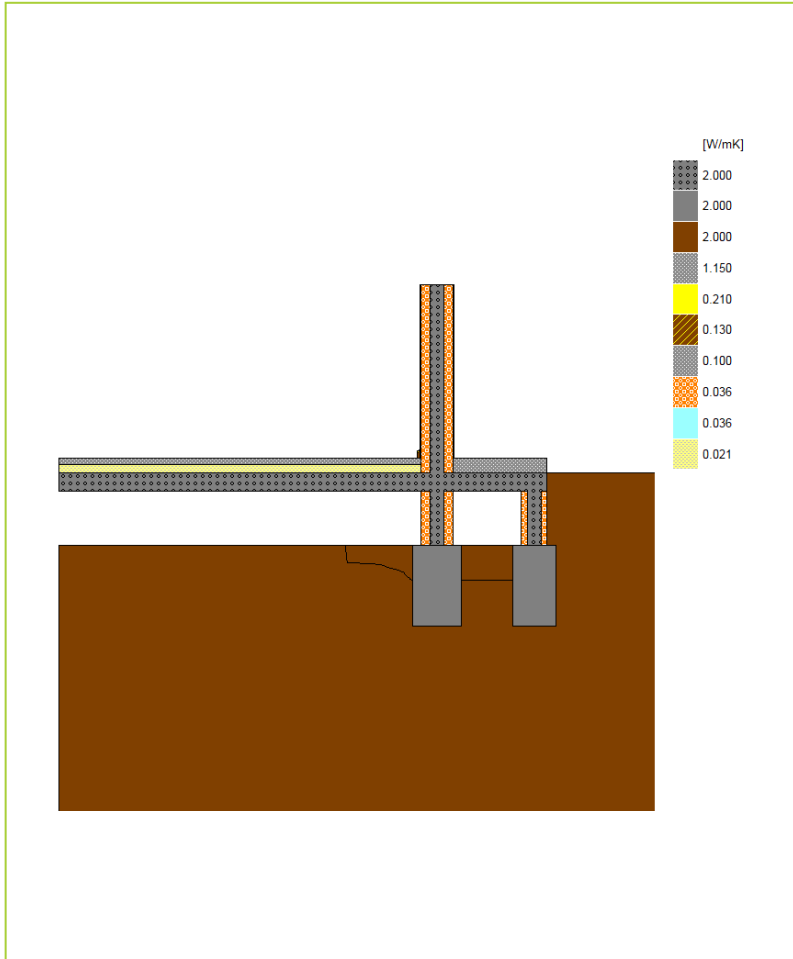


<b>Certificate No:</b>	<b>WRTM – 000107 vs. 0 PHPP</b>	<b>Issued:</b>	<b>29 August 2019</b>
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Issued to: <i>Jean-Marc Bouvier</i>  <b>Nudura Corporation</b> International Sales & Field Support  Tel: Mob +44 (0) 7766 118711 Email: <a href="mailto:jmb@nudura.com">jmb@nudura.com</a> www.nudura.com	<b>General Construction Specification:</b> (see detail below for full construction)	Main/Load-bearing:	152mm (nominal) Dense Concrete Core, $\lambda \leq 2.50$
		Insulation:	2x 102mm layers of EPS, $\lambda = 0.036$
		Concrete Flooring:	Cast in situ, 6mm acoustic mat
	<b>Description:</b>	Cladding:	9mm of Render OR 102mm Brick OR other Cladding
		<b>Concrete Groundfloor with insulation above (100mm, R=4.65) and concrete screed</b>	
<b>Reference:</b>	<b>E5</b>	<b>Ground floor</b>	



Temperature Distribution

<b>Linear Thermal Transmittance</b>	
<b>W/m.K</b>	
<b><math>\Psi =</math></b>	<b>0.006</b>
<b>Temperature Factor<sup>3</sup> for Humidity and Mould</b>	
<b><math>f =</math></b>	<b>0.937</b>

Calculation Prepared By: **Trefor Jones**

**Notes:** Calculation based upon internal heat loss areas, applicable in UK Building Regulations and SAP calculations.

- $\Psi$  and  $f$  are only valid for the detail drawn and described above.
- The  $\Psi$  and  $f$  quoted are considered valid for U-value(s) Wall  $U = 0.16 \text{ W/m}^2.\text{K}$  +/- 10% (external brick with cavity  $U = 0.159$ , thin render  $U = 0.167$ ), Ground Floor  $\geq 0.13 \text{ W/m}^2.\text{K}$ , (allowance of +/- 20%, following the present guidance from B. Anderson, BRE, correspondence dated 24/02/2012, for the UK market). The use of different claddings may affect the U-value slightly, but will have no material impact on the calculated values used here, in this case.
- In dwellings, UK regulations stipulate that a temperature factor,  $f$ , that is  $>0.75$  would avoid the risk of mould growth. For other nations, jurisdictions and climates, other standards may apply. E.g. 0.65; Switzerland: 0.75; Belgium: 0.7; Germany: 0.7; Finland: 0.87. French, German and other standards often do not indicate a single number for acceptable risk, but are dependent on circumstances.
- Calculations have been performed in accordance with:
  - EN ISO 10211\_2007 (British Standards)
  - IP 1/06 & BR497 (BRE Press)
 and with reference to the following publications:
  - EN ISO 6946 (British Standards)
  - BR443 (BRE Press)