C4Ci Consultants Construction Innovation

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Issued to: ***UK ICFA***
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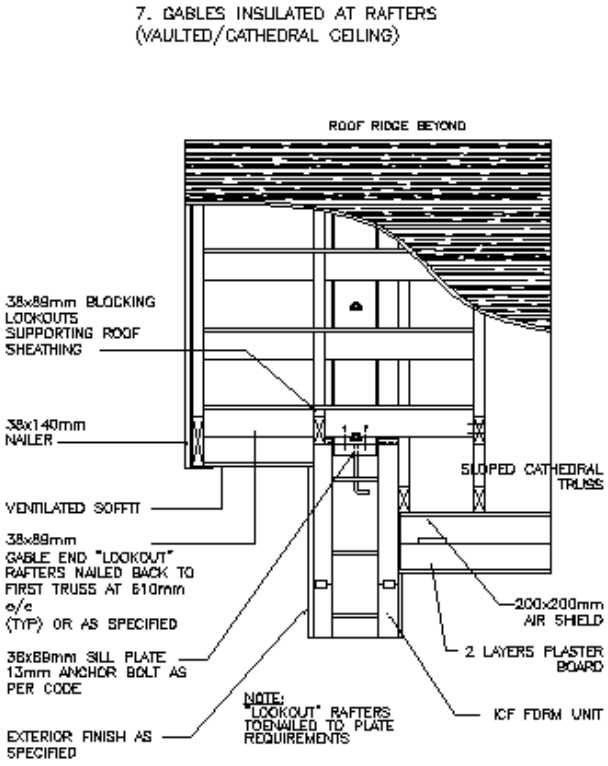
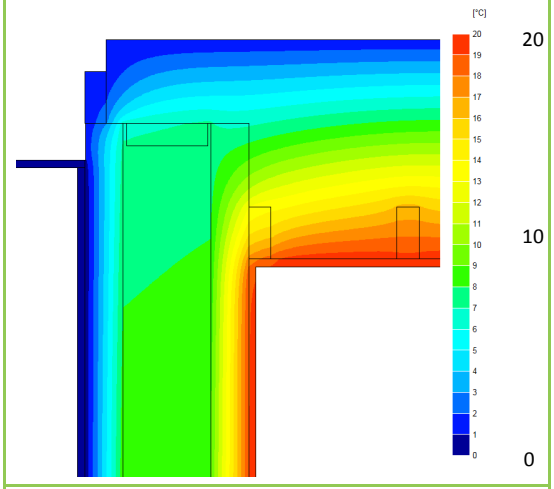
General Construction Specification: (see detail below for full construction)	Main/Load-bearing:	150mm (nominal) Dense Concrete Core, λ<=2.00
	Insulation:	2 layers of EPS, each with R value =>1.805m2k/w see note below
	Cavity:	15mm Cavity behind Brick if present
	Cladding:	9mm of Render OR 102mm Brick OR other Cladding
Description:	**ICF Wall, Gable @ Rafters, Minimum Roof U-value 0.1**	
Reference:	**Gable @ Rafters**	

Junction Detail





Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	**0.069**

Temperature Factor[3] for Humidity and Mould	
***f* =**	**0.921**

Calculation Prepared By: Matthew Wright *MA Physics (Oxon) PGCE*

Notes: **-**

1. Ψ and *f* are only valid for the detail drawn and described above.
2. These calculations apply to ICF forms with a minimum R value for the internal insulation layer (including embedded webs/fixing strips) of 1.805m^{2}k/w or greater, (e.g. 65mm of EPS with a λ value of 0.036), and where the external layer of insulation has an equal or greater R Value.
3. U-values for the flanking walls are U <= 0.255 W/m^2.K.
4. In dwellings, a temperature factor *f* that is >0.75 would avoid the risk of mould growth.
5. 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)*