

# Linear Thermal Transmittance ( $\Psi$ ) and Temperature Factor ( $f$ )

<b>Certificate No:</b>	<b>C4TM – 001209 ver . 1</b>	<b>Issued:</b>	30th November 2012
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Issued to:  
**Stora Enso Building and Living UK**  
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BR5 3QG  
Tel: +44 1689 883222  
Web: [www.storaenso.com/buildingandliving](http://www.storaenso.com/buildingandliving)

## Construction Specification used for Thermal Model:

(see detail below and notes for range of applicability)

External Wall	80mm CLT panel 90mm Celotex GA3000, $\lambda = 0.023$
	38mm ventilated cavity external, 25mm service void internal
Window	frame on outside of CLT panel

**Description:** Window head (Lintel)

**Reference:** E2 CLT building system

## Junction Detail

Timber cladding on 38x47mm battens fixed to CLT panel through Insulation using 6mm Stainless steel screw fixings

90mm PU insulation  $\lambda=0.023\text{W/m}^2\text{K}$

Standard breather membrane between vertical battens and insulation

47x90 batten fixed around window opening to allow fixing of frame

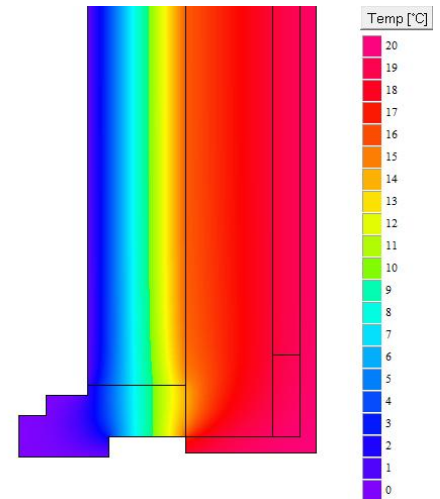
15mm Plasterboard fixed to 25x38mm battens fixed to inner face of CLT panel

25mm Service void created by 25x38mm vertical battens @ 600mm c/c

Vapour control layer between vertical battens and CLT panel

80mm CLT panel

25x38mm horizontal batten  
15mm plasterboard into reveal



Temperature

## Linear Thermal Transmittance W/m.K

$\Psi =$  0.032

## Temperature Factor<sup>3</sup> for Humidity and Mould

$f =$  0.919

Independently calculated by C4Ci Ltd. : Andrew Dunning BSc MSc MIWSc DIC

Our ref: 1538

## Notes: -

The  $\Psi$  and  $f$  quoted are calculated for the detail drawn and described above.

The  $\Psi$  and  $f$  quoted are considered valid for U-value(s) **External Wall = 0.20 (0.16 to 0.24)** W/m<sup>2</sup>.K. +/- 20% following the present guidance from B. Anderson, BRE

In dwellings, a temperature factor  $f$  that is >0.75 would avoid the risk of mould growth.

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)

# Linear Thermal Transmittance ( $\Psi$ ) and Temperature Factor ( $f$ )

<b>Certificate No:</b>	<b>C4TM – 001210 ver . 1</b>	<b>Issued:</b>	30th November 2012
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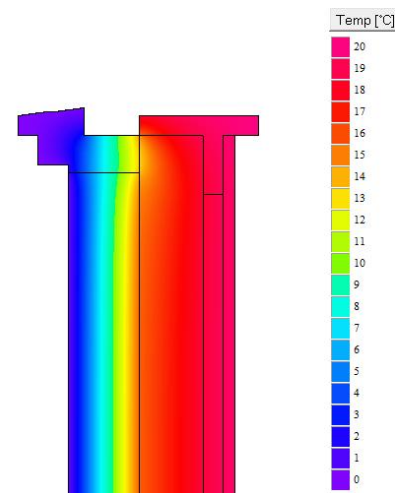
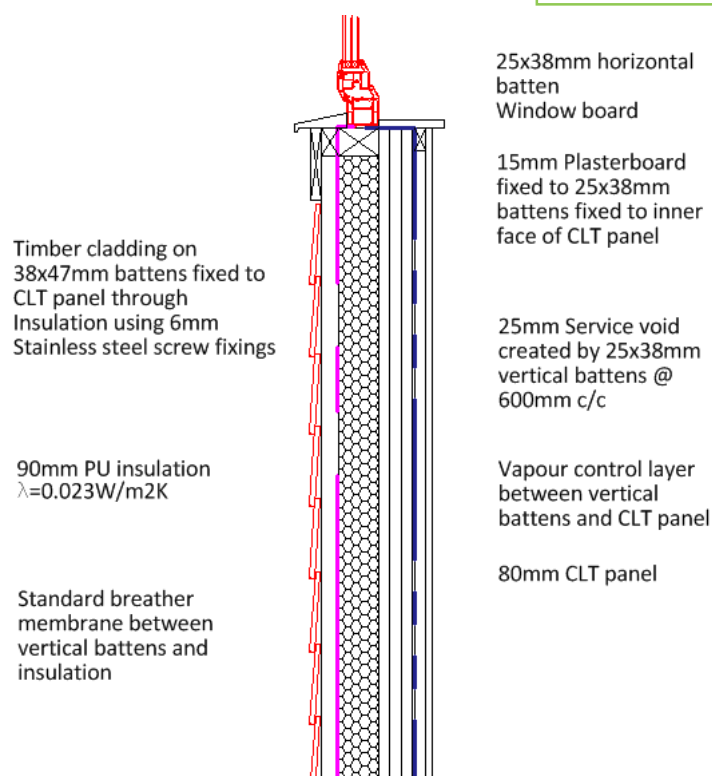
**Construction Specification used for Thermal Model:**  
(see detail below and notes for range of applicability)

External Wall	80mm CLT panel 90mm Celotex GA3000, $\lambda = 0.023$
	38mm ventilated cavity external, 25mm service void internal
Window	frame on outside of CLT panel

**Description:** **Window Cill**

**Reference:** E3 CLT building system

## Junction Detail



Temperature

**Linear Thermal Transmittance**  
**W/m.K**

**$\Psi = 0.027$**

**Temperature Factor<sup>3</sup> for Humidity and Mould**

**$f = 0.925$**

Independently calculated by C4Ci Ltd. : Andrew Dunning BSc MSc MIWSc DIC

Our ref: 1538

### Notes: -

The  $\Psi$  and  $f$  quoted are calculated for the detail drawn and described above.

The  $\Psi$  and  $f$  quoted are considered valid for U-value(s) **External Wall = 0.20 (0.16 to 0.24)** W/m<sup>2</sup>.K. +/- 20% following the present guidance from B. Anderson, BRE

In dwellings, a temperature factor  $f$  that is >0.75 would avoid the risk of mould growth.

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)

# Linear Thermal Transmittance ( $\Psi$ ) and Temperature Factor ( $f$ )

<b>Certificate No:</b>	<b>C4TM – 001211 ver . 1</b>	<b>Issued:</b>	30th November 2012
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## Construction Specification used for Thermal Model:

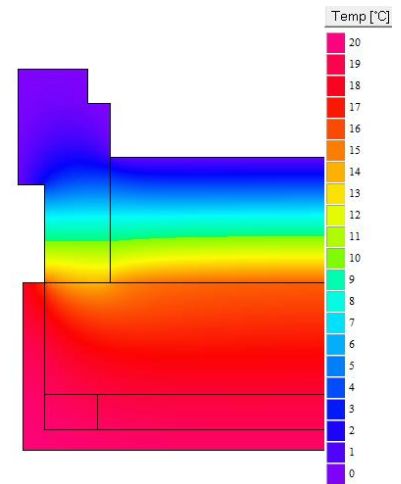
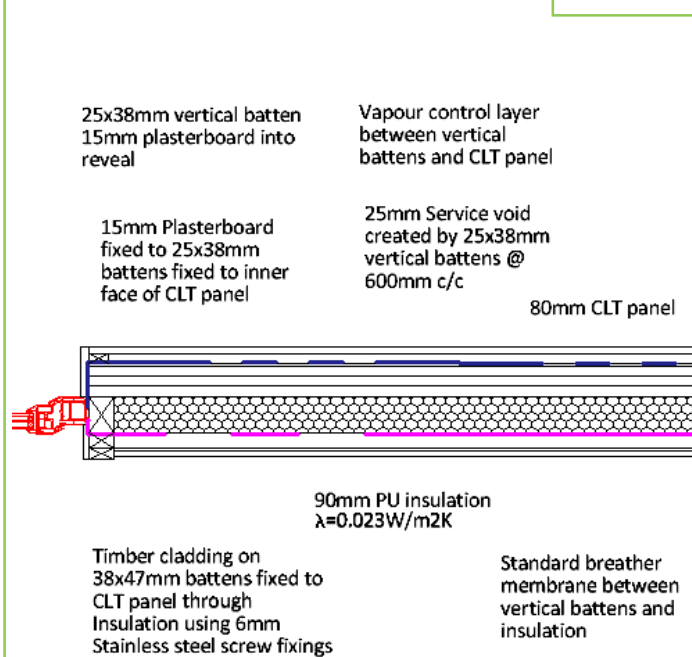
(see detail below and notes for range of applicability)

External wall	80mm CLT panel 90mm Celotex GA3000, $\lambda = 0.023$
	38mm ventilated cavity external, 25mm service void internal
Window	frame on outside of CLT panel

## Description: Window Jamb

**Reference:** E4 CLT building system

### Junction Detail



### Temperature

## Linear Thermal Transmittance W/m.K

$\Psi = 0.031$

## Temperature Factor<sup>3</sup> for Humidity and Mould

$f = 0.903$

Independently calculated by C4Ci Ltd. : Andrew Dunning BSc MSc MIWSc DIC

Our ref: 1538

### Notes: -

The  $\Psi$  and  $f$  quoted are calculated for the detail drawn and described above.

The  $\Psi$  and  $f$  quoted are considered valid for U-value(s) **External Wall = 0.20 (0.16 to 0.24)** W/m<sup>2</sup>.K. +/- 20% following the present guidance from B. Anderson, BRE

In dwellings, a temperature factor  $f$  that is >0.75 would avoid the risk of mould growth.

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)

# Linear Thermal Transmittance ( $\Psi$ ) and Temperature Factor ( $f$ )

<b>Certificate No:</b>	<b>C4TM – 001212 ver . 1</b>	<b>Issued:</b>	30th November 2012
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## Construction Specification used for Thermal Model:

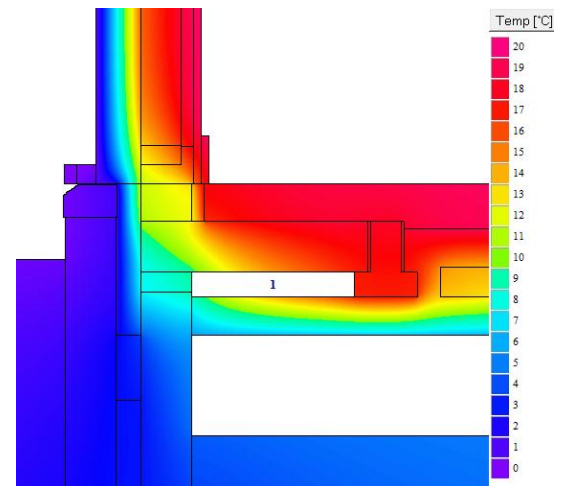
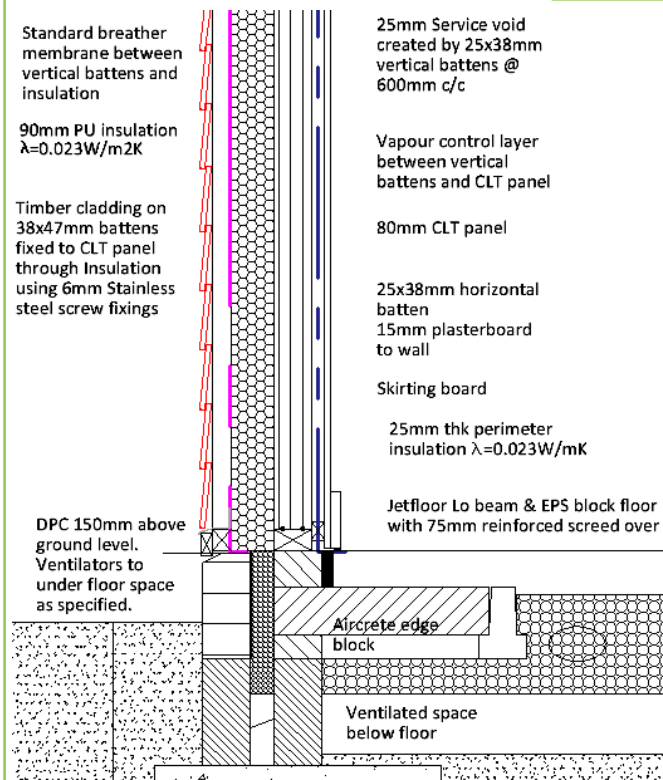
(see detail below and notes for range of applicability)

External wall	80mm CLT panel 90mm Celotex GA3000, $\lambda = 0.023$
	38mm ventilated cavity external, 25mm service void internal
Ground floor	Jetfloor Lo beams parallel & perpendicular to wall
	EPS $\lambda = 0.038$

**Description:** **Ground floor parallel / perpendicular jet floor lo**

**Reference:** E5 CLT building system

## Junction Detail



Temperature

**Linear Thermal Transmittance**  
**W/m.K**

**$\Psi =$  0.180 / 0.177**

**Temperature Factor<sup>3</sup> for Humidity and Mould**

**$f =$  0.886 / 0.881**

Independently calculated by C4Ci Ltd. : Andrew Dunning BSc MSc MIWSc DIC

Our ref: 1538

## Notes: -

The  $\Psi$  and  $f$  quoted are calculated for the detail drawn and described above.

The  $\Psi$  and  $f$  quoted are considered valid for U-value(s) **External Wall = 0.20 (0.16 to 0.24) Jet floor = 0.15 (0.12 to 0.18) W/m².K.** +/- 20% following the present guidance from B. Anderson, BRE

In dwellings, a temperature factor  $f$  that is  $>0.75$  would avoid the risk of mould growth.

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)

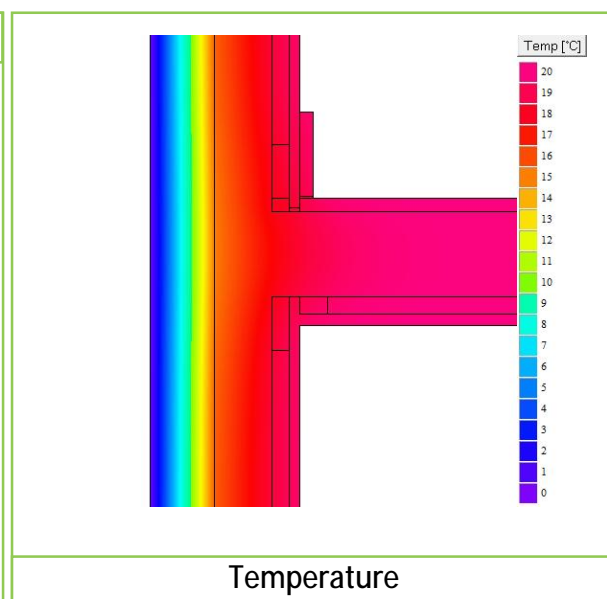
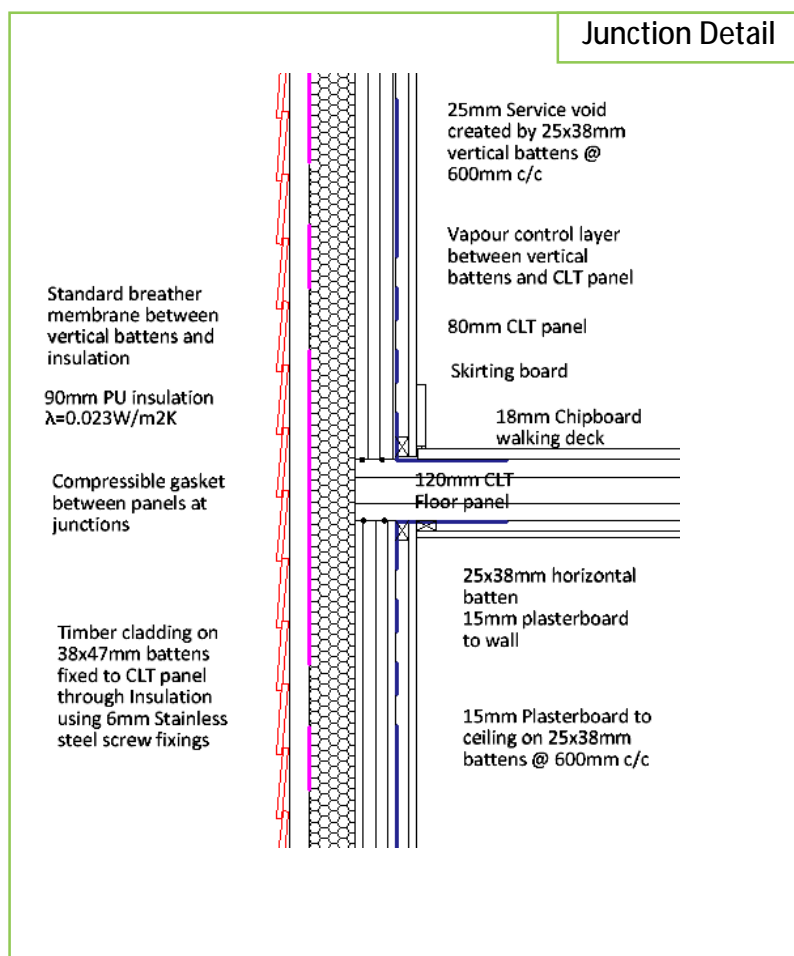
**BR443** (BRE Press)

# Linear Thermal Transmittance ( $\Psi$ ) and Temperature Factor ( $f$ )

<b>Certificate No:</b>	<b>C4TM – 001213 ver . 1</b>	<b>Issued:</b>	30th November 2012
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Web: [www.storaenso.com/buildingandliving](http://www.storaenso.com/buildingandliving)

<b>Construction Specification used for Thermal Model:</b> <i>(see detail below and notes for range of applicability)</i>	External wall	80mm CLT panel 90mm Celotex GA3000, $\lambda = 0.023$
		38mm ventilated cavity external, 25mm service void internal
	Intermediate floor	120mm CLT, plasterboard on 25mm service void
		18mm Chipboard walking surface
<b>Description:</b>	<b>Intermediate floor dwelling</b>	
<b>Reference:</b>	E6	CLT building system



<b>Linear Thermal Transmittance</b> <b>W/m.K</b>	
<b><math>\Psi =</math></b>	<b>-0.003</b>
<b>Temperature Factor<sup>3</sup> for Humidity and Mould</b>	
<b><math>f =</math></b>	<b>0.961</b>

Independently calculated by C4Ci Ltd. : Andrew Dunning BSc MSc MIWSc DIC

Our ref: 1538

## Notes: -

The  $\Psi$  and  $f$  quoted are calculated for the detail drawn and described above.

The  $\Psi$  and  $f$  quoted are considered valid for U-value(s) **External Wall = 0.20 (0.16 to 0.24)** W/m<sup>2</sup>.K. +/- 20% following the present guidance from B. Anderson, BRE

In dwellings, a temperature factor  $f$  that is >0.75 would avoid the risk of mould growth.

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)

# Linear Thermal Transmittance ( $\Psi$ ) and Temperature Factor ( $f$ )

<b>Certificate No:</b>	<b>C4TM – 001214 ver . 1</b>	<b>Issued:</b>	30th November 2012
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## Construction Specification used for Thermal Model:

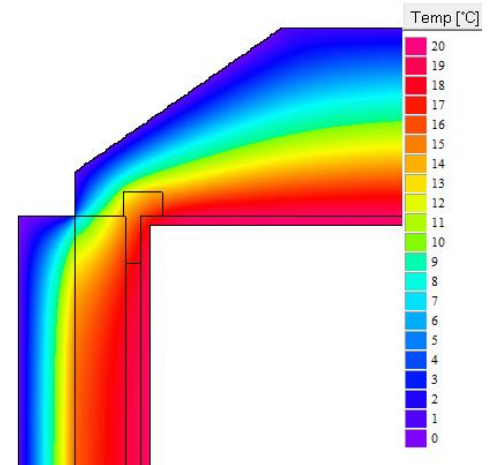
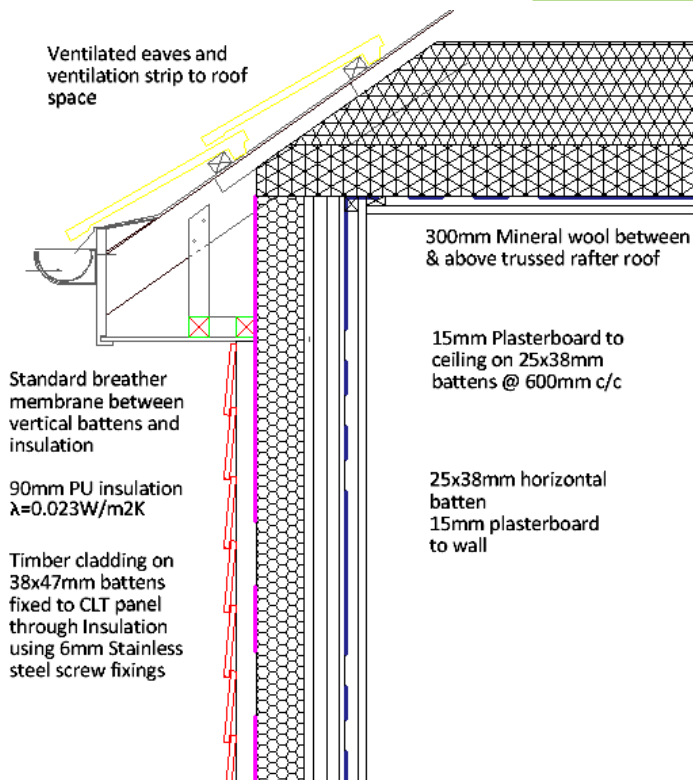
(see detail below and notes for range of applicability)

External wall	80mm CLT panel 90mm Celotex GA3000, $\lambda = 0.023$
	38mm ventilated cavity external, 25mm service void internal
Trussed rafter roof	300mm of mineral wool, $\lambda = 0.04$

**Description:** Eaves insulation @ ceiling trussed rafters

**Reference:** E10 CLT building system

## Junction Detail



Temperature

## Linear Thermal Transmittance W/m.K

$\Psi =$  0.083

## Temperature Factor<sup>3</sup> for Humidity and Mould

$f =$  0.918

Independently calculated by C4Ci Ltd. : Andrew Dunning BSc MSc MIWSc DIC

Our ref: 1538

## Notes: -

The  $\Psi$  and  $f$  quoted are calculated for the detail drawn and described above.

The  $\Psi$  and  $f$  quoted are considered valid for U-value(s) **External Wall = 0.20 (0.16 to 0.24) Roof = 0.16 (0.13 to 0.19) W/m<sup>2</sup>.K.** +/- 20% following the present guidance from B. Anderson, BRE

In dwellings, a temperature factor  $f$  that is >0.75 would avoid the risk of mould growth.

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)



# Linear Thermal Transmittance ( $\Psi$ ) and Temperature Factor ( $f$ )

<b>Certificate No:</b>	<b>C4TM – 001215 ver . 1</b>	<b>Issued:</b>	30th November 2012
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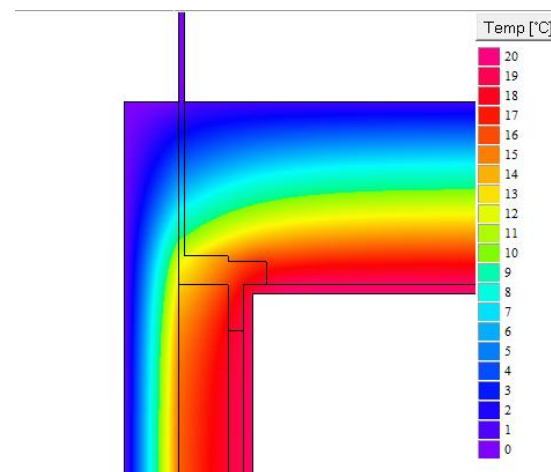
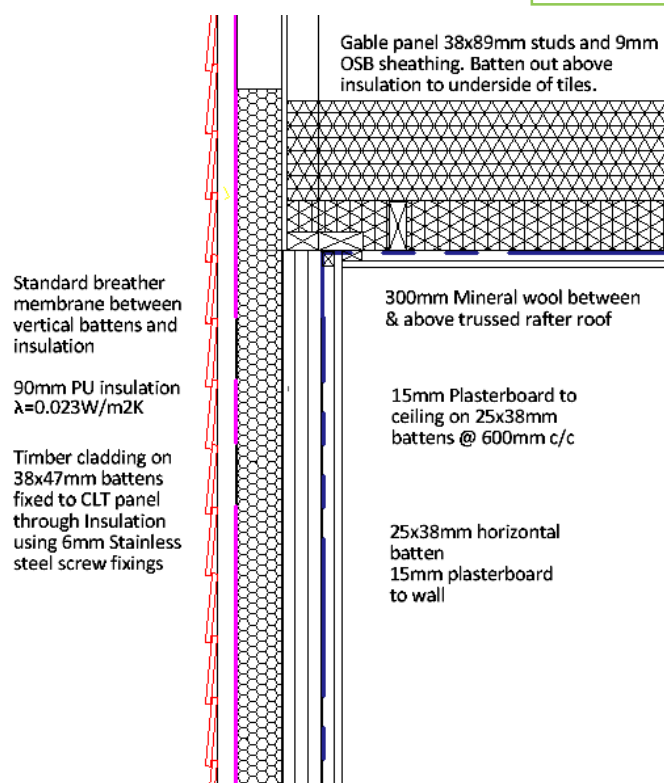
**Construction Specification used for Thermal Model:**  
(see detail below and notes for range of applicability)

External wall	80mm CLT panel 90mm Celotex GA3000, $\lambda = 0.023$
	38mm ventilated cavity external, 25mm service void internal
Trussed rafter roof	300mm of mineral wool, $\lambda = 0.04$

**Description:** **Gable insulation @ ceiling trussed rafters**

**Reference:** E12 CLT building system

## Junction Detail



## Temperature

**Linear Thermal Transmittance**  
**W/m.K**

**$\Psi =$  0.035**

**Temperature Factor<sup>3</sup> for Humidity and Mould**

**$f =$  0.931**

Independently calculated by C4Ci Ltd. : Andrew Dunning BSc MSc MIWSc DIC

Our ref: 1538

## Notes: -

The  $\Psi$  and  $f$  quoted are calculated for the detail drawn and described above.

The  $\Psi$  and  $f$  quoted are considered valid for U-value(s) **External Wall = 0.20 (0.16 to 0.24) Roof = 0.16 (0.13 to 0.19) W/m<sup>2</sup>.K.** +/- 20% following the present guidance from B. Anderson, BRE

In dwellings, a temperature factor  $f$  that is >0.75 would avoid the risk of mould growth.

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)**

# Linear Thermal Transmittance ( $\Psi$ ) and Temperature Factor ( $f$ )

<b>Certificate No:</b>	<b>C4TM – 001216 ver . 1</b>	<b>Issued:</b>	30th November 2012
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**Construction Specification used for Thermal Model:**  
(see detail below and notes for range of applicability)

External wall	80mm CLT panel 90mm Celotex GA3000, $\lambda = 0.023$
	38mm ventilated cavity external , 25mm service void internal
External Wall	80mm CLT panel 90mm Celotex GA3000, $\lambda = 0.023$
	38mm ventilated cavity external , 25mm service void internal

**Description:** External corner

**Reference:** E16 CLT building system

## Junction Detail

Timber cladding on  
38x47mm battens fixed to  
CLT panel through  
Insulation using 6mm  
Stainless steel screw fixings

90mm PU insulation  
 $\lambda=0.023\text{W/m}^2\text{K}$

Standard breather  
membrane between  
vertical battens and  
insulation

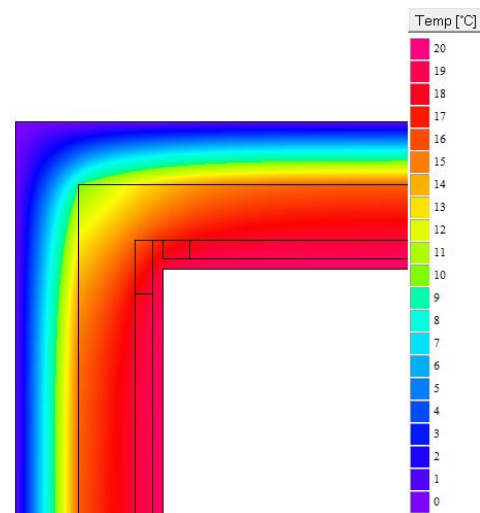
Vapour control layer  
between vertical  
battens and CLT panel

25mm Service void  
created by 25x38mm  
vertical battens @  
600mm c/c

80mm CLT panel

15mm Plasterboard  
fixed to 25x38mm  
battens fixed to inner  
face of CLT panel

• - Indicates compressible  
gasket



Temperature

**Linear Thermal Transmittance**  
**W/m.K**

$\Psi =$  0.047

**Temperature Factor<sup>3</sup> for Humidity  
and Mould**

$f =$  0.898

Independently calculated by C4Ci Ltd. : Andrew Dunning BSc MSc MIWSc DIC

Our ref: 1538

## Notes: -

The  $\Psi$  and  $f$  quoted are calculated for the detail drawn and described above.

The  $\Psi$  and  $f$  quoted are considered valid for U-value(s) **External Wall = 0.20 (0.16 to 0.24)** W/m<sup>2</sup>.K. +/- 20% following the present guidance from B. Anderson, BRE

In dwellings, a temperature factor  $f$  that is >0.75 would avoid the risk of mould growth.

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)



# Linear Thermal Transmittance ( $\Psi$ ) and Temperature Factor ( $f$ )

<b>Certificate No:</b>	<b>C4TM – 001217 ver . 1</b>	<b>Issued:</b>	30th November 2012
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Web: [www.storaenso.com/buildingandliving](http://www.storaenso.com/buildingandliving)

## Construction Specification used for Thermal Model:

(see detail below and notes for range of applicability)

External wall	80mm CLT panel 90mm Celotex GA3000, $\lambda = 0.023$
	38mm ventilated cavity external , 25mm service void internal
External Wall	80mm CLT panel 90mm Celotex GA3000, $\lambda = 0.023$
	38mm ventilated cavity external , 25mm service void internal

**Description:** **Inverted corner**

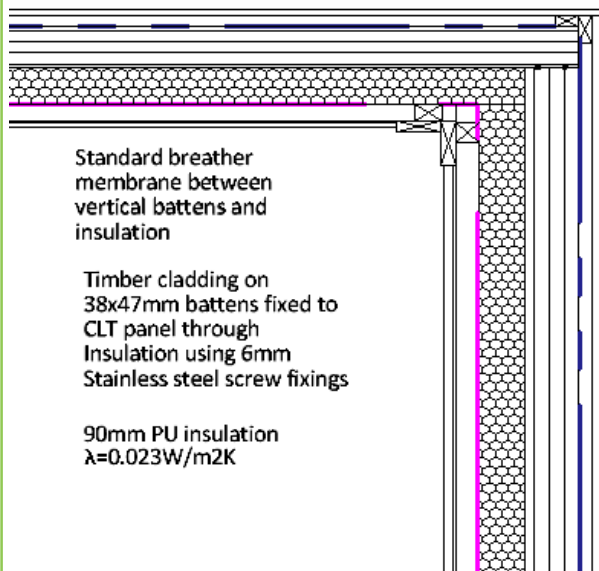
**Reference:** E17 CLT building system

## Junction Detail

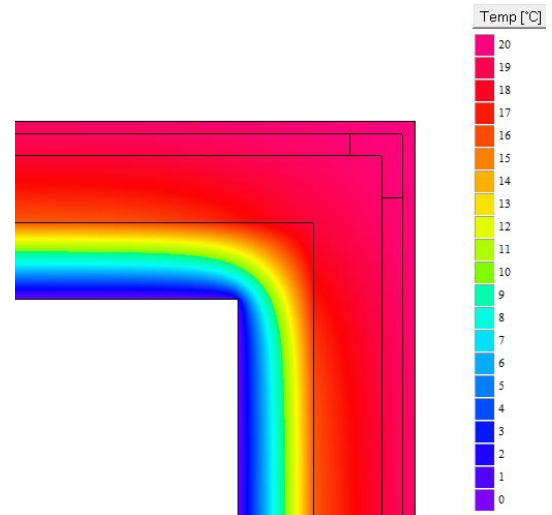
25mm Service void created by 25x38mm vertical battens @ 600mm c/c

15mm Plasterboard fixed to 25x38mm battens fixed to inner face of CLT panel

Vapour control layer between vertical battens and CLT panel



80mm CLT panel



Temperature

**Linear Thermal Transmittance**  
**W/m.K**

**$\Psi =$  -0.069**

**Temperature Factor<sup>3</sup> for Humidity and Mould**

**$f =$  0.978**

Independently calculated by C4Ci Ltd. : Andrew Dunning BSc MSc MIWSc DIC

Our ref: 1538

## Notes: -

The  $\Psi$  and  $f$  quoted are calculated for the detail drawn and described above.

The  $\Psi$  and  $f$  quoted are considered valid for U-value(s) **External Wall = 0.20 (0.16 to 0.24)** W/m<sup>2</sup>.K. +/- 20% following the present guidance from B. Anderson, BRE

In dwellings, a temperature factor  $f$  that is >0.75 would avoid the risk of mould growth.

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)

# Linear Thermal Transmittance ( $\Psi$ ) and Temperature Factor ( $f$ )

<b>Certificate No:</b>	<b>C4TM – 001218 ver . 1</b>	<b>Issued:</b>	30th November 2012
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Web: [www.storaenso.com/buildingandliving](http://www.storaenso.com/buildingandliving)

## Construction Specification used for Thermal Model:

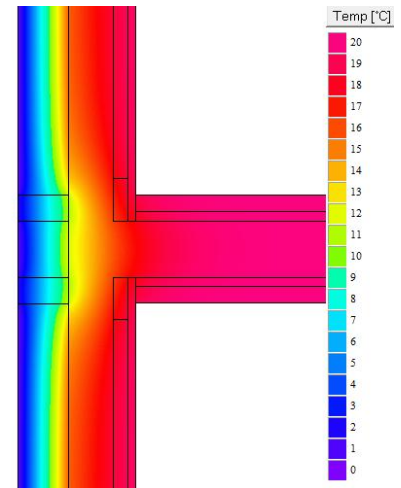
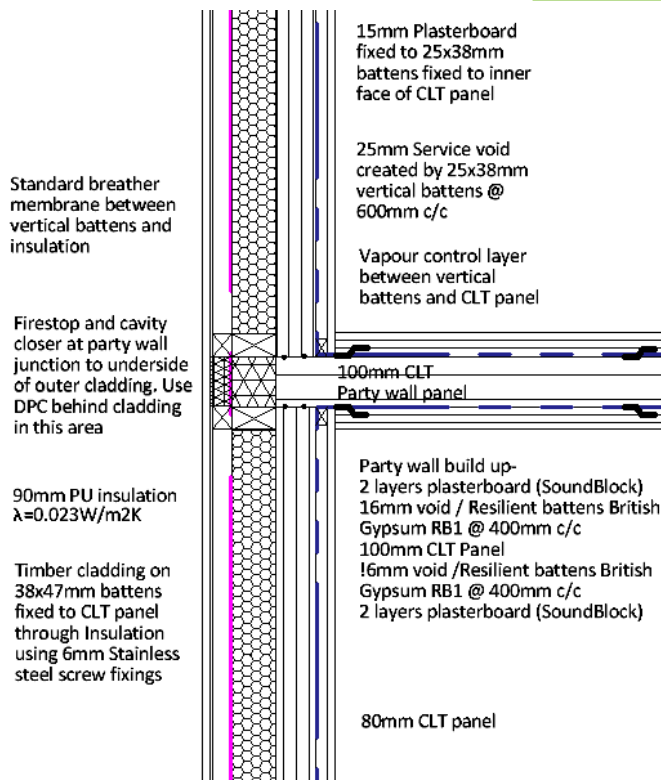
(see detail below and notes for range of applicability)

External wall	80mm CLT panel 90mm Celotex GA3000, $\lambda = 0.023$
	38mm ventilated cavity external, 25mm service void internal
Party wall	100mm CLT panel Resilient Batten & 2 layer of plasterboard

**Description:** Party wall external wall Single skin

**Reference:** E18 CLT building system

## Junction Detail



Temperature

## Linear Thermal Transmittance W/m.K

$\Psi =$  0.041

## Temperature Factor<sup>3</sup> for Humidity and Mould

$f =$  0.963

Independently calculated by C4Ci Ltd. : Andrew Dunning BSc MSc MIWSc DIC

Our ref: 1538

## Notes: -

The  $\Psi$  and  $f$  quoted are calculated for the detail drawn and described above.

The  $\Psi$  and  $f$  quoted are considered valid for U-value(s) **External Wall = 0.20 (0.16 to 0.24) Party Wall = 0.00** W/m<sup>2</sup>.K. +/- 20% following the present guidance from B. Anderson, BRE

In dwellings, a temperature factor  $f$  that is >0.75 would avoid the risk of mould growth.

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)

# Linear Thermal Transmittance ( $\Psi$ ) and Temperature Factor ( $f$ )

<b>Certificate No:</b>	<b>C4TM – 001219 ver . 1</b>	<b>Issued:</b>	30th November 2012
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Web: [www.storaenso.com/buildingandliving](http://www.storaenso.com/buildingandliving)

## Construction Specification used for Thermal Model:

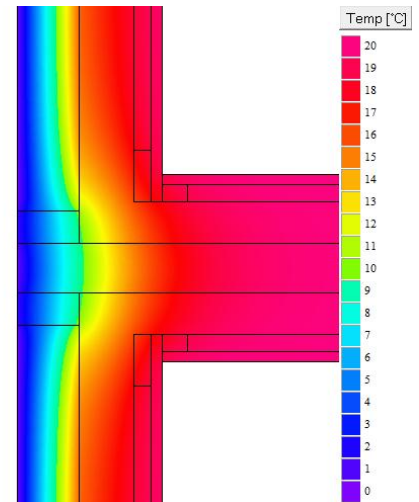
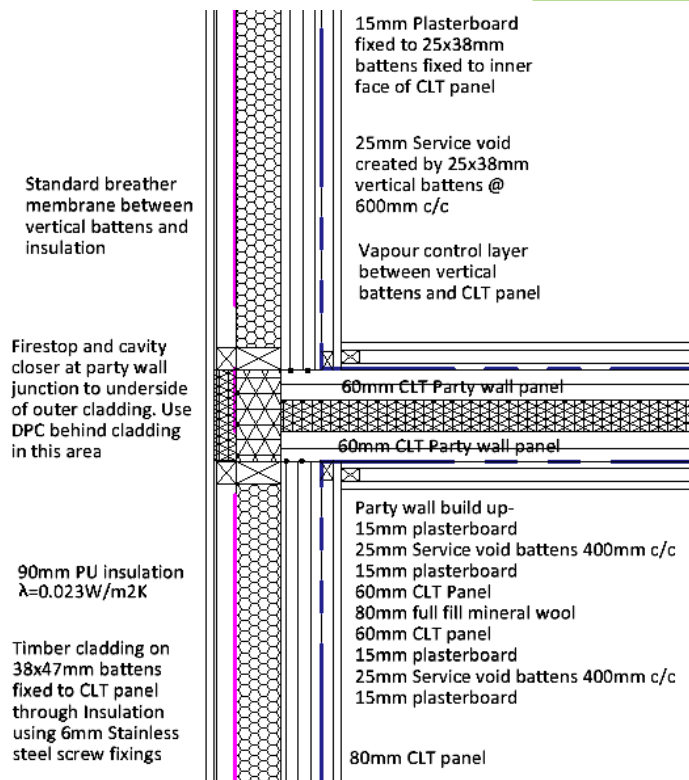
(see detail below and notes for range of applicability)

External wall	80mm CLT panel 90mm Celotex GA3000, $\lambda = 0.023$
	38mm ventilated cavity external, 25mm service void internal
Party wall	2 x 60mm CLT panel Full fill insulation &
	25mm service & plasterboard

**Description:** Party wall external wall double skin

**Reference:** E18 CLT building system

## Junction Detail



Temperature

## Linear Thermal Transmittance W/m.K

$\Psi =$  0.045

## Temperature Factor<sup>3</sup> for Humidity and Mould

$f =$  0.939

Independently calculated by C4Ci Ltd. : Andrew Dunning BSc MSc MIWSc DIC

Our ref: 1538

## Notes: -

The  $\Psi$  and  $f$  quoted are calculated for the detail drawn and described above.

The  $\Psi$  and  $f$  quoted are considered valid for U-value(s) **External Wall = 0.20 (0.16 to 0.24) Party Wall = 0.00** W/m<sup>2</sup>.K. +/- 20% following the present guidance from B. Anderson, BRE

In dwellings, a temperature factor  $f$  that is >0.75 would avoid the risk of mould growth.

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)

# Linear Thermal Transmittance ( $\Psi$ ) and Temperature Factor ( $f$ )

<b>Certificate No:</b>	<b>C4TM – 001220 ver . 1</b>	<b>Issued:</b>	30th November 2012
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## Construction Specification used for Thermal Model:

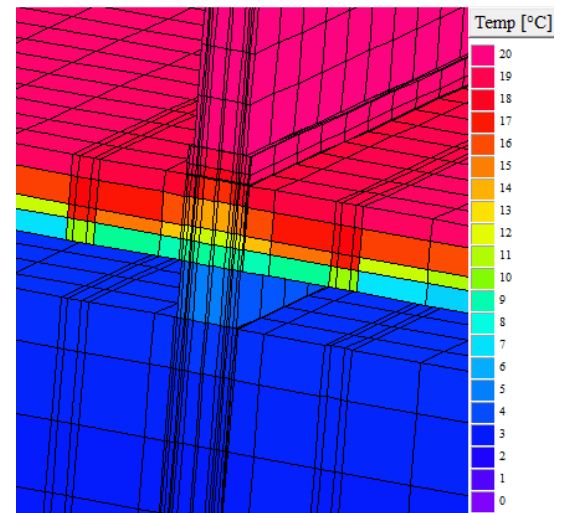
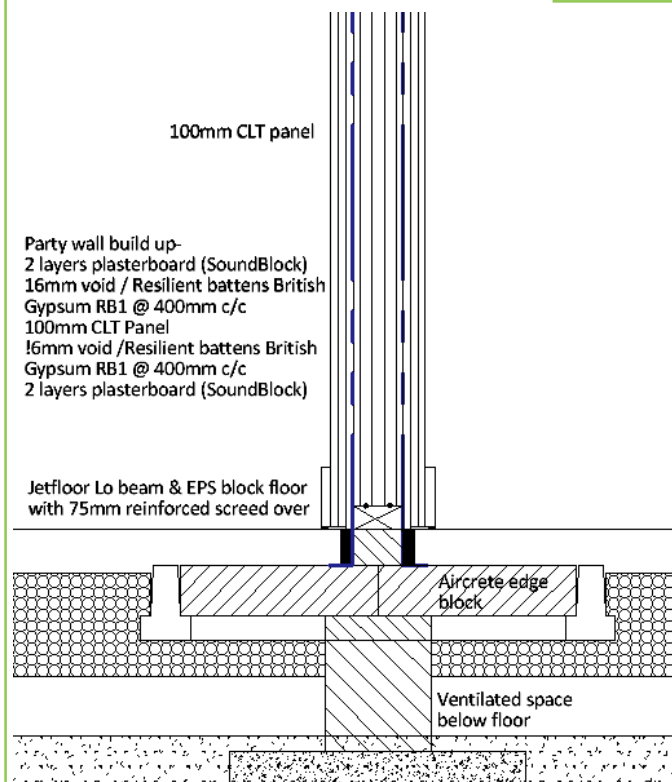
(see detail below and notes for range of applicability)

Party Wall	100mm CLT panel Resilient Batten & 2 layer of plasterboard
Ground floor	Jetfloor Lo beams parallel & perpendicular to wall
	EPS $\lambda = 0.038$

**Description:** Party wall Foot single skin

**Reference:** P1 CLT building system

## Junction Detail



Temperature

**Linear Thermal Transmittance**  
**W/m.K**

**$\Psi =$  0.118 / 0.059**

**Temperature Factor<sup>3</sup> for Humidity and Mould**

**$f =$  0.909 / 0.888**

Independently calculated by C4Ci Ltd. : Andrew Dunning BSc MSc MIWSc DIC

Our ref: 1538

## Notes: -

The  $\Psi$  and  $f$  quoted are calculated for the detail drawn and described above.

The  $\Psi$  and  $f$  quoted are considered valid for U-value(s) **Party wall = 0.00 Jet floor = 0.15 (0.12 to 0.18) W/m<sup>2</sup>.K.** +/- 20% following the present guidance from B. Anderson, BRE

In dwellings, a temperature factor  $f$  that is >0.75 would avoid the risk of mould growth.

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:

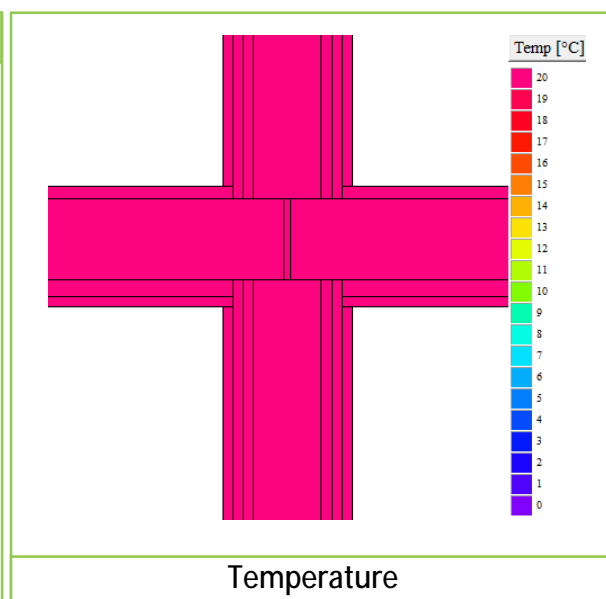
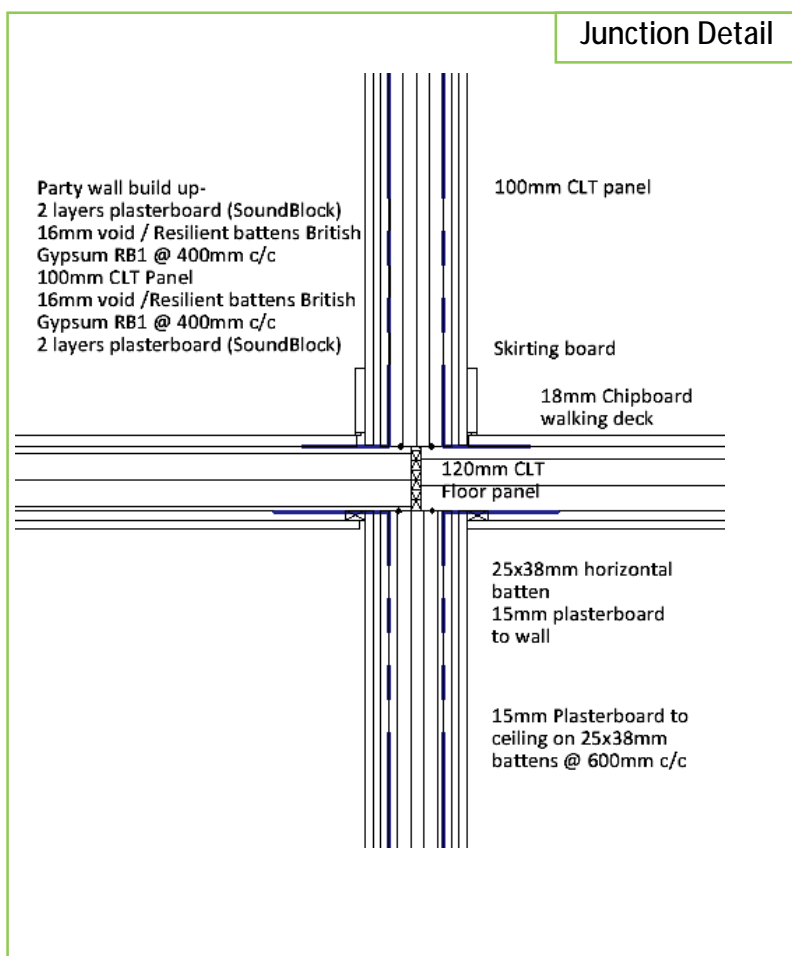
**EN ISO 6946** (British Standards)

**BR443** (BRE Press)

# Linear Thermal Transmittance ( $\Psi$ ) and Temperature Factor ( $f$ )

<b>Certificate No:</b>	<b>C4TM – 001221 ver . 1</b>	<b>Issued:</b>	30th November 2012
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<b>Issued to:</b> <b>Stora Enso Building and Living UK</b> 1 Kingfisher House New Mill Road Orpington BR5 3QG Tel: +44 1689 883222 Web: <a href="http://www.storaenso.com/buildingandliving">www.storaenso.com/buildingandliving</a>	<b>Construction Specification used for Thermal Model:</b> <i>(see detail below and notes for range of applicability)</i>		Party Wall	100mm CLT panel Resilient Batten &
				2 layer of plasterboard
			Intermediate floor	120mm CLT, plasterboard on 25mm service void
				18mm Chipboard walking surface
<b>Description:</b>		<b>Party wall intermediate floor dwelling single skin</b>		
<b>Reference:</b>		P2	CLT building system	



<b>Linear Thermal Transmittance</b>	
<b>W/m.K</b>	
<b><math>\Psi</math> =</b>	<b>0.007</b>

<b>Temperature Factor<sup>3</sup> for Humidity and Mould</b>	
<b><math>f</math> =</b>	<b>1.000</b>

Independently calculated by C4Ci Ltd. : Andrew Dunning BSc MSc MIWSc DIC

Our ref: 1538

## Notes: -

The  $\Psi$  and  $f$  quoted are calculated for the detail drawn and described above.

The  $\Psi$  and  $f$  quoted are considered valid for U-value(s) **Party Wall = 0.00** W/m<sup>2</sup>.K. +/- 20% following the present guidance from B. Anderson, BRE

In dwellings, a temperature factor  $f$  that is >0.75 would avoid the risk of mould growth.

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)

# Linear Thermal Transmittance ( $\Psi$ ) and Temperature Factor ( $f$ )

<b>Certificate No:</b>	<b>C4TM – 001222 ver . 1</b>	<b>Issued:</b>	30th November 2012
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## Construction Specification used for Thermal Model:

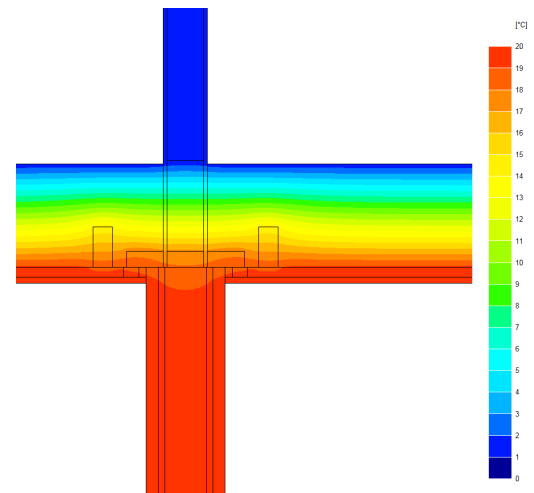
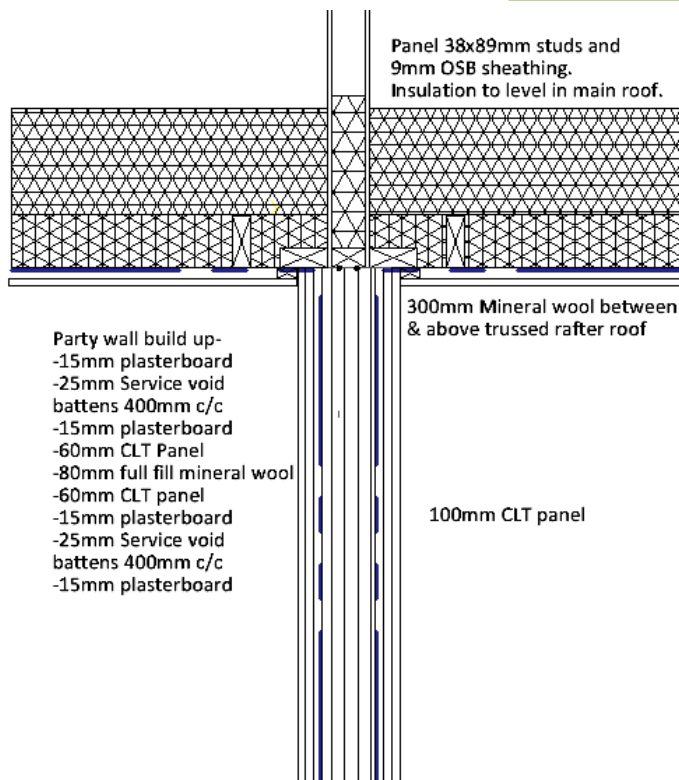
(see detail below and notes for range of applicability)

Party Wall	100mm CLT panel Resilient Batten &
	2 layer of plasterboard
Trussed rafter roof	300mm of mineral wool , $\lambda = 0.04$

**Description:** Party wall Head single skin

**Reference:** P4 CLT building system

## Junction Detail



Temperature

## Linear Thermal Transmittance W/m.K

$\Psi =$  0.021

## Temperature Factor<sup>3</sup> for Humidity and Mould

$f =$  0.971

Independently calculated by C4Ci Ltd. : Matthew Wright MA Physics (Oxon) PGCE

Our ref: 1538

## Notes: -.

The  $\Psi$  and  $f$  quoted are calculated for the detail drawn and described above.

The  $\Psi$  and  $f$  quoted are considered valid for U-value(s) **Party Wall = 0.00 Roof = 0.16 (0.13 to 0.19) W/m<sup>2</sup>.K.** +/- 20% following the present guidance from B. Anderson, BRE

In dwellings, a temperature factor  $f$  that is  $>0.75$  would avoid the risk of mould growth.

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)



# Linear Thermal Transmittance ( $\Psi$ ) and Temperature Factor ( $f$ )

<b>Certificate No:</b>	<b>C4TM – 001223 ver . 1</b>	<b>Issued:</b>	30th November 2012
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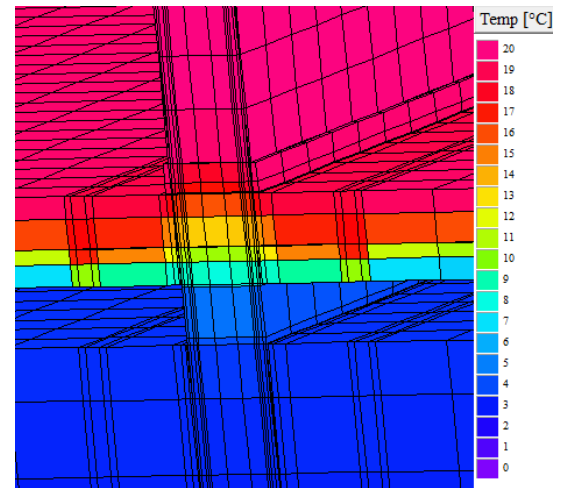
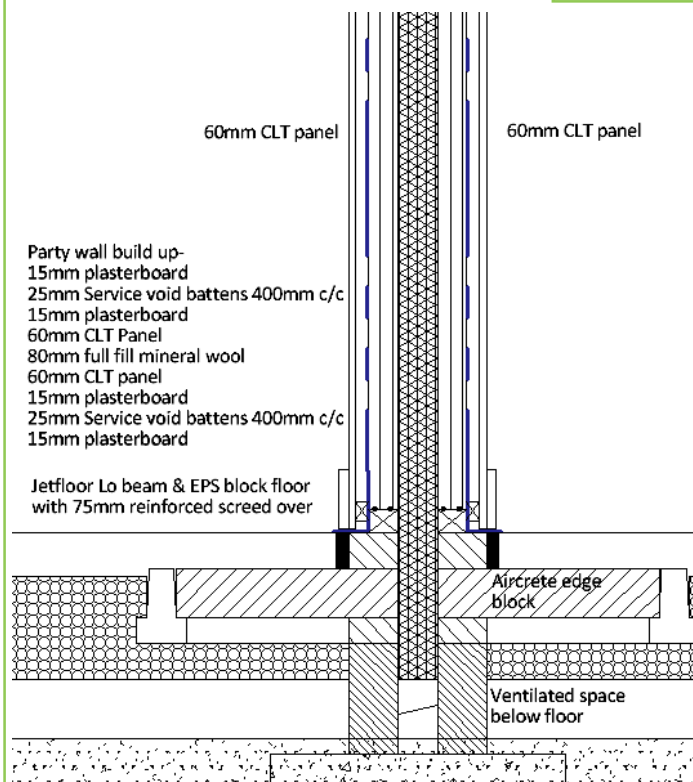
**Construction Specification used for Thermal Model:**  
(see detail below and notes for range of applicability)

Party Wall	2 x 60mm CLT panel Full fill insulation &
	25mm service & plasterboard
Ground floor	Jetfloor Lo beams parallel & perpendicular to wall
	EPS $\lambda = 0.038$

**Description:** **Party wall Foot double skin**

**Reference:** P1 CLT building system

**Junction Detail**



**Temperature**

**Linear Thermal Transmittance**  
**W/m.K**

**$\Psi =$  0.116 / 0.045**

**Temperature Factor<sup>3</sup> for Humidity and Mould**

**$f =$  0.977 / 0.916**

Independently calculated by C4Ci Ltd. : Andrew Dunning BSc MSc MIWSc DIC

Our ref: 1538

## Notes: -

The  $\Psi$  and  $f$  quoted are calculated for the detail drawn and described above.

The  $\Psi$  and  $f$  quoted are considered valid for U-value(s) **Party wall = 0.00 Jet floor = 0.15 (0.12 to 0.18) W/m<sup>2</sup>.K.** +/- 20% following the present guidance from B. Anderson, BRE

In dwellings, a temperature factor  $f$  that is >0.75 would avoid the risk of mould growth.

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)

# Linear Thermal Transmittance ( $\Psi$ ) and Temperature Factor ( $f$ )

<b>Certificate No:</b>	<b>C4TM – 001224 ver . 1</b>	<b>Issued:</b>	30th November 2012
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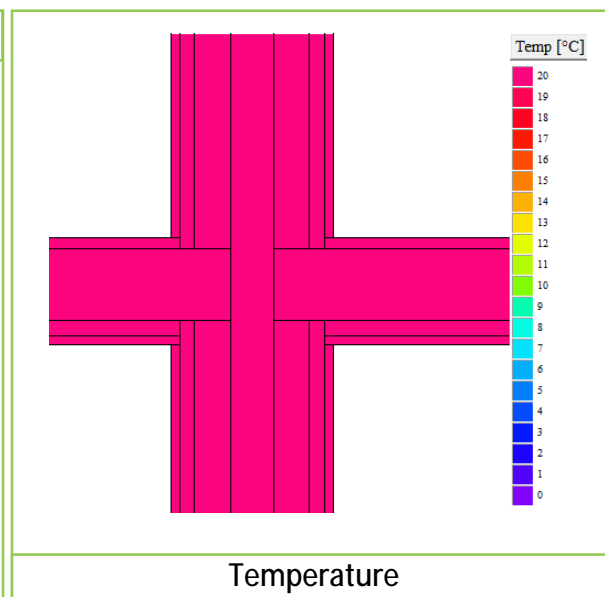
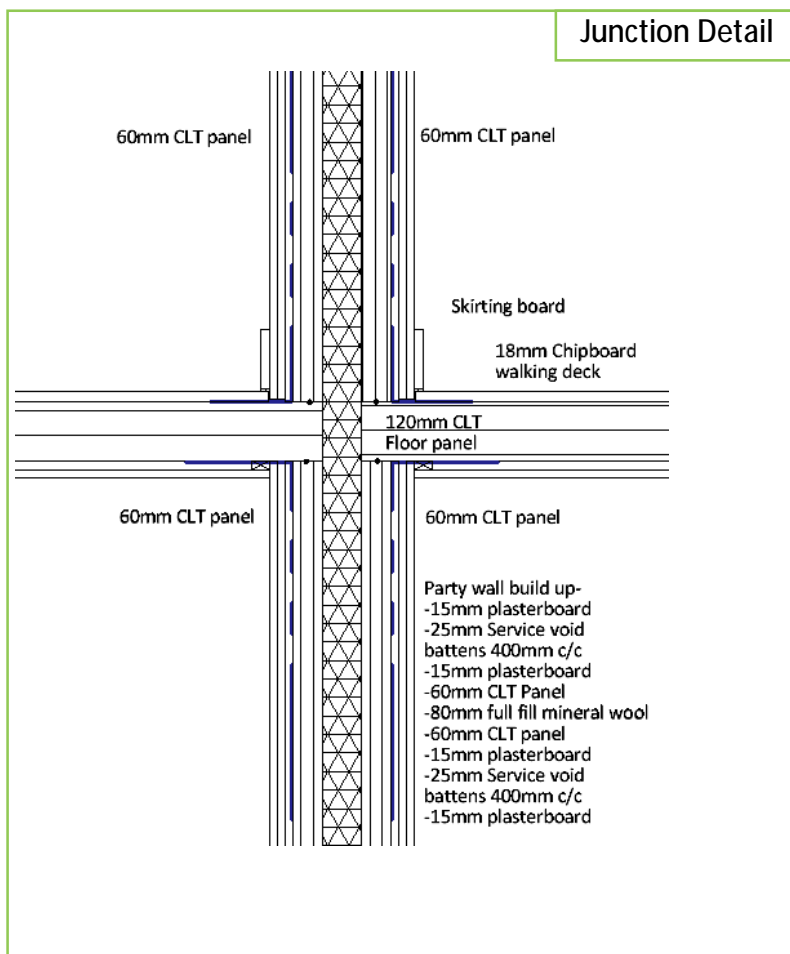
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Web: [www.storaenso.com/buildingandliving](http://www.storaenso.com/buildingandliving)

**Construction Specification used for Thermal Model:**  
(see detail below and notes for range of applicability)

Party Wall	2 x 60mm CLT panel Full fill insulation &
	25mm service & plasterboard
Intermediate floor	120mm CLT, plasterboard on 25mm service void
	18mm Chipboard walking surface

**Description:** **Party wall intermediate floor dwelling double skin**

**Reference:** P2 CLT building system



**Linear Thermal Transmittance  
W/m.K**

**$\Psi = 0.003$**

**Temperature Factor<sup>3</sup> for Humidity  
and Mould**

**$f = 1.000$**

Independently calculated by C4Ci Ltd. : Andrew Dunning BSc MSc MIWSc DIC

Our ref: 1538

## Notes: -

The  $\Psi$  and  $f$  quoted are calculated for the detail drawn and described above.

The  $\Psi$  and  $f$  quoted are considered valid for U-value(s) **Party Wall = 0.00** W/m<sup>2</sup>.K. +/- 20% following the present guidance from B. Anderson, BRE

In dwellings, a temperature factor  $f$  that is >0.75 would avoid the risk of mould growth.

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)

# Linear Thermal Transmittance ( $\Psi$ ) and Temperature Factor ( $f$ )

<b>Certificate No:</b>	<b>C4TM – 001225 ver . 1</b>	<b>Issued:</b>	30th November 2012
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Web: [www.storaenso.com/buildingandliving](http://www.storaenso.com/buildingandliving)

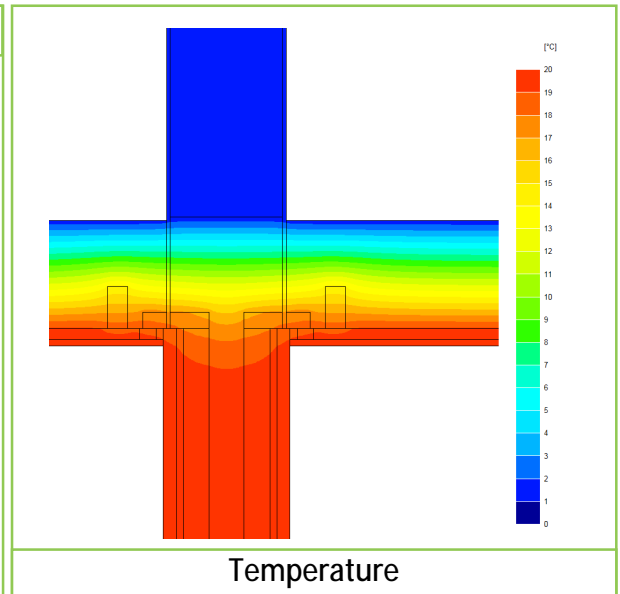
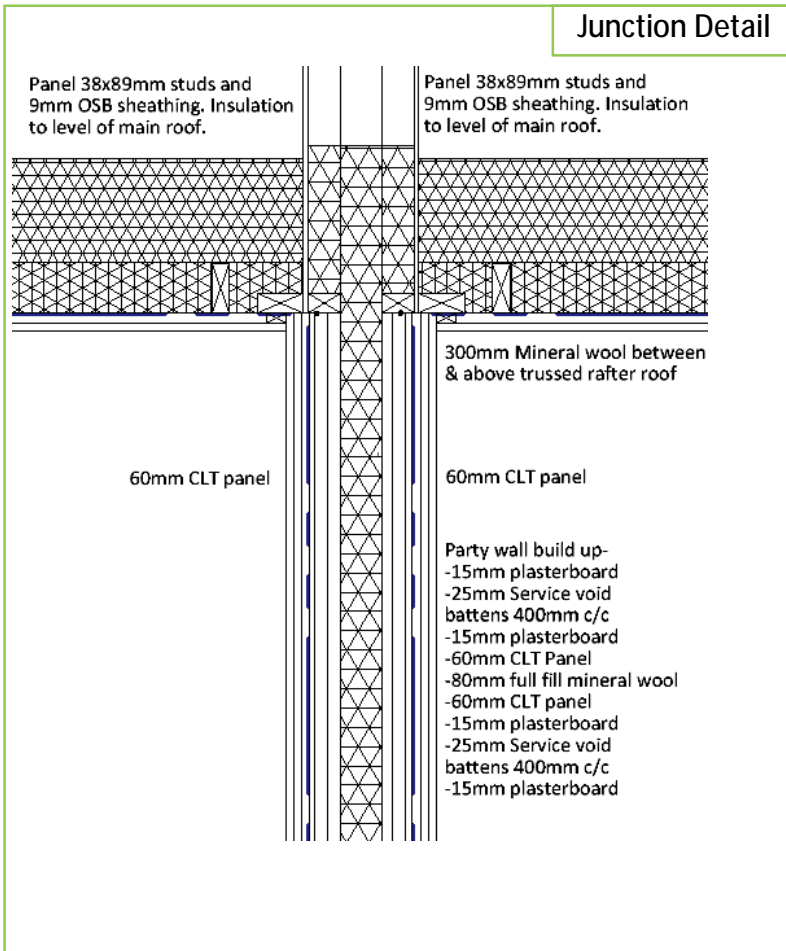
## Construction Specification used for Thermal Model:

(see detail below and notes for range of applicability)

Party Wall	2 x 60mm CLT panel Full fill insulation &
	25mm service & plasterboard
Trussed rafter roof	300mm of mineral wool , $\lambda = 0.04$

**Description:** Party wall Head double skin

**Reference:** P4 CLT building system



## Linear Thermal Transmittance W/m.K

$\Psi =$  0.028

## Temperature Factor<sup>3</sup> for Humidity and Mould

$f =$  0.967

Independently calculated by C4Ci Ltd. : Andrew Dunning BSc MSc MIWSc DIC

Our ref: 1538

### Notes: -

The  $\Psi$  and  $f$  quoted are calculated for the detail drawn and described above.

The  $\Psi$  and  $f$  quoted are considered valid for U-value(s) **Party Wall = 0.00 Roof = 0.16 (0.13 to 0.19) W/m<sup>2</sup>.K.** +/- 20% following the present guidance from B. Anderson, BRE

In dwellings, a temperature factor  $f$  that is >0.75 would avoid the risk of mould growth.

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)