

NBT ThermoPlan® System

Thin Bed Insulating
Solid Wall System



U-Value & Interstitial Moisture Data

Data Produced Using " JPA Designer Version 3.0315"

"The Science of Nature - The Future of Construction"

Natural Building Technologies Ltd

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Project Information

Reference

Date 23 Oct 2006

Client NBT THERMOPLAN TYPICAL DATA

Construction type

Element : Wall - ZT / ZV 10 - 300MM

Internal surface emissivity : High External surface emissivity : High

Construction

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
BaumatBayosan SEP01/02/03/04 Decor Finish	2.0	0.830	0.002	50.00	0.10
BaumatBayosan MP69 / W Lightweight Render	15.0	0.560	0.027	50.00	0.75
THERMOPLAN T10300 Block	300.0	0.100	3.000	20.83	6.25
BaumatBayosan K38 (RK38) Pure Lime Plaster	12.0	0.830	0.014	50.00	0.60
BaumatBayosan K30 (RK30) Pure Lime Skim Coat	2.0	0.830	0.002	50.00	0.10
Inside surface resistance	-	-	0.130	-	-

U-value - 0.31W/m²K

U-value, Combined Method : 0.31 W/m²K (upper/lower limit 3.216 / 3.216 m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000)

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

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

Structure element : Wall
Condensation calculations performed in accordance with BS5250:2002

Condensation is occurring at the following layers interfaces:-

Month	Int (C°)	Int (%RH)	Ext (C°)	Ext (%RH)
Jan	20.00	60.30	3.50	86.00
Feb	20.00	59.20	3.80	82.50
Mar	20.00	58.60	5.70	80.00
Apr	20.00	58.20	8.00	77.00
May	20.00	60.70	11.30	77.00
Jun	20.00	64.00	14.40	76.00
Jul	20.00	68.10	16.50	76.50
Aug	20.00	68.90	16.10	78.50
Sep	20.00	66.80	13.80	81.50
Oct	20.00	64.00	10.70	84.00
Nov	20.00	61.10	6.40	85.50
Dec	20.00	60.70	4.50	86.50

Gc = Monthly moisture accumulation per area at an interface

Ma = Accumulated moisture content per area at an interface

Peak accumulated moisture content per area at interface (Ma) = 0.00000 Kg/m²

Annual moisture accumulation = 0.00000 Kg/m²

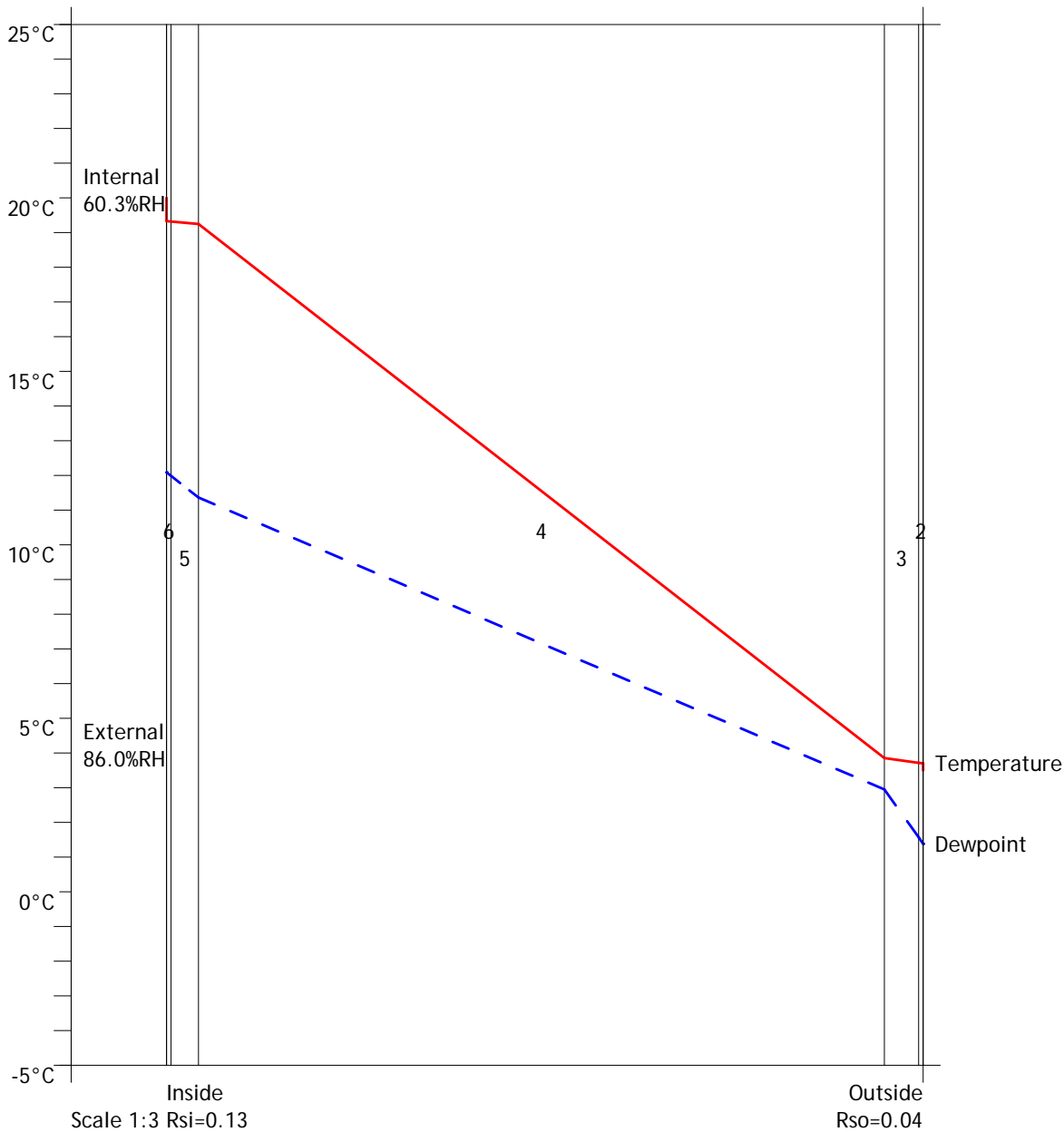
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 BaunitBayosan SEP01/02/03/04 Decor Finish	3.7	1.4	0.67	0.80			No
3 BaunitBayosan MP69 / W Lightweight Render	3.7	1.6	0.68	0.80			No
4 THERMOPLAN T10300 Block	3.9	3.0	0.75	0.80			No
5 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.2	11.4	1.34	2.23			No
6 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.3	12.0	1.40	2.24			No
7 Inside surface resistance	19.3	12.1	1.41	2.24			No

Worst case internal / external conditions for graph : 20.0°C @ 60.3%RH / 3.5°C @ 86.0%RH



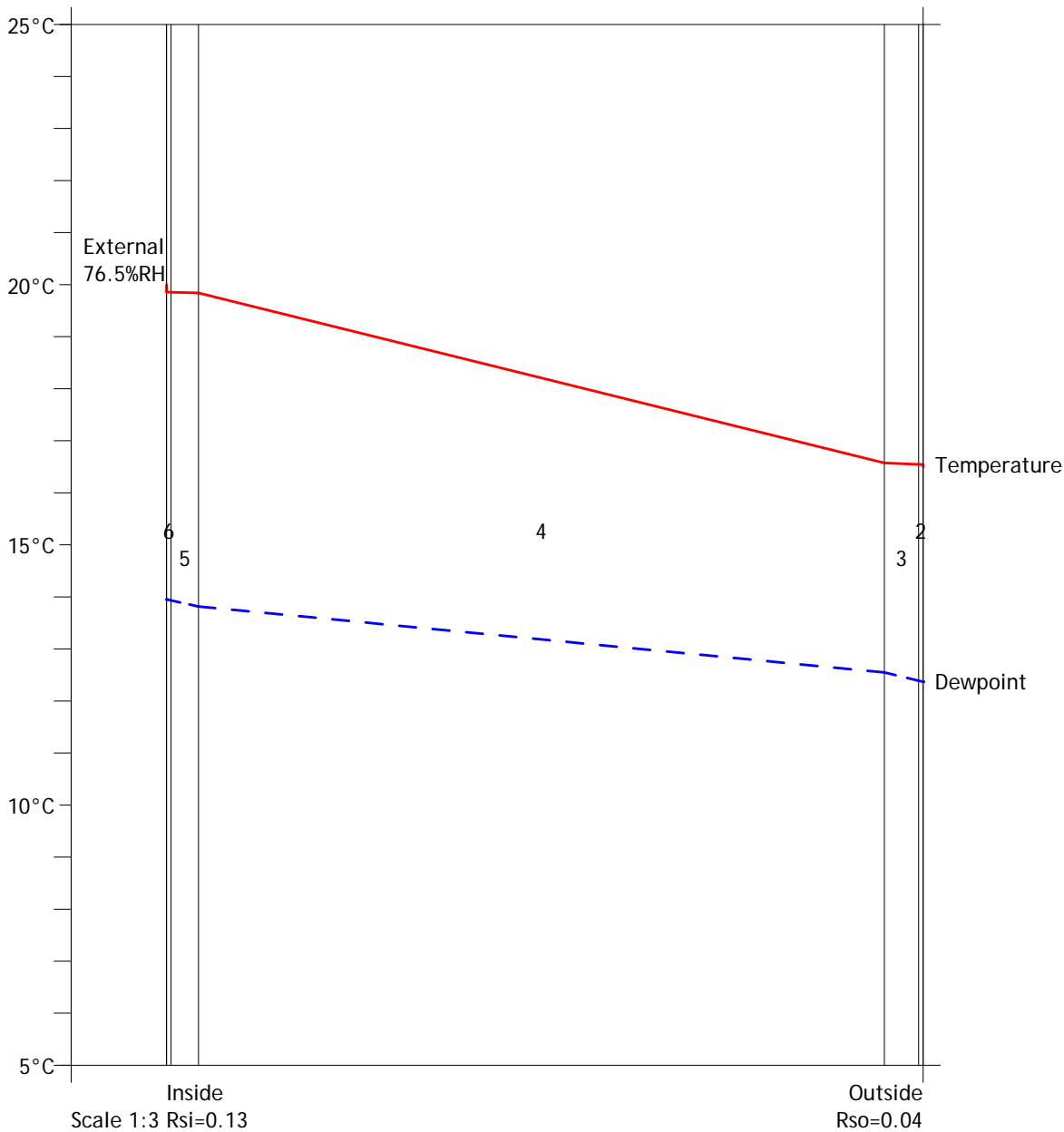
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 BaunitBayosan SEP01/02/03/04 Decor Finish	16.5	12.4	1.44	1.88			No
3 BaunitBayosan MP69 / W Lightweight Render	16.5	12.4	1.44	1.88			No
4 THERMOPLAN T10300 Block	16.6	12.5	1.45	1.89			No
5 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.8	13.8	1.58	2.31			No
6 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	13.9	1.59	2.32			No
7 Inside surface resistance	19.9	14.0	1.59	2.32			No

Worst case internal / external conditions for graph : 20.0°C @ 68.1%RH / 16.5°C @ 76.5%RH





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Project Information

Reference

Date 23 Oct 2006

Client NBT THERMOPLAN TYPICAL DATA

Construction type

Element : Wall - ZT / ZV 10 - 300MM CLAD 60

Internal surface emissivity : High External surface emissivity : High

Construction

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Diffutherm OR Pavatherm Plus 60mm	60.0	0.044	1.364	25.00	1.50
THERMOPLAN T10300 Block	300.0	0.100	3.000	20.83	6.25
BaumitBayosan K38 (RK38) Pure Lime Plaster	12.0	0.830	0.014	50.00	0.60
BaumitBayosan K30 (RK30) Pure Lime Skim Coat	2.0	0.830	0.002	50.00	0.10
Inside surface resistance	-	-	0.130	-	-

U-value - 0.22W/m²K

U-value, Combined Method : 0.22 W/m²K (upper/lower limit 4.551 / 4.551 m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000)

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

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

Structure element : Wall
Condensation calculations performed in accordance with BS5250:2002

Condensation is occurring at the following layers interfaces:-

Month	Int (C°)	Int (%RH)	Ext (C°)	Ext (%RH)
Jan	20.00	60.30	3.50	86.00
Feb	20.00	59.20	3.80	82.50
Mar	20.00	58.60	5.70	80.00
Apr	20.00	58.20	8.00	77.00
May	20.00	60.70	11.30	77.00
Jun	20.00	64.00	14.40	76.00
Jul	20.00	68.10	16.50	76.50
Aug	20.00	68.90	16.10	78.50
Sep	20.00	66.80	13.80	81.50
Oct	20.00	64.00	10.70	84.00
Nov	20.00	61.10	6.40	85.50
Dec	20.00	60.70	4.50	86.50

Gc = Monthly moisture accumulation per area at an interface

Ma = Accumulated moisture content per area at an interface

Peak accumulated moisture content per area at interface (Ma) = 0.00000 Kg/m²

Annual moisture accumulation = 0.00000 Kg/m²

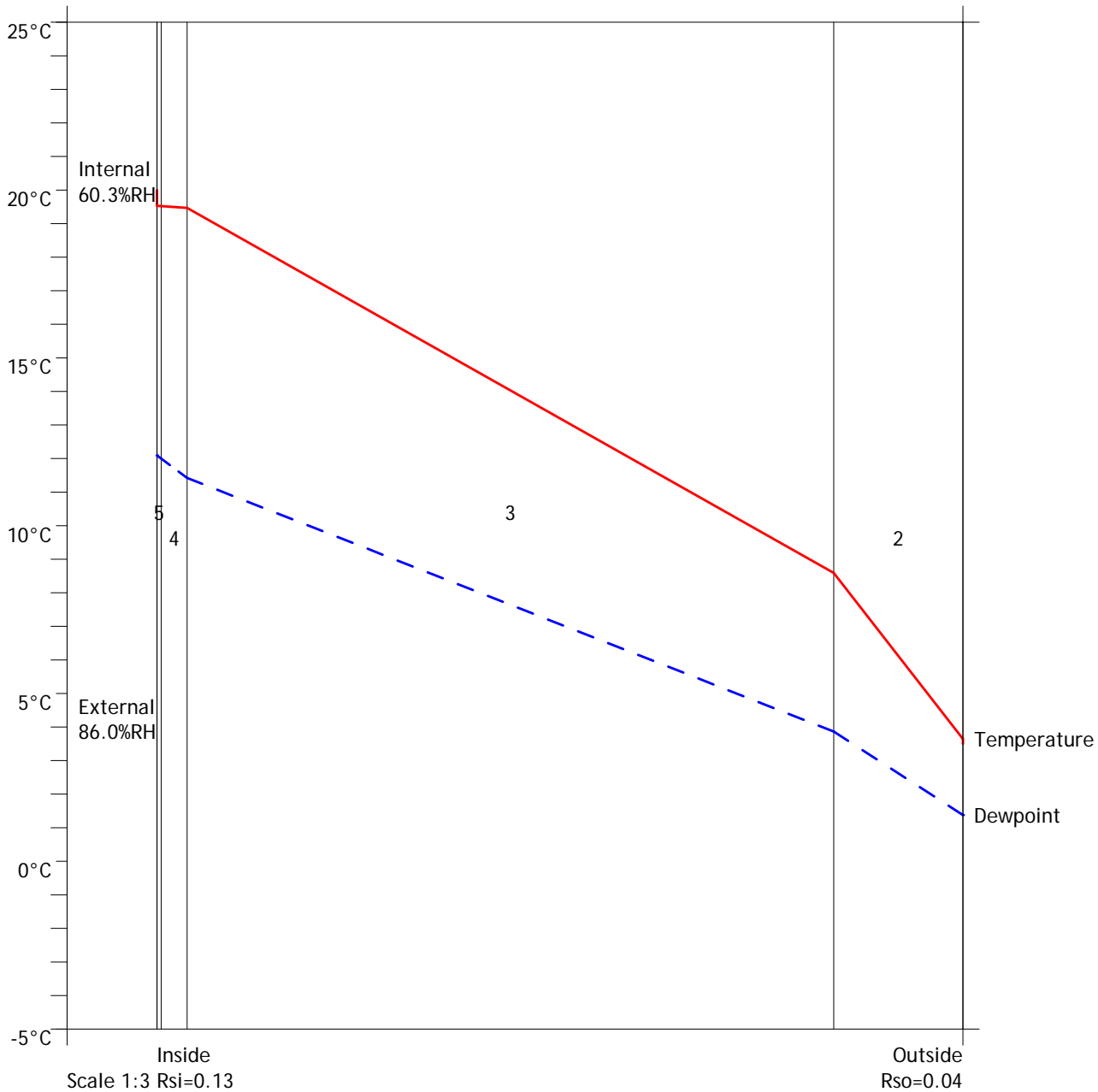
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 60mm	3.6	1.4	0.67	0.79			No
3 THERMOPLAN T10300 Block	8.6	3.9	0.81	1.12			No
4 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.5	11.4	1.35	2.26			No
5 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.5	12.0	1.40	2.27			No
6 Inside surface resistance	19.5	12.1	1.41	2.27			No

Worst case internal / external conditions for graph : 20.0°C @ 60.3%RH / 3.5°C @ 86.0%RH



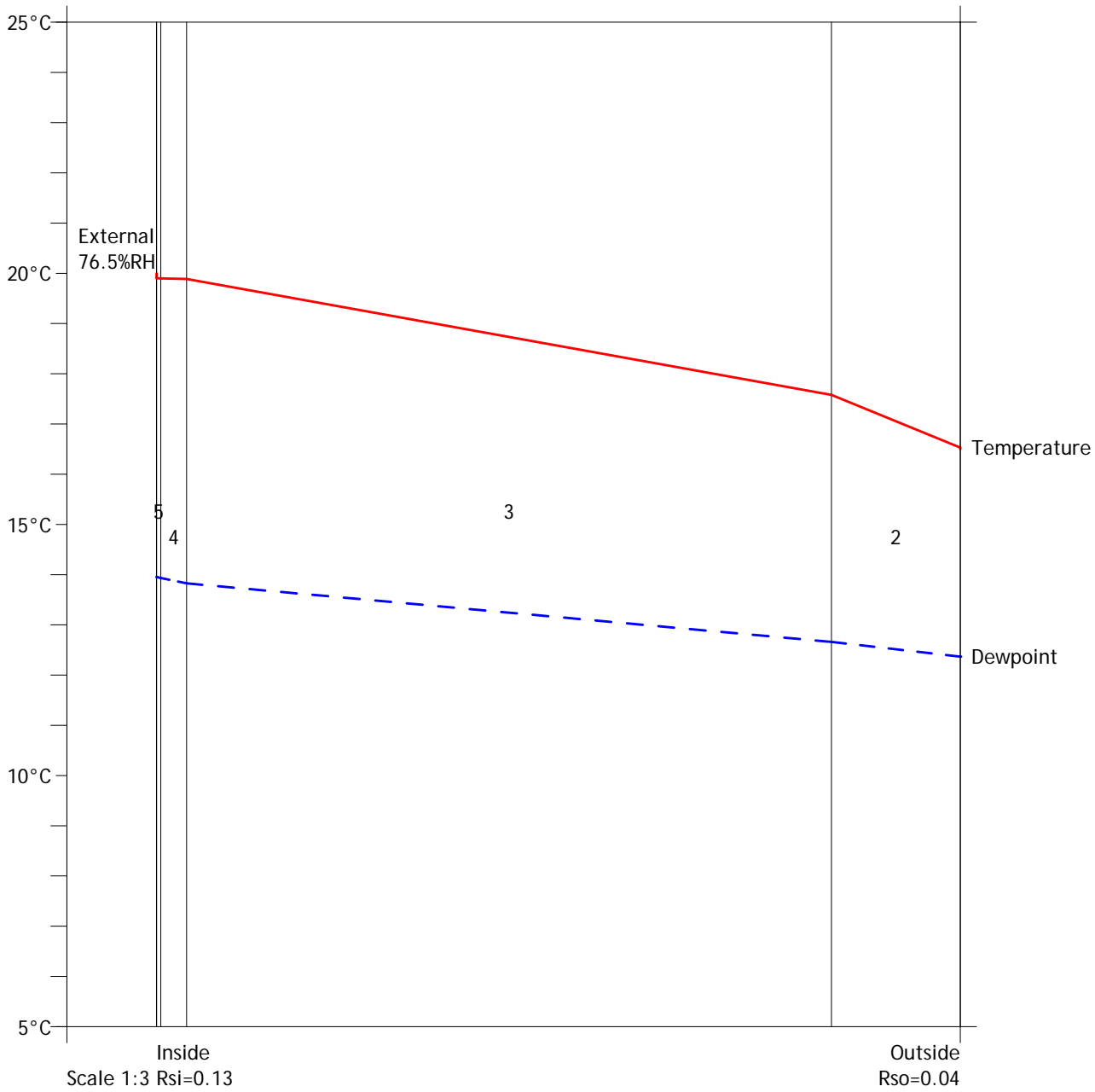
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 60mm	16.5	12.4	1.44	1.88			No
3 THERMOPLAN T10300 Block	17.6	12.7	1.46	2.01			No
4 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.8	1.58	2.32			No
5 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	13.9	1.59	2.32			No
6 Inside surface resistance	19.9	14.0	1.59	2.32			No

Worst case internal / external conditions for graph : 20.0°C @ 68.1%RH / 16.5°C @ 76.5%RH





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Project Information

Reference

Date 23 Oct 2006

Client NBT THERMOPLAN TYPICAL DATA

Construction type

Element : Wall - ZT / ZV 10 - 300MM CLAD 80

Internal surface emissivity : High External surface emissivity : High

Construction

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Diffutherm OR Pavatherm Plus 80mm	80.0	0.044	1.818	25.00	2.00
THERMOPLAN T10300 Block	300.0	0.100	3.000	20.83	6.25
BaumitBayosan K38 (RK38) Pure Lime Plaster	12.0	0.830	0.014	50.00	0.60
BaumitBayosan K30 (RK30) Pure Lime Skim Coat	2.0	0.830	0.002	50.00	0.10
Inside surface resistance	-	-	0.130	-	-

U-value - 0.20W/m²K

U-value, Combined Method : 0.20 W/m²K (upper/lower limit 5.005 / 5.005 m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000)

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

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

Structure element : Wall
Condensation calculations performed in accordance with BS5250:2002

Condensation is occurring at the following layers interfaces:-

Month	Int (C°)	Int (%RH)	Ext (C°)	Ext (%RH)
Jan	20.00	60.30	3.50	86.00
Feb	20.00	59.20	3.80	82.50
Mar	20.00	58.60	5.70	80.00
Apr	20.00	58.20	8.00	77.00
May	20.00	60.70	11.30	77.00
Jun	20.00	64.00	14.40	76.00
Jul	20.00	68.10	16.50	76.50
Aug	20.00	68.90	16.10	78.50
Sep	20.00	66.80	13.80	81.50
Oct	20.00	64.00	10.70	84.00
Nov	20.00	61.10	6.40	85.50
Dec	20.00	60.70	4.50	86.50

Gc = Monthly moisture accumulation per area at an interface

Ma = Accumulated moisture content per area at an interface

Peak accumulated moisture content per area at interface (Ma) = 0.00000 Kg/m²

Annual moisture accumulation = 0.00000 Kg/m²

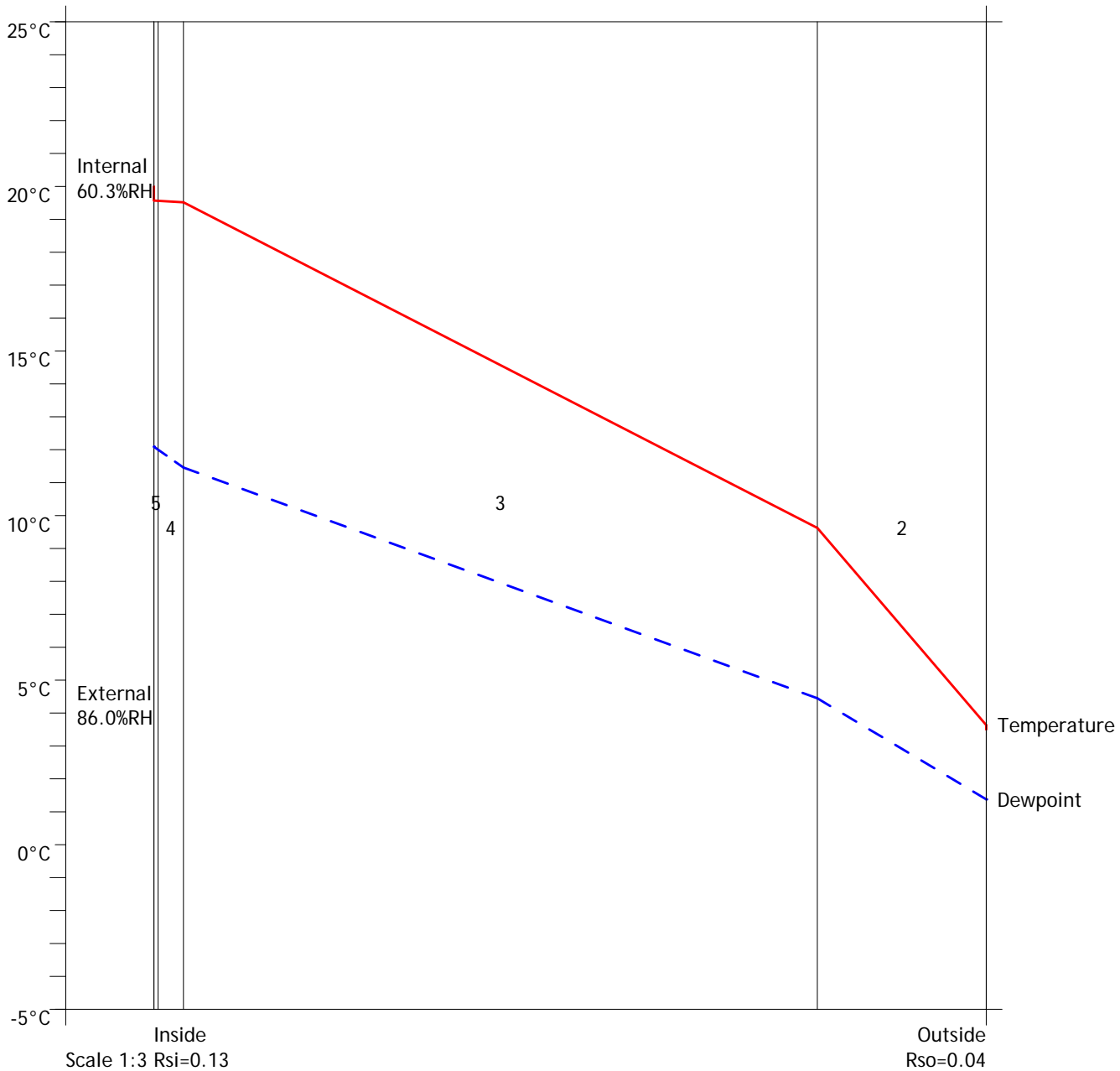
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 80mm	3.6	1.4	0.67	0.79			No
3 THERMOPLAN T10300 Block	9.6	4.4	0.84	1.20			No
4 BaimitBayosan K38 (RK38) Pure Lime Plaster	19.5	11.5	1.35	2.27			No
5 BaimitBayosan K30 (RK30) Pure Lime Skim Coat	19.6	12.0	1.40	2.27			No
6 Inside surface resistance	19.6	12.1	1.41	2.28			No

Worst case internal / external conditions for graph : 20.0°C @ 60.3%RH / 3.5°C @ 86.0%RH



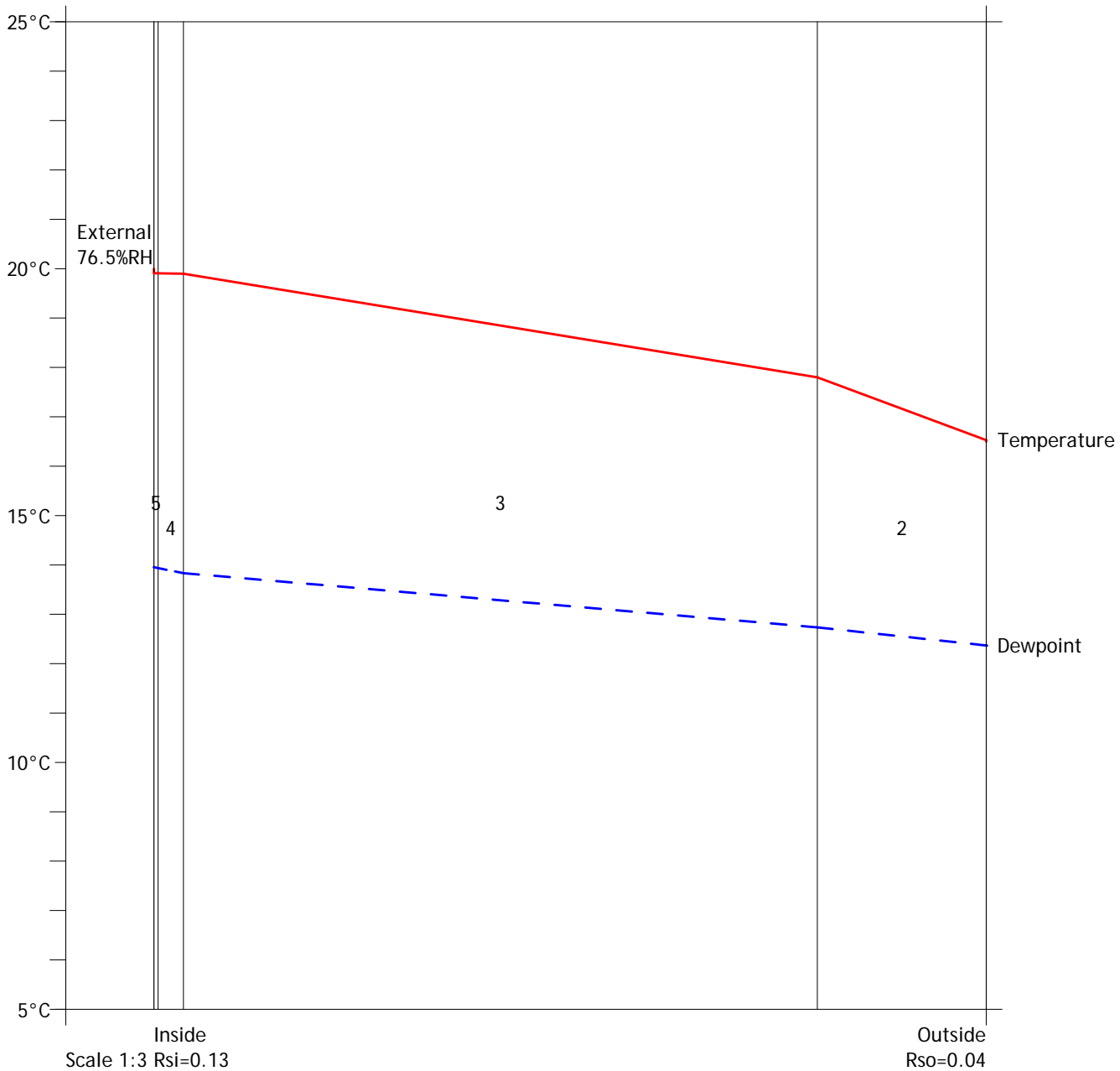
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 80mm	16.5	12.4	1.44	1.88			No
3 THERMOPLAN T10300 Block	17.8	12.7	1.47	2.04			No
4 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.8	1.58	2.32			No
5 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	13.9	1.59	2.32			No
6 Inside surface resistance	19.9	14.0	1.59	2.32			No

Worst case internal / external conditions for graph : 20.0°C @ 68.1%RH / 16.5°C @ 76.5%RH





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Project Information

Reference

Date 23 Oct 2006

Client NBT THERMOPLAN TYPICAL DATA

Construction type

Element : Wall - ZT / ZV 10 - 300MM CLAD 100

Internal surface emissivity : High External surface emissivity : High

Construction

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Diffutherm OR Pavatherm Plus 100mm	100.0	0.044	2.273	25.00	2.50
THERMOPLAN T10300 Block	300.0	0.100	3.000	20.83	6.25
BaumitBayosan K38 (RK38) Pure Lime Plaster	12.0	0.830	0.014	50.00	0.60
BaumitBayosan K30 (RK30) Pure Lime Skim Coat	2.0	0.830	0.002	50.00	0.10
Inside surface resistance	-	-	0.130	-	-

U-value - 0.18W/m²K

U-value, Combined Method : 0.18 W/m²K (upper/lower limit 5.460 / 5.460 m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000)

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

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

Structure element : Wall
Condensation calculations performed in accordance with BS5250:2002

Condensation is occurring at the following layers interfaces:-

Month	Int (C°)	Int (%RH)	Ext (C°)	Ext (%RH)
Jan	20.00	60.30	3.50	86.00
Feb	20.00	59.20	3.80	82.50
Mar	20.00	58.60	5.70	80.00
Apr	20.00	58.20	8.00	77.00
May	20.00	60.70	11.30	77.00
Jun	20.00	64.00	14.40	76.00
Jul	20.00	68.10	16.50	76.50
Aug	20.00	68.90	16.10	78.50
Sep	20.00	66.80	13.80	81.50
Oct	20.00	64.00	10.70	84.00
Nov	20.00	61.10	6.40	85.50
Dec	20.00	60.70	4.50	86.50

Gc = Monthly moisture accumulation per area at an interface

Ma = Accumulated moisture content per area at an interface

Peak accumulated moisture content per area at interface (Ma) = 0.00000 Kg/m²

Annual moisture accumulation = 0.00000 Kg/m²

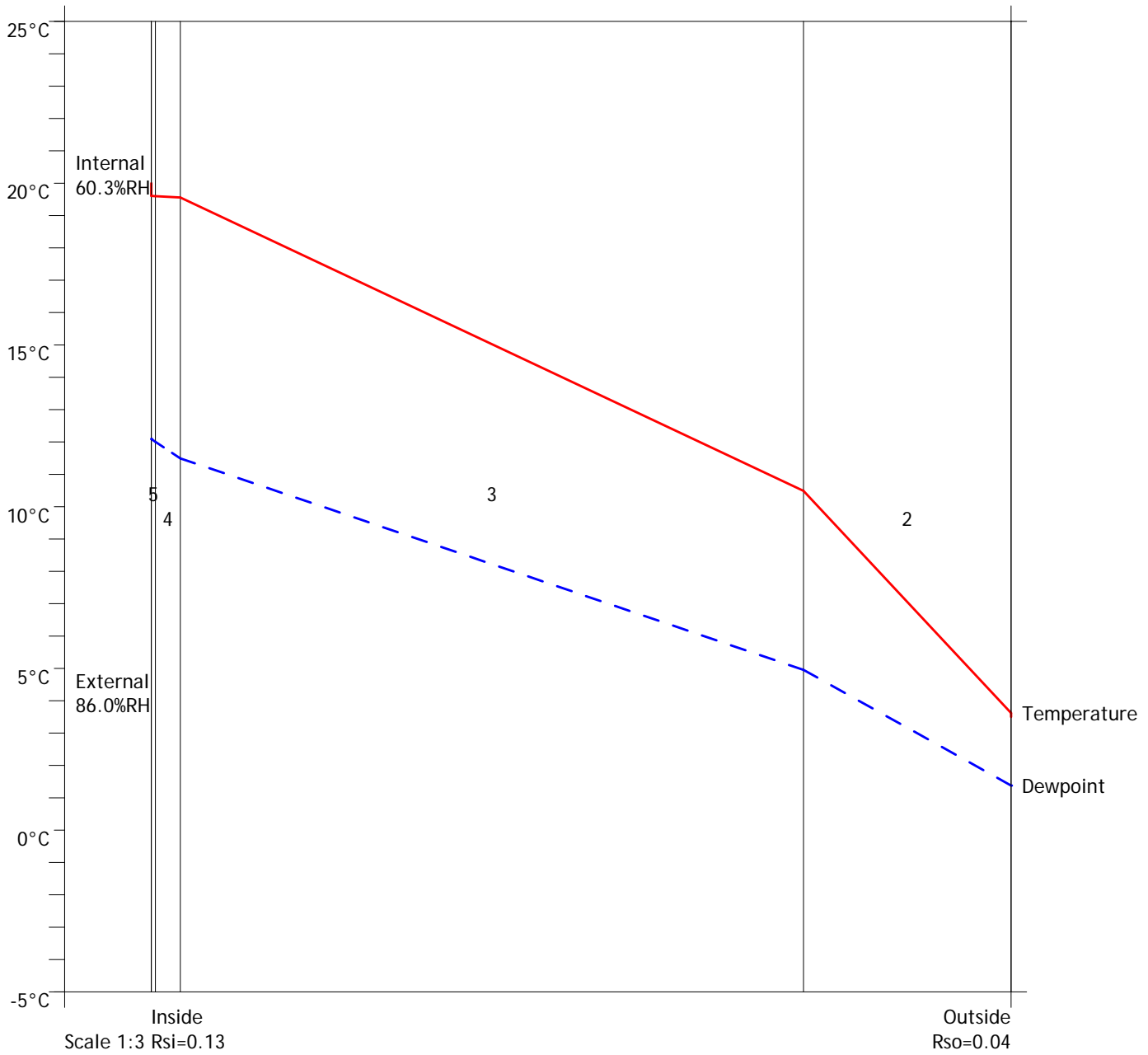
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 100mm	3.6	1.4	0.67	0.79			No
3 THERMOPLAN T10300 Block	10.5	5.0	0.87	1.27			No
4 BaimitBayosan K38 (RK38) Pure Lime Plaster	19.6	11.5	1.35	2.27			No
5 BaimitBayosan K30 (RK30) Pure Lime Skim Coat	19.6	12.0	1.40	2.28			No
6 Inside surface resistance	19.6	12.1	1.41	2.28			No

Worst case internal / external conditions for graph : 20.0°C @ 60.3%RH / 3.5°C @ 86.0%RH



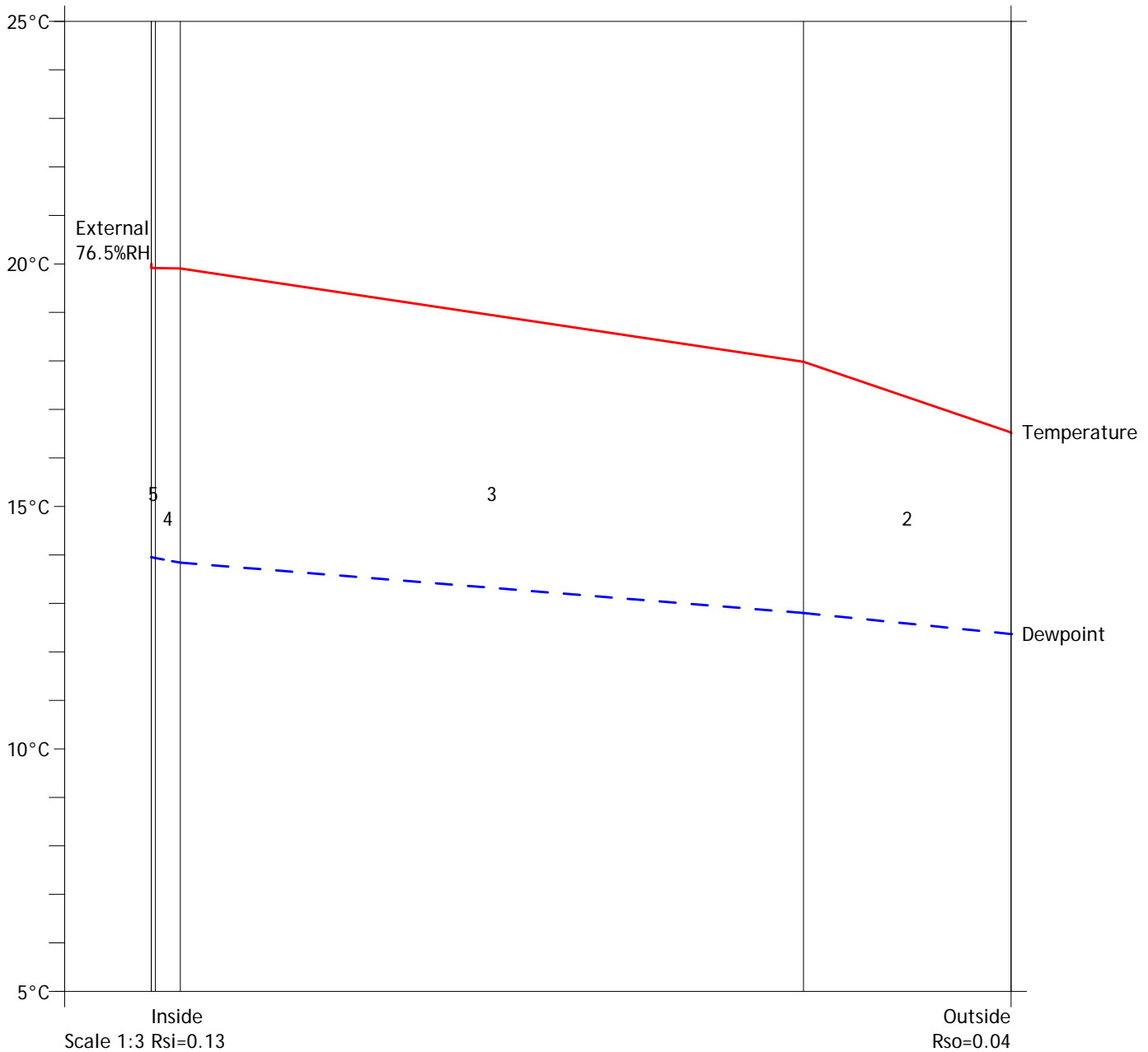
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 100mm	16.5	12.4	1.44	1.88			No
3 THERMOPLAN T10300 Block	18.0	12.8	1.48	2.06			No
4 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.8	1.58	2.32			No
5 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	13.9	1.59	2.32			No
6 Inside surface resistance	19.9	14.0	1.59	2.32			No

Worst case internal / external conditions for graph : 20.0°C @ 68.1%RH / 16.5°C @ 76.5%RH





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Project Information

Reference

Date 23 Oct 2006

Client NBT THERMOPLAN TYPICAL DATA

Construction type

Element : Wall - ZT / ZV 10 - 365MM

Internal surface emissivity : High External surface emissivity : High

Construction

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
BaumiBayosan SEP01/02/03/04 Decor Finish	2.0	0.830	0.002	50.00	0.10
BaumiBayosan MP69 / W Lightweight Render	15.0	0.560	0.027	50.00	0.75
THERMOPLAN T10365 Block	365.0	0.100	3.650	20.83	7.60
BaumiBayosan K38 (RK38) Pure Lime Plaster	12.0	0.830	0.014	50.00	0.60
BaumiBayosan K30 (RK30) Pure Lime Skim Coat	2.0	0.830	0.002	50.00	0.10
Inside surface resistance	-	-	0.130	-	-

U-value - 0.26W/m²K

U-value, Combined Method : 0.26 W/m²K (upper/lower limit 3.866 / 3.866 m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000)

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

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

Structure element : Wall
Condensation calculations performed in accordance with BS5250:2002

Condensation is occurring at the following layers interfaces:-

Month	Int (C°)	Int (%RH)	Ext (C°)	Ext (%RH)
Jan	20.00	60.30	3.50	86.00
Feb	20.00	59.20	3.80	82.50
Mar	20.00	58.60	5.70	80.00
Apr	20.00	58.20	8.00	77.00
May	20.00	60.70	11.30	77.00
Jun	20.00	64.00	14.40	76.00
Jul	20.00	68.10	16.50	76.50
Aug	20.00	68.90	16.10	78.50
Sep	20.00	66.80	13.80	81.50
Oct	20.00	64.00	10.70	84.00
Nov	20.00	61.10	6.40	85.50
Dec	20.00	60.70	4.50	86.50

Gc = Monthly moisture accumulation per area at an interface

Ma = Accumulated moisture content per area at an interface

Peak accumulated moisture content per area at interface (Ma) = 0.00000 Kg/m²

Annual moisture accumulation = 0.00000 Kg/m²

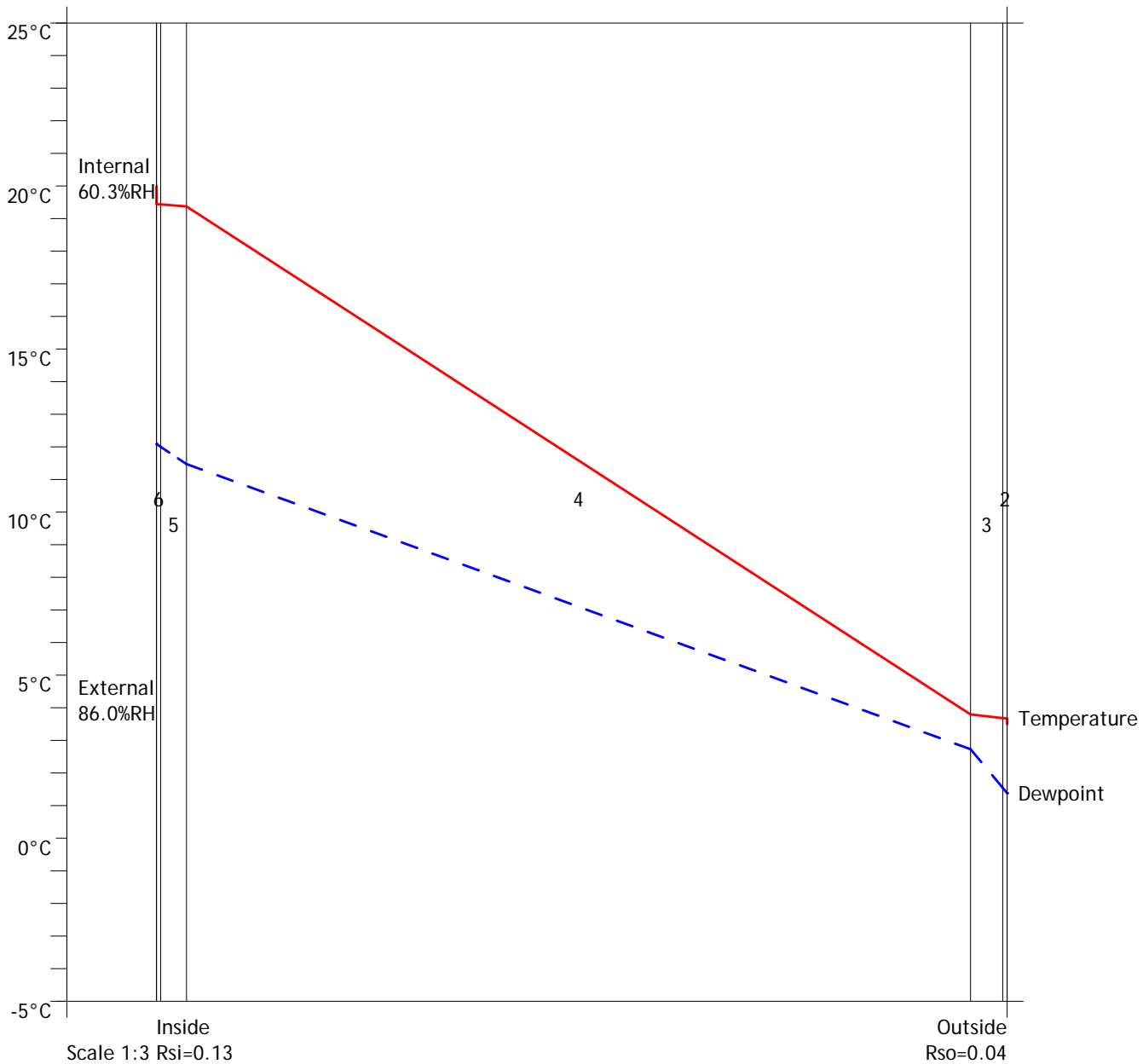
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 BaunitBayosan SEP01/02/03/04 Decor Finish	3.7	1.4	0.67	0.79			No
3 BaunitBayosan MP69 / W Lightweight Render	3.7	1.5	0.68	0.79			No
4 THERMOPLAN T10365 Block	3.8	2.7	0.74	0.80			No
5 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.4	11.5	1.35	2.25			No
6 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.4	12.0	1.40	2.26			No
7 Inside surface resistance	19.4	12.1	1.41	2.26			No

Worst case internal / external conditions for graph : 20.0°C @ 60.3%RH / 3.5°C @ 86.0%RH



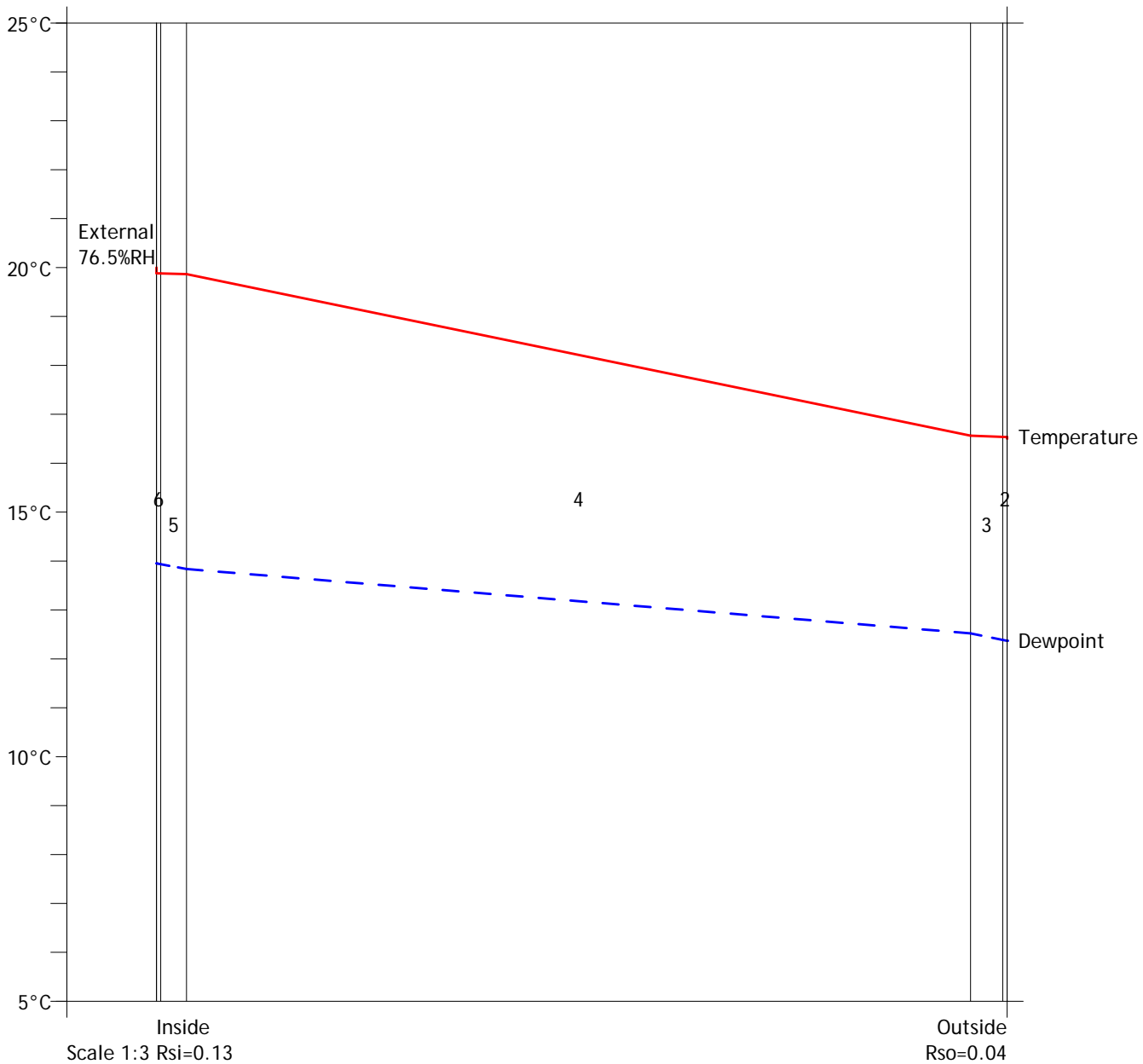
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 BaunitBayosan SEP01/02/03/04 Decor Finish	16.5	12.4	1.44	1.88			No
3 BaunitBayosan MP69 / W Lightweight Render	16.5	12.4	1.44	1.88			No
4 THERMOPLAN T10365 Block	16.6	12.5	1.45	1.88			No
5 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.8	1.58	2.32			No
6 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	13.9	1.59	2.32			No
7 Inside surface resistance	19.9	14.0	1.59	2.32			No

Worst case internal / external conditions for graph : 20.0°C @ 68.1%RH / 16.5°C @ 76.5%RH





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Project Information

Reference

Date 23 Oct 2006

Client NBT THERMOPLAN TYPICAL DATA

Construction type

Element : Wall - ZT / ZV 10 - 365MM CLAD

Internal surface emissivity : High External surface emissivity : High

Construction

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Diffutherm OR Pavatherm Plus 60mm	60.0	0.044	1.364	25.00	1.50
THERMOPLAN T10365 Block	365.0	0.100	3.650	20.83	7.60
BaumitBayosan K38 (RK38) Pure Lime Plaster	12.0	0.830	0.014	50.00	0.60
BaumitBayosan K30 (RK30) Pure Lime Skim Coat	2.0	0.830	0.002	50.00	0.10
Inside surface resistance	-	-	0.130	-	-

U-value - 0.19W/m²K

U-value, Combined Method : 0.19 W/m²K (upper/lower limit 5.201 / 5.201 m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000)

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

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

Structure element : Wall
Condensation calculations performed in accordance with BS5250:2002

Condensation is occurring at the following layers interfaces:-

Month	Int (C°)	Int (%RH)	Ext (C°)	Ext (%RH)
Jan	20.00	60.30	3.50	86.00
Feb	20.00	59.20	3.80	82.50
Mar	20.00	58.60	5.70	80.00
Apr	20.00	58.20	8.00	77.00
May	20.00	60.70	11.30	77.00
Jun	20.00	64.00	14.40	76.00
Jul	20.00	68.10	16.50	76.50
Aug	20.00	68.90	16.10	78.50
Sep	20.00	66.80	13.80	81.50
Oct	20.00	64.00	10.70	84.00
Nov	20.00	61.10	6.40	85.50
Dec	20.00	60.70	4.50	86.50

Gc = Monthly moisture accumulation per area at an interface

Ma = Accumulated moisture content per area at an interface

Peak accumulated moisture content per area at interface (Ma) = 0.00000 Kg/m²

Annual moisture accumulation = 0.00000 Kg/m²

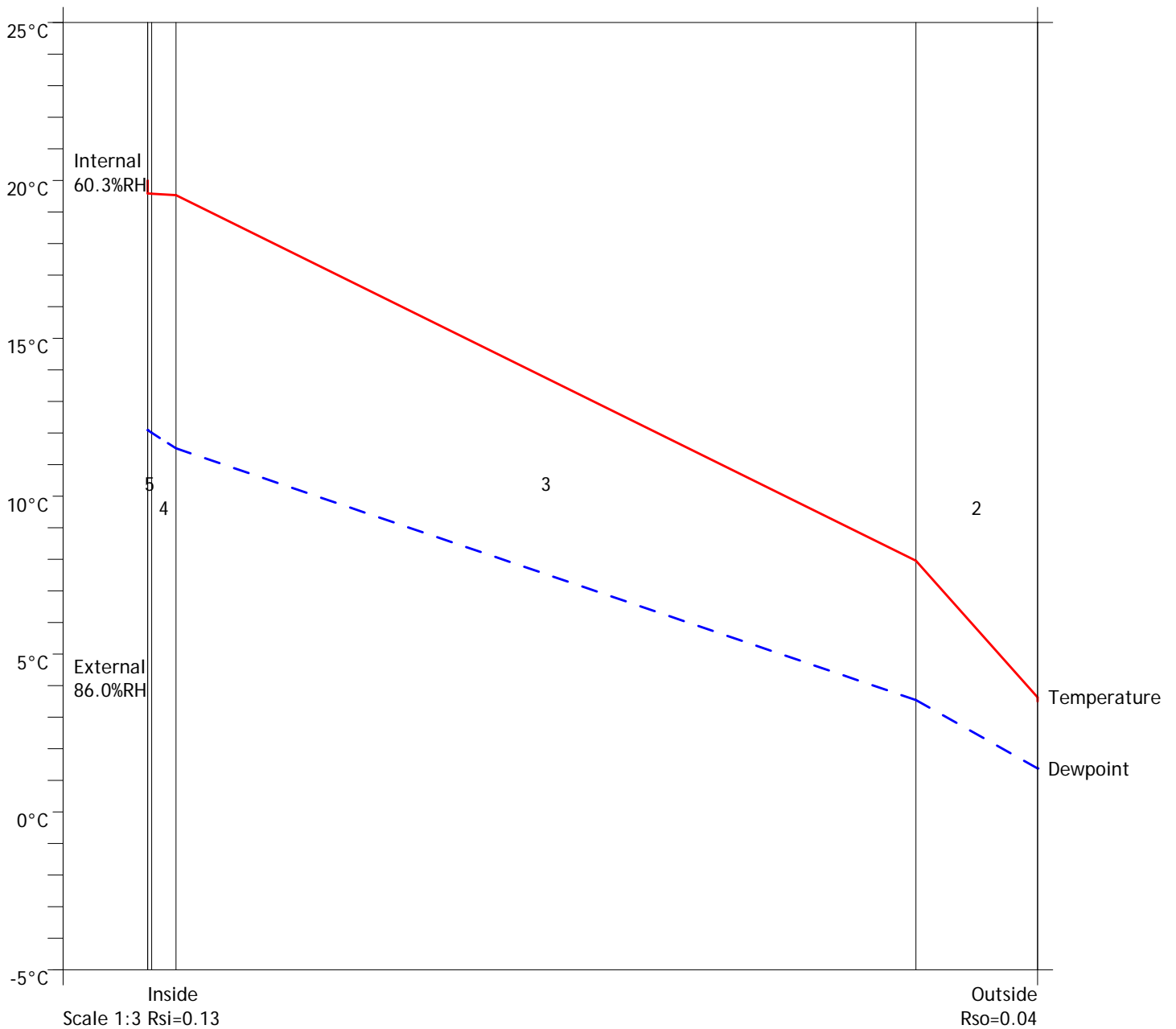
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 60mm	3.6	1.4	0.67	0.79			No
3 THERMOPLAN T10365 Block	8.0	3.5	0.79	1.07			No
4 BaimitBayosan K38 (RK38) Pure Lime Plaster	19.5	11.5	1.36	2.27			No
5 BaimitBayosan K30 (RK30) Pure Lime Skim Coat	19.6	12.0	1.40	2.28			No
6 Inside surface resistance	19.6	12.1	1.41	2.28			No

Worst case internal / external conditions for graph : 20.0°C @ 60.3%RH / 3.5°C @ 86.0%RH



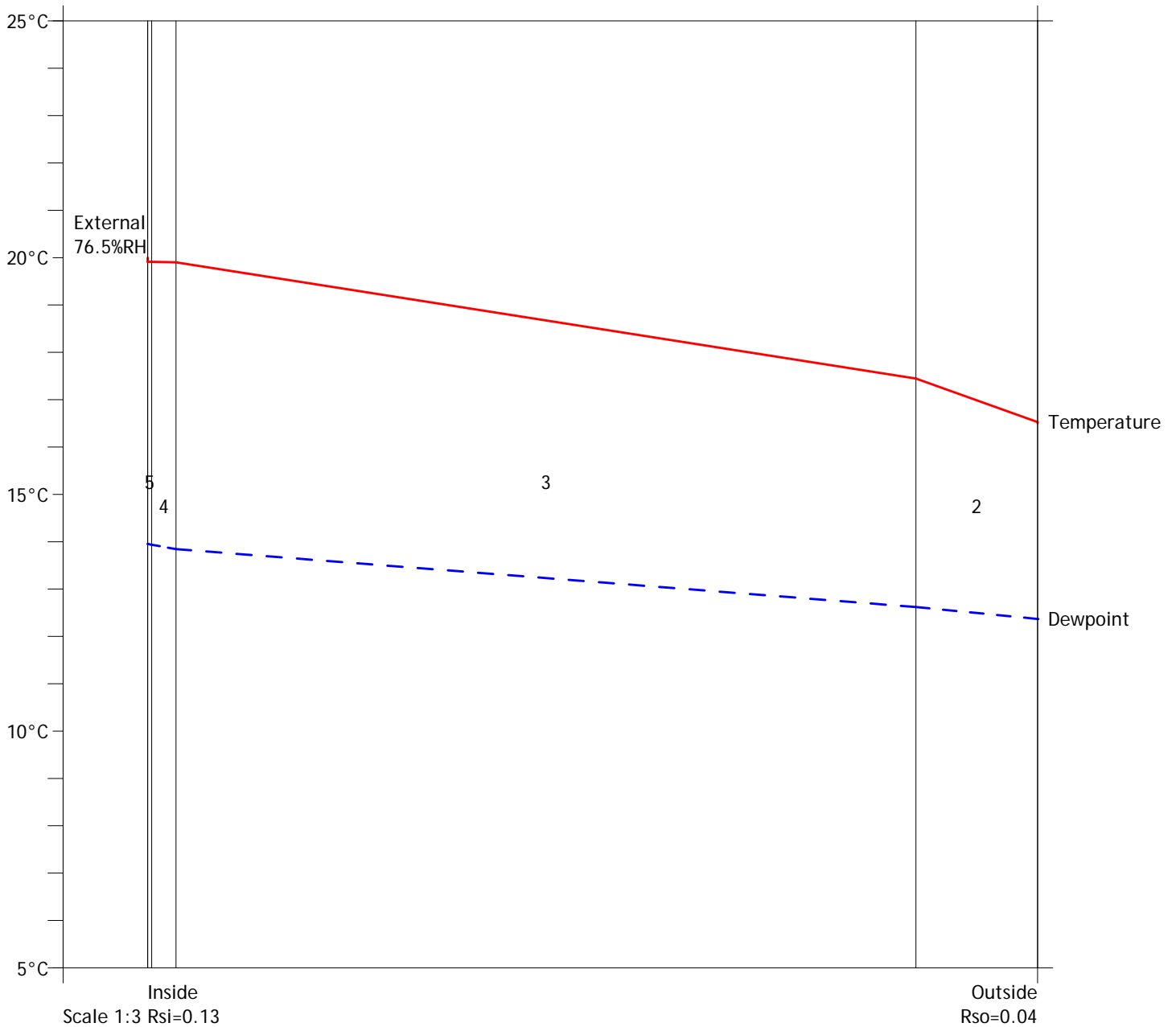
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 60mm	16.5	12.4	1.44	1.88			No
3 THERMOPLAN T10365 Block	17.4	12.6	1.46	1.99			No
4 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.8	1.58	2.32			No
5 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	13.9	1.59	2.32			No
6 Inside surface resistance	19.9	14.0	1.59	2.32			No

Worst case internal / external conditions for graph : 20.0°C @ 68.1%RH / 16.5°C @ 76.5%RH





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Project Information

Reference

Date 23 Oct 2006

Client NBT THERMOPLAN TYPICAL DATA

Construction type

Element : Wall - ZT / ZV 10 - 365MM CLAD 80

Internal surface emissivity : High External surface emissivity : High

Construction

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Diffutherm OR Pavatherm Plus 80mm	80.0	0.044	1.818	25.00	2.00
THERMOPLAN T10365 Block	365.0	0.100	3.650	20.83	7.60
BaumitBayosan K38 (RK38) Pure Lime Plaster	12.0	0.830	0.014	50.00	0.60
BaumitBayosan K30 (RK30) Pure Lime Skim Coat	2.0	0.830	0.002	50.00	0.10
Inside surface resistance	-	-	0.130	-	-

U-value - 0.18W/m²K

U-value, Combined Method : 0.18 W/m²K (upper/lower limit 5.655 / 5.655 m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000)

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

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

Structure element : Wall
Condensation calculations performed in accordance with BS5250:2002

Condensation is occurring at the following layers interfaces:-

Month	Int (C°)	Int (%RH)	Ext (C°)	Ext (%RH)
Jan	20.00	60.30	3.50	86.00
Feb	20.00	59.20	3.80	82.50
Mar	20.00	58.60	5.70	80.00
Apr	20.00	58.20	8.00	77.00
May	20.00	60.70	11.30	77.00
Jun	20.00	64.00	14.40	76.00
Jul	20.00	68.10	16.50	76.50
Aug	20.00	68.90	16.10	78.50
Sep	20.00	66.80	13.80	81.50
Oct	20.00	64.00	10.70	84.00
Nov	20.00	61.10	6.40	85.50
Dec	20.00	60.70	4.50	86.50

Gc = Monthly moisture accumulation per area at an interface

Ma = Accumulated moisture content per area at an interface

Peak accumulated moisture content per area at interface (Ma) = 0.00000 Kg/m²

Annual moisture accumulation = 0.00000 Kg/m²

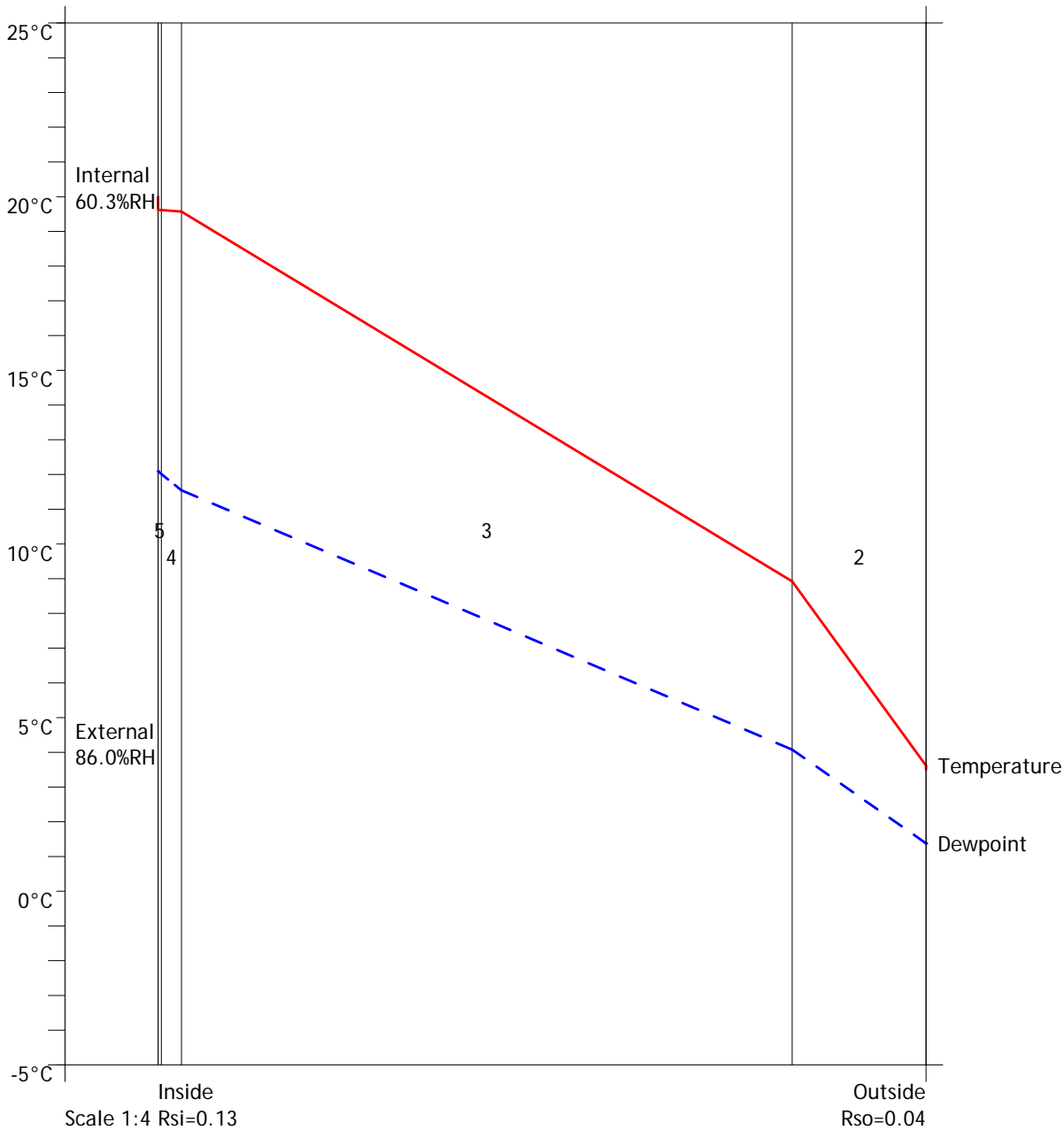
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 80mm	3.6	1.4	0.67	0.79			No
3 THERMOPLAN T10365 Block	8.9	4.1	0.82	1.14			No
4 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.6	11.5	1.36	2.28			No
5 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.6	12.0	1.40	2.28			No
6 Inside surface resistance	19.6	12.1	1.41	2.28			No

Worst case internal / external conditions for graph : 20.0°C @ 60.3%RH / 3.5°C @ 86.0%RH



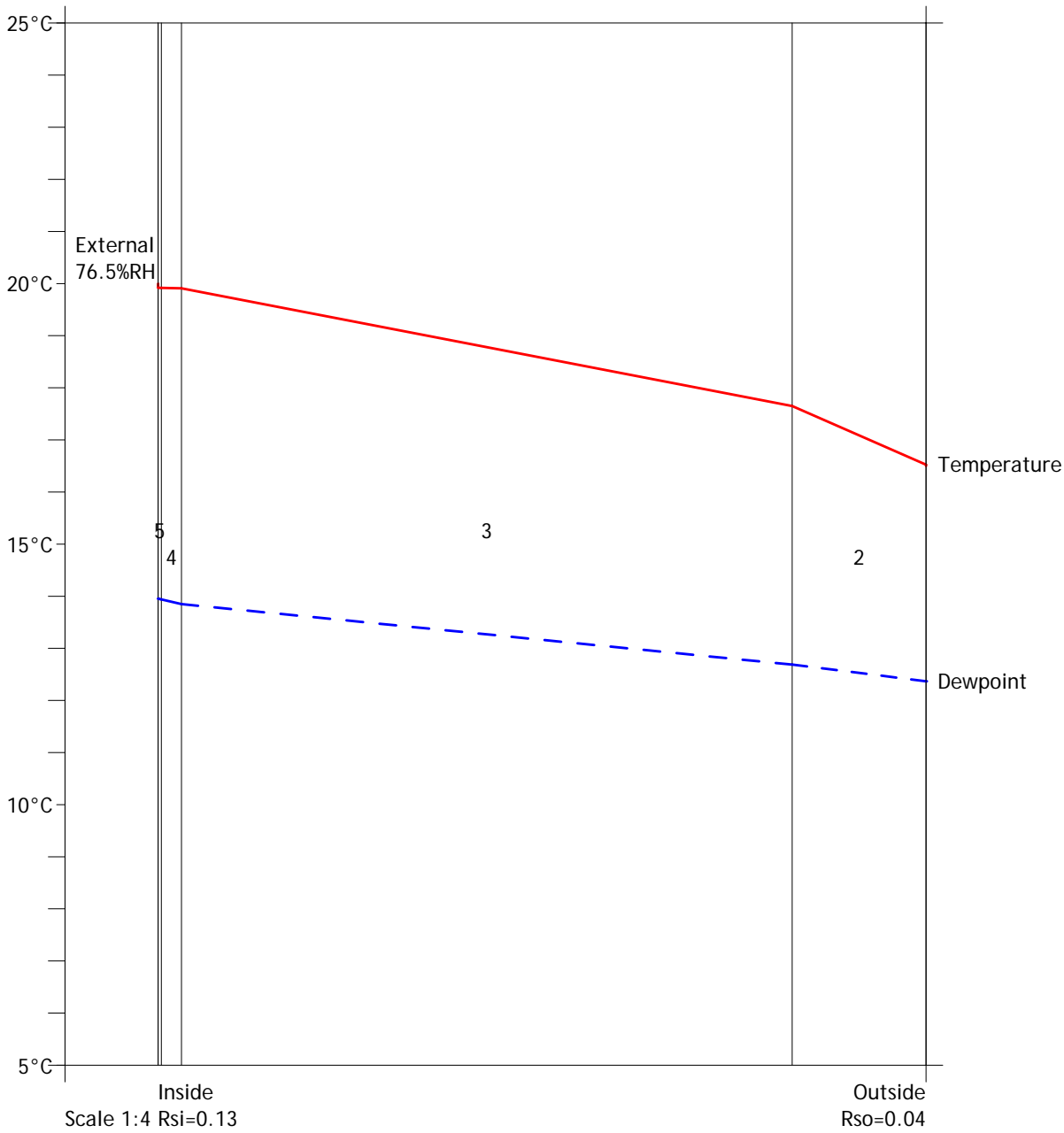
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 80mm	16.5	12.4	1.44	1.88			No
3 THERMOPLAN T10365 Block	17.6	12.7	1.47	2.02			No
4 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.8	1.58	2.32			No
5 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	13.9	1.59	2.33			No
6 Inside surface resistance	19.9	14.0	1.59	2.33			No

Worst case internal / external conditions for graph : 20.0°C @ 68.1%RH / 16.5°C @ 76.5%RH





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Project Information

Reference

Date 23 Oct 2006

Client NBT THERMOPLAN TYPICAL DATA

Construction type

Element : Wall - ZT / ZV 10 - 365MM CLAD 100

Internal surface emissivity : High External surface emissivity : High

Construction

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Diffutherm OR Pavatherm Plus 100mm	100.0	0.044	2.273	25.00	2.50
THERMOPLAN T10365 Block	365.0	0.100	3.650	20.83	7.60
BaumitBayosan K38 (RK38) Pure Lime Plaster	12.0	0.830	0.014	50.00	0.60
BaumitBayosan K30 (RK30) Pure Lime Skim Coat	2.0	0.830	0.002	50.00	0.10
Inside surface resistance	-	-	0.130	-	-

U-value - 0.16W/m²K

U-value, Combined Method : 0.16 W/m²K (upper/lower limit 6.110 / 6.110 m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000)

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

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

Structure element : Wall
Condensation calculations performed in accordance with BS5250:2002

Condensation is occurring at the following layers interfaces:-

Month	Int (C°)	Int (%RH)	Ext (C°)	Ext (%RH)
Jan	20.00	60.30	3.50	86.00
Feb	20.00	59.20	3.80	82.50
Mar	20.00	58.60	5.70	80.00
Apr	20.00	58.20	8.00	77.00
May	20.00	60.70	11.30	77.00
Jun	20.00	64.00	14.40	76.00
Jul	20.00	68.10	16.50	76.50
Aug	20.00	68.90	16.10	78.50
Sep	20.00	66.80	13.80	81.50
Oct	20.00	64.00	10.70	84.00
Nov	20.00	61.10	6.40	85.50
Dec	20.00	60.70	4.50	86.50

Gc = Monthly moisture accumulation per area at an interface

Ma = Accumulated moisture content per area at an interface

Peak accumulated moisture content per area at interface (Ma) = 0.00000 Kg/m²

Annual moisture accumulation = 0.00000 Kg/m²

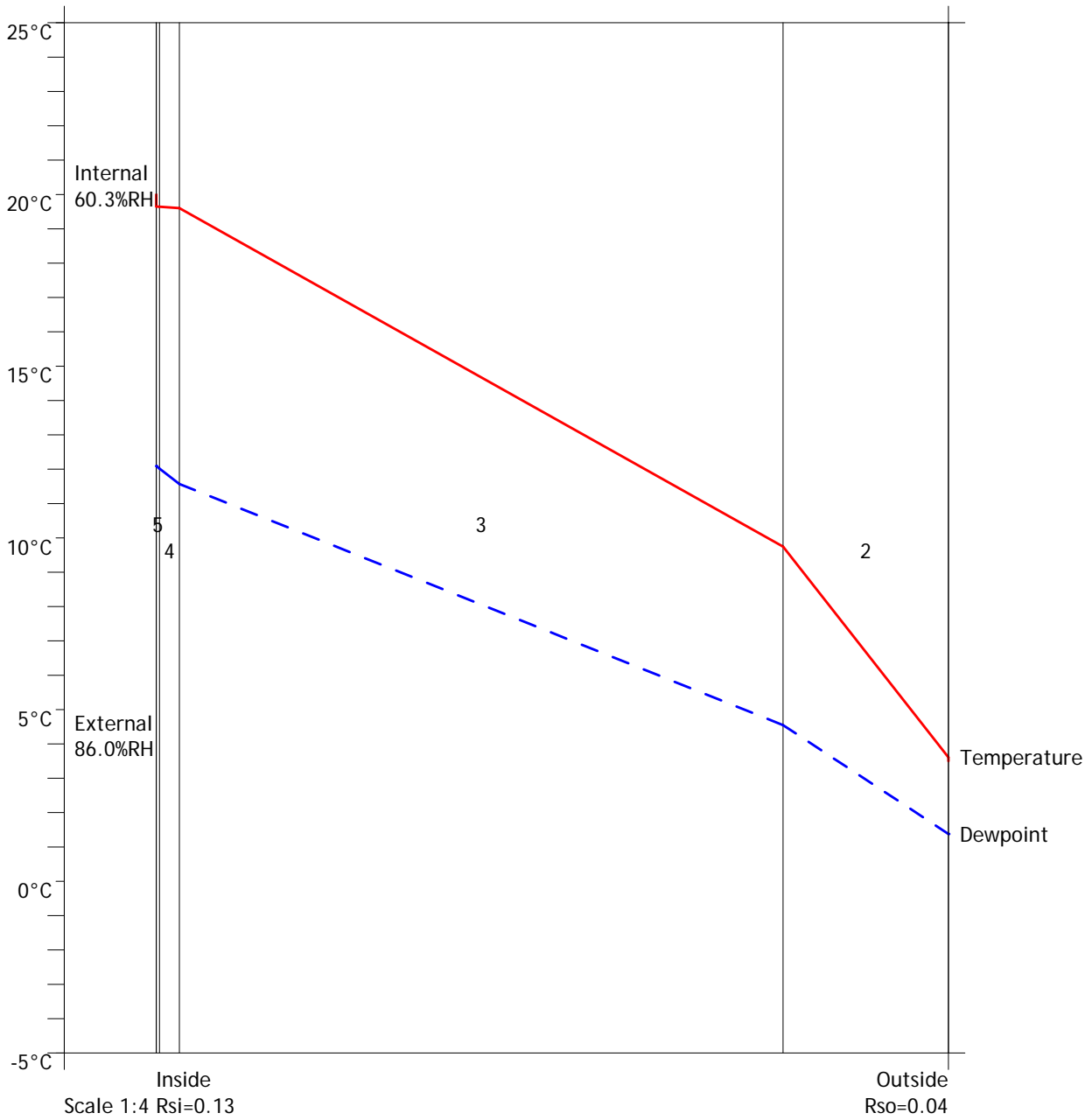
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 100mm	3.6	1.4	0.67	0.79			No
3 THERMOPLAN T10365 Block	9.7	4.5	0.84	1.21			No
4 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.6	11.6	1.36	2.28			No
5 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.6	12.0	1.40	2.29			No
6 Inside surface resistance	19.6	12.1	1.41	2.29			No

Worst case internal / external conditions for graph : 20.0°C @ 60.3%RH / 3.5°C @ 86.0%RH



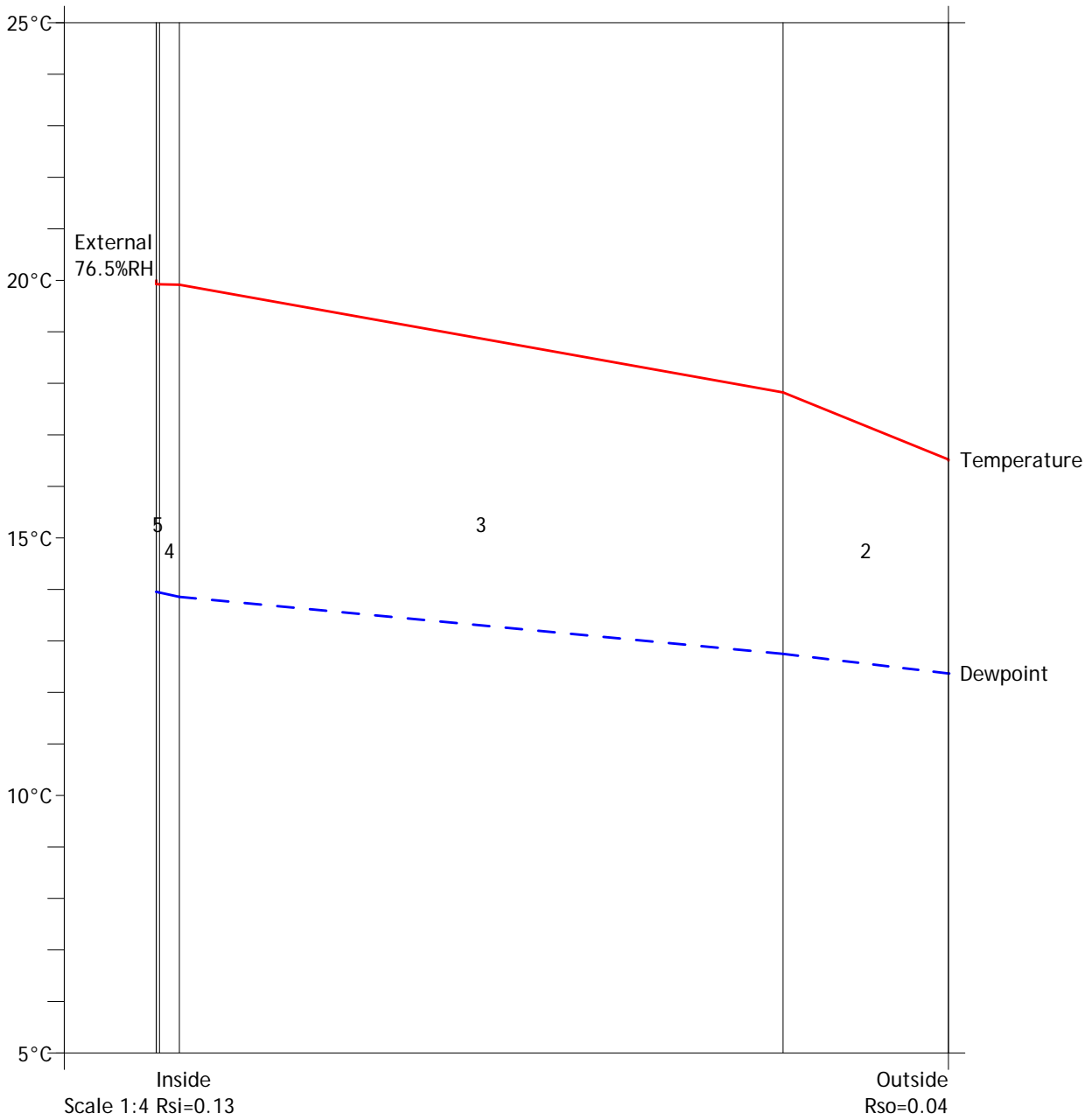
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 100mm	16.5	12.4	1.44	1.88			No
3 THERMOPLAN T10365 Block	17.8	12.7	1.47	2.04			No
4 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.9	1.58	2.32			No
5 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	13.9	1.59	2.33			No
6 Inside surface resistance	19.9	14.0	1.59	2.33			No

Worst case internal / external conditions for graph : 20.0°C @ 68.1%RH / 16.5°C @ 76.5%RH





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Project Information

Reference

Date 23 Oct 2006

Client NBT THERMOPLAN TYPICAL DATA

Construction type

Element : Wall - ZT / ZV 10 - 400MM

Internal surface emissivity : High External surface emissivity : High

Construction

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
BaumitBayosan SEP01/02/03/04 Decor Finish	2.0	0.830	0.002	50.00	0.10
BaumitBayosan MP69 / W Lightweight Render	15.0	0.560	0.027	50.00	0.75
THERMOPLAN T10400 Block	400.0	0.100	4.000	20.83	8.33
BaumitBayosan K38 (RK38) Pure Lime Plaster	12.0	0.830	0.014	50.00	0.60
BaumitBayosan K30 (RK30) Pure Lime Skim Coat	2.0	0.830	0.002	50.00	0.10
Inside surface resistance	-	-	0.130	-	-

U-value - 0.24W/m²K

U-value, Combined Method : 0.24 W/m²K (upper/lower limit 4.216 / 4.216 m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000)

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

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

Structure element : Wall
Condensation calculations performed in accordance with BS5250:2002

Condensation is occurring at the following layers interfaces:-

Month	Int (C°)	Int (%RH)	Ext (C°)	Ext (%RH)
Jan	20.00	60.30	3.50	86.00
Feb	20.00	59.20	3.80	82.50
Mar	20.00	58.60	5.70	80.00
Apr	20.00	58.20	8.00	77.00
May	20.00	60.70	11.30	77.00
Jun	20.00	64.00	14.40	76.00
Jul	20.00	68.10	16.50	76.50
Aug	20.00	68.90	16.10	78.50
Sep	20.00	66.80	13.80	81.50
Oct	20.00	64.00	10.70	84.00
Nov	20.00	61.10	6.40	85.50
Dec	20.00	60.70	4.50	86.50

Gc = Monthly moisture accumulation per area at an interface

Ma = Accumulated moisture content per area at an interface

Peak accumulated moisture content per area at interface (Ma) = 0.00000 Kg/m²

Annual moisture accumulation = 0.00000 Kg/m²

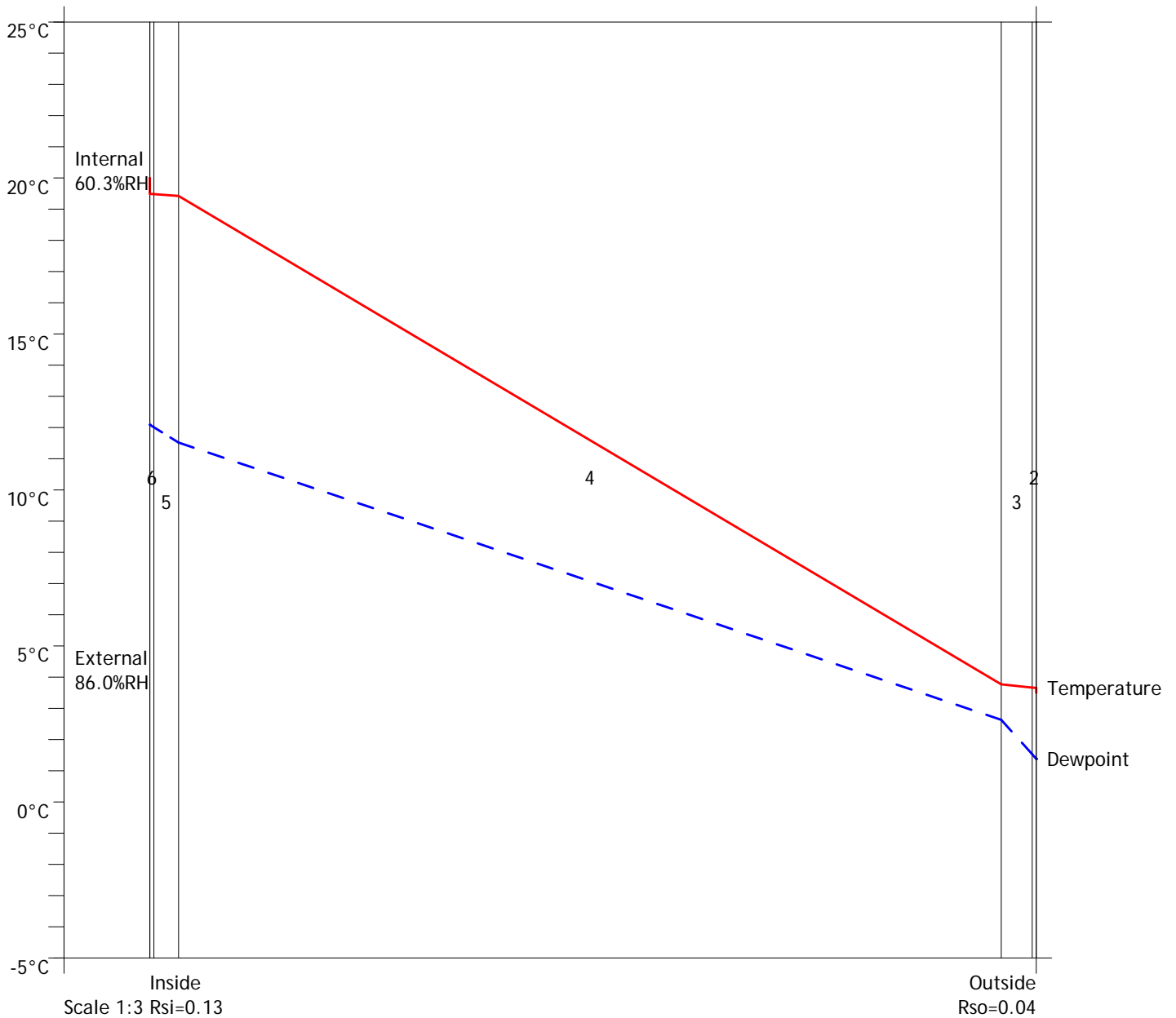
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 BaunitBayosan SEP01/02/03/04 Decor Finish	3.7	1.4	0.67	0.79			No
3 BaunitBayosan MP69 / W Lightweight Render	3.7	1.5	0.68	0.79			No
4 THERMOPLAN T10400 Block	3.8	2.6	0.74	0.80			No
5 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.4	11.5	1.36	2.26			No
6 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.5	12.0	1.40	2.26			No
7 Inside surface resistance	19.5	12.1	1.41	2.26			No

Worst case internal / external conditions for graph : 20.0°C @ 60.3%RH / 3.5°C @ 86.0%RH



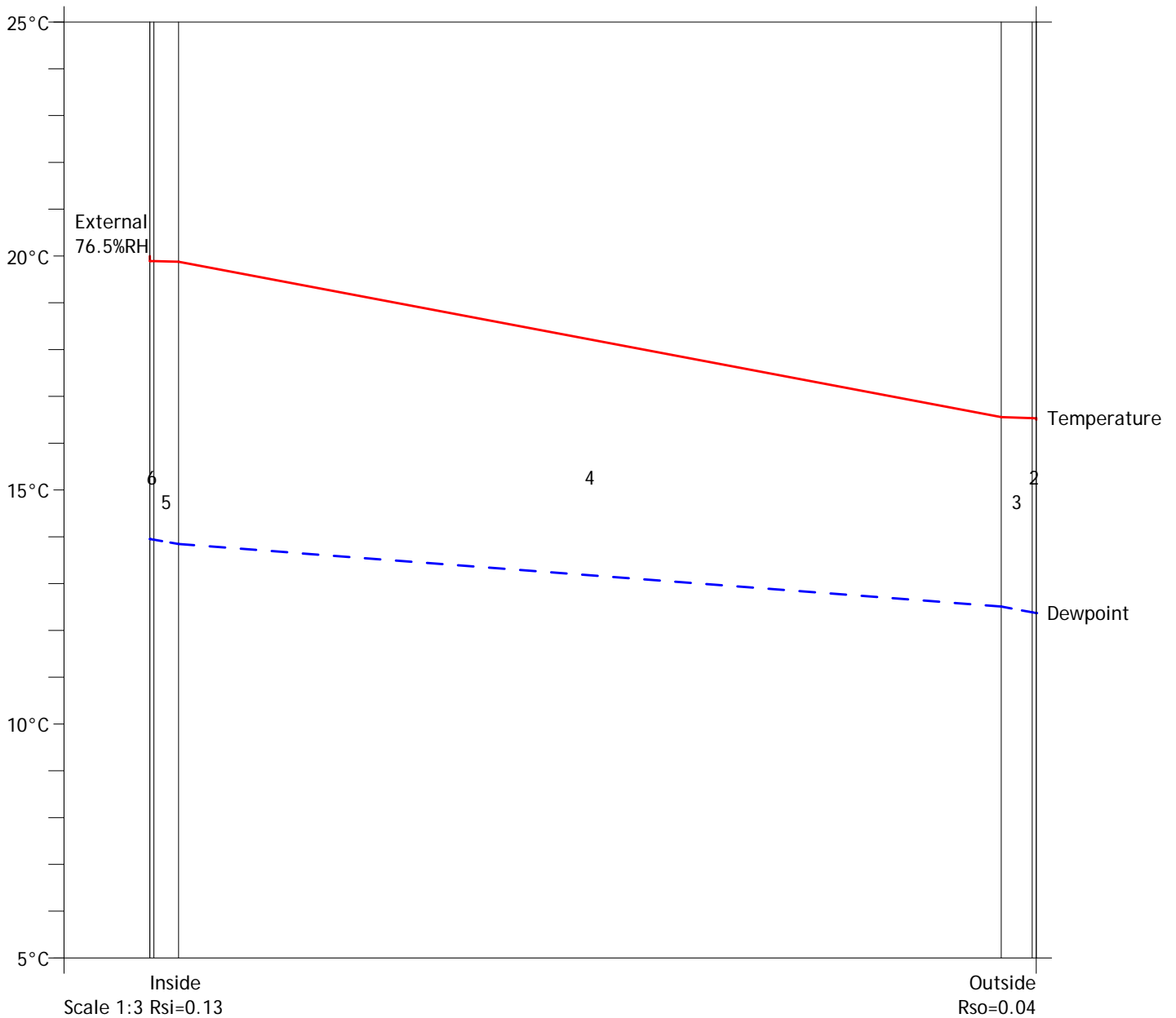
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 BaunitBayosan SEP01/02/03/04 Decor Finish	16.5	12.4	1.44	1.88			No
3 BaunitBayosan MP69 / W Lightweight Render	16.5	12.4	1.44	1.88			No
4 THERMOPLAN T10400 Block	16.6	12.5	1.45	1.88			No
5 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.8	1.58	2.32			No
6 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	13.9	1.59	2.32			No
7 Inside surface resistance	19.9	14.0	1.59	2.32			No

Worst case internal / external conditions for graph : 20.0°C @ 68.1%RH / 16.5°C @ 76.5%RH





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Project Information

Reference

Date 23 Oct 2006

Client NBT THERMOPLAN TYPICAL DATA

Construction type

Element : Wall - ZT / ZV 10 - 400MM CLAD 60

Internal surface emissivity : High External surface emissivity : High

Construction

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Diffutherm OR Pavatherm Plus 60mm	60.0	0.044	1.364	25.00	1.50
THERMOPLAN T10400Block	400.0	0.100	4.000	20.83	8.33
BaumitBayosan K38 (RK38) Pure Lime Plaster	12.0	0.830	0.014	50.00	0.60
BaumitBayosan K30 (RK30) Pure Lime Skim Coat	2.0	0.830	0.002	50.00	0.10
Inside surface resistance	-	-	0.130	-	-

U-value - 0.18W/m²K

U-value, Combined Method : 0.18 W/m²K (upper/lower limit 5.551 / 5.551 m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000)

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

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

Structure element : Wall
Condensation calculations performed in accordance with BS5250:2002

Condensation is occurring at the following layers interfaces:-

Month	Int (C°)	Int (%RH)	Ext (C°)	Ext (%RH)
Jan	20.00	60.30	3.50	86.00
Feb	20.00	59.20	3.80	82.50
Mar	20.00	58.60	5.70	80.00
Apr	20.00	58.20	8.00	77.00
May	20.00	60.70	11.30	77.00
Jun	20.00	64.00	14.40	76.00
Jul	20.00	68.10	16.50	76.50
Aug	20.00	68.90	16.10	78.50
Sep	20.00	66.80	13.80	81.50
Oct	20.00	64.00	10.70	84.00
Nov	20.00	61.10	6.40	85.50
Dec	20.00	60.70	4.50	86.50

Gc = Monthly moisture accumulation per area at an interface

Ma = Accumulated moisture content per area at an interface

Peak accumulated moisture content per area at interface (Ma) = 0.00000 Kg/m²

Annual moisture accumulation = 0.00000 Kg/m²

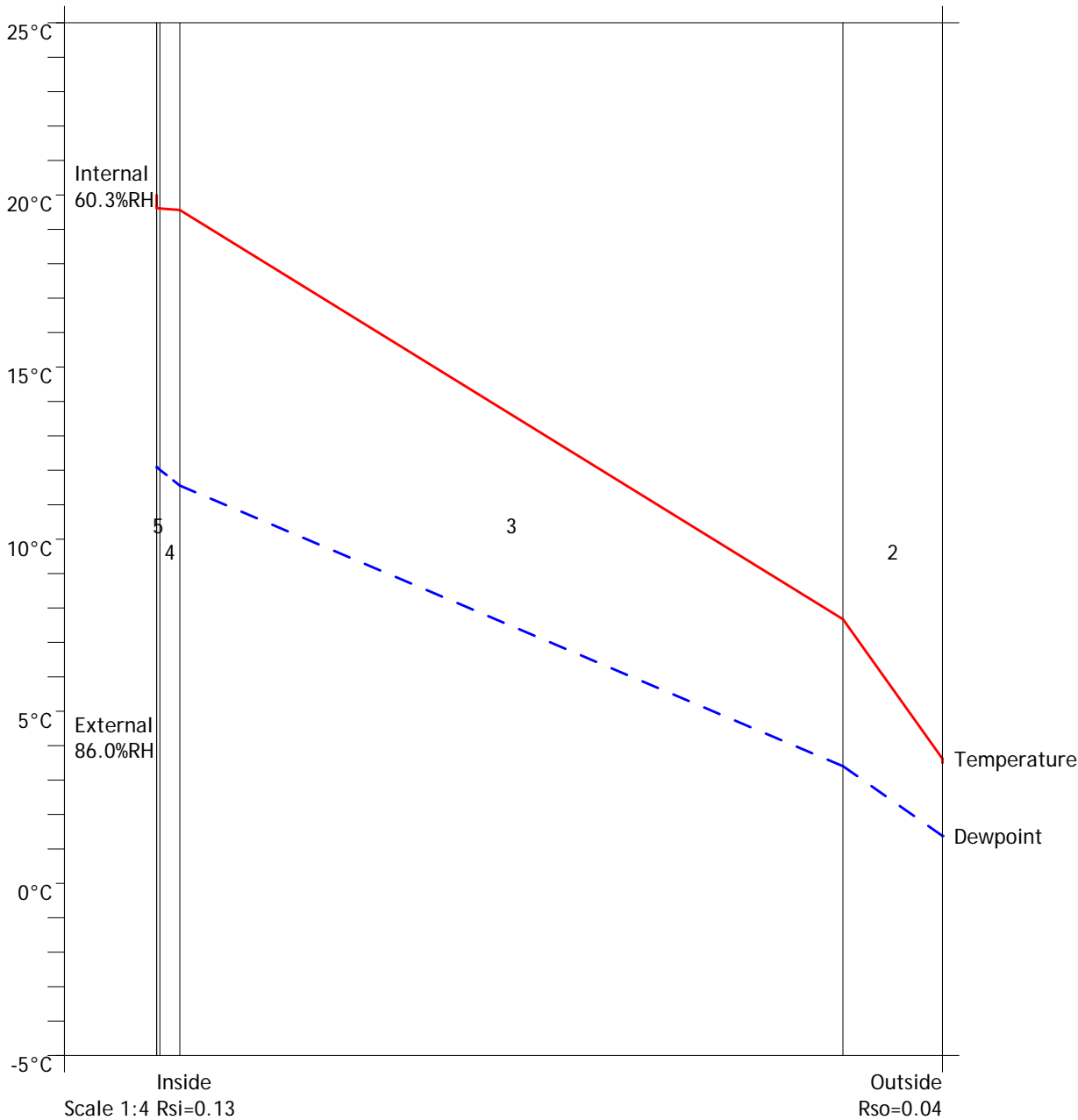
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 60mm	3.6	1.4	0.67	0.79			No
3 THERMOPLAN T10400Block	7.7	3.4	0.78	1.05			No
4 BaimitBayosan K38 (RK38) Pure Lime Plaster	19.6	11.6	1.36	2.27			No
5 BaimitBayosan K30 (RK30) Pure Lime Skim Coat	19.6	12.0	1.40	2.28			No
6 Inside surface resistance	19.6	12.1	1.41	2.28			No

Worst case internal / external conditions for graph : 20.0°C @ 60.3%RH / 3.5°C @ 86.0%RH



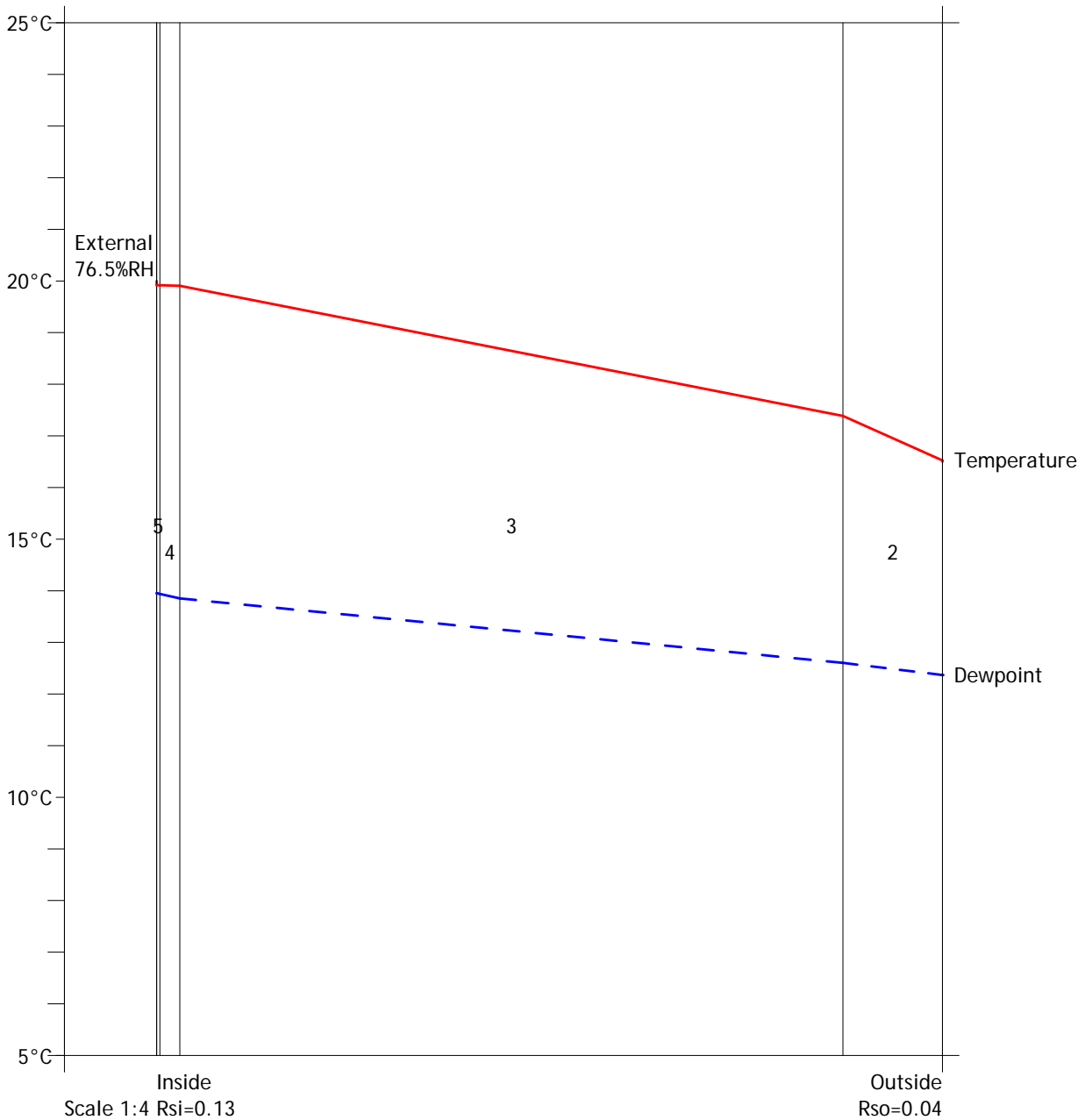
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 60mm	16.5	12.4	1.44	1.88			No
3 THERMOPLAN T10400Block	17.4	12.6	1.46	1.98			No
4 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.9	1.58	2.32			No
5 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	13.9	1.59	2.32			No
6 Inside surface resistance	19.9	14.0	1.59	2.33			No

Worst case internal / external conditions for graph : 20.0°C @ 68.1%RH / 16.5°C @ 76.5%RH





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Project Information

Reference

Date 23 Oct 2006

Client NBT THERMOPLAN TYPICAL DATA

Construction type

Element : Wall - ZT / ZV 10 - 400MM CLAD 80

Internal surface emissivity : High External surface emissivity : High

Construction

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Diffutherm OR Pavatherm Plus 80mm	80.0	0.044	1.818	25.00	2.00
THERMOPLAN T10400Block	400.0	0.100	4.000	20.83	8.33
BaumitBayosan K38 (RK38) Pure Lime Plaster	12.0	0.830	0.014	50.00	0.60
BaumitBayosan K30 (RK30) Pure Lime Skim Coat	2.0	0.830	0.002	50.00	0.10
Inside surface resistance	-	-	0.130	-	-

U-value - 0.17W/m²K

U-value, Combined Method : 0.17 W/m²K (upper/lower limit 6.005 / 6.005 m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000)

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

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

Structure element : Wall
Condensation calculations performed in accordance with BS5250:2002

Condensation is occurring at the following layers interfaces:-

Month	Int (C°)	Int (%RH)	Ext (C°)	Ext (%RH)
Jan	20.00	60.30	3.50	86.00
Feb	20.00	59.20	3.80	82.50
Mar	20.00	58.60	5.70	80.00
Apr	20.00	58.20	8.00	77.00
May	20.00	60.70	11.30	77.00
Jun	20.00	64.00	14.40	76.00
Jul	20.00	68.10	16.50	76.50
Aug	20.00	68.90	16.10	78.50
Sep	20.00	66.80	13.80	81.50
Oct	20.00	64.00	10.70	84.00
Nov	20.00	61.10	6.40	85.50
Dec	20.00	60.70	4.50	86.50

Gc = Monthly moisture accumulation per area at an interface

Ma = Accumulated moisture content per area at an interface

Peak accumulated moisture content per area at interface (Ma) = 0.00000 Kg/m²

Annual moisture accumulation = 0.00000 Kg/m²

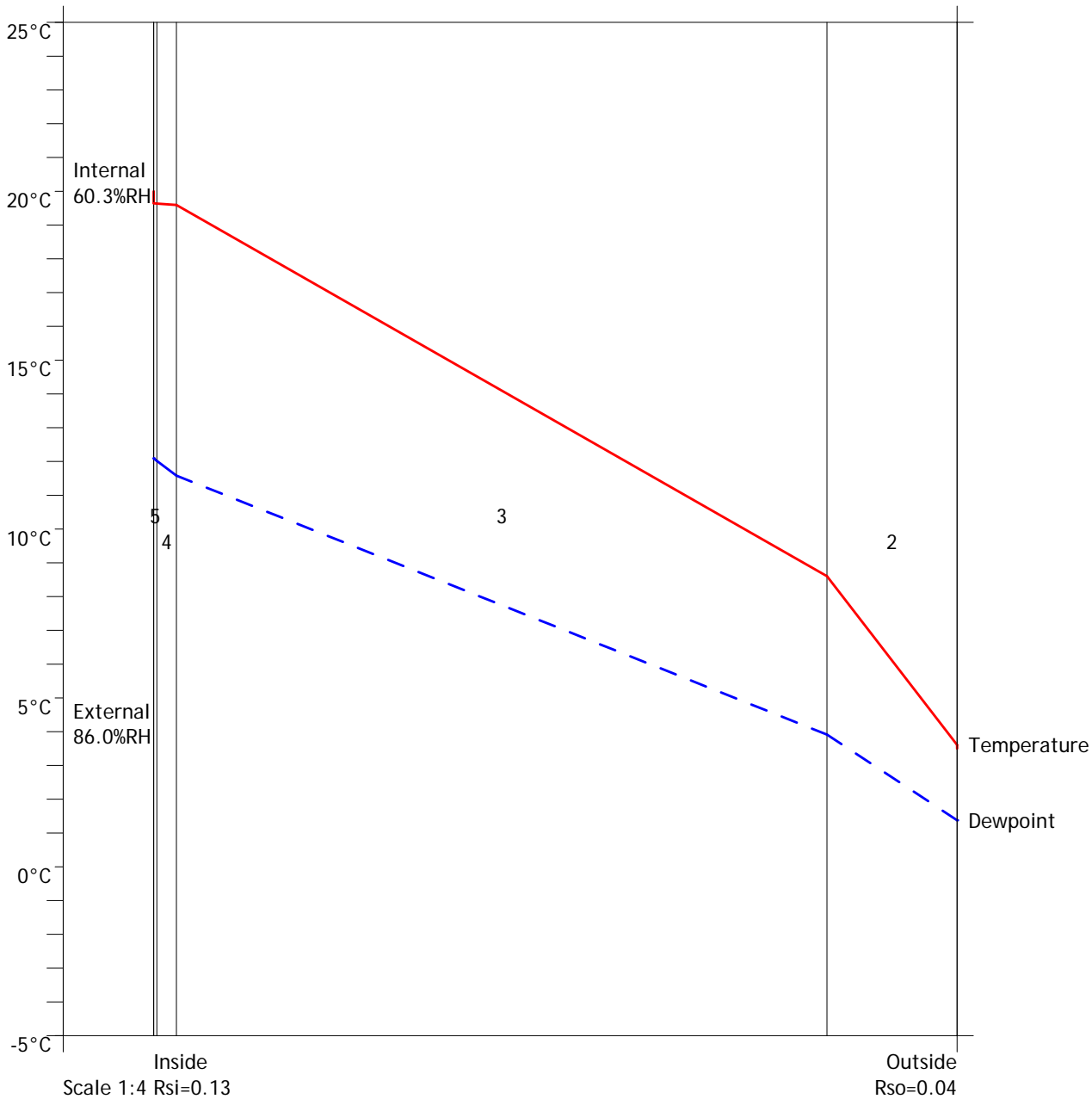
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 80mm	3.6	1.4	0.67	0.79			No
3 THERMOPLAN T10400Block	8.6	3.9	0.81	1.12			No
4 BaimitBayosan K38 (RK38) Pure Lime Plaster	19.6	11.6	1.36	2.28			No
5 BaimitBayosan K30 (RK30) Pure Lime Skim Coat	19.6	12.0	1.40	2.28			No
6 Inside surface resistance	19.6	12.1	1.41	2.29			No

Worst case internal / external conditions for graph : 20.0°C @ 60.3%RH / 3.5°C @ 86.0%RH



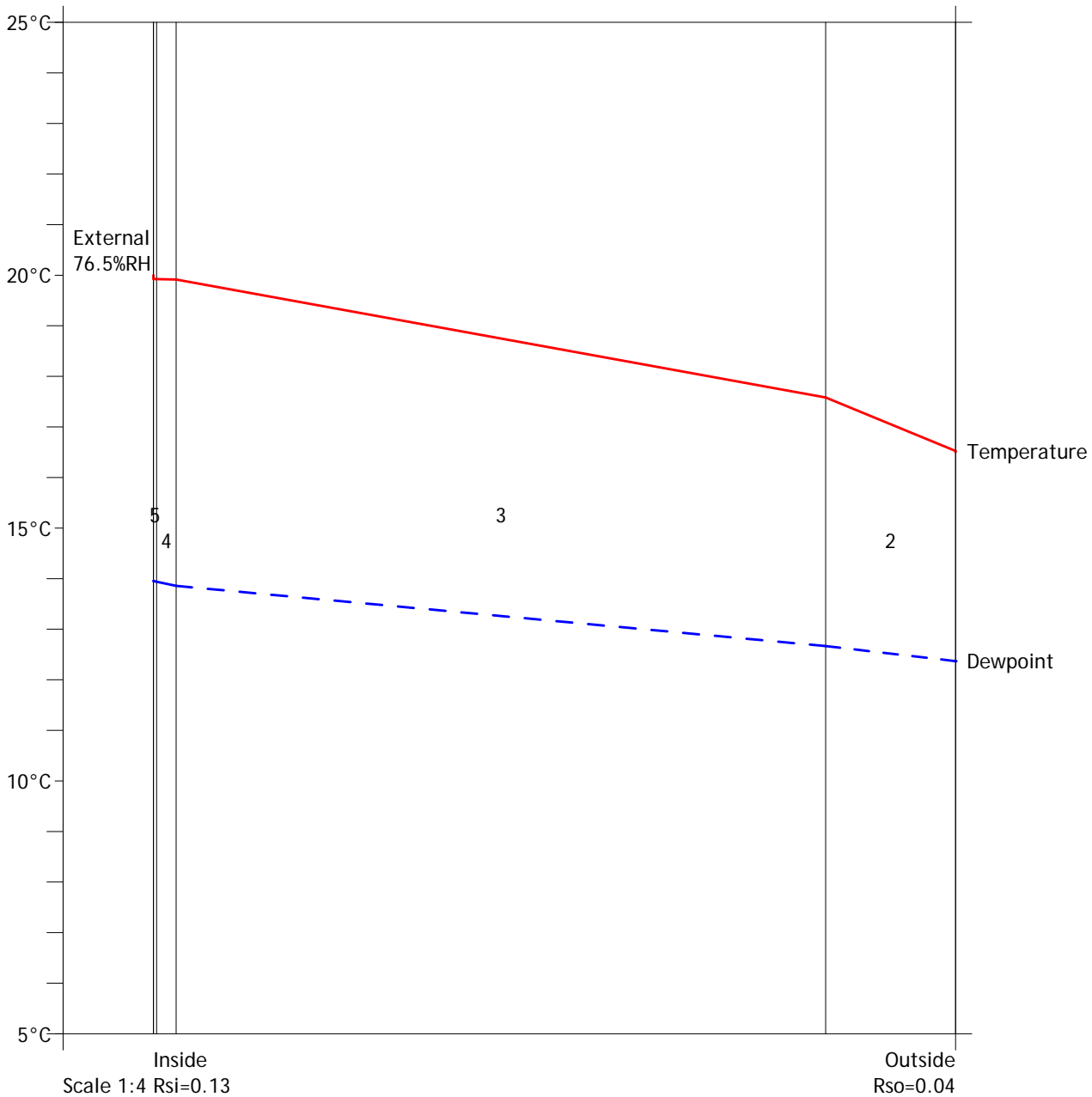
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 80mm	16.5	12.4	1.44	1.88			No
3 THERMOPLAN T10400Block	17.6	12.7	1.46	2.01			No
4 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.9	1.58	2.32			No
5 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	13.9	1.59	2.33			No
6 Inside surface resistance	19.9	14.0	1.59	2.33			No

Worst case internal / external conditions for graph : 20.0°C @ 68.1%RH / 16.5°C @ 76.5%RH





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Project Information

Reference

Date 23 Oct 2006

Client NBT THERMOPLAN TYPICAL DATA

Construction type

Element : Wall - ZT / ZV 10 - 400MM CLAD 100

Internal surface emissivity : High External surface emissivity : High

Construction

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Diffutherm OR Pavatherm Plus 100mm	100.0	0.044	2.273	25.00	2.50
THERMOPLAN T10400Block	400.0	0.100	4.000	20.83	8.33
BaumitBayosan K38 (RK38) Pure Lime Plaster	12.0	0.830	0.014	50.00	0.60
BaumitBayosan K30 (RK30) Pure Lime Skim Coat	2.0	0.830	0.002	50.00	0.10
Inside surface resistance	-	-	0.130	-	-

U-value - 0.15W/m²K

U-value, Combined Method : 0.15 W/m²K (upper/lower limit 6.460 / 6.460 m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000)

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

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

Structure element : Wall

Condensation calculations performed in accordance with BS5250:2002

Condensation is occurring at the following layers interfaces:-

Month	Int (C°)	Int (%RH)	Ext (C°)	Ext (%RH)
Jan	20.00	60.30	3.50	86.00
Feb	20.00	59.20	3.80	82.50
Mar	20.00	58.60	5.70	80.00
Apr	20.00	58.20	8.00	77.00
May	20.00	60.70	11.30	77.00
Jun	20.00	64.00	14.40	76.00
Jul	20.00	68.10	16.50	76.50
Aug	20.00	68.90	16.10	78.50
Sep	20.00	66.80	13.80	81.50
Oct	20.00	64.00	10.70	84.00
Nov	20.00	61.10	6.40	85.50
Dec	20.00	60.70	4.50	86.50

Gc = Monthly moisture accumulation per area at an interface

Ma = Accumulated moisture content per area at an interface

Peak accumulated moisture content per area at interface (Ma) = 0.00000 Kg/m²

Annual moisture accumulation = 0.00000 Kg/m²

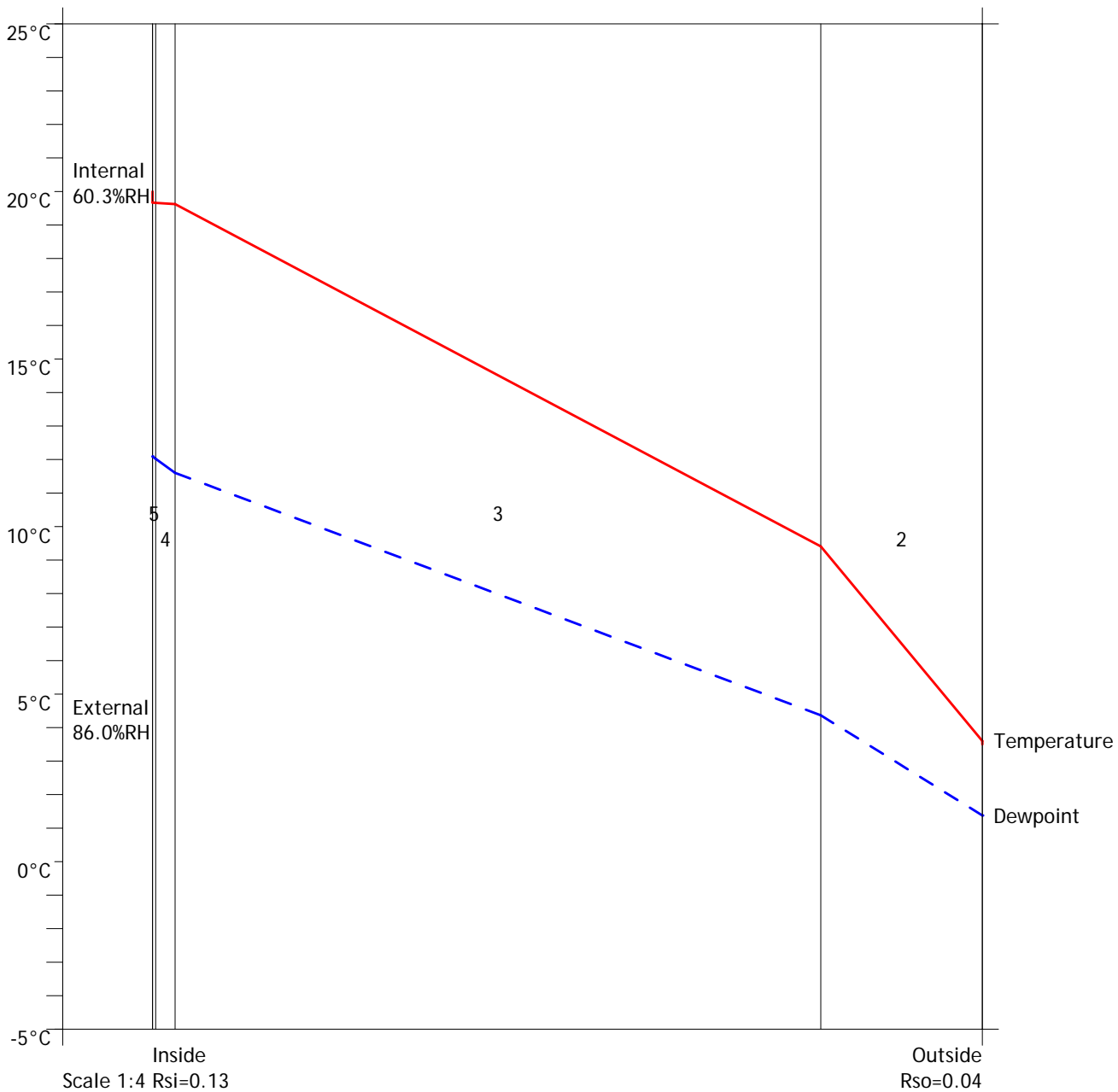
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 100mm	3.6	1.4	0.67	0.79			No
3 THERMOPLAN T10400Block	9.4	4.4	0.83	1.18			No
4 BaimitBayosan K38 (RK38) Pure Lime Plaster	19.6	11.6	1.36	2.28			No
5 BaimitBayosan K30 (RK30) Pure Lime Skim Coat	19.7	12.0	1.40	2.29			No
6 Inside surface resistance	19.7	12.1	1.41	2.29			No

Worst case internal / external conditions for graph : 20.0°C @ 60.3%RH / 3.5°C @ 86.0%RH



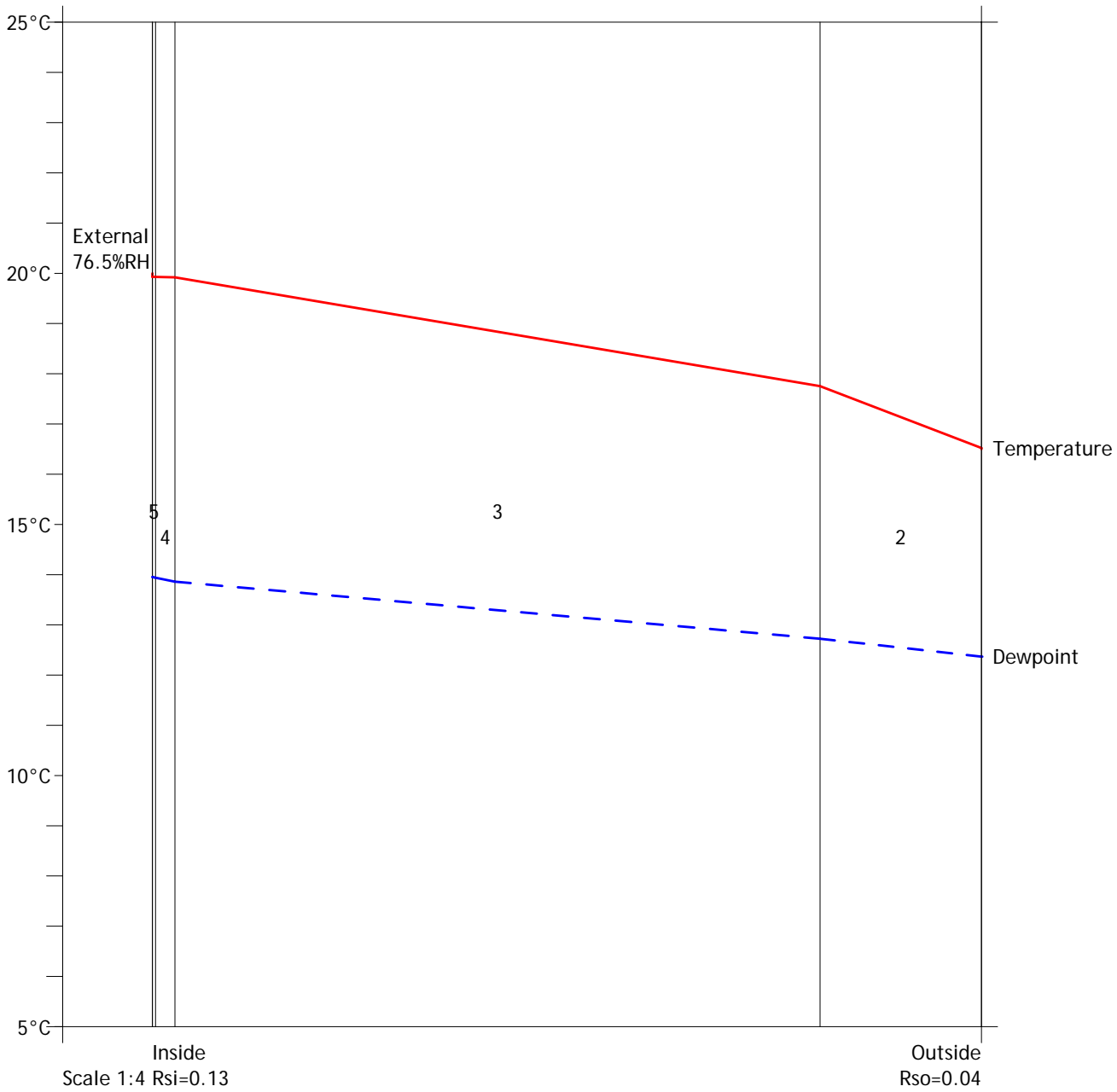
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 100mm	16.5	12.4	1.44	1.88			No
3 THERMOPLAN T10400Block	17.8	12.7	1.47	2.03			No
4 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.9	1.58	2.33			No
5 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	13.9	1.59	2.33			No
6 Inside surface resistance	19.9	14.0	1.59	2.33			No

Worst case internal / external conditions for graph : 20.0°C @ 68.1%RH / 16.5°C @ 76.5%RH





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Project Information

Reference

Date 23 Oct 2006

Client NBT THERMOPLAN TYPICAL DATA

Construction type

Element : Wall - ZT / ZV 10 - 425MM

Internal surface emissivity : High External surface emissivity : High

Construction

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
BaumitBayosan SEP01/02/03/04 Decor Finish	2.0	0.830	0.002	50.00	0.10
BaumitBayosan MP69 / W Lightweight Render	15.0	0.560	0.027	50.00	0.75
THERMOPLAN T10425 Block	425.0	0.100	4.250	20.83	8.85
BaumitBayosan K38 (RK38) Pure Lime Plaster	12.0	0.830	0.014	50.00	0.60
BaumitBayosan K30 (RK30) Pure Lime Skim Coat	2.0	0.830	0.002	50.00	0.10
Inside surface resistance	-	-	0.130	-	-

U-value - 0.22W/m²K

U-value, Combined Method : 0.22 W/m²K (upper/lower limit 4.466 / 4.466 m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000)

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

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

Structure element : Wall
Condensation calculations performed in accordance with BS5250:2002

Condensation is occurring at the following layers interfaces:-

Month	Int (C°)	Int (%RH)	Ext (C°)	Ext (%RH)
Jan	20.00	60.30	3.50	86.00
Feb	20.00	59.20	3.80	82.50
Mar	20.00	58.60	5.70	80.00
Apr	20.00	58.20	8.00	77.00
May	20.00	60.70	11.30	77.00
Jun	20.00	64.00	14.40	76.00
Jul	20.00	68.10	16.50	76.50
Aug	20.00	68.90	16.10	78.50
Sep	20.00	66.80	13.80	81.50
Oct	20.00	64.00	10.70	84.00
Nov	20.00	61.10	6.40	85.50
Dec	20.00	60.70	4.50	86.50

Gc = Monthly moisture accumulation per area at an interface
Ma = Accumulated moisture content per area at an interface

Peak accumulated moisture content per area at interface (Ma) = 0.00000 Kg/m²

Annual moisture accumulation = 0.00000 Kg/m²

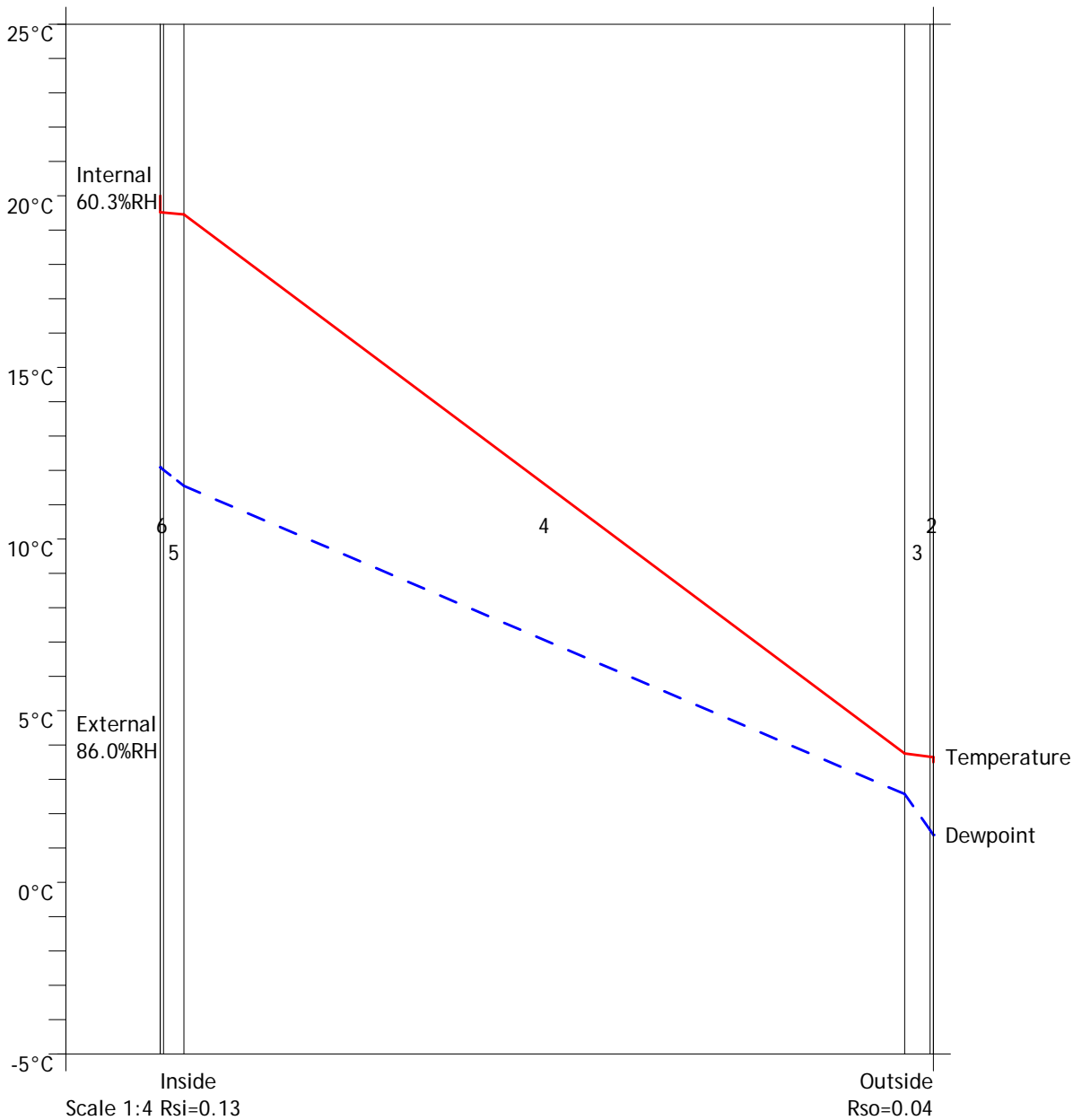
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 BaunitBayosan SEP01/02/03/04 Decor Finish	3.6	1.4	0.67	0.79			No
3 BaunitBayosan MP69 / W Lightweight Render	3.7	1.5	0.68	0.79			No
4 THERMOPLAN T10425 Block	3.8	2.6	0.73	0.80			No
5 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.5	11.5	1.36	2.26			No
6 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.5	12.0	1.40	2.27			No
7 Inside surface resistance	19.5	12.1	1.41	2.27			No

Worst case internal / external conditions for graph : 20.0°C @ 60.3%RH / 3.5°C @ 86.0%RH



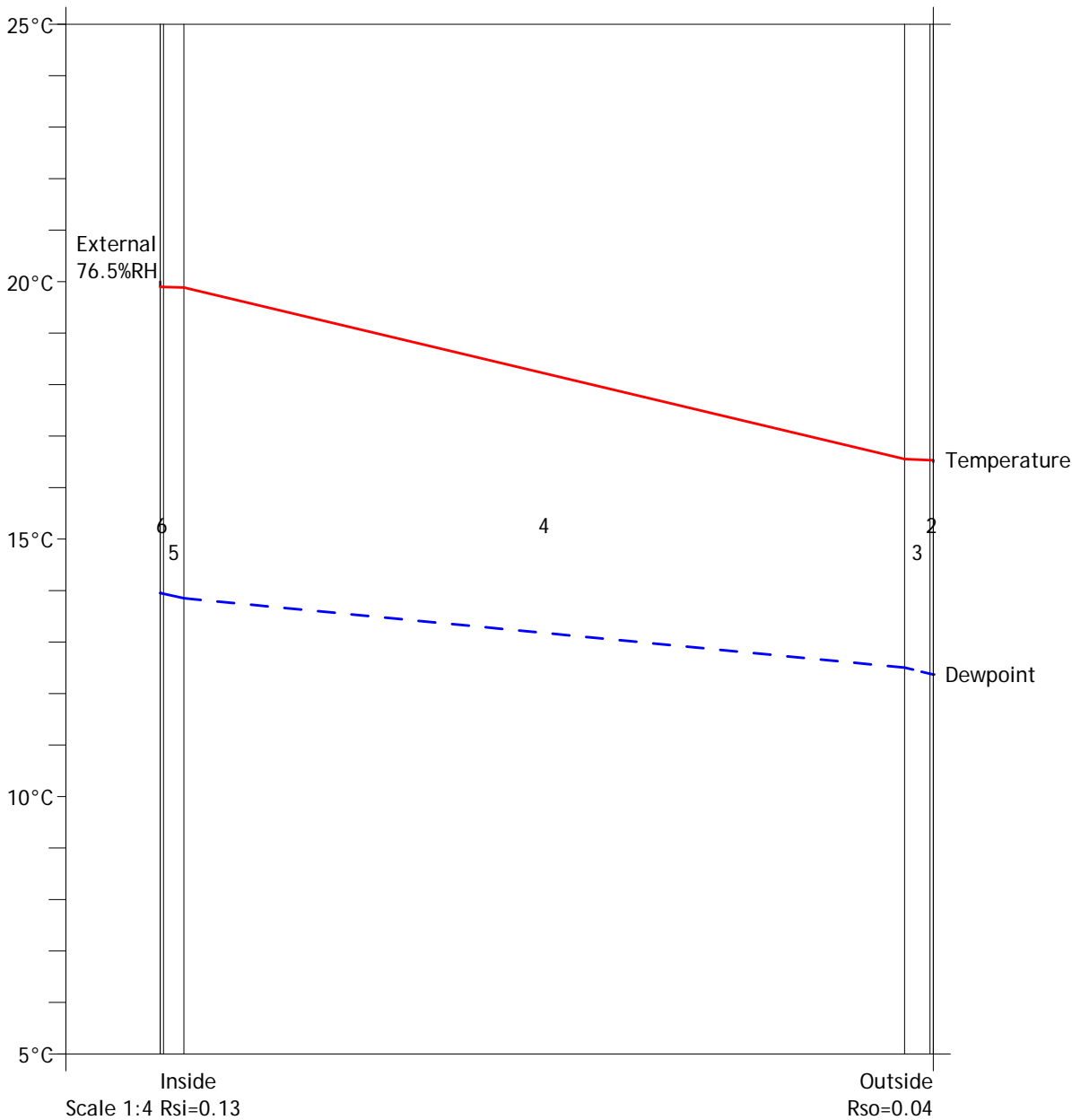
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 BaunitBayosan SEP01/02/03/04 Decor Finish	16.5	12.4	1.44	1.88			No
3 BaunitBayosan MP69 / W Lightweight Render	16.5	12.4	1.44	1.88			No
4 THERMOPLAN T10425 Block	16.6	12.5	1.45	1.88			No
5 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.9	1.58	2.32			No
6 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	13.9	1.59	2.32			No
7 Inside surface resistance	19.9	14.0	1.59	2.32			No

Worst case internal / external conditions for graph : 20.0°C @ 68.1%RH / 16.5°C @ 76.5%RH





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Project Information

Reference

Date 23 Oct 2006

Client NBT THERMOPLAN TYPICAL DATA

Construction type

Element : Wall - ZT / ZV 10 - 425MM CLAD 60

Internal surface emissivity : High External surface emissivity : High

Construction

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Diffutherm OR Pavatherm Plus 60mm	60.0	0.044	1.364	25.00	1.50
THERMOPLAN T10425 Block	425.0	0.100	4.250	20.83	8.85
BaumitBayosan K38 (RK38) Pure Lime Plaster	12.0	0.830	0.014	50.00	0.60
BaumitBayosan K30 (RK30) Pure Lime Skim Coat	2.0	0.830	0.002	50.00	0.10
Inside surface resistance	-	-	0.130	-	-

U-value - 0.17W/m²K

U-value, Combined Method : 0.17 W/m²K (upper/lower limit 5.801 / 5.801 m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000)

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

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

Structure element : Wall
Condensation calculations performed in accordance with BS5250:2002

Condensation is occurring at the following layers interfaces:-

Month	Int (C°)	Int (%RH)	Ext (C°)	Ext (%RH)
Jan	20.00	60.30	3.50	86.00
Feb	20.00	59.20	3.80	82.50
Mar	20.00	58.60	5.70	80.00
Apr	20.00	58.20	8.00	77.00
May	20.00	60.70	11.30	77.00
Jun	20.00	64.00	14.40	76.00
Jul	20.00	68.10	16.50	76.50
Aug	20.00	68.90	16.10	78.50
Sep	20.00	66.80	13.80	81.50
Oct	20.00	64.00	10.70	84.00
Nov	20.00	61.10	6.40	85.50
Dec	20.00	60.70	4.50	86.50

Gc = Monthly moisture accumulation per area at an interface

Ma = Accumulated moisture content per area at an interface

Peak accumulated moisture content per area at interface (Ma) = 0.00000 Kg/m²

Annual moisture accumulation = 0.00000 Kg/m²

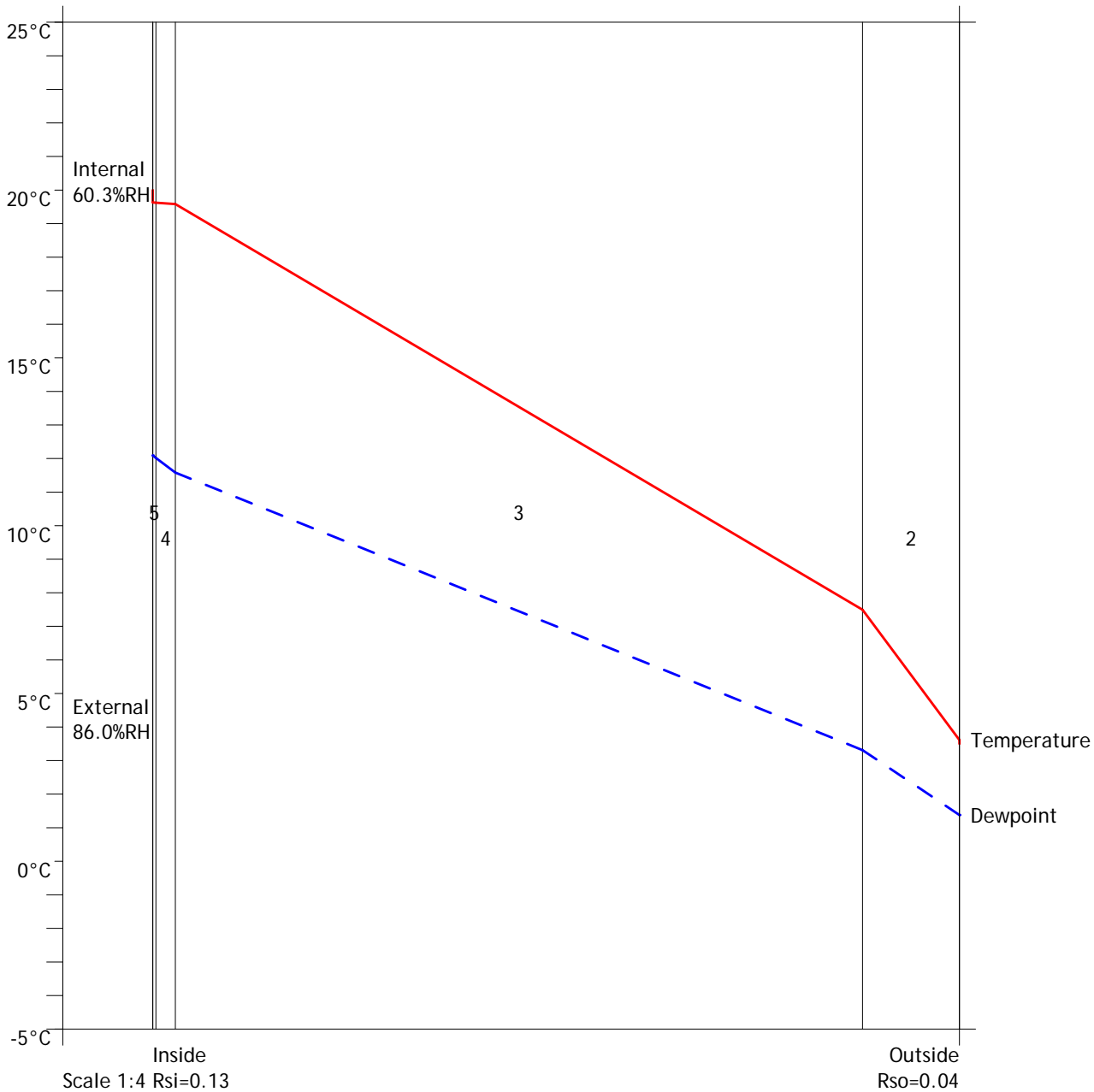
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 60mm	3.6	1.4	0.67	0.79			No
3 THERMOPLAN T10425 Block	7.5	3.3	0.77	1.04			No
4 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.6	11.6	1.36	2.28			No
5 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.6	12.0	1.40	2.28			No
6 Inside surface resistance	19.6	12.1	1.41	2.28			No

Worst case internal / external conditions for graph : 20.0°C @ 60.3%RH / 3.5°C @ 86.0%RH



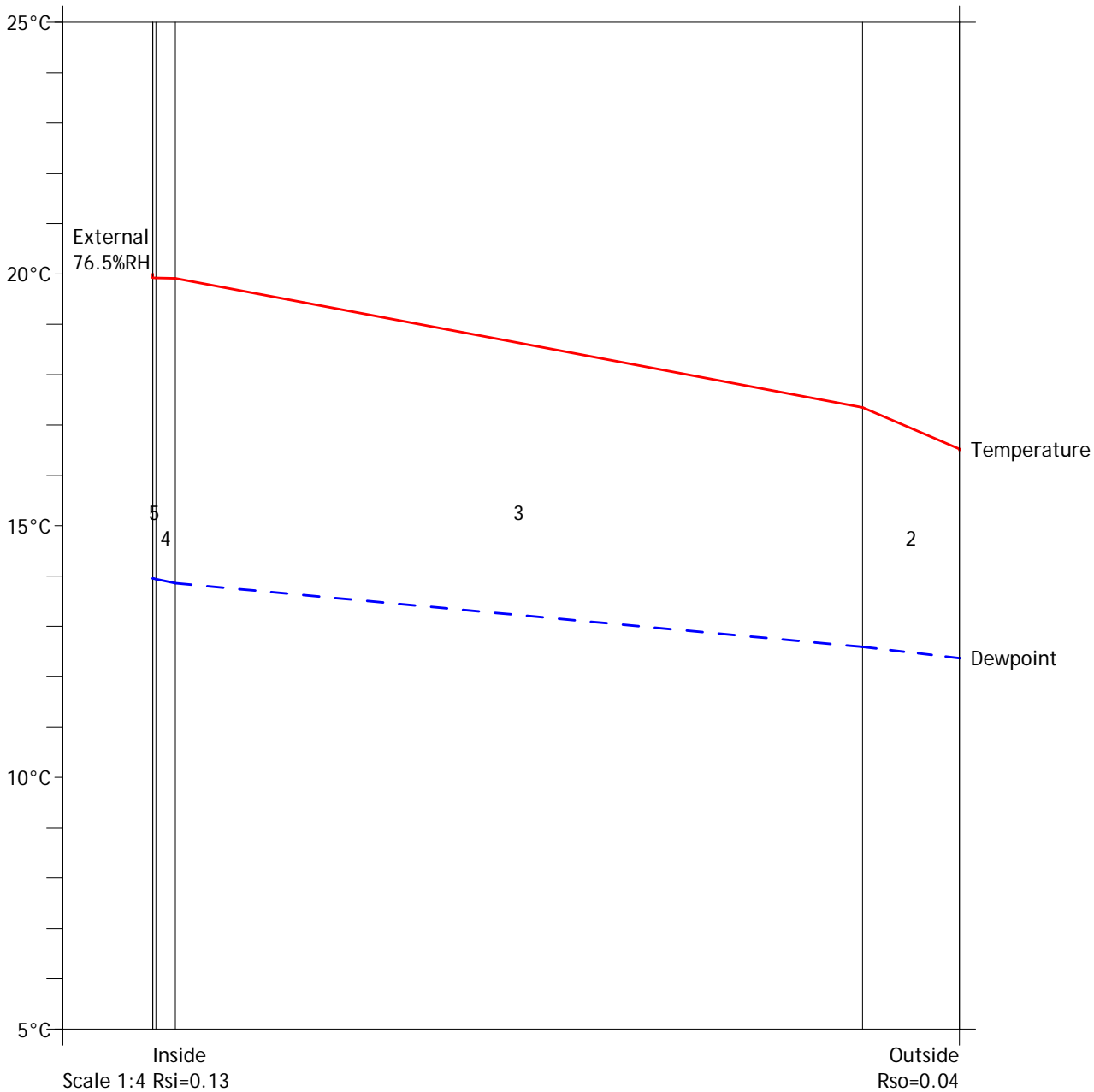
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 60mm	16.5	12.4	1.44	1.88			No
3 THERMOPLAN T10425 Block	17.3	12.6	1.46	1.98			No
4 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.9	1.58	2.32			No
5 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	13.9	1.59	2.33			No
6 Inside surface resistance	19.9	14.0	1.59	2.33			No

Worst case internal / external conditions for graph : 20.0°C @ 68.1%RH / 16.5°C @ 76.5%RH





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Project Information

Reference

Date 23 Oct 2006

Client NBT THERMOPLAN TYPICAL DATA

Construction type

Element : Wall - ZT / ZV 10 - 425MM CLAD 80

Internal surface emissivity : High External surface emissivity : High

Construction

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Diffutherm OR Pavatherm Plus 80mm	80.0	0.044	1.818	25.00	2.00
THERMOPLAN T10425 Block	425.0	0.100	4.250	20.83	8.85
BaumitBayosan K38 (RK38) Pure Lime Plaster	12.0	0.830	0.014	50.00	0.60
BaumitBayosan K30 (RK30) Pure Lime Skim Coat	2.0	0.830	0.002	50.00	0.10
Inside surface resistance	-	-	0.130	-	-

U-value - 0.16W/m²K

U-value, Combined Method : 0.16 W/m²K (upper/lower limit 6.255 / 6.255 m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000)

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

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

Structure element : Wall
Condensation calculations performed in accordance with BS5250:2002

Condensation is occurring at the following layers interfaces:-

Month	Int (C°)	Int (%RH)	Ext (C°)	Ext (%RH)
Jan	20.00	60.30	3.50	86.00
Feb	20.00	59.20	3.80	82.50
Mar	20.00	58.60	5.70	80.00
Apr	20.00	58.20	8.00	77.00
May	20.00	60.70	11.30	77.00
Jun	20.00	64.00	14.40	76.00
Jul	20.00	68.10	16.50	76.50
Aug	20.00	68.90	16.10	78.50
Sep	20.00	66.80	13.80	81.50
Oct	20.00	64.00	10.70	84.00
Nov	20.00	61.10	6.40	85.50
Dec	20.00	60.70	4.50	86.50

Gc = Monthly moisture accumulation per area at an interface

Ma = Accumulated moisture content per area at an interface

Peak accumulated moisture content per area at interface (Ma) = 0.00000 Kg/m²

Annual moisture accumulation = 0.00000 Kg/m²

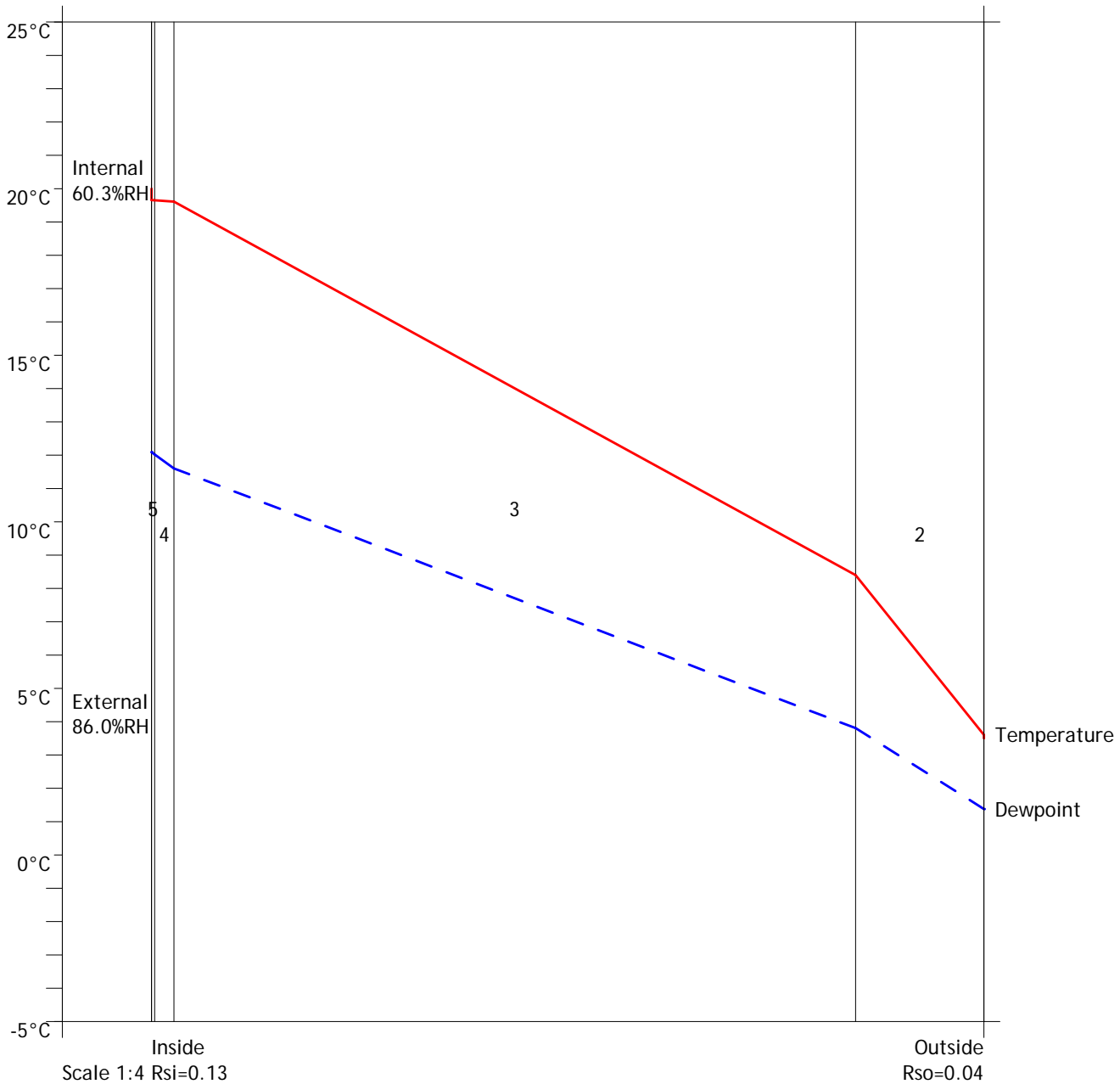
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 80mm	3.6	1.4	0.67	0.79			No
3 THERMOPLAN T10425 Block	8.4	3.8	0.80	1.10			No
4 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.6	11.6	1.36	2.28			No
5 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.7	12.0	1.40	2.29			No
6 Inside surface resistance	19.7	12.1	1.41	2.29			No

Worst case internal / external conditions for graph : 20.0°C @ 60.3%RH / 3.5°C @ 86.0%RH



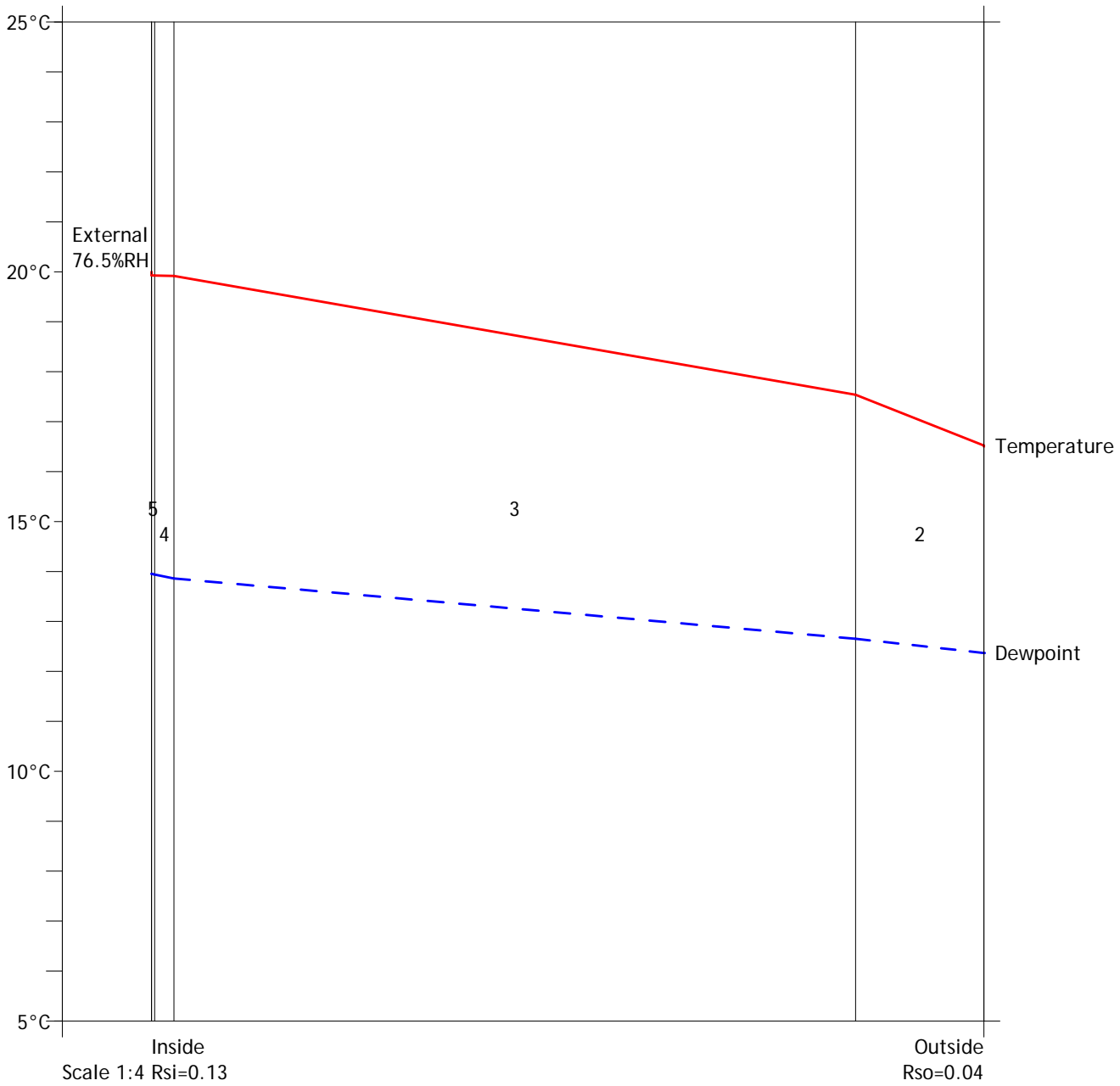
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 80mm	16.5	12.4	1.44	1.88			No
3 THERMOPLAN T10425 Block	17.5	12.7	1.46	2.00			No
4 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.9	1.58	2.33			No
5 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	13.9	1.59	2.33			No
6 Inside surface resistance	19.9	14.0	1.59	2.33			No

Worst case internal / external conditions for graph : 20.0°C @ 68.1%RH / 16.5°C @ 76.5%RH





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Project Information

Reference

Date 23 Oct 2006

Client NBT THERMOPLAN TYPICAL DATA

Construction type

Element : Wall - ZT / ZV 10 - 425MM CLAD 100

Internal surface emissivity : High External surface emissivity : High

Construction

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Diffutherm OR Pavatherm Plus 100mm	100.0	0.044	2.273	25.00	2.50
THERMOPLAN T10425 Block	425.0	0.100	4.250	20.83	8.85
BaumitBayosan K38 (RK38) Pure Lime Plaster	12.0	0.830	0.014	50.00	0.60
BaumitBayosan K30 (RK30) Pure Lime Skim Coat	2.0	0.830	0.002	50.00	0.10
Inside surface resistance	-	-	0.130	-	-

U-value - 0.15W/m²K

U-value, Combined Method : 0.15 W/m²K (upper/lower limit 6.710 / 6.710 m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000)

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

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

Structure element : Wall
Condensation calculations performed in accordance with BS5250:2002

Condensation is occurring at the following layers interfaces:-

Month	Int (C°)	Int (%RH)	Ext (C°)	Ext (%RH)
Jan	20.00	60.30	3.50	86.00
Feb	20.00	59.20	3.80	82.50
Mar	20.00	58.60	5.70	80.00
Apr	20.00	58.20	8.00	77.00
May	20.00	60.70	11.30	77.00
Jun	20.00	64.00	14.40	76.00
Jul	20.00	68.10	16.50	76.50
Aug	20.00	68.90	16.10	78.50
Sep	20.00	66.80	13.80	81.50
Oct	20.00	64.00	10.70	84.00
Nov	20.00	61.10	6.40	85.50
Dec	20.00	60.70	4.50	86.50

Gc = Monthly moisture accumulation per area at an interface

Ma = Accumulated moisture content per area at an interface

Peak accumulated moisture content per area at interface (Ma) = 0.00000 Kg/m²

Annual moisture accumulation = 0.00000 Kg/m²

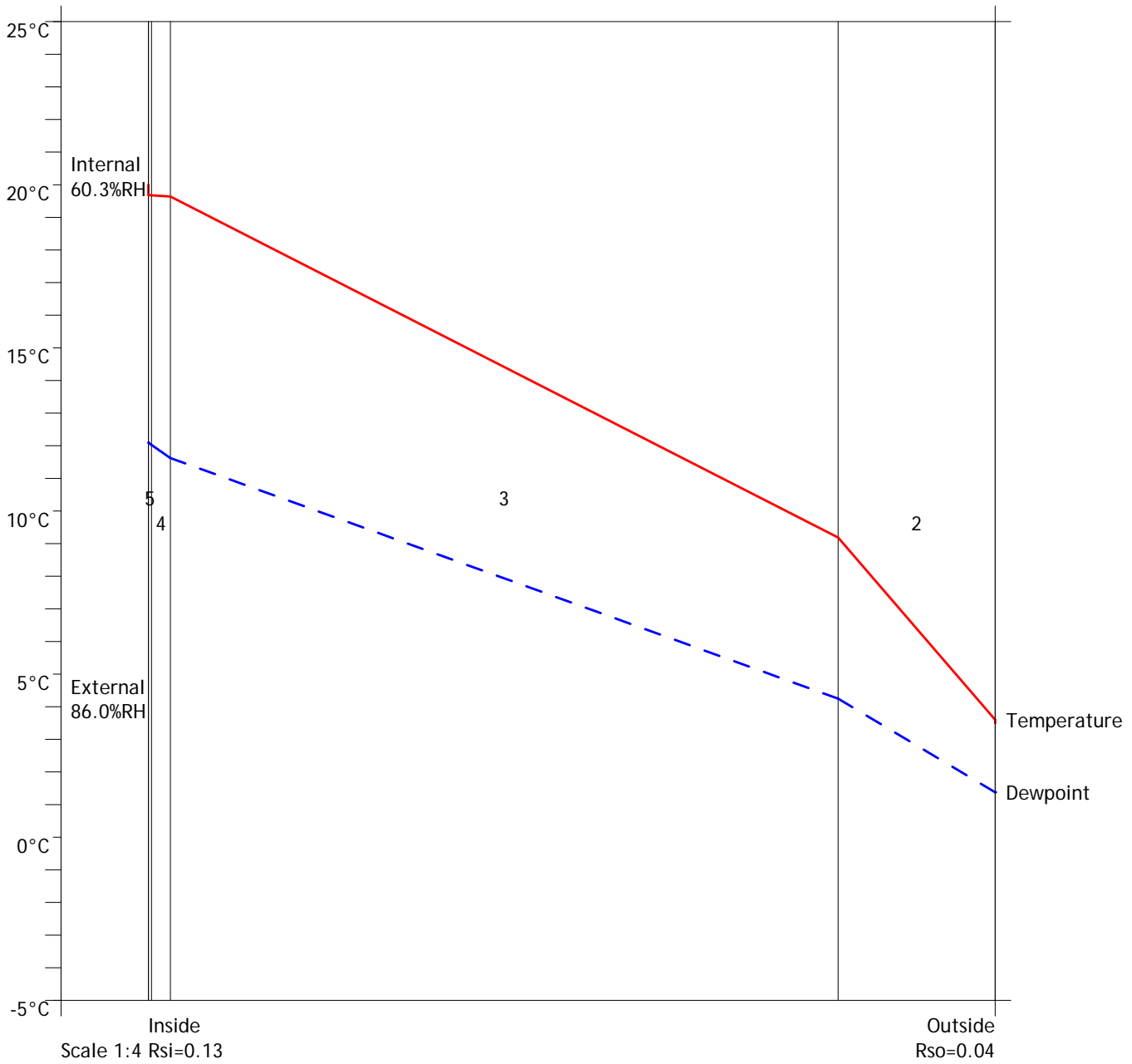
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 100mm	3.6	1.4	0.67	0.79			No
3 THERMOPLAN T10425 Block	9.2	4.2	0.83	1.16			No
4 BaimitBayosan K38 (RK38) Pure Lime Plaster	19.6	11.6	1.37	2.29			No
5 BaimitBayosan K30 (RK30) Pure Lime Skim Coat	19.7	12.0	1.40	2.29			No
6 Inside surface resistance	19.7	12.1	1.41	2.29			No

Worst case internal / external conditions for graph : 20.0°C @ 60.3%RH / 3.5°C @ 86.0%RH



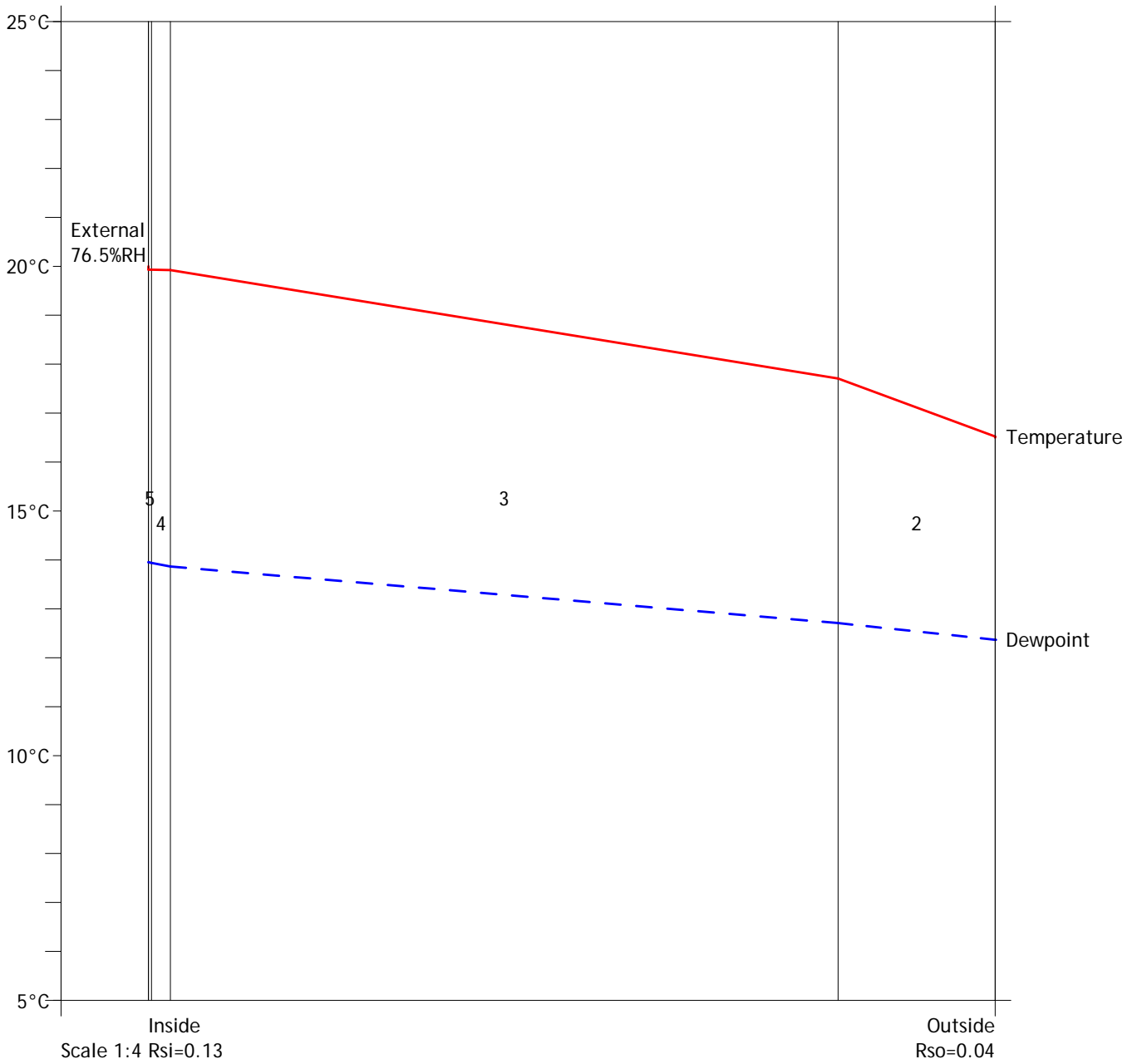
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 100mm	16.5	12.4	1.44	1.88			No
3 THERMOPLAN T10425 Block	17.7	12.7	1.47	2.03			No
4 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.9	1.58	2.33			No
5 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	13.9	1.59	2.33			No
6 Inside surface resistance	19.9	14.0	1.59	2.33			No

Worst case internal / external conditions for graph : 20.0°C @ 68.1%RH / 16.5°C @ 76.5%RH





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Project Information

Reference

Date 23 Oct 2006

Client NBT THERMOPLAN TYPICAL DATA

Construction type

Element : Wall - ZT / ZV 11 - 300MM

Internal surface emissivity : High External surface emissivity : High

Construction

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
BaumitBayosan SEP01/02/03/04 Decor Finish	2.0	0.830	0.002	50.00	0.10
BaumitBayosan MP69 / W Lightweight Render	15.0	0.560	0.027	50.00	0.75
THERMOPLAN T11300 Block	300.0	0.110	2.727	20.83	6.25
BaumitBayosan K38 (RK38) Pure Lime Plaster	12.0	0.830	0.014	50.00	0.60
BaumitBayosan K30 (RK30) Pure Lime Skim Coat	2.0	0.830	0.002	50.00	0.10
Inside surface resistance	-	-	0.130	-	-

U-value - 0.34W/m²K

U-value, Combined Method : 0.34 W/m²K (upper/lower limit 2.943 / 2.943 m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000)

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

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

Structure element : Wall
Condensation calculations performed in accordance with BS5250:2002

Condensation is occurring at the following layers interfaces:-

Month	Int (C°)	Int (%RH)	Ext (C°)	Ext (%RH)
Jan	20.00	60.30	3.50	86.00
Feb	20.00	59.20	3.80	82.50
Mar	20.00	58.60	5.70	80.00
Apr	20.00	58.20	8.00	77.00
May	20.00	60.70	11.30	77.00
Jun	20.00	64.00	14.40	76.00
Jul	20.00	68.10	16.50	76.50
Aug	20.00	68.90	16.10	78.50
Sep	20.00	66.80	13.80	81.50
Oct	20.00	64.00	10.70	84.00
Nov	20.00	61.10	6.40	85.50
Dec	20.00	60.70	4.50	86.50

Gc = Monthly moisture accumulation per area at an interface

Ma = Accumulated moisture content per area at an interface

Peak accumulated moisture content per area at interface (Ma) = 0.00000 Kg/m²

Annual moisture accumulation = 0.00000 Kg/m²

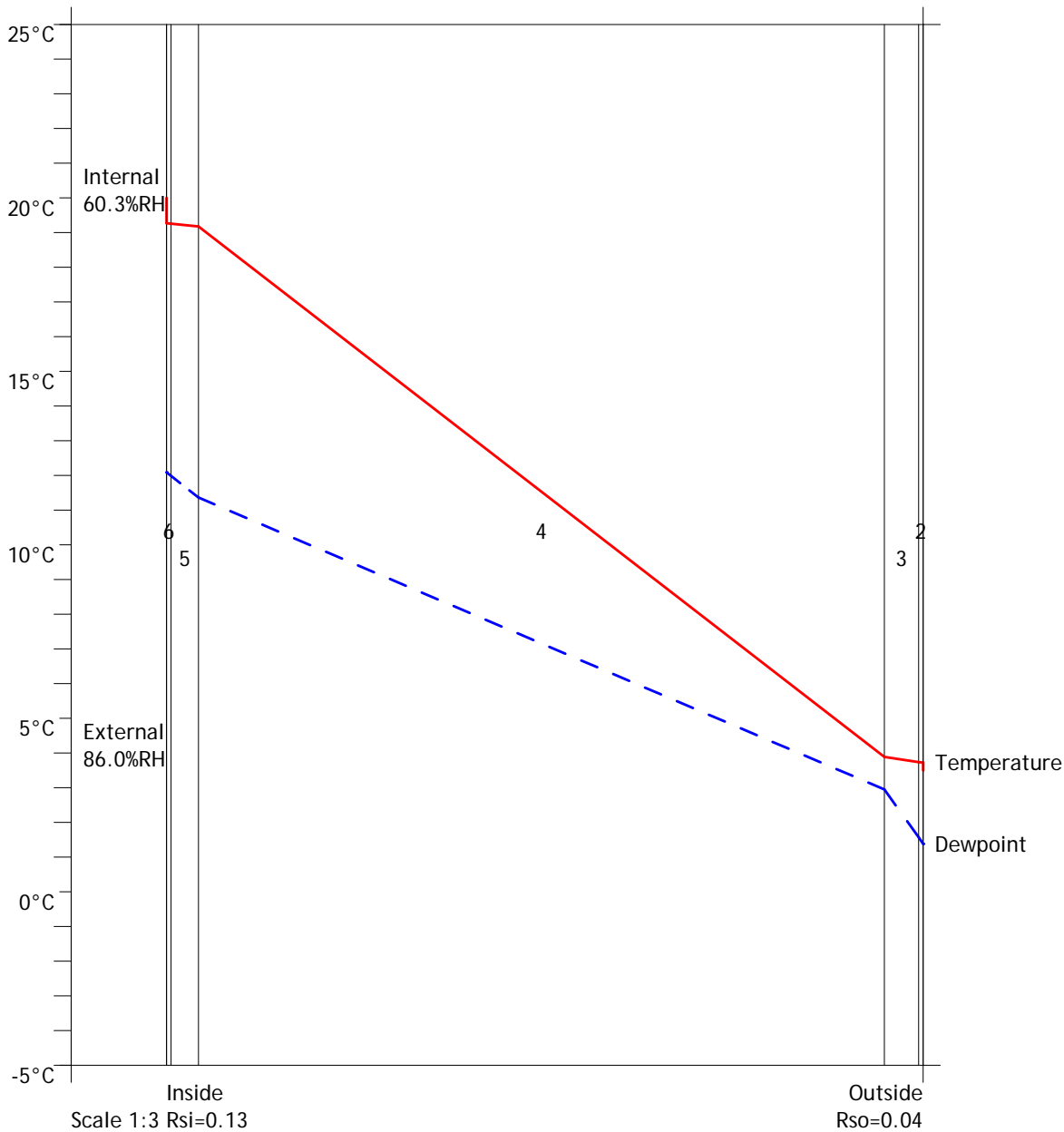
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 BaunitBayosan SEP01/02/03/04 Decor Finish	3.7	1.4	0.67	0.80			No
3 BaunitBayosan MP69 / W Lightweight Render	3.7	1.6	0.68	0.80			No
4 THERMOPLAN T11300 Block	3.9	3.0	0.75	0.81			No
5 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.2	11.4	1.34	2.22			No
6 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.3	12.0	1.40	2.23			No
7 Inside surface resistance	19.3	12.1	1.41	2.23			No

Worst case internal / external conditions for graph : 20.0°C @ 60.3%RH / 3.5°C @ 86.0%RH



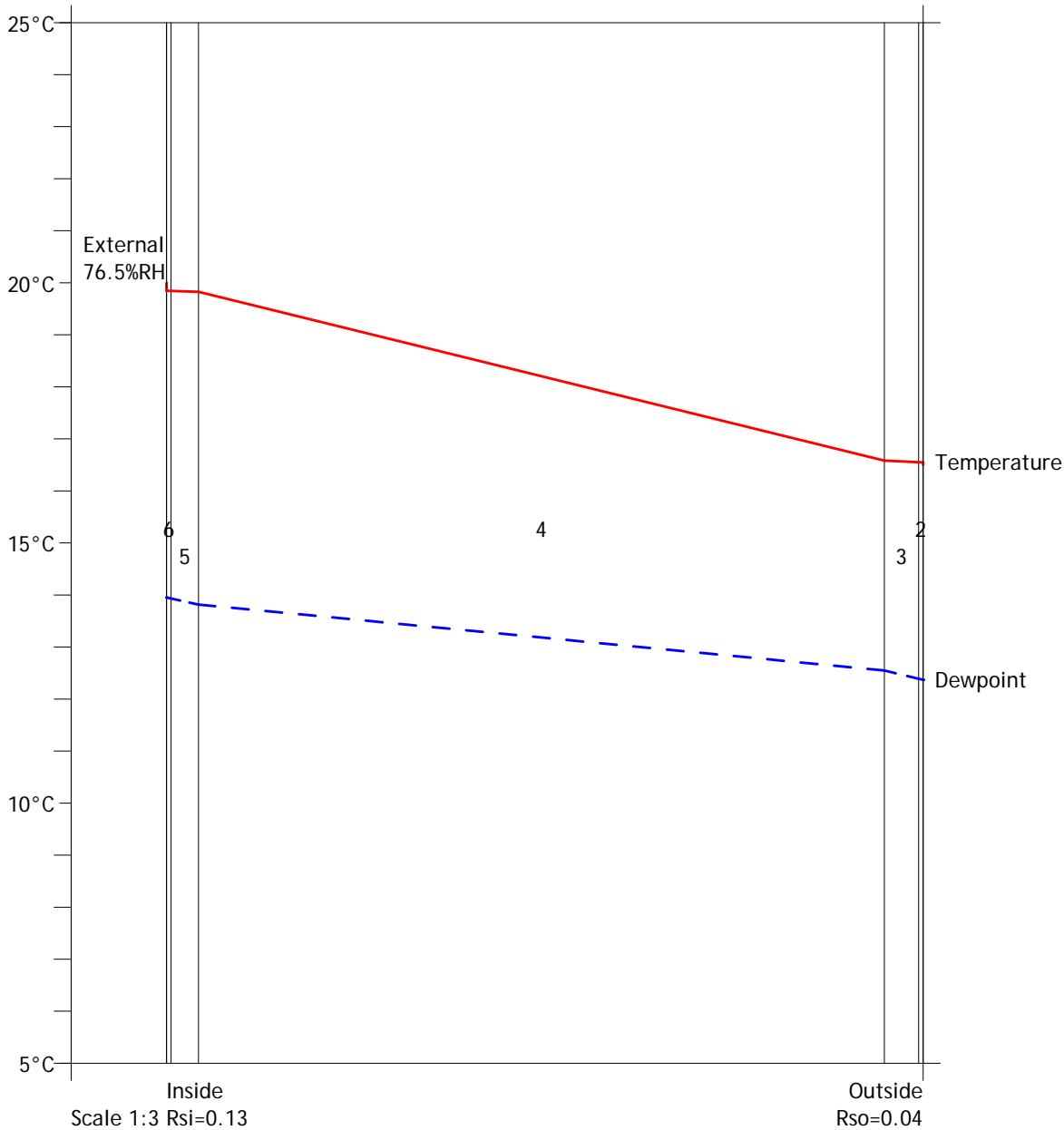
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 BaunitBayosan SEP01/02/03/04 Decor Finish	16.5	12.4	1.44	1.88			No
3 BaunitBayosan MP69 / W Lightweight Render	16.6	12.4	1.44	1.88			No
4 THERMOPLAN T11300 Block	16.6	12.5	1.45	1.89			No
5 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.8	13.8	1.58	2.31			No
6 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.8	13.9	1.59	2.31			No
7 Inside surface resistance	19.8	14.0	1.59	2.31			No

Worst case internal / external conditions for graph : 20.0°C @ 68.1%RH / 16.5°C @ 76.5%RH





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Project Information

Reference

Date 23 Oct 2006

Client NBT THERMOPLAN TYPICAL DATA

Construction type

Element : Wall - ZT / ZV 11 - 300MM CLAD 60

Internal surface emissivity : High External surface emissivity : High

Construction

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Diffutherm OR Pavatherm Plus 60mm	60.0	0.044	1.364	25.00	1.50
THERMOPLAN T11300 Block	300.0	0.110	2.727	20.83	6.25
BaumitBayosan K38 (RK38) Pure Lime Plaster	12.0	0.830	0.014	50.00	0.60
BaumitBayosan K30 (RK30) Pure Lime Skim Coat	2.0	0.830	0.002	50.00	0.10
Inside surface resistance	-	-	0.130	-	-

U-value - 0.23W/m²K

U-value, Combined Method : 0.23 W/m²K (upper/lower limit 4.278 / 4.278 m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000)

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

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

Structure element : Wall
Condensation calculations performed in accordance with BS5250:2002

Condensation is occurring at the following layers interfaces:-

Month	Int (C°)	Int (%RH)	Ext (C°)	Ext (%RH)
Jan	20.00	60.30	3.50	86.00
Feb	20.00	59.20	3.80	82.50
Mar	20.00	58.60	5.70	80.00
Apr	20.00	58.20	8.00	77.00
May	20.00	60.70	11.30	77.00
Jun	20.00	64.00	14.40	76.00
Jul	20.00	68.10	16.50	76.50
Aug	20.00	68.90	16.10	78.50
Sep	20.00	66.80	13.80	81.50
Oct	20.00	64.00	10.70	84.00
Nov	20.00	61.10	6.40	85.50
Dec	20.00	60.70	4.50	86.50

Gc = Monthly moisture accumulation per area at an interface

Ma = Accumulated moisture content per area at an interface

Peak accumulated moisture content per area at interface (Ma) = 0.00000 Kg/m²

Annual moisture accumulation = 0.00000 Kg/m²

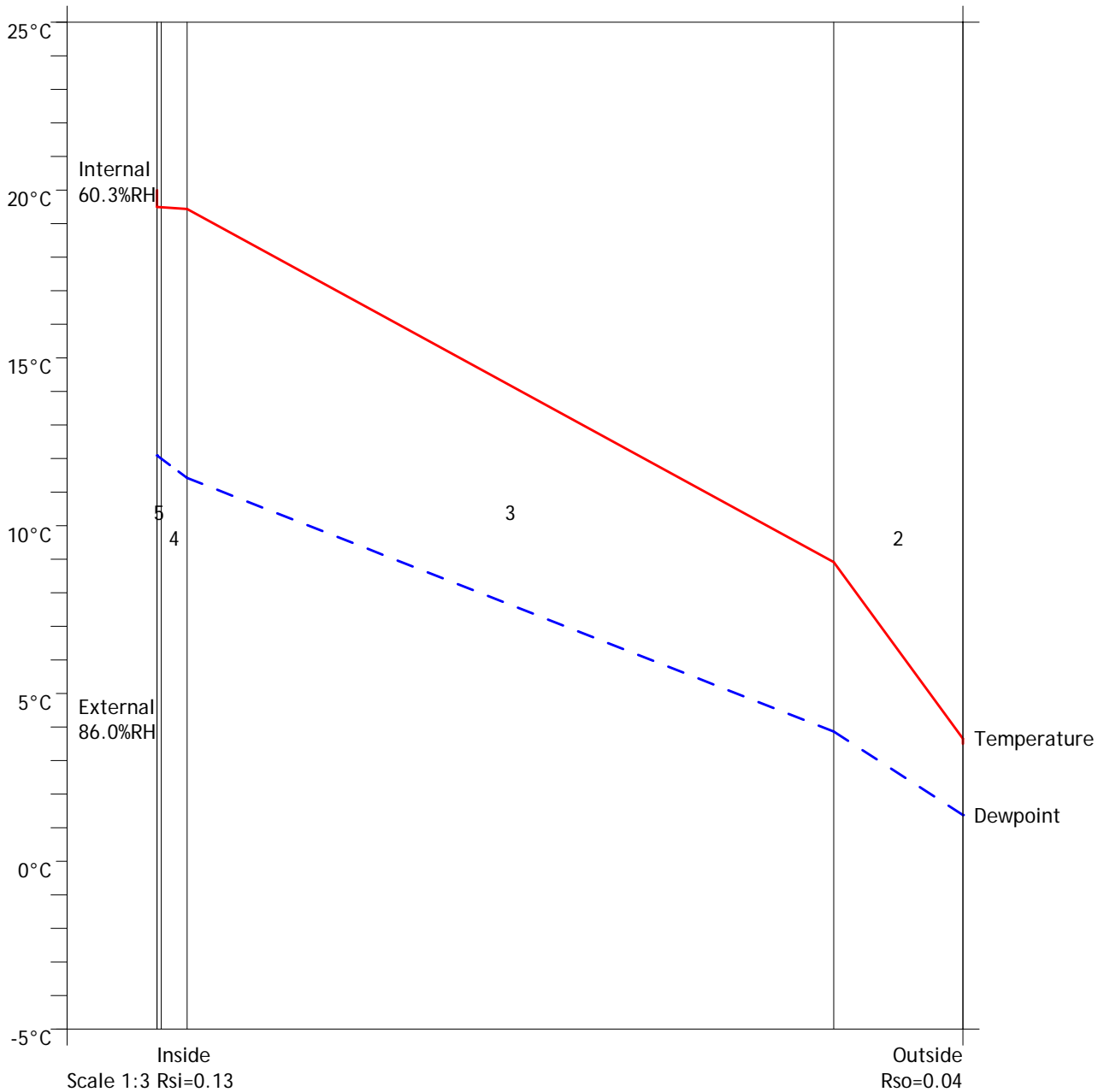
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 60mm	3.7	1.4	0.67	0.79			No
3 THERMOPLAN T11300 Block	8.9	3.9	0.81	1.14			No
4 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.4	11.4	1.35	2.26			No
5 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.5	12.0	1.40	2.26			No
6 Inside surface resistance	19.5	12.1	1.41	2.27			No

Worst case internal / external conditions for graph : 20.0°C @ 60.3%RH / 3.5°C @ 86.0%RH



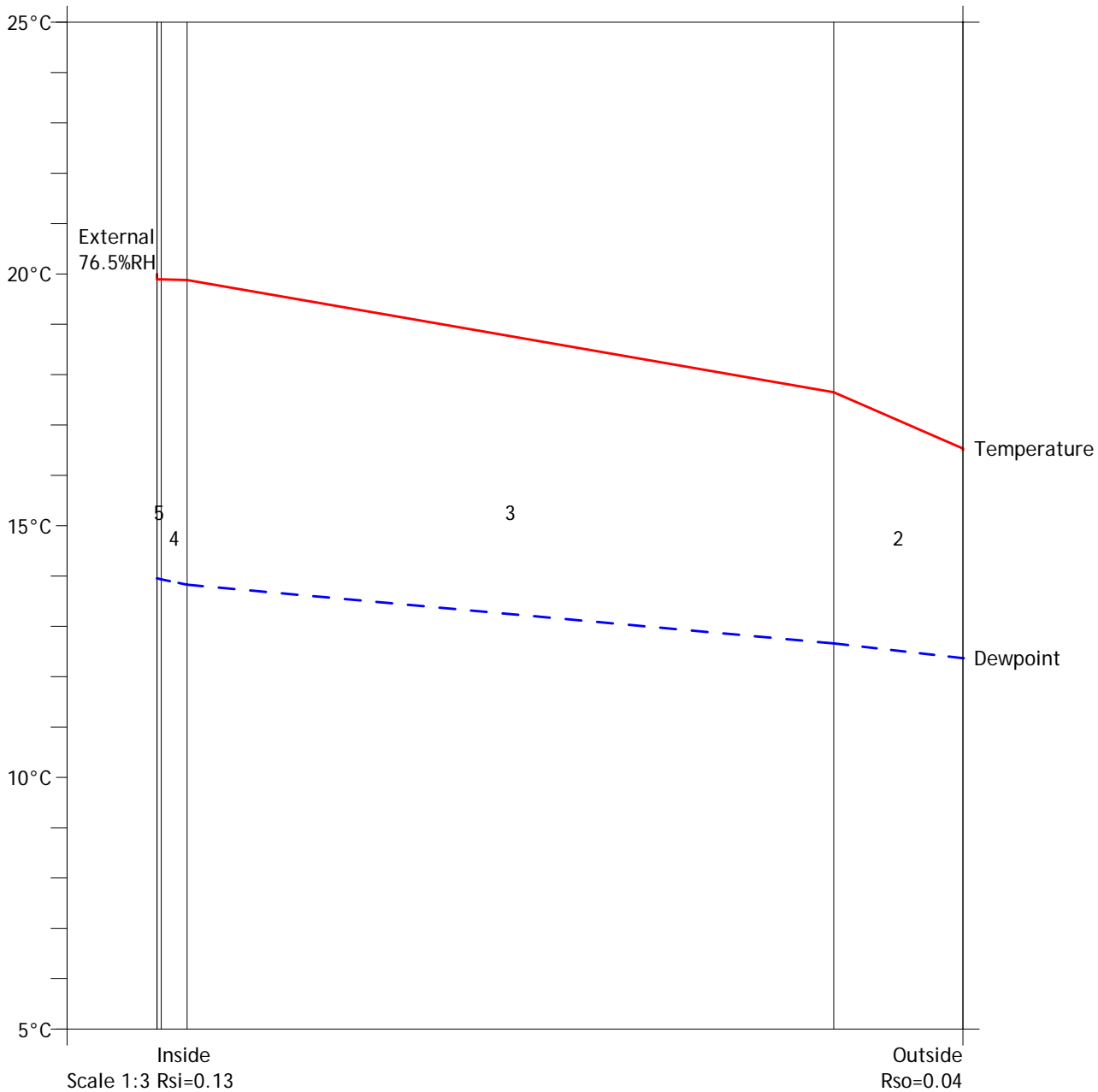
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 60mm	16.5	12.4	1.44	1.88			No
3 THERMOPLAN T11300 Block	17.6	12.7	1.46	2.02			No
4 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.8	1.58	2.32			No
5 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	13.9	1.59	2.32			No
6 Inside surface resistance	19.9	14.0	1.59	2.32			No

Worst case internal / external conditions for graph : 20.0°C @ 68.1%RH / 16.5°C @ 76.5%RH





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Project Information

Reference

Date 23 Oct 2006

Client NBT THERMOPLAN TYPICAL DATA

Construction type

Element : Wall - ZT / ZV 11 - 300MM CLAD 80

Internal surface emissivity : High External surface emissivity : High

Construction

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Diffutherm OR Pavatherm Plus 80mm	80.0	0.044	1.818	25.00	2.00
THERMOPLAN T11300 Block	300.0	0.110	2.727	20.83	6.25
BaumitBayosan K38 (RK38) Pure Lime Plaster	12.0	0.830	0.014	50.00	0.60
BaumitBayosan K30 (RK30) Pure Lime Skim Coat	2.0	0.830	0.002	50.00	0.10
Inside surface resistance	-	-	0.130	-	-

U-value - 0.21W/m²K

U-value, Combined Method : 0.21 W/m²K (upper/lower limit 4.732 / 4.732 m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000)

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

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

Structure element : Wall
Condensation calculations performed in accordance with BS5250:2002

Condensation is occurring at the following layers interfaces:-

Month	Int (C°)	Int (%RH)	Ext (C°)	Ext (%RH)
Jan	20.00	60.30	3.50	86.00
Feb	20.00	59.20	3.80	82.50
Mar	20.00	58.60	5.70	80.00
Apr	20.00	58.20	8.00	77.00
May	20.00	60.70	11.30	77.00
Jun	20.00	64.00	14.40	76.00
Jul	20.00	68.10	16.50	76.50
Aug	20.00	68.90	16.10	78.50
Sep	20.00	66.80	13.80	81.50
Oct	20.00	64.00	10.70	84.00
Nov	20.00	61.10	6.40	85.50
Dec	20.00	60.70	4.50	86.50

Gc = Monthly moisture accumulation per area at an interface

Ma = Accumulated moisture content per area at an interface

Peak accumulated moisture content per area at interface (Ma) = 0.00000 Kg/m²

Annual moisture accumulation = 0.00000 Kg/m²

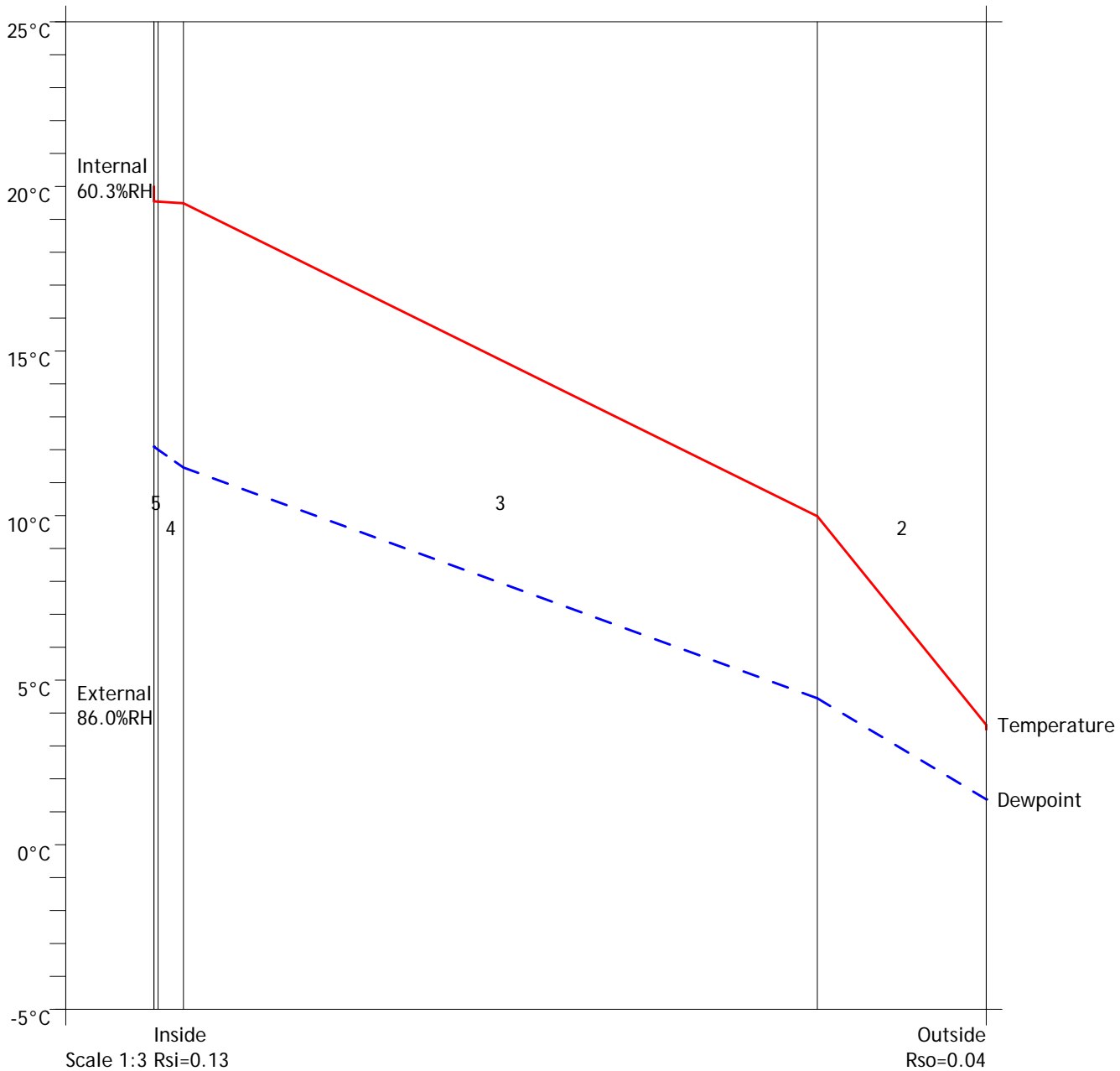
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 80mm	3.6	1.4	0.67	0.79			No
3 THERMOPLAN T11300 Block	10.0	4.4	0.84	1.23			No
4 BaimitBayosan K38 (RK38) Pure Lime Plaster	19.5	11.5	1.35	2.26			No
5 BaimitBayosan K30 (RK30) Pure Lime Skim Coat	19.5	12.0	1.40	2.27			No
6 Inside surface resistance	19.5	12.1	1.41	2.27			No

Worst case internal / external conditions for graph : 20.0°C @ 60.3%RH / 3.5°C @ 86.0%RH



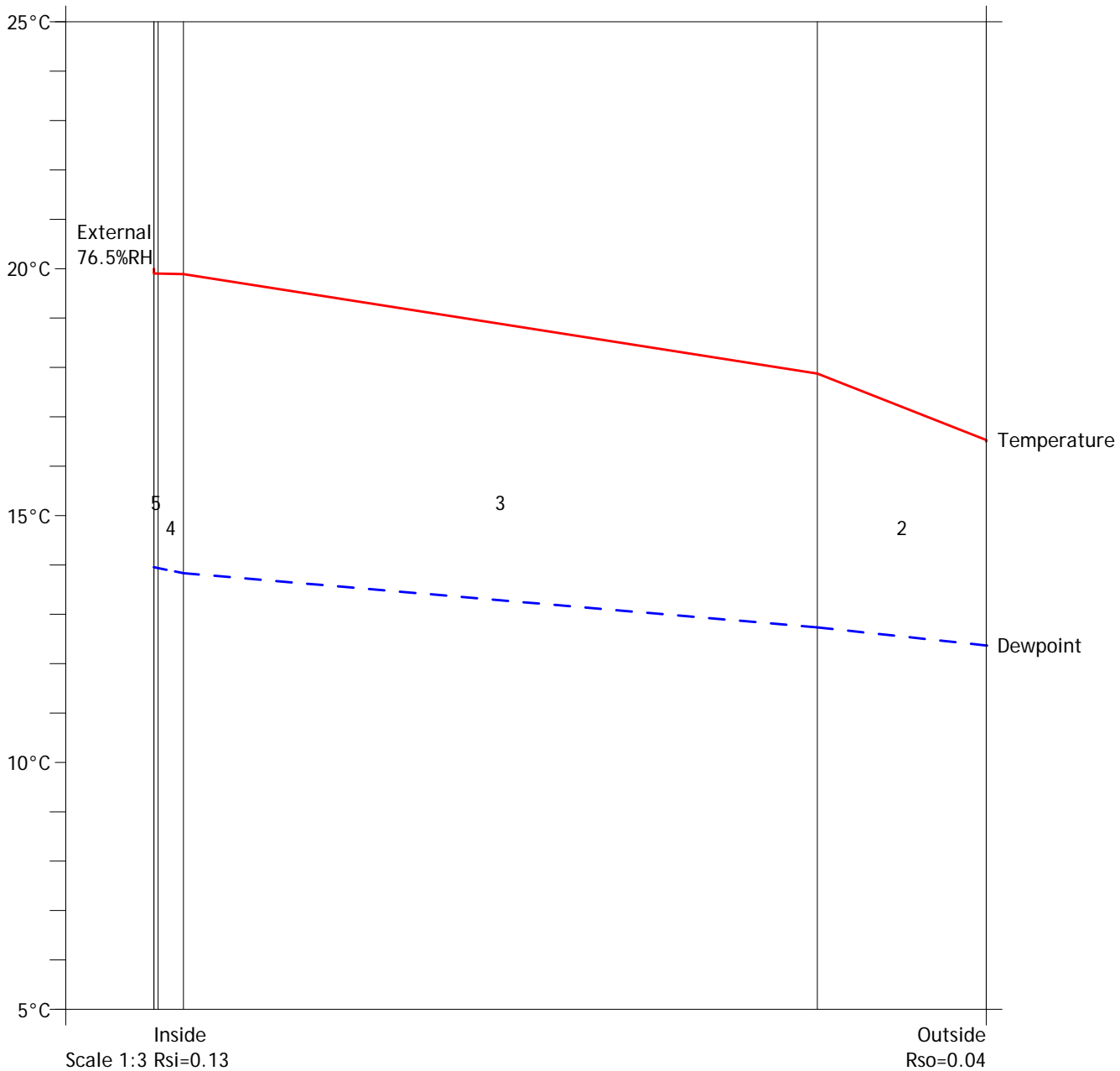
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 80mm	16.5	12.4	1.44	1.88			No
3 THERMOPLAN T11300 Block	17.9	12.7	1.47	2.05			No
4 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.8	1.58	2.32			No
5 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	13.9	1.59	2.32			No
6 Inside surface resistance	19.9	14.0	1.59	2.32			No

Worst case internal / external conditions for graph : 20.0°C @ 68.1%RH / 16.5°C @ 76.5%RH





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Project Information

Reference

Date 23 Oct 2006

Client NBT THERMOPLAN TYPICAL DATA

Construction type

Element : Wall - ZT / ZV 11 - 300MM CLAD 100

Internal surface emissivity : High External surface emissivity : High

Construction

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Diffutherm OR Pavatherm Plus 100MM	100.0	0.044	2.273	25.00	2.50
THERMOPLAN T11300 Block	300.0	0.110	2.727	20.83	6.25
BaumitBayosan K38 (RK38) Pure Lime Plaster	12.0	0.830	0.014	50.00	0.60
BaumitBayosan K30 (RK30) Pure Lime Skim Coat	2.0	0.830	0.002	50.00	0.10
Inside surface resistance	-	-	0.130	-	-

U-value - 0.19W/m²K

U-value, Combined Method : 0.19 W/m²K (upper/lower limit 5.187 / 5.187 m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000)

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

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

Structure element : Wall
Condensation calculations performed in accordance with BS5250:2002

Condensation is occurring at the following layers interfaces:-

Month	Int (C°)	Int (%RH)	Ext (C°)	Ext (%RH)
Jan	20.00	60.30	3.50	86.00
Feb	20.00	59.20	3.80	82.50
Mar	20.00	58.60	5.70	80.00
Apr	20.00	58.20	8.00	77.00
May	20.00	60.70	11.30	77.00
Jun	20.00	64.00	14.40	76.00
Jul	20.00	68.10	16.50	76.50
Aug	20.00	68.90	16.10	78.50
Sep	20.00	66.80	13.80	81.50
Oct	20.00	64.00	10.70	84.00
Nov	20.00	61.10	6.40	85.50
Dec	20.00	60.70	4.50	86.50

Gc = Monthly moisture accumulation per area at an interface

Ma = Accumulated moisture content per area at an interface

Peak accumulated moisture content per area at interface (Ma) = 0.00000 Kg/m²

Annual moisture accumulation = 0.00000 Kg/m²

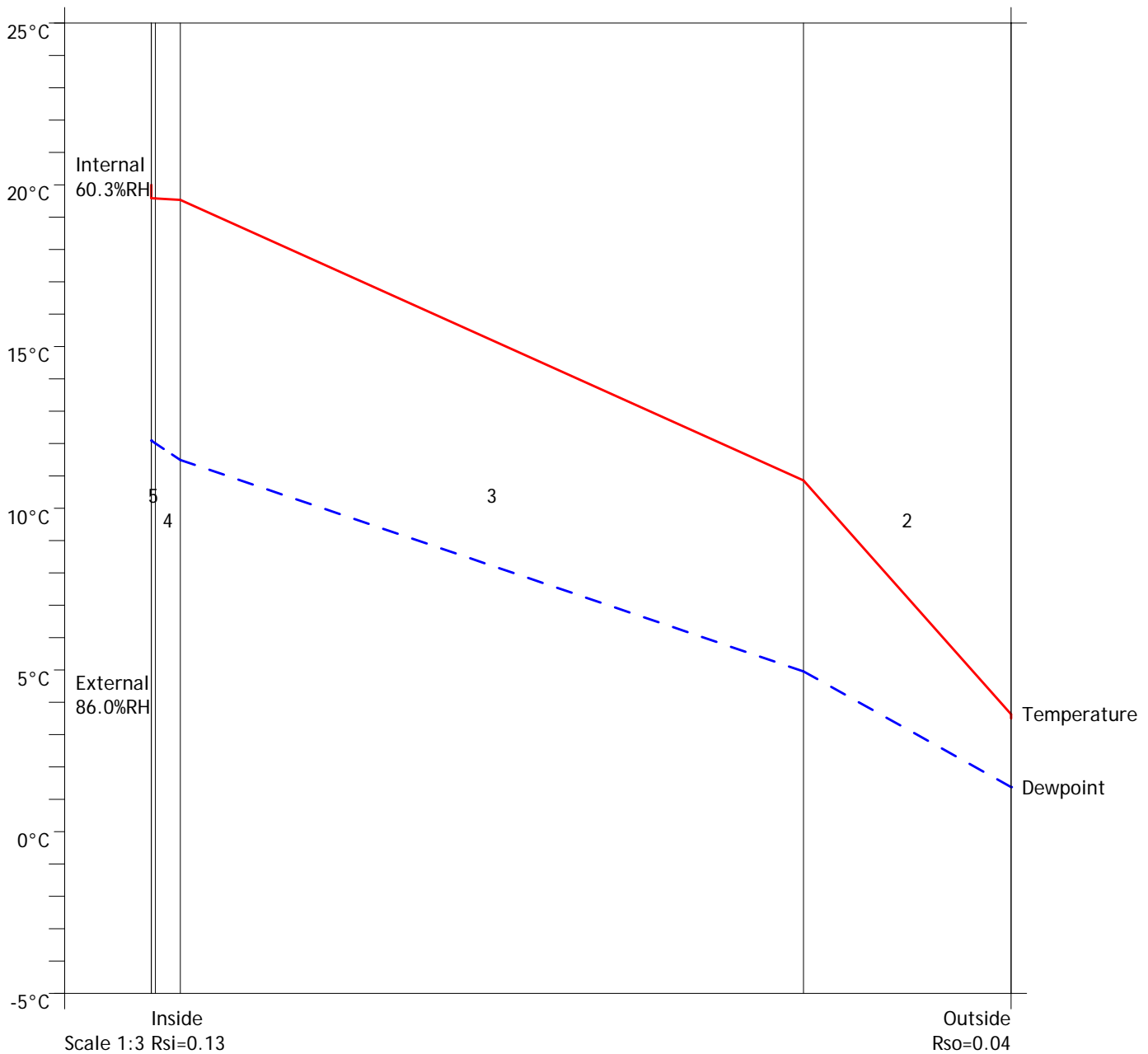
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 100MM	3.6	1.4	0.67	0.79			No
3 THERMOPLAN T11300 Block	10.9	5.0	0.87	1.30			No
4 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.5	11.5	1.35	2.27			No
5 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.6	12.0	1.40	2.28			No
6 Inside surface resistance	19.6	12.1	1.41	2.28			No

Worst case internal / external conditions for graph : 20.0°C @ 60.3%RH / 3.5°C @ 86.0%RH



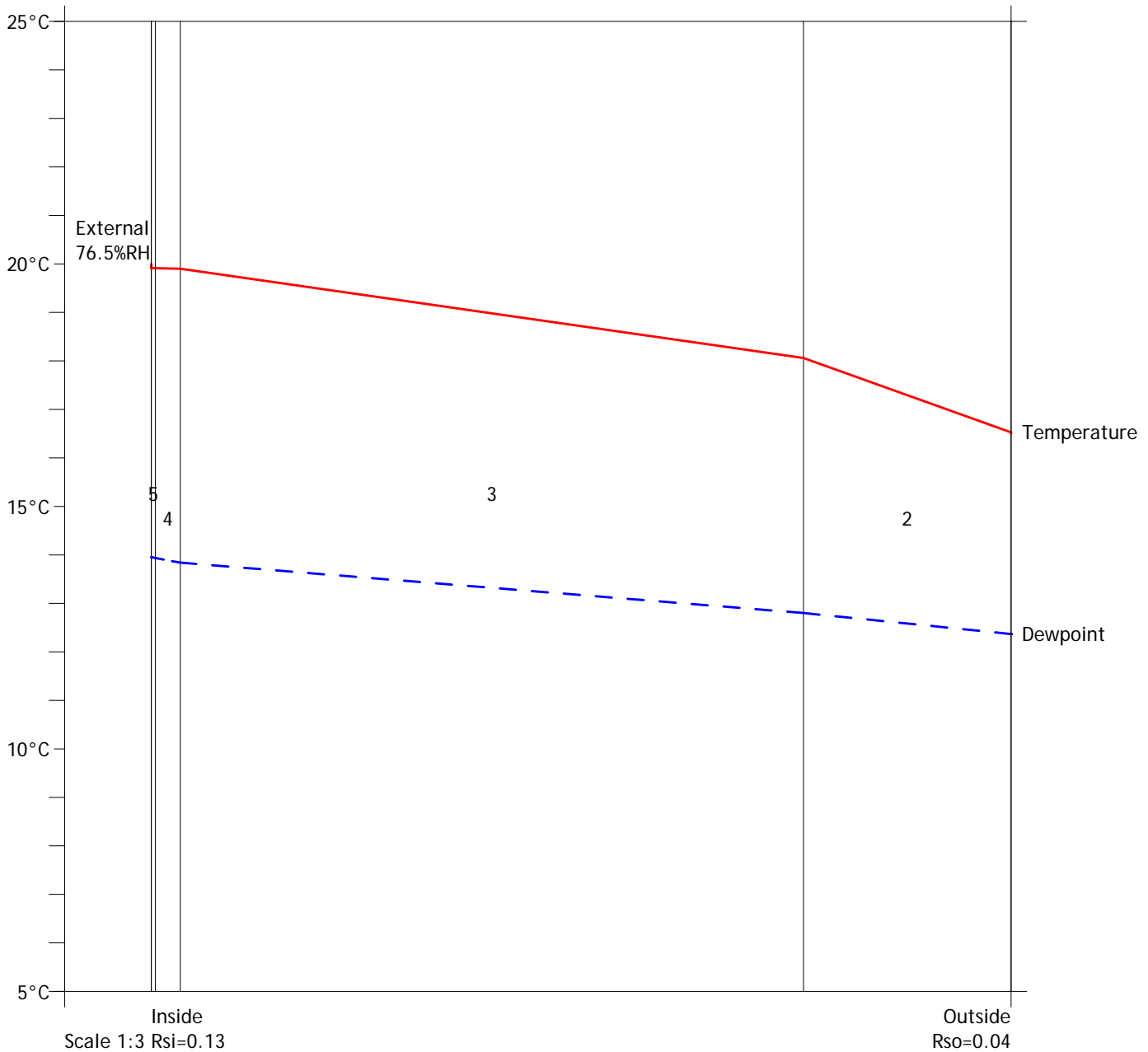
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 100MM	16.5	12.4	1.44	1.88			No
3 THERMOPLAN T11300 Block	18.1	12.8	1.48	2.07			No
4 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.8	1.58	2.32			No
5 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	13.9	1.59	2.32			No
6 Inside surface resistance	19.9	14.0	1.59	2.32			No

Worst case internal / external conditions for graph : 20.0°C @ 68.1%RH / 16.5°C @ 76.5%RH





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Project Information

Reference

Date 23 Oct 2006

Client NBT THERMOPLAN TYPICAL DATA

Construction type

Element : Wall - ZT / ZV 11 - 365MM

Internal surface emissivity : High External surface emissivity : High

Construction

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
BaumitBayosan SEP01/02/03/04 Decor Finish	2.0	0.830	0.002	50.00	0.10
BaumitBayosan MP69 / W Lightweight Render	15.0	0.560	0.027	50.00	0.75
THERMOPLAN T11365 Block	365.0	0.110	3.318	20.83	7.60
BaumitBayosan K38 (RK38) Pure Lime Plaster	12.0	0.830	0.014	50.00	0.60
BaumitBayosan K30 (RK30) Pure Lime Skim Coat	2.0	0.830	0.002	50.00	0.10
Inside surface resistance	-	-	0.130	-	-

U-value - 0.28W/m²K

U-value, Combined Method : 0.28 W/m²K (upper/lower limit 3.534 / 3.534 m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000)

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

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

Structure element : Wall
Condensation calculations performed in accordance with BS5250:2002

Condensation is occurring at the following layers interfaces:-

Month	Int (C°)	Int (%RH)	Ext (C°)	Ext (%RH)
Jan	20.00	60.30	3.50	86.00
Feb	20.00	59.20	3.80	82.50
Mar	20.00	58.60	5.70	80.00
Apr	20.00	58.20	8.00	77.00
May	20.00	60.70	11.30	77.00
Jun	20.00	64.00	14.40	76.00
Jul	20.00	68.10	16.50	76.50
Aug	20.00	68.90	16.10	78.50
Sep	20.00	66.80	13.80	81.50
Oct	20.00	64.00	10.70	84.00
Nov	20.00	61.10	6.40	85.50
Dec	20.00	60.70	4.50	86.50

Gc = Monthly moisture accumulation per area at an interface

Ma = Accumulated moisture content per area at an interface

Peak accumulated moisture content per area at interface (Ma) = 0.00000 Kg/m²

Annual moisture accumulation = 0.00000 Kg/m²

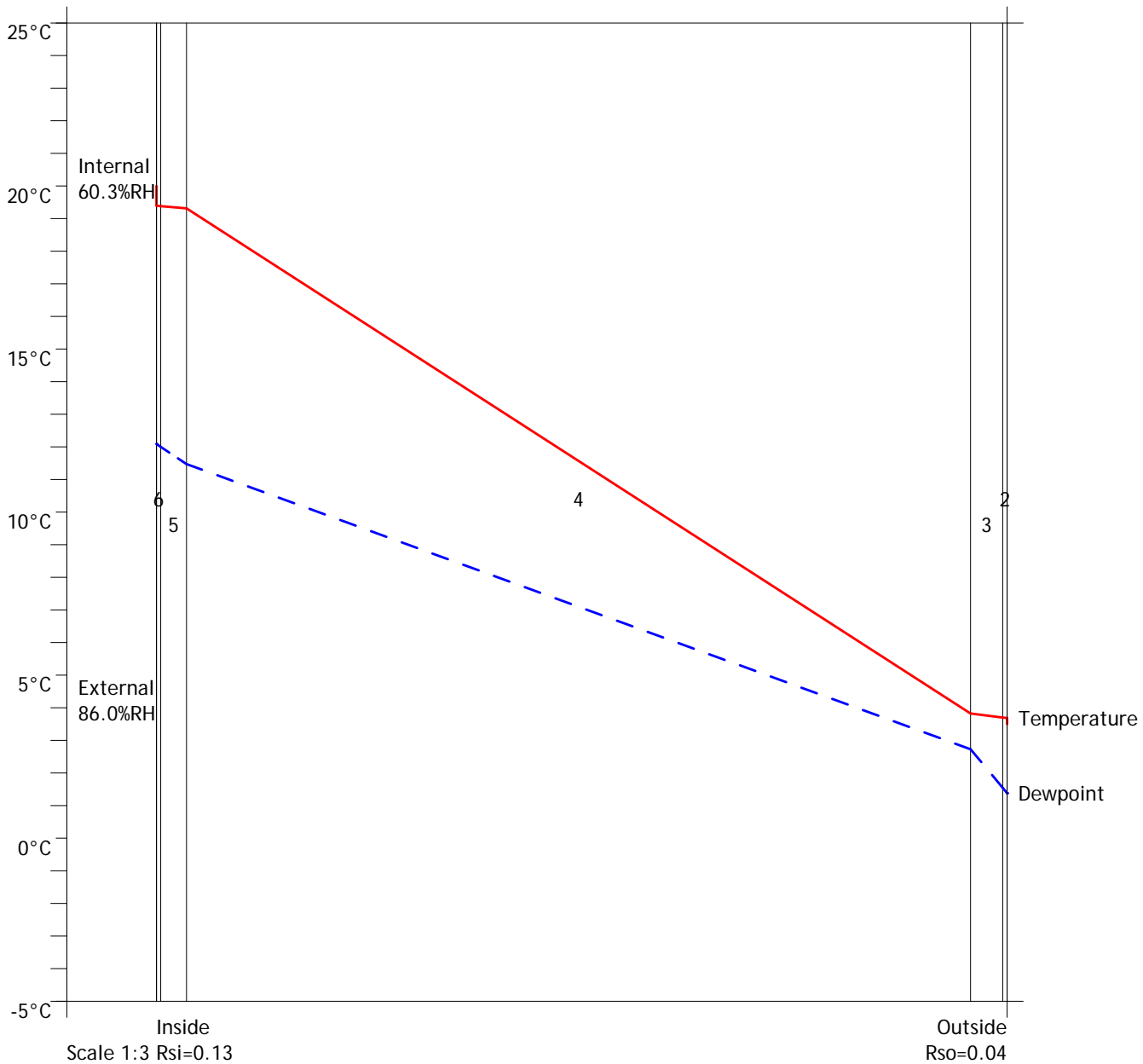
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 BaunitBayosan SEP01/02/03/04 Decor Finish	3.7	1.4	0.67	0.80			No
3 BaunitBayosan MP69 / W Lightweight Render	3.7	1.5	0.68	0.80			No
4 THERMOPLAN T11365 Block	3.8	2.7	0.74	0.80			No
5 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.3	11.5	1.35	2.24			No
6 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.4	12.0	1.40	2.25			No
7 Inside surface resistance	19.4	12.1	1.41	2.25			No

Worst case internal / external conditions for graph : 20.0°C @ 60.3%RH / 3.5°C @ 86.0%RH



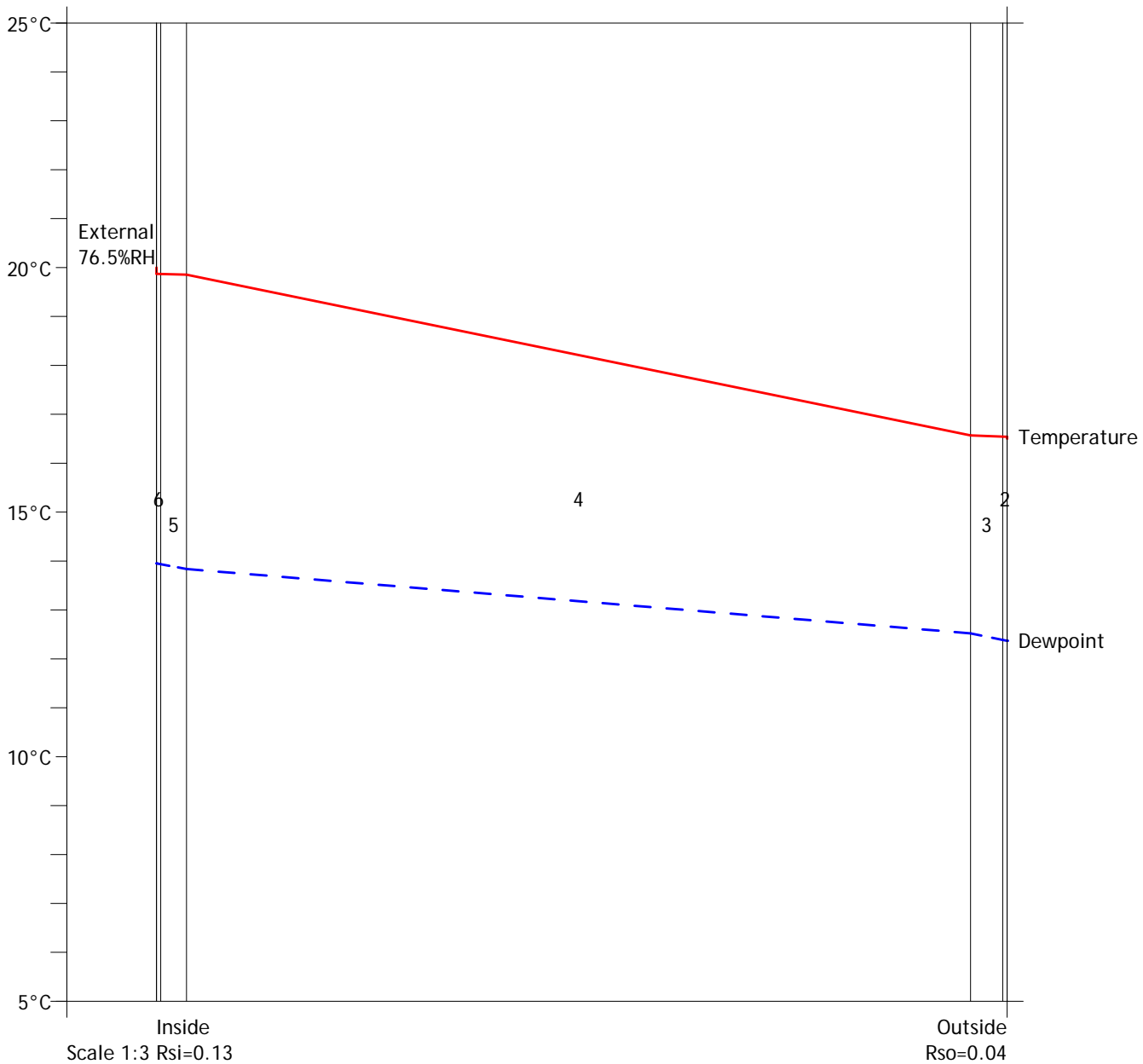
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 BaunitBayosan SEP01/02/03/04 Decor Finish	16.5	12.4	1.44	1.88			No
3 BaunitBayosan MP69 / W Lightweight Render	16.5	12.4	1.44	1.88			No
4 THERMOPLAN T11365 Block	16.6	12.5	1.45	1.88			No
5 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.8	1.58	2.32			No
6 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	13.9	1.59	2.32			No
7 Inside surface resistance	19.9	14.0	1.59	2.32			No

Worst case internal / external conditions for graph : 20.0°C @ 68.1%RH / 16.5°C @ 76.5%RH





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Project Information

Reference

Date 23 Oct 2006

Client NBT THERMOPLAN TYPICAL DATA

Construction type

Element : Wall - ZT / ZV 11 - 365MM CLAD 60

Internal surface emissivity : High External surface emissivity : High

Construction

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Diffutherm OR Pavatherm Plus 60mm	60.0	0.044	1.364	25.00	1.50
THERMOPLAN T11365 Block	365.0	0.110	3.318	20.83	7.60
BaumitBayosan K38 (RK38) Pure Lime Plaster	12.0	0.830	0.014	50.00	0.60
BaumitBayosan K30 (RK30) Pure Lime Skim Coat	2.0	0.830	0.002	50.00	0.10
Inside surface resistance	-	-	0.130	-	-

U-value - 0.21W/m²K

U-value, Combined Method : 0.21 W/m²K (upper/lower limit 4.869 / 4.869 m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000)

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

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

Structure element : Wall
Condensation calculations performed in accordance with BS5250:2002

Condensation is occurring at the following layers interfaces:-

Month	Int (C°)	Int (%RH)	Ext (C°)	Ext (%RH)
Jan	20.00	60.30	3.50	86.00
Feb	20.00	59.20	3.80	82.50
Mar	20.00	58.60	5.70	80.00
Apr	20.00	58.20	8.00	77.00
May	20.00	60.70	11.30	77.00
Jun	20.00	64.00	14.40	76.00
Jul	20.00	68.10	16.50	76.50
Aug	20.00	68.90	16.10	78.50
Sep	20.00	66.80	13.80	81.50
Oct	20.00	64.00	10.70	84.00
Nov	20.00	61.10	6.40	85.50
Dec	20.00	60.70	4.50	86.50

Gc = Monthly moisture accumulation per area at an interface

Ma = Accumulated moisture content per area at an interface

Peak accumulated moisture content per area at interface (Ma) = 0.00000 Kg/m²

Annual moisture accumulation = 0.00000 Kg/m²

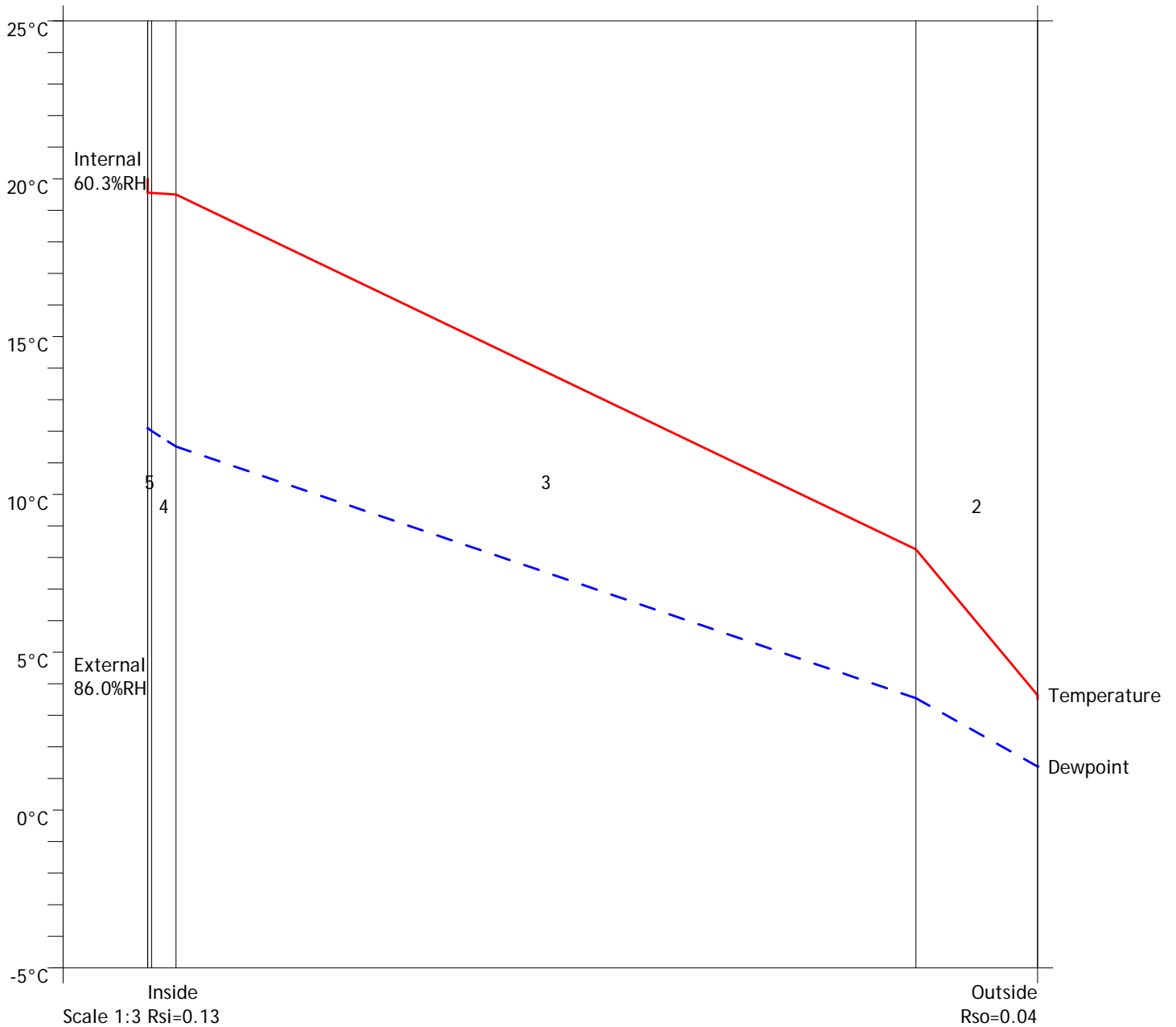
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 60mm	3.6	1.4	0.67	0.79			No
3 THERMOPLAN T11365 Block	8.3	3.5	0.79	1.09			No
4 BaimitBayosan K38 (RK38) Pure Lime Plaster	19.5	11.5	1.36	2.27			No
5 BaimitBayosan K30 (RK30) Pure Lime Skim Coat	19.6	12.0	1.40	2.27			No
6 Inside surface resistance	19.6	12.1	1.41	2.27			No

Worst case internal / external conditions for graph : 20.0°C @ 60.3%RH / 3.5°C @ 86.0%RH



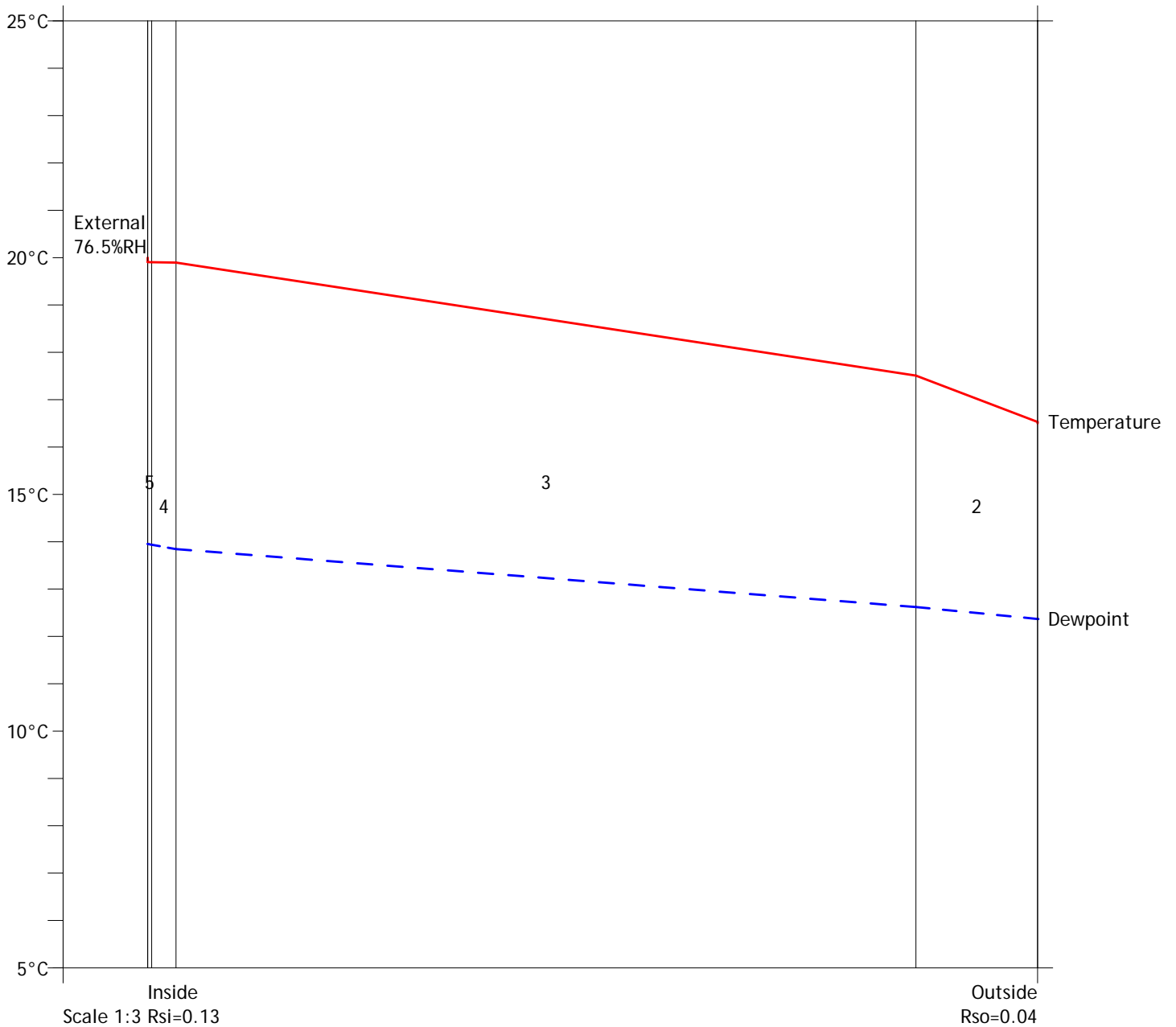
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 60mm	16.5	12.4	1.44	1.88			No
3 THERMOPLAN T11365 Block	17.5	12.6	1.46	2.00			No
4 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.8	1.58	2.32			No
5 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	13.9	1.59	2.32			No
6 Inside surface resistance	19.9	14.0	1.59	2.32			No

Worst case internal / external conditions for graph : 20.0°C @ 68.1%RH / 16.5°C @ 76.5%RH





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Project Information

Reference

Date 23 Oct 2006

Client NBT THERMOPLAN TYPICAL DATA

Construction type

Element : Wall - ZT / ZV 11 - 365MM CLAD 80

Internal surface emissivity : High External surface emissivity : High

Construction

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Diffutherm OR Pavatherm Plus 80mm	80.0	0.044	1.818	25.00	2.00
THERMOPLAN T11365 Block	365.0	0.110	3.318	20.83	7.60
BaumitBayosan K38 (RK38) Pure Lime Plaster	12.0	0.830	0.014	50.00	0.60
BaumitBayosan K30 (RK30) Pure Lime Skim Coat	2.0	0.830	0.002	50.00	0.10
Inside surface resistance	-	-	0.130	-	-

U-value - 0.19W/m²K

U-value, Combined Method : 0.19 W/m²K (upper/lower limit 5.323 / 5.323 m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000)

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

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

Structure element : Wall

Condensation calculations performed in accordance with BS5250:2002

Condensation is occurring at the following layers interfaces:-

Month	Int (C°)	Int (%RH)	Ext (C°)	Ext (%RH)
Jan	20.00	60.30	3.50	86.00
Feb	20.00	59.20	3.80	82.50
Mar	20.00	58.60	5.70	80.00
Apr	20.00	58.20	8.00	77.00
May	20.00	60.70	11.30	77.00
Jun	20.00	64.00	14.40	76.00
Jul	20.00	68.10	16.50	76.50
Aug	20.00	68.90	16.10	78.50
Sep	20.00	66.80	13.80	81.50
Oct	20.00	64.00	10.70	84.00
Nov	20.00	61.10	6.40	85.50
Dec	20.00	60.70	4.50	86.50

Gc = Monthly moisture accumulation per area at an interface

Ma = Accumulated moisture content per area at an interface

Peak accumulated moisture content per area at interface (Ma) = 0.00000 Kg/m²

Annual moisture accumulation = 0.00000 Kg/m²

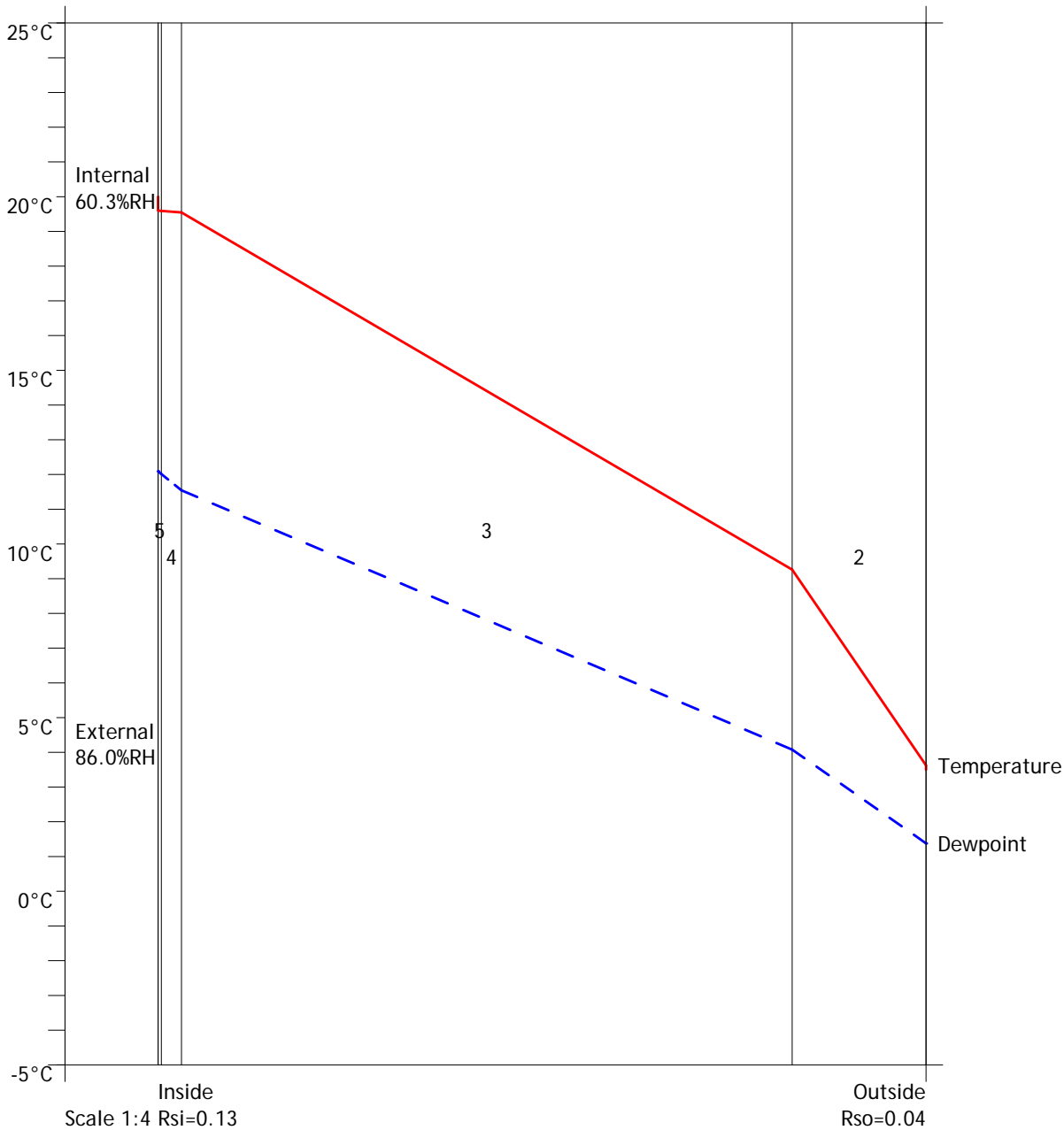
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 80mm	3.6	1.4	0.67	0.79			No
3 THERMOPLAN T11365 Block	9.3	4.1	0.82	1.17			No
4 BaimitBayosan K38 (RK38) Pure Lime Plaster	19.5	11.5	1.36	2.27			No
5 BaimitBayosan K30 (RK30) Pure Lime Skim Coat	19.6	12.0	1.40	2.28			No
6 Inside surface resistance	19.6	12.1	1.41	2.28			No

Worst case internal / external conditions for graph : 20.0°C @ 60.3%RH / 3.5°C @ 86.0%RH



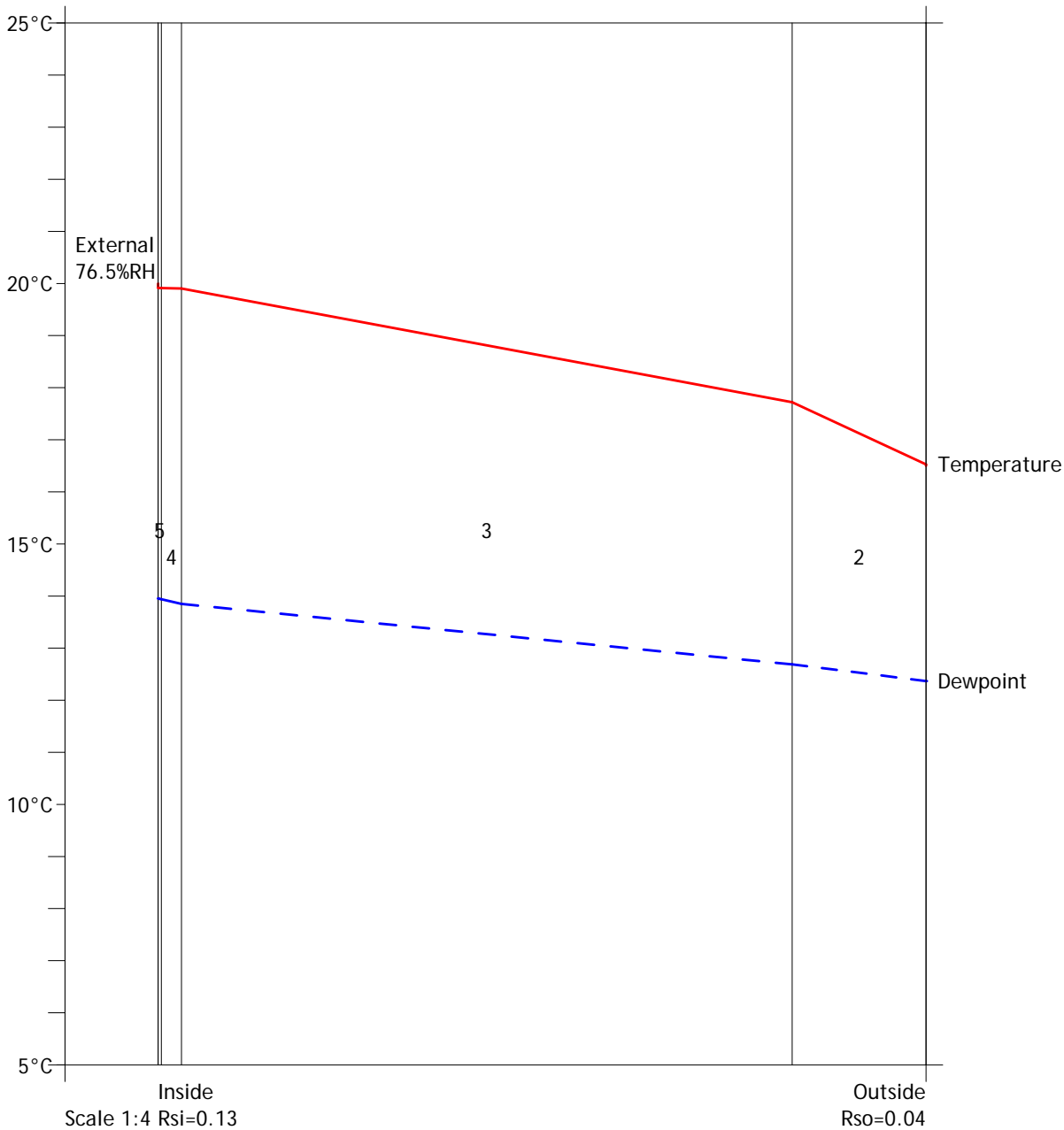
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 80mm	16.5	12.4	1.44	1.88			No
3 THERMOPLAN T11365 Block	17.7	12.7	1.47	2.03			No
4 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.8	1.58	2.32			No
5 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	13.9	1.59	2.32			No
6 Inside surface resistance	19.9	14.0	1.59	2.32			No

Worst case internal / external conditions for graph : 20.0°C @ 68.1%RH / 16.5°C @ 76.5%RH





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Project Information

Reference

Date 23 Oct 2006

Client NBT THERMOPLAN TYPICAL DATA

Construction type

Element : Wall - ZT / ZV 11 - 365MM CLAD 100

Internal surface emissivity : High External surface emissivity : High

Construction

	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Diffutherm OR Pavatherm Plus 100mm	100.0	0.044	2.273	25.00	2.50
THERMOPLAN T11365 Block	365.0	0.110	3.318	20.83	7.60
BaumitBayosan K38 (RK38) Pure Lime Plaster	12.0	0.830	0.014	50.00	0.60
BaumitBayosan K30 (RK30) Pure Lime Skim Coat	2.0	0.830	0.002	50.00	0.10
Inside surface resistance	-	-	0.130	-	-

U-value - 0.17W/m²K

U-value, Combined Method : 0.17 W/m²K (upper/lower limit 5.778 / 5.778 m²K/W, dUf 0.0000, dUg 0.0000, dUp0.0000, dUr0.0000)

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

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

Structure element : Wall
Condensation calculations performed in accordance with BS5250:2002

Condensation is occurring at the following layers interfaces:-

Month	Int (C°)	Int (%RH)	Ext (C°)	Ext (%RH)
Jan	20.00	60.30	3.50	86.00
Feb	20.00	59.20	3.80	82.50
Mar	20.00	58.60	5.70	80.00
Apr	20.00	58.20	8.00	77.00
May	20.00	60.70	11.30	77.00
Jun	20.00	64.00	14.40	76.00
Jul	20.00	68.10	16.50	76.50
Aug	20.00	68.90	16.10	78.50
Sep	20.00	66.80	13.80	81.50
Oct	20.00	64.00	10.70	84.00
Nov	20.00	61.10	6.40	85.50
Dec	20.00	60.70	4.50	86.50

Gc = Monthly moisture accumulation per area at an interface

Ma = Accumulated moisture content per area at an interface

Peak accumulated moisture content per area at interface (Ma) = 0.00000 Kg/m²

Annual moisture accumulation = 0.00000 Kg/m²

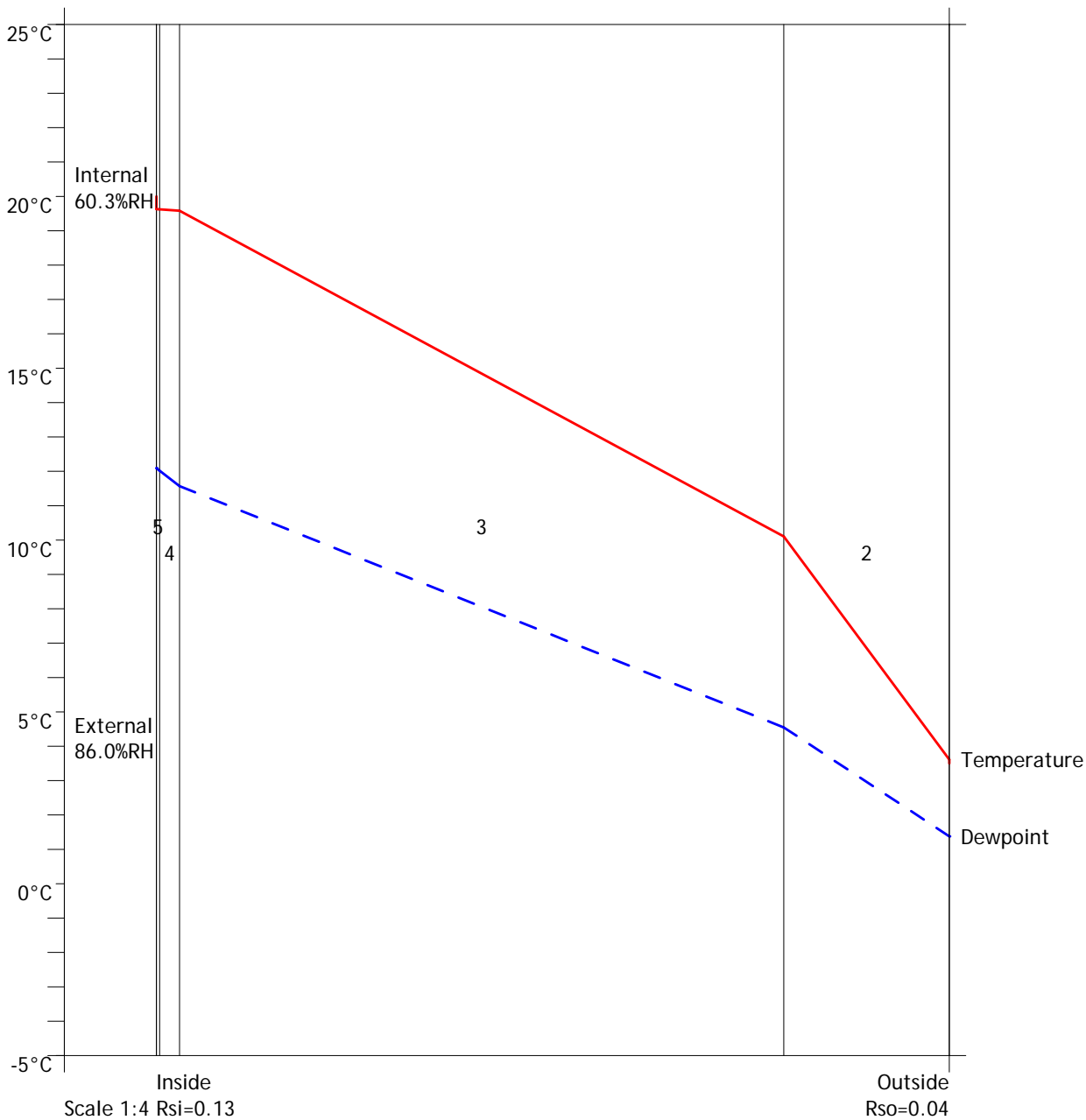
Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
20.0C 60.3%	20.0C 59.2%	20.0C 58.6%	20.0C 58.2%	20.0C 60.7%	20.0C 64.0%	20.0C 68.1%	20.0C 68.9%	20.0C 66.8%	20.0C 64.0%	20.0C 61.1%	20.0C 60.7%
3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

	Interface Temp. °C	Dewpoint Temp. °C	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m ²)	Peak Buildup (g/m ²)	Condensation
1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 100mm	3.6	1.4	0.67	0.79			No
3 THERMOPLAN T11365 Block	10.1	4.5	0.84	1.24			No
4 BaimitBayosan K38 (RK38) Pure Lime Plaster	19.6	11.6	1.36	2.28			No
5 BaimitBayosan K30 (RK30) Pure Lime Skim Coat	19.6	12.0	1.40	2.28			No
6 Inside surface resistance	19.6	12.1	1.41	2.28			No

Worst case internal / external conditions for graph : 20.0°C @ 60.3%RH / 3.5°C @ 86.0%RH



Condensation Risk Analysis (no account taken of thermal bridges)

3 - Dwellings with low occupancy

Jan (worst)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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3.5C 86.0%	3.8C 82.5%	5.7C 80.0%	8.0C 77.0%	11.3C 77.0%	14.4C 76.0%	16.5C 76.5%	16.1C 78.5%	13.8C 81.5%	10.7C 84.0%	6.4C 85.5%	4.5C 86.5%

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1 Outside surface resistance							
2 Pavatex Diffutherm OR Pavatherm Plus 100mm	16.5	12.4	1.44	1.88			No
3 THERMOPLAN T11365 Block	17.9	12.7	1.47	2.05			No
4 BaunitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.9	1.58	2.32			No
5 BaunitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	13.9	1.59	2.33			No
6 Inside surface resistance	19.9	14.0	1.59	2.33			No

Worst case internal / external conditions for graph : 20.0°C @ 68.1%RH / 16.5°C @ 76.5%RH

