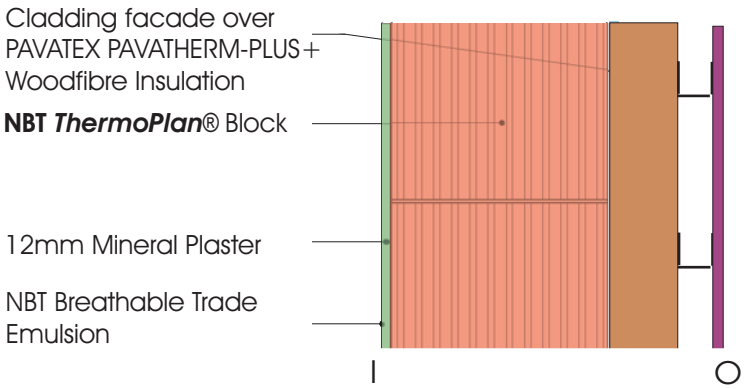
Natural Building Technologies

NBT ThermoPlan® **CladPlus** *11 System*

Thin Bed Insulating
Solid Wall System



U-Value

&

Interstitial Moisture

Data

Data Produced Using " JPA Designer Version 3.03i5"

"The Science of Nature - The Future of Construction"

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Project Information
Reference
Date 23 Oct 2006
Client NBT THERMOPLAN TYPICAL DATA

Construction type
Element : Wall - ZT/ ZV 11 - 240 60 CLAD
Internal surface emissivity : High External surface emissivity : High

Construction	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m²K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Pavatherm Plus 60mm	60.0	0.043	1.395	25.00	1.50
ThermoPlan ZT / ZV 11 240 Block	240.0	0.110	2.182	20.83	5.00
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 - 0.27W/m²K
U-value, Combined Method : 0.27 W/m²K (upper/lower limit 3.764 / 3.764 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 occuring 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

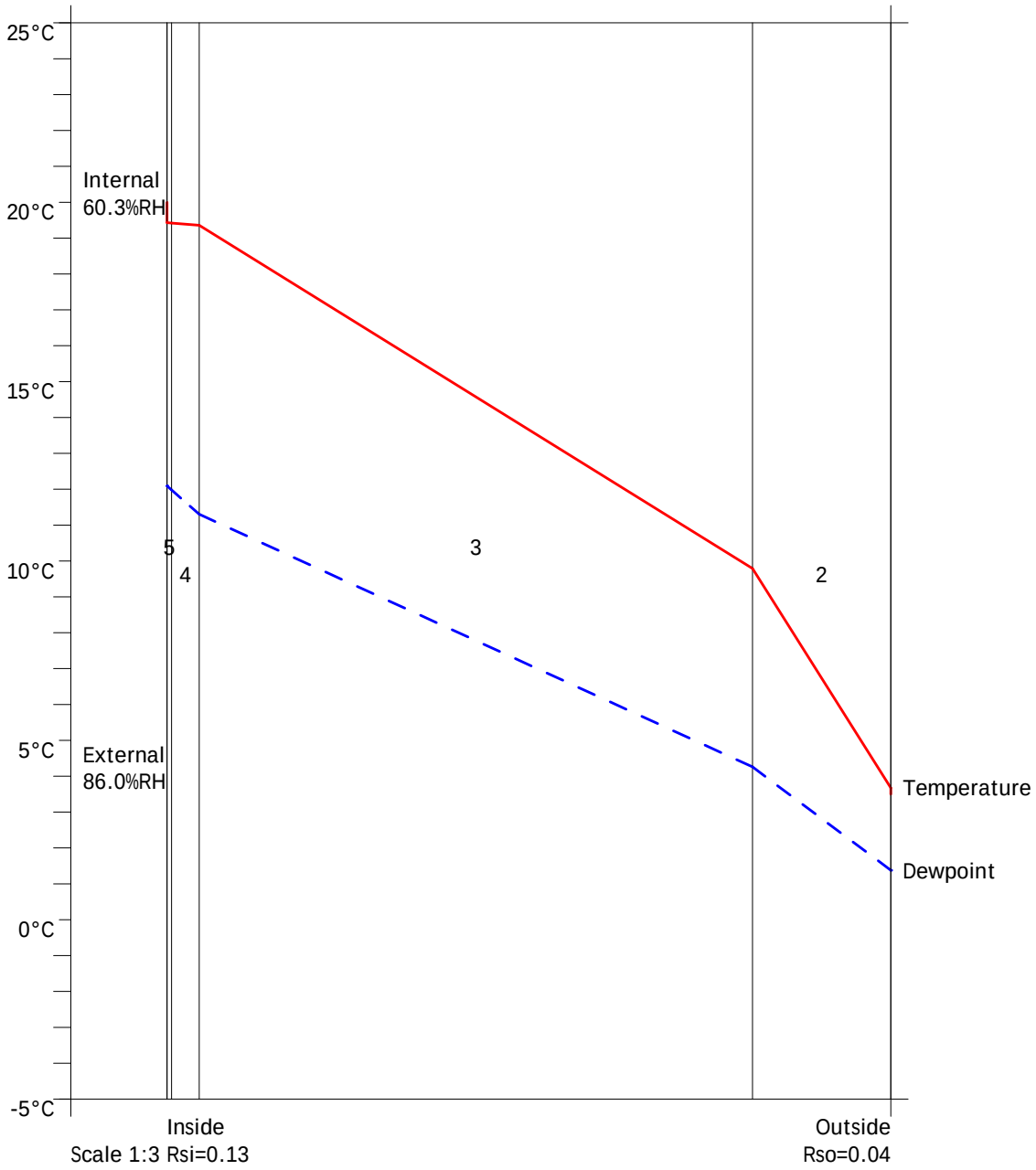
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	3.7	1.4	0.67	0.79			No
2 Pavatex Pavatherm Plus 60mm	9.8	4.3	0.83	1.21			No
3 ThermoPlan ZT / ZV 11 240 Block	19.4	11.3	1.34	2.25			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.4	12.0	1.40	2.25			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.4	12.1	1.41	2.26			No
6 Inside surface resistance							

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



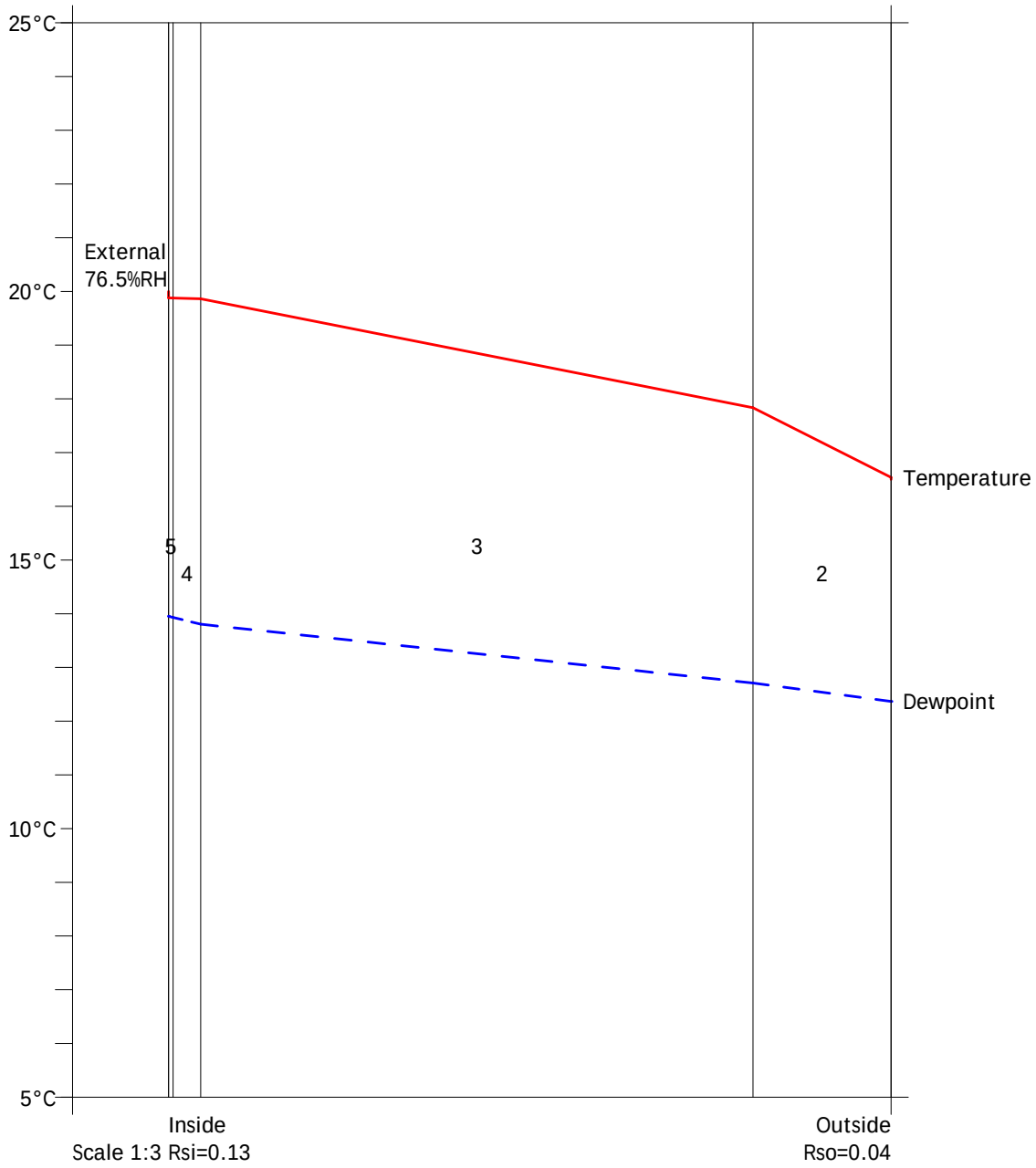
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	16.5	12.4	1.44	1.88			No
2 Pavatex Pavatherm Plus 60mm	17.8	12.7	1.47	2.04			No
3 ThermoPlan ZT / ZV 11 240 Block	19.9	13.8	1.58	2.32			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.9	1.59	2.32			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	14.0	1.59	2.32			No
6 Inside surface resistance							

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 - 240 80 CLAD
Internal surface emissivity : High External surface emissivity : High

Construction	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m²K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Pavatherm Plus 80mm	80.0	0.043	1.860	25.00	2.00
ThermoPlan ZT / ZV 11 240 Block	240.0	0.110	2.182	20.83	5.00
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 4.229 / 4.229 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 occuring 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

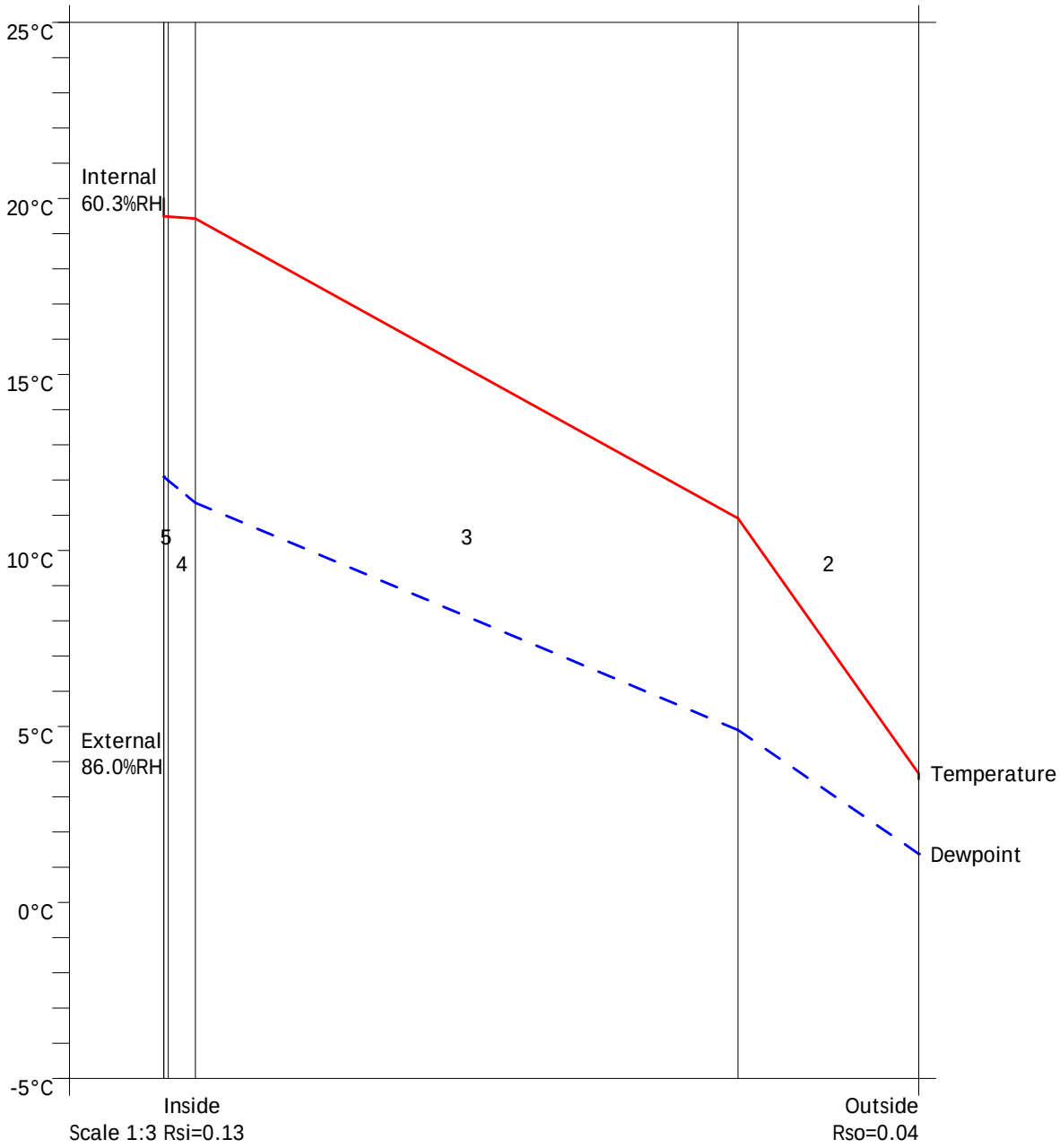
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	3.7	1.4	0.67	0.79			No
2 Pavatex Pavatherm Plus 80mm	10.9	4.9	0.87	1.30			No
3 ThermoPlan ZT / ZV 11 240 Block	19.4	11.4	1.34	2.26			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.5	12.0	1.40	2.26			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.5	12.1	1.41	2.26			No
6 Inside surface resistance							

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



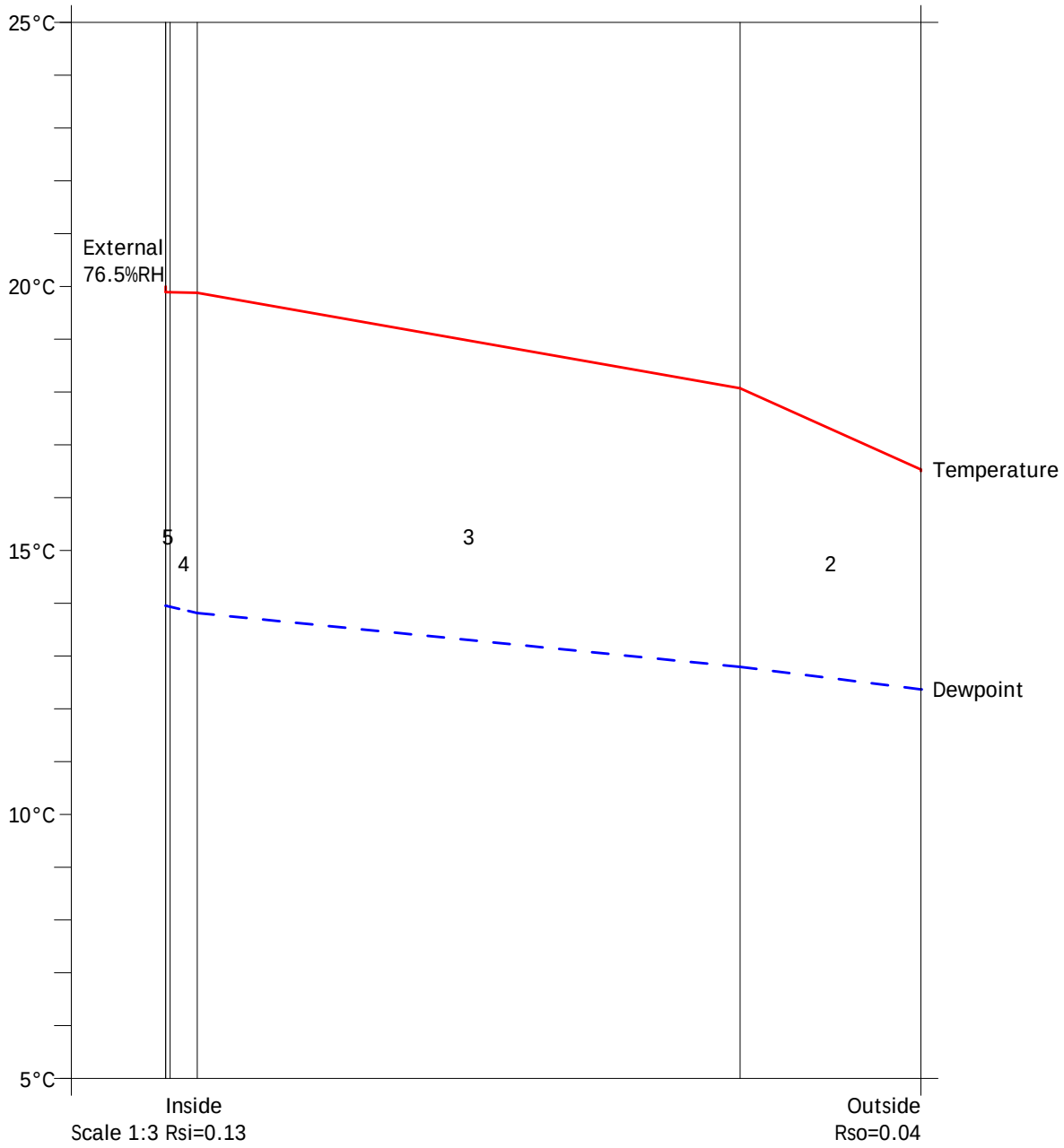
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	16.5	12.4	1.44	1.88			No
2 Pavatex Pavatherm Plus 80mm	18.1	12.8	1.48	2.07			No
3 ThermoPlan ZT / ZV 11 240 Block	19.9	13.8	1.58	2.32			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.9	1.59	2.32			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	14.0	1.59	2.32			No
6 Inside surface resistance							

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 - 240 100 CLAD
Internal surface emissivity : High External surface emissivity : High

Construction	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m²K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Pavatherm Plus 100mm	100.0	0.043	2.326	25.00	2.50
ThermoPlan ZT / ZV 11 240 Block	240.0	0.110	2.182	20.83	5.00
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 4.695 / 4.695 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 occuring 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

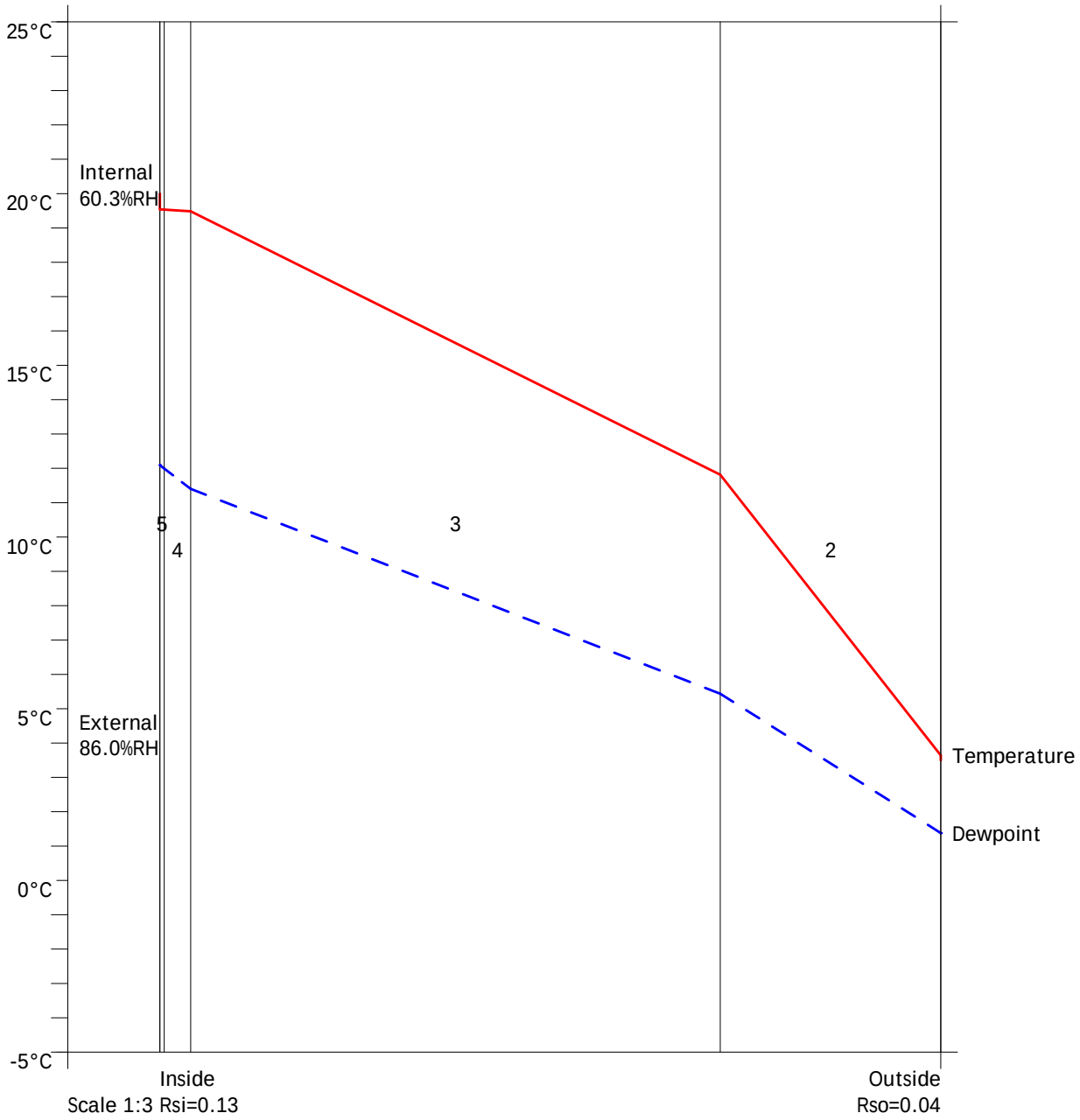
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	3.6	1.4	0.67	0.79			No
2 Pavatex Pavatherm Plus 100mm	11.8	5.4	0.90	1.38			No
3 ThermoPlan ZT / ZV 11 240 Block	19.5	11.4	1.35	2.26			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.5	12.0	1.40	2.27			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.5	12.1	1.41	2.27			No
6 Inside surface resistance							

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



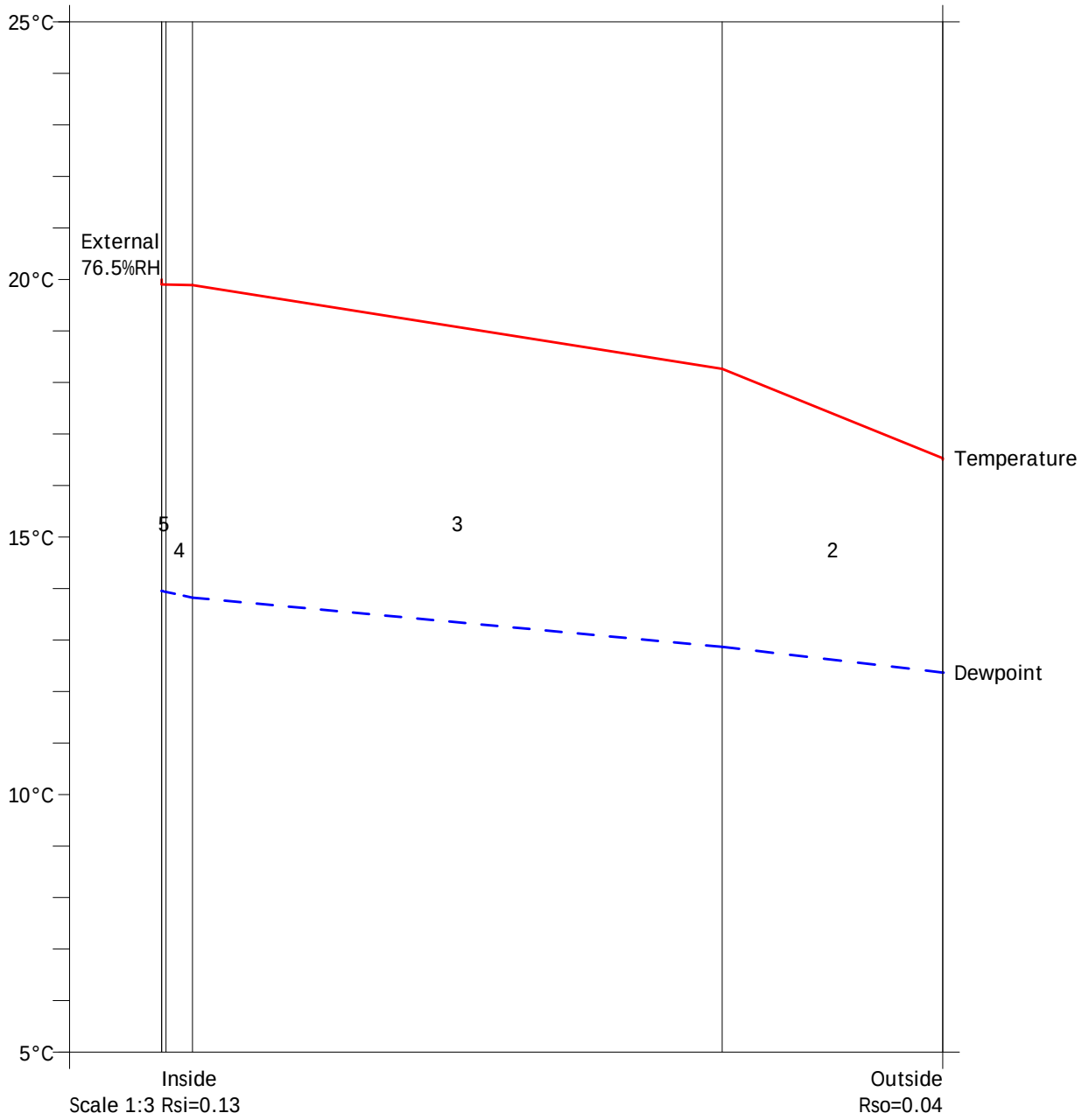
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	16.5	12.4	1.44	1.88			No
2 Pavatex Pavatherm Plus 100mm	18.3	12.9	1.48	2.10			No
3 ThermoPlan ZT / ZV 11 240 Block	19.9	13.8	1.58	2.32			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.9	1.59	2.32			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	14.0	1.59	2.32			No
6 Inside surface resistance							

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 - 300 60 CLAD
Internal surface emissivity : High External surface emissivity : High

Construction	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m²K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Pavatherm Plus 60mm	60.0	0.043	1.395	25.00	1.50
ThermoPlan ZT / ZV 11 300 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 4.309 / 4.309 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 occuring 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
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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

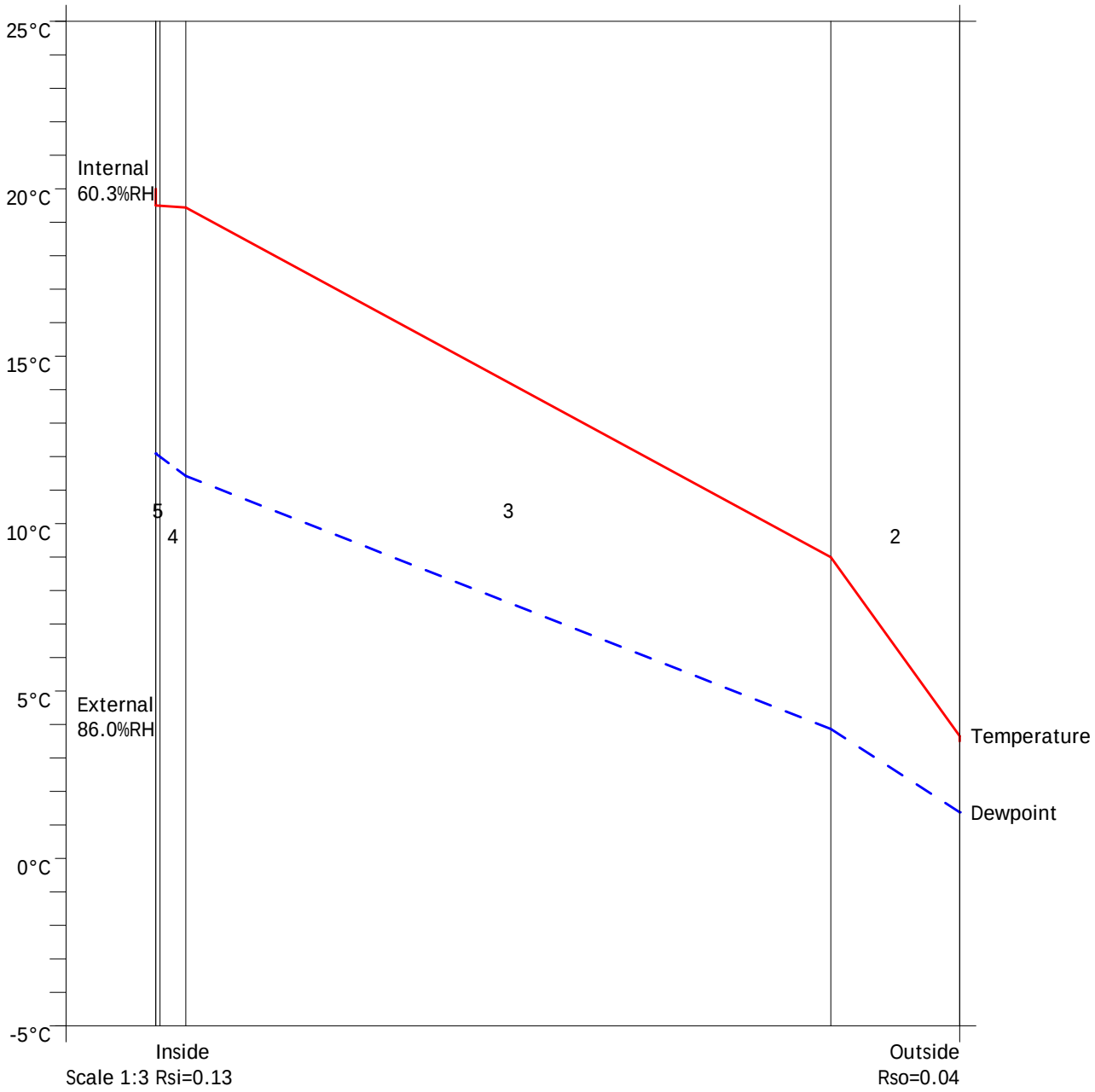
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	3.7	1.4	0.67	0.79			No
2 Pavatex Pavatherm Plus 60mm	9.0	3.9	0.81	1.15			No
3 ThermoPlan ZT / ZV 11 300 Block	19.4	11.4	1.35	2.26			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.5	12.0	1.40	2.26			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.5	12.1	1.41	2.27			No
6 Inside surface resistance							

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



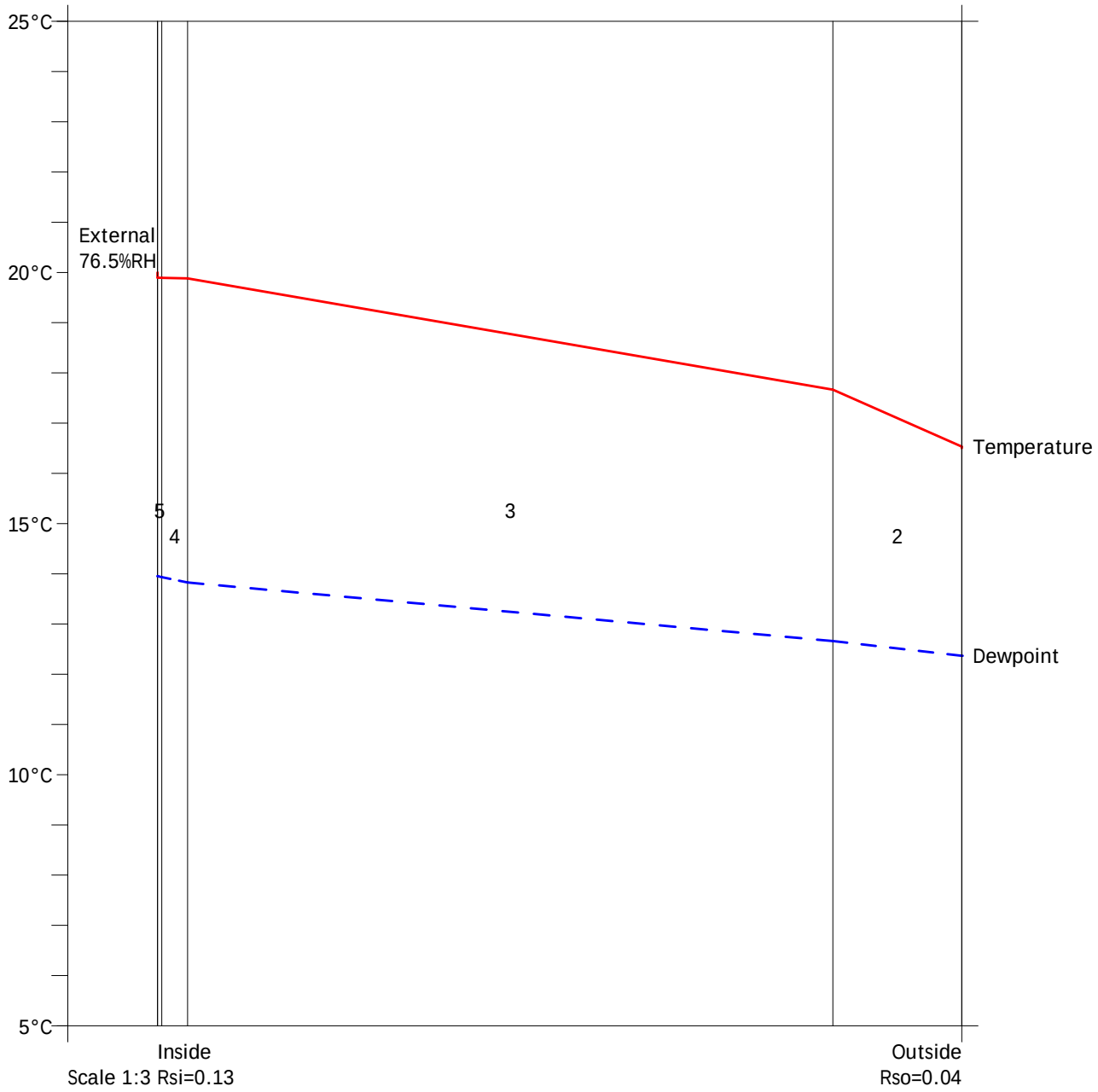
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	16.5	12.4	1.44	1.88			No
2 Pavatex Pavatherm Plus 60mm	17.7	12.7	1.46	2.02			No
3 ThermoPlan ZT / ZV 11 300 Block	19.9	13.8	1.58	2.32			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.9	1.59	2.32			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	14.0	1.59	2.32			No
6 Inside surface resistance							

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 - 300 80 CLAD
Internal surface emissivity : High External surface emissivity : High

Construction	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m²K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Pavatherm Plus 80mm	80.0	0.043	1.860	25.00	2.00
ThermoPlan ZT / ZV 11 300 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 4.774 / 4.774 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 occuring 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

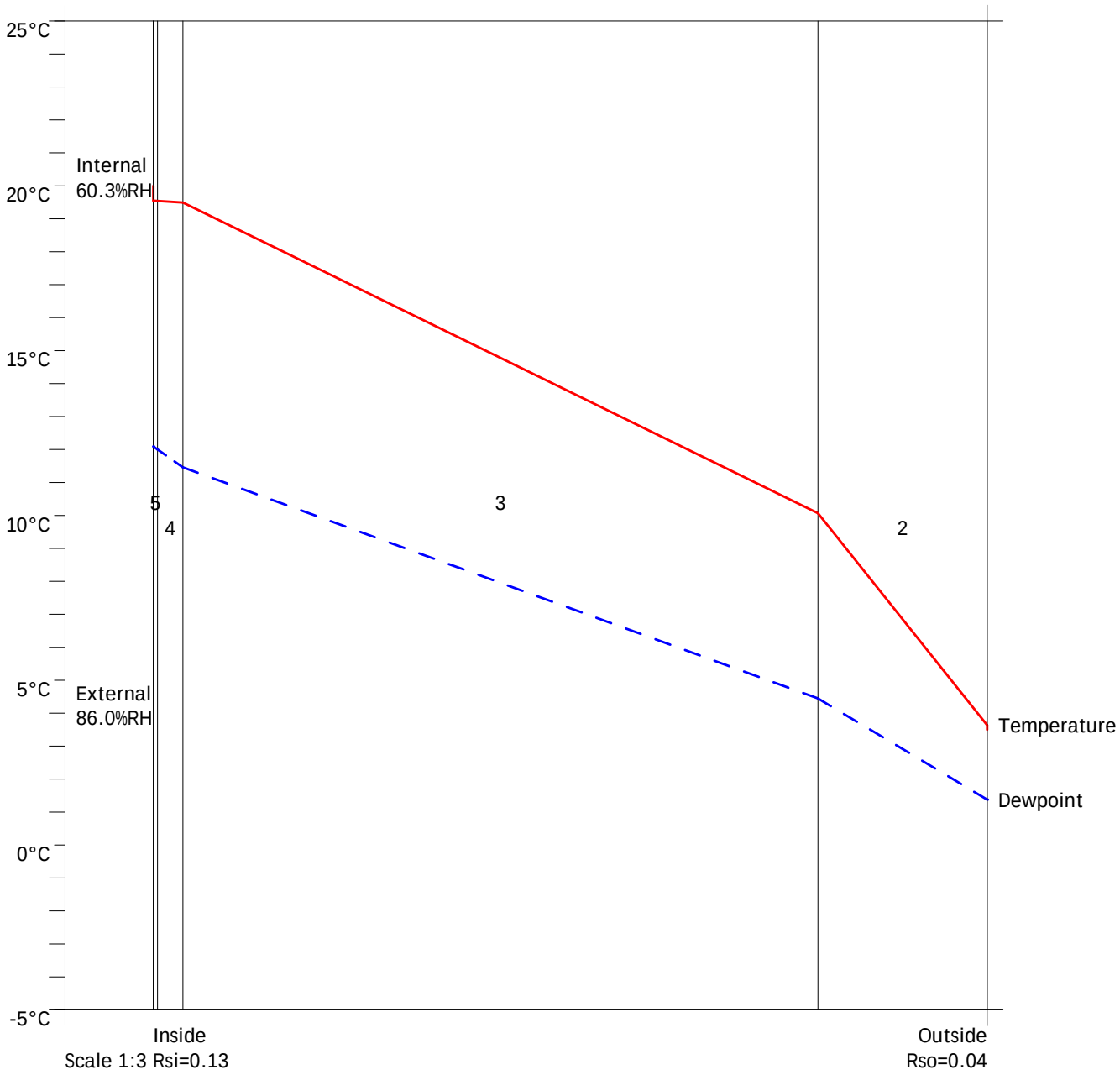
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	3.6	1.4	0.67	0.79			No
2 Pavatex Pavatherm Plus 80mm	10.1	4.4	0.84	1.23			No
3 ThermoPlan ZT / ZV 11 300 Block	19.5	11.5	1.35	2.26			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.5	12.0	1.40	2.27			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.6	12.1	1.41	2.27			No
6 Inside surface resistance							

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



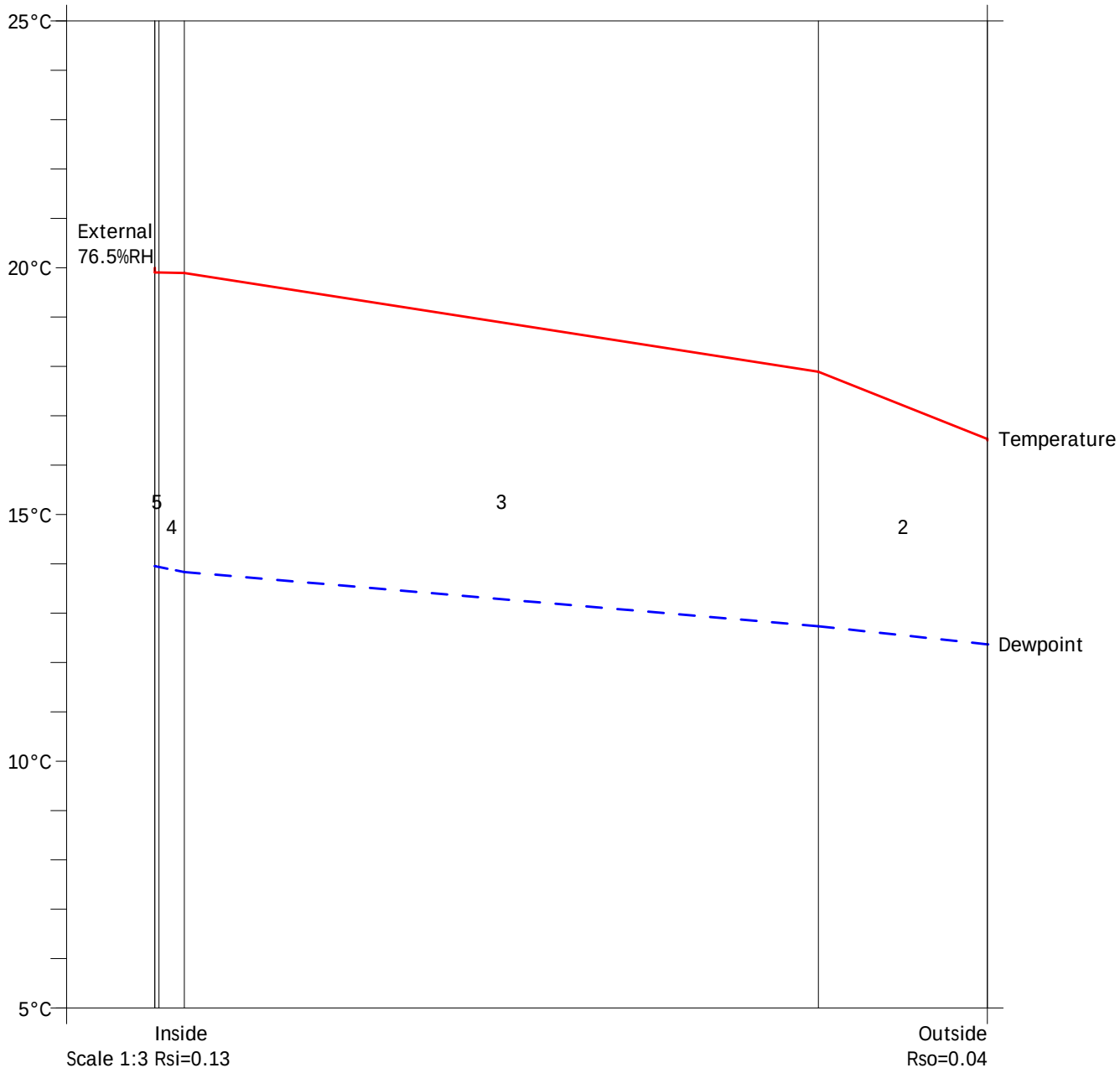
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	16.5	12.4	1.44	1.88			No
2 Pavatex Pavatherm Plus 80mm	17.9	12.7	1.47	2.05			No
3 ThermoPlan ZT / ZV 11 300 Block	19.9	13.8	1.58	2.32			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.9	1.59	2.32			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	14.0	1.59	2.32			No
6 Inside surface resistance							

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 - 300 100 CLAD
Internal surface emissivity : High External surface emissivity : High

Construction	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m²K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Pavatherm Plus 100mm	100.0	0.043	2.326	25.00	2.50
ThermoPlan ZT / ZV 11 300 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 5.240 / 5.240 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 occuring 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

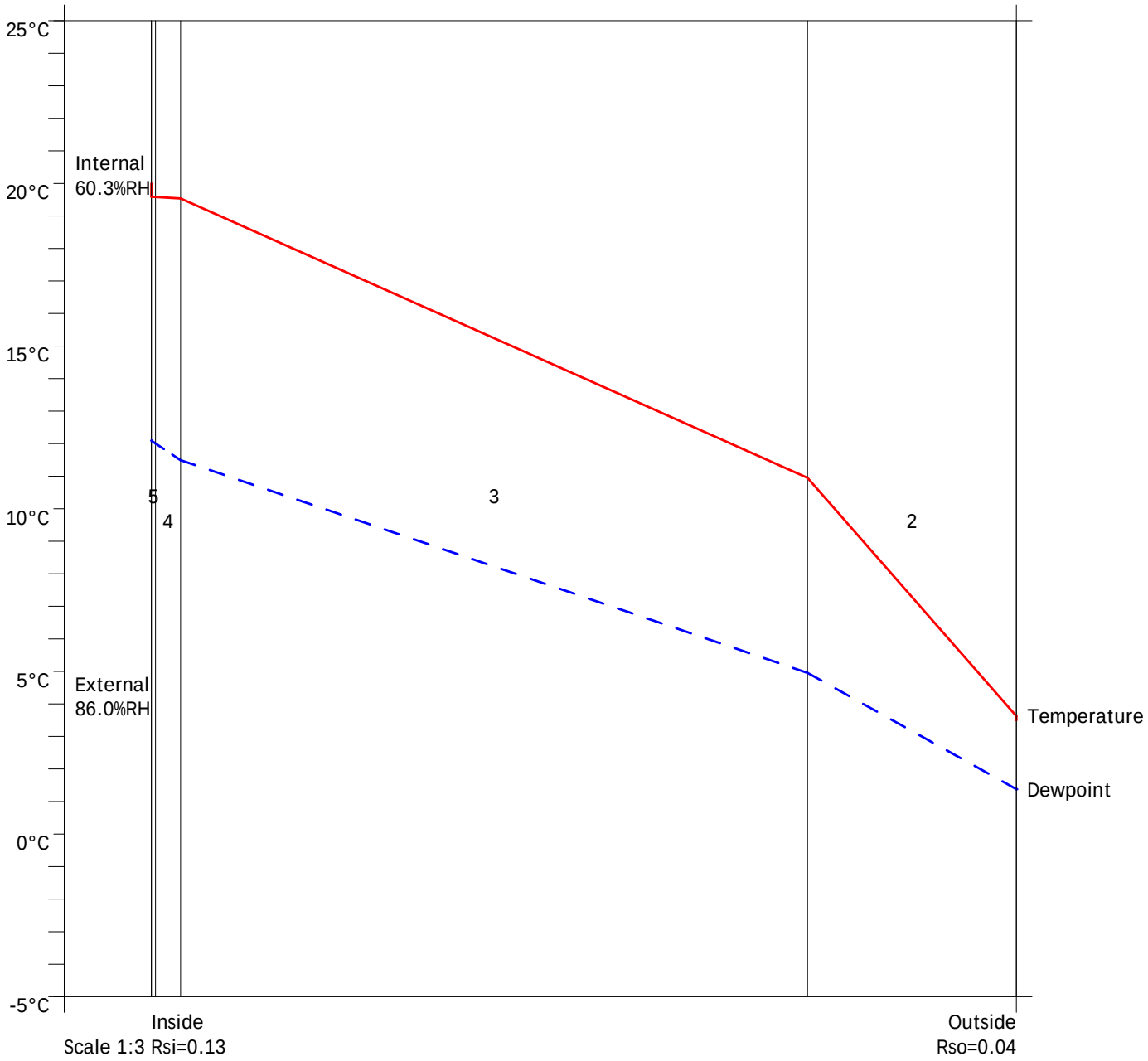
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	3.6	1.4	0.67	0.79			No
2 Pavatex Pavatherm Plus 100mm	11.0	5.0	0.87	1.31			No
3 ThermoPlan ZT / ZV 11 300 Block	19.5	11.5	1.35	2.27			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.6	12.0	1.40	2.28			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.6	12.1	1.41	2.28			No
6 Inside surface resistance							

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



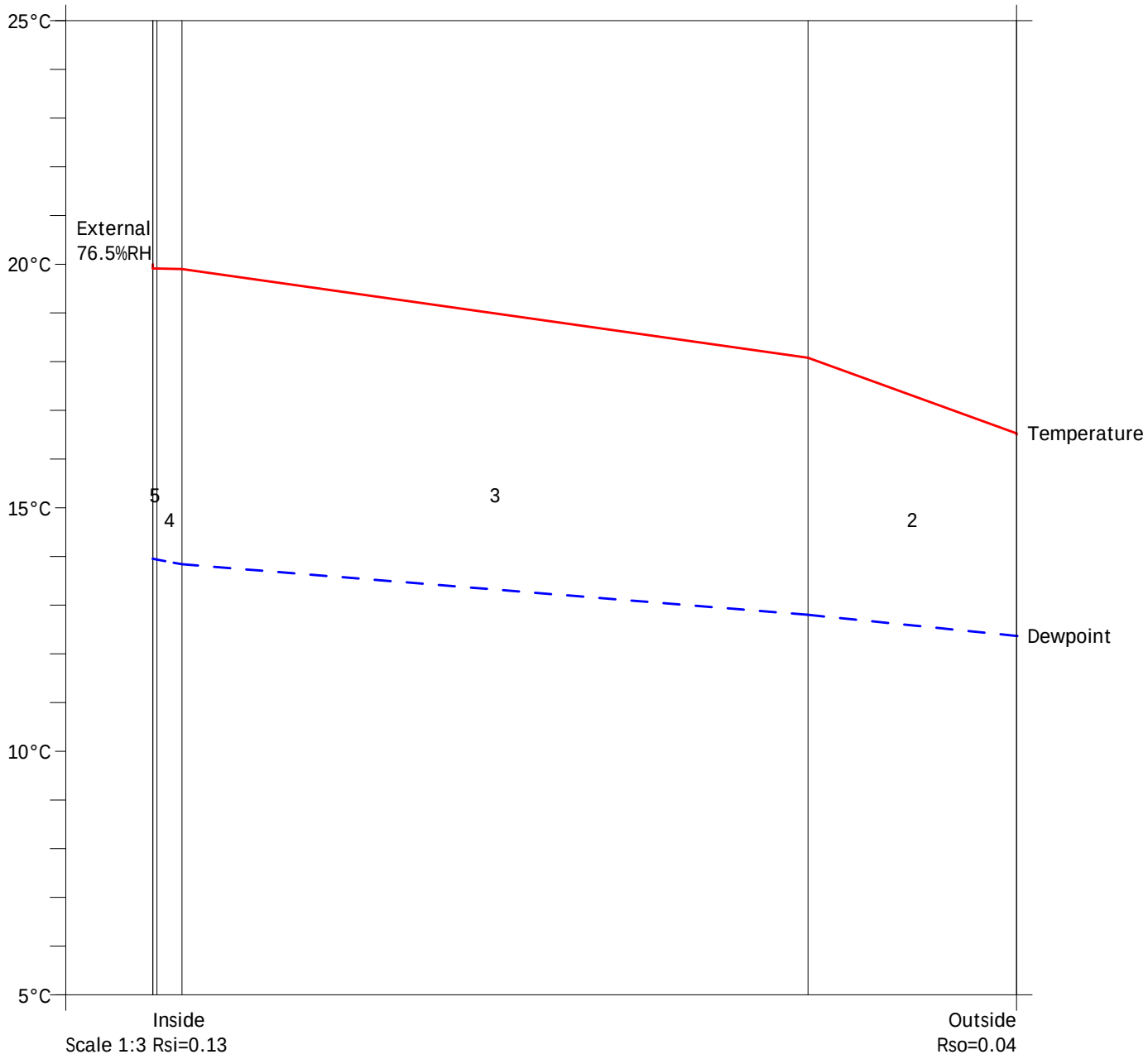
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	16.5	12.4	1.44	1.88			No
2 Pavatex Pavatherm Plus 100mm	18.1	12.8	1.48	2.07			No
3 ThermoPlan ZT / ZV 11 300 Block	19.9	13.8	1.58	2.32			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.9	1.59	2.32			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	14.0	1.59	2.32			No
6 Inside surface resistance							

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 - 365 60 CLAD
Internal surface emissivity : High External surface emissivity : High

Construction	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m²K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Pavatherm Plus 60mm	60.0	0.043	1.395	25.00	1.50
ThermoPlan ZT / ZV 11 365 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 - 0.20W/m²K
U-value, Combined Method : 0.20 W/m²K (upper/lower limit 4.900 / 4.900 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 occuring 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

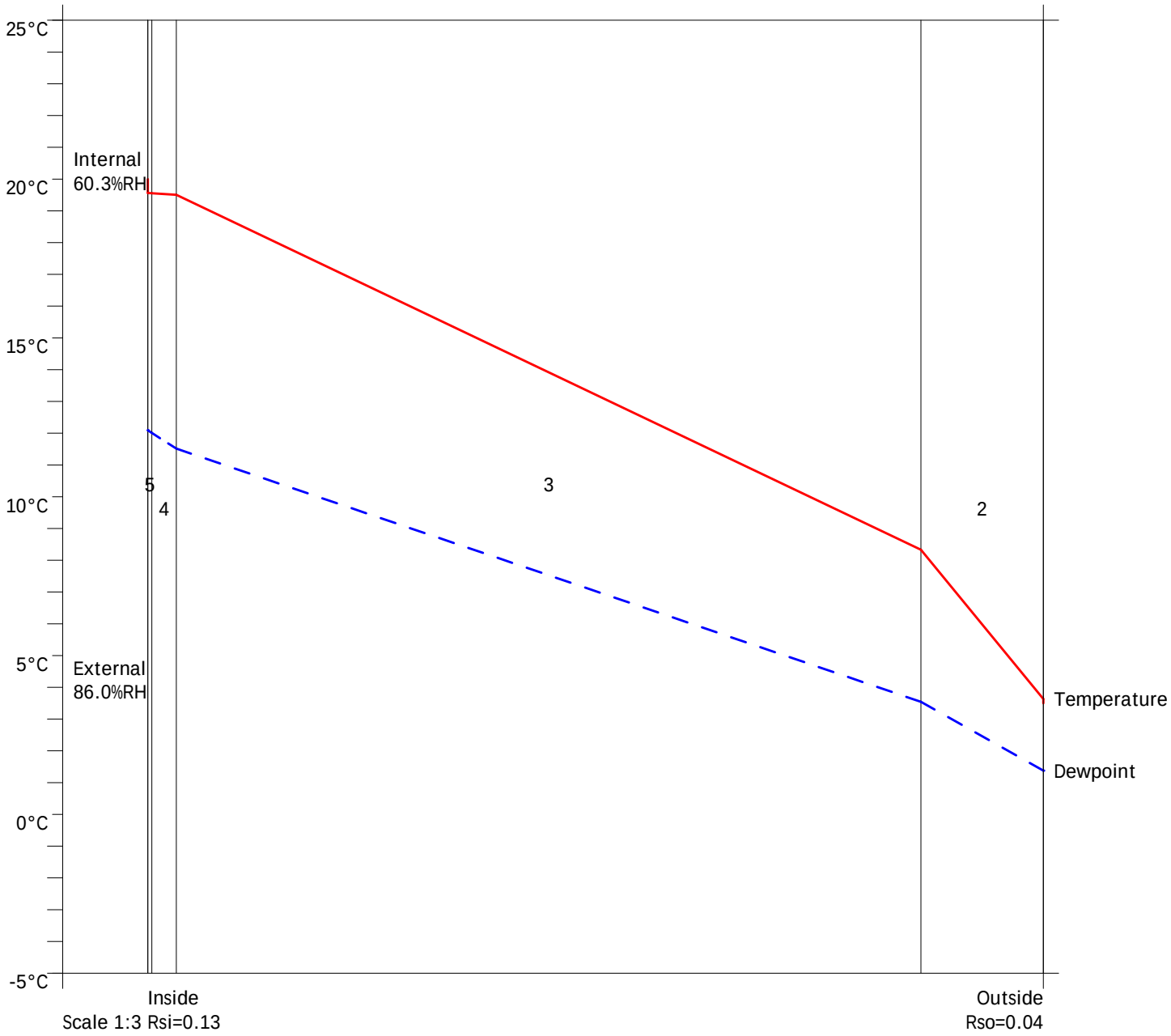
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	3.6	1.4	0.67	0.79			No
2 Pavatex Pavatherm Plus 60mm	8.3	3.5	0.79	1.10			No
3 ThermoPlan ZT / ZV 11 365 Block	19.5	11.5	1.36	2.27			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.6	12.0	1.40	2.27			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.6	12.1	1.41	2.27			No
6 Inside surface resistance							

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



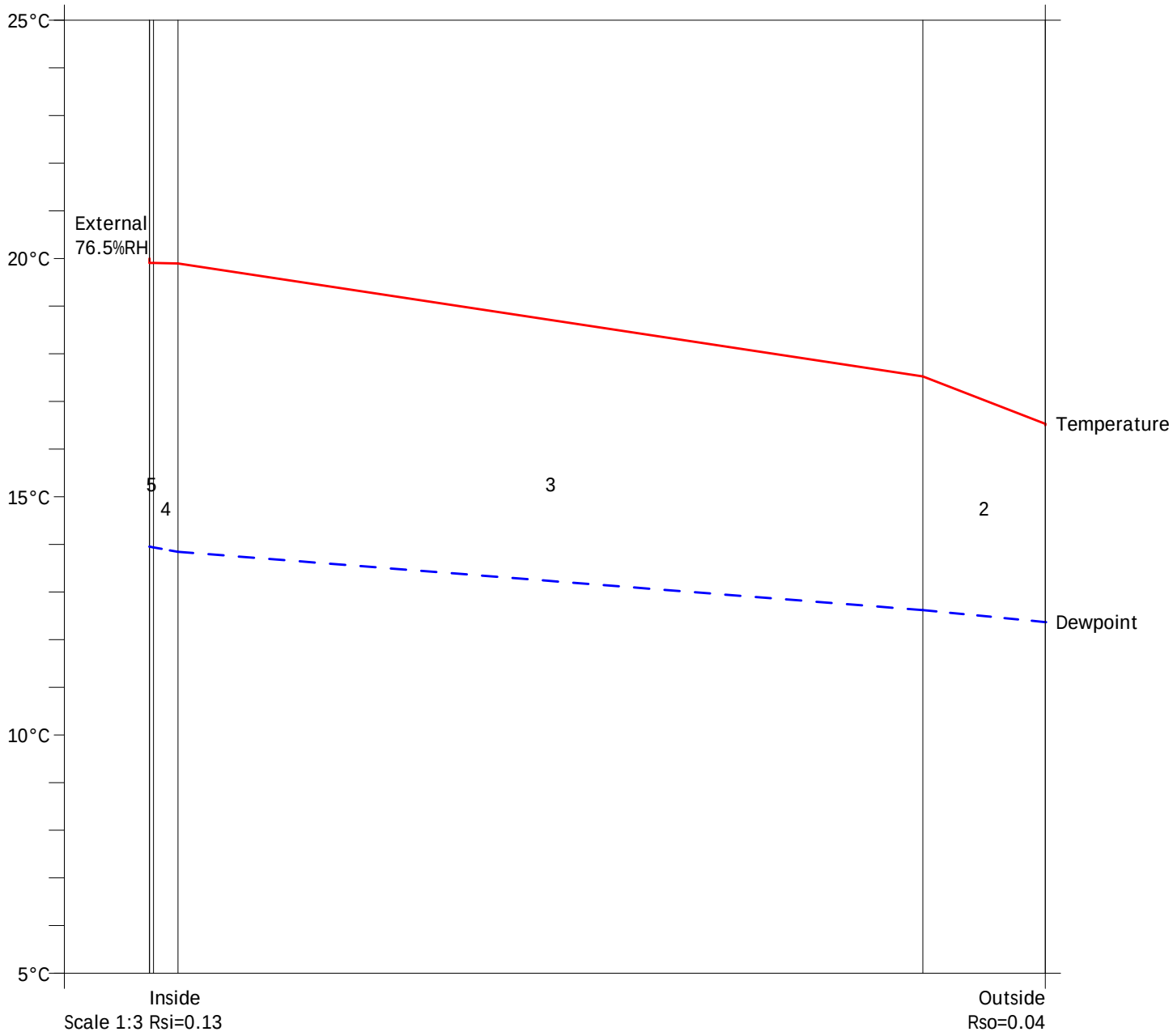
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	16.5	12.4	1.44	1.88			No
2 Pavatex Pavatherm Plus 60mm	17.5	12.6	1.46	2.00			No
3 ThermoPlan ZT / ZV 11 365 Block	19.9	13.8	1.58	2.32			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.9	1.59	2.32			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	14.0	1.59	2.32			No
6 Inside surface resistance							

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 - 365 80 CLAD
Internal surface emissivity : High External surface emissivity : High

Construction	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m²K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Pavatherm Plus 80mm	80.0	0.043	1.860	25.00	2.00
ThermoPlan ZT / ZV 11 365 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 5.365 / 5.365 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 occuring 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

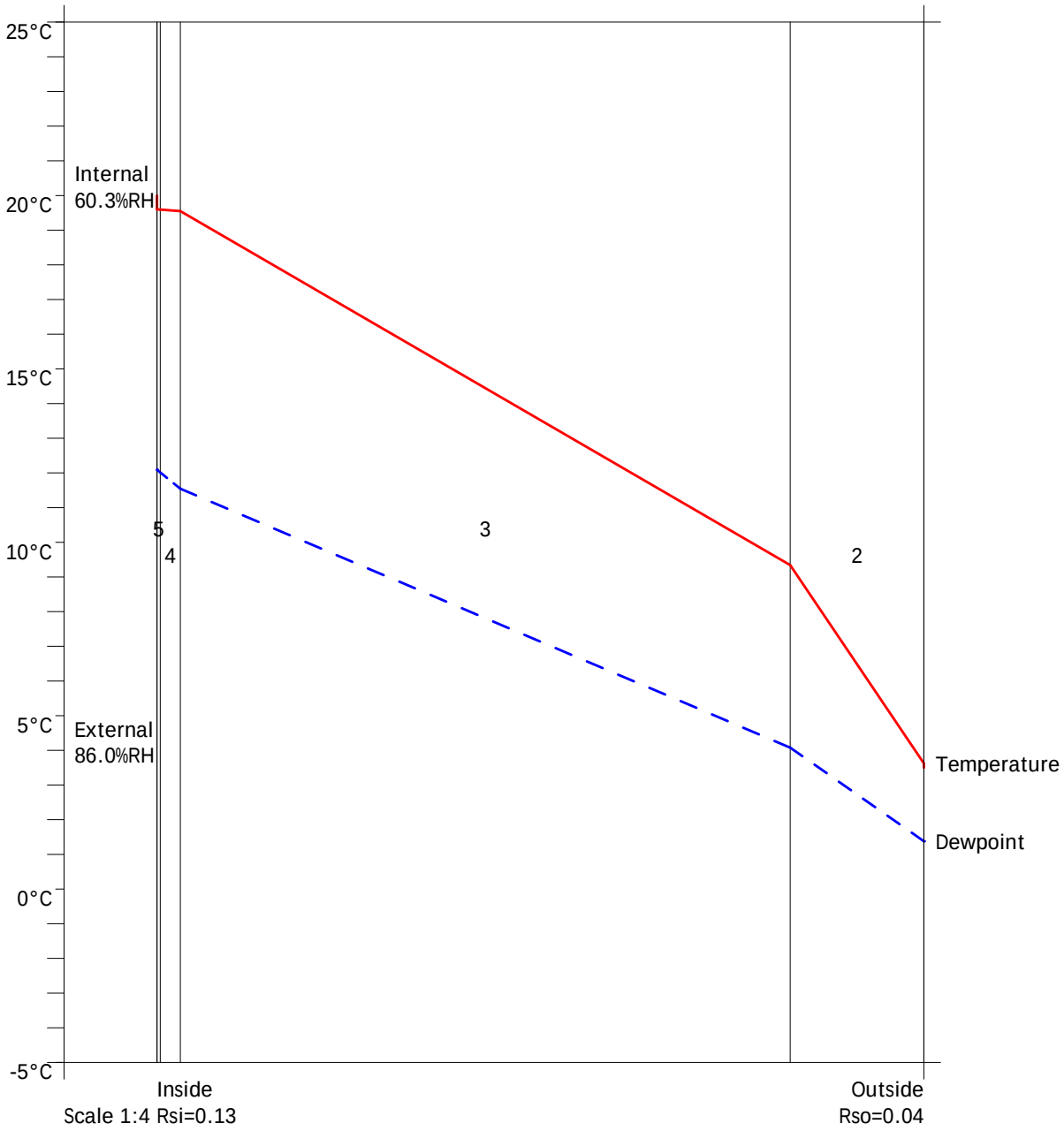
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	3.6	1.4	0.67	0.79			No
2 Pavatex Pavatherm Plus 80mm	9.3	4.1	0.82	1.17			No
3 ThermoPlan ZT / ZV 11 365 Block	19.5	11.5	1.36	2.27			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.6	12.0	1.40	2.28			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.6	12.1	1.41	2.28			No
6 Inside surface resistance							

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



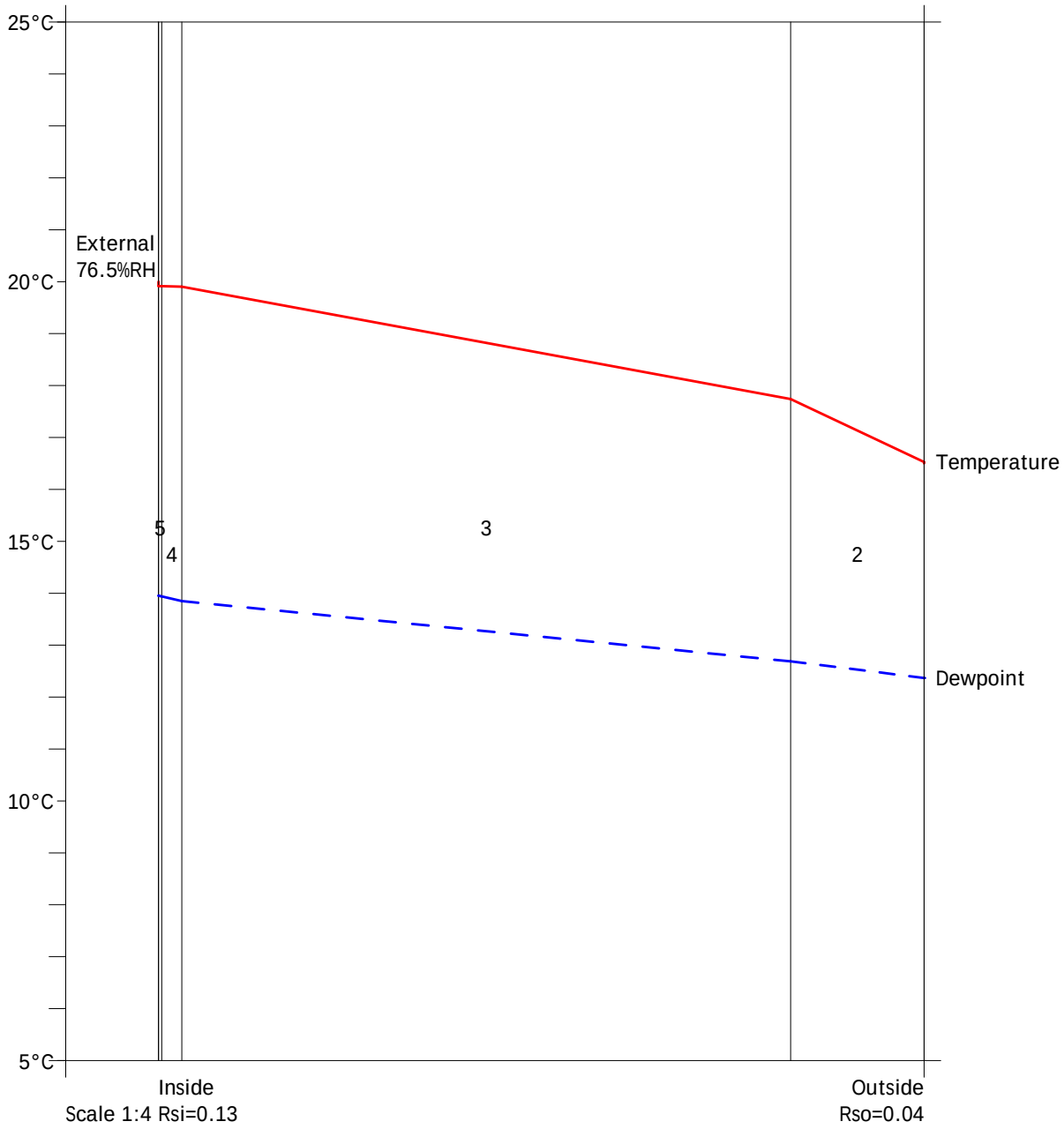
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	16.5	12.4	1.44	1.88			No
2 Pavatex Pavatherm Plus 80mm	17.7	12.7	1.47	2.03			No
3 ThermoPlan ZT / ZV 11 365 Block	19.9	13.8	1.58	2.32			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.9	1.59	2.32			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	14.0	1.59	2.32			No
6 Inside surface resistance							

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 - 365 100 CLAD
Internal surface emissivity : High External surface emissivity : High

Construction	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m²K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Pavatherm Plus 100mm	100.0	0.043	2.326	25.00	2.50
ThermoPlan ZT / ZV 11 365 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 5.831 / 5.831 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 occuring 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

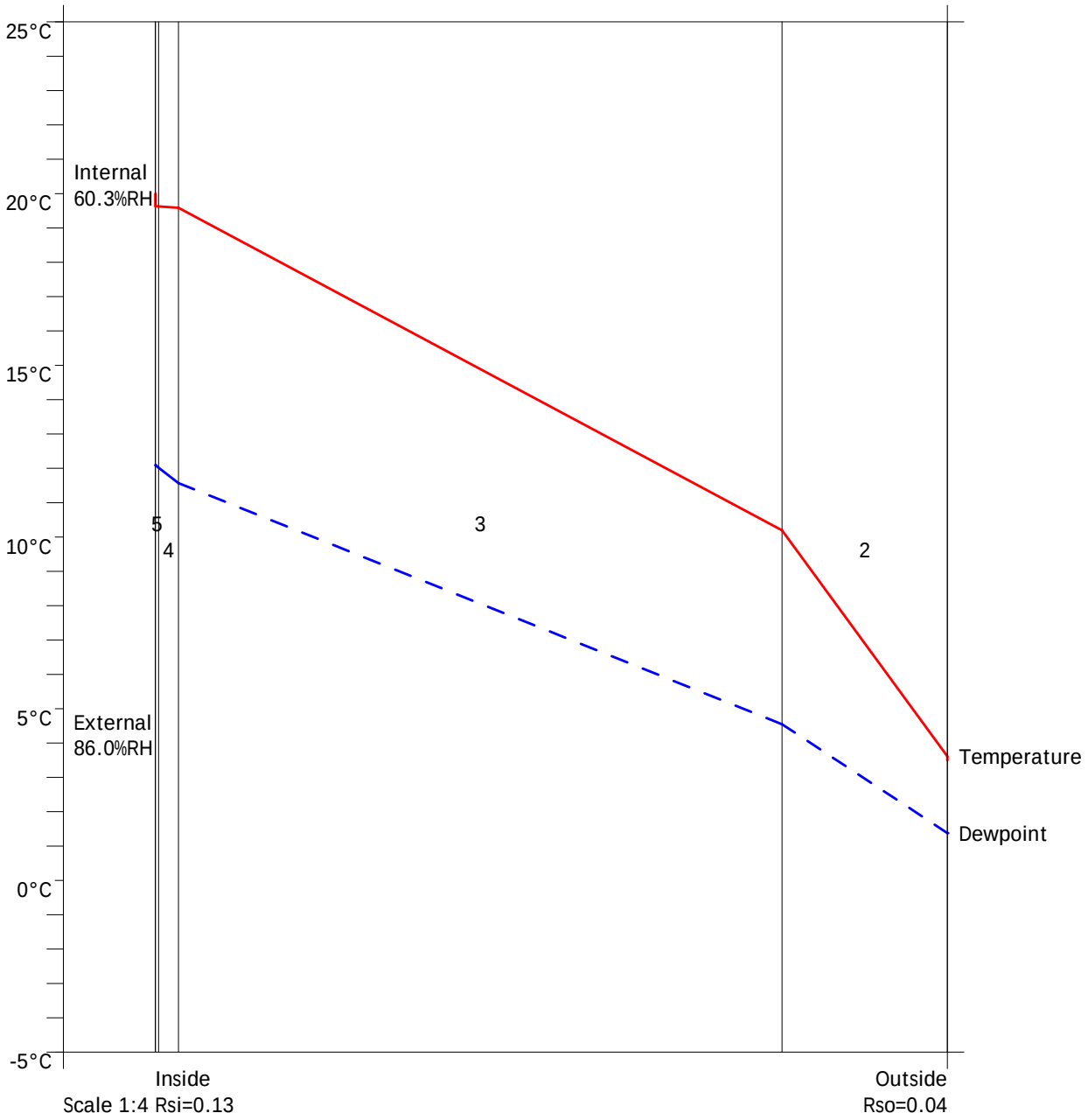
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	3.6	1.4	0.67	0.79			No
2 Pavatex Pavatherm Plus 100mm	10.2	4.5	0.84	1.24			No
3 ThermoPlan ZT / ZV 11 365 Block	19.6	11.6	1.36	2.28			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.6	12.0	1.40	2.28			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.6	12.1	1.41	2.28			No
6 Inside surface resistance							

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



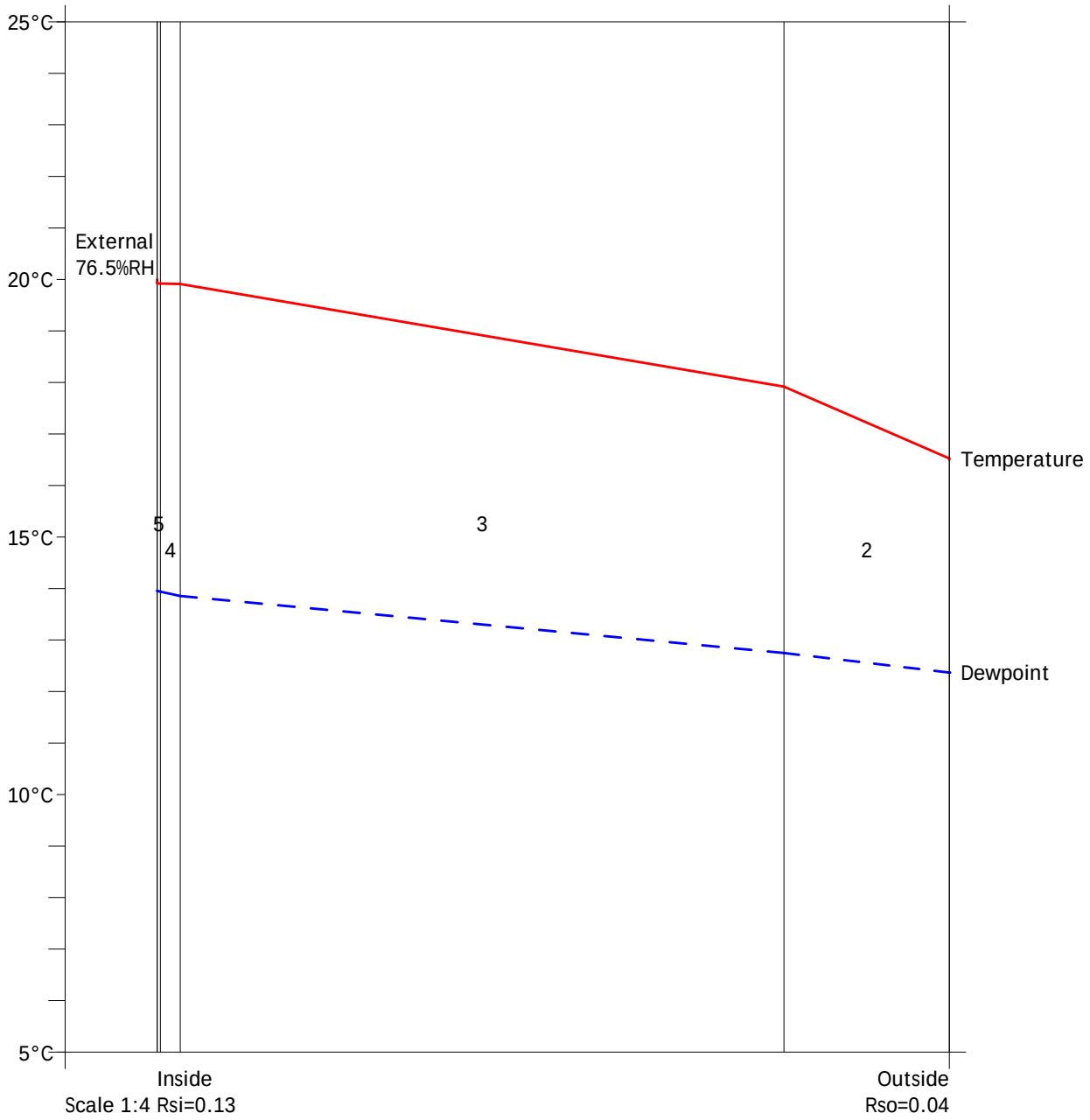
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	16.5	12.4	1.44	1.88			No
2 Pavatex Pavatherm Plus 100mm	17.9	12.7	1.47	2.05			No
3 ThermoPlan ZT / ZV 11 365 Block	19.9	13.9	1.58	2.32			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.9	1.59	2.33			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	14.0	1.59	2.33			No
6 Inside surface resistance							

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 - 425 60 CLAD
Internal surface emissivity : High External surface emissivity : High

Construction	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m²K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Pavatherm Plus 60mm	60.0	0.043	1.395	25.00	1.50
ThermoPlan ZT / ZV 11 425 Block	425.0	0.110	3.864	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 - 0.18W/m²K
U-value, Combined Method : 0.18 W/m²K (upper/lower limit 5.446 / 5.446 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 occuring 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

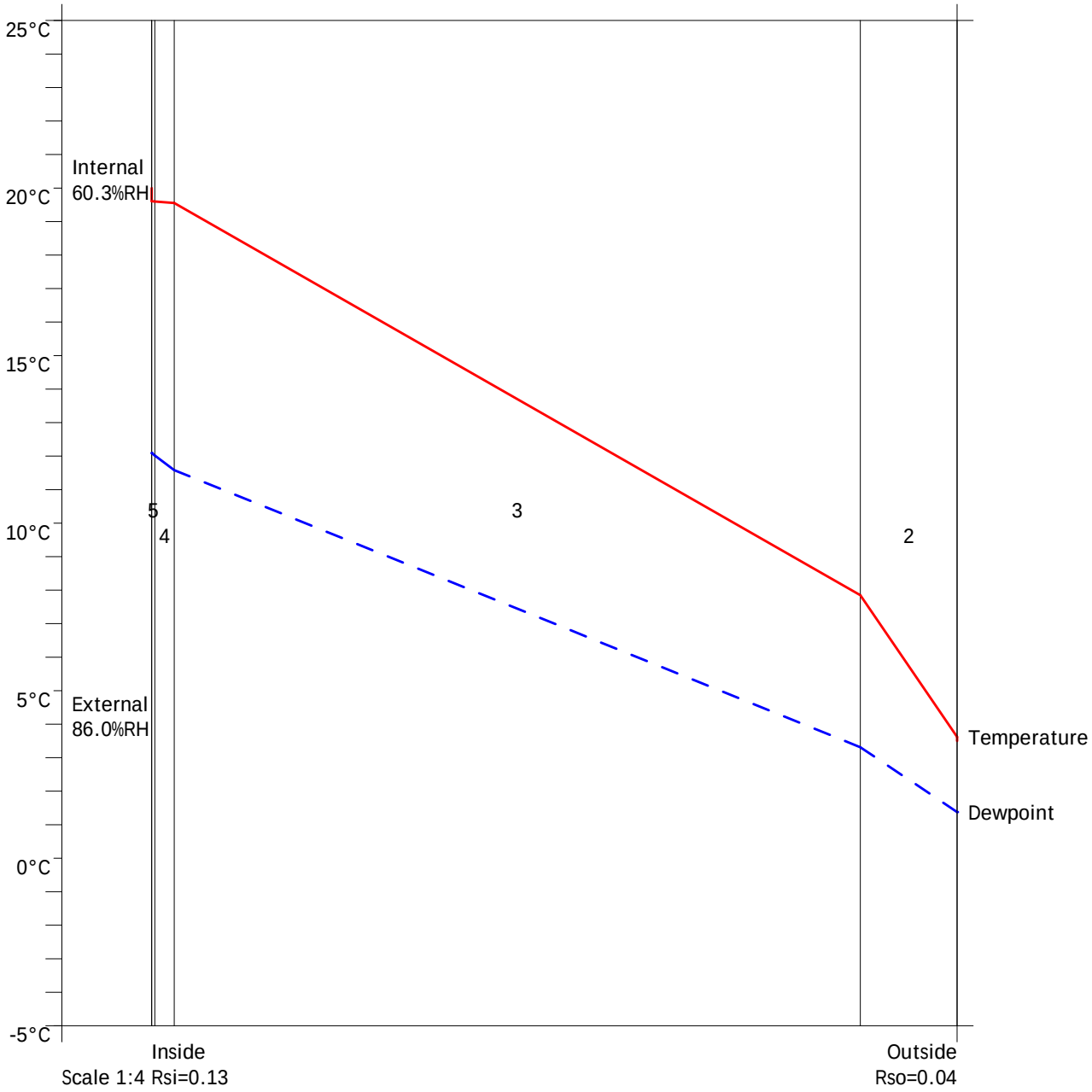
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	3.6	1.4	0.67	0.79			No
2 Pavatex Pavatherm Plus 60mm	7.8	3.3	0.77	1.06			No
3 ThermoPlan ZT / ZV 11 425 Block	19.6	11.6	1.36	2.27			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.6	12.0	1.40	2.28			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.6	12.1	1.41	2.28			No
6 Inside surface resistance							

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



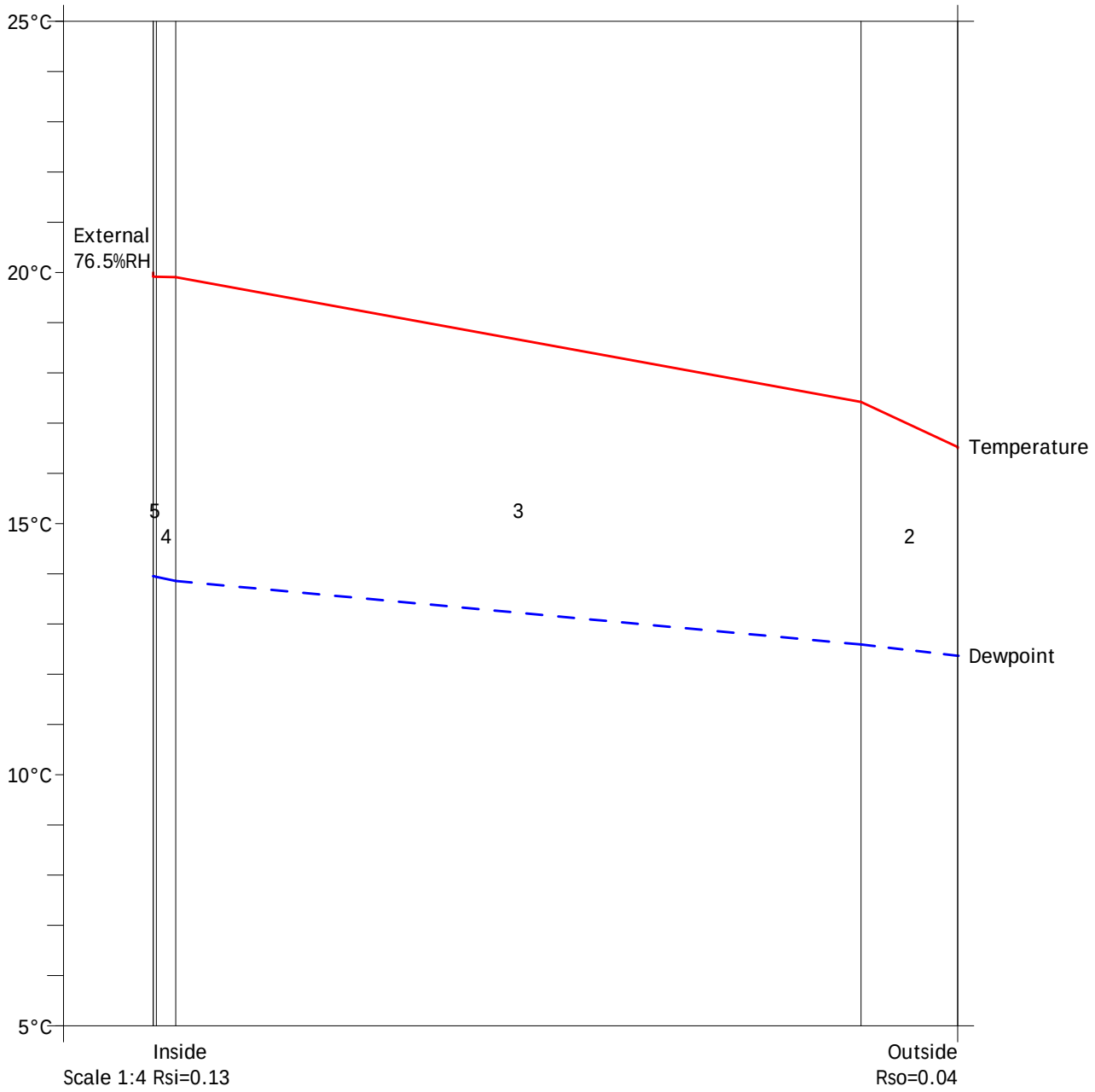
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	16.5	12.4	1.44	1.88			No
2 Pavatex Pavatherm Plus 60mm	17.4	12.6	1.46	1.99			No
3 ThermoPlan ZT / ZV 11 425 Block	19.9	13.9	1.58	2.32			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.9	1.59	2.32			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	14.0	1.59	2.32			No
6 Inside surface resistance							

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 - 425 80 CLAD
Internal surface emissivity : High External surface emissivity : High

Construction	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m²K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Pavatherm Plus 80mm	80.0	0.043	1.860	25.00	2.00
ThermoPlan ZT / ZV 11 425 Block	425.0	0.110	3.864	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 5.911 / 5.911 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 occuring 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

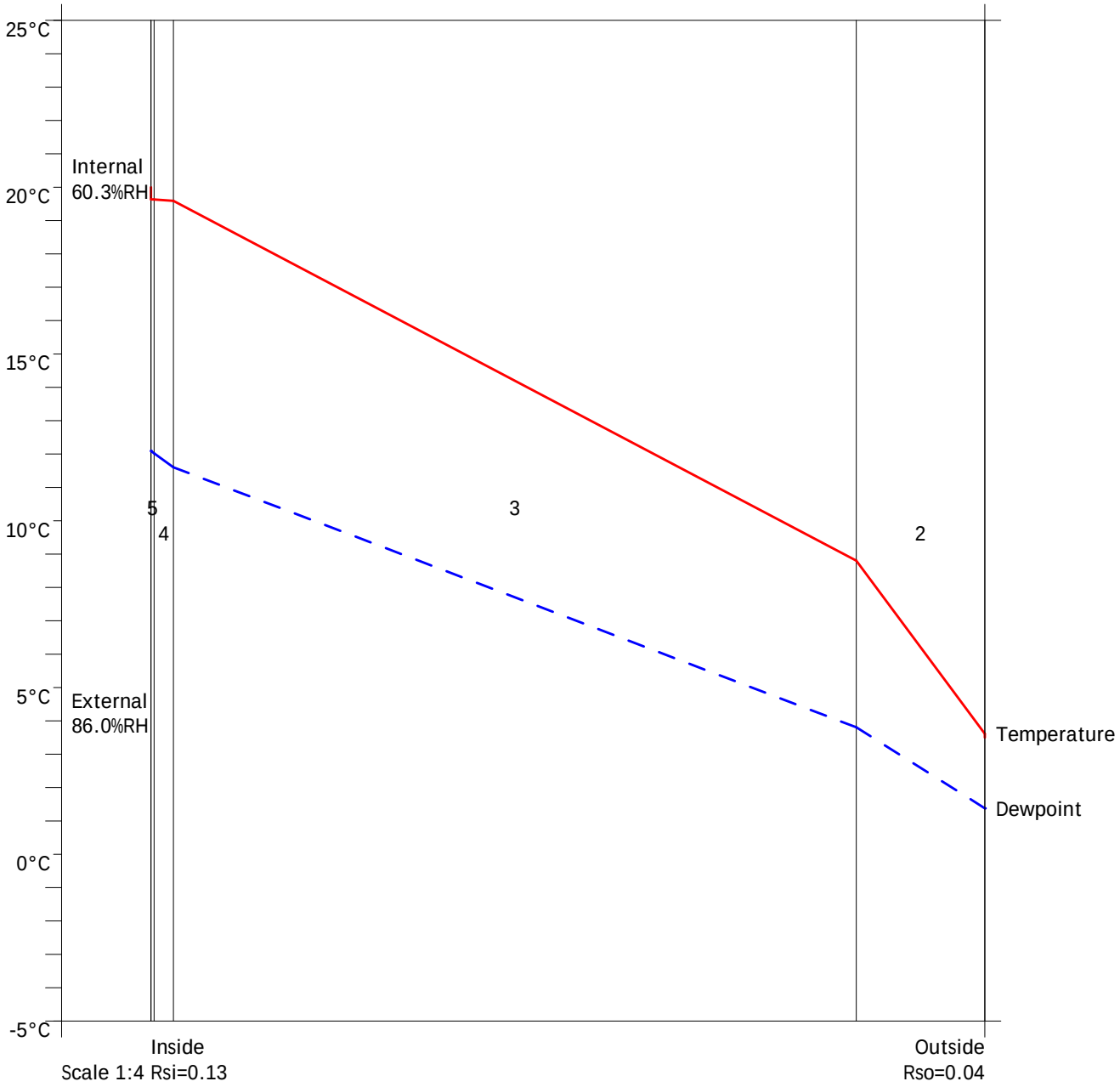
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	3.6	1.4	0.67	0.79			No
2 Pavatex Pavatherm Plus 80mm	8.8	3.8	0.80	1.13			No
3 ThermoPlan ZT / ZV 11 425 Block	19.6	11.6	1.36	2.28			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.6	12.0	1.40	2.28			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.6	12.1	1.41	2.28			No
6 Inside surface resistance							

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



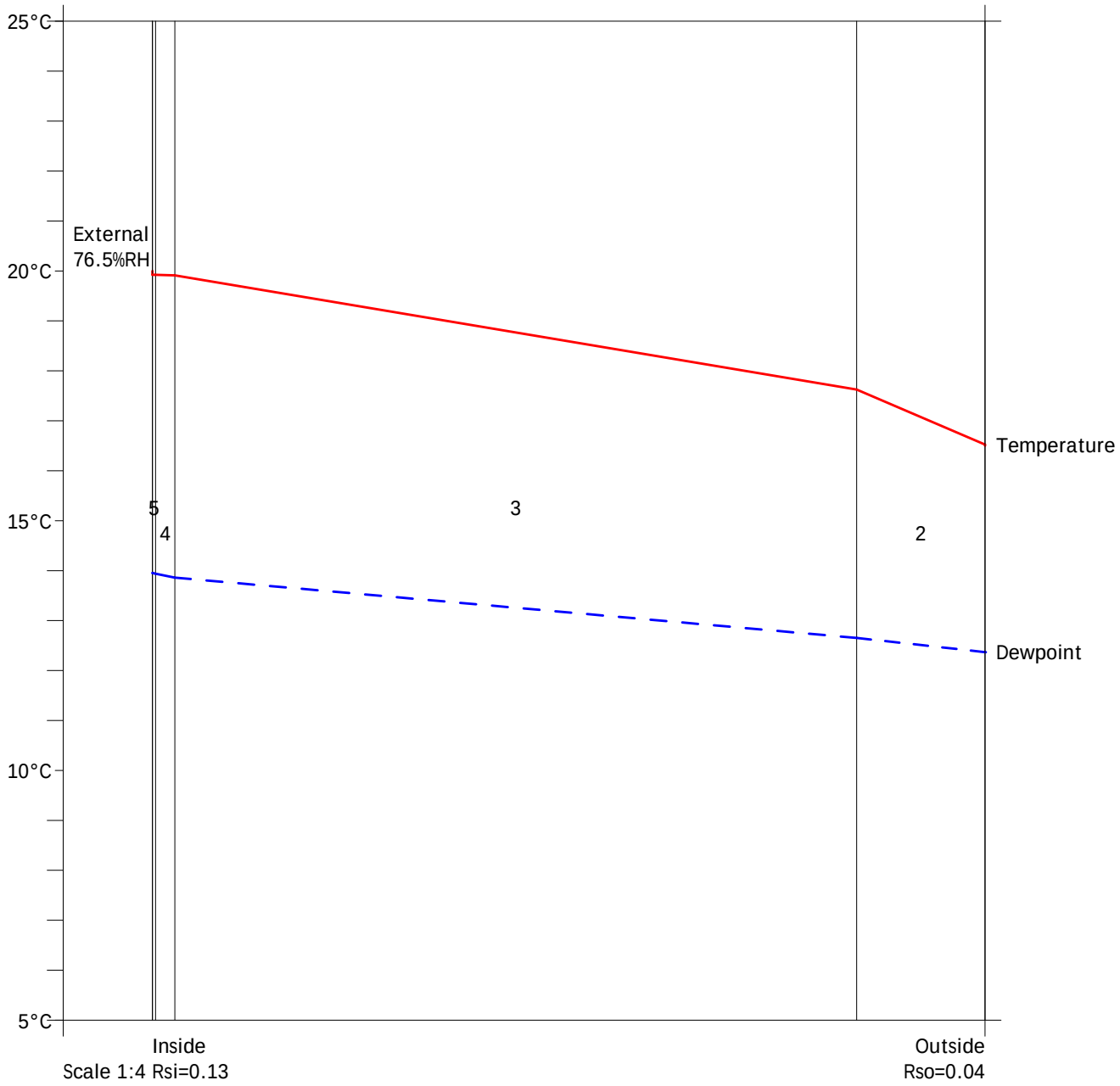
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	16.5	12.4	1.44	1.88			No
2 Pavatex Pavatherm Plus 80mm	17.6	12.7	1.46	2.01			No
3 ThermoPlan ZT / ZV 11 425 Block	19.9	13.9	1.58	2.32			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.9	1.59	2.33			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	14.0	1.59	2.33			No
6 Inside surface resistance							

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



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Construction type
Element : Wall - ZT/ ZV 11 - 425 100 CLAD
Internal surface emissivity : High External surface emissivity : High

Construction	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m²K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Pavatherm Plus 100mm	100.0	0.043	2.326	25.00	2.50
ThermoPlan ZT / ZV 11 425 Block	425.0	0.110	3.864	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 6.377 / 6.377 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 occuring 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

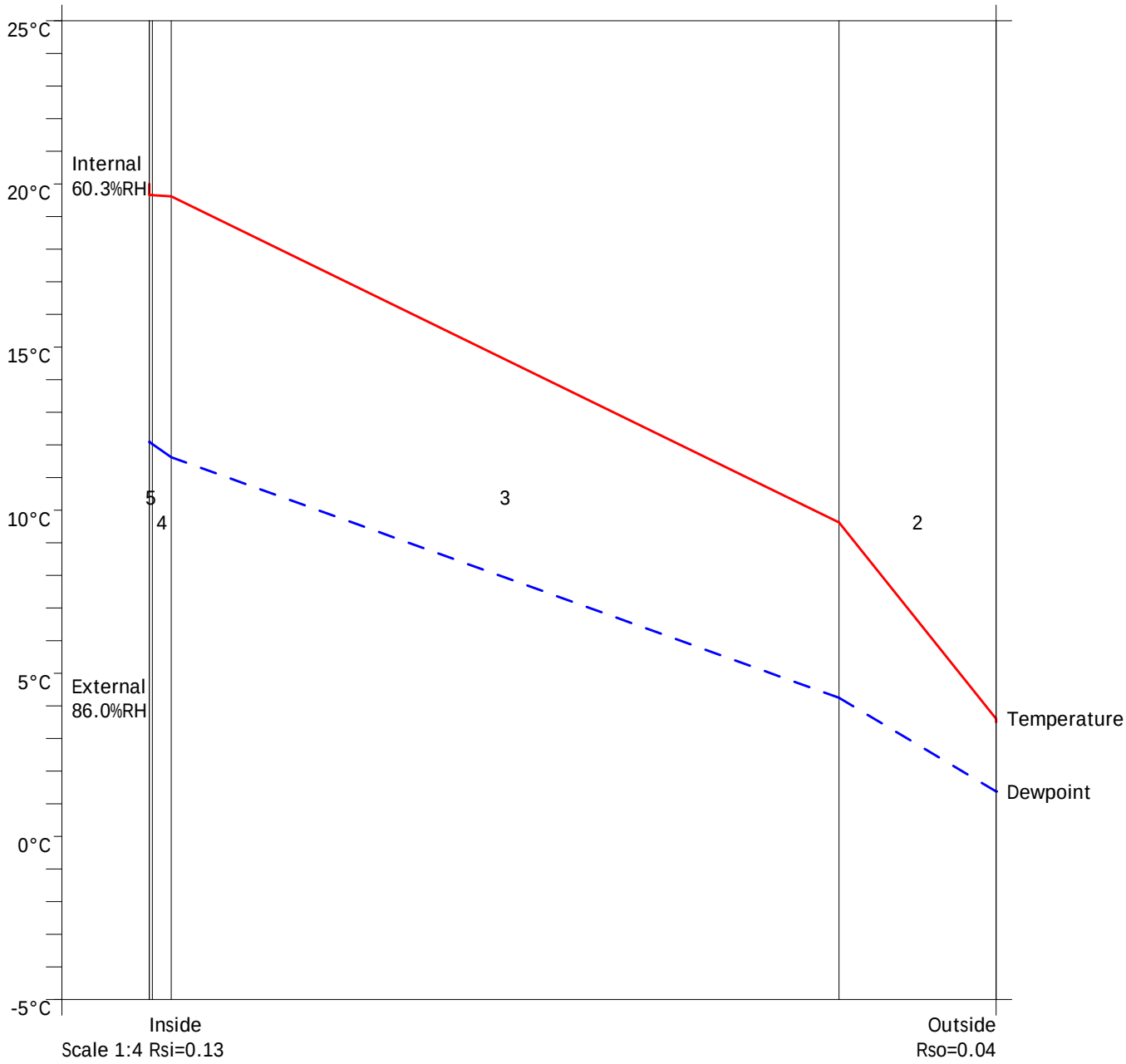
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	3.6	1.4	0.67	0.79			No
2 Pavatex Pavatherm Plus 100mm	9.6	4.2	0.83	1.20			No
3 ThermoPlan ZT / ZV 11 425 Block	19.6	11.6	1.37	2.28			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.7	12.0	1.40	2.29			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.7	12.1	1.41	2.29			No
6 Inside surface resistance							

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



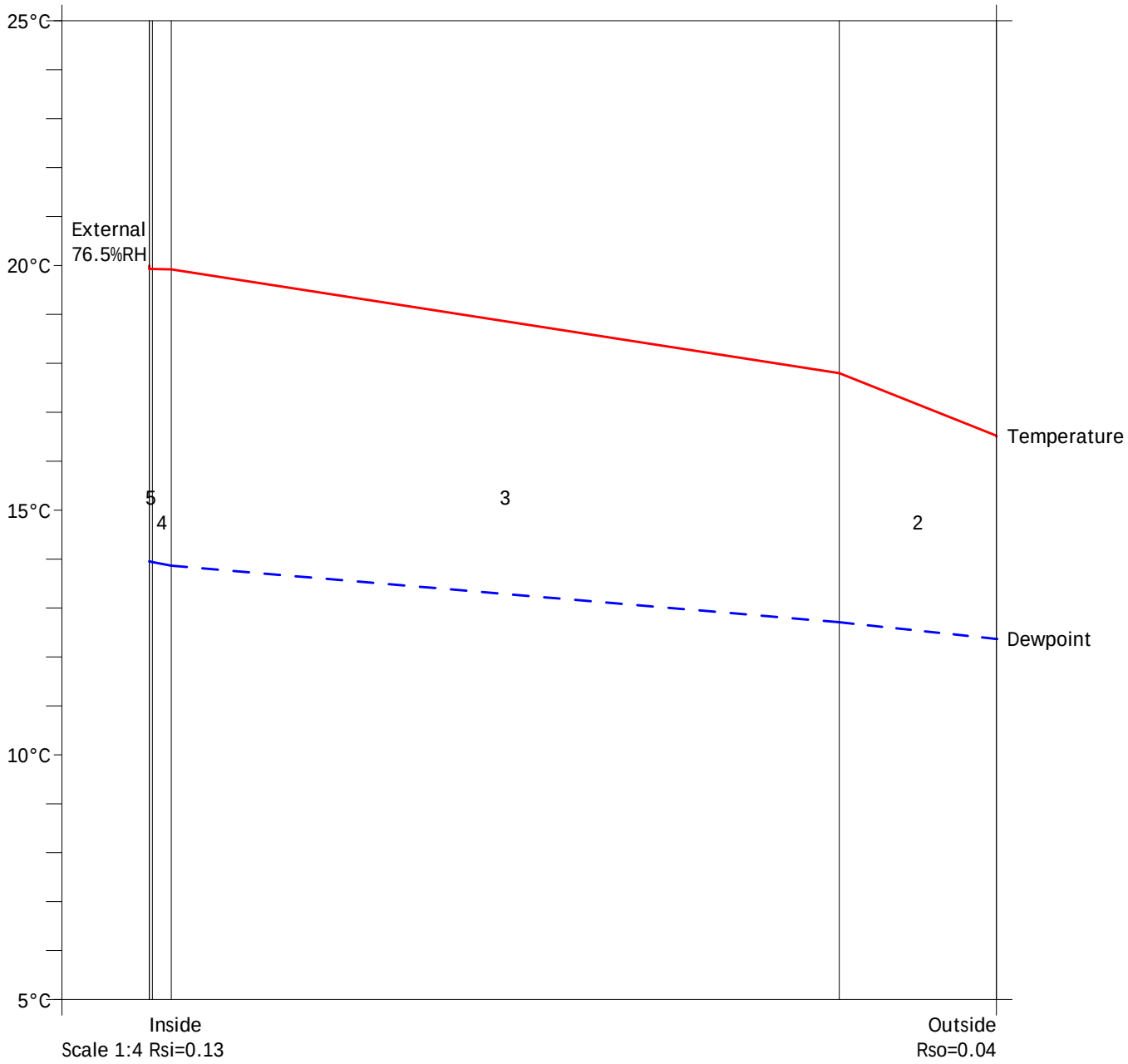
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	16.5	12.4	1.44	1.88			No
2 Pavatex Pavatherm Plus 100mm	17.8	12.7	1.47	2.04			No
3 ThermoPlan ZT / ZV 11 425 Block	19.9	13.9	1.58	2.33			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.9	1.59	2.33			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	14.0	1.59	2.33			No
6 Inside surface resistance							

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 - 490 60 CLAD
Internal surface emissivity : High External surface emissivity : High

Construction	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m²K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Pavatherm Plus 60mm	60.0	0.043	1.395	25.00	1.50
ThermoPlan ZT / ZV 11 490 Block	490.0	0.110	4.455	20.83	10.21
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 6.037 / 6.037 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 occuring 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

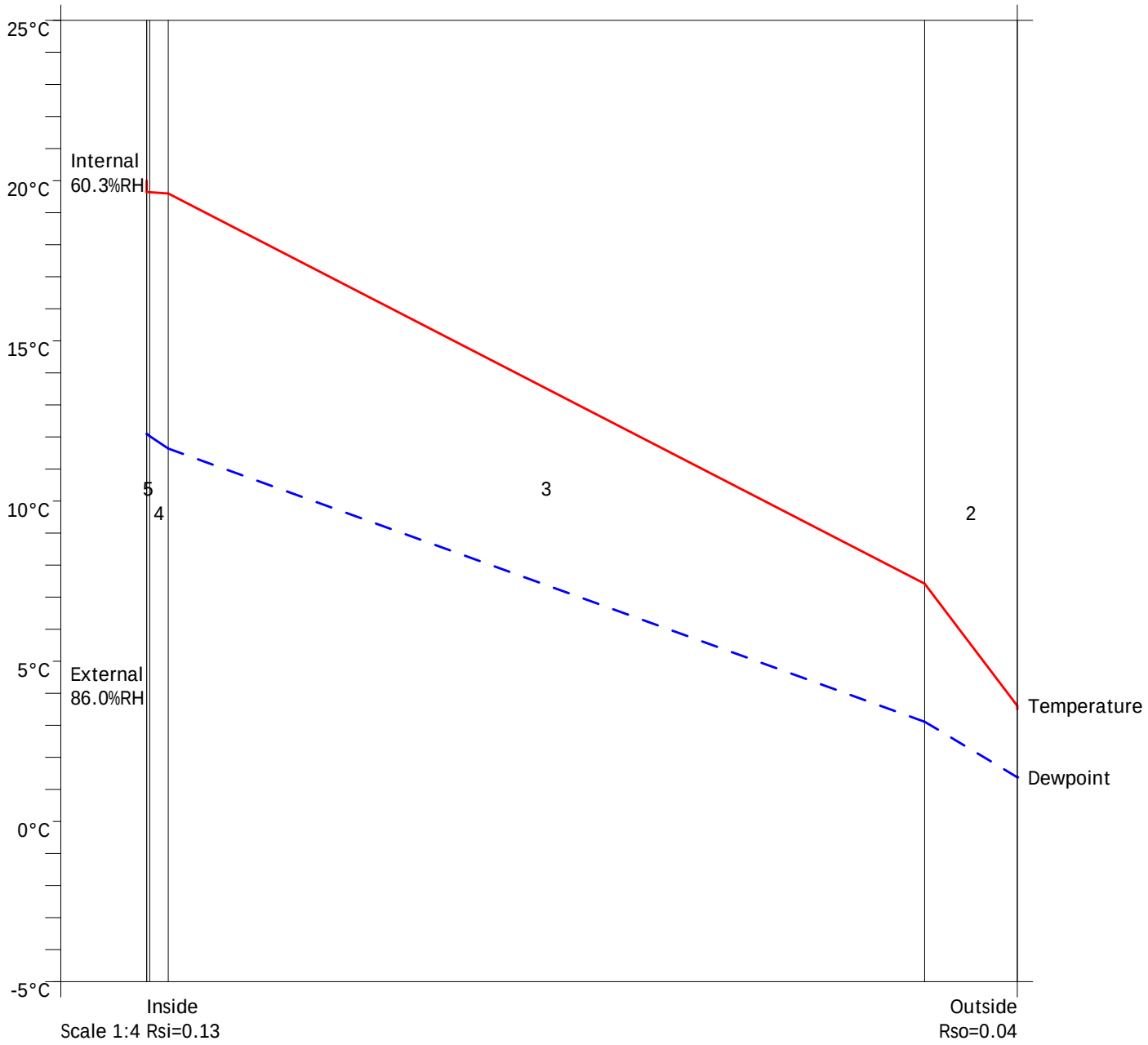
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	3.6	1.4	0.67	0.79			No
2 Pavatex Pavatherm Plus 60mm	7.4	3.1	0.76	1.03			No
3 ThermoPlan ZT / ZV 11 490 Block	19.6	11.6	1.37	2.28			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.6	12.0	1.40	2.29			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.6	12.1	1.41	2.29			No
6 Inside surface resistance							

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



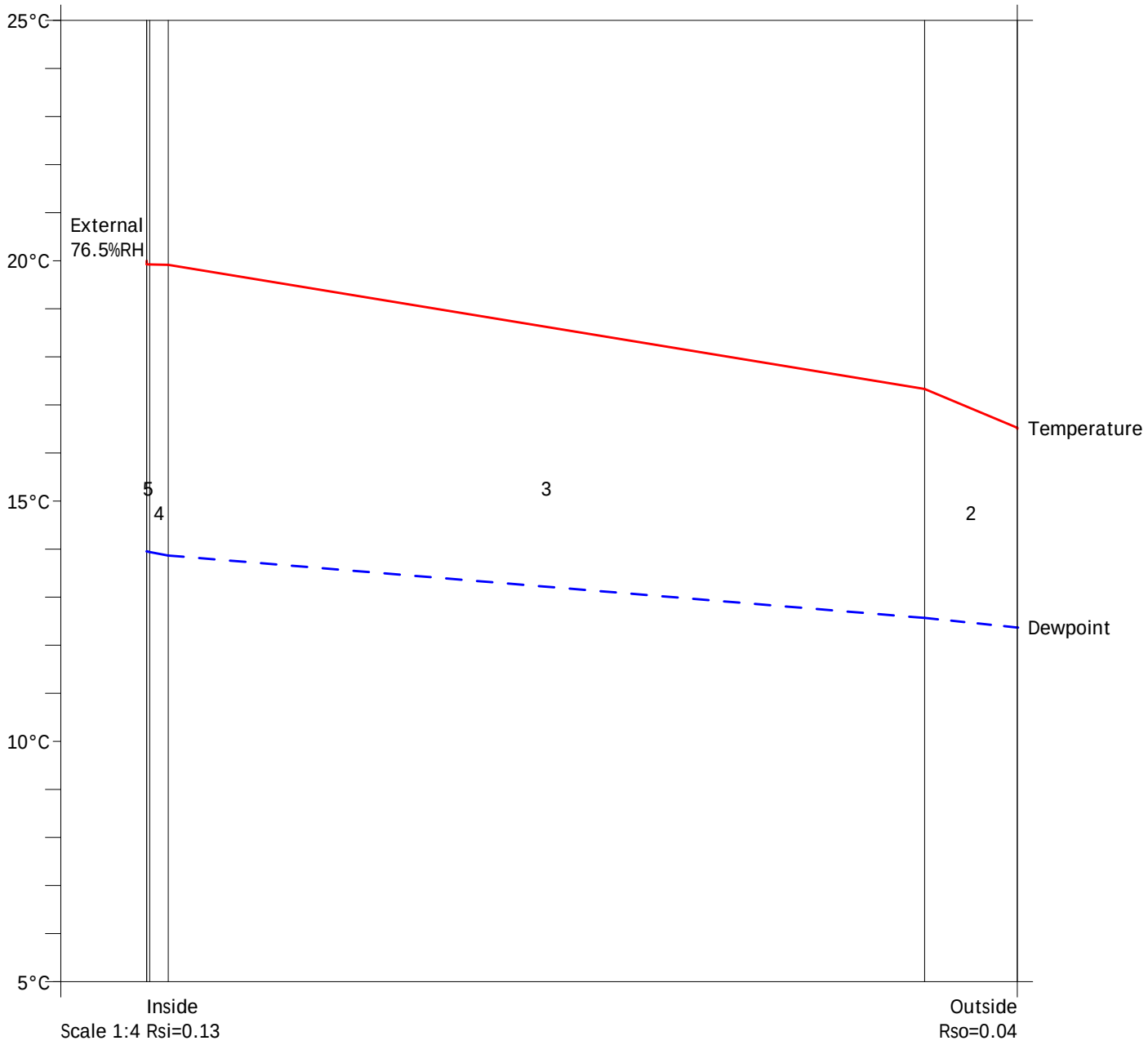
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	16.5	12.4	1.44	1.88			No
2 Pavatex Pavatherm Plus 60mm	17.3	12.6	1.45	1.98			No
3 ThermoPlan ZT / ZV 11 490 Block	19.9	13.9	1.58	2.32			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.9	1.59	2.33			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	14.0	1.59	2.33			No
6 Inside surface resistance							

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 - 490 80 CLAD
Internal surface emissivity : High External surface emissivity : High

Construction	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m²K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Pavatherm Plus 80mm	80.0	0.043	1.860	25.00	2.00
ThermoPlan ZT / ZV 11 490 Block	490.0	0.110	4.455	20.83	10.21
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 6.502 / 6.502 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 occuring 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

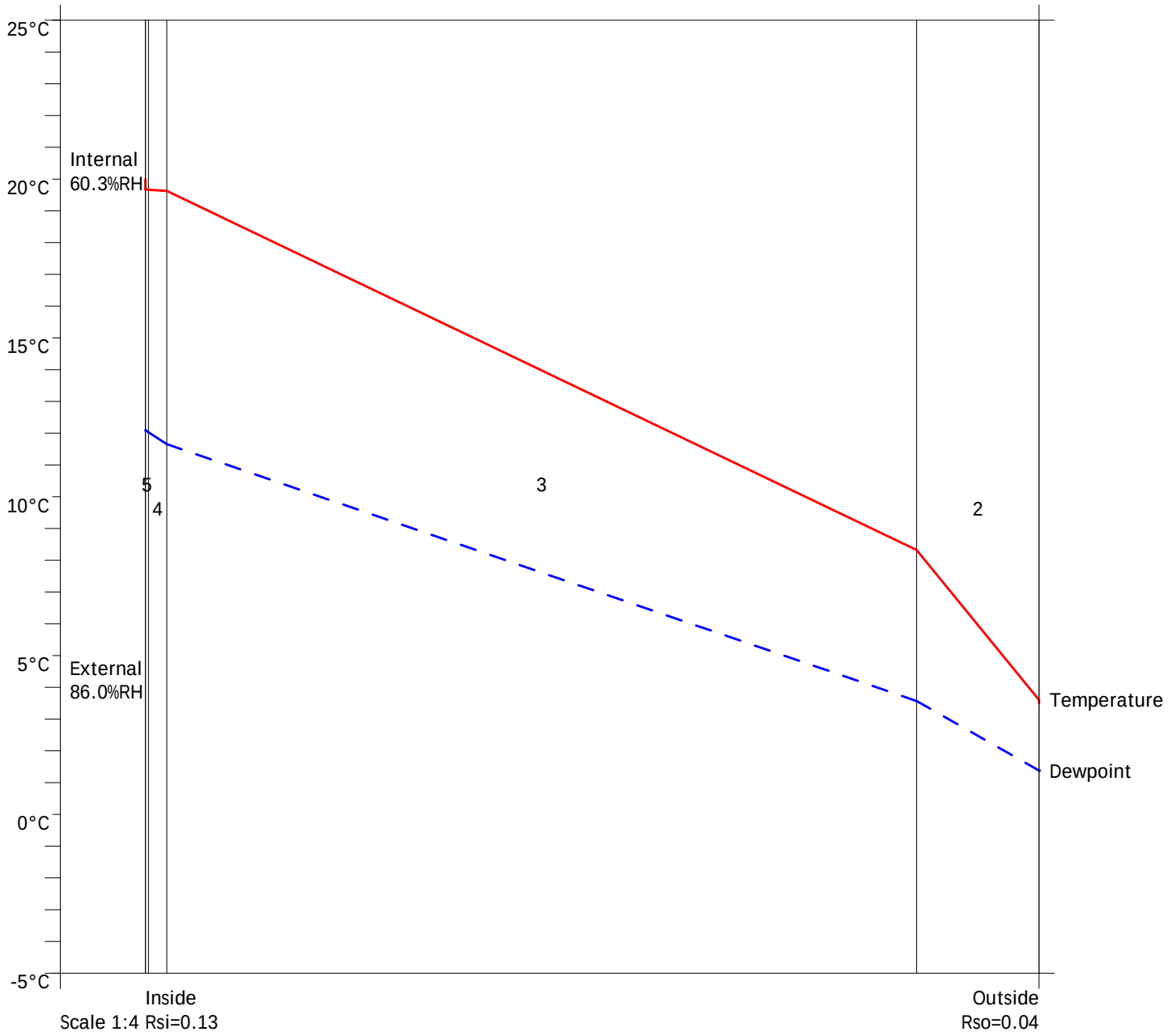
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	3.6	1.4	0.67	0.79			No
2 Pavatex Pavatherm Plus 80mm	8.3	3.6	0.79	1.10			No
3 ThermoPlan ZT / ZV 11 490 Block	19.6	11.7	1.37	2.28			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.7	12.0	1.40	2.29			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.7	12.1	1.41	2.29			No
6 Inside surface resistance							

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



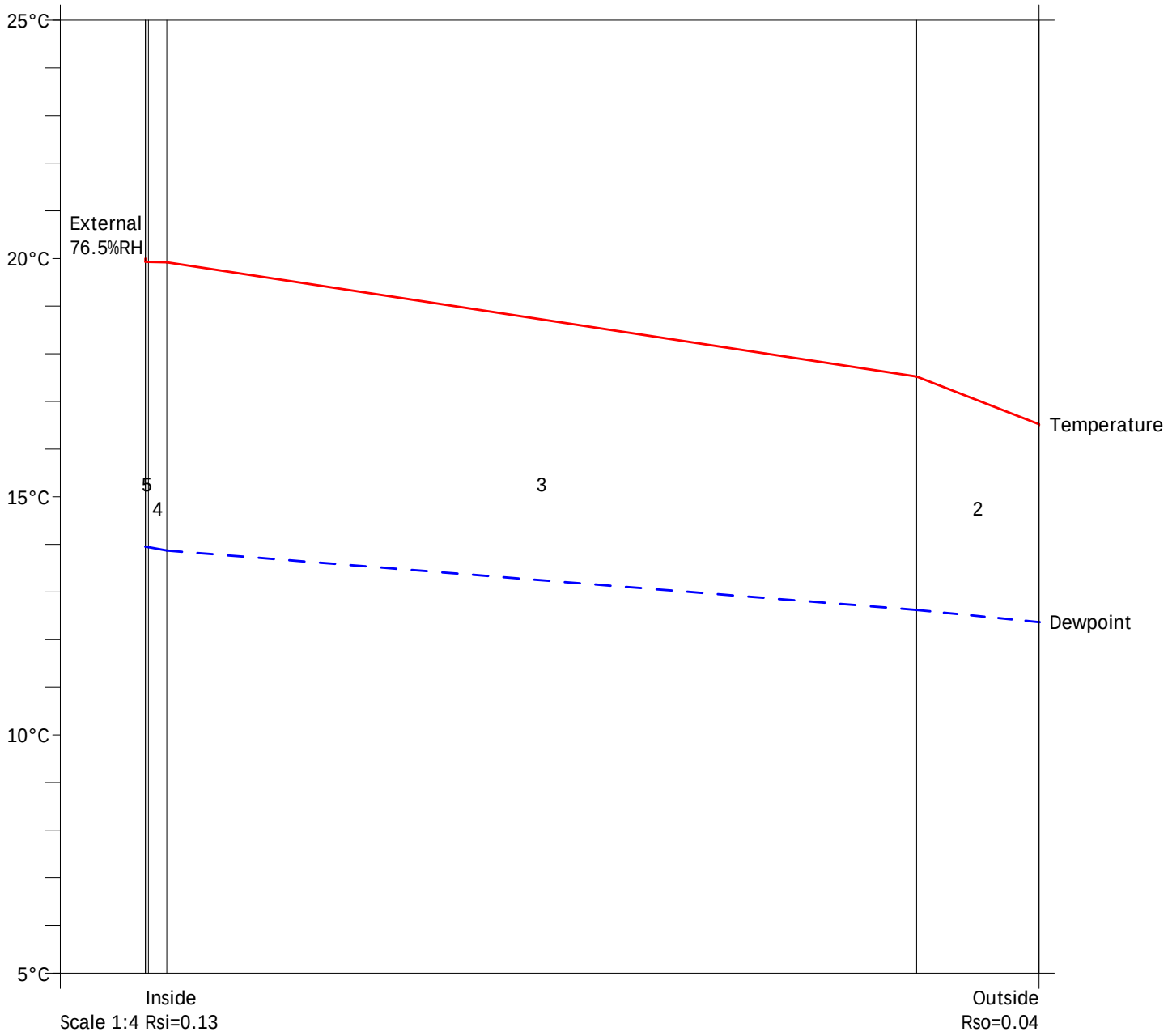
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	16.5	12.4	1.44	1.88			No
2 Pavatex Pavatherm Plus 80mm	17.5	12.6	1.46	2.00			No
3 ThermoPlan ZT / ZV 11 490 Block	19.9	13.9	1.58	2.33			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.9	1.59	2.33			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	14.0	1.59	2.33			No
6 Inside surface resistance							

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 - 490 100 CLAD
Internal surface emissivity : High External surface emissivity : High

Construction	Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m²K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)
Outside surface resistance	-	-	0.040	-	-
Pavatex Pavatherm Plus 100mm	100.0	0.043	2.326	25.00	2.50
ThermoPlan ZT / ZV 11 490 Block	490.0	0.110	4.455	20.83	10.21
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 - 0.14W/m²K
U-value, Combined Method : 0.14 W/m²K (upper/lower limit 6.968 / 6.968 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 occuring 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

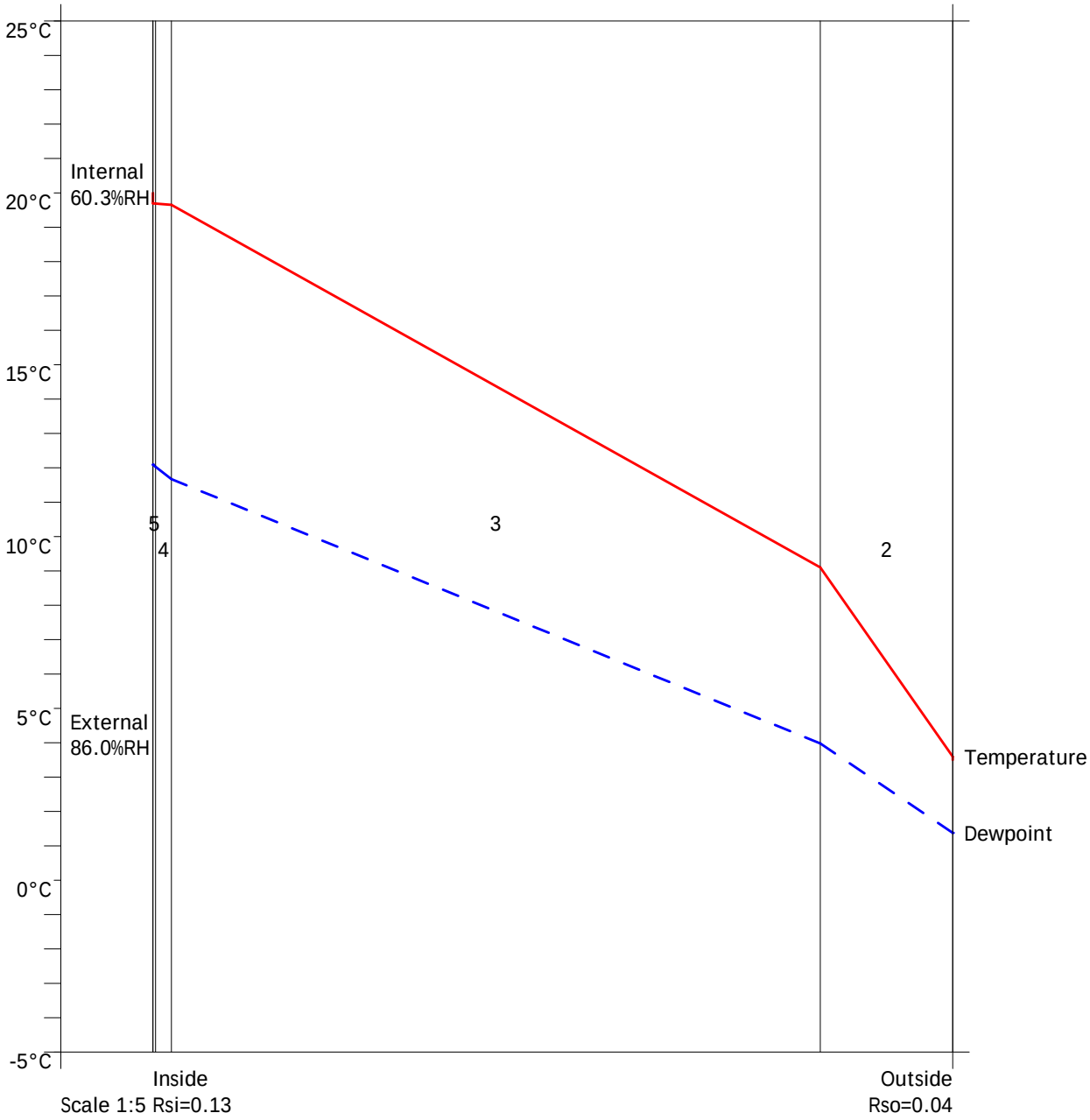
Condensation Risk Analysis (no account taken of thermal bridges)

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	3.6	1.4	0.67	0.79			No
2 Pavatex Pavatherm Plus 100mm	9.1	4.0	0.81	1.16			No
3 ThermoPlan ZT / ZV 11 490 Block	19.7	11.7	1.37	2.29			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.7	12.0	1.40	2.29			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.7	12.1	1.41	2.29			No
6 Inside surface resistance							

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. ºC	Dewpoint Temp. ºC	Vapour Pressure (kPa)	Saturated V.P. (kPa)	Worst Cond. (g/m²)	Peak Buildup (g/m²)	Conden-sation
1 Outside surface resistance	16.5	12.4	1.44	1.88			No
2 Pavatex Pavatherm Plus 100mm	17.7	12.7	1.46	2.02			No
3 ThermoPlan ZT / ZV 11 490 Block	19.9	13.9	1.58	2.33			No
4 BaumitBayosan K38 (RK38) Pure Lime Plaster	19.9	13.9	1.59	2.33			No
5 BaumitBayosan K30 (RK30) Pure Lime Skim Coat	19.9	14.0	1.59	2.33			No
6 Inside surface resistance							

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