ILLUSTRATIVE FIVE-NODE CASE 01 / 09

Which room cooled fastest?

SCOPE OF UNATTENDED MEASUREMENTS

Room air and one outdoor reference. No EPC, BER, DPE, DEAP, RdSAP or HEM assessment.
No ISO 9869 heat-flux test, blower-door test or RICS/SCSI survey. No property value or bill forecast.

First illustrative night

N3 Rear 1990s Kitchen Return cooled from 20.4°C at 22:30 to 12.1°C at 06:30 UTC. Its mean signed change was -1.04°C per hour. The shaded outdoor reference averaged 3.6°C and 86% RH over the same eight hours.

Indoor node / room	22:30	06:30	°C/hr	× N1	1/h	Air gap
N3 Rear 1990s Kitchen Return	20.4°	12.1°	-1.04	4.4	0.087	+6.4°
N4 North Box Bedroom	19.3°	14.1°	-0.65	2.7	0.051	+5.1°
N2 Upper Landing (Below Attic)	19.8°	17.9°	-0.24	1.0	0.016	+5.9°
N1 Front Living Room	20.5°	18.6°	-0.24	1.0	0.015	+6.4°

Air gap is the room air temperature minus its calculated dew point, averaged across the night. No surface probe was fitted. Wall temperature, surface crossing times and condensation duration are unavailable.

Continuity and completeness

Reporting window, UTC	02 Nov 12:00 to 09 Nov 12:00, 2026 (end excluded)
Interval schedule	5 minutes per node · 4 indoor + 1 shaded outdoor
Expected / logged	2,016 / 2,016 intervals for each of the 5 nodes
Whole case	10,080 / 10,080 example entries · 100.0%
Missing / delayed	0 missing · 0 delayed in this fictional edition
User row deletions permitted	Zero

The example assumes heating off during the selected overnight windows; the equipment does not sense boiler operation. A real deployment can observe ordinary occupied heating schedules without changing them. No property was monitored for this edition.

Download the complete five-node CSV

The same CSV is attached inside this PDF.

ILLUSTRATIVE FIVE-NODE CASE

Night 1 · simultaneous room temperatures

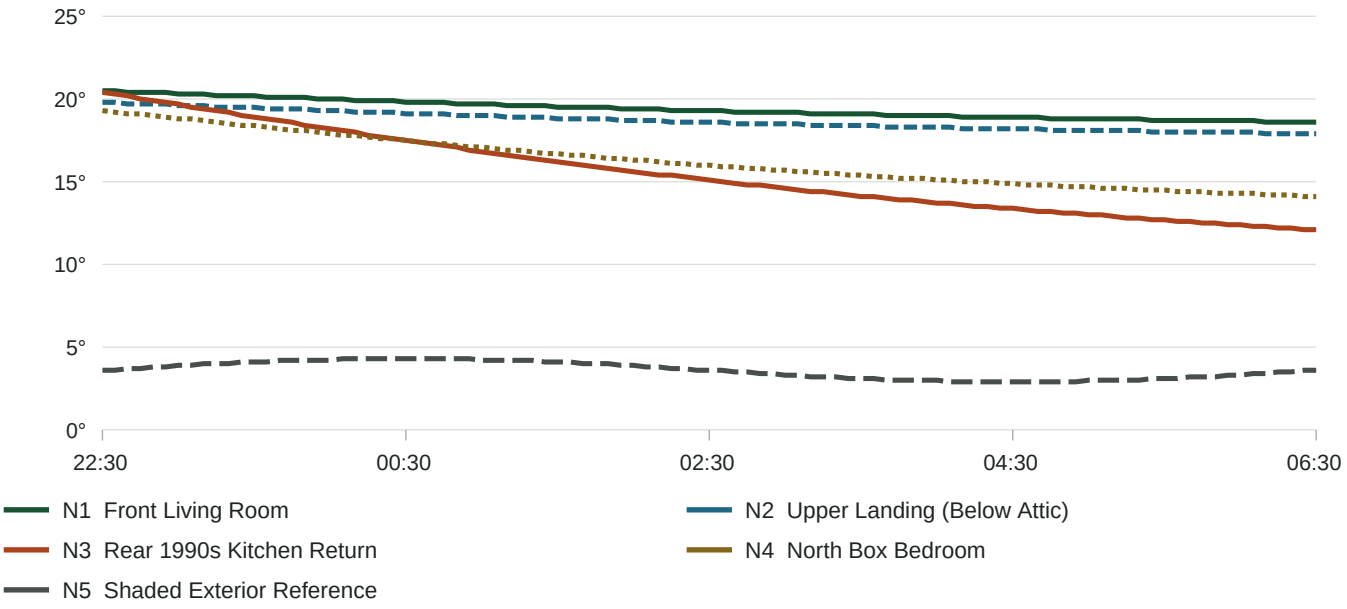
SCOPE OF UNATTENDED MEASUREMENTS

Room air and one outdoor reference. No EPC, BER, DPE, DEAP, RdSAP or HEM assessment.
No ISO 9869 heat-flux test, blower-door test or RICS/SCSI survey. No property value or bill forecast.

2026-11-02 22:30 UTC to 06:30 UTC the following day

Shaded outdoor reference 3.6°C mean air temperature · 86.0% mean relative humidity

Air temperature at five positions (°C)



Indoor node / room	22:30	06:30	°C/hr	× N1	1/h	Air gap
N3 Rear 1990s Kitchen Return	20.4°	12.1°	-1.04	4.4	0.087	+6.4°
N4 North Box Bedroom	19.3°	14.1°	-0.65	2.7	0.051	+5.1°
N2 Upper Landing (Below Attic)	19.8°	17.9°	-0.24	1.0	0.016	+5.9°
N1 Front Living Room	20.5°	18.6°	-0.24	1.0	0.015	+6.4°

The signed rate uses the full eight-hour endpoint change. “× N1” compares its magnitude with the front room. The 1/h index divides cooling-rate magnitude by the mean indoor–outdoor temperature difference. Neither is a heat-flow rate in watts.

The air gap does not establish whether wall surfaces reached dew point. Solar gains, weather, ventilation, thermal mass, doors and household activity influence the observed curves.

ILLUSTRATIVE FIVE-NODE CASE

Night 2 · simultaneous room temperatures

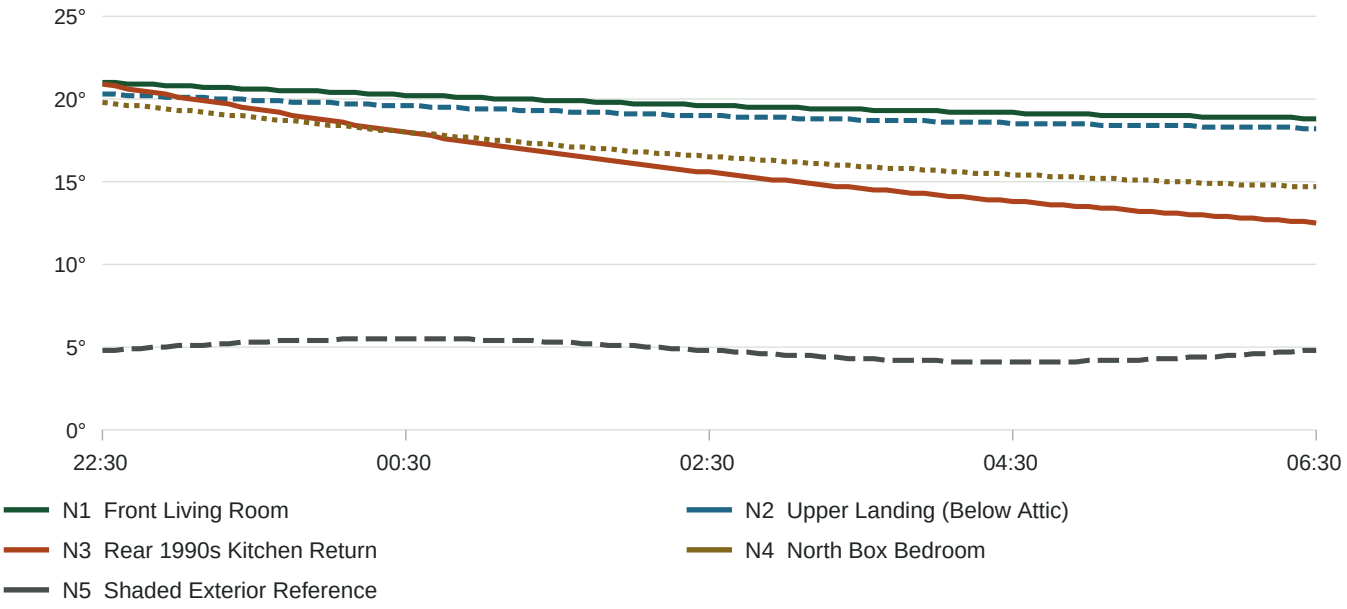
SCOPE OF UNATTENDED MEASUREMENTS

Room air and one outdoor reference. No EPC, BER, DPE, DEAP, RdSAP or HEM assessment.
No ISO 9869 heat-flux test, blower-door test or RICS/SCSI survey. No property value or bill forecast.

2026-11-03 22:30 UTC to 06:30 UTC the following day

Shaded outdoor reference 4.8°C mean air temperature · 84.8% mean relative humidity

Air temperature at five positions (°C)



Indoor node / room	22:30	06:30	°C/hr	× N1	1/h	Air gap
N3 Rear 1990s Kitchen Return	20.9°	12.5°	-1.05	3.8	0.094	+6.4°
N4 North Box Bedroom	19.8°	14.7°	-0.64	2.3	0.053	+5.0°
N1 Front Living Room	21.0°	18.8°	-0.28	1.0	0.018	+6.4°
N2 Upper Landing (Below Attic)	20.3°	18.2°	-0.26	1.0	0.018	+5.9°

The signed rate uses the full eight-hour endpoint change. “× N1” compares its magnitude with the front room. The 1/h index divides cooling-rate magnitude by the mean indoor–outdoor temperature difference. Neither is a heat-flow rate in watts.

The air gap does not establish whether wall surfaces reached dew point. Solar gains, weather, ventilation, thermal mass, doors and household activity influence the observed curves.

ILLUSTRATIVE FIVE-NODE CASE 04 / 09

Night 3 · simultaneous room temperatures

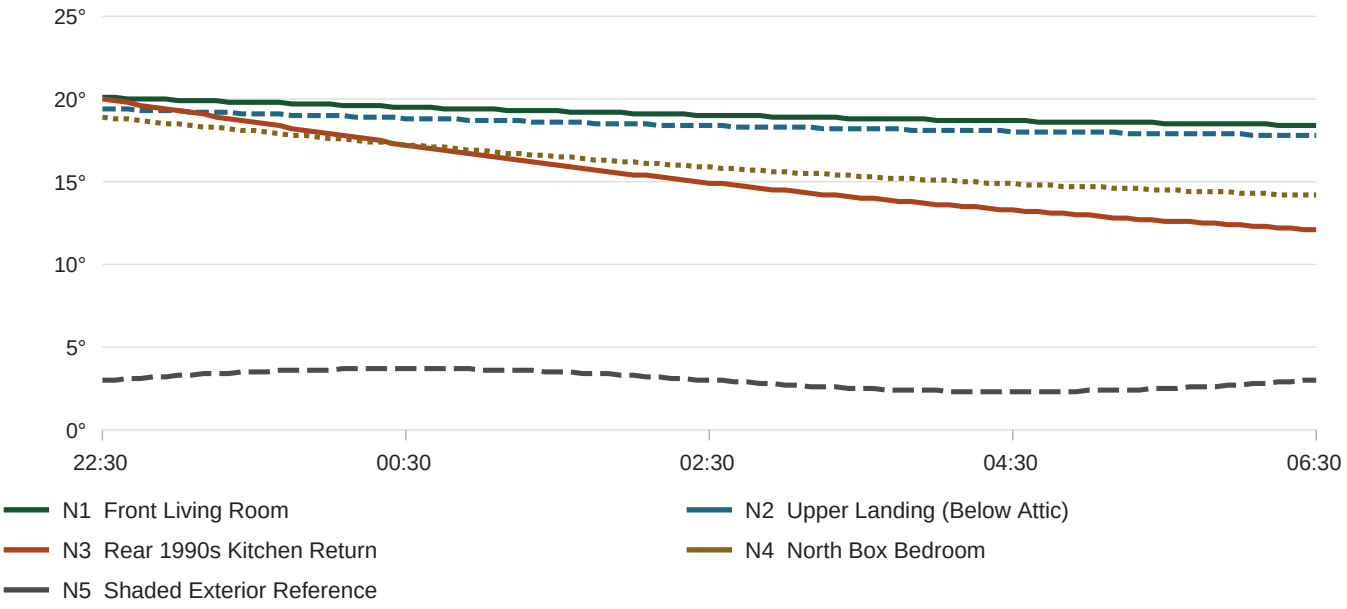
SCOPE OF UNATTENDED MEASUREMENTS

Room air and one outdoor reference. No EPC, BER, DPE, DEAP, RdSAP or HEM assessment.
No ISO 9869 heat-flux test, blower-door test or RICS/SCSI survey. No property value or bill forecast.

2026-11-04 22:30 UTC to 06:30 UTC the following day

Shaded outdoor reference 3.0°C mean air temperature · 86.6% mean relative humidity

Air temperature at five positions (°C)



Indoor node / room	22:30	06:30	°C/hr	× N1	1/h	Air gap
N3 Rear 1990s Kitchen Return	20.0°	12.1°	-0.99	4.6	0.080	+6.4°
N4 North Box Bedroom	18.9°	14.2°	-0.59	2.8	0.045	+5.1°
N1 Front Living Room	20.1°	18.4°	-0.21	1.0	0.013	+6.4°
N2 Upper Landing (Below Attic)	19.4°	17.8°	-0.20	0.9	0.013	+5.9°

The signed rate uses the full eight-hour endpoint change. “× N1” compares its magnitude with the front room. The 1/h index divides cooling-rate magnitude by the mean indoor–outdoor temperature difference. Neither is a heat-flow rate in watts.

The air gap does not establish whether wall surfaces reached dew point. Solar gains, weather, ventilation, thermal mass, doors and household activity influence the observed curves.

ILLUSTRATIVE FIVE-NODE CASE 05 / 09

Night 4 · simultaneous room temperatures

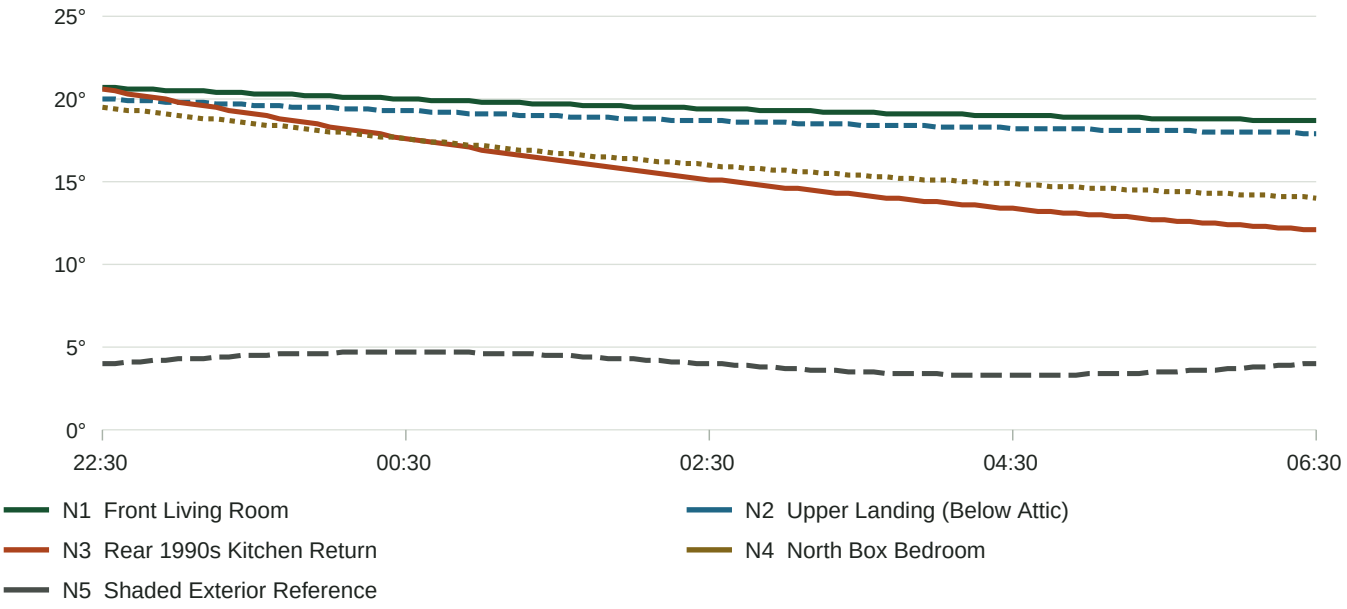
SCOPE OF UNATTENDED MEASUREMENTS

Room air and one outdoor reference. No EPC, BER, DPE, DEAP, RdSAP or HEM assessment.
No ISO 9869 heat-flux test, blower-door test or RICS/SCSI survey. No property value or bill forecast.

2026-11-05 22:30 UTC to 06:30 UTC the following day

Shaded outdoor reference 4.0°C mean air temperature · 85.6% mean relative humidity

Air temperature at five positions (°C)



Indoor node / room	22:30	06:30	°C/hr	× N1	1/h	Air gap
N3 Rear 1990s Kitchen Return	20.6°	12.1°	-1.06	4.2	0.091	+6.4°
N4 North Box Bedroom	19.5°	14.0°	-0.69	2.8	0.056	+5.1°
N2 Upper Landing (Below Attic)	20.0°	17.9°	-0.26	1.1	0.018	+5.9°
N1 Front Living Room	20.7°	18.7°	-0.25	1.0	0.016	+6.4°

The signed rate uses the full eight-hour endpoint change. “× N1” compares its magnitude with the front room. The 1/h index divides cooling-rate magnitude by the mean indoor–outdoor temperature difference. Neither is a heat-flow rate in watts.

The air gap does not establish whether wall surfaces reached dew point. Solar gains, weather, ventilation, thermal mass, doors and household activity influence the observed curves.

ILLUSTRATIVE FIVE-NODE CASE

Night 5 · simultaneous room temperatures

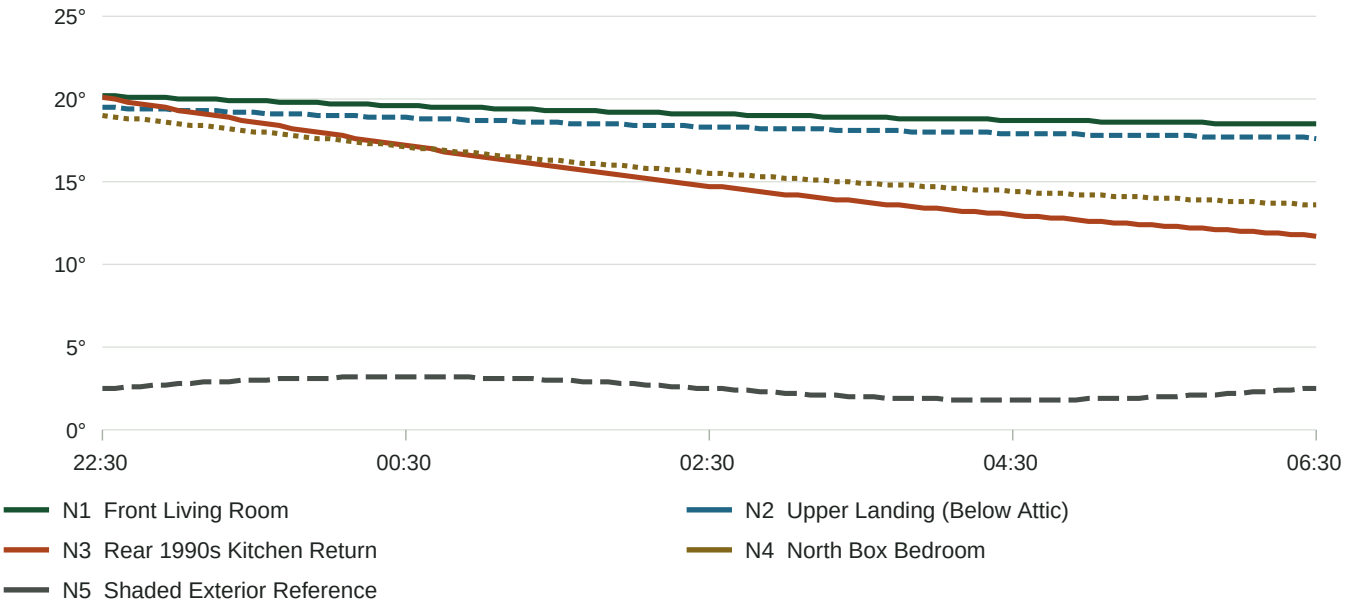
SCOPE OF UNATTENDED MEASUREMENTS

Room air and one outdoor reference. No EPC, BER, DPE, DEAP, RdSAP or HEM assessment.
No ISO 9869 heat-flux test, blower-door test or RICS/SCSI survey. No property value or bill forecast.

2026-11-06 22:30 UTC to 06:30 UTC the following day

Shaded outdoor reference 2.5°C mean air temperature · 87.1% mean relative humidity

Air temperature at five positions (°C)



Indoor node / room	22:30	06:30	°C/hr	× N1	1/h	Air gap
N3 Rear 1990s Kitchen Return	20.1°	11.7°	-1.05	4.9	0.083	+6.4°
N4 North Box Bedroom	19.0°	13.6°	-0.68	3.2	0.051	+5.1°
N2 Upper Landing (Below Attic)	19.5°	17.6°	-0.24	1.1	0.015	+5.9°
N1 Front Living Room	20.2°	18.5°	-0.21	1.0	0.013	+6.4°

The signed rate uses the full eight-hour endpoint change. “× N1” compares its magnitude with the front room. The 1/h index divides cooling-rate magnitude by the mean indoor–outdoor temperature difference. Neither is a heat-flow rate in watts.

The air gap does not establish whether wall surfaces reached dew point. Solar gains, weather, ventilation, thermal mass, doors and household activity influence the observed curves.

ILLUSTRATIVE FIVE-NODE CASE

Night 6 · simultaneous room temperatures

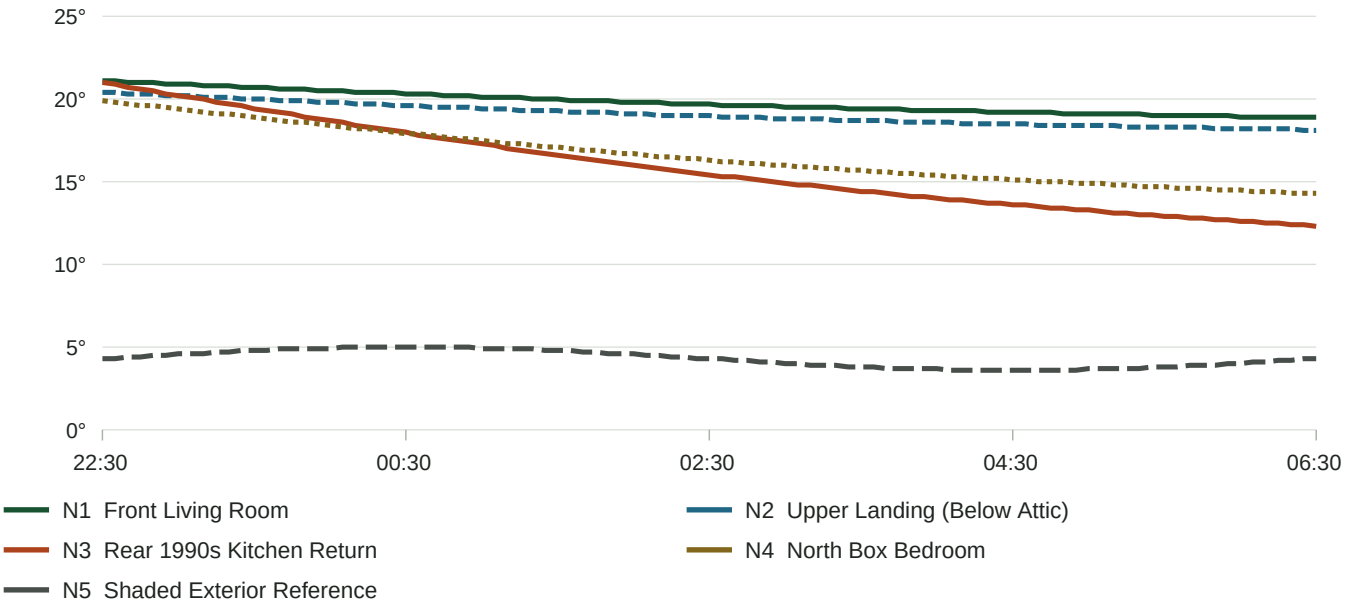
SCOPE OF UNATTENDED MEASUREMENTS

Room air and one outdoor reference. No EPC, BER, DPE, DEAP, RdSAP or HEM assessment.
No ISO 9869 heat-flux test, blower-door test or RICS/SCSI survey. No property value or bill forecast.

2026-11-07 22:30 UTC to 06:30 UTC the following day

Shaded outdoor reference 4.3°C mean air temperature · 85.3% mean relative humidity

Air temperature at five positions (°C)



Indoor node / room	22:30	06:30	°C/hr	× N1	1/h	Air gap
N3 Rear 1990s Kitchen Return	21.0°	12.3°	-1.09	4.0	0.094	+6.4°
N4 North Box Bedroom	19.9°	14.3°	-0.70	2.5	0.057	+5.0°
N2 Upper Landing (Below Attic)	20.4°	18.1°	-0.29	1.0	0.019	+5.9°
N1 Front Living Room	21.1°	18.9°	-0.28	1.0	0.018	+6.4°

The signed rate uses the full eight-hour endpoint change. “× N1” compares its magnitude with the front room. The 1/h index divides cooling-rate magnitude by the mean indoor–outdoor temperature difference. Neither is a heat-flow rate in watts.

The air gap does not establish whether wall surfaces reached dew point. Solar gains, weather, ventilation, thermal mass, doors and household activity influence the observed curves.

ILLUSTRATIVE FIVE-NODE CASE 08 / 09

Night 7 · simultaneous room temperatures

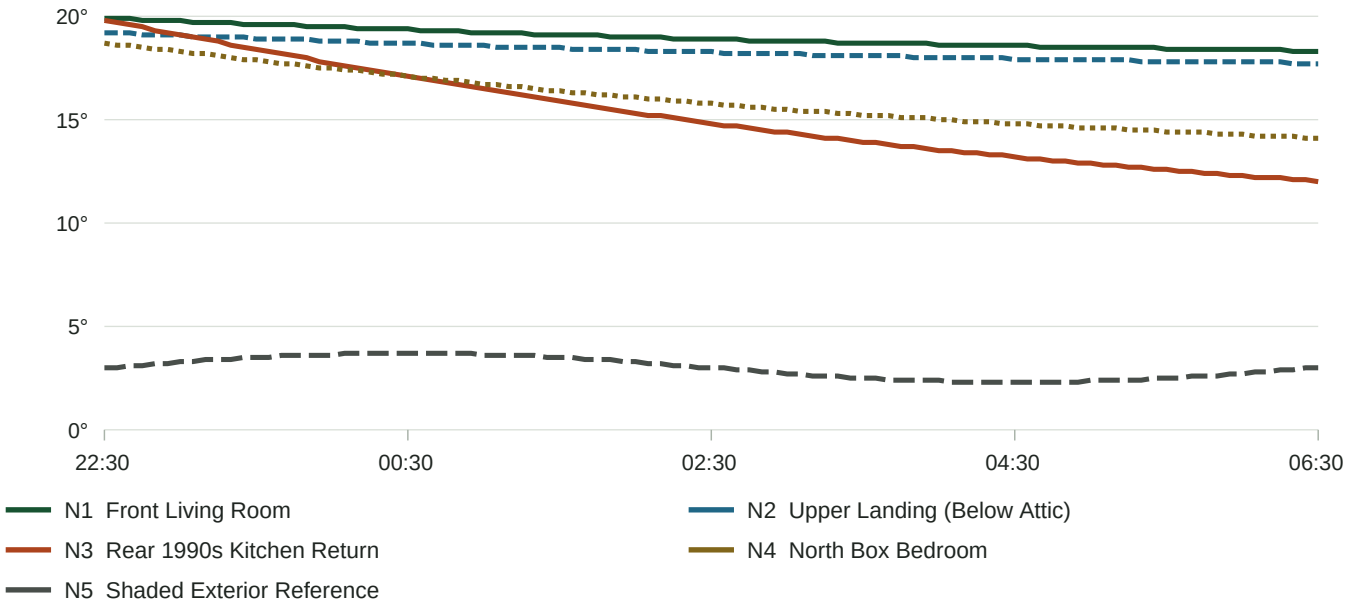
SCOPE OF UNATTENDED MEASUREMENTS

Room air and one outdoor reference. No EPC, BER, DPE, DEAP, RdSAP or HEM assessment.
No ISO 9869 heat-flux test, blower-door test or RICS/SCSI survey. No property value or bill forecast.

2026-11-08 22:30 UTC to 06:30 UTC the following day

Shaded outdoor reference 3.0°C mean air temperature · 86.6% mean relative humidity

Air temperature at five positions (°C)



Indoor node / room	22:30	06:30	°C/hr	× N1	1/h	Air gap
N3 Rear 1990s Kitchen Return	19.8°	12.0°	-0.97	4.9	0.080	+6.4°
N4 North Box Bedroom	18.7°	14.1°	-0.57	2.9	0.044	+5.2°
N1 Front Living Room	19.9°	18.3°	-0.20	1.0	0.013	+6.4°
N2 Upper Landing (Below Attic)	19.2°	17.7°	-0.19	0.9	0.012	+5.9°

The signed rate uses the full eight-hour endpoint change. “× N1” compares its magnitude with the front room. The 1/h index divides cooling-rate magnitude by the mean indoor–outdoor temperature difference. Neither is a heat-flow rate in watts.

The air gap does not establish whether wall surfaces reached dew point. Solar gains, weather, ventilation, thermal mass, doors and household activity influence the observed curves.

Method, limits and file verification

SCOPE OF UNATTENDED MEASUREMENTS

Room air and one outdoor reference. No EPC, BER, DPE, DEAP, RdSAP or HEM assessment.
No ISO 9869 heat-flux test, blower-door test or RICS/SCSI survey. No property value or bill forecast.

Where these figures came from

All three market editions use different deterministic fictional traces. No premises, identity or real hardware transmission is represented. Times use UTC. Positive “air gap” indicates how far the air was above its own calculated dew point.

Matching the clocks

Each node contributes one numeric packet per five-minute interval, starting at 12:00 UTC on 2 November. Means use 96 samples each night, including 22:30 and excluding 06:30; the endpoint change also uses the 06:30 reading. The plot shows all 97 time points.

Room cooling and outdoor reference

Signed slope = (06:30 air temperature − 22:30 air temperature) / 8 h. The ratio uses absolute unrounded slopes, divided by the magnitude for N1. The reference-normalised index is minus the signed slope divided by the mean of simultaneous inside minus outside air temperatures, in 1/h. It is descriptive and is unavailable for a nonpositive mean difference.

Dew point and placement

For air T in °C and RH in percent, g = ln(RH/100) + 17.62T/(243.12 + T). Calculated dew point = 243.12g/(17.62 − g). Surface headroom requires paired surface measurements at the same location. On a property, obtain explicit owner and occupier authority as applicable. Record the outdoor position, shading, room positions and any known changes to heating or ventilation.

What a reviewer can conclude

RippleXn has not inspected the site, supervised mounting or verified local interference. The room comparison cannot identify a defect, causal source, U-value, statutory breach, building heat demand or fuel savings. These readings do not change a certificate, establish heat-pump suitability or replace professional assessment.

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