Approved Document O report
Overheating risk in residential buildings
for
Lord Street

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Lord Street

Building details

Project name: Lord Street	Date: 23-09-2025 11:28:32
Location: Manchester Ap, United Kingdom	
Address: Wrexham	
Building use: Residential	
Are there any security, noise, or pollution issues: Windows shut during the night	

Designer's details

Designer's name: Andy Graves
Designer's organisation: Complete Sustainability
Designer's address: 1 Balloon Street Manchester

Dynamic thermal model

Software: IESVE version 2025.0.0.0	
Weather file: Manchester_DSY1_2020High50_.epw	
Results file: Lord Street Wrexham.aps	
Number of rooms analysed: 52	
TM59: summer elevated air speed: 0.1	
TM59: occupant category: Category II (normal)	
Overheating mitigation strategy: 100mm Windows during the day MVHR G value 0.4	
Has the building construction proposal been modelled accurately?	YES
Have the analysed rooms passed the assessment for Approved Doc O Dynamic Thermal Modelling Method (CIBSE TM 59)?	YES
Designer's signature:	

Summary

CIBSE TM59 overheating methodology for predominantly naturally ventilated rooms assesses against two criteria, (a) and (b) (for Category I occupancy, Tmax is reduced by 1K):

- Criterion (a) states that for living rooms, kitchens and bedrooms, the number of hours during which ΔT is greater than or equal to 1K from May to September (or November to March for southern hemisphere locations) shall not exceed 3% of occupied hours
- Criterion (b) states that the operative temperature of the bedrooms from 22:00-07:00 shall not exceed 26°C for more than 1% of annual hours (33 hours is therefore recorded as a fail). Approved document O applies limits to CIBSE TM59 section 3.3 (openings); these requirements are applied by appropriate assignment of MacroFlo types / scripted profiles in the model (see Modelled Openings Section).

CIBSE TM59 overheating methodology for predominantly mechanically ventilated rooms states the operative temperature of all rooms shall not exceed 26°C for more than 3% of annual occupied hours.

CIBSE TM59 also states that the inclusion of corridors in the overheating analysis is mandatory where community heating pipework runs through them. While there is no mandatory target for communal corridors, if an operative temperature of 28°C is exceeded for more than 3% of the total annual hours this should be identified as a significant risk.

Room name	Naturally ventilated Criterion a check	Naturally ventilated Criterion b check	Mechanically ventilated check	Corridor overheating risk check
Apartment 14 - Living Kitchen	Pass	N/A	-	-
Apartment 14 - Bedroom	Pass	-	-	-
Apartment 14 - Bedroom	Pass	Pass	-	-
Apartment 15 - Bedroom	Pass	Pass	-	-
Apartment 15 - Living Kitchen	Pass	N/A	-	-
Apartment 16 - Living Kictchen	Pass	N/A	-	-
Apartment 16 - Bedroom	Pass	-	-	-
Apartment 16 - Bedroom	Pass	Pass	-	-
Apartment 17 - Bedroom	Pass	Pass	-	-
Apartment 17 - Living Kitchen	Pass	N/A	-	-
Apartment 20 - Living Kitchen	Pass	N/A	-	-
Apartment 20 - bedroom	Pass	Pass	-	-
Apartment 18 - Bedroom	Pass	-	-	-
Apartment 18 - Bedroom	Pass	Pass	-	-
Apartment 18 - Living Kitchen	Pass	N/A	-	-
Apartment 19 - Living Kitchen	Pass	N/A	-	-
Apartment 19 - Bedroom	Pass	Pass	-	-
Apartment 07 - Living Kitchen	Pass	N/A	-	-
Apartment 07 - Bedroom	Pass	-	-	-
Apartment 07 - Bedroom	Pass	Pass	-	-
Apartment 08 - Bedroom	Pass	Pass	-	-
Apartment 08 - Living Kitchen	Pass	N/A	-	-

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Room name	Naturally ventilated Criterion a check	Naturally ventilated Criterion b check	Mechanically ventilated check	Corridor overheating risk check
Apartment 09 - Living Kictchen	Pass	N/A	-	-
Apartment 09 - Bedroom	Pass	-	-	-
Apartment 09 - Bedroom	Pass	Pass	-	-
Apartment 10 - Bedroom	Pass	Pass	-	-
Apartment 10 - Living Kitchen	Pass	N/A	-	-
Apartment 13 - Living Kitchen	Pass	N/A	-	-
Apartment 13 - bedroom	Pass	Pass	-	-
Apartment 11 - Bedroom	Pass	-	-	-
Apartment 11 - Bedroom	Pass	Pass	-	-
Apartment 11 - Living Kitchen	Pass	N/A	-	-
Apartment 12 - Living Kitchen	Pass	N/A	-	-
Apartment 12 - Bedroom	Pass	Pass	-	-
Apartment 1 - Bedroom	Pass	-	-	-
Apartment 1 - Living Kitchen	Pass	N/A	-	-
Apartment 1 - Bedroom	Pass	Pass	-	-
Apartment 2 - Bedroom	Pass	Pass	-	-
Apartment 2 - Living Kitchen	Pass	N/A	-	-
Apartment 3 - Living Kitchen	Pass	N/A	-	-
Apartment 3 - Bedroom	Pass	Pass	-	-
Apartment 4 - Bedroom	Pass	Pass	-	-
Apartment 4 - Living Kitchen	Pass	N/A	-	-
Apartment 4 - bedroom	Pass	Pass	-	-
Apartment 6 - Bedroom	Pass	Pass	-	-
Apartment 6 - Living Kitchen	Pass	N/A	-	-
Apartment 5 - Living Kitchen	Pass	N/A	-	-
Apartment 5 - bedroom	Pass	Pass	-	-
Apartment 21 - Living Kitchen	Pass	N/A	-	-
Apartment 22 - Living Kitchen	Pass	N/A	-	-
Apartment 22 - Bedroom	Pass	Pass	-	-
Apartment 21 - Bedroom	Pass	Pass	-	-

Naturally ventilated rooms – criterion (a)

Criterion (a) states that for living rooms, kitchens and bedrooms, the number of hours during which ΔT is greater than or equal to 1K from May to September (or November to March for southern hemisphere locations) shall not exceed 3% of occupied hours.

Room name	Occupied hours	No. hours ΔT ≥ 1°K	% Occupied hours ΔT ≥ 1°K	Criterion a check
Apartment 14 - Living Kitchen	1989	15	0.8	Pass
Apartment 14 - Bedroom	3672	8	0.2	Pass
Apartment 14 - Bedroom	3672	0	0.0	Pass
Apartment 15 - Bedroom	3672	0	0.0	Pass
Apartment 15 - Living Kitchen	1989	5	0.3	Pass
Apartment 16 - Living Kictchen	1989	8	0.4	Pass
Apartment 16 - Bedroom	3672	0	0.0	Pass
Apartment 16 - Bedroom	3672	0	0.0	Pass
Apartment 17 - Bedroom	3672	5	0.1	Pass
Apartment 17 - Living Kitchen	1989	6	0.3	Pass
Apartment 20 - Living Kitchen	1989	15	0.8	Pass
Apartment 20 - bedroom	3672	0	0.0	Pass
Apartment 18 - Bedroom	3672	1	0.0	Pass
Apartment 18 - Bedroom	3672	5	0.1	Pass
Apartment 18 - Living Kitchen	1989	9	0.5	Pass
Apartment 19 - Living Kitchen	1989	9	0.5	Pass
Apartment 19 - Bedroom	3672	0	0.0	Pass
Apartment 07 - Living Kitchen	1989	1	0.1	Pass
Apartment 07 - Bedroom	3672	3	0.1	Pass
Apartment 07 - Bedroom	3672	0	0.0	Pass
Apartment 08 - Bedroom	3672	0	0.0	Pass
Apartment 08 - Living Kitchen	1989	0	0.0	Pass
Apartment 09 - Living Kictchen	1989	0	0.0	Pass
Apartment 09 - Bedroom	3672	0	0.0	Pass
Apartment 09 - Bedroom	3672	0	0.0	Pass
Apartment 10 - Bedroom	3672	0	0.0	Pass
Apartment 10 - Living Kitchen	1989	1	0.1	Pass
Apartment 13 - Living Kitchen	1989	2	0.1	Pass

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Room name	Occupied hours	No. hours ΔT ≥ 1°K	% Occupied hours ΔT ≥ 1°K	Criterion a check
Apartment 13 - bedroom	3672	0	0.0	Pass
Apartment 11 - Bedroom	3672	0	0.0	Pass
Apartment 11 - Bedroom	3672	4	0.1	Pass
Apartment 11 - Living Kitchen	1989	8	0.4	Pass
Apartment 12 - Living Kitchen	1989	9	0.5	Pass
Apartment 12 - Bedroom	3672	0	0.0	Pass
Apartment 1 - Bedroom	3672	0	0.0	Pass
Apartment 1 - Living Kitchen	1989	0	0.0	Pass
Apartment 1 - Bedroom	3672	0	0.0	Pass
Apartment 2 - Bedroom	3672	0	0.0	Pass
Apartment 2 - Living Kitchen	1989	0	0.0	Pass
Apartment 3 - Living Kitchen	1989	0	0.0	Pass
Apartment 3 - Bedroom	3672	0	0.0	Pass
Apartment 4 - Bedroom	3672	0	0.0	Pass
Apartment 4 - Living Kitchen	1989	0	0.0	Pass
Apartment 4 - bedroom	3672	0	0.0	Pass
Apartment 6 - Bedroom	3672	0	0.0	Pass
Apartment 6 - Living Kitchen	1989	5	0.3	Pass
Apartment 5 - Living Kitchen	1989	4	0.2	Pass
Apartment 5 - bedroom	3672	0	0.0	Pass
Apartment 21 - Living Kitchen	1989	14	0.7	Pass
Apartment 22 - Living Kitchen	1989	15	0.8	Pass
Apartment 22 - Bedroom	3672	0	0.0	Pass
Apartment 21 - Bedroom	3672	5	0.1	Pass

Naturally ventilated rooms – criterion (b)

Criterion (b) states that the operative temperature of the bedrooms from 22:00-07:00 shall not exceed 26°C for more than 1% of annual hours (33 hours is therefore recorded as a fail). Any rooms that are not bedrooms are therefore not assessed, hence the corresponding N/A values.

Room name	No. hours > 26°C 22:00-24:00	No. hours > 26°C 00:00-07:00	Total hours > 26°C	Criterion b check
Apartment 14 - Living Kitchen	N/A	N/A	N/A	N/A
Apartment 14 - Bedroom	9	12	21	Pass
Apartment 15 - Bedroom	15	13	28	Pass
Apartment 15 - Living Kitchen	N/A	N/A	N/A	N/A
Apartment 16 - Living Kictchen	N/A	N/A	N/A	N/A
Apartment 16 - Bedroom	14	15	29	Pass
Apartment 17 - Bedroom	10	16	26	Pass
Apartment 17 - Living Kitchen	N/A	N/A	N/A	N/A
Apartment 20 - Living Kitchen	N/A	N/A	N/A	N/A
Apartment 20 - bedroom	9	10	19	Pass
Apartment 18 - Bedroom	9	19	28	Pass
Apartment 18 - Living Kitchen	N/A	N/A	N/A	N/A
Apartment 19 - Living Kitchen	N/A	N/A	N/A	N/A
Apartment 19 - Bedroom	15	14	29	Pass
Apartment 07 - Living Kitchen	N/A	N/A	N/A	N/A
Apartment 07 - Bedroom	7	8	15	Pass
Apartment 08 - Bedroom	10	9	19	Pass
Apartment 08 - Living Kitchen	N/A	N/A	N/A	N/A
Apartment 09 - Living Kictchen	N/A	N/A	N/A	N/A
Apartment 09 - Bedroom	12	12	24	Pass
Apartment 10 - Bedroom	8	13	21	Pass
Apartment 10 - Living Kitchen	N/A	N/A	N/A	N/A
Apartment 13 - Living Kitchen	N/A	N/A	N/A	N/A
Apartment 13 - bedroom	5	4	9	Pass
Apartment 11 - Bedroom	9	17	26	Pass
Apartment 11 - Living Kitchen	N/A	N/A	N/A	N/A

Room name	No. hours > 26°C 22:00-24:00	No. hours > 26°C 00:00-07:00	Total hours > 26°C	Criterion b check
Apartment 12 - Living Kitchen	N/A	N/A	N/A	N/A
Apartment 12 - Bedroom	9	9	18	Pass
Apartment 1 - Bedroom	5	4	9	Pass
Apartment 1 - Living Kitchen	N/A	N/A	N/A	N/A
Apartment 2 - Bedroom	6	4	10	Pass
Apartment 2 - Living Kitchen	N/A	N/A	N/A	N/A
Apartment 3 - Living Kitchen	N/A	N/A	N/A	N/A
Apartment 3 - Bedroom	10	5	15	Pass
Apartment 4 - Bedroom	8	6	14	Pass
Apartment 4 - Living Kitchen	N/A	N/A	N/A	N/A
Apartment 4 - bedroom	2	1	3	Pass
Apartment 6 - Bedroom	7	5	12	Pass
Apartment 6 - Living Kitchen	N/A	N/A	N/A	N/A
Apartment 5 - Living Kitchen	N/A	N/A	N/A	N/A
Apartment 5 - bedroom	11	19	30	Pass
Apartment 21 - Living Kitchen	N/A	N/A	N/A	N/A
Apartment 22 - Living Kitchen	N/A	N/A	N/A	N/A
Apartment 22 - Bedroom	13	19	32	Pass
Apartment 21 - Bedroom	8	20	28	Pass

Mechanically ventilated rooms

CIBSE TM59 overheating methodology for predominantly mech. vent. rooms states the operative temperature of all rooms shall not exceed 26°C for more than 3% of annual occupied hours.

Room name	No. hours > 26°C	% Annual hours > 26°C	Mechanically ventilated check
No mech vent rooms	N/A	N/A	N/A

Communal corridors

CIBSE TM59 states that whilst there is no mandatory target for communal corridors, if an operative temperature of 28°C is exceeded for more than 3% of annual hours, then this should be identified as a significant risk within the TM59 overheating report.

Room name	No. hours > 28°C	% Annual hours > 28°C	Corridor overheating risk check
No corridors	N/A	N/A	N/A

Modelled details & overheating mitigation strategy

Approved document O: Providing Information & Appendix B requires information about the model and the overheating mitigation strategy. The following tables detail the modelling method and mitigation strategies applied to each analysed room. Where multiple active openings per space (windows & louvres) exist they are all listed. Occupancy, equipment and lighting profiles for occupied rooms comply with TM59 section 5.

Modelled occupancy

Room name	Floor area m²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Apartment 14 - Living Kitchen	36.26	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Apartment 14 - Bedroom	15.8	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 14 - Bedroom	19.56	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 15 - Bedroom	13.19	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 15 - Living Kitchen	28.47	TM59 - 1 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Apartment 16 - Living Kictchen	26.49	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Apartment 16 - Bedroom	11.43	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 16 - Bedroom	9.91	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 17 - Bedroom	18.11	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 17 - Living Kitchen	35.26	TM59 - 1 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Apartment 20 - Living Kitchen	23.97	TM59 - 1 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Apartment 20 - bedroom	12.78	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 18 - Bedroom	15.16	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 18 - Bedroom	11.43	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 18 - Living Kitchen	29.21	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Apartment 19 - Living Kitchen	20.33	TM59 - 1 Bedroom - Living	Living Occupancy	Living Equipment	18-23h
Apartment 19 - Bedroom	17.25	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Apartment 07 - Living Kitchen	36.26	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Apartment 07 - Bedroom	15.8	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 07 - Bedroom	19.56	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 08 - Bedroom	13.19	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 08 - Living Kitchen	28.47	TM59 - 1 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Apartment 09 - Living Kictchen	26.49	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Apartment 09 - Bedroom	11.43	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 09 - Bedroom	9.91	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 10 - Bedroom	18.11	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 10 - Living Kitchen	35.26	TM59 - 1 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Apartment 13 - Living Kitchen	23.97	TM59 - 1 Bedroom - Living	Living Occupancy	Living Equipment	18-23h
Apartment 13 - bedroom	12.78	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 11 - Bedroom	15.16	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 11 - Bedroom	11.43	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 11 - Living Kitchen	29.21	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Apartment 12 - Living Kitchen	20.33	TM59 - 1 Bedroom - Living	Living Occupancy	Living Equipment	18-23h
Apartment 12 - Bedroom	17.25	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 1 - Bedroom	13.38	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 1 - Living Kitchen	33.96	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Apartment 1 - Bedroom	17.28	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 2 - Bedroom	14.6	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

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Room name	Floor area m²	Thermal template	Occupancy profile	Equipment profile	Lighting profile
Apartment 2 - Living Kitchen	36.85	TM59 - 1 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Apartment 3 - Living Kitchen	36.06	TM59 - 1 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Apartment 3 - Bedroom	14.35	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 4 - Bedroom	13.74	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 4 - Living Kitchen	40.53	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Apartment 4 - bedroom	16.83	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 6 - Bedroom	17.03	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 6 - Living Kitchen	23.64	TM59 - 1 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Apartment 5 - Living Kitchen	26.76	TM59 - 1 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Apartment 5 - bedroom	19.96	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 21 - Living Kitchen	29.21	TM59 - 2 Bedroom - Living / Kitchen	Living / Kitchen Occupancy	Living / Kitchen Equipment	18-23h
Apartment 22 - Living Kitchen	20.33	TM59 - 1 Bedroom - Living	Living Occupancy	Living Equipment	18-23h
Apartment 22 - Bedroom	17.25	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h
Apartment 21 - Bedroom	26.59	TM59 - Double Bedroom	Double Bedroom Occupancy	Double Bedroom Equipment	18-23h

Modelled openings

Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Apartment 14 - Living Kitchen	17.41	0.4012	3.0, 3.0, 3.0	20.0, 20.0, 20.0	4.96	ADO.Section_26a
Apartment 14 - Bedroom	16.69	0.4012, 0.4012	3.0, 0.9, 0.9, 0.72	20.0, 20.0, 20.0, 20.0	6.99	ADO.Section_26a
Apartment 14 - Bedroom	10.98	0.4012	0.9, 0.9, 0.72	20.0, 20.0, 20.0	2.58	ADO.Section_26a
Apartment 15 - Bedroom	12.71	0.4012	0.72, 0.72, 0.6	20.0, 20.0, 20.0	3.09	ADO.Section_26a
Apartment 15 - Living Kitchen	22.89	0.4012	0.72, 0.72, 0.6, 0.6, 0.72, 0.72	20.0, 20.0, 20.0, 20.0, 20.0, 20.0	2.87	ADO.Section_26a
Apartment 16 - Living Kictchen	24.6	0.4012	1.19, 0.72, 0.72, 0.6, 0.6, 0.72, 0.72	98.33999633789062, 20.0, 20.0, 20.0, 20.0, 20.0, 20.0	7.5	ADO.Section_26a, on continuously
Apartment 16 - Bedroom	15.12	0.4012	1.19, 0.72, 0.72, 0.6	98.33999633789062, 20.0, 20.0, 20.0	13.81	ADO.Section_26a, Internal Doors Bedroom Weekly
Apartment 16 - Bedroom	17.44	0.4012	1.19, 0.72, 0.72, 0.6	98.33999633789062, 20.0, 20.0, 20.0	15.93	ADO.Section_26a, Internal Doors Bedroom Weekly
Apartment 17 - Bedroom	19.53	0.4012	1.19, 0.7, 1.4, 1.4, 0.7	0.0, 20.0, 20.0, 20.0, 20.0	4.64	off continuously, ADO.Section_26a
Apartment 17 - Living Kitchen	14.07	0.4012, 0.4012	1.6, 1.6, 1.6, 0.7, 1.4, 1.4, 0.7	20.0, 20.0, 20.0, 20.0, 20.0, 20.0, 20.0	5.1	ADO.Section_26a
Apartment 20 - Living Kitchen	14.46	0.4012, 0.4012	1.6, 1.6, 1.6, 1.6, 1.6	20.0, 20.0, 20.0, 20.0, 20.0	6.68	ADO.Section_26a
Apartment 20 - bedroom	16.72	0.4012	1.6, 1.6	20.0, 20.0	5.01	ADO.Section_26a
Apartment 18 - Bedroom	27.18	0.4012	3.0, 1.26	20.0, 98.33999633789062	12.13	ADO.Section_26a, Internal Doors Bedroom Weekly

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Apartment 18 - Bedroom	21.49	0.4012	3.0, 1.26	20.0, 98.3399 9633789062	16.09	ADO.Section_ 26a, Internal Doors Bedroom Weekly
Apartment 18 - Living Kitchen	11.76	0.4012	1.6, 1.6, 1.6, 1.26	20.0, 20.0, 20.0, 98.3399 9633789062	7.53	ADO.Section_ 26a, on continuously
Apartment 19 - Living Kitchen	25.0	0.4012	1.6, 1.6	20.0, 20.0	3.15	ADO.Section_ 26a
Apartment 19 - Bedroom	21.43	0.4012	1.12, 1.12	20.0, 20.0	2.6	ADO.Section_ 26a
Apartment 07 - Living Kitchen	17.41	0.4012	3.0, 3.0, 3.0	20.0, 20.0, 20.0	4.96	ADO.Section_ 26a
Apartment 07 - Bedroom	16.69	0.4012, 0.4012	3.0, 0.9, 0.9, 0.72	20.0, 20.0, 20.0, 20.0	6.99	ADO.Section_ 26a
Apartment 07 - Bedroom	10.98	0.4012	0.9, 0.9, 0.72	20.0, 20.0, 20.0	2.58	ADO.Section_ 26a
Apartment 08 - Bedroom	12.71	0.4012	0.72, 0.72, 0.6	20.0, 20.0, 20.0	3.09	ADO.Section_ 26a
Apartment 08 - Living Kitchen	22.89	0.4012	0.72, 0.72, 0.6, 0.6, 0.72, 0.72	20.0, 20.0, 20.0, 20.0, 20.0, 20.0	2.87	ADO.Section_ 26a
Apartment 09 - Living Kictchen	24.6	0.4012	0.72, 0.72, 0.6, 0.6, 0.72, 0.72	20.0, 20.0, 20.0, 20.0, 20.0, 20.0	3.08	ADO.Section_ 26a
Apartment 09 - Bedroom	15.12	0.4012	0.72, 0.72, 0.6	20.0, 20.0, 20.0	3.57	ADO.Section_ 26a
Apartment 09 - Bedroom	17.44	0.4012	0.72, 0.72, 0.6	20.0, 20.0, 20.0	4.12	ADO.Section_ 26a
Apartment 10 - Bedroom	19.53	0.4012	0.7, 1.4, 1.4, 0.7	20.0, 20.0, 20.0, 20.0	4.64	ADO.Section_ 26a
Apartment 10 - Living Kitchen	14.07	0.4012, 0.4012	1.6, 1.6, 1.6, 0.7, 1.4, 1.4, 0.7	20.0, 20.0, 20.0, 20.0, 20.0, 20.0, 20.0	5.1	ADO.Section_ 26a
Apartment 13 - Living Kitchen	14.46	0.4012, 0.4012	1.6, 1.6, 1.6, 1.6, 1.6	20.0, 20.0, 20.0, 20.0, 20.0	6.68	ADO.Section_ 26a
Apartment 13 - bedroom	16.72	0.4012	1.6, 1.6	20.0, 20.0	5.01	ADO.Section_ 26a
Apartment 11 - Bedroom	27.18	0.4012	3.0, 0.57, 0.57	20.0, 98.3399 9633789062, 98.339996337 89062	11.35	ADO.Section_ 26a, Internal Doors Bedroom Weekly

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Apartment 11 - Bedroom	21.49	0.4012	3.0, 0.57, 0.57	20.0, 98.3399 9633789062, 98.339996337 89062	15.06	ADO.Section_ 26a, Internal Doors Bedroom Weekly
Apartment 11 - Living Kitchen	11.76	0.4012	1.6, 1.6, 1.6, 1.26	20.0, 20.0, 20.0, 98.3399 9633789062	7.53	ADO.Section_ 26a, on continuously
Apartment 12 - Living Kitchen	25.0	0.4012	1.6, 1.6	20.0, 20.0	3.15	ADO.Section_ 26a
Apartment 12 - Bedroom	21.43	0.4012	1.12, 1.12	20.0, 20.0	2.6	ADO.Section_ 26a
Apartment 1 - Bedroom	0.0				0.0	
Apartment 1 - Living Kitchen	16.99	0.4012	3.96, 3.96	20.0, 20.0	4.66	ADO.Section_ 26a
Apartment 1 - Bedroom	28.03	0.4012	3.96	20.0	4.58	ADO.Section_ 26a
Apartment 2 - Bedroom	24.29	0.4012	1.6, 1.6	20.0, 20.0	4.38	ADO.Section_ 26a
Apartment 2 - Living Kitchen	18.45	0.4012	1.6, 1.6	20.0, 20.0	1.74	ADO.Section_ 26a
Apartment 3 - Living Kitchen	21.22	0.4012	1.8, 1.8	20.0, 20.0	2.0	ADO.Section_ 26a
Apartment 3 - Bedroom	12.29	0.4012	1.6	20.0	2.23	ADO.Section_ 26a
Apartment 4 - Bedroom	16.38	0.4012	2.25	20.0	3.28	ADO.Section_ 26a
Apartment 4 - Living Kitchen	9.68	0.4012, 0.4012	3.36, 1.35, 1.35, 0.49	20.0, 20.0, 20.0, 20.0	3.23	ADO.Section_ 26a
Apartment 4 - bedroom	24.73	0.4012	2.2, 2.2, 2.2	20.0, 20.0, 20.0	7.84	ADO.Section_ 26a
Apartment 6 - Bedroom	21.89	0.4012	1.12, 1.12	20.0, 20.0	2.63	ADO.Section_ 26a
Apartment 6 - Living Kitchen	15.08	0.4012	2.2	20.0	1.86	ADO.Section_ 26a
Apartment 5 - Living Kitchen	23.0	0.4012	1.7, 1.19, 1.26	20.0, 20.0, 98. 33999633789 062	6.79	ADO.Section_ 26a, on continuously
Apartment 5 - bedroom	8.49	0.4012	1.7, 1.7, 1.26	20.0, 20.0, 98. 33999633789 062	9.61	ADO.Section_ 26a, Internal Doors Bedroom Weekly
Apartment 21 - Living Kitchen	10.7	0.4012	1.6, 1.6, 1.6, 1.26	20.0, 20.0, 20.0, 98.3399 9633789062	7.53	ADO.Section_ 26a, on continuously

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Room name	Window to wall ratio %	Window g-value (EN 410)	Opening gross area m²	Opening free area (avg) %	Opening free area / floor area ratio %	Opening profile(s)
Apartment 22 - Living Kitchen	25.0	0.4012	1.6, 1.6, 1.26	20.0, 20.0, 98.33999633789062	9.24	ADO.Section_26a, on continuously
Apartment 22 - Bedroom	6.08	0.4012	1.26, 1.12, 1.12	98.33999633789062, 20.0, 20.0	9.78	ADO.Section_26a, on continuously
Apartment 21 - Bedroom	13.16	0.4012	3.0, 3.0, 1.26, 1.26	20.0, 20.0, 98.33999633789062, 98.33999633789062	13.83	ADO.Section_26a, Internal Doors Bedroom Weekly

Modelled ventilation

Room name	Infiltration rate ACH	Mech vent flow rate ACH
Apartment 14 - Living Kitchen	0.25	0.37
Apartment 14 - Bedroom	0.25	1.14
Apartment 14 - Bedroom	0.25	0.92
Apartment 15 - Bedroom	0.25	1.36
Apartment 15 - Living Kitchen	0.25	0.47
Apartment 16 - Living Kictchen	0.25	0.51
Apartment 16 - Bedroom	0.25	1.73
Apartment 16 - Bedroom	0.25	2.0
Apartment 17 - Bedroom	0.25	0.99
Apartment 17 - Living Kitchen	0.25	0.38
Apartment 20 - Living Kitchen	0.25	0.56
Apartment 20 - bedroom	0.25	1.41
Apartment 18 - Bedroom	0.25	1.19
Apartment 18 - Bedroom	0.25	1.58
Apartment 18 - Living Kitchen	0.25	0.46
Apartment 19 - Living Kitchen	0.25	0.66
Apartment 19 - Bedroom	0.25	1.04
Apartment 07 - Living Kitchen	0.25	0.37
Apartment 07 - Bedroom	0.25	1.14
Apartment 07 - Bedroom	0.25	0.92
Apartment 08 - Bedroom	0.25	1.36
Apartment 08 - Living Kitchen	0.25	0.47
Apartment 09 - Living Kictchen	0.25	0.51
Apartment 09 - Bedroom	0.25	1.57
Apartment 09 - Bedroom	0.25	1.82
Apartment 10 - Bedroom	0.25	0.99
Apartment 10 - Living Kitchen	0.25	0.38
Apartment 13 - Living Kitchen	0.25	0.56
Apartment 13 - bedroom	0.25	1.41
Apartment 11 - Bedroom	0.25	1.19
Apartment 11 - Bedroom	0.25	1.58
Apartment 11 - Living Kitchen	0.25	0.46
Apartment 12 - Living Kitchen	0.25	0.66
Apartment 12 - Bedroom	0.25	1.04
Apartment 1 - Bedroom	0.25	1.35
Apartment 1 - Living Kitchen	0.25	0.4
Apartment 1 - Bedroom	0.25	1.04
Apartment 2 - Bedroom	0.25	1.23
Apartment 2 - Living Kitchen	0.25	0.37
Apartment 3 - Living Kitchen	0.25	0.37

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Room name	Infiltration rate ACH	Mech vent flow rate ACH
Apartment 3 - Bedroom	0.25	1.25
Apartment 4 - Bedroom	0.25	1.31
Apartment 4 - Living Kitchen	0.25	0.33
Apartment 4 - bedroom	0.25	1.07
Apartment 6 - Bedroom	0.25	1.06
Apartment 6 - Living Kitchen	0.25	0.57
Apartment 5 - Living Kitchen	0.25	0.5
Apartment 5 - bedroom	0.25	0.9
Apartment 21 - Living Kitchen	0.25	0.46
Apartment 22 - Living Kitchen	0.25	0.66
Apartment 22 - Bedroom	0.25	1.15
Apartment 21 - Bedroom	0.25	0.68