

Medius House – Future Climate Change Study

1 MEDIUS HOUSE OVERHEATING FOR FUTURE YEARS

Camden's Sustainability Planning Guidance Document Section 12 states the following - Adapting to climate change states 'All development is expected to consider the impact of climate change and be designed to cope with the anticipated conditions'. To abide by this GDM have created two simulations which incorporate current London weather data and future London weather data, the results of these simulations will determine the overheating risk of Medius House.

Two simulations have been carried out using TAS Dynamic Simulation Software to determine the impact of future climate change in accordance with Camden's Sustainability Planning Guidance Document.

The calculation method used is CIBSE TM52: The Limits if Thermal Comfort.

The results indicate that the majority of the development complies with TM52 Regulations when calculated with current LondonDSY weather data.

Most the new build area (5th-7th) pass except 2 lounge areas. A similar result occurs with the future years simulation but a few more areas do not comply.

1.1 Current London weather results

Zone Name	Occupied Summer Hours	Max. Exceedable Hours	Criterion 1: #Hours Exceeding Comfort Range	Criterion 2: Peak Daily Weighted Exceedance	Criterion 3: #Hours Exceeding Absolute Limit	Result
01 Apt 01 Bedroom 01	1377	41	0	0.0	0	Pass
01 Apt 01 Lounge 01	1071	32	11	7.0	0	Pass
01 Apt 02 Bedroom 01	1377	41	0	0.0	0	Pass
01 Apt 02 Bedroom 02	1377	41	0	0.0	0	Pass
01 Apt 02 Bedroom 03	1377	41	0	0.0	0	Pass
01 Apt 02 Lounge	1071	32	14	9.0	0	Pass
01 Apt 03 Lounge	1071	32	18	10.0	0	Pass
02 Apt 01 Bedroom 01	1377	41	0	0.0	0	Pass
02 Apt 01 Lounge	1071	32	7	6.0	0	Pass
02 Apt 02 Bedroom 01	1377	41	0	0.0	0	Pass
02 Apt 02 Bedroom 02	1377	41	0	0.0	0	Pass
02 Apt 02 Lounge	1071	32	11	8.0	0	Pass
02 Apt 03 Bedroom 01	1377	41	0	0.0	0	Pass
02 Apt 03 Bedroom 02	1377	41	2	1.0	0	Pass
02 Apt 03 Lounge	1071	32	24	9.0	1	Fail
03 Apt 01 Bedroom 01	1377	41	0	0.0	0	Pass
03 Apt 01 Lounge	1071	32	7	5.0	0	Pass
03 Apt 02 Bedroom 01	1377	41	0	0.0	0	Pass
03 Apt 02 Bedroom 2	1377	41	0	0.0	0	Pass
03 Apt 02 Lounge	1071	32	11	9.0	0	Pass

Zone Name	Occupied Summer Hours	Max. Exceedable Hours	Criterion 1: #Hours Exceeding Comfort Range	Criterion 2: Peak Daily Weighted Exceedance	Criterion 3: #Hours Exceeding Absolute Limit	Result
03 Apt 03 Bedroom 01	1377	41	0	0.0	0	Pass
03 Apt 03 Bedroom 02	1377	41	2	1.0	0	Pass
03 Apt 03 Lounge	1071	32	24	10.0	1	Fail
03 Apt 02 Bedroom 03	1377	41	0	0.0	0	Pass
04 Apt 01 Bedroom 01	1377	41	0	0.0	0	Pass
04 Apt 01 Lounge	1071	32	6	5.0	0	Pass
04 Apt 02 Bedroom 01	1377	41	0	0.0	0	Pass
04 Apt 02 Bedroom 02	1377	41	0	0.0	0	Pass
04 Apt 02 Bedroom 03	1377	41	0	0.0	0	Pass
04 Apt 03 Bedroom 01	1377	41	0	0.0	0	Pass
04 Apt 03 Bedroom 02	1377	41	2	1.0	0	Pass
05 Apt 01 Bedroom 01	1377	41	0	0.0	0	Pass
05 Apt 01 Bedroom 02	1377	41	0	0.0	0	Pass
05 Apt 01 Lounge	1071	32	5	3.0	0	Pass
05 Apt 02 Bedroom 01	1377	41	0	0.0	0	Pass
05 Apt 02 Lounge	1071	32	6	5.0	0	Pass
05 Apt 02 Bedroom 02	1377	41	0	0.0	0	Pass
05 Apt 03 Lounge	1071	32	17	9.0	0	Pass
06 Apt 01 Lounge	1071	32	12	7.0	0	Pass
06 Apt 02 Bedroom 01	1377	41	0	0.0	0	Pass
06 Apt 02 Bedroom 02	1377	41	0	0.0	0	Pass
06 Apt 02 Lounge	1071	32	18	9.0	0	Pass
06 Apt 03 Lounge	1071	32	26	11.0	1	Fail
07 Apt 01 Lounge	1071	32	12	7.0	0	Pass
07 Apt 02 Bedroom 01	1377	41	2	1.0	0	Pass
07 Apt 02 Bedroom 02	1377	41	2	1.0	0	Pass
07 Apt 02 Lounge	1071	32	32	11.0	1	Fail

1.2 Future London weather results

Zone Name	Occupied Summer Hours	Max. Exceedable Hours	Criterion 1: #Hours Exceeding Comfort Range	Criterion 2: Peak Daily Weighted Exceedance	Criterion 3: #Hours Exceeding Absolute Limit	Result
01 Apt 01 Bedroom 01	1377	41	2	1.0	0	Pass
01 Apt 01 Lounge 01	1071	32	23	13.0	0	Pass
01 Apt 02 Bedrom 01	1377	41	2	1.0	0	Pass
01 Apt 02 Bedroom 02	1377	41	2	1.0	0	Pass
01 Apt 02 Bedroom 03	1377	41	2	1.0	0	Pass
01 Apt 02 Lounge	1071	32	27	10.0	2	Fail
01 Apt 03 Lounge	1071	32	30	12.0	1	Fail
02 Apt 01 Bedroom 01	1377	41	2	1.0	0	Pass
02 Apt 01 Lounge	1071	32	18	12.0	0	Pass
02 Apt 02 Bedroom 01	1377	41	2	1.0	0	Pass
02 Apt 02 Bedroom 02	1377	41	2	1.0	0	Pass
02 Apt 02 Lounge	1071	32	25	10.0	2	Fail
02 Apt 03 Bedroom 01	1377	41	3	2.0	0	Pass
02 Apt 03 Bedroom 02	1377	41	4	3.0	0	Pass
02 Apt 03 Lounge	1071	32	38	13.0	3	Fail
03 Apt 01 Bedroom 01	1377	41	1	1.0	0	Pass
03 Apt 01 Lounge	1071	32	18	11.0	0	Pass
03 Apt 02 Bedroom 01	1377	41	2	1.0	0	Pass
03 Apt 02 Bedroom 2	1377	41	2	1.0	0	Pass
03 Apt 02 Lounge	1071	32	25	10.0	2	Fail
03 Apt 03 Bedroom 01	1377	41	4	3.0	0	Pass
03 Apt 03 Bedroom 02	1377	41	4	3.0	0	Pass
03 Apt 03 Lounge	1071	32	38	13.0	3	Fail
03 Apt 02 Bedroom 03	1377	41	2	1.0	0	Pass
04 Apt 01 Bedroom 01	1377	41	2	1.0	0	Pass
04 Apt 01 Lounge	1071	32	15	9.0	0	Pass
04 Apt 02 Bedroom 01	1377	41	2	1.0	0	Pass
04 Apt 02 Bedroom 02	1377	41	2	1.0	0	Pass
04 Apt 02 Bedroom 03	1377	41	2	1.0	0	Pass
04 Apt 03 Bedroom 01	1377	41	4	2.0	0	Pass
04 Apt 03 Bedroom 02	1377	41	4	3.0	0	Pass
05 Apt 01 Bedroom 01	1377	41	2	1.0	0	Pass
05 Apt 01 Bedroom 02	1377	41	2	1.0	0	Pass
05 Apt 01 Lounge	1071	32	15	9.0	0	Pass
05 Apt 02 Bedroom 01	1377	41	4	2.0	0	Pass
05 Apt 02 Lounge	1071	32	16	11.0	0	Pass
05 Apt 02 Bedroom 02	1377	41	2	1.0	0	Pass
05 Apt 03 Lounge	1071	32	30	12.0	1	Fail
06 Apt 01 Lounge	1071	32	25	13.0	0	Pass
06 Apt 02 Bedroom 01	1377	41	2	1.0	0	Pass
06 Apt 02 Bedroom 02	1377	41	4	3.0	0	Pass
06 Apt 02 Lounge	1071	32	33	12.0	2	Fail
06 Apt 03 Lounge	1071	32	43	14.0	3	Fail

Zone Name	Occupied Summer Hours	Max. Exceedable Hours	Criterion 1: #Hours Exceeding Comfort Range	Criterion 2: Peak Daily Weighted Exceedance	Criterion 3: #Hours Exceeding Absolute Limit	Result
07 Apt 01 Lounge	1071	32	24	13.0	0	Pass
07 Apt 02 Bedroom 01	1377	41	5	3.0	0	Pass
07 Apt 02 Bedroom 02	1377	41	6	4.0	0	Pass
07 Apt 02 Lounge	1071	32	55	12.0	5	Fail