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# Greggs Bakery / Twickenham

## Residential Led Scheme Overheating Report

April 2022  
1823-50-RPT-07



<b>Service:</b>	Building Physics Engineering	<b>Date:</b>	05/04/2022
<b>Subject:</b>	Thermal Comfort and Overheating Risk report	<b>Issue No.:</b>	02
<b>Project:</b>	Greggs Bakery	<b>Status:</b>	For Information

## Executive Summary

The following report demonstrates the predicted thermal performance of the proposed Greggs Bakery flats and townhouses and the predicted temperatures that occupants using the building will expect. This report includes only occupied spaces such as Kitchens/Living Room and Bedrooms. The analysis has been based on CIBSE Technical Memorandum 59 (TM59) 'Design methodology for the assessment of overheating risk in homes', that states:

### 4.2 Criteria for assessing overheating risk in homes

Compliance is based on passing of the following criteria:

- a) For living rooms, kitchens and bedrooms: the number of hours during which  $\Delta T$  is greater than or equal to one degree (K) during the period May to September inclusive shall not be more than 3 percent of occupied hours. (CIBSE TM52 Criterion 1: Hours of exceedance).
- b) For bedrooms only: to guarantee comfort during the sleeping hours the operative temperature in the bedroom from 10PM to 7AM shall not exceed 26°C for more than 1% of annual hours. (Note: 1% of the annual hours between 22:00 and 07:00 for bedrooms is 32 hours, so 33 or more hours above 26°C will be recorded as fail).
- c) For Homes with restricted window openings, the CIBSE fixed temperature test must be followed – all occupied rooms should not exceed an operative temperature of 26°C for more than 3% of annual occupied hours (CIBSE Guide A 2015a)

Criteria 2 and 3 of CIBSE TM52 may fail to be met but both (a) and (c) must be passed for all relevant rooms.

All the flats and townhouses are mechanically ventilated building due to window opening restrictions as a result of acoustic issues. This report demonstrates the effects of mechanically ventilating scenario over a yearly period and has produced the following results and analysis for the current CIBSE DSY1 weather files.

- **259 of 259 assessed mechanically ventilated Bedrooms pass criteria (c) (only pass with cooling)**
- **153 of 153 assessed mechanically ventilated Living rooms pass criteria (c) (only pass with cooling)**

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Whilst the model indicates the predicted operating conditions in line with profiling and utilisation set out within TM59 this may not bear resemblance to the actual operation of the building.

If there is further information regarding the equipment loads and internal heat gains allocated to each room, this would require further simulations of the model to understand the effect

There are several important factors to consider for assessing these spaces:

- How long and how often will the internal equipment gains run?
- How long each space will be occupied for?
- Will the space be used at full capacity during warm summer days?
- Client installing/operating additional equipment adding heat into the spaces over the predicated estimates.

The Building has been simulated against the following weather files:

- DSY1: Moderately warm summer (Required for compliance with overheating criteria)
- DSY2: Short, intense warm spell (Assessed as advisory, not required to achieve a pass)
- DSY3: Long, less intense warm spell (Assessed as advisory, not required to achieve a pass)

## **Introduction**

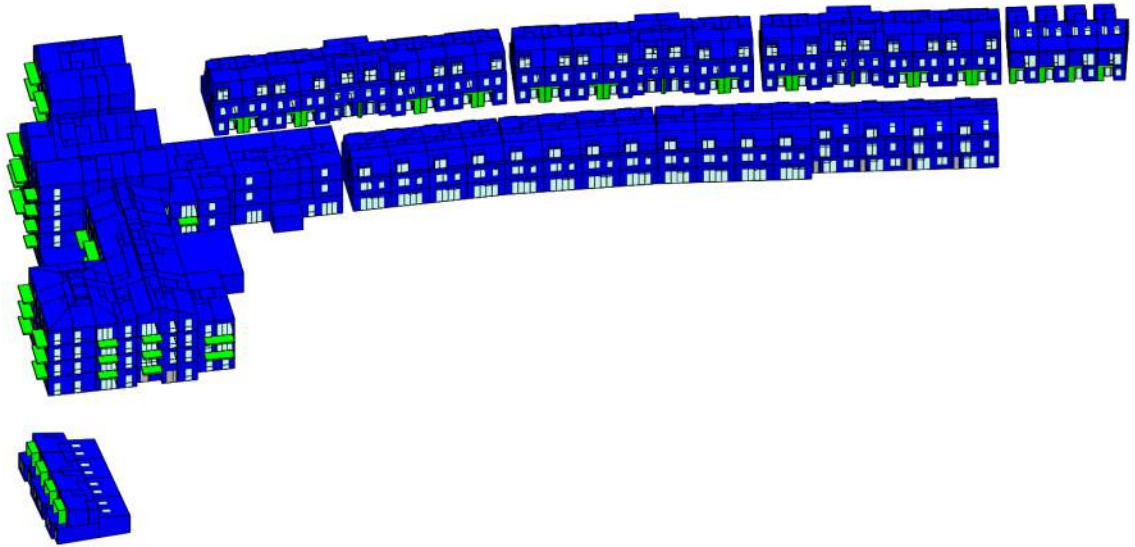
This report assesses the risk of overheating in the occupied spaces: living/dining/kitchen and bedrooms. Calculations in this report are based on Chartered Institute of Building Services Engineers (CIBSE) AM11 Building Performance Modelling 2015 and CIBSE TM59 'Design methodology for the assessment of overheating risk in homes'.

In order to assess the risk of overheating of Greggs Bakery, a thermal model was built in VE IES 2017 software and full thermal dynamic simulation has been undertaken. According to the recommendations in CIBSE TM59 only summer period has been calculated as the risk of overheating in winter time is not likely to occur.

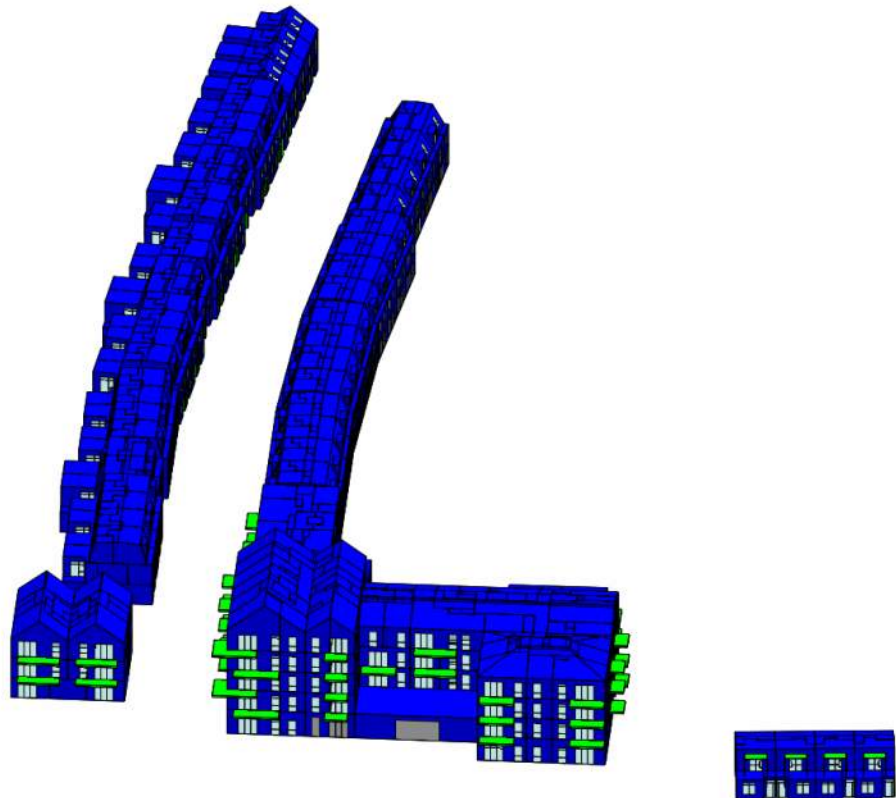
Information inputted into the model has been taken from TM59 Table 2 and accommodated in thermal profiles then applied to all relevant spaces such as bedrooms and living rooms.

**Model Images**

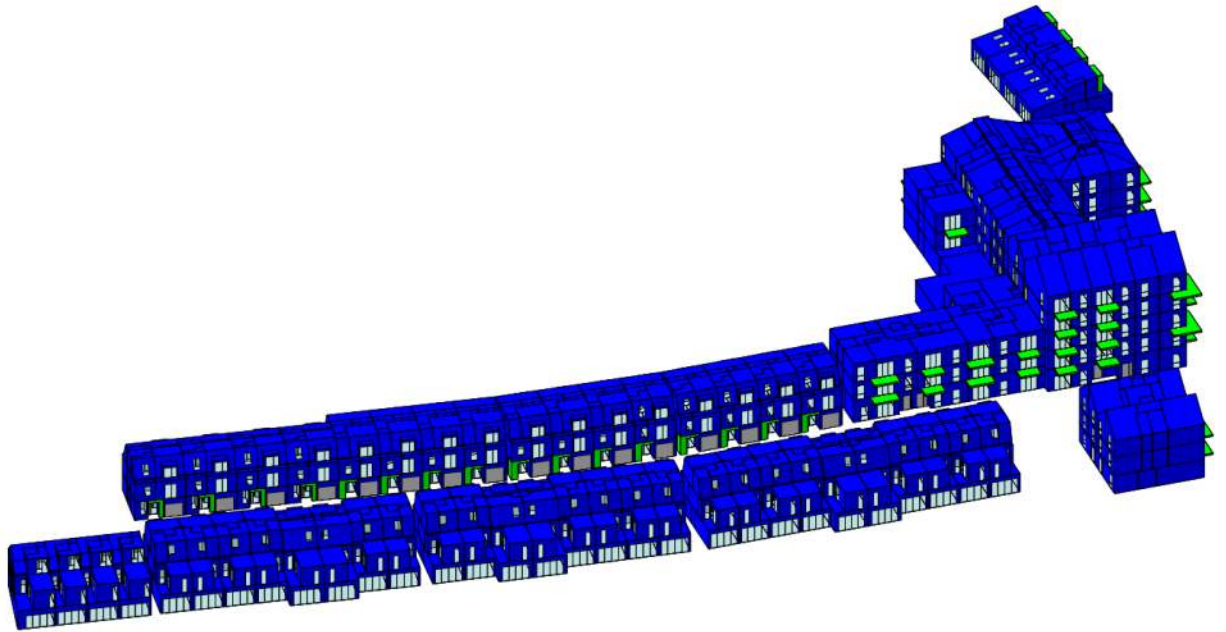
West Façade



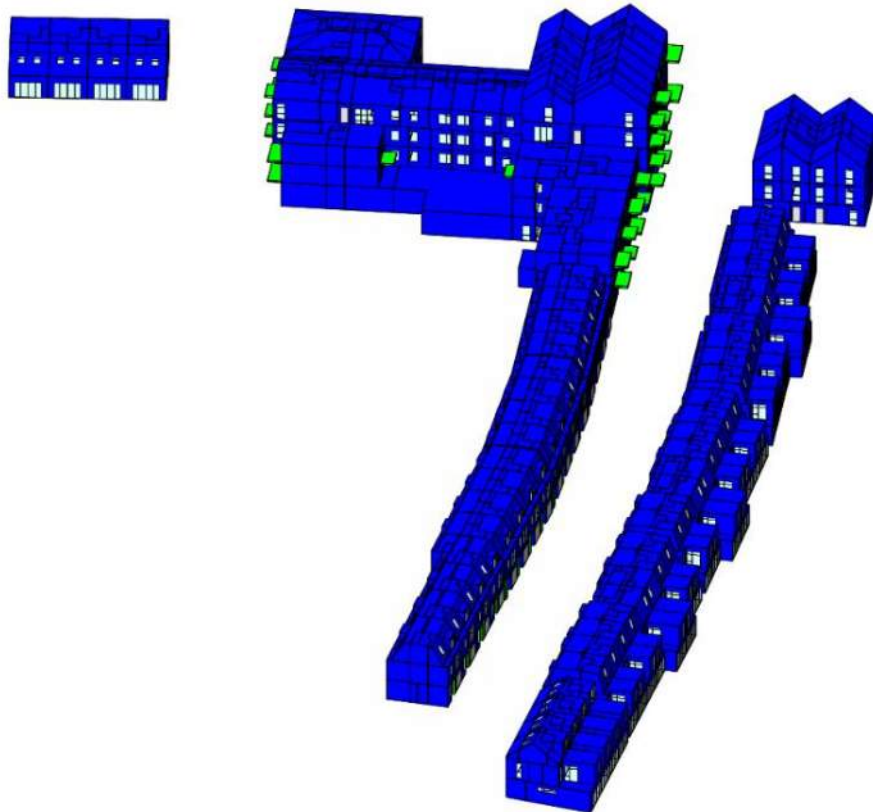
North Façade



East Façade



South Façade



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### **Modelling and Overheating Criteria**

Understanding and predicting how the building will react thermally throughout the days during the summer time and different weather conditions is vitally important to understanding the best operating usage of the building and predicting temperature levels.

The following criteria has been specified for the study of the building:

***CIBSE TM59, 4.3 Criteria for homes predominantly mechanically ventilated.***

*For homes with restricted window openings, the CIBSE fixed temperature test must be followed, i.e all occupied rooms should not exceed an operative temperature of 26°C for more than 3% of the annual occupied hours.*

Results have been produced based on the above criteria for all the weather scenarios and are contained within this report.

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## **Method and Data Input**

All occupied spaces listed above have been constructed using information and drawings provided from Assael Architects as a package of drawings. The following elevations drawings and floor plans have been used to create openings:

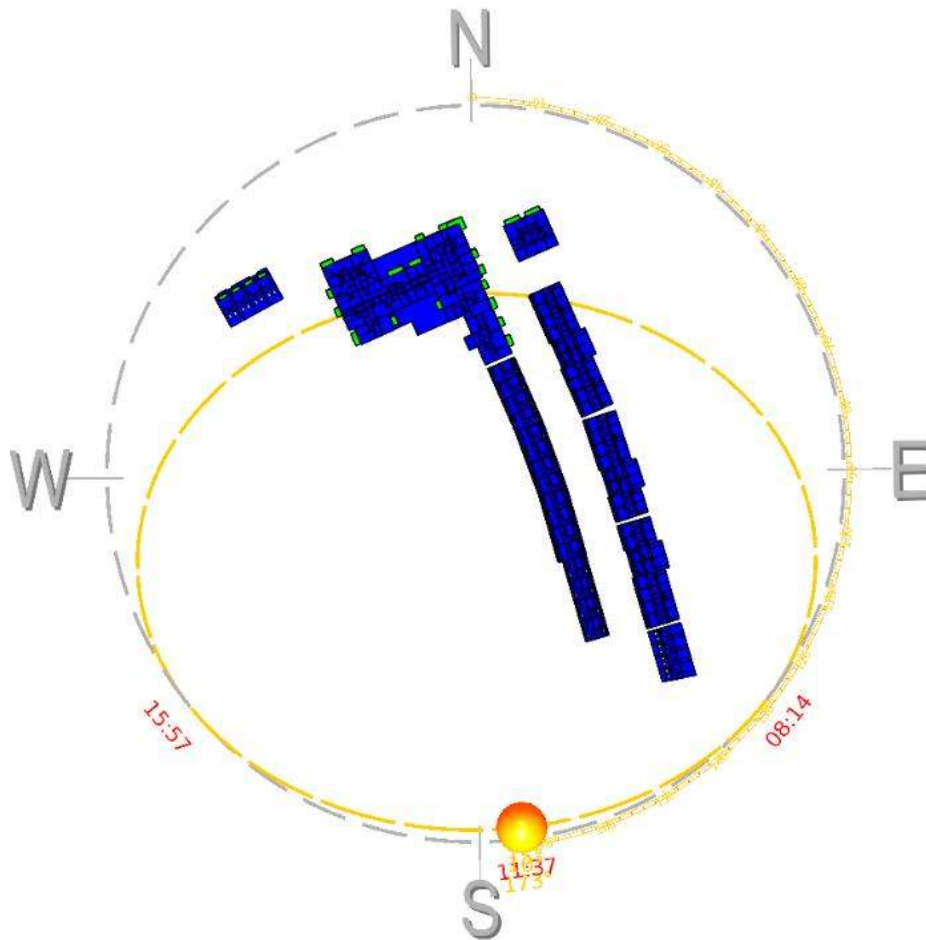
- A2871 200-R16
- A2871 201-R16
- A2871 202-R16
- A2871 203-R15
- A2871 204-R16
- A2871 205-R16
- A2871 401-R2
- A2871 402-R2
- A2871 603-R4
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- A2871 611-R2
- A2871 612-R3
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- A2871 616-R3
- A2871 617-R3
- A2871 620-R1
- A2871 621-R1
- A2871 630-R2
- A2871 631-R2

**Weather Data Files, Site Location & Orientation**

A local weather file must be selected for the model to represent the building location. For this project the weather file used for the analysis is the CIBSE Design Summer Year (DSY) for London (Heathrow-London\_LHR\_DSY1.epw) which is the closest CIBSE location to site. The Design Summer Year consists of an actual 1-year sequence of hourly data, selected from the 20-year data sets to represent a year with a hot summer.

The GLA additionally require the building to be tested against the DSY1, DSY2 and DSY3 weather files in line with TM49

If the actual weather data exceeds the predicted temperatures in the weather file the internal temperatures will exceed the predicted temperatures. The orientation of the model has been set to the actual orientation on the proposed site as showed on architectural drawings.





## Ventilation & Windows

An acoustic restriction has been implemented across all blocks resulting in a requirement to not rely on openable windows to overcome an overheating risk.

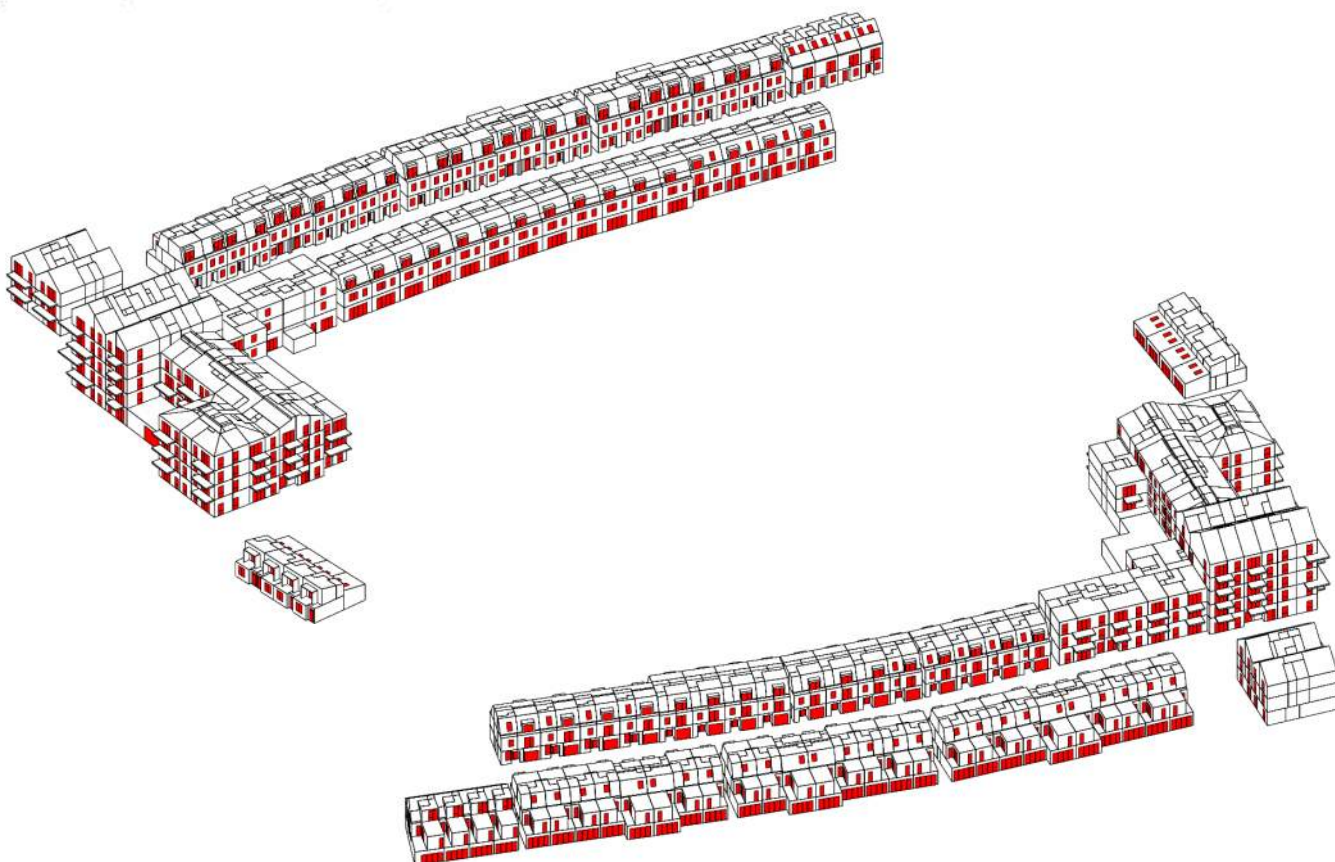
Mechanical ventilation will be supplying fresh air to all occupied areas which will be provided via an enhanced MVHR unit. The chosen MVHR (Zehnder Comfoair) unit allows for three flow settings, they are as follows:

- Trickle- 0.3 l/s/m<sup>2</sup>
- Boost- 0.7 l/s/m<sup>2</sup>
- Summertime Boost- Maximum of 90l/s divided across the occupied areas in each dwelling.

If the MVHR doesn't meet the overheating criteria, cooling will be supplied via Dimplex Smartrads with a cooling capacity of 891W for living spaces and 735W for bedrooms. In this case the background ventilation will be set to a minimum of 0.3l/s/m<sup>2</sup>. The images below illustrates that all the windows across all blocks are closed.

### Opening Type

 XTRN0000 (External window closed)



### Building Fabric and Constructions Data

The following U-Values have been allowed for and assigned within the thermal model.

Element/System		Part L1A 2013	As Designed Specification	Thermal Mass (kJ/m <sup>2</sup> K)
<b>Area Weighted U-values (W/m<sup>2</sup>K)</b>	External Wall	0.30	0.15	21.95
	Exposed Floor	0.25	0.12	85
	Exposed Roof	0.20	0.15	98.75
	Window	2.0	1.3	N/A
	Roof light	2.0	1.3	N/A
	Personnel Doors	N/A	N/A	N/A

### Glazing Thermal Properties

Element/System		Part L 2013 Minimum values	As Designed Specification
<b>Glass Properties</b>	Side-Lit Light Transmittance	-	71%
	Side-Lit Solar Transmittance (g-value)	-	40%
	Top-Lit Light Transmittance	-	N/A
	Top-Lit Solar Transmittance (g-value)	-	N/A

### Thermal Templates

The building has been split into thermal groups based on guidance within TM59 to which internal heat gains have been applied:

- **Living Rooms:** People with 75W sensible and 55 latent gains each; Lighting 2W/m<sup>2</sup>; Equipment heat gains 150W
- **Living Rooms/Kitchens (combined):** People with 75W sensible and 55 latent gains each; Lighting 2W/m<sup>2</sup>; Equipment heat gains 450W,
- **Kitchens:** People with 75W sensible and 55 latent gains each; Lighting 2W/m<sup>2</sup>; Equipment heat gains 300W,

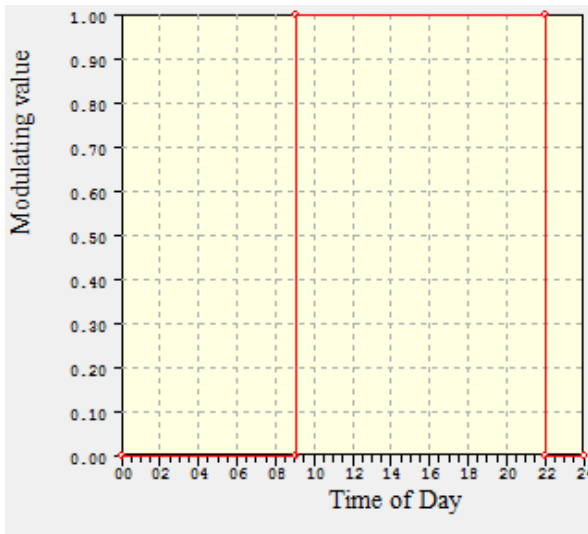
Number of Bedrooms	Occupancy in Living Spaces
1	2
2	2
3	3
4	4

- **Double Bedrooms:** Occupancy 2 people with 75W sensible and 55 latent gains; Lighting 2W/m<sup>2</sup>; Equipment heat gains 80W
- **Single Bedrooms:** Occupancy 1 people with 75W sensible and 55 latent gains; Lighting 2W/m<sup>2</sup>; Equipment heat gains 80W

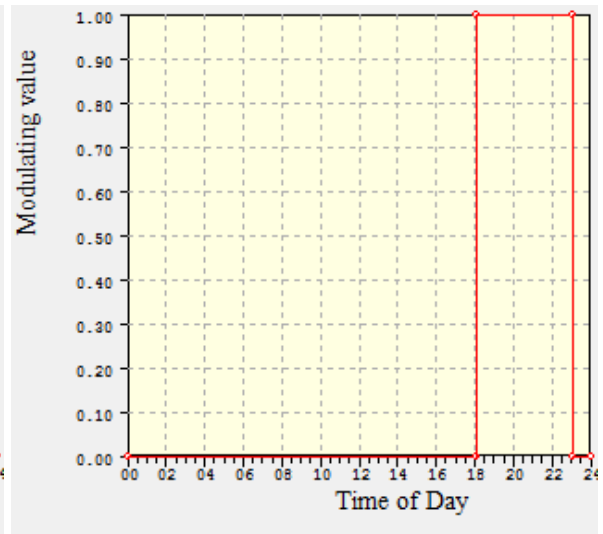
### Thermal template profiles

All of the profiles used for the analysis have been taken from TM59 Design methodology for the assessment of overheating risk in homes.

**Figure 1 - Living rooms/Kitchens occupancy profile**



**Figure 2 - Living rooms/Kitchens/Bedrooms Lighting profile**



**Figure 3 - Living rooms/Kitchens Equipment profile**

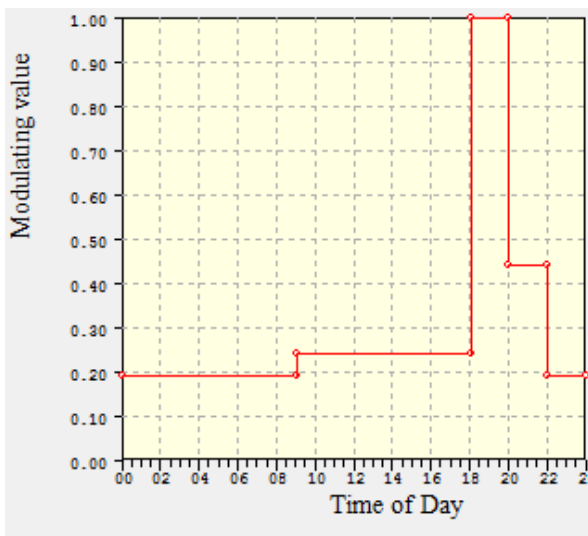


Figure 4 – Bedroom occupancy profile

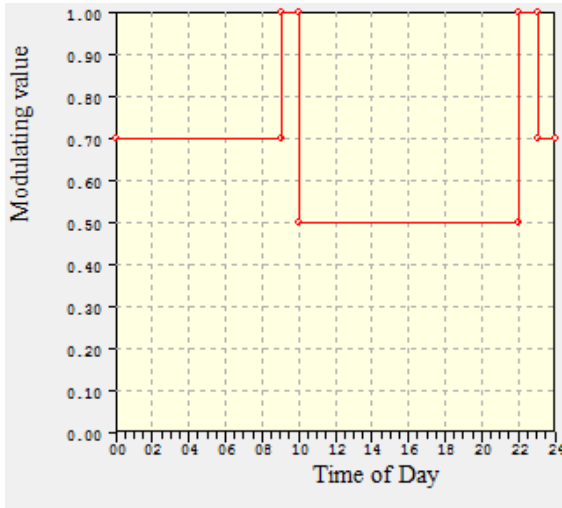


Figure 5 - Bedroom equipment profile

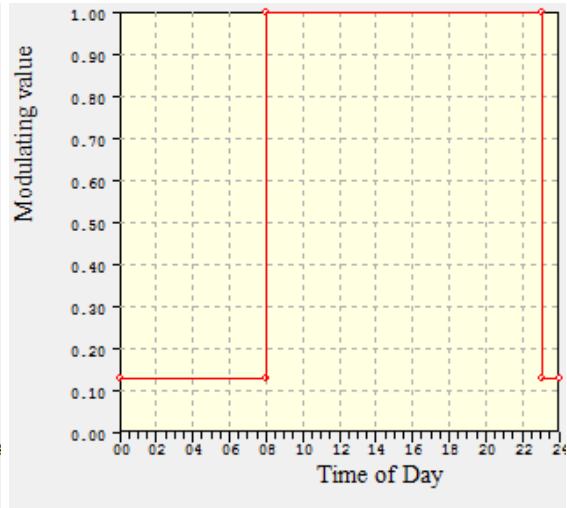


Figure 6 – Kitchen occupancy profile

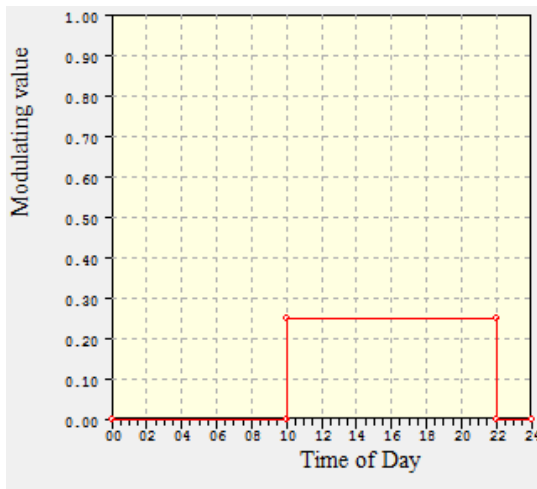
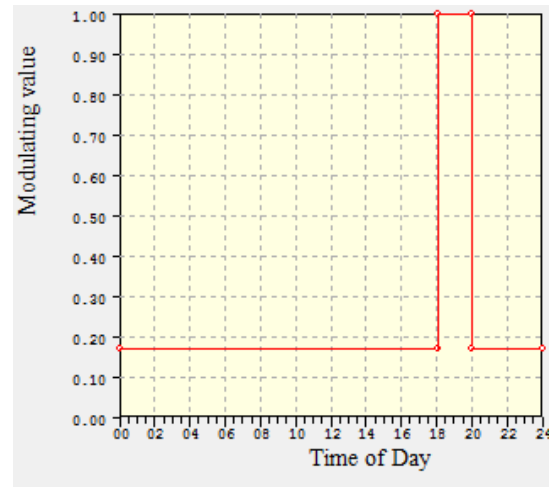


Figure 7 – Kitchen equipment profile



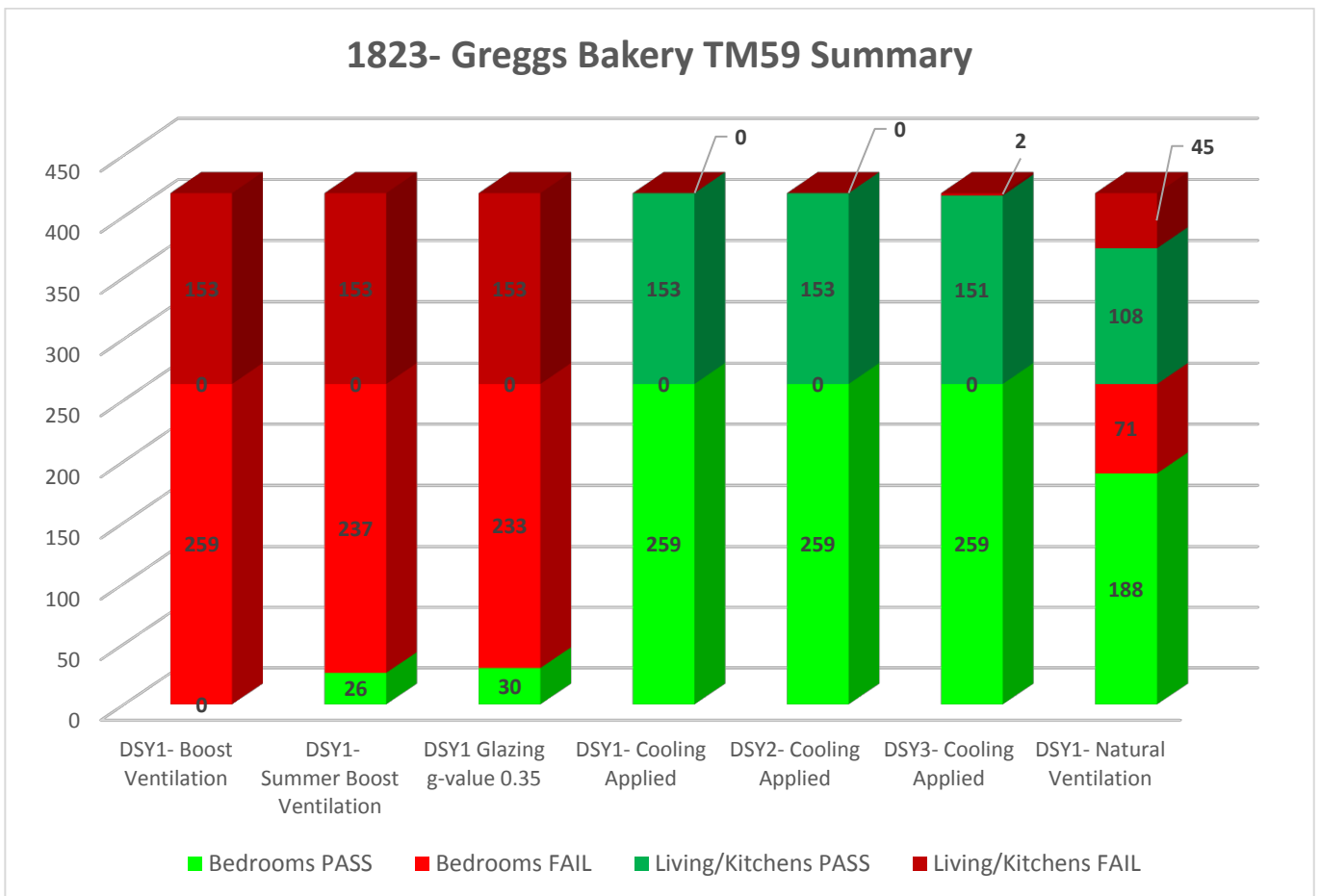
**Results**

**Mechanically ventilated Living Rooms and Bedrooms**

The graph below illustrates the TM59 compliance results for the living rooms and bedrooms based on the following criteria:

- c) For Homes with restricted window openings, the CIBSE fixed temperature test must be followed – all occupied rooms should not exceed an operative temperature of 26°C for more than 3% of annual occupied hours (CIBSE Guide A 2015a)

Several simulations of the model have been run in order to establish the effects of different possible solutions to potentially overcome overheating. Full results can be seen in Appendix 1.



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## **Summary and Conclusion**

Understanding the cause of the overheating is key to limiting the overheating risks and improving occupant comfort levels.

The results identify where or if there is a risk of discomfort to occupants as a result of overheating. The site is located in an area with acoustic restrictions therefore does not allow for openable windows.

### **Result 1- DSY1 Boost ventilation**

The first model iteration was run to check whether overheating could potentially be dealt with by the application of MVHR ventilation at the boost setting of 0.7l/s/m<sup>2</sup> across all occupied spaces. It is evident from the results graph that this is not a sufficient solution as 412 out of 412 rooms fail the overheating criteria.

### **Result 2- DSY1 Summertime Boost ventilation**

The chosen MVHR unit has the peak capacity of providing 90l/s of fresh air which is divided between all bedrooms, living and kitchen areas in each dwelling. The results show that this step is not sufficient to satisfy the risk of overheating as only 26 bedrooms out of a total of 412 occupied spaces pass the overheating criteria.

### **Result 3- DSY1 Glazing g-value reduced**

The purpose of changing the g- value from 0.4 to 0.35 is to establish the effects of lower solar transmission has on the spaces. It is evident that this is still not an adequate solution as only 30 bedrooms out of 412 occupied spaces pass the TM59 analysis.

### **Result 4- DSY1 Cooling Applied**

This model iteration has been applied with 891W and 735W of cooling capacity for the living and bedroom spaces respectively. The set point temperature is 22°C and the ventilation rate is reduced to a minimum part F requirement of 0.3l/s/m<sup>2</sup>. This solution has proven to be the most effective in overcoming the risk of overheating as 412 out of 412 spaces pass the criteria specified in CIBSE TM59: Design Methodology for The Assessment of Overheating Risk in Homes.

### **Result 5- DSY2 Cooling Applied**

The cooling capacity applied to the spaces is sufficient enough to overcome over heating under the DSY2 weather file.

### **Result 6- DSY3 Cooling Applied**

There is a risk of overheating in two living room spaces under DSY3, however it should be noted that this weather file represents extreme conditions

### **Result 7- DSY1 Natural ventilation**

This iteration was carried out to establish whether a natural ventilation solution, aided by mechanical ventilation will be sufficient enough to overcome the risk of overheating. Although it has been suggested that the windows cannot be used due to acoustic reasons, the occupants will still have the option of opening their own windows. We have considered and assessed this scenario.

The window opening types have been set out below. It is evident that this is not a suitable solution as 42 out of 153 living rooms and 71 out of 259 bedrooms fail the overheating criteria. This is a result of insufficient window openable areas in some spaces or excessive glazing in others.

### **Assessed Openable Windows**

All windows types have been applied as per architectural windows schedules with windows free area set to match the requirements to pass the overheating analysis. The different openable area types of windows are summarised in the table below. The windows open when internal temperatures reach 22°C.

Due to the acoustic restrictions, the most suitable solution is applying cooling to the occupied spaces. The biggest influencing factor of overheating is the solar gains to the spaces with restricted window openings which cannot utilise natural ventilation to overcome the risk of overheating. Therefore further suggested steps could be to minimise this risk by:

- The application of internal blinds
- Minimising the amount of glazing

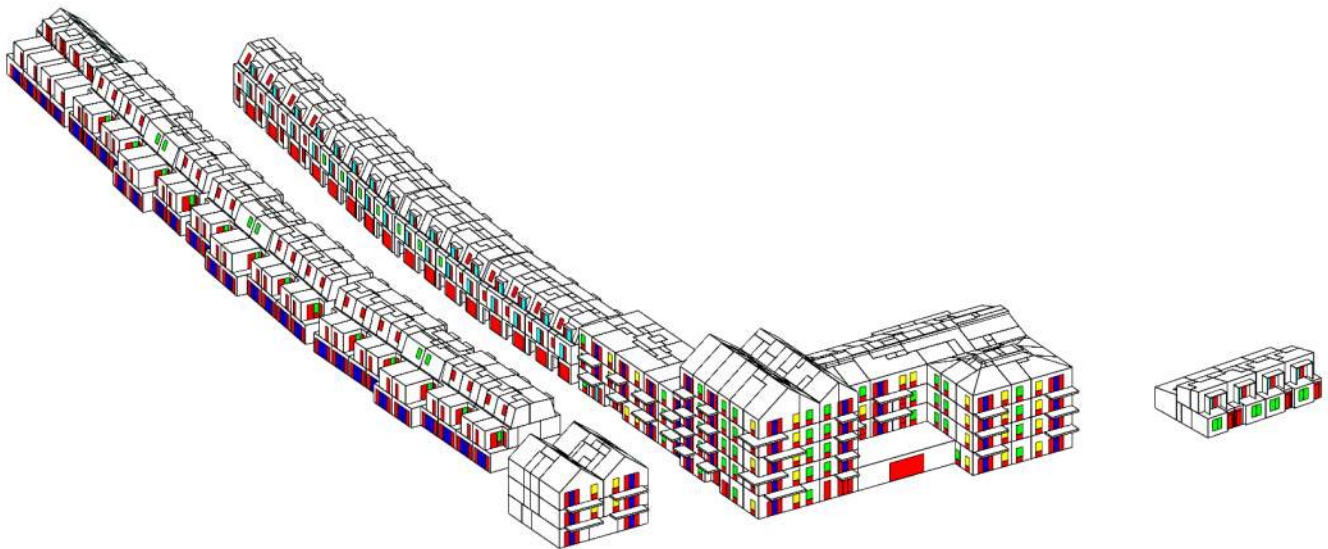
Ext. Glazing Type:	Description	Openable Area (%)
1	Balcony Sliding Door	90%
2	Standard opening window across building	25%



North-east Façade

Opening Type

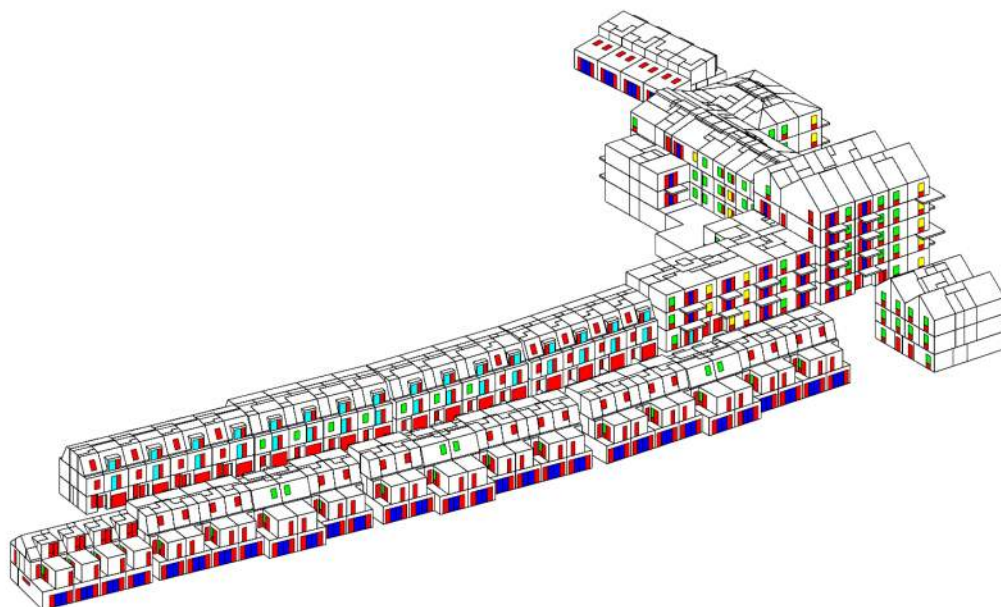
- XTRN0000 (External window closed)
- XTRN0004 (Bed window open 25%)
- XTRN0007 (Living sliding door open 90%)
- XTRN0008 (BED sliding door open 90%)
- XTRN0009 (Living window open 25%)



East Façade

Opening Type

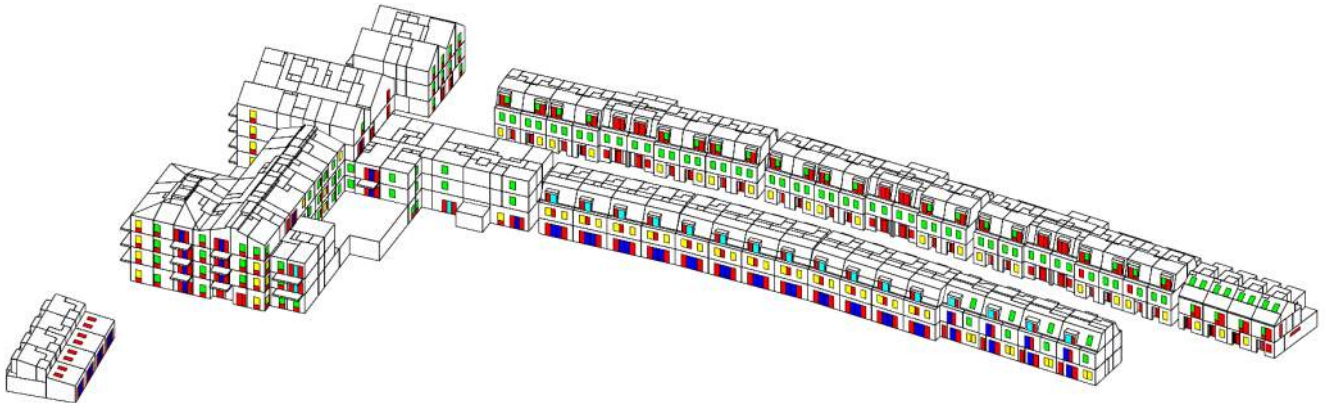
- XTRN0000 (External window closed)
- XTRN0004 (Bed window open 25%)
- XTRN0007 (Living sliding door open 90%)
- XTRN0008 (BED sliding door open 90%)
- XTRN0009 (Living window open 25%)



West façade

Opening Type

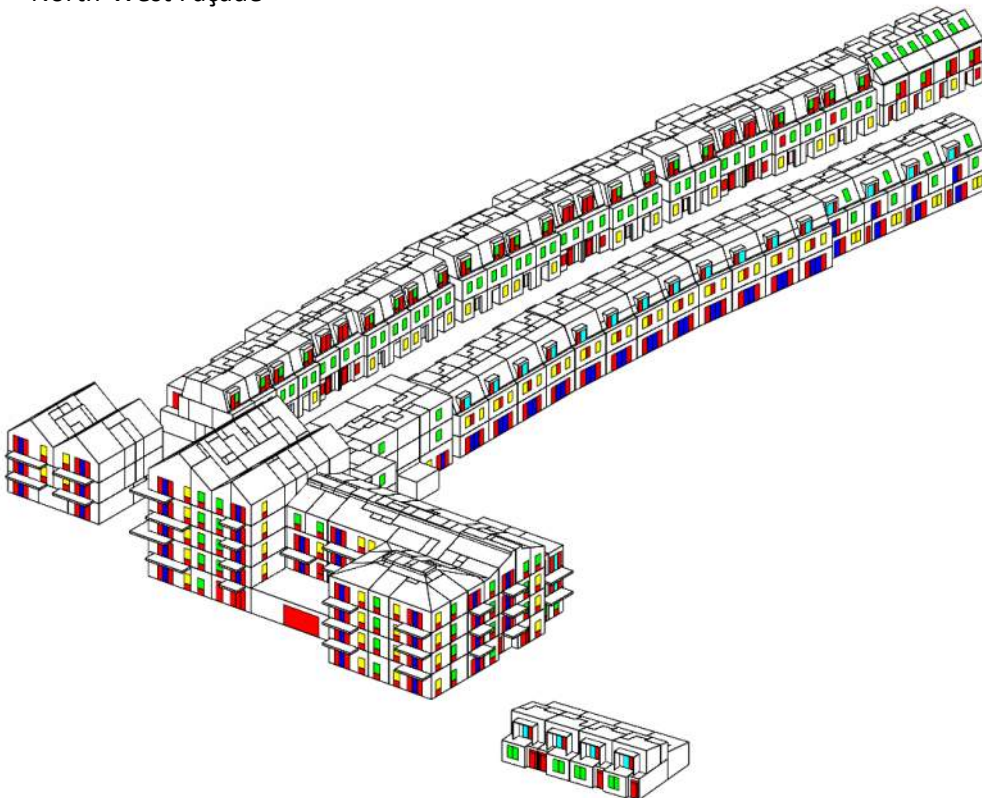
- XTRN0000 (External window closed)
- XTRN0004 (Bed window open 25%)
- XTRN0007 (Living sliding door open 90%)
- XTRN0008 (BED sliding door open 90%)
- XTRN0009 (Living window open 25%)



North-West Façade

Opening Type

- XTRN0000 (External window closed)
- XTRN0004 (Bed window open 25%)
- XTRN0007 (Living sliding door open 90%)
- XTRN0008 (BED sliding door open 90%)
- XTRN0009 (Living window open 25%)



## Appendix 1

### Results DSY 1

#### Mechanically ventilated Bedrooms- Boost Ventilation

*For Homes with restricted window openings, the CIBSE fixed temperature test must be followed – all occupied rooms should not exceed an operative temperature of 26 °C for more than 3% of annual occupied hours*

Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K )	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-E0-1-Bedroom	100	2.2	PASS	119	138	257	7.8%	FAIL	30.6
00-E0-2-Bedroom	100	2.6	PASS	121	150	271	8.2%	FAIL	30.9
00-F0-2-Bedroom	100	1.9	PASS	138	169	307	9.3%	FAIL	30.7
00-F0-5-Bedroom 01	100	2.3	PASS	137	165	302	9.2%	FAIL	30.4
00-F0-5-Bedroom 02	100	2.2	PASS	132	147	279	8.5%	FAIL	30.8
00-F0-6-Bedroom	100	0.5	PASS	134	132	266	8.1%	FAIL	29.9
00-F0-8 -Bedroom 02	100	0.1	PASS	82	59	141	4.3%	FAIL	29.4
01-F1-14-Bedroom	100	0	PASS	71	35	106	3.2%	FAIL	29.0
01-F1-15-Bedroom 02	100	1.3	PASS	136	133	269	8.2%	FAIL	30.2
01-F1-2-Bedroom 02	100	0.1	PASS	109	90	199	6.1%	FAIL	29.5
01-F1-3-Bedroom 01	100	0	PASS	91	61	152	4.6%	FAIL	29.3
01-F1-3-Bedroom 03	100	2.5	PASS	136	164	300	9.1%	FAIL	30.6
01-F1-4-Bedroom 01	100	0.3	PASS	107	97	204	6.2%	FAIL	29.6
02-F2-14-Bedroom	100	1.3	PASS	122	113	235	7.2%	FAIL	30.3
02-F2-2-Bedroom 02	100	1.4	PASS	138	183	321	9.8%	FAIL	30.3
02-F2-3-Bedroom 01	100	1.3	PASS	137	164	301	9.2%	FAIL	30.3
03-F3-2-Bedroom 02	100	3	FAIL	138	207	345	10.5%	FAIL	30.5
04-F4-4-Bedroom 02	100	0.2	PASS	90	100	190	5.8%	FAIL	29.7
00-A0-1 -Bedroom 01	100	10.4	FAIL	131	162	293	8.9%	FAIL	33.5
00-A0-2 -Bedroom 01	100	12.3	FAIL	153	253	406	12.4%	FAIL	31.9
00-A0-2 -Bedroom 02	100	19.1	FAIL	176	374	550	16.7%	FAIL	33.0
00-F0-1-Bedroom 01	100	32.5	FAIL	223	536	759	23.1%	FAIL	35.8
00-F0-1-Bedroom 02	100	23.2	FAIL	196	474	670	20.4%	FAIL	34.6
00-F0-3-Bedroom 01	100	11.7	FAIL	169	352	521	15.9%	FAIL	33.0
00-F0-3-Bedroom 02	100	12.6	FAIL	177	320	497	15.1%	FAIL	33.0
00-F0-4-Bedroom	100	10	FAIL	165	245	410	12.5%	FAIL	32.2
00-F0-7 -Bedroom	100	19.4	FAIL	181	438	619	18.8%	FAIL	32.5
00-F0-8 -Bedroom 01	100	9.7	FAIL	166	319	485	14.8%	FAIL	31.6
00-HT8(1)-Bedroom 01	100	35.3	FAIL	201	568	769	23.4%	FAIL	35.5
00-HT8(2)-Bedroom 01	100	36	FAIL	202	568	770	23.4%	FAIL	35.5
00-HT8(3)-Bedroom 01	100	36.1	FAIL	202	571	773	23.5%	FAIL	35.5

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K )	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-HT8(4)-Bedroom 01	100	31.9	FAIL	194	546	740	22.5%	FAIL	35.3
01-A2-1-Bedroom 01	100	3.4	FAIL	141	236	377	11.5%	FAIL	31.1
01-A2-2-Bedroom 01	100	14.8	FAIL	182	439	621	18.9%	FAIL	33.0
01-A2-2-Bedroom 02	100	22.1	FAIL	185	453	638	19.4%	FAIL	33.3
02-E0-1-Bedroom 01	100	15	FAIL	162	388	550	16.7%	FAIL	32.7
01-E0-1-Bedroom 01	100	16.4	FAIL	169	354	523	15.9%	FAIL	32.8
01-E0-1-Bedroom 02	100	17.4	FAIL	170	314	484	14.7%	FAIL	32.7
02-E0-1-Bedroom 02	100	16.1	FAIL	167	395	562	17.1%	FAIL	32.8
01-E0-2-Bedroom 01	100	19.8	FAIL	176	390	566	17.2%	FAIL	33.2
02-E0-2-Bedroom 01	100	16.5	FAIL	167	412	579	17.6%	FAIL	32.9
02-E0-2-Bedroom 02	100	16.2	FAIL	168	401	569	17.3%	FAIL	32.8
01-E0-2-Bedroom 02	100	17.4	FAIL	170	320	490	14.9%	FAIL	32.7
01-F1-1-Bedroom 01	100	42	FAIL	244	602	846	25.8%	FAIL	36.8
01-F1-1-Bedroom 02	100	32.4	FAIL	214	531	745	22.7%	FAIL	35.5
01-F1-10-Bedroom 01	100	11	FAIL	168	307	475	14.5%	FAIL	31.7
01-F1-11-Bedroom 01	100	17	FAIL	188	383	571	17.4%	FAIL	32.3
01-F1-12-Bedroom 01	100	31.3	FAIL	201	518	719	21.9%	FAIL	33.5
01-F1-13-Bedroom 01	100	23	FAIL	227	546	773	23.5%	FAIL	33.0
01-F1-13-Bedroom 02	100	17.4	FAIL	196	438	634	19.3%	FAIL	33.4
01-F1-15-Bedroom 01	100	4.4	FAIL	147	178	325	9.9%	FAIL	31.0
01-F1-2-Bedroom 01	100	11.8	FAIL	171	357	528	16.1%	FAIL	32.3
01-F1-3-Bedroom 02	100	7.8	FAIL	143	176	319	9.7%	FAIL	31.6
01-F1-5-Bedroom 01	100	30	FAIL	211	495	706	21.5%	FAIL	36.2
01-F1-5-Bedroom 02	100	26.6	FAIL	227	507	734	22.3%	FAIL	35.0
01-F1-6-Bedroom 01	100	19.2	FAIL	200	340	540	16.4%	FAIL	33.7
01-F1-7-Bedroom 01	100	26.2	FAIL	231	486	717	21.8%	FAIL	35.0
01-F1-8-Bedroom 01	100	12.2	FAIL	169	315	484	14.7%	FAIL	33.0
01-F1-9-Bedroom 01	100	21.6	FAIL	186	435	621	18.9%	FAIL	33.1
01-F1-9-Bedroom 02	100	18.4	FAIL	183	405	588	17.9%	FAIL	33.8
01-HT2(1)-Bedroom 01	100	67.7	FAIL	262	745	1007	30.7%	FAIL	41.2
01-HT2(1)-Bedroom 02	100	52.4	FAIL	219	627	846	25.8%	FAIL	37.9
01-HT2(2)-Bedroom 01	100	67	FAIL	262	740	1002	30.5%	FAIL	41.0
01-HT2(2)-Bedroom 02	100	52.3	FAIL	219	626	845	25.7%	FAIL	37.9
01-HT2(3)-Bedroom 01	100	63.2	FAIL	255	718	973	29.6%	FAIL	40.3
01-HT2(3)-Bedroom 02	100	49.9	FAIL	217	603	820	25.0%	FAIL	37.7
01-HT2A-Bedroom 01	100	68.7	FAIL	258	738	996	30.3%	FAIL	41.7
01-HT2A-Bedroom 02	100	62	FAIL	239	673	912	27.8%	FAIL	39.4
01-HT3(1)-Bedroom 01	100	39.9	FAIL	191	538	729	22.2%	FAIL	36.2
01-HT3(1)-Bedroom 02	100	38.7	FAIL	210	587	797	24.3%	FAIL	36.7

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K )	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-HT3(10)-Bedroom 01	100	51.9	FAIL	209	575	784	23.9%	FAIL	38.2
01-HT3(10)-Bedroom 02	100	47.3	FAIL	222	635	857	26.1%	FAIL	37.5
01-HT3(11)-Bedroom 01	100	45.4	FAIL	203	565	768	23.4%	FAIL	36.6
01-HT3(11)-Bedroom 02	100	47.9	FAIL	226	641	867	26.4%	FAIL	37.5
01-HT3(12)-Bedroom 01	100	50.7	FAIL	209	573	782	23.8%	FAIL	38.0
01-HT3(12)-Bedroom 02	100	48.1	FAIL	226	641	867	26.4%	FAIL	37.5
01-HT3(13)-Bedroom 01	100	43.5	FAIL	198	557	755	23.0%	FAIL	36.3
01-HT3(13)-Bedroom 02	100	46.7	FAIL	220	632	852	25.9%	FAIL	37.4
01-HT3(14)-Bedroom 01	100	51.7	FAIL	210	571	781	23.8%	FAIL	38.1
01-HT3(14)-Bedroom 02	100	43.8	FAIL	217	617	834	25.4%	FAIL	37.1
01-HT3(15)-Bedroom 01	100	41.8	FAIL	191	547	738	22.5%	FAIL	36.4
01-HT3(15)-Bedroom 02	100	42.1	FAIL	214	606	820	25.0%	FAIL	36.9
01-HT3(16)-Bedroom 01	100	49.6	FAIL	203	565	768	23.4%	FAIL	37.9
01-HT3(16)-Bedroom 02	100	46.3	FAIL	219	627	846	25.8%	FAIL	37.4
01-HT3(17)-Bedroom 01	100	45.1	FAIL	203	568	771	23.5%	FAIL	36.4
01-HT3(17)-Bedroom 02	100	48.3	FAIL	227	643	870	26.5%	FAIL	37.5
01-HT3(18)-Bedroom 01	100	52.6	FAIL	212	582	794	24.2%	FAIL	38.3
01-HT3(18)-Bedroom 02	100	48.6	FAIL	228	645	873	26.6%	FAIL	37.6
01-HT3(19)-Bedroom 01	100	46.3	FAIL	207	570	777	23.7%	FAIL	36.7
01-HT3(19)-Bedroom 02	100	47.9	FAIL	226	642	868	26.4%	FAIL	37.5
01-HT3(2)-Bedroom 01	100	49.5	FAIL	202	559	761	23.2%	FAIL	37.9
01-HT3(2)-Bedroom 02	100	44	FAIL	216	611	827	25.2%	FAIL	37.2
01-HT3(20)-Bedroom 01	100	52.2	FAIL	213	577	790	24.0%	FAIL	38.2
01-HT3(20)-Bedroom 02	100	45.5	FAIL	220	626	846	25.8%	FAIL	37.3
01-HT3(3)-Bedroom 01	100	42.5	FAIL	197	553	750	22.8%	FAIL	36.4
01-HT3(3)-Bedroom 02	100	45.5	FAIL	218	619	837	25.5%	FAIL	37.3
01-HT3(4)-Bedroom 01	100	48.8	FAIL	200	561	761	23.2%	FAIL	37.8
01-HT3(4)-Bedroom 02	100	46.2	FAIL	221	628	849	25.8%	FAIL	37.4
01-HT3(5)-Bedroom 01	100	42.5	FAIL	197	555	752	22.9%	FAIL	36.2
01-HT3(5)-Bedroom 02	100	47.8	FAIL	227	639	866	26.4%	FAIL	37.5
01-HT3(6)-Bedroom 01	100	51.3	FAIL	209	572	781	23.8%	FAIL	38.1
01-HT3(6)-Bedroom 02	100	48.4	FAIL	228	646	874	26.6%	FAIL	37.6
01-HT3(7)-Bedroom 01	100	44.5	FAIL	202	562	764	23.3%	FAIL	36.6
01-HT3(7)-Bedroom 02	100	47.5	FAIL	225	641	866	26.4%	FAIL	37.5
01-HT3(8)-Bedroom 01	100	52.3	FAIL	211	575	786	23.9%	FAIL	38.2
01-HT3(8)-Bedroom 02	100	44.6	FAIL	220	626	846	25.8%	FAIL	37.2
01-HT3(9)-Bedroom 01	100	43	FAIL	198	552	750	22.8%	FAIL	36.5
01-HT3(9)-Bedroom 02	100	43	FAIL	214	613	827	25.2%	FAIL	37.0
01-HT4(1)-Bedroom 01	100	33.6	FAIL	181	519	700	21.3%	FAIL	35.2

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K )	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-HT4(1)-Bedroom 02	100	47.9	FAIL	225	623	848	25.8%	FAIL	38.0
01-HT4(2)-Bedroom 01	100	40	FAIL	191	535	726	22.1%	FAIL	36.6
01-HT4(2)-Bedroom 02	100	48.8	FAIL	229	627	856	26.1%	FAIL	38.1
01-HT4(3)-Bedroom 01	100	35.2	FAIL	188	529	717	21.8%	FAIL	35.4
01-HT4(3)-Bedroom 02	100	49	FAIL	230	629	859	26.1%	FAIL	38.1
01-HT4(4)-Bedroom 01	100	40.8	FAIL	191	543	734	22.3%	FAIL	36.6
01-HT4(4)-Bedroom 02	100	49	FAIL	228	629	857	26.1%	FAIL	38.1
01-HT4(5)-Bedroom 01	100	35.6	FAIL	188	529	717	21.8%	FAIL	35.4
01-HT4(5)-Bedroom 02	100	48.7	FAIL	225	626	851	25.9%	FAIL	38.1
01-HT4(6)-Bedroom 01	100	41.4	FAIL	194	545	739	22.5%	FAIL	36.7
01-HT4(6)-Bedroom 02	100	49.5	FAIL	229	632	861	26.2%	FAIL	38.2
01-HT5(1)-Bedroom 01	100	30.8	FAIL	197	496	693	21.1%	FAIL	34.2
01-HT5(1)-Bedroom 02	100	41.8	FAIL	248	616	864	26.3%	FAIL	34.4
01-HT5(2)-Bedroom 01	100	33.5	FAIL	209	521	730	22.2%	FAIL	34.3
01-HT5(2)-Bedroom 02	100	42	FAIL	248	619	867	26.4%	FAIL	34.4
01-HT5(3)-Bedroom 01	100	31.9	FAIL	204	516	720	21.9%	FAIL	34.3
01-HT5(3)-Bedroom 02	100	39.7	FAIL	238	613	851	25.9%	FAIL	34.4
01-HT5(4)-Bedroom 01	100	29.6	FAIL	192	489	681	20.7%	FAIL	34.1
01-HT5(4)-Bedroom 02	100	41.6	FAIL	245	613	858	26.1%	FAIL	34.4
01-HT5(5)-Bedroom 01	100	34.3	FAIL	211	521	732	22.3%	FAIL	34.5
01-HT5(5)-Bedroom 02	100	44.3	FAIL	250	627	877	26.7%	FAIL	34.6
01-HT5(6)-Bedroom 01	100	35.6	FAIL	214	534	748	22.8%	FAIL	34.6
01-HT5(6)-Bedroom 02	100	45.9	FAIL	254	635	889	27.1%	FAIL	34.6
01-HT5(7)-Bedroom 01	100	36.6	FAIL	216	544	760	23.1%	FAIL	34.7
01-HT5(7)-Bedroom 02	100	46.2	FAIL	256	637	893	27.2%	FAIL	34.7
01-HT6(1)-Bedroom 01	100	20.8	FAIL	169	389	558	17.0%	FAIL	33.0
01-HT6(2)-Bedroom 01	100	23	FAIL	176	414	590	18.0%	FAIL	33.3
01-HT6(3)-Bedroom 01	100	23.1	FAIL	176	416	592	18.0%	FAIL	33.3
01-HT6(4)-Bedroom 01	100	21.5	FAIL	172	399	571	17.4%	FAIL	33.2
01-HT6(5)-Bedroom 01	100	23.6	FAIL	177	419	596	18.1%	FAIL	33.4
01-HT7(1)-Bedroom 01	100	53	FAIL	269	701	970	29.5%	FAIL	37.3
01-HT7(1)-Bedroom 02	100	35.6	FAIL	215	523	738	22.5%	FAIL	34.3
01-HT7(2)-Bedroom 01	100	54.5	FAIL	271	707	978	29.8%	FAIL	37.4
01-HT7(2)-Bedroom 02	100	36.1	FAIL	214	530	744	22.6%	FAIL	34.4
01-HT7(3)-Bedroom 01	100	55	FAIL	271	708	979	29.8%	FAIL	37.5
01-HT7(3)-Bedroom 02	100	36.2	FAIL	214	532	746	22.7%	FAIL	34.4
01-HT7(4)-Bedroom 01	100	55.8	FAIL	266	731	997	30.4%	FAIL	37.4
01-HT7(4)-Bedroom 02	100	36.2	FAIL	213	533	746	22.7%	FAIL	34.5
01-HT8(1)-Bedroom 02	100	23.4	FAIL	183	505	688	20.9%	FAIL	34.5

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K )	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-HT8(2)-Bedroom 02	100	25.1	FAIL	185	513	698	21.2%	FAIL	34.4
01-HT8(3)-Bedroom 02	100	24.9	FAIL	183	510	693	21.1%	FAIL	34.4
01-HT8(4)-Bedroom 02	100	22	FAIL	178	496	674	20.5%	FAIL	34.3
02-A2-1-Bedroom 01	100	3.7	FAIL	138	237	375	11.4%	FAIL	31.2
02-A2-2-Bedroom 01	100	14.1	FAIL	173	414	587	17.9%	FAIL	33.0
02-A2-2-Bedroom 02	100	27.5	FAIL	187	484	671	20.4%	FAIL	33.9
02-F2-1-Bedroom 01	100	43.7	FAIL	248	611	859	26.1%	FAIL	37.0
02-F2-1-Bedroom 02	100	34.2	FAIL	222	542	764	23.3%	FAIL	35.7
02-F2-10-Bedroom 01	100	27.5	FAIL	199	502	701	21.3%	FAIL	33.3
02-F2-11-Bedroom 01	100	27.8	FAIL	207	489	696	21.2%	FAIL	33.3
02-F2-12-Bedroom 01	100	35.1	FAIL	206	532	738	22.5%	FAIL	34.1
02-F2-13-Bedroom 01	100	30	FAIL	232	577	809	24.6%	FAIL	33.6
02-F2-13-Bedroom 02	100	24.1	FAIL	213	499	712	21.7%	FAIL	34.4
02-F2-15-Bedroom 01	100	16	FAIL	185	382	567	17.3%	FAIL	32.6
02-F2-15-Bedroom 02	100	9.5	FAIL	169	316	485	14.8%	FAIL	31.4
02-F2-2-Bedroom 01	100	19	FAIL	182	427	609	18.5%	FAIL	33.0
02-F2-3-Bedroom 02	100	20.2	FAIL	183	384	567	17.3%	FAIL	33.3
02-F2-3-Bedroom 03	100	14.3	FAIL	177	387	564	17.2%	FAIL	32.3
02-F2-4-Bedroom 01	100	4.8	FAIL	156	281	437	13.3%	FAIL	31.1
02-F2-5-Bedroom 01	100	40.2	FAIL	228	546	774	23.6%	FAIL	38.6
02-F2-5-Bedroom 02	100	36.5	FAIL	237	555	792	24.1%	FAIL	36.6
02-F2-6-Bedroom 01	100	27.8	FAIL	231	492	723	22.0%	FAIL	35.2
02-F2-7-Bedroom 01	100	31.7	FAIL	236	535	771	23.5%	FAIL	35.7
02-F2-8-Bedroom 01	100	24.2	FAIL	201	479	680	20.7%	FAIL	34.6
02-F2-9-Bedroom 01	100	33.8	FAIL	204	534	738	22.5%	FAIL	34.2
02-F2-9-Bedroom 02	100	26.3	FAIL	197	486	683	20.8%	FAIL	34.7
02-HT2(1)-Bedroom 03	100	75.9	FAIL	278	809	1087	33.1%	FAIL	41.8
02-HT2(2)-Bedroom 03	100	75.6	FAIL	278	807	1085	33.0%	FAIL	41.8
02-HT2(3)-Bedroom 03	100	73.7	FAIL	272	786	1058	32.2%	FAIL	41.4
02-HT2A-Bedroom 03	100	74.4	FAIL	275	803	1078	32.8%	FAIL	41.4
02-HT3(1)-Bedroom 03	100	32	FAIL	195	532	727	22.1%	FAIL	36.2
02-HT3(10)-Bedroom 03	100	41.6	FAIL	209	584	793	24.1%	FAIL	37.0
02-HT3(11)-Bedroom 03	100	42.7	FAIL	211	594	805	24.5%	FAIL	37.1
02-HT3(12)-Bedroom 03	100	44.1	FAIL	212	605	817	24.9%	FAIL	36.9
02-HT3(13)-Bedroom 03	100	42.5	FAIL	210	596	806	24.5%	FAIL	36.8
02-HT3(14)-Bedroom 03	100	38.9	FAIL	205	570	775	23.6%	FAIL	36.7
02-HT3(15)-Bedroom 03	100	37	FAIL	202	561	763	23.2%	FAIL	36.5
02-HT3(16)-Bedroom 03	100	42.1	FAIL	210	592	802	24.4%	FAIL	36.8
02-HT3(17)-Bedroom 03	100	44.2	FAIL	212	606	818	24.9%	FAIL	36.9

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K )	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
02-HT3(18)-Bedroom 03	100	43.4	FAIL	212	596	808	24.6%	FAIL	37.1
02-HT3(19)-Bedroom 03	100	42.5	FAIL	209	589	798	24.3%	FAIL	37.1
02-HT3(2)-Bedroom 03	100	37.7	FAIL	202	558	760	23.1%	FAIL	36.7
02-HT3(20)-Bedroom 03	100	39.8	FAIL	207	572	779	23.7%	FAIL	36.8
02-HT3(3)-Bedroom 03	100	39.6	FAIL	205	571	776	23.6%	FAIL	36.8
02-HT3(4)-Bedroom 03	100	41.4	FAIL	210	593	803	24.4%	FAIL	36.8
02-HT3(5)-Bedroom 03	100	43.1	FAIL	212	600	812	24.7%	FAIL	36.9
02-HT3(6)-Bedroom 03	100	42.6	FAIL	212	593	805	24.5%	FAIL	37.1
02-HT3(7)-Bedroom 03	100	41.5	FAIL	210	584	794	24.2%	FAIL	37.0
02-HT3(8)-Bedroom 03	100	38.8	FAIL	205	571	776	23.6%	FAIL	36.8
02-HT3(9)-Bedroom 03	100	37	FAIL	203	561	764	23.3%	FAIL	36.6
02-HT4(1)-Bedroom 03	100	47.2	FAIL	218	644	862	26.2%	FAIL	35.1
02-HT4(2)-Bedroom 03	100	48	FAIL	219	648	867	26.4%	FAIL	35.2
02-HT4(3)-Bedroom 03	100	49	FAIL	221	653	874	26.6%	FAIL	35.2
02-HT4(4)-Bedroom 03	100	49.2	FAIL	221	654	875	26.6%	FAIL	35.3
02-HT4(5)-Bedroom 03	100	48.6	FAIL	219	652	871	26.5%	FAIL	35.2
02-HT4(6)-Bedroom 03	100	50.1	FAIL	222	660	882	26.8%	FAIL	35.3
02-HT5(1)-Bedroom 03	100	32.5	FAIL	197	545	742	22.6%	FAIL	35.8
02-HT5(1)-Bedroom 04	100	39.3	FAIL	200	574	774	23.6%	FAIL	34.6
02-HT5(2)-Bedroom 03	100	32.1	FAIL	197	542	739	22.5%	FAIL	35.8
02-HT5(2)-Bedroom 04	100	38.3	FAIL	201	575	776	23.6%	FAIL	34.5
02-HT5(3)-Bedroom 03	100	28.4	FAIL	195	523	718	21.9%	FAIL	35.5
02-HT5(3)-Bedroom 04	100	35.2	FAIL	193	556	749	22.8%	FAIL	34.3
02-HT5(4)-Bedroom 03	100	29.8	FAIL	195	533	728	22.2%	FAIL	35.5
02-HT5(4)-Bedroom 04	100	37.4	FAIL	198	562	760	23.1%	FAIL	34.6
02-HT5(5)-Bedroom 03	100	33.1	FAIL	197	552	749	22.8%	FAIL	35.8
02-HT5(5)-Bedroom 04	100	39.8	FAIL	204	580	784	23.9%	FAIL	34.7
02-HT5(6)-Bedroom 03	100	34.2	FAIL	201	564	765	23.3%	FAIL	35.9
02-HT5(6)-Bedroom 04	100	40.8	FAIL	204	590	794	24.2%	FAIL	34.8
02-HT5(7)-Bedroom 03	100	35.2	FAIL	204	571	775	23.6%	FAIL	36.0
02-HT5(7)-Bedroom 04	100	42.4	FAIL	208	604	812	24.7%	FAIL	34.9
02-HT6(1)-Bedroom 02	100	29.5	FAIL	193	520	713	21.7%	FAIL	35.5
02-HT6(1)-Bedroom 03	100	34.6	FAIL	190	530	720	21.9%	FAIL	34.4
02-HT6(2)-Bedroom 02	100	32.4	FAIL	196	534	730	22.2%	FAIL	35.7
02-HT6(2)-Bedroom 03	100	37.2	FAIL	196	558	754	23.0%	FAIL	34.5
02-HT6(3)-Bedroom 02	100	32.1	FAIL	196	533	729	22.2%	FAIL	35.7
02-HT6(3)-Bedroom 03	100	37.6	FAIL	196	559	755	23.0%	FAIL	34.5
02-HT6(4)-Bedroom 02	100	28.6	FAIL	192	517	709	21.6%	FAIL	35.4
02-HT6(4)-Bedroom 03	100	35.2	FAIL	190	545	735	22.4%	FAIL	34.3



**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K )	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
02-HT6(5)-Bedroom 02	100	30.8	FAIL	195	530	725	22.1%	FAIL	35.5
02-HT6(5)-Bedroom 03	100	36.1	FAIL	194	547	741	22.6%	FAIL	34.6
02-HT7(1)-Bedroom 03	100	47.1	FAIL	218	627	845	25.7%	FAIL	37.7
02-HT7(1)-Bedroom 04	100	48.1	FAIL	223	632	855	26.0%	FAIL	35.5
02-HT7(2)-Bedroom 03	100	49.8	FAIL	224	642	866	26.4%	FAIL	38.0
02-HT7(2)-Bedroom 04	100	52.1	FAIL	227	642	869	26.5%	FAIL	35.9
02-HT7(3)-Bedroom 03	100	50	FAIL	224	643	867	26.4%	FAIL	38.1
02-HT7(3)-Bedroom 04	100	52.3	FAIL	227	643	870	26.5%	FAIL	35.9
02-HT7(4)-Bedroom 03	100	48.6	FAIL	222	634	856	26.1%	FAIL	37.9
02-HT7(4)-Bedroom 04	100	51	FAIL	225	639	864	26.3%	FAIL	35.9
03-F3-1-Bedroom 01	100	36.2	FAIL	227	553	780	23.7%	FAIL	36.2
03-F3-1-Bedroom 02	100	28.7	FAIL	197	510	707	21.5%	FAIL	35.2
03-F3-10-Bedroom 01	100	34.2	FAIL	214	522	736	22.4%	FAIL	33.9
03-F3-11-Bedroom 01	100	11.4	FAIL	164	352	516	15.7%	FAIL	32.0
03-F3-11-Bedroom 02	100	8.3	FAIL	153	306	459	14.0%	FAIL	32.4
03-F3-11-Bedroom 03	100	6.5	FAIL	152	314	466	14.2%	FAIL	31.9
03-F3-2-Bedroom 01	100	18.3	FAIL	175	414	589	17.9%	FAIL	32.9
03-F3-4-Bedroom 01	100	20.1	FAIL	197	453	650	19.8%	FAIL	32.9
03-F3-3-Bedroom 01	100	23.8	FAIL	200	481	681	20.7%	FAIL	33.6
03-F3-3-Bedroom 02	100	21.9	FAIL	191	457	648	19.7%	FAIL	33.5
03-F3-5-Bedroom 01	100	28.3	FAIL	200	450	650	19.8%	FAIL	35.0
03-F3-5-Bedroom 02	100	26.9	FAIL	222	500	722	22.0%	FAIL	35.1
03-F3-6-Bedroom 01	100	27	FAIL	221	496	717	21.8%	FAIL	35.3
03-F3-7-Bedroom	100	26.8	FAIL	201	496	697	21.2%	FAIL	34.9
03-F3-8-Bedroom 01	100	36.5	FAIL	204	541	745	22.7%	FAIL	34.4
03-F3-8-Bedroom 02	100	28	FAIL	198	492	690	21.0%	FAIL	34.9
03-F3-9-Bedroom	100	34.6	FAIL	207	544	751	22.9%	FAIL	33.8
03-F3-9-Bedroom 01	100	94.7	FAIL	306	1050	1356	41.3%	FAIL	36.7
04-F4-1-Bedroom 01	100	19.3	FAIL	183	459	642	19.5%	FAIL	34.1
04-F4-2-Bedroom 01	100	24.2	FAIL	179	498	677	20.6%	FAIL	33.4
04-F4-2-Bedroom 02	100	19.2	FAIL	179	455	634	19.3%	FAIL	34.0
04-F4-3-Bedroom 01	100	20.9	FAIL	178	488	666	20.3%	FAIL	32.7
04-F4-4-Bedroom 01	100	22.7	FAIL	180	470	650	19.8%	FAIL	33.0

### Mechanically ventilated Living Rooms- Boost Ventilation

c) For Homes with restricted window openings, the CIBSE fixed temperature test must be followed – all occupied rooms should not exceed an operative temperature of 26°C for more than 3% of annual occupied hours (CIBSE Guide A 2015a)

Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-A0-1 -Living room / Kitchen	100	12.8	FAIL	1054	22.2%	FAIL	32.3
00-A0-2 -Living room / Kitchen	100	34.2	FAIL	1266	26.7%	FAIL	35.5
00-E0-1-Living / Dining	100	0.3	PASS	359	7.6%	FAIL	29.9
00-E0-2-Living / Dining	100	0.3	PASS	391	8.2%	FAIL	30.0
00-F0-1-Living room / Kitchen	100	48.3	FAIL	1438	30.3%	FAIL	37.7
00-F0-2-Living room / Kitchen	100	22.8	FAIL	1100	23.2%	FAIL	34.1
00-F0-3 -Living room / Kitchen	100	4.6	FAIL	780	16.4%	FAIL	31.0
00-F0-4-Living room / Kitchen	100	33.4	FAIL	1340	28.2%	FAIL	35.0
00-F0-5-Living room / Kitchen	100	25.3	FAIL	1139	24.0%	FAIL	34.4
00-F0-6-Living room / Kitchen	100	19.4	FAIL	1164	24.5%	FAIL	32.3
00-F0-7 -Living room / Kitchen	100	26.6	FAIL	1210	25.5%	FAIL	32.7
00-F0-8 -Living room / Kitchen	100	18.8	FAIL	1113	23.5%	FAIL	32.8
00-HT2(1)-Kitchen	100	65.8	FAIL	1562	32.9%	FAIL	38.9
00-HT2(1)-Living Room	100	69.6	FAIL	1640	34.6%	FAIL	37.8
00-HT2(2)-Kitchen	100	66	FAIL	1570	33.1%	FAIL	38.8
00-HT2(2)-Living Room	100	70.8	FAIL	1652	34.8%	FAIL	38.0
00-HT2(3)-Kitchen	100	63	FAIL	1505	31.7%	FAIL	38.1
00-HT2(3)-Living Room	100	66.4	FAIL	1606	33.8%	FAIL	37.4
00-HT2A-Living Room	100	58.4	FAIL	1503	31.7%	FAIL	36.3
00-HT3(1)-Kitchen	100	41.2	FAIL	1268	26.7%	FAIL	36.3
00-HT3(1)-Living Room	100	60.7	FAIL	1540	32.5%	FAIL	36.6
00-HT3(2)-Kitchen	100	51.9	FAIL	1405	29.6%	FAIL	37.2
00-HT3(2)-Living Room	100	65.7	FAIL	1606	33.8%	FAIL	37.4
00-HT3(3)-Kitchen	100	52.1	FAIL	1406	29.6%	FAIL	37.2
00-HT3(3)-Living Room	100	64	FAIL	1589	33.5%	FAIL	37.3
00-HT3(4)-Kitchen	100	52.9	FAIL	1400	29.5%	FAIL	37.1
00-HT3(4)-Living Room	100	58.7	FAIL	1513	31.9%	FAIL	36.3
00-HT3(5)-Kitchen	100	55	FAIL	1422	30.0%	FAIL	37.6
00-HT3(5)-Living Room	100	61.4	FAIL	1541	32.5%	FAIL	36.9
00-HT3(6)-Kitchen	100	56.8	FAIL	1453	30.6%	FAIL	37.7

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-HT3(6)-Living Room	100	66.9	FAIL	1626	34.3%	FAIL	37.5
00-HT3(7)-Kitchen	100	56.4	FAIL	1450	30.6%	FAIL	37.7
00-HT3(7)-Living Room	100	66.3	FAIL	1618	34.1%	FAIL	37.5
00-HT3(8)-Kitchen	100	47.3	FAIL	1347	28.4%	FAIL	36.9
00-HT3(8)-Living Room	100	64.1	FAIL	1586	33.4%	FAIL	36.9
00-HT3(9)-Kitchen	100	45.7	FAIL	1323	27.9%	FAIL	36.9
00-HT3(9)-Living Room	100	64.4	FAIL	1593	33.6%	FAIL	37.3
00-HT3(10)-Kitchen	100	56.3	FAIL	1446	30.5%	FAIL	37.7
00-HT3(10)-Living Room	100	69.3	FAIL	1639	34.5%	FAIL	38.1
00-HT3(11)-Kitchen	100	56.4	FAIL	1442	30.4%	FAIL	37.7
00-HT3(11)-Living Room	100	67.7	FAIL	1631	34.4%	FAIL	38.0
00-HT3(12)-Kitchen	100	54.8	FAIL	1415	29.8%	FAIL	37.6
00-HT3(12)-Living Room	100	62.3	FAIL	1558	32.8%	FAIL	36.9
00-HT3(13)-Kitchen	100	54.1	FAIL	1404	29.6%	FAIL	37.5
00-HT3(13)-Living Room	100	62.4	FAIL	1561	32.9%	FAIL	37.4
00-HT3(14)-Kitchen	100	45.8	FAIL	1327	28.0%	FAIL	36.9
00-HT3(14)-Living Room	100	64.7	FAIL	1590	33.5%	FAIL	37.3
00-HT3(15)-Kitchen	100	43.9	FAIL	1306	27.5%	FAIL	36.8
00-HT3(15)-Living Room	100	62.5	FAIL	1561	32.9%	FAIL	37.2
00-HT3(16)-Kitchen	100	54	FAIL	1400	29.5%	FAIL	37.5
00-HT3(16)-Living Room	100	61.8	FAIL	1548	32.6%	FAIL	37.0
00-HT3(17)-Kitchen	100	55.3	FAIL	1419	29.9%	FAIL	37.7
00-HT3(17)-Living Room	100	64.6	FAIL	1590	33.5%	FAIL	37.7
00-HT3(18)-Kitchen	100	57.2	FAIL	1456	30.7%	FAIL	37.8
00-HT3(18)-Living Room	100	70.4	FAIL	1648	34.7%	FAIL	38.4
00-HT3(19)-Kitchen	100	57	FAIL	1451	30.6%	FAIL	37.8
00-HT3(19)-Living Room	100	69.7	FAIL	1643	34.6%	FAIL	38.3
00-HT3(20)-Kitchen	100	48.7	FAIL	1365	28.8%	FAIL	37.1
00-HT3(20)-Living Room	100	67.1	FAIL	1620	34.1%	FAIL	37.6
00-HT4(1)-Living Room	100	46.4	FAIL	1275	26.9%	FAIL	34.7
00-HT4(2)-Living Room	100	47.5	FAIL	1310	27.6%	FAIL	34.9
00-HT4(3)-Living Room	100	48.4	FAIL	1322	27.9%	FAIL	35.0
00-HT4(4)-Living Room	100	49	FAIL	1344	28.3%	FAIL	35.0
00-HT4(5)-Living Room	100	48.8	FAIL	1333	28.1%	FAIL	35.0

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-HT4(6)-Living Room	100	49.8	FAIL	1360	28.7%	FAIL	35.2
00-HT5(1)-Kitchen	100	51.1	FAIL	1390	29.3%	FAIL	40.1
00-HT5(2)-Kitchen	100	51	FAIL	1389	29.3%	FAIL	40.0
00-HT5(3)-Kitchen	100	49.3	FAIL	1362	28.7%	FAIL	39.7
00-HT5(4)-Kitchen	100	48	FAIL	1335	28.1%	FAIL	39.7
00-HT5(5)-Kitchen	100	50.2	FAIL	1382	29.1%	FAIL	40.1
00-HT5(6)-Kitchen	100	50.2	FAIL	1385	29.2%	FAIL	40.1
00-HT5(7)-Kitchen	100	45.9	FAIL	1324	27.9%	FAIL	39.2
00-HT6(1)-Kitchen	100	46.6	FAIL	1317	27.8%	FAIL	39.3
00-HT6(2)-Kitchen	100	48.3	FAIL	1354	28.5%	FAIL	39.7
00-HT6(3)-Kitchen	100	49.4	FAIL	1364	28.7%	FAIL	39.7
00-HT6(4)-Kitchen	100	47.5	FAIL	1328	28.0%	FAIL	39.3
00-HT6(5)-Kitchen	100	48.4	FAIL	1343	28.3%	FAIL	39.6
00-HT7(1)-Kitchen	100	37.2	FAIL	1230	25.9%	FAIL	36.7
00-HT7(2)-Kitchen	100	37.9	FAIL	1254	26.4%	FAIL	36.8
00-HT7(3)-Kitchen	100	38.1	FAIL	1259	26.5%	FAIL	36.8
00-HT7(4)-Kitchen	100	46.6	FAIL	1358	28.6%	FAIL	38.2
00-HT8(1)-Living Room	100	74.1	FAIL	1675	35.3%	FAIL	40.5
00-HT8(2)-Living Room	100	74.9	FAIL	1687	35.6%	FAIL	41.1
00-HT8(3)-Living Room	100	74	FAIL	1680	35.4%	FAIL	41.0
00-HT8(4)-Living Room	100	70.9	FAIL	1645	34.7%	FAIL	40.3
01-A2-1-Living room / Kitchen	100	31.8	FAIL	1212	25.5%	FAIL	33.7
01-A2-2-Living room / Kitchen	100	31	FAIL	1233	26.0%	FAIL	33.4
01-E0-1-Living / Kitchen	100	5.4	FAIL	662	14.0%	FAIL	32.0
01-E0-2-Living / Kitchen	100	6.5	FAIL	700	14.8%	FAIL	32.1
01-F1-1-Living room / Kitchen	100	56	FAIL	1523	32.1%	FAIL	38.5
01-F1-2-Living room / Kitchen	100	38.1	FAIL	1298	27.4%	FAIL	35.9
01-F1-3-Living room / Kitchen	100	9.2	FAIL	926	19.5%	FAIL	31.8
01-F1-4-Living room / Kitchen	100	9.2	FAIL	972	20.5%	FAIL	32.0
01-F1-5-Living room / Kitchen	100	28.3	FAIL	1268	26.7%	FAIL	34.0
01-F1-6-Living room / Kitchen	100	29.1	FAIL	1286	27.1%	FAIL	34.4
01-F1-7-Living room / Kitchen	100	44.4	FAIL	1478	31.1%	FAIL	36.2
01-F1-8-Living room / Kitchen	100	28.5	FAIL	1198	25.2%	FAIL	35.2
01-F1-9-Living room / Kitchen	100	20.2	FAIL	1065	22.4%	FAIL	33.4

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-F1-10-Living room / Kitchen	100	16	FAIL	1186	25.0%	FAIL	32.2
01-F1-11-Living room / Kitchen	100	34.8	FAIL	1367	28.8%	FAIL	33.5
01-F1-12-Living room / Kitchen	100	38.1	FAIL	1381	29.1%	FAIL	33.7
01-F1-13-Living room / Kitchen	100	30.8	FAIL	1232	26.0%	FAIL	33.8
01-F1-14-Living room / Kitchen	100	10.7	FAIL	972	20.5%	FAIL	31.6
01-HT5(1)-Living Room	100	47.9	FAIL	1418	29.9%	FAIL	36.6
01-HT5(2)-Living Room	100	48.2	FAIL	1422	30.0%	FAIL	36.6
01-HT5(3)-Living Room	100	44.4	FAIL	1378	29.0%	FAIL	36.5
01-HT5(4)-Living Room	100	43.8	FAIL	1380	29.1%	FAIL	36.4
01-HT5(5)-Living Room	100	48.6	FAIL	1426	30.1%	FAIL	36.7
01-HT5(6)-Living Room	100	49.5	FAIL	1440	30.3%	FAIL	36.7
01-HT5(7)-Living Room	100	49.4	FAIL	1444	30.4%	FAIL	36.8
01-HT6(1)-Living Room	100	39.4	FAIL	1326	27.9%	FAIL	35.9
01-HT6(2)-Living Room	100	43	FAIL	1364	28.7%	FAIL	36.2
01-HT6(3)-Living Room	100	43.4	FAIL	1366	28.8%	FAIL	36.3
01-HT6(4)-Living Room	100	39.6	FAIL	1327	28.0%	FAIL	36.0
01-HT6(5)-Living Room	100	41.5	FAIL	1348	28.4%	FAIL	36.2
01-HT7(1)-Living Room	100	61.5	FAIL	1627	34.3%	FAIL	37.3
01-HT7(2)-Living Room	100	65.8	FAIL	1685	35.5%	FAIL	37.6
01-HT7(3)-Living Room	100	66.5	FAIL	1690	35.6%	FAIL	37.6
01-HT7(4)-Living Room	100	66.4	FAIL	1680	35.4%	FAIL	37.7
02-A2-1-Living room / Kitchen	100	45.1	FAIL	1376	29.0%	FAIL	34.5
02-A2-2-Living room / Kitchen	100	45.4	FAIL	1394	29.4%	FAIL	34.3
02-E0-1-Living / Kitchen	100	5.3	FAIL	657	13.8%	FAIL	31.9
02-E0-2-Living / Kitchen	100	5.9	FAIL	696	14.7%	FAIL	31.9
02-F2-1-Living room / Kitchen	100	57.1	FAIL	1534	32.3%	FAIL	38.7
02-F2-2-Living room / Kitchen	100	43.3	FAIL	1349	28.4%	FAIL	36.4
02-F2-3-Living room / Kitchen	100	23.6	FAIL	1197	25.2%	FAIL	33.3
02-F2-4-Living room / Kitchen	100	27.7	FAIL	1186	25.0%	FAIL	33.5
02-F2-5-Living room / Kitchen	100	38.1	FAIL	1401	29.5%	FAIL	34.9
02-F2-6-Living room / Kitchen	100	38.4	FAIL	1424	30.0%	FAIL	35.6
02-F2-7-Living room / Kitchen	100	47.1	FAIL	1495	31.5%	FAIL	36.5
02-F2-8-Living room / Kitchen	100	44.1	FAIL	1419	29.9%	FAIL	37.0
02-F2-9-Living room / Kitchen	100	25.9	FAIL	1152	24.3%	FAIL	34.0



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
02-F2-10-Living room / Kitchen	100	38	FAIL	1427	30.1%	FAIL	33.6
02-F2-11-Living room / Kitchen	100	44	FAIL	1487	31.3%	FAIL	34.2
02-F2-12-Living room / Kitchen	100	45.8	FAIL	1489	31.4%	FAIL	34.1
02-F2-13-Living room / Kitchen	100	41.8	FAIL	1338	28.2%	FAIL	34.3
02-F2-14-Living room / Kitchen	100	28.6	FAIL	1253	26.4%	FAIL	33.9
02-F2-15- Living/ Kitchen	100	16.5	FAIL	1025	21.6%	FAIL	33.4
03-F3-1-Living room / Kitchen	100	51.9	FAIL	1473	31.0%	FAIL	38.2
03-F3-2-Living room / Kitchen	100	40.5	FAIL	1290	27.2%	FAIL	36.0
03-F3-3-Living room / Kitchen	100	9.5	FAIL	878	18.5%	FAIL	32.3
03-F3-4-Living room / Kitchen	100	26	FAIL	1327	28.0%	FAIL	32.1
03-F3-5-Living room / Kitchen	100	30.5	FAIL	1257	26.5%	FAIL	34.5
03-F3-6-Living room / Kitchen	100	41.5	FAIL	1413	29.8%	FAIL	35.9
03-F3-7-Living room / Kitchen	100	47.1	FAIL	1449	30.5%	FAIL	37.3
03-F3-8-Living room / Kitchen	100	27.2	FAIL	1165	24.6%	FAIL	34.3
03-F3-9-Living / Kitchen	100	50.5	FAIL	1564	33.0%	FAIL	34.3
03-F3-10-Living room / Kitchen	100	53.9	FAIL	1580	33.3%	FAIL	34.8
03-F3-11-Living / Kitchen	100	5.2	FAIL	975	20.5%	FAIL	30.6
04-F4-1-Living room / Kitchen	100	36	FAIL	1285	27.1%	FAIL	35.8
04-F4-2-Living room / Kitchen	100	20	FAIL	1062	22.4%	FAIL	33.3
04-F4-3-Living room / Kitchen	100	30.5	FAIL	1236	26.0%	FAIL	32.8
04-F4-4-Living room / Kitchen	100	32	FAIL	1243	26.2%	FAIL	33.3

## Results DSY 1

### Mechanically ventilated Bedrooms- Summer Boost Ventilation

*For Homes with restricted window openings, the CIBSE fixed temperature test must be followed – all occupied rooms should not exceed an operative temperature of 26 °C for more than 3% of annual occupied hours*

Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-E0-1-Bedroom	100	0.4	PASS	49	35	84	2.6%	PASS	30.1
00-E0-2-Bedroom	100	0.5	PASS	51	38	89	2.7%	PASS	30.2
00-F0-2-Bedroom	100	0.2	PASS	32	14	46	1.4%	PASS	29.9
00-F0-5-Bedroom 01	100	0.2	PASS	49	26	75	2.3%	PASS	29.9
00-F0-5-Bedroom 02	100	0.3	PASS	49	23	72	2.2%	PASS	30.0
00-F0-6-Bedroom	100	0.1	PASS	22	10	32	1.0%	PASS	29.6
00-F0-8 -Bedroom 02	100	0	PASS	20	10	30	0.9%	PASS	28.9
01-F1-14-Bedroom	100	0	PASS	18	4	22	0.7%	PASS	29.1
01-F1-15-Bedroom 02	100	0.2	PASS	52	31	83	2.5%	PASS	30.0
01-F1-2-Bedroom 02	100	0	PASS	31	13	44	1.3%	PASS	29.2
01-F1-3-Bedroom 01	100	0	PASS	46	26	72	2.2%	PASS	29.1
01-F1-3-Bedroom 03	100	0.5	PASS	66	55	121	3.7%	FAIL	30.2
01-F1-4-Bedroom 01	100	0.1	PASS	24	12	36	1.1%	PASS	29.5
02-F2-14-Bedroom	100	0.3	PASS	29	12	41	1.2%	PASS	29.9
02-F2-2-Bedroom 02	100	0.1	PASS	44	29	73	2.2%	PASS	29.7
02-F2-3-Bedroom 01	100	0.3	PASS	72	60	132	4.0%	FAIL	29.8
03-F3-2-Bedroom 02	100	0.2	PASS	50	41	91	2.8%	PASS	29.8
04-F4-4-Bedroom 02	100	0	PASS	41	32	73	2.2%	PASS	29.3
00-A0-1 -Bedroom 01	100	3.8	FAIL	38	19	57	1.7%	FAIL	32.1
00-A0-2 -Bedroom 01	100	1.7	PASS	63	49	112	3.4%	FAIL	31.0
00-A0-2 -Bedroom 02	100	3.5	FAIL	83	78	161	4.9%	FAIL	31.7
00-F0-1-Bedroom 01	100	8.5	FAIL	106	101	207	6.3%	FAIL	33.3
00-F0-1-Bedroom 02	100	4.1	FAIL	93	88	181	5.5%	FAIL	32.4
00-F0-3-Bedroom 01	100	1.6	PASS	52	36	88	2.7%	PASS	31.3
00-F0-3-Bedroom 02	100	2.4	PASS	55	30	85	2.6%	PASS	31.5
00-F0-4-Bedroom	100	1.7	PASS	45	16	61	1.9%	PASS	30.8
00-F0-7 -Bedroom	100	1.3	PASS	59	38	97	3.0%	PASS	31.1
00-F0-8 -Bedroom 01	100	1	PASS	70	58	128	3.9%	FAIL	30.4
00-HT8(1)-Bedroom 01	100	7.1	FAIL	116	158	274	8.3%	FAIL	33.1

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-HT8(2)-Bedroom 01	100	6.9	FAIL	113	140	253	7.7%	FAIL	33.0
00-HT8(3)-Bedroom 01	100	7	FAIL	114	142	256	7.8%	FAIL	33.0
00-HT8(4)-Bedroom 01	100	6.2	FAIL	112	148	260	7.9%	FAIL	32.9
01-A2-1-Bedroom 01	100	0.5	PASS	41	31	72	2.2%	PASS	30.1
01-A2-2-Bedroom 01	100	2.6	PASS	93	92	185	5.6%	FAIL	31.4
01-A2-2-Bedroom 02	100	3.7	FAIL	95	109	204	6.2%	FAIL	31.7
02-E0-1-Bedroom 01	100	2.5	PASS	89	113	202	6.1%	FAIL	31.2
01-E0-1-Bedroom 01	100	3.9	FAIL	93	90	183	5.6%	FAIL	31.5
01-E0-1-Bedroom 02	100	4.5	FAIL	91	75	166	5.1%	FAIL	31.3
02-E0-1-Bedroom 02	100	3.1	FAIL	92	108	200	6.1%	FAIL	31.3
01-E0-2-Bedroom 01	100	4.9	FAIL	97	99	196	6.0%	FAIL	31.7
02-E0-2-Bedroom 01	100	3.1	FAIL	95	123	218	6.6%	FAIL	31.4
02-E0-2-Bedroom 02	100	3	FAIL	92	110	202	6.1%	FAIL	31.3
01-E0-2-Bedroom 02	100	4.5	FAIL	89	75	164	5.0%	FAIL	31.3
01-F1-1-Bedroom 01	100	11	FAIL	114	112	226	6.9%	FAIL	33.9
01-F1-1-Bedroom 02	100	6.2	FAIL	106	98	204	6.2%	FAIL	32.9
01-F1-10-Bedroom 01	100	1.2	PASS	48	26	74	2.3%	PASS	31.0
01-F1-11-Bedroom 01	100	1.7	PASS	55	32	87	2.6%	PASS	31.3
01-F1-12-Bedroom 01	100	2.7	PASS	67	54	121	3.7%	FAIL	31.7
01-F1-13-Bedroom 01	100	3.1	FAIL	106	105	211	6.4%	FAIL	31.4
01-F1-13-Bedroom 02	100	3.5	FAIL	91	78	169	5.1%	FAIL	31.8
01-F1-15-Bedroom 01	100	0.9	PASS	66	42	108	3.3%	FAIL	30.6
01-F1-2-Bedroom 01	100	1.8	PASS	75	60	135	4.1%	FAIL	31.0
01-F1-3-Bedroom 02	100	2.2	PASS	88	63	151	4.6%	FAIL	30.8
01-F1-5-Bedroom 01	100	10.5	FAIL	112	118	230	7.0%	FAIL	34.0
01-F1-5-Bedroom 02	100	8	FAIL	112	111	223	6.8%	FAIL	33.1
01-F1-6-Bedroom 01	100	5	FAIL	66	25	91	2.8%	FAIL	32.1
01-F1-7-Bedroom 01	100	6.2	FAIL	74	38	112	3.4%	FAIL	32.6
01-F1-8-Bedroom 01	100	1.9	PASS	55	24	79	2.4%	PASS	31.4
01-F1-9-Bedroom 01	100	4.1	FAIL	96	102	198	6.0%	FAIL	31.8
01-F1-9-Bedroom 02	100	4.5	FAIL	98	87	185	5.6%	FAIL	32.2
01-HT2(1)-Bedroom 01	100	38.5	FAIL	210	652	862	26.2%	FAIL	38.9
01-HT2(1)-Bedroom 02	100	27.6	FAIL	168	520	688	20.9%	FAIL	35.8
01-HT2(2)-Bedroom 01	100	37.1	FAIL	208	641	849	25.8%	FAIL	38.7
01-HT2(2)-Bedroom 02	100	27.7	FAIL	168	523	691	21.0%	FAIL	35.8



**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-HT2(3)-Bedroom 01	100	33.6	FAIL	202	612	814	24.8%	FAIL	38.2
01-HT2(3)-Bedroom 02	100	26.6	FAIL	164	497	661	20.1%	FAIL	35.7
01-HT2A-Bedroom 01	100	42.8	FAIL	213	645	858	26.1%	FAIL	39.5
01-HT2A-Bedroom 02	100	38.2	FAIL	189	587	776	23.6%	FAIL	37.3
01-HT3(1)-Bedroom 01	100	22.8	FAIL	157	457	614	18.7%	FAIL	34.9
01-HT3(1)-Bedroom 02	100	20.2	FAIL	170	479	649	19.8%	FAIL	35.4
01-HT3(10)-Bedroom 01	100	33.3	FAIL	168	544	712	21.7%	FAIL	36.5
01-HT3(10)-Bedroom 02	100	24.2	FAIL	181	548	729	22.2%	FAIL	36.0
01-HT3(11)-Bedroom 01	100	26.3	FAIL	162	511	673	20.5%	FAIL	35.2
01-HT3(11)-Bedroom 02	100	24.8	FAIL	183	558	741	22.6%	FAIL	36.0
01-HT3(12)-Bedroom 01	100	32.4	FAIL	166	548	714	21.7%	FAIL	36.4
01-HT3(12)-Bedroom 02	100	25.7	FAIL	190	570	760	23.1%	FAIL	36.1
01-HT3(13)-Bedroom 01	100	25.1	FAIL	162	506	668	20.3%	FAIL	35.0
01-HT3(13)-Bedroom 02	100	24.6	FAIL	183	559	742	22.6%	FAIL	36.0
01-HT3(14)-Bedroom 01	100	34	FAIL	168	543	711	21.6%	FAIL	36.5
01-HT3(14)-Bedroom 02	100	22.4	FAIL	181	521	702	21.4%	FAIL	35.7
01-HT3(15)-Bedroom 01	100	24.2	FAIL	158	481	639	19.5%	FAIL	35.0
01-HT3(15)-Bedroom 02	100	21.5	FAIL	177	502	679	20.7%	FAIL	35.5
01-HT3(16)-Bedroom 01	100	31.8	FAIL	164	535	699	21.3%	FAIL	36.4
01-HT3(16)-Bedroom 02	100	24.5	FAIL	184	557	741	22.6%	FAIL	36.0
01-HT3(17)-Bedroom 01	100	25.9	FAIL	162	520	682	20.8%	FAIL	35.0
01-HT3(17)-Bedroom 02	100	25.7	FAIL	190	573	763	23.2%	FAIL	36.1
01-HT3(18)-Bedroom 01	100	34.2	FAIL	169	557	726	22.1%	FAIL	36.6
01-HT3(18)-Bedroom 02	100	25.2	FAIL	184	564	748	22.8%	FAIL	36.1
01-HT3(19)-Bedroom 01	100	27	FAIL	162	520	682	20.8%	FAIL	35.3
01-HT3(19)-Bedroom 02	100	24.7	FAIL	182	556	738	22.5%	FAIL	36.0
01-HT3(2)-Bedroom 01	100	32.6	FAIL	166	540	706	21.5%	FAIL	36.4
01-HT3(2)-Bedroom 02	100	23.4	FAIL	180	538	718	21.9%	FAIL	35.9
01-HT3(20)-Bedroom 01	100	33.3	FAIL	168	547	715	21.8%	FAIL	36.6
01-HT3(20)-Bedroom 02	100	23.1	FAIL	181	534	715	21.8%	FAIL	35.8
01-HT3(3)-Bedroom 01	100	30.1	FAIL	171	591	762	23.2%	FAIL	35.4
01-HT3(3)-Bedroom 02	100	28.7	FAIL	199	638	837	25.5%	FAIL	36.3
01-HT3(4)-Bedroom 01	100	32.8	FAIL	165	563	728	22.2%	FAIL	36.4
01-HT3(4)-Bedroom 02	100	26	FAIL	189	581	770	23.4%	FAIL	36.1
01-HT3(5)-Bedroom 01	100	24	FAIL	161	492	653	19.9%	FAIL	34.8

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-HT3(5)-Bedroom 02	100	25.5	FAIL	190	568	758	23.1%	FAIL	36.1
01-HT3(6)-Bedroom 01	100	32.8	FAIL	167	542	709	21.6%	FAIL	36.4
01-HT3(6)-Bedroom 02	100	25.2	FAIL	184	556	740	22.5%	FAIL	36.1
01-HT3(7)-Bedroom 01	100	25.2	FAIL	161	492	653	19.9%	FAIL	35.1
01-HT3(7)-Bedroom 02	100	24.4	FAIL	181	547	728	22.2%	FAIL	36.0
01-HT3(8)-Bedroom 01	100	34.3	FAIL	169	543	712	21.7%	FAIL	36.5
01-HT3(8)-Bedroom 02	100	23	FAIL	180	525	705	21.5%	FAIL	35.7
01-HT3(9)-Bedroom 01	100	24.6	FAIL	159	489	648	19.7%	FAIL	35.1
01-HT3(9)-Bedroom 02	100	21.8	FAIL	178	504	682	20.8%	FAIL	35.6
01-HT4(1)-Bedroom 01	100	19.1	FAIL	154	457	611	18.6%	FAIL	34.2
01-HT4(1)-Bedroom 02	100	30.9	FAIL	201	600	801	24.4%	FAIL	36.9
01-HT4(2)-Bedroom 01	100	25.8	FAIL	161	502	663	20.2%	FAIL	35.4
01-HT4(2)-Bedroom 02	100	31.2	FAIL	201	603	804	24.5%	FAIL	36.9
01-HT4(3)-Bedroom 01	100	20	FAIL	158	468	626	19.1%	FAIL	34.3
01-HT4(3)-Bedroom 02	100	31.1	FAIL	200	606	806	24.5%	FAIL	36.9
01-HT4(4)-Bedroom 01	100	26.5	FAIL	162	509	671	20.4%	FAIL	35.4
01-HT4(4)-Bedroom 02	100	31.2	FAIL	199	606	805	24.5%	FAIL	36.9
01-HT4(5)-Bedroom 01	100	20.2	FAIL	158	474	632	19.2%	FAIL	34.3
01-HT4(5)-Bedroom 02	100	30.8	FAIL	199	604	803	24.4%	FAIL	36.9
01-HT4(6)-Bedroom 01	100	26.7	FAIL	162	514	676	20.6%	FAIL	35.4
01-HT4(6)-Bedroom 02	100	31.5	FAIL	199	614	813	24.7%	FAIL	36.9
01-HT5(1)-Bedroom 01	100	20.3	FAIL	164	438	602	18.3%	FAIL	33.3
01-HT5(1)-Bedroom 02	100	27.1	FAIL	205	616	821	25.0%	FAIL	33.7
01-HT5(2)-Bedroom 01	100	22.3	FAIL	172	474	646	19.7%	FAIL	33.4
01-HT5(2)-Bedroom 02	100	27.3	FAIL	206	621	827	25.2%	FAIL	33.7
01-HT5(3)-Bedroom 01	100	21.4	FAIL	170	469	639	19.5%	FAIL	33.4
01-HT5(3)-Bedroom 02	100	25.2	FAIL	200	627	827	25.2%	FAIL	33.6
01-HT5(4)-Bedroom 01	100	20.3	FAIL	162	439	601	18.3%	FAIL	33.3
01-HT5(4)-Bedroom 02	100	27.5	FAIL	204	618	822	25.0%	FAIL	33.7
01-HT5(5)-Bedroom 01	100	23	FAIL	177	482	659	20.1%	FAIL	33.6
01-HT5(5)-Bedroom 02	100	29.2	FAIL	210	636	846	25.8%	FAIL	33.8
01-HT5(6)-Bedroom 01	100	23.8	FAIL	181	493	674	20.5%	FAIL	33.7
01-HT5(6)-Bedroom 02	100	30.3	FAIL	213	646	859	26.1%	FAIL	33.9
01-HT5(7)-Bedroom 01	100	24.3	FAIL	182	501	683	20.8%	FAIL	33.8
01-HT5(7)-Bedroom 02	100	30.2	FAIL	215	647	862	26.2%	FAIL	34.0

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-HT6(1)-Bedroom 01	100	10	FAIL	133	271	404	12.3%	FAIL	32.2
01-HT6(2)-Bedroom 01	100	11.9	FAIL	140	287	427	13.0%	FAIL	32.2
01-HT6(3)-Bedroom 01	100	12.1	FAIL	140	287	427	13.0%	FAIL	32.2
01-HT6(4)-Bedroom 01	100	10.9	FAIL	138	275	413	12.6%	FAIL	32.2
01-HT6(5)-Bedroom 01	100	13	FAIL	142	301	443	13.5%	FAIL	32.5
01-HT7(1)-Bedroom 01	100	37.2	FAIL	246	683	929	28.3%	FAIL	36.4
01-HT7(1)-Bedroom 02	100	22.9	FAIL	179	476	655	19.9%	FAIL	33.7
01-HT7(2)-Bedroom 01	100	38.6	FAIL	248	691	939	28.6%	FAIL	36.6
01-HT7(2)-Bedroom 02	100	23.5	FAIL	179	490	669	20.4%	FAIL	33.7
01-HT7(3)-Bedroom 01	100	38.9	FAIL	248	694	942	28.7%	FAIL	36.6
01-HT7(3)-Bedroom 02	100	23.6	FAIL	181	494	675	20.5%	FAIL	33.7
01-HT7(4)-Bedroom 01	100	40	FAIL	242	741	983	29.9%	FAIL	36.5
01-HT7(4)-Bedroom 02	100	23.8	FAIL	180	502	682	20.8%	FAIL	33.8
01-HT8(1)-Bedroom 02	100	3.2	FAIL	90	118	208	6.3%	FAIL	32.2
01-HT8(2)-Bedroom 02	100	3.1	FAIL	87	114	201	6.1%	FAIL	32.1
01-HT8(3)-Bedroom 02	100	3.3	FAIL	87	110	197	6.0%	FAIL	32.1
01-HT8(4)-Bedroom 02	100	2.8	PASS	85	109	194	5.9%	FAIL	32.0
02-A2-1-Bedroom 01	100	0.5	PASS	42	33	75	2.3%	PASS	30.1
02-A2-2-Bedroom 01	100	2.5	PASS	87	87	174	5.3%	FAIL	31.5
02-A2-2-Bedroom 02	100	4.9	FAIL	98	139	237	7.2%	FAIL	32.0
02-F2-1-Bedroom 01	100	11.3	FAIL	116	116	232	7.1%	FAIL	34.0
02-F2-1-Bedroom 02	100	6.8	FAIL	107	107	214	6.5%	FAIL	33.1
02-F2-10-Bedroom 01	100	5	FAIL	116	168	284	8.6%	FAIL	31.6
02-F2-11-Bedroom 01	100	4.9	FAIL	116	154	270	8.2%	FAIL	31.6
02-F2-12-Bedroom 01	100	3.4	FAIL	69	66	135	4.1%	FAIL	31.9
02-F2-13-Bedroom 01	100	4.4	FAIL	113	129	242	7.4%	FAIL	31.7
02-F2-13-Bedroom 02	100	5.1	FAIL	98	100	198	6.0%	FAIL	32.4
02-F2-15-Bedroom 01	100	3.8	FAIL	98	89	187	5.7%	FAIL	31.5
02-F2-15-Bedroom 02	100	1.7	PASS	86	69	155	4.7%	FAIL	30.8
02-F2-2-Bedroom 01	100	3.2	FAIL	84	81	165	5.0%	FAIL	31.5
02-F2-3-Bedroom 02	100	6.4	FAIL	117	129	246	7.5%	FAIL	31.9
02-F2-3-Bedroom 03	100	2.7	PASS	100	106	206	6.3%	FAIL	31.1
02-F2-4-Bedroom 01	100	0.5	PASS	45	35	80	2.4%	PASS	30.3
02-F2-5-Bedroom 01	100	17.1	FAIL	130	173	303	9.2%	FAIL	36.0
02-F2-5-Bedroom 02	100	13	FAIL	126	151	277	8.4%	FAIL	34.3

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
02-F2-6-Bedroom 01	100	7.2	FAIL	85	51	136	4.1%	FAIL	32.9
02-F2-7-Bedroom 01	100	7	FAIL	82	48	130	4.0%	FAIL	32.9
02-F2-8-Bedroom 01	100	3.3	FAIL	72	48	120	3.7%	FAIL	32.1
02-F2-9-Bedroom 01	100	6.6	FAIL	114	174	288	8.8%	FAIL	32.3
02-F2-9-Bedroom 02	100	5.6	FAIL	104	106	210	6.4%	FAIL	32.7
02-HT2(1)-Bedroom 03	100	52.7	FAIL	222	762	984	30.0%	FAIL	39.4
02-HT2(2)-Bedroom 03	100	52.5	FAIL	222	757	979	29.8%	FAIL	39.4
02-HT2(3)-Bedroom 03	100	50.8	FAIL	217	740	957	29.1%	FAIL	39.1
02-HT2A-Bedroom 03	100	49.5	FAIL	220	743	963	29.3%	FAIL	39.0
02-HT3(1)-Bedroom 03	100	16.9	FAIL	151	400	551	16.8%	FAIL	35.0
02-HT3(10)-Bedroom 03	100	21.7	FAIL	165	458	623	19.0%	FAIL	35.6
02-HT3(11)-Bedroom 03	100	22.3	FAIL	168	469	637	19.4%	FAIL	35.6
02-HT3(12)-Bedroom 03	100	23	FAIL	173	510	683	20.8%	FAIL	35.5
02-HT3(13)-Bedroom 03	100	22.2	FAIL	171	500	671	20.4%	FAIL	35.5
02-HT3(14)-Bedroom 03	100	20.8	FAIL	165	451	616	18.8%	FAIL	35.4
02-HT3(15)-Bedroom 03	100	19.7	FAIL	161	437	598	18.2%	FAIL	35.2
02-HT3(16)-Bedroom 03	100	22.2	FAIL	171	495	666	20.3%	FAIL	35.4
02-HT3(17)-Bedroom 03	100	23	FAIL	173	510	683	20.8%	FAIL	35.5
02-HT3(18)-Bedroom 03	100	22.4	FAIL	168	476	644	19.6%	FAIL	35.6
02-HT3(19)-Bedroom 03	100	22.1	FAIL	167	463	630	19.2%	FAIL	35.6
02-HT3(2)-Bedroom 03	100	21	FAIL	161	456	617	18.8%	FAIL	35.5
02-HT3(20)-Bedroom 03	100	21	FAIL	164	452	616	18.8%	FAIL	35.4
02-HT3(3)-Bedroom 03	100	25	FAIL	178	567	745	22.7%	FAIL	35.8
02-HT3(4)-Bedroom 03	100	23	FAIL	173	521	694	21.1%	FAIL	35.5
02-HT3(5)-Bedroom 03	100	22.4	FAIL	174	501	675	20.5%	FAIL	35.5
02-HT3(6)-Bedroom 03	100	22.2	FAIL	166	467	633	19.3%	FAIL	35.6
02-HT3(7)-Bedroom 03	100	21.7	FAIL	165	457	622	18.9%	FAIL	35.6
02-HT3(8)-Bedroom 03	100	20.8	FAIL	163	449	612	18.6%	FAIL	35.4
02-HT3(9)-Bedroom 03	100	19.7	FAIL	161	433	594	18.1%	FAIL	35.2
02-HT4(1)-Bedroom 03	100	26.2	FAIL	186	671	857	26.1%	FAIL	33.9
02-HT4(2)-Bedroom 03	100	26.6	FAIL	186	677	863	26.3%	FAIL	33.9
02-HT4(3)-Bedroom 03	100	27.8	FAIL	187	682	869	26.5%	FAIL	34.0
02-HT4(4)-Bedroom 03	100	28.2	FAIL	188	682	870	26.5%	FAIL	34.0
02-HT4(5)-Bedroom 03	100	27.9	FAIL	187	682	869	26.5%	FAIL	34.0
02-HT4(6)-Bedroom 03	100	28.8	FAIL	190	684	874	26.6%	FAIL	34.0

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
02-HT5(1)-Bedroom 03	100	18.8	FAIL	163	465	628	19.1%	FAIL	34.8
02-HT5(1)-Bedroom 04	100	22.2	FAIL	170	593	763	23.2%	FAIL	33.5
02-HT5(2)-Bedroom 03	100	19.2	FAIL	163	475	638	19.4%	FAIL	34.8
02-HT5(2)-Bedroom 04	100	21.3	FAIL	171	596	767	23.3%	FAIL	33.4
02-HT5(3)-Bedroom 03	100	17.5	FAIL	156	453	609	18.5%	FAIL	34.6
02-HT5(3)-Bedroom 04	100	19.4	FAIL	163	568	731	22.3%	FAIL	33.3
02-HT5(4)-Bedroom 03	100	18.1	FAIL	160	462	622	18.9%	FAIL	34.7
02-HT5(4)-Bedroom 04	100	21.7	FAIL	167	578	745	22.7%	FAIL	33.6
02-HT5(5)-Bedroom 03	100	19.6	FAIL	166	495	661	20.1%	FAIL	34.9
02-HT5(5)-Bedroom 04	100	23.1	FAIL	173	612	785	23.9%	FAIL	33.6
02-HT5(6)-Bedroom 03	100	20.4	FAIL	170	509	679	20.7%	FAIL	34.9
02-HT5(6)-Bedroom 04	100	24.1	FAIL	176	624	800	24.4%	FAIL	33.7
02-HT5(7)-Bedroom 03	100	20.8	FAIL	171	516	687	20.9%	FAIL	35.0
02-HT5(7)-Bedroom 04	100	25.2	FAIL	179	634	813	24.7%	FAIL	33.8
02-HT6(1)-Bedroom 02	100	14.7	FAIL	146	367	513	15.6%	FAIL	34.3
02-HT6(1)-Bedroom 03	100	16.3	FAIL	154	442	596	18.1%	FAIL	33.3
02-HT6(2)-Bedroom 02	100	16	FAIL	149	384	533	16.2%	FAIL	34.5
02-HT6(2)-Bedroom 03	100	18.1	FAIL	159	488	647	19.7%	FAIL	33.3
02-HT6(3)-Bedroom 02	100	16	FAIL	149	384	533	16.2%	FAIL	34.5
02-HT6(3)-Bedroom 03	100	18.4	FAIL	159	489	648	19.7%	FAIL	33.4
02-HT6(4)-Bedroom 02	100	14.6	FAIL	147	362	509	15.5%	FAIL	34.2
02-HT6(4)-Bedroom 03	100	17.1	FAIL	157	467	624	19.0%	FAIL	33.2
02-HT6(5)-Bedroom 02	100	15.8	FAIL	149	398	547	16.7%	FAIL	34.3
02-HT6(5)-Bedroom 03	100	18.2	FAIL	157	477	634	19.3%	FAIL	33.5
02-HT7(1)-Bedroom 03	100	30	FAIL	186	603	789	24.0%	FAIL	36.6
02-HT7(1)-Bedroom 04	100	30.7	FAIL	189	655	844	25.7%	FAIL	34.5
02-HT7(2)-Bedroom 03	100	32.5	FAIL	196	617	813	24.7%	FAIL	37.0
02-HT7(2)-Bedroom 04	100	34.8	FAIL	195	684	879	26.8%	FAIL	34.9
02-HT7(3)-Bedroom 03	100	32.8	FAIL	197	619	816	24.8%	FAIL	37.0
02-HT7(3)-Bedroom 04	100	35	FAIL	197	688	885	26.9%	FAIL	34.9
02-HT7(4)-Bedroom 03	100	31.9	FAIL	194	620	814	24.8%	FAIL	36.9
02-HT7(4)-Bedroom 04	100	34.6	FAIL	194	683	877	26.7%	FAIL	34.9
03-F3-1-Bedroom 01	100	9.4	FAIL	107	111	218	6.6%	FAIL	33.5
03-F3-1-Bedroom 02	100	5.8	FAIL	103	105	208	6.3%	FAIL	32.8
03-F3-10-Bedroom 01	100	3.6	FAIL	72	63	135	4.1%	FAIL	32.1

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
03-F3-11-Bedroom 01	100	2.3	PASS	102	124	226	6.9%	FAIL	30.9
03-F3-11-Bedroom 02	100	2.4	PASS	93	113	206	6.3%	FAIL	31.4
03-F3-11-Bedroom 03	100	1.5	PASS	91	105	196	6.0%	FAIL	30.9
03-F3-2-Bedroom 01	100	2.8	PASS	83	90	173	5.3%	FAIL	31.3
03-F3-4-Bedroom 01	100	2.6	PASS	72	60	132	4.0%	FAIL	31.4
03-F3-3-Bedroom 01	100	5.5	FAIL	104	128	232	7.1%	FAIL	31.8
03-F3-3-Bedroom 02	100	5.6	FAIL	105	134	239	7.3%	FAIL	31.8
03-F3-5-Bedroom 01	100	9.3	FAIL	106	117	223	6.8%	FAIL	33.1
03-F3-5-Bedroom 02	100	9	FAIL	118	137	255	7.8%	FAIL	33.2
03-F3-6-Bedroom 01	100	6.4	FAIL	83	56	139	4.2%	FAIL	32.8
03-F3-7-Bedroom	100	3.6	FAIL	75	53	128	3.9%	FAIL	32.3
03-F3-8-Bedroom 01	100	6.5	FAIL	109	169	278	8.5%	FAIL	32.3
03-F3-8-Bedroom 02	100	6	FAIL	105	106	211	6.4%	FAIL	32.8
03-F3-9-Bedroom	100	3.6	FAIL	78	75	153	4.7%	FAIL	31.9
03-F3-9-Bedroom 01	100	54.2	FAIL	305	973	1278	38.9%	FAIL	34.7
04-F4-1-Bedroom 01	100	2.3	PASS	74	55	129	3.9%	FAIL	31.8
04-F4-2-Bedroom 01	100	3.2	FAIL	92	136	228	6.9%	FAIL	31.3
04-F4-2-Bedroom 02	100	3.7	FAIL	95	113	208	6.3%	FAIL	32.1
04-F4-3-Bedroom 01	100	1.3	PASS	67	65	132	4.0%	FAIL	30.9
04-F4-4-Bedroom 01	100	2.6	PASS	88	114	202	6.1%	FAIL	31.2

### Mechanically ventilated Living Rooms- Summer Boost Ventilation

c) For Homes with restricted window openings, the CIBSE fixed temperature test must be followed – all occupied rooms should not exceed an operative temperature of 26°C for more than 3% of annual occupied hours (CIBSE Guide A 2015a)

Location	Occupied days (%)	Criteria 1 (%Hrs Tmax>=1K)	Criteria 1 Status	Occupied hours 09:00 - 22:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-A0-1 -Living room / Kitchen	100	2.2	PASS	445	445	9.4%	FAIL	31.4
00-A0-2 -Living room / Kitchen	100	17.8	FAIL	774	774	16.3%	FAIL	33.7
00-E0-1-Living / Dining	100	0.2	PASS	233	233	4.9%	FAIL	29.7
00-E0-2-Living / Dining	100	0.2	PASS	245	245	5.2%	FAIL	29.7
00-F0-1-Living room / Kitchen	100	17.9	FAIL	835	835	17.6%	FAIL	35.0
00-F0-2-Living room / Kitchen	100	5.4	FAIL	529	529	11.1%	FAIL	32.3
00-F0-3 -Living room / Kitchen	100	1.2	PASS	381	381	8.0%	FAIL	30.4
00-F0-4-Living room / Kitchen	100	10.4	FAIL	624	624	13.2%	FAIL	32.9
00-F0-5-Living room / Kitchen	100	9	FAIL	668	668	14.1%	FAIL	33.0
00-F0-6-Living room / Kitchen	100	2.2	PASS	445	445	9.4%	FAIL	31.4
00-F0-7 -Living room / Kitchen	100	2.4	PASS	467	467	9.8%	FAIL	31.6
00-F0-8 -Living room / Kitchen	100	2.6	PASS	489	489	10.3%	FAIL	31.5
00-HT2(1)-Kitchen	100	39.1	FAIL	1262	1262	26.6%	FAIL	36.9
00-HT2(1)-Living Room	100	45.5	FAIL	1335	1335	28.1%	FAIL	35.5
00-HT2(2)-Kitchen	100	39.3	FAIL	1272	1272	26.8%	FAIL	36.8
00-HT2(2)-Living Room	100	46.9	FAIL	1346	1346	28.4%	FAIL	35.6
00-HT2(3)-Kitchen	100	36.3	FAIL	1232	1232	26.0%	FAIL	36.2
00-HT2(3)-Living Room	100	43.6	FAIL	1307	1307	27.5%	FAIL	35.1
00-HT2A-Living Room	100	33.9	FAIL	1174	1174	24.7%	FAIL	34.4
00-HT3(1)-Kitchen	100	24.6	FAIL	1027	1027	21.6%	FAIL	35.1
00-HT3(1)-Living Room	100	45.1	FAIL	1310	1310	27.6%	FAIL	35.1
00-HT3(2)-Kitchen	100	34.4	FAIL	1210	1210	25.5%	FAIL	36.0
00-HT3(2)-Living Room	100	50.6	FAIL	1408	1408	29.7%	FAIL	35.7
00-HT3(3)-Kitchen	100	37.9	FAIL	1266	1266	26.7%	FAIL	36.2
00-HT3(3)-Living Room	100	53.9	FAIL	1453	1453	30.6%	FAIL	36.1
00-HT3(4)-Kitchen	100	35.2	FAIL	1209	1209	25.5%	FAIL	36.0
00-HT3(4)-Living Room	100	44.9	FAIL	1307	1307	27.5%	FAIL	35.1
00-HT3(5)-Kitchen	100	36.3	FAIL	1222	1222	25.8%	FAIL	36.3

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Occupied hours 09:00 - 22:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-HT3(5)-Living Room	100	45.2	FAIL	1321	1321	27.8%	FAIL	35.3
00-HT3(6)-Kitchen	100	35.6	FAIL	1229	1229	25.9%	FAIL	36.2
00-HT3(6)-Living Room	100	50.3	FAIL	1405	1405	29.6%	FAIL	35.7
00-HT3(7)-Kitchen	100	35.1	FAIL	1222	1222	25.8%	FAIL	36.2
00-HT3(7)-Living Room	100	49.4	FAIL	1392	1392	29.3%	FAIL	35.6
00-HT3(8)-Kitchen	100	28.7	FAIL	1105	1105	23.3%	FAIL	35.6
00-HT3(8)-Living Room	100	47.6	FAIL	1358	1358	28.6%	FAIL	35.5
00-HT3(9)-Kitchen	100	27.5	FAIL	1079	1079	22.7%	FAIL	35.6
00-HT3(9)-Living Room	100	47.9	FAIL	1366	1366	28.8%	FAIL	35.6
00-HT3(10)-Kitchen	100	34.9	FAIL	1217	1217	25.6%	FAIL	36.2
00-HT3(10)-Living Room	100	52.2	FAIL	1448	1448	30.5%	FAIL	36.2
00-HT3(11)-Kitchen	100	34.8	FAIL	1215	1215	25.6%	FAIL	36.3
00-HT3(11)-Living Room	100	51.1	FAIL	1427	1427	30.1%	FAIL	36.1
00-HT3(12)-Kitchen	100	35.5	FAIL	1214	1214	25.6%	FAIL	36.3
00-HT3(12)-Living Room	100	46.2	FAIL	1333	1333	28.1%	FAIL	35.3
00-HT3(13)-Kitchen	100	35	FAIL	1210	1210	25.5%	FAIL	36.3
00-HT3(13)-Living Room	100	46.7	FAIL	1338	1338	28.2%	FAIL	35.7
00-HT3(14)-Kitchen	100	28.1	FAIL	1094	1094	23.1%	FAIL	35.6
00-HT3(14)-Living Room	100	48.2	FAIL	1375	1375	29.0%	FAIL	35.6
00-HT3(15)-Kitchen	100	26.5	FAIL	1065	1065	22.4%	FAIL	35.5
00-HT3(15)-Living Room	100	46.7	FAIL	1333	1333	28.1%	FAIL	35.6
00-HT3(16)-Kitchen	100	34.9	FAIL	1209	1209	25.5%	FAIL	36.3
00-HT3(16)-Living Room	100	45.9	FAIL	1329	1329	28.0%	FAIL	35.4
00-HT3(17)-Kitchen	100	35.9	FAIL	1230	1230	25.9%	FAIL	36.4
00-HT3(17)-Living Room	100	48.6	FAIL	1372	1372	28.9%	FAIL	35.9
00-HT3(18)-Kitchen	100	35.8	FAIL	1229	1229	25.9%	FAIL	36.3
00-HT3(18)-Living Room	100	53.5	FAIL	1459	1459	30.7%	FAIL	36.4
00-HT3(19)-Kitchen	100	35.5	FAIL	1227	1227	25.9%	FAIL	36.3
00-HT3(19)-Living Room	100	52.8	FAIL	1452	1452	30.6%	FAIL	36.3
00-HT3(20)-Kitchen	100	29.4	FAIL	1131	1131	23.8%	FAIL	35.7
00-HT3(20)-Living Room	100	50.8	FAIL	1419	1419	29.9%	FAIL	35.9
00-HT4(1)-Living Room	100	29.3	FAIL	1093	1093	23.0%	FAIL	33.6
00-HT4(2)-Living Room	100	30.9	FAIL	1101	1101	23.2%	FAIL	33.8



**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Tmax>=1K)	Criteria 1 Status	Occupied hours 09:00 - 22:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-HT4(3)-Living Room	100	31.7	FAIL	1129	1129	23.8%	FAIL	33.8
00-HT4(4)-Living Room	100	33.1	FAIL	1142	1142	24.1%	FAIL	33.9
00-HT4(5)-Living Room	100	32.6	FAIL	1134	1134	23.9%	FAIL	33.9
00-HT4(6)-Living Room	100	34.6	FAIL	1156	1156	24.4%	FAIL	34.0
00-HT5(1)-Kitchen	100	44.2	FAIL	1264	1264	26.6%	FAIL	39.4
00-HT5(2)-Kitchen	100	44.2	FAIL	1271	1271	26.8%	FAIL	39.4
00-HT5(3)-Kitchen	100	43	FAIL	1242	1242	26.2%	FAIL	39.0
00-HT5(4)-Kitchen	100	42.2	FAIL	1224	1224	25.8%	FAIL	39.1
00-HT5(5)-Kitchen	100	43.6	FAIL	1256	1256	26.5%	FAIL	39.4
00-HT5(6)-Kitchen	100	43.5	FAIL	1259	1259	26.5%	FAIL	39.4
00-HT5(7)-Kitchen	100	40	FAIL	1209	1209	25.5%	FAIL	38.6
00-HT6(1)-Kitchen	100	38.8	FAIL	1148	1148	24.2%	FAIL	38.4
00-HT6(2)-Kitchen	100	40.4	FAIL	1184	1184	25.0%	FAIL	38.7
00-HT6(3)-Kitchen	100	41.1	FAIL	1192	1192	25.1%	FAIL	38.8
00-HT6(4)-Kitchen	100	39.9	FAIL	1172	1172	24.7%	FAIL	38.4
00-HT6(5)-Kitchen	100	40.6	FAIL	1192	1192	25.1%	FAIL	38.8
00-HT7(1)-Kitchen	100	31.8	FAIL	1099	1099	23.2%	FAIL	36.2
00-HT7(2)-Kitchen	100	32.5	FAIL	1123	1123	23.7%	FAIL	36.3
00-HT7(3)-Kitchen	100	32.9	FAIL	1130	1130	23.8%	FAIL	36.3
00-HT7(4)-Kitchen	100	40	FAIL	1239	1239	26.1%	FAIL	37.6
00-HT8(1)-Living Room	100	45.1	FAIL	1300	1300	27.4%	FAIL	36.9
00-HT8(2)-Living Room	100	46.3	FAIL	1321	1321	27.8%	FAIL	37.3
00-HT8(3)-Living Room	100	45.8	FAIL	1306	1306	27.5%	FAIL	37.3
00-HT8(4)-Living Room	100	42.7	FAIL	1259	1259	26.5%	FAIL	36.7
01-A2-1-Living room / Kitchen	100	5.9	FAIL	638	638	13.4%	FAIL	32.2
01-A2-2-Living room / Kitchen	100	6.7	FAIL	725	725	15.3%	FAIL	32.2
01-E0-1-Living / Kitchen	100	2.3	PASS	429	429	9.0%	FAIL	31.4
01-E0-2-Living / Kitchen	100	2.7	PASS	444	444	9.4%	FAIL	31.5
01-F1-1-Living room / Kitchen	100	21.4	FAIL	903	903	19.0%	FAIL	35.5
01-F1-2-Living room / Kitchen	100	12.1	FAIL	743	743	15.7%	FAIL	33.8
01-F1-3-Living room / Kitchen	100	3.1	FAIL	632	632	13.3%	FAIL	31.3
01-F1-4-Living room / Kitchen	100	1.7	PASS	412	412	8.7%	FAIL	31.2
01-F1-5-Living room / Kitchen	100	9.2	FAIL	686	686	14.5%	FAIL	32.5

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Tmax>=1K)	Criteria 1 Status	Occupied hours 09:00 - 22:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-F1-6-Living room / Kitchen	100	8.9	FAIL	587	587	12.4%	FAIL	32.6
01-F1-7-Living room / Kitchen	100	13.5	FAIL	683	683	14.4%	FAIL	33.6
01-F1-8-Living room / Kitchen	100	9.4	FAIL	592	592	12.5%	FAIL	33.4
01-F1-9-Living room / Kitchen	100	5.2	FAIL	560	560	11.8%	FAIL	32.0
01-F1-10-Living room / Kitchen	100	2.4	PASS	472	472	9.9%	FAIL	31.5
01-F1-11-Living room / Kitchen	100	4.7	FAIL	538	538	11.3%	FAIL	32.2
01-F1-12-Living room / Kitchen	100	4.6	FAIL	522	522	11.0%	FAIL	32.2
01-F1-13-Living room / Kitchen	100	5.1	FAIL	602	602	12.7%	FAIL	32.1
01-F1-14-Living room / Kitchen	100	2.7	PASS	480	480	10.1%	FAIL	31.1
01-HT5(1)-Living Room	100	35.2	FAIL	1275	1275	26.9%	FAIL	35.7
01-HT5(2)-Living Room	100	35.6	FAIL	1284	1284	27.1%	FAIL	35.8
01-HT5(3)-Living Room	100	34	FAIL	1232	1232	26.0%	FAIL	35.7
01-HT5(4)-Living Room	100	33.5	FAIL	1227	1227	25.9%	FAIL	35.6
01-HT5(5)-Living Room	100	35.7	FAIL	1286	1286	27.1%	FAIL	35.8
01-HT5(6)-Living Room	100	36.2	FAIL	1296	1296	27.3%	FAIL	35.9
01-HT5(7)-Living Room	100	36.3	FAIL	1294	1294	27.3%	FAIL	36.0
01-HT6(1)-Living Room	100	28.3	FAIL	1079	1079	22.7%	FAIL	34.9
01-HT6(2)-Living Room	100	30.6	FAIL	1145	1145	24.1%	FAIL	35.2
01-HT6(3)-Living Room	100	30.9	FAIL	1155	1155	24.3%	FAIL	35.2
01-HT6(4)-Living Room	100	28.9	FAIL	1093	1093	23.0%	FAIL	35.0
01-HT6(5)-Living Room	100	30.2	FAIL	1140	1140	24.0%	FAIL	35.2
01-HT7(1)-Living Room	100	46.9	FAIL	1459	1459	30.7%	FAIL	36.5
01-HT7(2)-Living Room	100	51.3	FAIL	1504	1504	31.7%	FAIL	36.8
01-HT7(3)-Living Room	100	51.5	FAIL	1508	1508	31.8%	FAIL	36.8
01-HT7(4)-Living Room	100	51.8	FAIL	1506	1506	31.7%	FAIL	36.9
02-A2-1-Living room / Kitchen	100	9.5	FAIL	785	785	16.5%	FAIL	32.8
02-A2-2-Living room / Kitchen	100	12.9	FAIL	894	894	18.8%	FAIL	32.8
02-E0-1-Living / Kitchen	100	2.3	PASS	410	410	8.6%	FAIL	31.3
02-E0-2-Living / Kitchen	100	2.4	PASS	424	424	8.9%	FAIL	31.3
02-F2-1-Living room / Kitchen	100	22.1	FAIL	916	916	19.3%	FAIL	35.6
02-F2-2-Living room / Kitchen	100	13.8	FAIL	790	790	16.6%	FAIL	34.1
02-F2-3-Living room / Kitchen	100	8.6	FAIL	790	790	16.6%	FAIL	32.3
02-F2-4-Living room / Kitchen	100	4	FAIL	561	561	11.8%	FAIL	32.0



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Occupied hours 09:00 - 22:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
02-F2-5-Living room / Kitchen	100	13.1	FAIL	786	786	16.6%	FAIL	33.1
02-F2-6-Living room / Kitchen	100	11.1	FAIL	644	644	13.6%	FAIL	33.3
02-F2-7-Living room / Kitchen	100	14	FAIL	700	700	14.8%	FAIL	33.7
02-F2-8-Living room / Kitchen	100	13.6	FAIL	687	687	14.5%	FAIL	34.2
02-F2-9-Living room / Kitchen	100	6.3	FAIL	610	610	12.9%	FAIL	32.3
02-F2-10-Living room / Kitchen	100	8.6	FAIL	906	906	19.1%	FAIL	32.1
02-F2-11-Living room / Kitchen	100	10.4	FAIL	909	909	19.2%	FAIL	32.5
02-F2-12-Living room / Kitchen	100	6.2	FAIL	666	666	14.0%	FAIL	32.4
02-F2-13-Living room / Kitchen	100	7.2	FAIL	733	733	15.4%	FAIL	32.5
02-F2-14-Living room / Kitchen	100	10.5	FAIL	646	646	13.6%	FAIL	32.4
02-F2-15- Living/ Kitchen	100	5.9	FAIL	580	580	12.2%	FAIL	32.3
03-F3-1-Living room / Kitchen	100	19.9	FAIL	878	878	18.5%	FAIL	35.3
03-F3-2-Living room / Kitchen	100	13	FAIL	782	782	16.5%	FAIL	33.9
03-F3-3-Living room / Kitchen	100	3.1	FAIL	490	490	10.3%	FAIL	31.4
03-F3-4-Living room / Kitchen	100	4.3	FAIL	672	672	14.2%	FAIL	31.0
03-F3-5-Living room / Kitchen	100	11.2	FAIL	691	691	14.6%	FAIL	32.7
03-F3-6-Living room / Kitchen	100	13.8	FAIL	697	697	14.7%	FAIL	33.4
03-F3-7-Living room / Kitchen	100	13.9	FAIL	708	708	14.9%	FAIL	34.4
03-F3-8-Living room / Kitchen	100	6.9	FAIL	616	616	13.0%	FAIL	32.4
03-F3-9-Living / Kitchen	100	7.3	FAIL	707	707	14.9%	FAIL	32.6
03-F3-10-Living room / Kitchen	100	10.9	FAIL	807	807	17.0%	FAIL	33.0
03-F3-11-Living / Kitchen	100	1	PASS	651	651	13.7%	FAIL	30.1
04-F4-1-Living room / Kitchen	100	9.8	FAIL	618	618	13.0%	FAIL	33.3
04-F4-2-Living room / Kitchen	100	3.6	FAIL	516	516	10.9%	FAIL	31.6
04-F4-3-Living room / Kitchen	100	2.9	PASS	556	556	11.7%	FAIL	31.3
04-F4-4-Living room / Kitchen	100	6.7	FAIL	769	769	16.2%	FAIL	31.9

## Results DSY1

### Mechanically ventilated Bedrooms- G value reduced to 0.35

- c) For Homes with restricted window openings, the CIBSE fixed temperature test must be followed – all occupied rooms should not exceed an operative temperature of 26°C for more than 3% of annual occupied hours (CIBSE Guide A 2015a)

Location	Occu pied days (%)	Criteria 1 (%Hrs Top- Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-E0-1-Bedroom	100	0.2	PASS	43	28	71	2.2%	PASS	29.9
00-E0-2-Bedroom	100	0.3	PASS	45	31	76	2.3%	PASS	30.0
00-F0-2-Bedroom	100	0.1	PASS	30	14	44	1.3%	PASS	29.7
00-F0-5-Bedroom 01	100	0.1	PASS	43	21	64	1.9%	PASS	29.7
00-F0-5-Bedroom 02	100	0.2	PASS	41	19	60	1.8%	PASS	29.7
00-F0-6-Bedroom	100	0.1	PASS	22	9	31	0.9%	PASS	29.4
00-F0-8 -Bedroom 02	100	0	PASS	19	9	28	0.9%	PASS	28.7
01-F1-14-Bedroom	100	0	PASS	15	4	19	0.6%	PASS	29.0
01-F1-15-Bedroom 02	100	0.2	PASS	49	24	73	2.2%	PASS	29.8
01-F1-2-Bedroom 02	100	0	PASS	29	12	41	1.2%	PASS	29.1
01-F1-3-Bedroom 01	100	0	PASS	39	20	59	1.8%	PASS	28.9
01-F1-3-Bedroom 03	100	0.4	PASS	62	42	104	3.2%	FAIL	29.9
01-F1-4-Bedroom 01	100	0.1	PASS	22	11	33	1.0%	PASS	29.3
02-F2-14-Bedroom	100	0.2	PASS	25	12	37	1.1%	PASS	29.7
02-F2-2-Bedroom 02	100	0.1	PASS	42	22	64	1.9%	PASS	29.5
02-F2-3-Bedroom 01	100	0.1	PASS	68	48	116	3.5%	FAIL	29.6
03-F3-2-Bedroom 02	100	0.1	PASS	43	31	74	2.3%	PASS	29.6
04-F4-4-Bedroom 02	100	0	PASS	33	24	57	1.7%	PASS	29.0
00-A0-1 -Bedroom 01	100	2.4	PASS	29	16	45	1.4%	PASS	31.5
00-A0-2 -Bedroom 01	100	1	PASS	56	32	88	2.7%	PASS	30.7
00-A0-2 -Bedroom 02	100	2.5	PASS	77	54	131	4.0%	FAIL	31.4
00-F0-1-Bedroom 01	100	6.2	FAIL	101	72	173	5.3%	FAIL	32.8
00-F0-1-Bedroom 02	100	3	FAIL	86	58	144	4.4%	FAIL	31.9
00-F0-3-Bedroom 01	100	1.1	PASS	50	28	78	2.4%	PASS	31.0
00-F0-3-Bedroom 02	100	1.5	PASS	50	24	74	2.3%	PASS	31.2
00-F0-4-Bedroom	100	1.2	PASS	37	14	51	1.6%	PASS	30.5
00-F0-7 -Bedroom	100	0.8	PASS	49	29	78	2.4%	PASS	30.9
00-F0-8 -Bedroom 01	100	0.7	PASS	61	45	106	3.2%	FAIL	30.2
00-HT8(1)-Bedroom 01	100	4.6	FAIL	97	108	205	6.2%	FAIL	32.4
00-HT8(2)-Bedroom 01	100	4.5	FAIL	96	99	195	5.9%	FAIL	32.4

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occu pied days (%)	Criteria 1 (%Hrs Top- Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-HT8(3)-Bedroom 01	100	4.7	FAIL	97	101	198	6.0%	FAIL	32.5
00-HT8(4)-Bedroom 01	100	4.1	FAIL	95	103	198	6.0%	FAIL	32.3
01-A2-1-Bedroom 01	100	0.2	PASS	37	23	60	1.8%	PASS	29.9
01-A2-2-Bedroom 01	100	1.7	PASS	86	69	155	4.7%	FAIL	31.1
01-A2-2-Bedroom 02	100	2.8	PASS	85	76	161	4.9%	FAIL	31.4
02-E0-1-Bedroom 01	100	1.7	PASS	84	84	168	5.1%	FAIL	30.9
01-E0-1-Bedroom 01	100	2.4	PASS	86	68	154	4.7%	FAIL	31.2
01-E0-1-Bedroom 02	100	2.6	PASS	83	53	136	4.1%	FAIL	31.0
02-E0-1-Bedroom 02	100	1.9	PASS	85	81	166	5.1%	FAIL	30.9
01-E0-2-Bedroom 01	100	2.9	PASS	88	78	166	5.1%	FAIL	31.4
02-E0-2-Bedroom 01	100	1.8	PASS	86	87	173	5.3%	FAIL	31.0
02-E0-2-Bedroom 02	100	1.8	PASS	84	81	165	5.0%	FAIL	30.9
01-E0-2-Bedroom 02	100	2.6	PASS	82	53	135	4.1%	FAIL	31.0
01-F1-1-Bedroom 01	100	8.8	FAIL	106	88	194	5.9%	FAIL	33.4
01-F1-1-Bedroom 02	100	4.6	FAIL	96	78	174	5.3%	FAIL	32.5
01-F1-10-Bedroom 01	100	0.7	PASS	45	22	67	2.0%	PASS	30.8
01-F1-11-Bedroom 01	100	1.3	PASS	49	23	72	2.2%	PASS	31.1
01-F1-12-Bedroom 01	100	2	PASS	63	36	99	3.0%	PASS	31.4
01-F1-13-Bedroom 01	100	2.2	PASS	99	84	183	5.6%	FAIL	31.1
01-F1-13-Bedroom 02	100	2.4	PASS	87	62	149	4.5%	FAIL	31.5
01-F1-15-Bedroom 01	100	0.5	PASS	62	35	97	3.0%	PASS	30.4
01-F1-2-Bedroom 01	100	1.3	PASS	71	47	118	3.6%	FAIL	30.8
01-F1-3-Bedroom 02	100	1.1	PASS	81	48	129	3.9%	FAIL	30.6
01-F1-5-Bedroom 01	100	8.2	FAIL	103	89	192	5.8%	FAIL	33.4
01-F1-5-Bedroom 02	100	6	FAIL	107	84	191	5.8%	FAIL	32.6
01-F1-6-Bedroom 01	100	3.2	FAIL	57	21	78	2.4%	FAIL	31.7
01-F1-7-Bedroom 01	100	4.5	FAIL	68	33	101	3.1%	FAIL	32.2
01-F1-8-Bedroom 01	100	1.3	PASS	48	21	69	2.1%	PASS	31.1
01-F1-9-Bedroom 01	100	3.2	FAIL	88	71	159	4.8%	FAIL	31.5
01-F1-9-Bedroom 02	100	3.4	FAIL	88	68	156	4.7%	FAIL	31.9
01-HT2(1)-Bedroom 01	100	29.9	FAIL	194	441	635	19.3%	FAIL	37.6
01-HT2(1)-Bedroom 02	100	21.4	FAIL	156	333	489	14.9%	FAIL	34.9
01-HT2(2)-Bedroom 01	100	28.6	FAIL	191	436	627	19.1%	FAIL	37.4
01-HT2(2)-Bedroom 02	100	21.4	FAIL	155	333	488	14.9%	FAIL	34.9

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occu pied days (%)	Criteria 1 (%Hrs Top- Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-HT2(3)-Bedroom 01	100	25.8	FAIL	181	411	592	18.0%	FAIL	36.9
01-HT2(3)-Bedroom 02	100	20.2	FAIL	152	315	467	14.2%	FAIL	34.8
01-HT2A-Bedroom 01	100	33.7	FAIL	193	427	620	18.9%	FAIL	38.1
01-HT2A-Bedroom 02	100	29.6	FAIL	167	366	533	16.2%	FAIL	36.1
01-HT3(1)-Bedroom 01	100	16.3	FAIL	144	281	425	12.9%	FAIL	34.0
01-HT3(1)-Bedroom 02	100	15.1	FAIL	153	330	483	14.7%	FAIL	34.5
01-HT3(10)-Bedroom 01	100	25.3	FAIL	154	322	476	14.5%	FAIL	35.4
01-HT3(10)-Bedroom 02	100	19.2	FAIL	165	373	538	16.4%	FAIL	35.0
01-HT3(11)-Bedroom 01	100	19.3	FAIL	149	309	458	13.9%	FAIL	34.3
01-HT3(11)-Bedroom 02	100	19.6	FAIL	169	379	548	16.7%	FAIL	35.1
01-HT3(12)-Bedroom 01	100	24.8	FAIL	154	319	473	14.4%	FAIL	35.3
01-HT3(12)-Bedroom 02	100	19.9	FAIL	174	388	562	17.1%	FAIL	35.1
01-HT3(13)-Bedroom 01	100	18.2	FAIL	147	302	449	13.7%	FAIL	34.1
01-HT3(13)-Bedroom 02	100	19.5	FAIL	169	377	546	16.6%	FAIL	35.0
01-HT3(14)-Bedroom 01	100	25.8	FAIL	154	322	476	14.5%	FAIL	35.4
01-HT3(14)-Bedroom 02	100	17.6	FAIL	162	362	524	16.0%	FAIL	34.8
01-HT3(15)-Bedroom 01	100	17.4	FAIL	145	291	436	13.3%	FAIL	34.2
01-HT3(15)-Bedroom 02	100	16.5	FAIL	159	353	512	15.6%	FAIL	34.7
01-HT3(16)-Bedroom 01	100	24.3	FAIL	153	313	466	14.2%	FAIL	35.2
01-HT3(16)-Bedroom 02	100	19.4	FAIL	169	376	545	16.6%	FAIL	35.0
01-HT3(17)-Bedroom 01	100	18.9	FAIL	150	312	462	14.1%	FAIL	34.2
01-HT3(17)-Bedroom 02	100	19.9	FAIL	175	390	565	17.2%	FAIL	35.1
01-HT3(18)-Bedroom 01	100	26.1	FAIL	156	325	481	14.6%	FAIL	35.4
01-HT3(18)-Bedroom 02	100	19.8	FAIL	169	383	552	16.8%	FAIL	35.1
01-HT3(19)-Bedroom 01	100	19.8	FAIL	151	316	467	14.2%	FAIL	34.4
01-HT3(19)-Bedroom 02	100	19.4	FAIL	166	379	545	16.6%	FAIL	35.1
01-HT3(2)-Bedroom 01	100	24.9	FAIL	154	319	473	14.4%	FAIL	35.3
01-HT3(2)-Bedroom 02	100	18.4	FAIL	164	371	535	16.3%	FAIL	35.0
01-HT3(20)-Bedroom 01	100	25.6	FAIL	154	325	479	14.6%	FAIL	35.4
01-HT3(20)-Bedroom 02	100	18.1	FAIL	165	369	534	16.3%	FAIL	34.9
01-HT3(3)-Bedroom 01	100	22.2	FAIL	160	365	525	16.0%	FAIL	34.5
01-HT3(3)-Bedroom 02	100	22.2	FAIL	180	446	626	19.1%	FAIL	35.3
01-HT3(4)-Bedroom 01	100	24.9	FAIL	156	331	487	14.8%	FAIL	35.2
01-HT3(4)-Bedroom 02	100	20.2	FAIL	176	394	570	17.4%	FAIL	35.2

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occu pied days (%)	Criteria 1 (%Hrs Top- Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-HT3(5)-Bedroom 01	100	17.3	FAIL	147	298	445	13.5%	FAIL	34.0
01-HT3(5)-Bedroom 02	100	20.1	FAIL	172	386	558	17.0%	FAIL	35.1
01-HT3(6)-Bedroom 01	100	25.1	FAIL	155	321	476	14.5%	FAIL	35.3
01-HT3(6)-Bedroom 02	100	19.9	FAIL	171	377	548	16.7%	FAIL	35.1
01-HT3(7)-Bedroom 01	100	18.5	FAIL	150	302	452	13.8%	FAIL	34.3
01-HT3(7)-Bedroom 02	100	19.6	FAIL	167	373	540	16.4%	FAIL	35.1
01-HT3(8)-Bedroom 01	100	26	FAIL	154	322	476	14.5%	FAIL	35.4
01-HT3(8)-Bedroom 02	100	18	FAIL	164	365	529	16.1%	FAIL	34.8
01-HT3(9)-Bedroom 01	100	17.9	FAIL	148	295	443	13.5%	FAIL	34.2
01-HT3(9)-Bedroom 02	100	16.8	FAIL	159	352	511	15.6%	FAIL	34.7
01-HT4(1)-Bedroom 01	100	13.7	FAIL	143	281	424	12.9%	FAIL	33.4
01-HT4(1)-Bedroom 02	100	23.6	FAIL	178	403	581	17.7%	FAIL	35.8
01-HT4(2)-Bedroom 01	100	19.1	FAIL	147	304	451	13.7%	FAIL	34.3
01-HT4(2)-Bedroom 02	100	23.9	FAIL	179	406	585	17.8%	FAIL	35.8
01-HT4(3)-Bedroom 01	100	14.1	FAIL	144	290	434	13.2%	FAIL	33.5
01-HT4(3)-Bedroom 02	100	24.1	FAIL	178	407	585	17.8%	FAIL	35.8
01-HT4(4)-Bedroom 01	100	19.6	FAIL	149	308	457	13.9%	FAIL	34.4
01-HT4(4)-Bedroom 02	100	24	FAIL	178	407	585	17.8%	FAIL	35.8
01-HT4(5)-Bedroom 01	100	14.2	FAIL	144	292	436	13.3%	FAIL	33.5
01-HT4(5)-Bedroom 02	100	23.8	FAIL	178	406	584	17.8%	FAIL	35.8
01-HT4(6)-Bedroom 01	100	19.7	FAIL	150	310	460	14.0%	FAIL	34.4
01-HT4(6)-Bedroom 02	100	24.4	FAIL	180	412	592	18.0%	FAIL	35.8
01-HT5(1)-Bedroom 01	100	14.6	FAIL	151	261	412	12.5%	FAIL	32.5
01-HT5(1)-Bedroom 02	100	21.5	FAIL	193	427	620	18.9%	FAIL	33.1
01-HT5(2)-Bedroom 01	100	16.7	FAIL	163	303	466	14.2%	FAIL	32.7
01-HT5(2)-Bedroom 02	100	21.8	FAIL	194	430	624	19.0%	FAIL	33.2
01-HT5(3)-Bedroom 01	100	16	FAIL	162	295	457	13.9%	FAIL	32.7
01-HT5(3)-Bedroom 02	100	19.7	FAIL	191	439	630	19.2%	FAIL	33.2
01-HT5(4)-Bedroom 01	100	15.1	FAIL	154	271	425	12.9%	FAIL	32.6
01-HT5(4)-Bedroom 02	100	22	FAIL	192	425	617	18.8%	FAIL	33.2
01-HT5(5)-Bedroom 01	100	17.8	FAIL	165	308	473	14.4%	FAIL	32.9
01-HT5(5)-Bedroom 02	100	23	FAIL	199	443	642	19.5%	FAIL	33.3
01-HT5(6)-Bedroom 01	100	18.5	FAIL	165	316	481	14.6%	FAIL	32.9
01-HT5(6)-Bedroom 02	100	23.8	FAIL	199	453	652	19.8%	FAIL	33.3

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occu pied days (%)	Criteria 1 (%Hrs Top- Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-HT5(7)-Bedroom 01	100	18.8	FAIL	167	326	493	15.0%	FAIL	33.0
01-HT5(7)-Bedroom 02	100	23.8	FAIL	199	450	649	19.8%	FAIL	33.4
01-HT6(1)-Bedroom 01	100	5.4	FAIL	117	153	270	8.2%	FAIL	31.7
01-HT6(2)-Bedroom 01	100	6.6	FAIL	122	156	278	8.5%	FAIL	31.7
01-HT6(3)-Bedroom 01	100	6.5	FAIL	122	157	279	8.5%	FAIL	31.7
01-HT6(4)-Bedroom 01	100	5.8	FAIL	118	148	266	8.1%	FAIL	31.6
01-HT6(5)-Bedroom 01	100	7.7	FAIL	127	175	302	9.2%	FAIL	32.0
01-HT7(1)-Bedroom 01	100	29.8	FAIL	233	497	730	22.2%	FAIL	35.6
01-HT7(1)-Bedroom 02	100	18	FAIL	163	303	466	14.2%	FAIL	33.1
01-HT7(2)-Bedroom 01	100	31	FAIL	233	507	740	22.5%	FAIL	35.7
01-HT7(2)-Bedroom 02	100	17.9	FAIL	163	308	471	14.3%	FAIL	33.1
01-HT7(3)-Bedroom 01	100	31.3	FAIL	233	509	742	22.6%	FAIL	35.8
01-HT7(3)-Bedroom 02	100	18	FAIL	163	310	473	14.4%	FAIL	33.1
01-HT7(4)-Bedroom 01	100	31.5	FAIL	230	540	770	23.4%	FAIL	35.7
01-HT7(4)-Bedroom 02	100	18.1	FAIL	163	310	473	14.4%	FAIL	33.1
01-HT8(1)-Bedroom 02	100	2	PASS	81	82	163	5.0%	FAIL	31.7
01-HT8(2)-Bedroom 02	100	1.9	PASS	81	81	162	4.9%	FAIL	31.7
01-HT8(3)-Bedroom 02	100	2	PASS	81	79	160	4.9%	FAIL	31.7
01-HT8(4)-Bedroom 02	100	1.8	PASS	80	78	158	4.8%	FAIL	31.6
02-A2-1-Bedroom 01	100	0.3	PASS	37	25	62	1.9%	PASS	29.9
02-A2-2-Bedroom 01	100	1.7	PASS	82	68	150	4.6%	FAIL	31.2
02-A2-2-Bedroom 02	100	3.6	FAIL	88	86	174	5.3%	FAIL	31.7
02-F2-1-Bedroom 01	100	9	FAIL	107	93	200	6.1%	FAIL	33.4
02-F2-1-Bedroom 02	100	5	FAIL	99	82	181	5.5%	FAIL	32.6
02-F2-10-Bedroom 01	100	3.6	FAIL	107	106	213	6.5%	FAIL	31.3
02-F2-11-Bedroom 01	100	3.6	FAIL	110	93	203	6.2%	FAIL	31.3
02-F2-12-Bedroom 01	100	2.5	PASS	67	43	110	3.3%	FAIL	31.6
02-F2-13-Bedroom 01	100	3.3	FAIL	104	106	210	6.4%	FAIL	31.5
02-F2-13-Bedroom 02	100	3.7	FAIL	92	79	171	5.2%	FAIL	32.1
02-F2-15-Bedroom 01	100	2.5	PASS	90	69	159	4.8%	FAIL	31.2
02-F2-15-Bedroom 02	100	1	PASS	76	50	126	3.8%	FAIL	30.6
02-F2-2-Bedroom 01	100	2.3	PASS	79	60	139	4.2%	FAIL	31.2
02-F2-3-Bedroom 02	100	4.2	FAIL	108	96	204	6.2%	FAIL	31.5
02-F2-3-Bedroom 03	100	1.7	PASS	92	81	173	5.3%	FAIL	30.8



**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occu pied days (%)	Criteria 1 (%Hrs Top- Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
02-F2-4-Bedroom 01	100	0.3	PASS	42	28	70	2.1%	PASS	30.1
02-F2-5-Bedroom 01	100	13.8	FAIL	116	125	241	7.3%	FAIL	35.1
02-F2-5-Bedroom 02	100	10.2	FAIL	114	111	225	6.8%	FAIL	33.6
02-F2-6-Bedroom 01	100	5.3	FAIL	76	41	117	3.6%	FAIL	32.4
02-F2-7-Bedroom 01	100	5.3	FAIL	73	39	112	3.4%	FAIL	32.5
02-F2-8-Bedroom 01	100	2.6	PASS	69	39	108	3.3%	FAIL	31.8
02-F2-9-Bedroom 01	100	5	FAIL	109	107	216	6.6%	FAIL	31.9
02-F2-9-Bedroom 02	100	4.4	FAIL	99	84	183	5.6%	FAIL	32.3
02-HT2(1)-Bedroom 03	100	42.5	FAIL	204	520	724	22.0%	FAIL	38.0
02-HT2(2)-Bedroom 03	100	42.4	FAIL	203	520	723	22.0%	FAIL	38.0
02-HT2(3)-Bedroom 03	100	40.1	FAIL	200	512	712	21.7%	FAIL	37.7
02-HT2A-Bedroom 03	100	39.1	FAIL	202	510	712	21.7%	FAIL	37.6
02-HT3(1)-Bedroom 03	100	12.2	FAIL	143	263	406	12.4%	FAIL	34.1
02-HT3(10)-Bedroom 03	100	16.2	FAIL	151	305	456	13.9%	FAIL	34.7
02-HT3(11)-Bedroom 03	100	16.7	FAIL	153	316	469	14.3%	FAIL	34.7
02-HT3(12)-Bedroom 03	100	17.2	FAIL	156	342	498	15.2%	FAIL	34.6
02-HT3(13)-Bedroom 03	100	16.7	FAIL	154	330	484	14.7%	FAIL	34.6
02-HT3(14)-Bedroom 03	100	15.3	FAIL	150	303	453	13.8%	FAIL	34.5
02-HT3(15)-Bedroom 03	100	14.4	FAIL	149	295	444	13.5%	FAIL	34.4
02-HT3(16)-Bedroom 03	100	16.6	FAIL	153	328	481	14.6%	FAIL	34.6
02-HT3(17)-Bedroom 03	100	17.2	FAIL	156	344	500	15.2%	FAIL	34.7
02-HT3(18)-Bedroom 03	100	16.9	FAIL	153	319	472	14.4%	FAIL	34.7
02-HT3(19)-Bedroom 03	100	16.6	FAIL	153	312	465	14.2%	FAIL	34.7
02-HT3(2)-Bedroom 03	100	15.5	FAIL	149	306	455	13.9%	FAIL	34.6
02-HT3(20)-Bedroom 03	100	15.4	FAIL	150	302	452	13.8%	FAIL	34.6
02-HT3(3)-Bedroom 03	100	19.6	FAIL	161	382	543	16.5%	FAIL	34.9
02-HT3(4)-Bedroom 03	100	17.1	FAIL	158	349	507	15.4%	FAIL	34.6
02-HT3(5)-Bedroom 03	100	16.7	FAIL	153	335	488	14.9%	FAIL	34.6
02-HT3(6)-Bedroom 03	100	16.5	FAIL	152	315	467	14.2%	FAIL	34.7
02-HT3(7)-Bedroom 03	100	16	FAIL	150	305	455	13.9%	FAIL	34.7
02-HT3(8)-Bedroom 03	100	15.2	FAIL	150	300	450	13.7%	FAIL	34.5
02-HT3(9)-Bedroom 03	100	14.3	FAIL	148	291	439	13.4%	FAIL	34.4
02-HT4(1)-Bedroom 03	100	18.1	FAIL	174	473	647	19.7%	FAIL	33.3
02-HT4(2)-Bedroom 03	100	18.3	FAIL	175	475	650	19.8%	FAIL	33.3

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occu pied days (%)	Criteria 1 (%Hrs Top- Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
02-HT4(3)-Bedroom 03	100	19.1	FAIL	176	478	654	19.9%	FAIL	33.3
02-HT4(4)-Bedroom 03	100	19.4	FAIL	178	479	657	20.0%	FAIL	33.4
02-HT4(5)-Bedroom 03	100	19.2	FAIL	176	478	654	19.9%	FAIL	33.3
02-HT4(6)-Bedroom 03	100	20	FAIL	179	487	666	20.3%	FAIL	33.4
02-HT5(1)-Bedroom 03	100	14	FAIL	149	315	464	14.1%	FAIL	34.0
02-HT5(1)-Bedroom 04	100	16.4	FAIL	158	378	536	16.3%	FAIL	32.9
02-HT5(2)-Bedroom 03	100	14.3	FAIL	150	321	471	14.3%	FAIL	34.0
02-HT5(2)-Bedroom 04	100	15.8	FAIL	160	386	546	16.6%	FAIL	32.9
02-HT5(3)-Bedroom 03	100	12.9	FAIL	146	304	450	13.7%	FAIL	33.8
02-HT5(3)-Bedroom 04	100	14.4	FAIL	155	362	517	15.7%	FAIL	32.7
02-HT5(4)-Bedroom 03	100	13.3	FAIL	147	314	461	14.0%	FAIL	33.9
02-HT5(4)-Bedroom 04	100	16.4	FAIL	158	372	530	16.1%	FAIL	33.0
02-HT5(5)-Bedroom 03	100	14.9	FAIL	151	332	483	14.7%	FAIL	34.1
02-HT5(5)-Bedroom 04	100	17.1	FAIL	162	397	559	17.0%	FAIL	33.0
02-HT5(6)-Bedroom 03	100	15.4	FAIL	153	341	494	15.0%	FAIL	34.1
02-HT5(6)-Bedroom 04	100	17.7	FAIL	163	404	567	17.3%	FAIL	33.0
02-HT5(7)-Bedroom 03	100	16	FAIL	153	349	502	15.3%	FAIL	34.2
02-HT5(7)-Bedroom 04	100	18.5	FAIL	164	414	578	17.6%	FAIL	33.2
02-HT6(1)-Bedroom 02	100	10.8	FAIL	133	240	373	11.4%	FAIL	33.5
02-HT6(1)-Bedroom 03	100	11.9	FAIL	140	268	408	12.4%	FAIL	32.7
02-HT6(2)-Bedroom 02	100	11.9	FAIL	137	248	385	11.7%	FAIL	33.7
02-HT6(2)-Bedroom 03	100	12.9	FAIL	144	287	431	13.1%	FAIL	32.7
02-HT6(3)-Bedroom 02	100	11.8	FAIL	137	249	386	11.8%	FAIL	33.7
02-HT6(3)-Bedroom 03	100	13	FAIL	145	288	433	13.2%	FAIL	32.7
02-HT6(4)-Bedroom 02	100	10.5	FAIL	132	236	368	11.2%	FAIL	33.5
02-HT6(4)-Bedroom 03	100	11.6	FAIL	142	268	410	12.5%	FAIL	32.6
02-HT6(5)-Bedroom 02	100	11.5	FAIL	140	263	403	12.3%	FAIL	33.6
02-HT6(5)-Bedroom 03	100	13.4	FAIL	145	294	439	13.4%	FAIL	32.9
02-HT7(1)-Bedroom 03	100	23.6	FAIL	171	410	581	17.7%	FAIL	35.6
02-HT7(1)-Bedroom 04	100	23.1	FAIL	175	438	613	18.7%	FAIL	33.8
02-HT7(2)-Bedroom 03	100	25.2	FAIL	176	429	605	18.4%	FAIL	35.9
02-HT7(2)-Bedroom 04	100	25.9	FAIL	180	462	642	19.5%	FAIL	34.1
02-HT7(3)-Bedroom 03	100	25.4	FAIL	176	431	607	18.5%	FAIL	36.0
02-HT7(3)-Bedroom 04	100	26.2	FAIL	180	465	645	19.6%	FAIL	34.2

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occu pied days (%)	Criteria 1 (%Hrs Top- Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
02-HT7(4)-Bedroom 03	100	24.7	FAIL	175	427	602	18.3%	FAIL	35.9
02-HT7(4)-Bedroom 04	100	25.6	FAIL	179	459	638	19.4%	FAIL	34.1
03-F3-1-Bedroom 01	100	7.2	FAIL	102	89	191	5.8%	FAIL	33.0
03-F3-1-Bedroom 02	100	4	FAIL	91	79	170	5.2%	FAIL	32.3
03-F3-10-Bedroom 01	100	3	FAIL	68	41	109	3.3%	FAIL	31.8
03-F3-11-Bedroom 01	100	1.4	PASS	89	89	178	5.4%	FAIL	30.6
03-F3-11-Bedroom 02	100	1.6	PASS	86	83	169	5.1%	FAIL	31.1
03-F3-11-Bedroom 03	100	0.8	PASS	84	80	164	5.0%	FAIL	30.6
03-F3-2-Bedroom 01	100	1.8	PASS	81	63	144	4.4%	FAIL	31.0
03-F3-4-Bedroom 01	100	1.8	PASS	69	46	115	3.5%	FAIL	31.1
03-F3-3-Bedroom 01	100	3.2	FAIL	95	94	189	5.8%	FAIL	31.3
03-F3-3-Bedroom 02	100	3.5	FAIL	98	99	197	6.0%	FAIL	31.4
03-F3-5-Bedroom 01	100	6.3	FAIL	96	87	183	5.6%	FAIL	32.5
03-F3-5-Bedroom 02	100	6.5	FAIL	108	102	210	6.4%	FAIL	32.6
03-F3-6-Bedroom 01	100	4.4	FAIL	74	41	115	3.5%	FAIL	32.3
03-F3-7-Bedroom	100	2.8	PASS	70	39	109	3.3%	FAIL	31.9
03-F3-8-Bedroom 01	100	4.8	FAIL	100	91	191	5.8%	FAIL	32.0
03-F3-8-Bedroom 02	100	4.5	FAIL	99	82	181	5.5%	FAIL	32.4
03-F3-9-Bedroom	100	2.8	PASS	71	50	121	3.7%	FAIL	31.6
03-F3-9-Bedroom 01	100	51	FAIL	304	732	1036	31.5%	FAIL	34.5
04-F4-1-Bedroom 01	100	1.7	PASS	65	43	108	3.3%	FAIL	31.4
04-F4-2-Bedroom 01	100	2	PASS	84	91	175	5.3%	FAIL	31.0
04-F4-2-Bedroom 02	100	2.5	PASS	85	82	167	5.1%	FAIL	31.7
04-F4-3-Bedroom 01	100	0.8	PASS	58	47	105	3.2%	FAIL	30.6
04-F4-4-Bedroom 01	100	1.6	PASS	76	74	150	4.6%	FAIL	30.9

**Mechanically ventilated Living Rooms- G value reduced to 0.35**

d) For Homes with restricted window openings, the CIBSE fixed temperature test must be followed – all occupied rooms should not exceed an operative temperature of 26°C for more than 3% of annual occupied hours (CIBSE Guide A 2015a)

Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Occupied hours 09:00 - 22:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-A0-1 -Living room / Kitchen	100	1.6	PASS	404	404	8.5%	FAIL	31.2
00-A0-2 -Living room / Kitchen	100	13.8	FAIL	705	705	14.9%	FAIL	32.9
00-E0-1-Living / Dining	100	0.1	PASS	196	196	4.1%	FAIL	29.5
00-E0-2-Living / Dining	100	0.1	PASS	212	212	4.5%	FAIL	29.5
00-F0-1-Living room / Kitchen	100	14.1	FAIL	740	740	15.6%	FAIL	34.4
00-F0-2-Living room / Kitchen	100	3.9	FAIL	465	465	9.8%	FAIL	32.0
00-F0-3 -Living room / Kitchen	100	0.8	PASS	347	347	7.3%	FAIL	30.2
00-F0-4-Living room / Kitchen	100	6.8	FAIL	576	576	12.1%	FAIL	32.4
00-F0-5-Living room / Kitchen	100	6.8	FAIL	583	583	12.3%	FAIL	32.6
00-F0-6-Living room / Kitchen	100	1.6	PASS	406	406	8.6%	FAIL	31.2
00-F0-7 -Living room / Kitchen	100	2.1	PASS	421	421	8.9%	FAIL	31.4
00-F0-8 -Living room / Kitchen	100	2	PASS	440	440	9.3%	FAIL	31.3
00-HT2(1)-Kitchen	100	30.8	FAIL	1152	1152	24.3%	FAIL	36.0
00-HT2(1)-Living Room	100	35.4	FAIL	1192	1192	25.1%	FAIL	34.3
00-HT2(2)-Kitchen	100	30.4	FAIL	1160	1160	24.4%	FAIL	35.9
00-HT2(2)-Living Room	100	36.6	FAIL	1206	1206	25.4%	FAIL	34.4
00-HT2(3)-Kitchen	100	27.9	FAIL	1109	1109	23.4%	FAIL	35.4
00-HT2(3)-Living Room	100	33.8	FAIL	1158	1158	24.4%	FAIL	34.2
00-HT2A-Living Room	100	24.4	FAIL	1030	1030	21.7%	FAIL	33.5
00-HT3(1)-Kitchen	100	18.5	FAIL	915	915	19.3%	FAIL	34.5
00-HT3(1)-Living Room	100	34.8	FAIL	1158	1158	24.4%	FAIL	34.2
00-HT3(2)-Kitchen	100	27.2	FAIL	1101	1101	23.2%	FAIL	35.3
00-HT3(2)-Living Room	100	40.3	FAIL	1246	1246	26.3%	FAIL	34.6
00-HT3(3)-Kitchen	100	30.4	FAIL	1158	1158	24.4%	FAIL	35.5
00-HT3(3)-Living Room	100	44.2	FAIL	1301	1301	27.4%	FAIL	34.8
00-HT3(4)-Kitchen	100	27.5	FAIL	1098	1098	23.1%	FAIL	35.2
00-HT3(4)-Living Room	100	34.4	FAIL	1147	1147	24.2%	FAIL	34.2
00-HT3(5)-Kitchen	100	28.5	FAIL	1096	1096	23.1%	FAIL	35.4
00-HT3(5)-Living Room	100	34.8	FAIL	1171	1171	24.7%	FAIL	34.1
00-HT3(6)-Kitchen	100	28.5	FAIL	1114	1114	23.5%	FAIL	35.5
00-HT3(6)-Living Room	100	39.6	FAIL	1244	1244	26.2%	FAIL	34.6
00-HT3(7)-Kitchen	100	28.3	FAIL	1105	1105	23.3%	FAIL	35.5

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Occupied hours 09:00 - 22:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-HT3(7)-Living Room	100	39	FAIL	1234	1234	26.0%	FAIL	34.5
00-HT3(8)-Kitchen	100	21.9	FAIL	983	983	20.7%	FAIL	34.9
00-HT3(8)-Living Room	100	37	FAIL	1199	1199	25.3%	FAIL	34.5
00-HT3(9)-Kitchen	100	20.8	FAIL	967	967	20.4%	FAIL	34.9
00-HT3(9)-Living Room	100	37.8	FAIL	1213	1213	25.6%	FAIL	34.4
00-HT3(10)-Kitchen	100	27.8	FAIL	1099	1099	23.2%	FAIL	35.5
00-HT3(10)-Living Room	100	41.9	FAIL	1276	1276	26.9%	FAIL	34.9
00-HT3(11)-Kitchen	100	27.7	FAIL	1100	1100	23.2%	FAIL	35.5
00-HT3(11)-Living Room	100	41.1	FAIL	1257	1257	26.5%	FAIL	34.8
00-HT3(12)-Kitchen	100	27.9	FAIL	1092	1092	23.0%	FAIL	35.4
00-HT3(12)-Living Room	100	36.2	FAIL	1183	1183	24.9%	FAIL	34.3
00-HT3(13)-Kitchen	100	27.3	FAIL	1083	1083	22.8%	FAIL	35.4
00-HT3(13)-Living Room	100	36.7	FAIL	1202	1202	25.3%	FAIL	34.4
00-HT3(14)-Kitchen	100	21.5	FAIL	972	972	20.5%	FAIL	34.9
00-HT3(14)-Living Room	100	38.4	FAIL	1224	1224	25.8%	FAIL	34.5
00-HT3(15)-Kitchen	100	20.1	FAIL	955	955	20.1%	FAIL	34.8
00-HT3(15)-Living Room	100	36.6	FAIL	1193	1193	25.1%	FAIL	34.3
00-HT3(16)-Kitchen	100	27.5	FAIL	1081	1081	22.8%	FAIL	35.4
00-HT3(16)-Living Room	100	35.6	FAIL	1174	1174	24.7%	FAIL	34.2
00-HT3(17)-Kitchen	100	28.4	FAIL	1099	1099	23.2%	FAIL	35.5
00-HT3(17)-Living Room	100	38.7	FAIL	1232	1232	26.0%	FAIL	34.6
00-HT3(18)-Kitchen	100	28.4	FAIL	1116	1116	23.5%	FAIL	35.6
00-HT3(18)-Living Room	100	42.9	FAIL	1292	1292	27.2%	FAIL	35.1
00-HT3(19)-Kitchen	100	28.1	FAIL	1110	1110	23.4%	FAIL	35.6
00-HT3(19)-Living Room	100	42.4	FAIL	1283	1283	27.0%	FAIL	35.0
00-HT3(20)-Kitchen	100	23	FAIL	1000	1000	21.1%	FAIL	35.0
00-HT3(20)-Living Room	100	39.5	FAIL	1248	1248	26.3%	FAIL	34.7
00-HT4(1)-Living Room	100	19.6	FAIL	988	988	20.8%	FAIL	32.8
00-HT4(2)-Living Room	100	20.8	FAIL	1001	1001	21.1%	FAIL	32.9
00-HT4(3)-Living Room	100	22.2	FAIL	1006	1006	21.2%	FAIL	33.0
00-HT4(4)-Living Room	100	23	FAIL	1019	1019	21.5%	FAIL	33.1
00-HT4(5)-Living Room	100	22.6	FAIL	1009	1009	21.3%	FAIL	33.0
00-HT4(6)-Living Room	100	24.3	FAIL	1029	1029	21.7%	FAIL	33.1
00-HT5(1)-Kitchen	100	36.8	FAIL	1130	1130	23.8%	FAIL	37.7
00-HT5(2)-Kitchen	100	37	FAIL	1135	1135	23.9%	FAIL	37.7

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Occupied hours 09:00 - 22:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-HT5(3)-Kitchen	100	35.5	FAIL	1112	1112	23.4%	FAIL	37.4
00-HT5(4)-Kitchen	100	34.7	FAIL	1094	1094	23.1%	FAIL	37.4
00-HT5(5)-Kitchen	100	36.2	FAIL	1125	1125	23.7%	FAIL	37.7
00-HT5(6)-Kitchen	100	36.2	FAIL	1129	1129	23.8%	FAIL	37.7
00-HT5(7)-Kitchen	100	33.1	FAIL	1073	1073	22.6%	FAIL	37.0
00-HT6(1)-Kitchen	100	31.6	FAIL	1022	1022	21.5%	FAIL	36.8
00-HT6(2)-Kitchen	100	32.9	FAIL	1049	1049	22.1%	FAIL	37.1
00-HT6(3)-Kitchen	100	33.9	FAIL	1057	1057	22.3%	FAIL	37.2
00-HT6(4)-Kitchen	100	32.4	FAIL	1039	1039	21.9%	FAIL	36.8
00-HT6(5)-Kitchen	100	33.9	FAIL	1049	1049	22.1%	FAIL	37.1
00-HT7(1)-Kitchen	100	25.6	FAIL	974	974	20.5%	FAIL	35.0
00-HT7(2)-Kitchen	100	26.2	FAIL	995	995	21.0%	FAIL	35.0
00-HT7(3)-Kitchen	100	26.3	FAIL	1002	1002	21.1%	FAIL	35.0
00-HT7(4)-Kitchen	100	32.8	FAIL	1111	1111	23.4%	FAIL	36.2
00-HT8(1)-Living Room	100	35	FAIL	1168	1168	24.6%	FAIL	35.5
00-HT8(2)-Living Room	100	36.7	FAIL	1181	1181	24.9%	FAIL	35.9
00-HT8(3)-Living Room	100	36.1	FAIL	1168	1168	24.6%	FAIL	35.9
00-HT8(4)-Living Room	100	33	FAIL	1123	1123	23.7%	FAIL	35.4
01-A2-1-Living room / Kitchen	100	4.4	FAIL	561	561	11.8%	FAIL	32.0
01-A2-2-Living room / Kitchen	100	5.3	FAIL	646	646	13.6%	FAIL	31.9
01-E0-1-Living / Kitchen	100	1.7	PASS	386	386	8.1%	FAIL	31.1
01-E0-2-Living / Kitchen	100	2	PASS	408	408	8.6%	FAIL	31.2
01-F1-1-Living room / Kitchen	100	17.1	FAIL	817	817	17.2%	FAIL	34.9
01-F1-2-Living room / Kitchen	100	9.8	FAIL	662	662	14.0%	FAIL	33.4
01-F1-3-Living room / Kitchen	100	2.3	PASS	560	560	11.8%	FAIL	31.1
01-F1-4-Living room / Kitchen	100	1.2	PASS	375	375	7.9%	FAIL	31.0
01-F1-5-Living room / Kitchen	100	6.4	FAIL	612	612	12.9%	FAIL	32.1
01-F1-6-Living room / Kitchen	100	6.6	FAIL	533	533	11.2%	FAIL	32.2
01-F1-7-Living room / Kitchen	100	10.8	FAIL	625	625	13.2%	FAIL	33.1
01-F1-8-Living room / Kitchen	100	7.4	FAIL	535	535	11.3%	FAIL	32.9
01-F1-9-Living room / Kitchen	100	3.7	FAIL	490	490	10.3%	FAIL	31.6
01-F1-10-Living room / Kitchen	100	2	PASS	431	431	9.1%	FAIL	31.3
01-F1-11-Living room / Kitchen	100	3.8	FAIL	497	497	10.5%	FAIL	32.0
01-F1-12-Living room / Kitchen	100	3.7	FAIL	489	489	10.3%	FAIL	32.0
01-F1-13-Living room / Kitchen	100	4	FAIL	534	534	11.3%	FAIL	31.9

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Occupied hours 09:00 - 22:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-F1-14-Living room / Kitchen	100	1.8	PASS	439	439	9.3%	FAIL	30.9
01-HT5(1)-Living Room	100	29.7	FAIL	1156	1156	24.4%	FAIL	34.9
01-HT5(2)-Living Room	100	29.9	FAIL	1164	1164	24.5%	FAIL	35.0
01-HT5(3)-Living Room	100	28.2	FAIL	1118	1118	23.6%	FAIL	34.8
01-HT5(4)-Living Room	100	28.3	FAIL	1116	1116	23.5%	FAIL	34.8
01-HT5(5)-Living Room	100	30	FAIL	1166	1166	24.6%	FAIL	35.0
01-HT5(6)-Living Room	100	30.6	FAIL	1180	1180	24.9%	FAIL	35.1
01-HT5(7)-Living Room	100	30.6	FAIL	1177	1177	24.8%	FAIL	35.1
01-HT6(1)-Living Room	100	21.1	FAIL	960	960	20.2%	FAIL	34.0
01-HT6(2)-Living Room	100	24.1	FAIL	1009	1009	21.3%	FAIL	34.3
01-HT6(3)-Living Room	100	24.6	FAIL	1017	1017	21.4%	FAIL	34.4
01-HT6(4)-Living Room	100	21.6	FAIL	971	971	20.5%	FAIL	34.2
01-HT6(5)-Living Room	100	23.9	FAIL	999	999	21.1%	FAIL	34.4
01-HT7(1)-Living Room	100	39.1	FAIL	1354	1354	28.5%	FAIL	35.7
01-HT7(2)-Living Room	100	42.2	FAIL	1390	1390	29.3%	FAIL	35.9
01-HT7(3)-Living Room	100	42.7	FAIL	1398	1398	29.5%	FAIL	36.0
01-HT7(4)-Living Room	100	42.8	FAIL	1393	1393	29.4%	FAIL	36.1
02-A2-1-Living room / Kitchen	100	6.8	FAIL	692	692	14.6%	FAIL	32.4
02-A2-2-Living room / Kitchen	100	8.5	FAIL	787	787	16.6%	FAIL	32.5
02-E0-1-Living / Kitchen	100	1.4	PASS	365	365	7.7%	FAIL	31.0
02-E0-2-Living / Kitchen	100	1.5	PASS	385	385	8.1%	FAIL	31.0
02-F2-1-Living room / Kitchen	100	17.5	FAIL	827	827	17.4%	FAIL	35.0
02-F2-2-Living room / Kitchen	100	11.1	FAIL	701	701	14.8%	FAIL	33.6
02-F2-3-Living room / Kitchen	100	6.3	FAIL	711	711	15.0%	FAIL	32.0
02-F2-4-Living room / Kitchen	100	3	FAIL	492	492	10.4%	FAIL	31.8
02-F2-5-Living room / Kitchen	100	9.8	FAIL	709	709	14.9%	FAIL	32.7
02-F2-6-Living room / Kitchen	100	9.3	FAIL	590	590	12.4%	FAIL	32.9
02-F2-7-Living room / Kitchen	100	11.2	FAIL	641	641	13.5%	FAIL	33.2
02-F2-8-Living room / Kitchen	100	10.8	FAIL	632	632	13.3%	FAIL	33.8
02-F2-9-Living room / Kitchen	100	4.5	FAIL	532	532	11.2%	FAIL	31.9
02-F2-10-Living room / Kitchen	100	6.2	FAIL	815	815	17.2%	FAIL	31.9
02-F2-11-Living room / Kitchen	100	7.8	FAIL	828	828	17.4%	FAIL	32.3
02-F2-12-Living room / Kitchen	100	5	FAIL	587	587	12.4%	FAIL	32.2
02-F2-13-Living room / Kitchen	100	5.5	FAIL	655	655	13.8%	FAIL	32.2
02-F2-14-Living room / Kitchen	100	7.3	FAIL	591	591	12.5%	FAIL	32.0

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Occupied hours 09:00 - 22:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
02-F2-15- Living/ Kitchen	100	4.3	FAIL	527	527	11.1%	FAIL	32.0
03-F3-1-Living room / Kitchen	100	15.7	FAIL	787	787	16.6%	FAIL	34.7
03-F3-2-Living room / Kitchen	100	10.4	FAIL	684	684	14.4%	FAIL	33.4
03-F3-3-Living room / Kitchen	100	2.1	PASS	425	425	9.0%	FAIL	31.1
03-F3-4-Living room / Kitchen	100	2.2	PASS	585	585	12.3%	FAIL	30.8
03-F3-5-Living room / Kitchen	100	7.6	FAIL	621	621	13.1%	FAIL	32.3
03-F3-6-Living room / Kitchen	100	10.2	FAIL	636	636	13.4%	FAIL	32.9
03-F3-7-Living room / Kitchen	100	11.6	FAIL	645	645	13.6%	FAIL	33.9
03-F3-8-Living room / Kitchen	100	4.8	FAIL	538	538	11.3%	FAIL	32.0
03-F3-9-Living / Kitchen	100	5.9	FAIL	623	623	13.1%	FAIL	32.3
03-F3-10-Living room / Kitchen	100	8	FAIL	705	705	14.9%	FAIL	32.7
03-F3-11-Living / Kitchen	100	0.4	PASS	556	556	11.7%	FAIL	29.9
04-F4-1-Living room / Kitchen	100	7.3	FAIL	557	557	11.7%	FAIL	32.9
04-F4-2-Living room / Kitchen	100	2.6	PASS	449	449	9.5%	FAIL	31.3
04-F4-3-Living room / Kitchen	100	1.9	PASS	468	468	9.9%	FAIL	31.1
04-F4-4-Living room / Kitchen	100	4.5	FAIL	671	671	14.1%	FAIL	31.5



## Results DSY1

### Mechanically ventilated Bedrooms- Cooling Applied

- c) For Homes with restricted window openings, the CIBSE fixed temperature test must be followed – all occupied rooms should not exceed an operative temperature of 26°C for more than 3% of annual occupied hours (CIBSE Guide A 2015a)

Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-E0-1-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-E0-2-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-F0-2-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.2
00-F0-5-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
00-F0-5-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.2
00-F0-6-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.2
00-F0-8 -Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-F1-14-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-F1-15-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-F1-2-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-F1-3-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-F1-3-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-F1-4-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
02-F2-14-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-2-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.2
02-F2-3-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
03-F3-2-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
04-F4-4-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-A0-1 -Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.7
00-A0-2 -Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
00-A0-2 -Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-F0-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
00-F0-1-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-F0-3-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-F0-3-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-F0-4-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.4
00-F0-7 -Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-F0-8 -Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-HT8(1)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-HT8(2)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-HT8(3)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
00-HT8(4)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-A2-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-A2-2-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-A2-2-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-E0-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-E0-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-E0-1-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-E0-1-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-E0-2-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-E0-2-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-E0-2-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-E0-2-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-F1-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-F1-1-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-F1-10-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-F1-11-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-F1-12-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-F1-13-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-F1-13-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-F1-15-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-F1-2-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-F1-3-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-F1-5-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.0
01-F1-5-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-F1-6-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-F1-7-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-F1-8-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-F1-9-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-F1-9-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT2(1)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.6
01-HT2(1)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT2(2)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.5

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-HT2(2)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT2(3)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.4
01-HT2(3)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT2A-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.1
01-HT2A-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	23.7
01-HT3(1)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT3(1)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(10)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.8
01-HT3(10)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(11)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT3(11)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(12)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.8
01-HT3(12)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(13)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT3(13)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(14)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.0
01-HT3(14)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT3(15)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT3(15)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(16)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.8
01-HT3(16)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT3(17)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT3(17)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(18)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.8
01-HT3(18)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(19)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT3(19)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(2)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.7
01-HT3(2)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(20)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.9
01-HT3(20)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT3(3)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT3(3)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(4)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.7

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-HT3(4)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(5)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT3(5)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(6)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.7
01-HT3(6)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(7)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT3(7)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(8)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.9
01-HT3(8)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(9)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT3(9)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT4(1)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT4(1)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.7
01-HT4(2)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.3
01-HT4(2)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.7
01-HT4(3)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT4(3)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.7
01-HT4(4)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.3
01-HT4(4)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.7
01-HT4(5)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT4(5)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.7
01-HT4(6)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.3
01-HT4(6)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.7
01-HT5(1)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.6
01-HT5(1)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT5(2)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT5(2)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT5(3)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT5(3)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT5(4)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT5(4)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT5(5)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT5(5)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT5(6)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.5

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-HT5(6)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT5(7)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT5(7)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT6(1)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT6(2)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.7
01-HT6(3)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.7
01-HT6(4)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.7
01-HT6(5)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.6
01-HT7(1)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT7(1)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.6
01-HT7(2)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT7(2)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.8
01-HT7(3)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT7(3)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.7
01-HT7(4)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT7(4)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.8
01-HT8(1)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT8(2)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-HT8(3)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-HT8(4)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-A2-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-A2-2-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-A2-2-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-F2-1-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-10-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-11-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-12-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-F2-13-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
02-F2-13-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-15-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-15-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-2-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-3-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
02-F2-3-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.2
02-F2-4-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
02-F2-5-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.4
02-F2-5-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-F2-6-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-F2-7-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-F2-8-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-9-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-F2-9-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-HT2(1)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	24.6
02-HT2(2)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	24.6
02-HT2(3)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	24.8
02-HT2A-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	24.4
02-HT3(1)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.2
02-HT3(10)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.4
02-HT3(11)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.4
02-HT3(12)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.6
02-HT3(13)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.6
02-HT3(14)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.5
02-HT3(15)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.4
02-HT3(16)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.6
02-HT3(17)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.6
02-HT3(18)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.4
02-HT3(19)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.4
02-HT3(2)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.3
02-HT3(20)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.5
02-HT3(3)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.3
02-HT3(4)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.5
02-HT3(5)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.5
02-HT3(6)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.3
02-HT3(7)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.3
02-HT3(8)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.4
02-HT3(9)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.4
02-HT4(1)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.3

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
02-HT4(2)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-HT4(3)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-HT4(4)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-HT4(5)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-HT4(6)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-HT5(1)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-HT5(1)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT5(2)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-HT5(2)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT5(3)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-HT5(3)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT5(4)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-HT5(4)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT5(5)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-HT5(5)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT5(6)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-HT5(6)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT5(7)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.6
02-HT5(7)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT6(1)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT6(1)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT6(2)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT6(2)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT6(3)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT6(3)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT6(4)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT6(4)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT6(5)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT6(5)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT7(1)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.9
02-HT7(1)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT7(2)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	24.0
02-HT7(2)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT7(3)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	24.0

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
02-HT7(3)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT7(4)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	24.1
02-HT7(4)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.4
03-F3-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
03-F3-1-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
03-F3-10-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
03-F3-11-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
03-F3-11-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.2
03-F3-11-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.2
03-F3-2-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
03-F3-4-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
03-F3-3-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
03-F3-3-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
03-F3-5-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.7
03-F3-5-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5
03-F3-6-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.5
03-F3-7-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.3
03-F3-8-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
03-F3-8-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
03-F3-9-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.3
03-F3-9-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
04-F4-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
04-F4-2-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
04-F4-2-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.2
04-F4-3-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
04-F4-4-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3



### Mechanically ventilated Living Rooms- Cooling Applied

c) For Homes with restricted window openings, the CIBSE fixed temperature test must be followed – all occupied rooms should not exceed an operative temperature of 26°C for more than 3% of annual occupied hours (CIBSE Guide A 2015a)

Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-A0-1 -Living room / Kitchen	100	0	PASS	0	0.0%	PASS	22.5
00-A0-2 -Living room / Kitchen	100	0	PASS	6	0.1%	PASS	26.5
00-E0-1-Living / Dining	100	0	PASS	0	0.0%	PASS	23.1
00-E0-2-Living / Dining	100	0	PASS	0	0.0%	PASS	23.1
00-F0-1-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	25.0
00-F0-2-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	23.7
00-F0-3 -Living room / Kitchen	100	0	PASS	0	0.0%	PASS	23.0
00-F0-4-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	24.4
00-F0-5-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	23.8
00-F0-6-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	22.5
00-F0-7 -Living room / Kitchen	100	0	PASS	0	0.0%	PASS	22.4
00-F0-8 -Living room / Kitchen	100	0	PASS	0	0.0%	PASS	22.5
00-HT2(1)-Kitchen	100	0	PASS	0	0.0%	PASS	22.5
00-HT2(1)-Living Room	100	0	PASS	0	0.0%	PASS	24.8
00-HT2(2)-Kitchen	100	0	PASS	0	0.0%	PASS	22.5
00-HT2(2)-Living Room	100	0	PASS	0	0.0%	PASS	24.9
00-HT2(3)-Kitchen	100	0	PASS	0	0.0%	PASS	22.4
00-HT2(3)-Living Room	100	0	PASS	0	0.0%	PASS	24.6
00-HT2A-Living Room	100	0	PASS	0	0.0%	PASS	24.4
00-HT3(1)-Kitchen	100	0	PASS	0	0.0%	PASS	22.3
00-HT3(1)-Living Room	100	0	PASS	0	0.0%	PASS	24.8
00-HT3(2)-Kitchen	100	0	PASS	0	0.0%	PASS	22.3
00-HT3(2)-Living Room	100	0	PASS	0	0.0%	PASS	25.2
00-HT3(3)-Kitchen	100	0	PASS	0	0.0%	PASS	22.3
00-HT3(3)-Living Room	100	0	PASS	0	0.0%	PASS	25.1
00-HT3(4)-Kitchen	100	0	PASS	0	0.0%	PASS	22.4
00-HT3(4)-Living Room	100	0	PASS	0	0.0%	PASS	24.4
00-HT3(5)-Kitchen	100	0	PASS	0	0.0%	PASS	22.5
00-HT3(5)-Living Room	100	0	PASS	0	0.0%	PASS	25.0
00-HT3(6)-Kitchen	100	0	PASS	0	0.0%	PASS	22.4



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-HT3(6)-Living Room	100	0	PASS	0	0.0%	PASS	25.2
00-HT3(7)-Kitchen	100	0	PASS	0	0.0%	PASS	22.4
00-HT3(7)-Living Room	100	0	PASS	0	0.0%	PASS	25.2
00-HT3(8)-Kitchen	100	0	PASS	0	0.0%	PASS	22.4
00-HT3(8)-Living Room	100	0	PASS	0	0.0%	PASS	24.8
00-HT3(9)-Kitchen	100	0	PASS	0	0.0%	PASS	22.4
00-HT3(9)-Living Room	100	0	PASS	0	0.0%	PASS	25.1
00-HT3(10)-Kitchen	100	0	PASS	0	0.0%	PASS	22.4
00-HT3(10)-Living Room	100	0	PASS	0	0.0%	PASS	25.6
00-HT3(11)-Kitchen	100	0	PASS	0	0.0%	PASS	22.4
00-HT3(11)-Living Room	100	0	PASS	0	0.0%	PASS	25.5
00-HT3(12)-Kitchen	100	0	PASS	0	0.0%	PASS	22.5
00-HT3(12)-Living Room	100	0	PASS	0	0.0%	PASS	25.0
00-HT3(13)-Kitchen	100	0	PASS	0	0.0%	PASS	22.5
00-HT3(13)-Living Room	100	0	PASS	0	0.0%	PASS	25.3
00-HT3(14)-Kitchen	100	0	PASS	0	0.0%	PASS	22.4
00-HT3(14)-Living Room	100	0	PASS	0	0.0%	PASS	25.1
00-HT3(15)-Kitchen	100	0	PASS	0	0.0%	PASS	22.4
00-HT3(15)-Living Room	100	0	PASS	0	0.0%	PASS	25.2
00-HT3(16)-Kitchen	100	0	PASS	0	0.0%	PASS	22.5
00-HT3(16)-Living Room	100	0	PASS	0	0.0%	PASS	25.1
00-HT3(17)-Kitchen	100	0	PASS	0	0.0%	PASS	22.5
00-HT3(17)-Living Room	100	0	PASS	0	0.0%	PASS	25.5
00-HT3(18)-Kitchen	100	0	PASS	0	0.0%	PASS	22.4
00-HT3(18)-Living Room	100	0	PASS	0	0.0%	PASS	25.7
00-HT3(19)-Kitchen	100	0	PASS	0	0.0%	PASS	22.4
00-HT3(19)-Living Room	100	0	PASS	0	0.0%	PASS	25.6
00-HT3(20)-Kitchen	100	0	PASS	0	0.0%	PASS	22.4
00-HT3(20)-Living Room	100	0	PASS	0	0.0%	PASS	25.2
00-HT4(1)-Living Room	100	0	PASS	0	0.0%	PASS	24.0
00-HT4(2)-Living Room	100	0	PASS	0	0.0%	PASS	24.1
00-HT4(3)-Living Room	100	0	PASS	0	0.0%	PASS	24.3
00-HT4(4)-Living Room	100	0	PASS	0	0.0%	PASS	24.4



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-HT4(5)-Living Room	100	0	PASS	0	0.0%	PASS	24.4
00-HT4(6)-Living Room	100	0	PASS	0	0.0%	PASS	24.5
00-HT5(1)-Kitchen	100	0.1	PASS	59	1.2%	PASS	28.5
00-HT5(2)-Kitchen	100	0.1	PASS	59	1.2%	PASS	28.5
00-HT5(3)-Kitchen	100	0	PASS	50	1.1%	PASS	28.2
00-HT5(4)-Kitchen	100	0	PASS	51	1.1%	PASS	28.2
00-HT5(5)-Kitchen	100	0.1	PASS	59	1.2%	PASS	28.5
00-HT5(6)-Kitchen	100	0.1	PASS	59	1.2%	PASS	28.5
00-HT5(7)-Kitchen	100	0	PASS	50	1.1%	PASS	28.2
00-HT6(1)-Kitchen	100	0	PASS	42	0.9%	PASS	28.2
00-HT6(2)-Kitchen	100	0.1	PASS	50	1.1%	PASS	28.4
00-HT6(3)-Kitchen	100	0.1	PASS	55	1.2%	PASS	28.4
00-HT6(4)-Kitchen	100	0	PASS	47	1.0%	PASS	28.1
00-HT6(5)-Kitchen	100	0	PASS	51	1.1%	PASS	28.2
00-HT7(1)-Kitchen	100	0	PASS	8	0.2%	PASS	26.5
00-HT7(2)-Kitchen	100	0	PASS	8	0.2%	PASS	26.5
00-HT7(3)-Kitchen	100	0	PASS	8	0.2%	PASS	26.5
00-HT7(4)-Kitchen	100	0	PASS	14	0.3%	PASS	26.8
00-HT8(1)-Living Room	100	0	PASS	74	1.6%	PASS	27.8
00-HT8(2)-Living Room	100	0	PASS	99	2.1%	PASS	28.2
00-HT8(3)-Living Room	100	0	PASS	98	2.1%	PASS	28.1
00-HT8(4)-Living Room	100	0	PASS	66	1.4%	PASS	27.5
01-A2-1-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	22.9
01-A2-2-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	22.9
01-E0-1-Living / Kitchen	100	0	PASS	0	0.0%	PASS	23.5
01-E0-2-Living / Kitchen	100	0	PASS	0	0.0%	PASS	23.5
01-F1-1-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	24.9
01-F1-2-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	23.8
01-F1-3-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	23.6
01-F1-4-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	22.6
01-F1-5-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	23.1
01-F1-6-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	24.1
01-F1-7-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	24.4



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-F1-8-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	24.6
01-F1-9-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	23.5
01-F1-10-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	22.4
01-F1-11-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	22.4
01-F1-12-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	22.4
01-F1-13-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	22.5
01-F1-14-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	22.6
01-HT5(1)-Living Room	100	0	PASS	0	0.0%	PASS	23.3
01-HT5(2)-Living Room	100	0	PASS	0	0.0%	PASS	23.2
01-HT5(3)-Living Room	100	0	PASS	0	0.0%	PASS	23.3
01-HT5(4)-Living Room	100	0	PASS	0	0.0%	PASS	23.3
01-HT5(5)-Living Room	100	0	PASS	0	0.0%	PASS	23.3
01-HT5(6)-Living Room	100	0	PASS	0	0.0%	PASS	23.3
01-HT5(7)-Living Room	100	0	PASS	0	0.0%	PASS	23.3
01-HT6(1)-Living Room	100	0	PASS	0	0.0%	PASS	23.6
01-HT6(2)-Living Room	100	0	PASS	0	0.0%	PASS	23.5
01-HT6(3)-Living Room	100	0	PASS	0	0.0%	PASS	23.6
01-HT6(4)-Living Room	100	0	PASS	0	0.0%	PASS	23.5
01-HT6(5)-Living Room	100	0	PASS	0	0.0%	PASS	23.5
01-HT7(1)-Living Room	100	0	PASS	0	0.0%	PASS	23.2
01-HT7(2)-Living Room	100	0	PASS	0	0.0%	PASS	23.2
01-HT7(3)-Living Room	100	0	PASS	0	0.0%	PASS	23.2
01-HT7(4)-Living Room	100	0	PASS	0	0.0%	PASS	23.3
02-A2-1-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	24.0
02-A2-2-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	24.0
02-E0-1-Living / Kitchen	100	0	PASS	0	0.0%	PASS	23.8
02-E0-2-Living / Kitchen	100	0	PASS	0	0.0%	PASS	23.8
02-F2-1-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	24.9
02-F2-2-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	23.8
02-F2-3-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	23.2
02-F2-4-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	22.9
02-F2-5-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	23.2
02-F2-6-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	24.2

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
02-F2-7-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	24.4
02-F2-8-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	24.7
02-F2-9-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	23.4
02-F2-10-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	22.4
02-F2-11-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	22.5
02-F2-12-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	22.7
02-F2-13-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	22.8
02-F2-14-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	24.1
02-F2-15- Living/ Kitchen	100	0	PASS	0	0.0%	PASS	23.6
03-F3-1-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	25.2
03-F3-2-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	24.1
03-F3-3-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	23.6
03-F3-4-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	24.4
03-F3-5-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	24.5
03-F3-6-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	24.7
03-F3-7-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	24.7
03-F3-8-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	23.6
03-F3-9-Living / Kitchen	100	0	PASS	0	0.0%	PASS	22.4
03-F3-10-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	23.1
03-F3-11-Living / Kitchen	100	0	PASS	0	0.0%	PASS	24.1
04-F4-1-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	24.3
04-F4-2-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	23.6
04-F4-3-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	22.6
04-F4-4-Living room / Kitchen	100	0	PASS	0	0.0%	PASS	23.6

## Results DSY2

### Mechanically ventilated Bedrooms- Cooling Applied

- c) For Homes with restricted window openings, the CIBSE fixed temperature test must be followed – all occupied rooms should not exceed an operative temperature of 26°C for more than 3% of annual occupied hours (CIBSE Guide A 2015a)

Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-E0-1-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-E0-2-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-F0-2-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.2
00-F0-5-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
00-F0-5-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.2
00-F0-6-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.2
00-F0-8 -Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-F1-14-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-F1-15-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-F1-2-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-F1-3-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-F1-3-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-F1-4-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
02-F2-14-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-2-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.2
02-F2-3-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
03-F3-2-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
04-F4-4-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
00-A0-1 -Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.4
00-A0-2 -Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
00-A0-2 -Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-F0-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
00-F0-1-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.2
00-F0-3-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-F0-3-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-F0-4-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.4
00-F0-7 -Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-F0-8 -Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-HT8(1)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-HT8(2)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-HT8(3)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-HT8(4)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-A2-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-A2-2-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-A2-2-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-E0-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-E0-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-E0-1-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-E0-1-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-E0-2-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-E0-2-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-E0-2-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-E0-2-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-F1-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-F1-1-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-F1-10-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-F1-11-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-F1-12-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-F1-13-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-F1-13-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-F1-15-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-F1-2-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-F1-3-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-F1-5-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.6
01-F1-5-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-F1-6-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-F1-7-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-F1-8-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-F1-9-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-F1-9-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-HT2(1)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.3
01-HT2(1)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.6
01-HT2(2)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.2
01-HT2(2)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.6
01-HT2(3)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.1
01-HT2(3)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.6

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-HT2A-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.1
01-HT2A-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	24.6
01-HT3(1)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(1)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(10)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.5
01-HT3(10)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(11)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT3(11)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(12)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.5
01-HT3(12)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(13)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT3(13)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(14)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.7
01-HT3(14)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(15)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT3(15)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(16)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.5
01-HT3(16)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(17)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT3(17)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(18)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.5
01-HT3(18)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(19)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT3(19)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(2)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.4
01-HT3(2)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(20)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.6
01-HT3(20)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(3)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(3)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(4)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.4
01-HT3(4)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(5)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(5)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(6)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.4



**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-HT3(6)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(7)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT3(7)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(8)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.7
01-HT3(8)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(9)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT3(9)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT4(1)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT4(1)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.6
01-HT4(2)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.9
01-HT4(2)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.6
01-HT4(3)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT4(3)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.6
01-HT4(4)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.9
01-HT4(4)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.6
01-HT4(5)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT4(5)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.6
01-HT4(6)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.9
01-HT4(6)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.6
01-HT5(1)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.6
01-HT5(1)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT5(2)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT5(2)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT5(3)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT5(3)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT5(4)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT5(4)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT5(5)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT5(5)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT5(6)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.6
01-HT5(6)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT5(7)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.6
01-HT5(7)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT6(1)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT6(2)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.7

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-HT6(3)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.7
01-HT6(4)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.7
01-HT6(5)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.6
01-HT7(1)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT7(1)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.6
01-HT7(2)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT7(2)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.7
01-HT7(3)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT7(3)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.7
01-HT7(4)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT7(4)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.8
01-HT8(1)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT8(2)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-HT8(3)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-HT8(4)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.2
02-A2-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
02-A2-2-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-A2-2-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-F2-1-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.2
02-F2-10-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-11-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-12-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-F2-13-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-13-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-15-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-15-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-2-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-3-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-3-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.2
02-F2-4-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
02-F2-5-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.1
02-F2-5-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-F2-6-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-F2-7-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
02-F2-8-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
02-F2-9-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-9-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.2
02-HT2(1)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	24.9
02-HT2(2)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	24.9
02-HT2(3)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	25.1
02-HT2A-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	24.6
02-HT3(1)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.3
02-HT3(10)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.3
02-HT3(11)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.4
02-HT3(12)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.5
02-HT3(13)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.6
02-HT3(14)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.5
02-HT3(15)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.4
02-HT3(16)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.6
02-HT3(17)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.5
02-HT3(18)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.3
02-HT3(19)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.3
02-HT3(2)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.3
02-HT3(20)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.5
02-HT3(3)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.3
02-HT3(4)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.5
02-HT3(5)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.5
02-HT3(6)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.3
02-HT3(7)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.3
02-HT3(8)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.5
02-HT3(9)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.4
02-HT4(1)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-HT4(2)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-HT4(3)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-HT4(4)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-HT4(5)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-HT4(6)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-HT5(1)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT5(1)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.4

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
02-HT5(2)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT5(2)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT5(3)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-HT5(3)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT5(4)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-HT5(4)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT5(5)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT5(5)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT5(6)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT5(6)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT5(7)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-HT5(7)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT6(1)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT6(1)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT6(2)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT6(2)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT6(3)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT6(3)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT6(4)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-HT6(4)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT6(5)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT6(5)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT7(1)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.8
02-HT7(1)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT7(2)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.9
02-HT7(2)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT7(3)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.9
02-HT7(3)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT7(4)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	24.0
02-HT7(4)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.4
03-F3-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
03-F3-1-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
03-F3-10-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
03-F3-11-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
03-F3-11-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.2



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
03-F3-11-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.2
03-F3-2-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
03-F3-4-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
03-F3-3-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
03-F3-3-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
03-F3-5-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.3
03-F3-5-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5
03-F3-6-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
03-F3-7-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.2
03-F3-8-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
03-F3-8-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.2
03-F3-9-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.3
03-F3-9-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
04-F4-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
04-F4-2-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
04-F4-2-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.2
04-F4-3-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
04-F4-4-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3

## Results DSY2

### Mechanically ventilated Living rooms - Cooling Applied

- c) For Homes with restricted window openings, the CIBSE fixed temperature test must be followed – all occupied rooms should not exceed an operative temperature of 26°C for more than 3% of annual occupied hours (CIBSE Guide A 2015a)

Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1 K)	Criteria 1 Status	Occupied hours 09:00 - 22:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Results based on over all % of time over threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-A0-1 -Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.7
00-A0-2 -Living room / Kitchen	100	0	PASS	4	4	0.1%	PASS	PASS	26.3
00-E0-1-Living / Dining	100	0	PASS	0	0	0.0%	PASS	PASS	23.3
00-E0-2-Living / Dining	100	0	PASS	0	0	0.0%	PASS	PASS	23.3
00-F0-1-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	24.8
00-F0-2-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	23.7
00-F0-3 -Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	23.2
00-F0-4-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	24.2
00-F0-5-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	23.9
00-F0-6-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.7
00-F0-7 -Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.6
00-F0-8 -Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.7
00-HT2(1)-Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.5
00-HT2(1)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	25.0
00-HT2(2)-Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.4
00-HT2(2)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	25.0
00-HT2(3)-Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.4
00-HT2(3)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	24.8
00-HT2A-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	24.9
00-HT3(1)-Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.3
00-HT3(1)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	24.8
00-HT3(2)-Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.3
00-HT3(2)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	25.2
00-HT3(3)-Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.3

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1 K)	Criteria 1 Status	Occupied hours 09:00 - 22:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Results based on over all % of time over threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-HT3(3)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	25.1
00-HT3(4)-Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.4
00-HT3(4)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	24.4
00-HT3(5)-Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.5
00-HT3(5)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	25.0
00-HT3(6)-Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.4
00-HT3(6)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	25.2
00-HT3(7)-Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.4
00-HT3(7)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	25.2
00-HT3(8)-Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.4
00-HT3(8)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	24.8
00-HT3(9)-Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.4
00-HT3(9)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	25.2
00-HT3(10)-Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.4
00-HT3(10)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	25.6
00-HT3(11)-Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.4
00-HT3(11)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	25.5
00-HT3(12)-Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.5
00-HT3(12)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	24.9
00-HT3(13)-Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.5
00-HT3(13)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	25.4
00-HT3(14)-Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.4
00-HT3(14)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	25.2
00-HT3(15)-Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.4
00-HT3(15)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	25.3
00-HT3(16)-Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.5
00-HT3(16)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	25.1
00-HT3(17)-Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.5
00-HT3(17)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	25.6
00-HT3(18)-Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.4
00-HT3(18)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	25.8
00-HT3(19)-Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.4
00-HT3(19)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	25.7

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1 K)	Criteria 1 Status	Occupied hours 09:00 - 22:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Results based on over all % of time over threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-HT3(20)-Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.4
00-HT3(20)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	25.4
00-HT4(1)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	24.2
00-HT4(2)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	24.4
00-HT4(3)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	24.6
00-HT4(4)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	24.7
00-HT4(5)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	24.7
00-HT4(6)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	24.8
00-HT5(1)-Kitchen	100	0	PASS	35	35	0.7%	PASS	PASS	27.9
00-HT5(2)-Kitchen	100	0	PASS	35	35	0.7%	PASS	PASS	27.9
00-HT5(3)-Kitchen	100	0	PASS	28	28	0.6%	PASS	PASS	27.7
00-HT5(4)-Kitchen	100	0	PASS	27	27	0.6%	PASS	PASS	27.8
00-HT5(5)-Kitchen	100	0	PASS	36	36	0.8%	PASS	PASS	28.0
00-HT5(6)-Kitchen	100	0	PASS	36	36	0.8%	PASS	PASS	28.0
00-HT5(7)-Kitchen	100	0	PASS	26	26	0.5%	PASS	PASS	27.7
00-HT6(1)-Kitchen	100	0	PASS	27	27	0.6%	PASS	PASS	27.6
00-HT6(2)-Kitchen	100	0	PASS	33	33	0.7%	PASS	PASS	27.8
00-HT6(3)-Kitchen	100	0	PASS	34	34	0.7%	PASS	PASS	27.8
00-HT6(4)-Kitchen	100	0	PASS	29	29	0.6%	PASS	PASS	27.6
00-HT6(5)-Kitchen	100	0	PASS	28	28	0.6%	PASS	PASS	27.7
00-HT7(1)-Kitchen	100	0	PASS	1	1	0.0%	PASS	PASS	26.1
00-HT7(2)-Kitchen	100	0	PASS	2	2	0.0%	PASS	PASS	26.2
00-HT7(3)-Kitchen	100	0	PASS	2	2	0.0%	PASS	PASS	26.2
00-HT7(4)-Kitchen	100	0	PASS	3	3	0.1%	PASS	PASS	26.4
00-HT8(1)-Living Room	100	0	PASS	103	103	2.2%	PASS	PASS	29.3
00-HT8(2)-Living Room	100	0	PASS	115	115	2.4%	PASS	PASS	29.6
00-HT8(3)-Living Room	100	0	PASS	113	113	2.4%	PASS	PASS	29.6
00-HT8(4)-Living Room	100	0	PASS	93	93	2.0%	PASS	PASS	29.1
01-A2-1-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	23.1
01-A2-2-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	23.0
01-E0-1-Living / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	23.5
01-E0-2-Living / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	23.6



**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1 K)	Criteria 1 Status	Occupied hours 09:00 - 22:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Results based on over all % of time over threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-F1-1-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	24.7
01-F1-2-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	23.8
01-F1-3-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	24.1
01-F1-4-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.9
01-F1-5-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	23.2
01-F1-6-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	23.7
01-F1-7-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	24.0
01-F1-8-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	24.2
01-F1-9-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	23.7
01-F1-10-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.6
01-F1-11-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.6
01-F1-12-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.6
01-F1-13-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.7
01-F1-14-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.8
01-HT5(1)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	23.2
01-HT5(2)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	23.2
01-HT5(3)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	23.2
01-HT5(4)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	23.2
01-HT5(5)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	23.2
01-HT5(6)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	23.2
01-HT5(7)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	23.2
01-HT6(1)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	23.4
01-HT6(2)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	23.4
01-HT6(3)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	23.4
01-HT6(4)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	23.5
01-HT6(5)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	23.5
01-HT7(1)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	23.1
01-HT7(2)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	23.1



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1 K)	Criteria 1 Status	Occupied hours 09:00 - 22:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Results based on over all % of time over threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-HT7(3)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	23.1
01-HT7(4)-Living Room	100	0	PASS	0	0	0.0%	PASS	PASS	23.2
02-A2-1-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	24.0
02-A2-2-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	24.1
02-E0-1-Living / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	23.9
02-E0-2-Living / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	24.0
02-F2-1-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	24.7
02-F2-2-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	23.8
02-F2-3-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	23.6
02-F2-4-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	23.2
02-F2-5-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	23.3
02-F2-6-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	23.7
02-F2-7-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	24.0
02-F2-8-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	24.3
02-F2-9-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	23.6
02-F2-10-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.5
02-F2-11-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.7
02-F2-12-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.8
02-F2-13-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	23.0
02-F2-14-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	24.1
02-F2-15- Living/ Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	23.6
03-F3-1-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	25.0
03-F3-2-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	24.1
03-F3-3-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	23.8
03-F3-4-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	25.0



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1 K)	Criteria 1 Status	Occupied hours 09:00 - 22:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Results based on over all % of time over threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
03-F3-5-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	24.4
03-F3-6-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	24.5
03-F3-7-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	24.3
03-F3-8-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	23.7
03-F3-9-Living / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.6
03-F3-10-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	23.6
03-F3-11-Living / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	24.7
04-F4-1-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	24.2
04-F4-2-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	23.9
04-F4-3-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	22.8
04-F4-4-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	PASS	24.2

## Results DSY3

### Mechanically ventilated Bedrooms- Cooling Applied

- c) For Homes with restricted window openings, the CIBSE fixed temperature test must be followed – all occupied rooms should not exceed an operative temperature of 26°C for more than 3% of annual occupied hours (CIBSE Guide A 2015a)

Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax >=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-E0-1-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-E0-2-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-F0-2-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.2
00-F0-5-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-F0-5-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-F0-6-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-F0-8 -Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-F1-14-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-F1-15-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-F1-2-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-F1-3-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-F1-3-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-F1-4-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
02-F2-14-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-2-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.2
02-F2-3-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
03-F3-2-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
04-F4-4-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-A0-1 -Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.8
00-A0-2 -Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.5
00-A0-2 -Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-F0-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
00-F0-1-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-F0-3-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-F0-3-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
00-F0-4-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.5
00-F0-7 -Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.4
00-F0-8 -Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
00-HT8(1)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.5
00-HT8(2)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax >=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-HT8(3)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
00-HT8(4)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-A2-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-A2-2-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-A2-2-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-E0-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-E0-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-E0-1-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-E0-1-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-E0-2-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-E0-2-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-E0-2-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-E0-2-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-F1-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-F1-1-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-F1-10-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-F1-11-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-F1-12-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-F1-13-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-F1-13-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-F1-15-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-F1-2-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
01-F1-3-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-F1-5-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.6
01-F1-5-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-F1-6-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-F1-7-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-F1-8-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-F1-9-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-F1-9-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT2(1)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.1
01-HT2(1)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.9
01-HT2(2)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.0
01-HT2(2)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.9

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax >=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-HT2(3)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.8
01-HT2(3)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.9
01-HT2A-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.6
01-HT2A-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	23.7
01-HT3(1)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(1)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT3(10)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.3
01-HT3(10)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.6
01-HT3(11)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(11)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.6
01-HT3(12)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.4
01-HT3(12)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.6
01-HT3(13)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(13)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.6
01-HT3(14)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.4
01-HT3(14)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.6
01-HT3(15)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(15)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.6
01-HT3(16)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.4
01-HT3(16)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.7
01-HT3(17)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(17)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.6
01-HT3(18)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.3
01-HT3(18)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT3(19)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(19)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.6
01-HT3(2)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.3
01-HT3(2)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT3(20)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.3
01-HT3(20)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.6
01-HT3(3)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT3(3)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT3(4)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.4
01-HT3(4)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax >=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-HT3(5)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(5)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT3(6)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.3
01-HT3(6)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT3(7)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT3(7)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT3(8)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	24.4
01-HT3(8)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT3(9)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT3(9)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5
01-HT4(1)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT4(1)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.9
01-HT4(2)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.5
01-HT4(2)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.9
01-HT4(3)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT4(3)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	23.1
01-HT4(4)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.5
01-HT4(4)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	23.1
01-HT4(5)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT4(5)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	23.1
01-HT4(6)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.5
01-HT4(6)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	23.1
01-HT5(1)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.0
01-HT5(1)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT5(2)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.8
01-HT5(2)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT5(3)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.8
01-HT5(3)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT5(4)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.8
01-HT5(4)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT5(5)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.9
01-HT5(5)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT5(6)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.9
01-HT5(6)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax >=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-HT5(7)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.9
01-HT5(7)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT6(1)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.9
01-HT6(2)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.2
01-HT6(3)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.2
01-HT6(4)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.3
01-HT6(5)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.1
01-HT7(1)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT7(1)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	23.0
01-HT7(2)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT7(2)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	23.3
01-HT7(3)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT7(3)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	23.2
01-HT7(4)-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
01-HT7(4)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	23.3
01-HT8(1)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT8(2)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT8(3)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
01-HT8(4)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-A2-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-A2-2-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-A2-2-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-F2-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-F2-1-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-10-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-F2-11-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-F2-12-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-F2-13-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
02-F2-13-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-15-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
02-F2-15-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-2-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-3-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-3-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.2



**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax >=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
02-F2-4-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
02-F2-5-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.5
02-F2-5-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-F2-6-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-F2-7-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-F2-8-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-F2-9-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-F2-9-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
02-HT2(1)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	25.1
02-HT2(2)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	25.1
02-HT2(3)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	25.3
02-HT2A-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	24.8
02-HT3(1)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.4
02-HT3(10)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.7
02-HT3(11)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.7
02-HT3(12)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.9
02-HT3(13)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.9
02-HT3(14)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.8
02-HT3(15)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.7
02-HT3(16)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.9
02-HT3(17)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.9
02-HT3(18)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.7
02-HT3(19)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.7
02-HT3(2)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.5
02-HT3(20)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.8
02-HT3(3)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.6
02-HT3(4)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.8
02-HT3(5)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.8
02-HT3(6)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.6
02-HT3(7)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.6
02-HT3(8)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.7
02-HT3(9)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	23.6
02-HT4(1)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT4(2)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.4

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax >=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
02-HT4(3)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT4(4)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT4(5)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT4(6)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.4
02-HT5(1)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.6
02-HT5(1)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-HT5(2)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.6
02-HT5(2)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-HT5(3)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.7
02-HT5(3)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-HT5(4)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.7
02-HT5(4)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-HT5(5)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.7
02-HT5(5)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-HT5(6)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.7
02-HT5(6)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-HT5(7)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.8
02-HT5(7)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-HT6(1)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-HT6(1)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-HT6(2)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-HT6(2)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.6
02-HT6(3)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-HT6(3)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.6
02-HT6(4)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-HT6(4)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.7
02-HT6(5)-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-HT6(5)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-HT7(1)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	24.2
02-HT7(1)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-HT7(2)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	24.3
02-HT7(2)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.5
02-HT7(3)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	24.3
02-HT7(3)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.5

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax >=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
02-HT7(4)-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	24.4
02-HT7(4)-Bedroom 04	100	0	PASS	0	0	0	0.0%	PASS	22.5
03-F3-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.5
03-F3-1-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.4
03-F3-10-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
03-F3-11-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.2
03-F3-11-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
03-F3-11-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	22.3
03-F3-2-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
03-F3-4-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
03-F3-3-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
03-F3-3-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
03-F3-5-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	23.2
03-F3-5-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.6
03-F3-6-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.7
03-F3-7-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.3
03-F3-8-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.4
03-F3-8-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
03-F3-9-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	22.4
03-F3-9-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
04-F4-1-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
04-F4-2-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
04-F4-2-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	22.3
04-F4-3-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3
04-F4-4-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	22.3

## Results DSY3

### Mechanically ventilated Living rooms- Cooling Applied

- c) For Homes with restricted window openings, the CIBSE fixed temperature test must be followed – all occupied rooms should not exceed an operative temperature of 26°C for more than 3% of annual occupied hours (CIBSE Guide A 2015a)

Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Occupied hours 09:00 - 22:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-A0-1 -Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	22.7
00-A0-2 -Living room / Kitchen	100	0	PASS	10	10	0.2%	PASS	27.0
00-E0-1-Living / Dining	100	0	PASS	0	0	0.0%	PASS	23.4
00-E0-2-Living / Dining	100	0	PASS	0	0	0.0%	PASS	23.3
00-F0-1-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	25.7
00-F0-2-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	24.1
00-F0-3 -Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	23.3
00-F0-4-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	24.9
00-F0-5-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	24.2
00-F0-6-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	22.6
00-F0-7 -Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	22.7
00-F0-8 -Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	22.8
00-HT2(1)-Kitchen	100	0	PASS	0	0	0.0%	PASS	22.6
00-HT2(1)-Living Room	100	0	PASS	1	1	0.0%	PASS	26.3
00-HT2(2)-Kitchen	100	0	PASS	0	0	0.0%	PASS	22.5
00-HT2(2)-Living Room	100	0	PASS	1	1	0.0%	PASS	26.3
00-HT2(3)-Kitchen	100	0	PASS	0	0	0.0%	PASS	22.5
00-HT2(3)-Living Room	100	0	PASS	0	0	0.0%	PASS	26.0
00-HT2A-Living Room	100	0	PASS	0	0	0.0%	PASS	25.5
00-HT3(1)-Kitchen	100	0	PASS	0	0	0.0%	PASS	22.4
00-HT3(1)-Living Room	100	0	PASS	1	1	0.0%	PASS	26.2
00-HT3(2)-Kitchen	100	0	PASS	0	0	0.0%	PASS	22.4
00-HT3(2)-Living Room	100	0	PASS	2	2	0.0%	PASS	26.7
00-HT3(3)-Kitchen	100	0	PASS	0	0	0.0%	PASS	22.4
00-HT3(3)-Living Room	100	0	PASS	1	1	0.0%	PASS	26.7
00-HT3(4)-Kitchen	100	0	PASS	0	0	0.0%	PASS	22.5
00-HT3(4)-Living Room	100	0	PASS	0	0	0.0%	PASS	25.9
00-HT3(5)-Kitchen	100	0	PASS	0	0	0.0%	PASS	22.5
00-HT3(5)-Living Room	100	0	PASS	1	1	0.0%	PASS	26.6
00-HT3(6)-Kitchen	100	0	PASS	0	0	0.0%	PASS	22.4

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Occupied hours 09:00 - 22:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-HT3(6)-Living Room	100	0	PASS	2	2	0.0%	PASS	26.8
00-HT3(7)-Kitchen	100	0	PASS	0	0	0.0%	PASS	22.4
00-HT3(7)-Living Room	100	0	PASS	2	2	0.0%	PASS	26.7
00-HT3(8)-Kitchen	100	0	PASS	0	0	0.0%	PASS	22.4
00-HT3(8)-Living Room	100	0	PASS	1	1	0.0%	PASS	26.2
00-HT3(9)-Kitchen	100	0	PASS	0	0	0.0%	PASS	22.4
00-HT3(9)-Living Room	100	0	PASS	2	2	0.0%	PASS	26.6
00-HT3(10)-Kitchen	100	0	PASS	0	0	0.0%	PASS	22.4
00-HT3(10)-Living Room	100	0	PASS	6	6	0.1%	PASS	27.2
00-HT3(11)-Kitchen	100	0	PASS	0	0	0.0%	PASS	22.4
00-HT3(11)-Living Room	100	0	PASS	6	6	0.1%	PASS	27.1
00-HT3(12)-Kitchen	100	0	PASS	0	0	0.0%	PASS	22.5
00-HT3(12)-Living Room	100	0	PASS	1	1	0.0%	PASS	26.5
00-HT3(13)-Kitchen	100	0	PASS	0	0	0.0%	PASS	22.5
00-HT3(13)-Living Room	100	0	PASS	4	4	0.1%	PASS	26.9
00-HT3(14)-Kitchen	100	0	PASS	0	0	0.0%	PASS	22.4
00-HT3(14)-Living Room	100	0	PASS	2	2	0.0%	PASS	26.6
00-HT3(15)-Kitchen	100	0	PASS	0	0	0.0%	PASS	22.4
00-HT3(15)-Living Room	100	0	PASS	2	2	0.0%	PASS	26.7
00-HT3(16)-Kitchen	100	0	PASS	0	0	0.0%	PASS	22.5
00-HT3(16)-Living Room	100	0	PASS	1	1	0.0%	PASS	26.6
00-HT3(17)-Kitchen	100	0	PASS	0	0	0.0%	PASS	22.5
00-HT3(17)-Living Room	100	0	PASS	6	6	0.1%	PASS	27.1
00-HT3(18)-Kitchen	100	0	PASS	0	0	0.0%	PASS	22.4
00-HT3(18)-Living Room	100	0	PASS	6	6	0.1%	PASS	27.3
00-HT3(19)-Kitchen	100	0	PASS	0	0	0.0%	PASS	22.4
00-HT3(19)-Living Room	100	0	PASS	6	6	0.1%	PASS	27.2
00-HT3(20)-Kitchen	100	0	PASS	0	0	0.0%	PASS	22.4
00-HT3(20)-Living Room	100	0	PASS	4	4	0.1%	PASS	26.8
00-HT4(1)-Living Room	100	0	PASS	0	0	0.0%	PASS	25.4
00-HT4(2)-Living Room	100	0	PASS	0	0	0.0%	PASS	25.5
00-HT4(3)-Living Room	100	0	PASS	0	0	0.0%	PASS	25.7
00-HT4(4)-Living Room	100	0	PASS	0	0	0.0%	PASS	25.8
00-HT4(5)-Living Room	100	0	PASS	0	0	0.0%	PASS	25.8

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Occupied hours 09:00 - 22:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-HT4(6)-Living Room	100	0	PASS	0	0	0.0%	PASS	25.9
00-HT5(1)-Kitchen	100	0.1	PASS	53	53	1.1%	PASS	29.1
00-HT5(2)-Kitchen	100	0.1	PASS	53	53	1.1%	PASS	29.1
00-HT5(3)-Kitchen	100	0	PASS	49	49	1.0%	PASS	28.8
00-HT5(4)-Kitchen	100	0	PASS	49	49	1.0%	PASS	28.9
00-HT5(5)-Kitchen	100	0.2	PASS	55	55	1.2%	PASS	29.2
00-HT5(6)-Kitchen	100	0.2	PASS	56	56	1.2%	PASS	29.2
00-HT5(7)-Kitchen	100	0	PASS	47	47	1.0%	PASS	28.9
00-HT6(1)-Kitchen	100	0	PASS	41	41	0.9%	PASS	28.6
00-HT6(2)-Kitchen	100	0	PASS	51	51	1.1%	PASS	28.9
00-HT6(3)-Kitchen	100	0	PASS	52	52	1.1%	PASS	28.9
00-HT6(4)-Kitchen	100	0	PASS	46	46	1.0%	PASS	28.7
00-HT6(5)-Kitchen	100	0	PASS	48	48	1.0%	PASS	28.8
00-HT7(1)-Kitchen	100	0	PASS	12	12	0.3%	PASS	27.1
00-HT7(2)-Kitchen	100	0	PASS	12	12	0.3%	PASS	27.2
00-HT7(3)-Kitchen	100	0	PASS	12	12	0.3%	PASS	27.2
00-HT7(4)-Kitchen	100	0	PASS	16	16	0.3%	PASS	27.5
00-HT8(1)-Living Room	100	0	PASS	128	128	2.7%	PASS	28.2
00-HT8(2)-Living Room	100	0	PASS	147	147	3.1%	FAIL	28.5
00-HT8(3)-Living Room	100	0	PASS	145	145	3.1%	FAIL	28.5
00-HT8(4)-Living Room	100	0	PASS	117	117	2.5%	PASS	28.2
01-A2-1-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	23.3
01-A2-2-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	23.5
01-E0-1-Living / Kitchen	100	0	PASS	0	0	0.0%	PASS	23.9
01-E0-2-Living / Kitchen	100	0	PASS	0	0	0.0%	PASS	23.9
01-F1-1-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	25.5
01-F1-2-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	24.2
01-F1-3-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	23.9
01-F1-4-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	22.8
01-F1-5-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	23.4
01-F1-6-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	24.5
01-F1-7-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	24.7
01-F1-8-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	25.2
01-F1-9-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	23.9

**Greggs Bakery  
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Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Occupied hours 09:00 - 22:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-F1-10-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	22.6
01-F1-11-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	22.6
01-F1-12-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	22.6
01-F1-13-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	22.8
01-F1-14-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	22.7
01-HT5(1)-Living Room	100	0	PASS	0	0	0.0%	PASS	23.5
01-HT5(2)-Living Room	100	0	PASS	0	0	0.0%	PASS	23.5
01-HT5(3)-Living Room	100	0	PASS	0	0	0.0%	PASS	23.5
01-HT5(4)-Living Room	100	0	PASS	0	0	0.0%	PASS	23.5
01-HT5(5)-Living Room	100	0	PASS	0	0	0.0%	PASS	23.6
01-HT5(6)-Living Room	100	0	PASS	0	0	0.0%	PASS	23.6
01-HT5(7)-Living Room	100	0	PASS	0	0	0.0%	PASS	23.6
01-HT6(1)-Living Room	100	0	PASS	0	0	0.0%	PASS	23.6
01-HT6(2)-Living Room	100	0	PASS	0	0	0.0%	PASS	23.7
01-HT6(3)-Living Room	100	0	PASS	0	0	0.0%	PASS	23.7
01-HT6(4)-Living Room	100	0	PASS	0	0	0.0%	PASS	23.7
01-HT6(5)-Living Room	100	0	PASS	0	0	0.0%	PASS	23.7
01-HT7(1)-Living Room	100	0	PASS	0	0	0.0%	PASS	23.6
01-HT7(2)-Living Room	100	0	PASS	0	0	0.0%	PASS	23.5
01-HT7(3)-Living Room	100	0	PASS	0	0	0.0%	PASS	23.5
01-HT7(4)-Living Room	100	0	PASS	0	0	0.0%	PASS	23.6
02-A2-1-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	25.0
02-A2-2-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	25.0
02-E0-1-Living / Kitchen	100	0	PASS	0	0	0.0%	PASS	24.3
02-E0-2-Living / Kitchen	100	0	PASS	0	0	0.0%	PASS	24.3
02-F2-1-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	25.5
02-F2-2-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	24.3
02-F2-3-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	23.5
02-F2-4-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	23.2
02-F2-5-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	23.5
02-F2-6-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	24.6
02-F2-7-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	24.7
02-F2-8-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	25.2
02-F2-9-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	23.8



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Occupied hours 09:00 - 22:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
02-F2-10-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	22.6
02-F2-11-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	22.8
02-F2-12-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	23.2
02-F2-13-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	23.3
02-F2-14-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	24.4
02-F2-15- Living/ Kitchen	100	0	PASS	0	0	0.0%	PASS	24.1
03-F3-1-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	25.9
03-F3-2-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	24.6
03-F3-3-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	24.1
03-F3-4-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	24.3
03-F3-5-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	24.8
03-F3-6-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	25.1
03-F3-7-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	25.2
03-F3-8-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	24.0
03-F3-9-Living / Kitchen	100	0	PASS	0	0	0.0%	PASS	22.6
03-F3-10-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	23.5
03-F3-11-Living / Kitchen	100	0	PASS	0	0	0.0%	PASS	24.0
04-F4-1-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	24.8
04-F4-2-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	24.1
04-F4-3-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	23.0
04-F4-4-Living room / Kitchen	100	0	PASS	0	0	0.0%	PASS	24.1



**Result DSY2**

**Naturally ventilated Bedrooms-DSY1**

*For bedrooms only: to guarantee comfort during the sleeping hours the operative temperature in the bedroom from 10PM to 7AM shall not exceed 26°C for more than 1% of annual hours. (Note: 1% of the annual hours between 22:00 and 07:00 for bedrooms is 32 hours, so 33 or more hours above 26°C will be recorded as fail).*

Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Results	Predicted Peak Summer Temp. °C
00-Blk C-Apt 01-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	25.6
01-Blk C-Apt 01-Bedroom	100	0.3	PASS	8	3	11	0.3%	PASS	29.9
01-Blk C-Apt 02-Bedroom 01	100	0	PASS	3	0	3	0.1%	PASS	28.7
01-Blk C-Apt 02-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	26.5
01-Blk C-Apt 02-Bedroom 03	100	0	PASS	1	0	1	0.0%	PASS	27.0
01-Blk C-Apt 03-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	26.2
01-Blk C-Apt 03-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	26.4
01-Blk C-Apt 03-Bedroom 03	100	0	PASS	0	0	0	0.0%	PASS	26.9
02-Blk C-Apt 01-Bedroom	100	0.4	PASS	8	6	14	0.4%	PASS	30.3
02-Blk C-Apt 02-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	24.2
02-Blk C-Apt 03-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	26.2
02-Blk C-Apt 03-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	26.5
02-Blk C-Apt 03-Bedroom 03	100	0	PASS	1	0	1	0.0%	PASS	27.5
03-Blk C-Apt 01-Bedroom	100	0.4	PASS	8	5	13	0.4%	PASS	30.2
03-Blk C-Apt 02-Bedroom	100	0.4	PASS	8	3	11	0.3%	PASS	30.7
03-Blk C-Apt 03-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	26.1
03-Blk C-Apt 04-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	26.3
04-Blk C-Apt 01-Bedroom	100	0.4	PASS	8	5	13	0.4%	PASS	30.2
04-Blk C-Apt 02-Bedroom	100	0.4	PASS	8	6	14	0.4%	PASS	30.9
04-Blk C-Apt 03-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	26.2
04-Blk C-Apt 04-Bedroom	100	0	PASS	0	0	0	0.0%	PASS	26.3
05-Blk C-Apt 01-Bedroom	100	0.4	PASS	8	6	14	0.4%	PASS	30.3
05-Blk C-Apt 02-Bedroom	100	0.5	PASS	8	6	14	0.4%	PASS	31.1
05-Blk C-Apt 03-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.9
05-Blk C-Apt 03-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	26.8
05-Blk C-Apt 04-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.9
05-Blk C-Apt 04-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	27.1
06-Blk C-Apt 01-Bedroom	100	0.4	PASS	8	6	14	0.4%	PASS	30.3
06-Blk C-Apt 02-Bedroom	100	0.6	PASS	8	6	14	0.4%	PASS	31.2
06-Blk C-Apt 03-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.9
06-Blk C-Apt 03-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	26.8

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06-Blk C-Apt 04-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.9
06-Blk C-Apt 04-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	27.1
07-Blk C-Apt 01-Bedroom	100	0.4	PASS	8	6	14	0.4%	PASS	30.3
07-Blk C-Apt 02-Bedroom	100	0.6	PASS	8	6	14	0.4%	PASS	31.2
07-Blk C-Apt 03-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.9
07-Blk C-Apt 03-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	26.8
07-Blk C-Apt 04-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.9
07-Blk C-Apt 04-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	27.1
08-Blk C-Apt 01-Bedroom	100	0.4	PASS	8	6	14	0.4%	PASS	30.3
08-Blk C-Apt 02-Bedroom	100	0.6	PASS	8	6	14	0.4%	PASS	31.2
08-Blk C-Apt 03-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.9
08-Blk C-Apt 03-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	26.8
08-Blk C-Apt 04-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.9
08-Blk C-Apt 04-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	27.1
09-Blk C-Apt 01-Bedroom	100	0.4	PASS	8	6	14	0.4%	PASS	30.3



09-Blk C-Apt 02-Bedroom	100	0.6	PASS	8	6	14	0.4%	PASS	31.2
09-Blk C-Apt 03-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.9
09-Blk C-Apt 03-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	26.8
09-Blk C-Apt 04-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.9
09-Blk C-Apt 04-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	27.1
10-Blk C-Apt 01-Bedroom	100	0.4	PASS	8	6	14	0.4%	PASS	30.3
10-Blk C-Apt 02-Bedroom	100	0.6	PASS	8	6	14	0.4%	PASS	31.2
10-Blk C-Apt 03-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.9
10-Blk C-Apt 03-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	26.8
10-Blk C-Apt 04-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.9
10-Blk C-Apt 04-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	27.1
11-Blk C-Apt 01-Bedroom	100	0.4	PASS	8	6	14	0.4%	PASS	30.3
11-Blk C-Apt 02-Bedroom	100	0.6	PASS	8	6	14	0.4%	PASS	31.2
11-Blk C-Apt 03-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.9
11-Blk C-Apt 03-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	26.8

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11-Blk C-Apt 04-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.9
11-Blk C-Apt 04-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	27.1
12-Blk C-Apt 01-Bedroom	100	0.4	PASS	8	6	14	0.4%	PASS	30.3
12-Blk C-Apt 02-Bedroom	100	0.6	PASS	8	6	14	0.4%	PASS	31.2
12-Blk C-Apt 03-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.9
12-Blk C-Apt 03-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	26.8
12-Blk C-Apt 04-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.9
12-Blk C-Apt 04-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	27.1
13-Blk C-Apt 01-Bedroom	100	0.4	PASS	8	6	14	0.4%	PASS	30.3
13-Blk C-Apt 02-Bedroom	100	0.6	PASS	8	6	14	0.4%	PASS	31.2
13-Blk C-Apt 03-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.9
13-Blk C-Apt 03-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	26.8
13-Blk C-Apt 04-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.9
13-Blk C-Apt 04-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	27.1
14-Blk C-Apt 01-Bedroom	100	0.4	PASS	8	6	14	0.4%	PASS	30.3
14-Blk C-Apt 02-Bedroom	100	0.6	PASS	8	6	14	0.4%	PASS	31.2
14-Blk C-Apt 03-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.9
14-Blk C-Apt 03-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	26.8
14-Blk C-Apt 04-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.9
14-Blk C-Apt 04-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	27.1
15-Blk C-Apt 01-Bedroom	100	0.4	PASS	8	6	14	0.4%	PASS	30.3
15-Blk C-Apt 02-Bedroom	100	0.6	PASS	8	6	14	0.4%	PASS	31.2
15-Blk C-Apt 03-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.9
15-Blk C-Apt 03-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	26.8
15-Blk C-Apt 04-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.9
15-Blk C-Apt 04-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	27.1
16-Blk C-Apt 01-Bedroom	100	0.4	PASS	8	6	14	0.4%	PASS	30.3
16-Blk C-Apt 02-Bedroom	100	0.6	PASS	8	6	14	0.4%	PASS	31.2
16-Blk C-Apt 03-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.8
16-Blk C-Apt 03-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	26.8
16-Blk C-Apt 04-Bedroom 01	100	0	PASS	0	0	0	0.0%	PASS	25.9
16-Blk C-Apt 04-Bedroom 02	100	0	PASS	0	0	0	0.0%	PASS	27.2



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
00-E0-1-Bedroom	100	0.3	PASS	12	4	16	0.5%	PASS	30.5
00-E0-2-Bedroom	100	0.3	PASS	13	5	18	0.5%	PASS	30.5
00-F0-2-Bedroom	100	0.3	PASS	9	4	13	0.4%	PASS	30.6
00-F0-5-Bedroom 01	100	0.2	PASS	11	4	15	0.5%	PASS	30.5
00-F0-5-Bedroom 02	100	0.2	PASS	10	4	14	0.4%	PASS	30.5
00-F0-6-Bedroom	100	0.2	PASS	11	3	14	0.4%	PASS	30.4
00-F0-8 -Bedroom 02	100	0.1	PASS	7	3	10	0.3%	PASS	29.7
01-F1-14-Bedroom	100	0.2	PASS	8	3	11	0.3%	PASS	30.1
01-F1-15-Bedroom 02	100	0.3	PASS	13	4	17	0.5%	PASS	30.7
01-F1-2-Bedroom 02	100	0.2	PASS	9	3	12	0.4%	PASS	30.2
01-F1-3-Bedroom 01	100	0.2	PASS	11	4	15	0.5%	PASS	30.1
01-F1-3-Bedroom 03	100	0.3	PASS	13	5	18	0.5%	PASS	30.6
01-F1-4-Bedroom 01	100	0.2	PASS	9	3	12	0.4%	PASS	30.2
02-F2-14-Bedroom	100	0.3	PASS	12	4	16	0.5%	PASS	30.5
02-F2-2-Bedroom 02	100	0.2	PASS	12	4	16	0.5%	PASS	30.4
02-F2-3-Bedroom 01	100	0.2	PASS	13	5	18	0.5%	PASS	30.4
03-F3-2-Bedroom 02	100	0.2	PASS	12	4	16	0.5%	PASS	30.3
04-F4-4-Bedroom 02	100	0.1	PASS	12	6	18	0.5%	PASS	29.8
00-A0-1 -Bedroom 01	100	1	PASS	7	3	10	0.3%	PASS	31.9
00-A0-2 -Bedroom 01	100	0.6	PASS	7	3	10	0.3%	PASS	32.0
00-A0-2 -Bedroom 02	100	0.6	PASS	14	7	21	0.6%	PASS	31.6
00-F0-1-Bedroom 01	100	1.4	PASS	17	9	26	0.8%	PASS	32.1
00-F0-1-Bedroom 02	100	0.7	PASS	17	8	25	0.8%	PASS	31.7
00-F0-3-Bedroom 01	100	0.6	PASS	14	7	21	0.6%	PASS	31.1
00-F0-3-Bedroom 02	100	0.8	PASS	15	5	20	0.6%	PASS	31.6
00-F0-4-Bedroom	100	0.7	PASS	13	4	17	0.5%	PASS	31.0
00-F0-7 -Bedroom	100	0.5	PASS	15	8	23	0.7%	PASS	31.4
00-F0-8 -Bedroom 01	100	0.4	PASS	13	4	17	0.5%	PASS	30.8
00-HT8(1)-Bedroom 01	100	0.6	PASS	12	4	16	0.5%	PASS	31.6
00-HT8(2)-Bedroom 01	100	0.7	PASS	12	4	16	0.5%	PASS	31.7
00-HT8(3)-Bedroom 01	100	0.7	PASS	12	4	16	0.5%	PASS	31.8
00-HT8(4)-Bedroom 01	100	0.7	PASS	13	4	17	0.5%	PASS	31.7
01-A2-1-Bedroom 01	100	0.2	PASS	12	4	16	0.5%	PASS	30.4
01-A2-2-Bedroom 01	100	0.6	PASS	16	9	25	0.8%	PASS	31.1

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Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-A2-2-Bedroom 02	100	0.5	PASS	17	9	26	0.8%	PASS	31.4
02-E0-1-Bedroom 01	100	0.5	PASS	17	12	29	0.9%	PASS	30.8
01-E0-1-Bedroom 01	100	0.6	PASS	16	8	24	0.7%	PASS	31.2
01-E0-1-Bedroom 02	100	0.6	PASS	13	4	17	0.5%	PASS	31.5
02-E0-1-Bedroom 02	100	0.5	PASS	16	11	27	0.8%	PASS	30.8
01-E0-2-Bedroom 01	100	0.6	PASS	17	9	26	0.8%	PASS	31.3
02-E0-2-Bedroom 01	100	0.5	PASS	18	12	30	0.9%	PASS	30.8
02-E0-2-Bedroom 02	100	0.5	PASS	16	11	27	0.8%	PASS	30.8
01-E0-2-Bedroom 02	100	0.5	PASS	16	8	24	0.7%	PASS	31.2
01-F1-1-Bedroom 01	100	1.7	PASS	19	9	28	0.9%	PASS	32.4
01-F1-1-Bedroom 02	100	1	PASS	18	8	26	0.8%	PASS	31.9
01-F1-10-Bedroom 01	100	0.4	PASS	13	4	17	0.5%	PASS	31.3
01-F1-11-Bedroom 01	100	0.6	PASS	14	7	21	0.6%	PASS	31.6
01-F1-12-Bedroom 01	100	0.7	PASS	16	8	24	0.7%	PASS	31.8
01-F1-13-Bedroom 01	100	0.5	PASS	18	8	26	0.8%	PASS	31.3
01-F1-13-Bedroom 02	100	0.8	PASS	18	8	26	0.8%	PASS	31.6
01-F1-15-Bedroom 01	100	0.4	PASS	13	5	18	0.5%	PASS	31.1
01-F1-2-Bedroom 01	100	0.5	PASS	15	8	23	0.7%	PASS	31.3
01-F1-3-Bedroom 02	100	0.5	PASS	15	8	23	0.7%	PASS	31.2
01-F1-5-Bedroom 01	100	1.3	PASS	10	3	13	0.4%	PASS	32.6
01-F1-5-Bedroom 02	100	1.1	PASS	17	8	25	0.8%	PASS	32.1
01-F1-6-Bedroom 01	100	1.3	PASS	16	5	21	0.6%	PASS	32.0
01-F1-7-Bedroom 01	100	1.4	PASS	17	7	24	0.7%	PASS	32.2
01-F1-8-Bedroom 01	100	0.6	PASS	13	4	17	0.5%	PASS	31.6
01-F1-9-Bedroom 01	100	0.7	PASS	18	8	26	0.8%	PASS	31.7
01-F1-9-Bedroom 02	100	1	PASS	18	8	26	0.8%	PASS	32.0
01-HT2(1)-Bedroom 01	100	5.1	FAIL	40	25	65	2.0%	FAIL	33.8
01-HT2(1)-Bedroom 02	100	2.3	PASS	32	27	59	1.8%	FAIL	32.3
01-HT2(2)-Bedroom 01	100	4.8	FAIL	39	24	63	1.9%	FAIL	33.7
01-HT2(2)-Bedroom 02	100	2.3	PASS	32	26	58	1.8%	FAIL	32.3
01-HT2(3)-Bedroom 01	100	4	FAIL	40	26	66	2.0%	FAIL	33.3
01-HT2(3)-Bedroom 02	100	2.2	PASS	30	26	56	1.7%	FAIL	32.3
01-HT2A-Bedroom 01	100	6.8	FAIL	43	27	70	2.1%	FAIL	34.2
01-HT2A-Bedroom 02	100	3.6	FAIL	36	29	65	2.0%	FAIL	32.8
01-HT3(1)-Bedroom 01	100	1.4	PASS	27	21	48	1.5%	FAIL	31.9

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-HT3(1)-Bedroom 02	100	1.1	PASS	17	8	25	0.8%	PASS	32.1
01-HT3(10)-Bedroom 01	100	2.8	PASS	29	24	53	1.6%	FAIL	32.2
01-HT3(10)-Bedroom 02	100	1.4	PASS	17	8	25	0.8%	PASS	32.4
01-HT3(11)-Bedroom 01	100	1.6	PASS	27	21	48	1.5%	FAIL	32.0
01-HT3(11)-Bedroom 02	100	1.4	PASS	17	8	25	0.8%	PASS	32.4
01-HT3(12)-Bedroom 01	100	2.5	PASS	29	23	52	1.6%	FAIL	32.1
01-HT3(12)-Bedroom 02	100	1.4	PASS	17	8	25	0.8%	PASS	32.4
01-HT3(13)-Bedroom 01	100	1.5	PASS	27	21	48	1.5%	FAIL	31.9
01-HT3(13)-Bedroom 02	100	1.4	PASS	17	8	25	0.8%	PASS	32.4
01-HT3(14)-Bedroom 01	100	2.8	PASS	30	24	54	1.6%	FAIL	32.3
01-HT3(14)-Bedroom 02	100	1.3	PASS	17	8	25	0.8%	PASS	32.3
01-HT3(15)-Bedroom 01	100	1.6	PASS	27	22	49	1.5%	FAIL	32.0
01-HT3(15)-Bedroom 02	100	1.3	PASS	17	8	25	0.8%	PASS	32.2
01-HT3(16)-Bedroom 01	100	2.4	PASS	29	23	52	1.6%	FAIL	32.1
01-HT3(16)-Bedroom 02	100	1.4	PASS	17	8	25	0.8%	PASS	32.4
01-HT3(17)-Bedroom 01	100	1.6	PASS	28	23	51	1.6%	FAIL	31.9
01-HT3(17)-Bedroom 02	100	1.7	PASS	25	17	42	1.3%	FAIL	32.2
01-HT3(18)-Bedroom 01	100	2.8	PASS	30	24	54	1.6%	FAIL	32.2
01-HT3(18)-Bedroom 02	100	1.4	PASS	17	8	25	0.8%	PASS	32.4
01-HT3(19)-Bedroom 01	100	1.8	PASS	29	22	51	1.6%	FAIL	32.0
01-HT3(19)-Bedroom 02	100	1.7	PASS	24	16	40	1.2%	FAIL	32.2
01-HT3(2)-Bedroom 01	100	2.6	PASS	29	23	52	1.6%	FAIL	32.2
01-HT3(2)-Bedroom 02	100	1.4	PASS	17	8	25	0.8%	PASS	32.2
01-HT3(20)-Bedroom 01	100	2.8	PASS	31	24	55	1.7%	FAIL	32.3
01-HT3(20)-Bedroom 02	100	1.3	PASS	17	9	26	0.8%	PASS	32.3
01-HT3(3)-Bedroom 01	100	1.6	PASS	29	23	52	1.6%	FAIL	31.9
01-HT3(3)-Bedroom 02	100	1.4	PASS	17	8	25	0.8%	PASS	32.3
01-HT3(4)-Bedroom 01	100	2.4	PASS	29	23	52	1.6%	FAIL	32.0
01-HT3(4)-Bedroom 02	100	1.4	PASS	17	8	25	0.8%	PASS	32.3
01-HT3(5)-Bedroom 01	100	1.4	PASS	27	19	46	1.4%	FAIL	31.8
01-HT3(5)-Bedroom 02	100	1.4	PASS	17	8	25	0.8%	PASS	32.4
01-HT3(6)-Bedroom 01	100	2.7	PASS	29	23	52	1.6%	FAIL	32.2
01-HT3(6)-Bedroom 02	100	1.4	PASS	17	8	25	0.8%	PASS	32.4
01-HT3(7)-Bedroom 01	100	1.7	PASS	27	21	48	1.5%	FAIL	32.0
01-HT3(7)-Bedroom 02	100	1.4	PASS	17	8	25	0.8%	PASS	32.4

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-HT3(8)-Bedroom 01	100	2.8	PASS	31	24	55	1.7%	FAIL	32.3
01-HT3(8)-Bedroom 02	100	1.3	PASS	17	8	25	0.8%	PASS	32.3
01-HT3(9)-Bedroom 01	100	1.7	PASS	27	22	49	1.5%	FAIL	32.0
01-HT3(9)-Bedroom 02	100	1.3	PASS	17	8	25	0.8%	PASS	32.2
01-HT4(1)-Bedroom 01	100	1	PASS	25	21	46	1.4%	FAIL	31.4
01-HT4(1)-Bedroom 02	100	1.8	PASS	16	8	24	0.7%	PASS	32.6
01-HT4(2)-Bedroom 01	100	1.6	PASS	28	23	51	1.6%	FAIL	31.7
01-HT4(2)-Bedroom 02	100	1.8	PASS	16	8	24	0.7%	PASS	32.7
01-HT4(3)-Bedroom 01	100	1	PASS	25	22	47	1.4%	FAIL	31.5
01-HT4(3)-Bedroom 02	100	1.9	PASS	16	8	24	0.7%	PASS	32.7
01-HT4(4)-Bedroom 01	100	1.6	PASS	28	23	51	1.6%	FAIL	31.7
01-HT4(4)-Bedroom 02	100	1.8	PASS	16	8	24	0.7%	PASS	32.7
01-HT4(5)-Bedroom 01	100	1	PASS	25	22	47	1.4%	FAIL	31.5
01-HT4(5)-Bedroom 02	100	1.8	PASS	16	8	24	0.7%	PASS	32.7
01-HT4(6)-Bedroom 01	100	1.6	PASS	28	23	51	1.6%	FAIL	31.7
01-HT4(6)-Bedroom 02	100	1.9	PASS	17	8	25	0.8%	PASS	32.7
01-HT5(1)-Bedroom 01	100	0.8	PASS	8	3	11	0.3%	PASS	32.2
01-HT5(1)-Bedroom 02	100	0.8	PASS	18	8	26	0.8%	PASS	31.8
01-HT5(2)-Bedroom 01	100	0.8	PASS	8	3	11	0.3%	PASS	32.3
01-HT5(2)-Bedroom 02	100	0.8	PASS	18	8	26	0.8%	PASS	31.8
01-HT5(3)-Bedroom 01	100	0.8	PASS	8	3	11	0.3%	PASS	32.3
01-HT5(3)-Bedroom 02	100	0.6	PASS	21	9	30	0.9%	PASS	31.6
01-HT5(4)-Bedroom 01	100	0.8	PASS	8	3	11	0.3%	PASS	32.3
01-HT5(4)-Bedroom 02	100	0.8	PASS	18	8	26	0.8%	PASS	31.8
01-HT5(5)-Bedroom 01	100	0.8	PASS	8	3	11	0.3%	PASS	32.3
01-HT5(5)-Bedroom 02	100	0.8	PASS	18	8	26	0.8%	PASS	31.8
01-HT5(6)-Bedroom 01	100	0.8	PASS	8	3	11	0.3%	PASS	32.3
01-HT5(6)-Bedroom 02	100	0.8	PASS	18	8	26	0.8%	PASS	31.8
01-HT5(7)-Bedroom 01	100	0.8	PASS	8	3	11	0.3%	PASS	32.3
01-HT5(7)-Bedroom 02	100	0.8	PASS	19	8	27	0.8%	PASS	31.9
01-HT6(1)-Bedroom 01	100	0.6	PASS	7	3	10	0.3%	PASS	32.1
01-HT6(2)-Bedroom 01	100	0.6	PASS	7	3	10	0.3%	PASS	32.0
01-HT6(3)-Bedroom 01	100	0.6	PASS	7	3	10	0.3%	PASS	32.0
01-HT6(4)-Bedroom 01	100	0.6	PASS	7	3	10	0.3%	PASS	32.0
01-HT6(5)-Bedroom 01	100	0.7	PASS	8	3	11	0.3%	PASS	32.1



**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
01-HT7(1)-Bedroom 01	100	1.9	PASS	25	14	39	1.2%	FAIL	32.6
01-HT7(1)-Bedroom 02	100	0.8	PASS	8	3	11	0.3%	PASS	32.3
01-HT7(2)-Bedroom 01	100	1.9	PASS	25	14	39	1.2%	FAIL	32.7
01-HT7(2)-Bedroom 02	100	0.8	PASS	8	3	11	0.3%	PASS	32.2
01-HT7(3)-Bedroom 01	100	1.9	PASS	25	14	39	1.2%	FAIL	32.7
01-HT7(3)-Bedroom 02	100	0.8	PASS	8	3	11	0.3%	PASS	32.2
01-HT7(4)-Bedroom 01	100	1.6	PASS	27	16	43	1.3%	FAIL	32.5
01-HT7(4)-Bedroom 02	100	0.8	PASS	8	3	11	0.3%	PASS	32.2
01-HT8(1)-Bedroom 02	100	0.6	PASS	8	3	11	0.3%	PASS	32.0
01-HT8(2)-Bedroom 02	100	0.6	PASS	8	3	11	0.3%	PASS	31.9
01-HT8(3)-Bedroom 02	100	0.7	PASS	8	3	11	0.3%	PASS	32.0
01-HT8(4)-Bedroom 02	100	0.6	PASS	8	3	11	0.3%	PASS	31.9
02-A2-1-Bedroom 01	100	0.2	PASS	12	5	17	0.5%	PASS	30.4
02-A2-2-Bedroom 01	100	0.5	PASS	15	9	24	0.7%	PASS	31.0
02-A2-2-Bedroom 02	100	0.6	PASS	17	11	28	0.9%	PASS	31.5
02-F2-1-Bedroom 01	100	1.6	PASS	16	7	23	0.7%	PASS	32.6
02-F2-1-Bedroom 02	100	1	PASS	18	8	26	0.8%	PASS	32.0
02-F2-10-Bedroom 01	100	0.6	PASS	17	9	26	0.8%	PASS	31.4
02-F2-11-Bedroom 01	100	0.7	PASS	18	11	29	0.9%	PASS	31.6
02-F2-12-Bedroom 01	100	0.8	PASS	16	8	24	0.7%	PASS	31.8
02-F2-13-Bedroom 01	100	0.6	PASS	18	9	27	0.8%	PASS	31.3
02-F2-13-Bedroom 02	100	1	PASS	19	10	29	0.9%	PASS	31.8
02-F2-15-Bedroom 01	100	0.6	PASS	16	8	24	0.7%	PASS	31.5
02-F2-15-Bedroom 02	100	0.5	PASS	15	8	23	0.7%	PASS	31.1
02-F2-2-Bedroom 01	100	0.5	PASS	15	8	23	0.7%	PASS	31.4
02-F2-3-Bedroom 02	100	0.7	PASS	17	11	28	0.9%	PASS	31.6
02-F2-3-Bedroom 03	100	0.5	PASS	16	8	24	0.7%	PASS	31.0
02-F2-4-Bedroom 01	100	0.3	PASS	13	4	17	0.5%	PASS	30.6
02-F2-5-Bedroom 01	100	1.7	PASS	10	3	13	0.4%	PASS	32.8
02-F2-5-Bedroom 02	100	1.7	PASS	17	8	25	0.8%	PASS	32.4
02-F2-6-Bedroom 01	100	1.4	PASS	17	8	25	0.8%	PASS	32.2
02-F2-7-Bedroom 01	100	1.5	PASS	17	8	25	0.8%	PASS	32.3
02-F2-8-Bedroom 01	100	0.9	PASS	17	8	25	0.8%	PASS	31.8
02-F2-9-Bedroom 01	100	0.9	PASS	18	9	27	0.8%	PASS	31.9
02-F2-9-Bedroom 02	100	1.1	PASS	19	9	28	0.9%	PASS	32.1

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
02-HT2(1)-Bedroom 03	100	3.5	FAIL	18	11	29	0.9%	FAIL	33.1
02-HT2(2)-Bedroom 03	100	3.4	FAIL	18	10	28	0.9%	FAIL	33.1
02-HT2(3)-Bedroom 03	100	3.5	FAIL	20	12	32	1.0%	FAIL	33.1
02-HT2A-Bedroom 03	100	3.1	FAIL	19	12	31	0.9%	FAIL	33.0
02-HT3(1)-Bedroom 03	100	1.4	PASS	28	22	50	1.5%	FAIL	31.6
02-HT3(10)-Bedroom 03	100	1.9	PASS	33	25	58	1.8%	FAIL	32.0
02-HT3(11)-Bedroom 03	100	1.9	PASS	33	25	58	1.8%	FAIL	32.0
02-HT3(12)-Bedroom 03	100	1.9	PASS	35	28	63	1.9%	FAIL	32.0
02-HT3(13)-Bedroom 03	100	1.9	PASS	35	28	63	1.9%	FAIL	31.9
02-HT3(14)-Bedroom 03	100	1.9	PASS	35	28	63	1.9%	FAIL	32.0
02-HT3(15)-Bedroom 03	100	1.7	PASS	33	28	61	1.9%	FAIL	31.9
02-HT3(16)-Bedroom 03	100	1.9	PASS	35	28	63	1.9%	FAIL	32.0
02-HT3(17)-Bedroom 03	100	2	PASS	35	29	64	1.9%	FAIL	32.0
02-HT3(18)-Bedroom 03	100	2	PASS	34	27	61	1.9%	FAIL	32.1
02-HT3(19)-Bedroom 03	100	2	PASS	35	27	62	1.9%	FAIL	32.1
02-HT3(2)-Bedroom 03	100	1.7	PASS	30	22	52	1.6%	FAIL	31.8
02-HT3(20)-Bedroom 03	100	1.9	PASS	35	28	63	1.9%	FAIL	32.0
02-HT3(3)-Bedroom 03	100	1.9	PASS	33	27	60	1.8%	FAIL	31.9
02-HT3(4)-Bedroom 03	100	1.7	PASS	33	28	61	1.9%	FAIL	31.8
02-HT3(5)-Bedroom 03	100	1.8	PASS	35	28	63	1.9%	FAIL	31.9
02-HT3(6)-Bedroom 03	100	1.9	PASS	33	24	57	1.7%	FAIL	32.0
02-HT3(7)-Bedroom 03	100	1.9	PASS	32	24	56	1.7%	FAIL	32.0
02-HT3(8)-Bedroom 03	100	1.9	PASS	35	28	63	1.9%	FAIL	31.9
02-HT3(9)-Bedroom 03	100	1.7	PASS	32	27	59	1.8%	FAIL	31.9
02-HT4(1)-Bedroom 03	100	0.7	PASS	24	23	47	1.4%	FAIL	31.0
02-HT4(2)-Bedroom 03	100	0.7	PASS	24	23	47	1.4%	FAIL	31.0
02-HT4(3)-Bedroom 03	100	0.8	PASS	24	23	47	1.4%	FAIL	31.0
02-HT4(4)-Bedroom 03	100	0.8	PASS	24	23	47	1.4%	FAIL	31.0
02-HT4(5)-Bedroom 03	100	0.8	PASS	24	23	47	1.4%	FAIL	31.0
02-HT4(6)-Bedroom 03	100	0.8	PASS	24	23	47	1.4%	FAIL	31.1
02-HT5(1)-Bedroom 03	100	1	PASS	7	3	10	0.3%	PASS	32.0
02-HT5(1)-Bedroom 04	100	0.6	PASS	7	3	10	0.3%	PASS	31.8
02-HT5(2)-Bedroom 03	100	1	PASS	7	3	10	0.3%	PASS	32.0
02-HT5(2)-Bedroom 04	100	0.6	PASS	7	3	10	0.3%	PASS	31.7
02-HT5(3)-Bedroom 03	100	0.9	PASS	8	3	11	0.3%	PASS	32.0

**Greggs Bakery  
TM 59 Overheating Analysis**



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
02-HT5(3)-Bedroom 04	100	0.5	PASS	7	3	10	0.3%	PASS	31.7
02-HT5(4)-Bedroom 03	100	0.9	PASS	8	3	11	0.3%	PASS	32.0
02-HT5(4)-Bedroom 04	100	0.6	PASS	7	3	10	0.3%	PASS	31.8
02-HT5(5)-Bedroom 03	100	1	PASS	7	3	10	0.3%	PASS	32.0
02-HT5(5)-Bedroom 04	100	0.6	PASS	7	3	10	0.3%	PASS	31.7
02-HT5(6)-Bedroom 03	100	1	PASS	8	3	11	0.3%	PASS	32.0
02-HT5(6)-Bedroom 04	100	0.6	PASS	7	3	10	0.3%	PASS	31.8
02-HT5(7)-Bedroom 03	100	1	PASS	8	3	11	0.3%	PASS	32.0
02-HT5(7)-Bedroom 04	100	0.6	PASS	7	3	10	0.3%	PASS	31.8
02-HT6(1)-Bedroom 02	100	0.9	PASS	8	3	11	0.3%	PASS	32.1
02-HT6(1)-Bedroom 03	100	0.6	PASS	8	3	11	0.3%	PASS	32.0
02-HT6(2)-Bedroom 02	100	1	PASS	8	3	11	0.3%	PASS	32.1
02-HT6(2)-Bedroom 03	100	0.6	PASS	7	3	10	0.3%	PASS	31.9
02-HT6(3)-Bedroom 02	100	1	PASS	8	3	11	0.3%	PASS	32.1
02-HT6(3)-Bedroom 03	100	0.6	PASS	7	3	10	0.3%	PASS	31.9
02-HT6(4)-Bedroom 02	100	1	PASS	8	3	11	0.3%	PASS	32.1
02-HT6(4)-Bedroom 03	100	0.6	PASS	7	3	10	0.3%	PASS	31.9
02-HT6(5)-Bedroom 02	100	1	PASS	8	3	11	0.3%	PASS	32.1
02-HT6(5)-Bedroom 03	100	0.6	PASS	8	3	11	0.3%	PASS	32.0
02-HT7(1)-Bedroom 03	100	1.2	PASS	8	3	11	0.3%	PASS	32.3
02-HT7(1)-Bedroom 04	100	0.7	PASS	8	3	11	0.3%	PASS	32.1
02-HT7(2)-Bedroom 03	100	1.2	PASS	8	3	11	0.3%	PASS	32.4
02-HT7(2)-Bedroom 04	100	0.7	PASS	8	3	11	0.3%	PASS	32.1
02-HT7(3)-Bedroom 03	100	1.2	PASS	8	3	11	0.3%	PASS	32.4
02-HT7(3)-Bedroom 04	100	0.7	PASS	8	3	11	0.3%	PASS	32.1
02-HT7(4)-Bedroom 03	100	1.2	PASS	8	3	11	0.3%	PASS	32.4
02-HT7(4)-Bedroom 04	100	0.7	PASS	8	3	11	0.3%	PASS	32.1
03-F3-1-Bedroom 01	100	1.4	PASS	18	10	28	0.9%	PASS	32.1
03-F3-1-Bedroom 02	100	0.8	PASS	17	9	26	0.8%	PASS	31.7
03-F3-10-Bedroom 01	100	0.8	PASS	17	8	25	0.8%	PASS	31.8
03-F3-11-Bedroom 01	100	0.5	PASS	17	12	29	0.9%	PASS	30.8
03-F3-11-Bedroom 02	100	0.5	PASS	16	10	26	0.8%	PASS	31.1
03-F3-11-Bedroom 03	100	0.4	PASS	14	8	22	0.7%	PASS	30.6
03-F3-2-Bedroom 01	100	0.5	PASS	15	8	23	0.7%	PASS	31.2
03-F3-4-Bedroom 01	100	0.6	PASS	15	8	23	0.7%	PASS	31.3



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Sleeping hours 22:00 - 24:00	Sleeping hours 24:00 - 07:00	Hours above threshold temp. of 26 C	% of time room is above threshold temperature	Overall Results	Predicted Peak Summer Temp. °C
03-F3-3-Bedroom 01	100	0.7	PASS	16	10	26	0.8%	PASS	31.2
03-F3-3-Bedroom 02	100	0.7	PASS	17	11	28	0.9%	PASS	31.3
03-F3-5-Bedroom 01	100	1.2	PASS	12	5	17	0.5%	PASS	32.3
03-F3-5-Bedroom 02	100	1.4	PASS	20	10	30	0.9%	PASS	32.0
03-F3-6-Bedroom 01	100	1.4	PASS	17	8	25	0.8%	PASS	32.1
03-F3-7-Bedroom	100	0.9	PASS	17	8	25	0.8%	PASS	31.9
03-F3-8-Bedroom 01	100	1	PASS	18	9	27	0.8%	PASS	31.9
03-F3-8-Bedroom 02	100	1.1	PASS	19	9	28	0.9%	PASS	32.1
03-F3-9-Bedroom	100	0.7	PASS	17	8	25	0.8%	PASS	31.7
04-F4-1-Bedroom 01	100	0.7	PASS	16	8	24	0.7%	PASS	31.5
04-F4-2-Bedroom 01	100	0.6	PASS	18	12	30	0.9%	PASS	31.3
04-F4-2-Bedroom 02	100	0.8	PASS	19	12	31	0.9%	PASS	31.7
04-F4-3-Bedroom 01	100	0.4	PASS	14	8	22	0.7%	PASS	30.9
04-F4-4-Bedroom 01	100	0.5	PASS	18	12	30	0.9%	PASS	31.2

### Naturally Ventilated Living Room, Dining and Kitchen –DSY1

For living rooms, kitchens and bedrooms: the number of hours during which  $\Delta T$  is greater than or equal to one degree (K) during the period May to September inclusive shall not be more than 3 percent of occupied hours. (CIBSE TM52 Criterion 1: Hours of exceedance).

Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Predicted Peak Summer Temp. °C
00-A0-1 -Living room / Kitchen	100	1.1	PASS	31.7
00-A0-2 -Living room / Kitchen	100	2.8	PASS	32.7
00-E0-1-Living / Dining	100	0.6	PASS	31.0
00-E0-2-Living / Dining	100	0.6	PASS	31.1
00-F0-1-Living room / Kitchen	100	2.6	PASS	33.1
00-F0-2-Living room / Kitchen	100	1.7	PASS	32.6
00-F0-3 -Living room / Kitchen	100	1.2	PASS	31.5
00-F0-4-Living room / Kitchen	100	2.3	PASS	32.5
00-F0-5-Living room / Kitchen	100	2.1	PASS	32.8
00-F0-6-Living room / Kitchen	100	1.4	PASS	32.1
00-F0-7 -Living room / Kitchen	100	1.4	PASS	32.2
00-F0-8 -Living room / Kitchen	100	1.3	PASS	32.0
00-HT2(1)-Kitchen	100	4	FAIL	33.1
00-HT2(1)-Living Room	100	2.4	PASS	32.8
00-HT2(2)-Kitchen	100	3.7	FAIL	32.9
00-HT2(2)-Living Room	100	2.4	PASS	32.8
00-HT2(3)-Kitchen	100	3.5	FAIL	32.7
00-HT2(3)-Living Room	100	2.3	PASS	32.8
00-HT2A-Living Room	100	2	PASS	32.6
00-HT3(1)-Kitchen	100	2.5	PASS	32.4
00-HT3(1)-Living Room	100	2.2	PASS	32.8
00-HT3(2)-Kitchen	100	3	FAIL	32.6
00-HT3(2)-Living Room	100	2.4	PASS	32.8
00-HT3(3)-Kitchen	100	3.1	FAIL	32.7
00-HT3(3)-Living Room	100	2.4	PASS	32.8
00-HT3(4)-Kitchen	100	3.1	FAIL	32.5
00-HT3(4)-Living Room	100	2.3	PASS	32.8
00-HT3(5)-Kitchen	100	3.4	FAIL	32.7
00-HT3(5)-Living Room	100	2.3	PASS	32.8
00-HT3(6)-Kitchen	100	3.4	FAIL	32.8
00-HT3(6)-Living Room	100	2.4	PASS	32.8
00-HT3(7)-Kitchen	100	3.4	FAIL	32.8
00-HT3(7)-Living Room	100	2.4	PASS	32.8



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Predicted Peak Summer Temp. °C
00-HT3(8)-Kitchen	100	2.8	PASS	32.5
00-HT3(8)-Living Room	100	2.4	PASS	32.8
00-HT3(9)-Kitchen	100	2.8	PASS	32.5
00-HT3(9)-Living Room	100	2.3	PASS	32.8
00-HT3(10)-Kitchen	100	3.4	FAIL	32.8
00-HT3(10)-Living Room	100	2.4	PASS	32.9
00-HT3(11)-Kitchen	100	3.4	FAIL	32.8
00-HT3(11)-Living Room	100	2.4	PASS	32.8
00-HT3(12)-Kitchen	100	3.4	FAIL	32.7
00-HT3(12)-Living Room	100	2.4	PASS	32.8
00-HT3(13)-Kitchen	100	3.4	FAIL	32.7
00-HT3(13)-Living Room	100	2.4	PASS	32.8
00-HT3(14)-Kitchen	100	2.9	PASS	32.5
00-HT3(14)-Living Room	100	2.4	PASS	32.8
00-HT3(15)-Kitchen	100	2.8	PASS	32.5
00-HT3(15)-Living Room	100	2.3	PASS	32.8
00-HT3(16)-Kitchen	100	3.4	FAIL	32.7
00-HT3(16)-Living Room	100	2.4	PASS	32.8
00-HT3(17)-Kitchen	100	3.4	FAIL	32.7
00-HT3(17)-Living Room	100	2.4	PASS	32.8
00-HT3(18)-Kitchen	100	3.4	FAIL	32.8
00-HT3(18)-Living Room	100	2.4	PASS	32.9
00-HT3(19)-Kitchen	100	3.4	FAIL	32.8
00-HT3(19)-Living Room	100	2.4	PASS	32.8
00-HT3(20)-Kitchen	100	3	FAIL	32.6
00-HT3(20)-Living Room	100	2.4	PASS	32.8
00-HT4(1)-Living Room	100	1.7	PASS	32.4
00-HT4(2)-Living Room	100	1.7	PASS	32.4
00-HT4(3)-Living Room	100	1.7	PASS	32.4
00-HT4(4)-Living Room	100	1.7	PASS	32.4
00-HT4(5)-Living Room	100	1.7	PASS	32.4
00-HT4(6)-Living Room	100	1.7	PASS	32.4
00-HT5(1)-Kitchen	100	3.8	FAIL	33.3
00-HT5(2)-Kitchen	100	3.8	FAIL	33.3
00-HT5(3)-Kitchen	100	3.6	FAIL	33.3
00-HT5(4)-Kitchen	100	5.1	FAIL	33.4



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Predicted Peak Summer Temp. °C
00-HT5(5)-Kitchen	100	3.8	FAIL	33.3
00-HT5(6)-Kitchen	100	3.8	FAIL	33.3
00-HT5(7)-Kitchen	100	3.5	FAIL	33.2
00-HT6(1)-Kitchen	100	3.6	FAIL	33.2
00-HT6(2)-Kitchen	100	3.8	FAIL	33.2
00-HT6(3)-Kitchen	100	3.8	FAIL	33.2
00-HT6(4)-Kitchen	100	3.6	FAIL	33.2
00-HT6(5)-Kitchen	100	3.6	FAIL	33.3
00-HT7(1)-Kitchen	100	2.9	PASS	32.8
00-HT7(2)-Kitchen	100	3	FAIL	32.8
00-HT7(3)-Kitchen	100	3.1	FAIL	32.8
00-HT7(4)-Kitchen	100	3.5	FAIL	33.1
00-HT8(1)-Living Room	100	3	FAIL	32.9
00-HT8(2)-Living Room	100	3.2	FAIL	32.9
00-HT8(3)-Living Room	100	3.1	FAIL	32.9
00-HT8(4)-Living Room	100	3	FAIL	32.9
01-A2-1-Living room / Kitchen	100	1.7	PASS	32.5
01-A2-2-Living room / Kitchen	100	1.6	PASS	32.4
01-E0-1-Living / Kitchen	100	1.4	PASS	32.1
01-E0-2-Living / Kitchen	100	1.4	PASS	32.1
01-F1-1-Living room / Kitchen	100	2.8	PASS	33.2
01-F1-2-Living room / Kitchen	100	2.2	PASS	32.9
01-F1-3-Living room / Kitchen	100	1.5	PASS	32.2
01-F1-4-Living room / Kitchen	100	1.1	PASS	31.9
01-F1-5-Living room / Kitchen	100	2.1	PASS	32.3
01-F1-6-Living room / Kitchen	100	2.4	PASS	32.5
01-F1-7-Living room / Kitchen	100	2.6	PASS	32.7
01-F1-8-Living room / Kitchen	100	2.4	PASS	32.9
01-F1-9-Living room / Kitchen	100	1.6	PASS	32.5
01-F1-10-Living room / Kitchen	100	1.4	PASS	32.1
01-F1-11-Living room / Kitchen	100	1.6	PASS	32.4
01-F1-12-Living room / Kitchen	100	1.6	PASS	32.4
01-F1-13-Living room / Kitchen	100	1.6	PASS	32.3
01-F1-14-Living room / Kitchen	100	1.5	PASS	32.0
01-HT5(1)-Living Room	100	3	FAIL	32.4
01-HT5(2)-Living Room	100	3.1	FAIL	32.4



Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Predicted Peak Summer Temp. °C
01-HT5(3)-Living Room	100	2.8	PASS	32.3
01-HT5(4)-Living Room	100	2.8	PASS	32.3
01-HT5(5)-Living Room	100	3	FAIL	32.4
01-HT5(6)-Living Room	100	3.1	FAIL	32.4
01-HT5(7)-Living Room	100	3.1	FAIL	32.4
01-HT6(1)-Living Room	100	2.6	PASS	32.2
01-HT6(2)-Living Room	100	2.8	PASS	32.3
01-HT6(3)-Living Room	100	2.9	PASS	32.3
01-HT6(4)-Living Room	100	2.7	PASS	32.2
01-HT6(5)-Living Room	100	2.7	PASS	32.2
01-HT7(1)-Living Room	100	2.9	PASS	32.9
01-HT7(2)-Living Room	100	3.1	FAIL	33.0
01-HT7(3)-Living Room	100	3.1	FAIL	33.0
01-HT7(4)-Living Room	100	3.1	FAIL	33.0
02-A2-1-Living room / Kitchen	100	2	PASS	32.6
02-A2-2-Living room / Kitchen	100	1.9	PASS	32.6
02-E0-1-Living / Kitchen	100	1.2	PASS	31.8
02-E0-2-Living / Kitchen	100	1.3	PASS	31.8
02-F2-1-Living room / Kitchen	100	2.8	PASS	33.2
02-F2-2-Living room / Kitchen	100	2.3	PASS	33.0
02-F2-3-Living room / Kitchen	100	1.8	PASS	32.5
02-F2-4-Living room / Kitchen	100	1.3	PASS	32.2
02-F2-5-Living room / Kitchen	100	2.2	PASS	32.4
02-F2-6-Living room / Kitchen	100	2.5	PASS	32.7
02-F2-7-Living room / Kitchen	100	2.6	PASS	32.7
02-F2-8-Living room / Kitchen	100	2.5	PASS	33.1
02-F2-9-Living room / Kitchen	100	1.6	PASS	32.5
02-F2-10-Living room / Kitchen	100	1.6	PASS	32.3
02-F2-11-Living room / Kitchen	100	1.8	PASS	32.5
02-F2-12-Living room / Kitchen	100	1.8	PASS	32.5
02-F2-13-Living room / Kitchen	100	1.7	PASS	32.4
02-F2-14-Living room / Kitchen	100	2.4	PASS	32.4
02-F2-15- Living/ Kitchen	100	1.6	PASS	32.3
03-F3-1-Living room / Kitchen	100	2.6	PASS	33.2
03-F3-2-Living room / Kitchen	100	2.3	PASS	32.9
03-F3-3-Living room / Kitchen	100	1.3	PASS	31.9





Location	Occupied days (%)	Criteria 1 (%Hrs Top-Tmax>=1K)	Criteria 1 Status	Predicted Peak Summer Temp. °C
03-F3-4-Living room / Kitchen	100	1.3	PASS	31.9
03-F3-5-Living room / Kitchen	100	2	PASS	32.2
03-F3-6-Living room / Kitchen	100	2.5	PASS	32.5
03-F3-7-Living room / Kitchen	100	2.6	PASS	33.1
03-F3-8-Living room / Kitchen	100	1.6	PASS	32.5
03-F3-9-Living / Kitchen	100	1.9	PASS	32.5
03-F3-10-Living room / Kitchen	100	2.4	PASS	32.7
03-F3-11-Living / Kitchen	100	0.8	PASS	31.3
04-F4-1-Living room / Kitchen	100	2.3	PASS	32.8
04-F4-2-Living room / Kitchen	100	1.3	PASS	32.2
04-F4-3-Living room / Kitchen	100	1.2	PASS	31.8
04-F4-4-Living room / Kitchen	100	1.3	PASS	32.0