Thermal Comfort Study – TM 59 Analysis

For

Proposed Apartments (Blocks A-D)

At

Galway Port LRD

For

The Land Development Agency

Date of Issue: 28/07/2025 Version: 0

Document History

Version No.	Description	Prepared By	Reviewed By	Date
0	Issued for Planning	KT	MOD/GW	28/07/2025

Contents

Executive Summary

In July 2025, Axiseng carried out a CIBSE TM59 overheating study all apartments in the proposed residential development at Galway Port, Co. Galway. This analysis involved building a thermal model and simulating summer weather conditions during the months of May – September.

CIBSE TM59 establishes criteria for evaluating overheating in residential buildings. Criteria A of this regulation recommends that naturally ventilated living spaces do not exceed the maximum comfortable temperature by more than 1 degree Celsius for more than 3% of occupied hours. Criteria B of this regulation recommends that bedrooms do not exceed 26°C at night for more than 32 hours between May and September.

CIBSE TM59 requires that buildings be evaluated using a Design Summer Year weather file for the 2020s and suggests also discussing a more extreme weather scenario. The future weather file predicts a warmer climate in the 2050s. The future performance of the development is not representative of current performance; furthermore, CIBSE TM59 does not require these results to pass any metrics. Based on the analysis, the development meets the performance criteria set out within CIBSE TM59, based on a current weather file for Manchester, which is a typical location for analysis in Dublin.

For EU Taxonomy requirements, results shall be provided based on the Manchester 2050s weather file, predicting the development's future performance. These results are for information only and it is not a requirement for the rooms to pass this assessment.

All apartments across the proposed blocks (A-D) were analysed. The results of the CIBSE TM59 analysis are summarised for each of the proposed blocks in the table below. These results were calculated using the Manchester 2020s weather file, as detailed within the report.

Manchester 2020s Weather File			
	#Passing	#Total	%Passing
Block A – Bedrooms	128	128	100
Block A – Living/Kitchen	81	81	
Block B – Bedrooms	164	164	100
Block B – Living/Kitchen	105	105	
Block C – Bedrooms	100	100	100
Block C – Living/Kitchen	66	66	
Block D – Bedrooms	163	163	100
Block D – Living/Kitchen	104	104	

Based on this analysis of the apartments, the development meets the performance criteria set out within CIBSE TM59.

In line with CIBSE TM59, where communal heating systems are used, the associated corridors should also be assessed for overheating risks. Due to one of the options to serve the apartments coming from a centralised group heating system, an analysis has been completed on the corridors to assess the potential for overheating where heating pipework is running through the corridor ceiling voids.

For communal corridors, if an operative temperature of 28°C is exceeded for more than 3% of total annual hours, this should be flagged as a significant risk of overheating within the development, there is no requirement to reduce this risk, unless the Client wishes to avoid it.

Results have shown that where corridor doors are held open, and corridor AOVs are open to 50% when the internal temperature exceeds 22°C, the percentage of hours each corridor is over 28°C is under the 3% threshold noted in CIBSE TM59.

Manchester 2020s Weather File – Corridors			
	#Passing	#Total	%Passing
Block A – Corridors	25	25	100
Block B – Corridors	30	30	100
Block C – Corridors	18	18	100
Block D – Corridors	39	39	100

1. Introduction

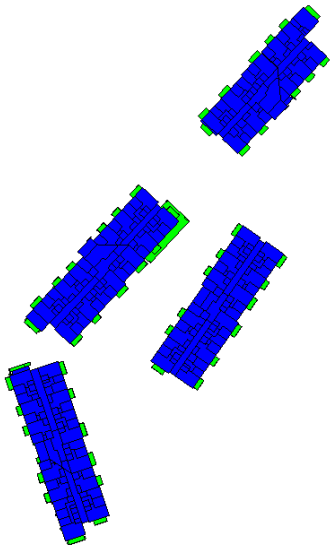
The Land Development Agency intends to apply to Galway City Council for permission for a 'Large-Scale Residential Development' (LRD) at a site of 1.621 Ha in Galway Port at Dock Road and Lough Atalia Road, Galway City, and extending to include parts of both roads for road infrastructure works and water services infrastructure works.

The proposed development principally consists of: the demolition of the existing office / bus depot building (370.2 sq m) and ancillary building (26 sq m); the partial demolition of the existing ESB sub-station (67.4 sq m); the demolition of existing boundary walls at the south-west and north-west; and the construction of a mixed-use development.

The proposed mixed-use development primarily comprises: 356 No. residential apartments (172 No. 1-bed, 169 No. 2-bed and 15 No. 3-bed); crèche (255.9 sq m); 2 No. café/restaurant units (totalling 428.4 sq m) and 1 No. retail unit (156.0 sq m). The development has a total floor area of 32,096.0 sq m and is primarily proposed in 4 No. blocks (identified as A–D) that generally range in height from 6 No. to 13 No. storeys.

The proposed development also includes: new internal street and pedestrian network, including a one-way vehicular route at the north-western side of the site and new junctions with Dock Road at the south-west and with the access road from Lough Atalia at the north-west; upgrades to Lough Atalia Road and the access road from it at the north-west of the site, including the provision of a new toucan pedestrian/cycle crossing at Lough Atalia Road; upgrades to the footpath and road interface with Dock Road to the south-west; 37 No. car parking spaces; 1 No. set-down/delivery bay; 748 No. cycle parking spaces; hard and soft landscaping, including public open spaces and communal amenity spaces; private amenity spaces as balconies and terraces facing all directions; boundary treatments; public lightng; bin stores; plant rooms; rooftop lift overruns; rooftop telecommunications and plant infrastructure and enclosure at Block C; recladding of the existing sub-station and pumping station; and all associated works above and below ground.

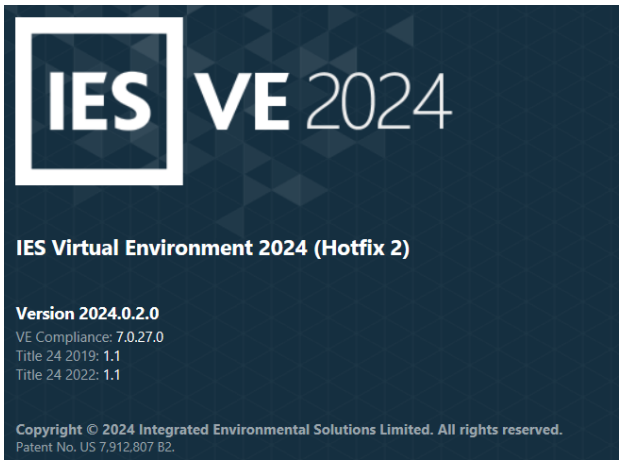
Axiseng carried out a CIBSE TM59 overheating study on the full development of 365 apartments within the proposed residential development at Galway Port for The Land Development Agency. This study involved building a thermal model of the proposed development and running analysis on internal temperature and comfort levels. The analysis included shading due to balconies and accounted for dynamic solar gain as well as outdoor weather conditions for the months of May through September. Corridor spaces have also been included in the analysis.



Birds Eye View of full site model orientated to due North.

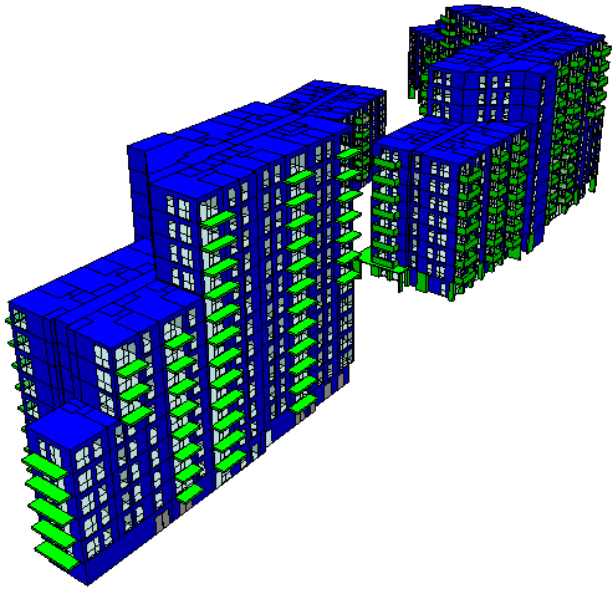
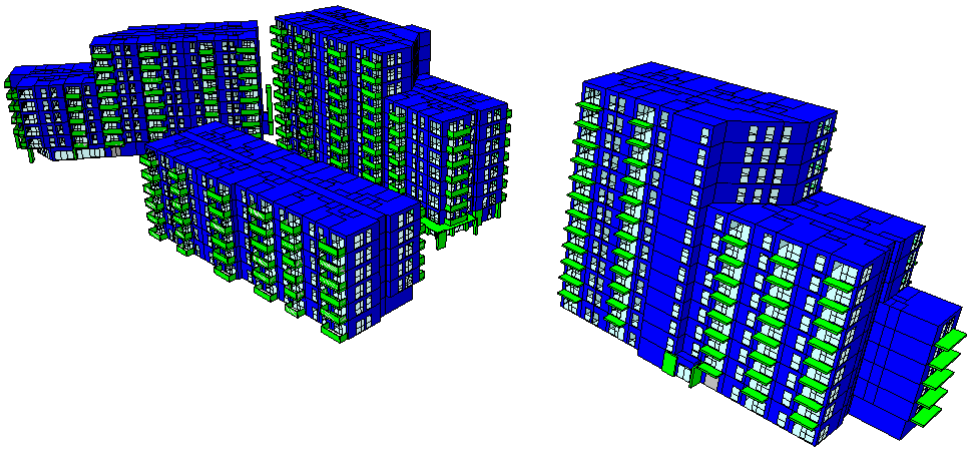
1.1 Simulation Software Used

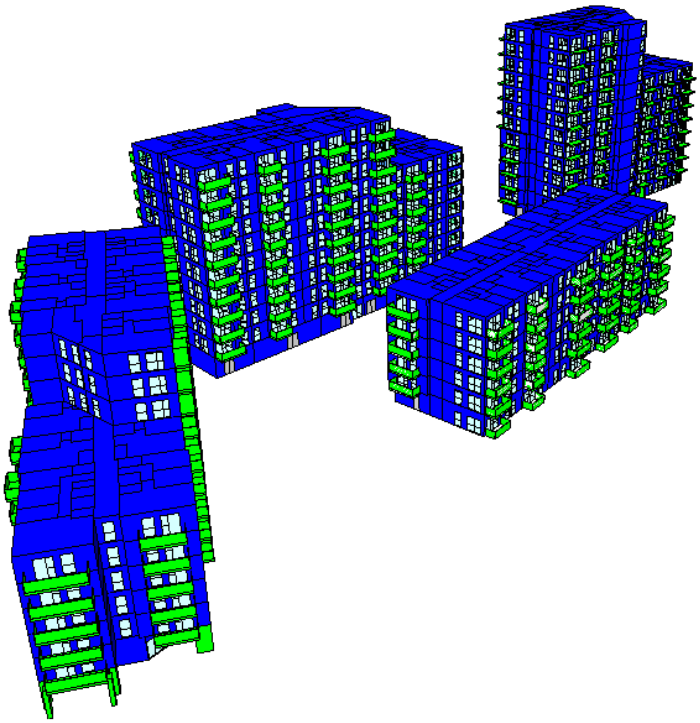
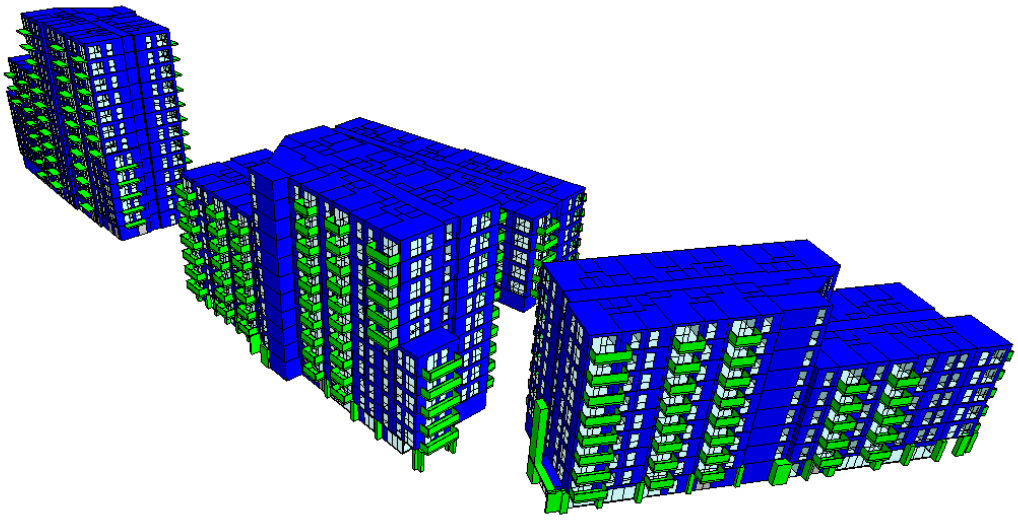
The software used to demonstrate compliance for this credit was the Virtual Environment version 2024.0.2.0 by Integrated Environmental Solutions. The module within the software toolkit used was Apache simulation. This software was selected in accordance with CIBSE AM11 (Building Energy and Environmental Modelling) as it provides full dynamic thermal analysis using real weather data.



2. Model Images

Software images taken from the IES Virtual Environment Building Performance Simulation model that was used to carry out the Thermal Comfort Analysis.

IES VE Simulation Full Model	
Northern View	
Eastern View	

Southern View	
Western View	

3. Overheating Criteria

3.1 CIBSE TM59 – Assessment of Overheating Risk in Homes

CIBSE TM59 establishes two criteria to evaluate the overheating risk for naturally ventilated domestic buildings, shown in the table below.

CIBSE TM59 Guidelines		
TM59 Criteria	Applicable Rooms	Criteria Details
A	Living rooms, kitchens, and bedrooms	"The number of hours during which DT 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." $\Delta T = T_{operative} - T_{maximum}$ $T_{operative}$: the actual operative temperature in the room $T_{maximum}$: the maximum acceptable temperature Note: See CIBSE TM52 Criteria 1 for further clarification
B	Bedrooms only	"The operative temperature in the bedroom from 10 pm to 7 am shall not exceed 26 °C for more than 1% of annual hours. (Note: 1% of the annual hours between 10 pm and 7am is 32 hours, so 33 or more hours above 26°C will be recorded as a failure)"
Corridors	Corridors	For communal corridors, if an operative temperature of 28°C is exceeded for more than 3% of total annual hours, this should be flagged as a significant risk of overheating within the development.

3.2 Report Limitations

CIBSE TM59 acknowledges that overheating risk in homes is a serious concern, especially given the reality of increasing summer temperatures in the coming decades. The TM59 methodology is a prescriptive dynamic thermal modelling approach which seeks to identify rooms in apartments that are at risk of overheating. By necessity, many assumptions must be made with regard to occupant behaviour and internal gains. Consequently, the results of this analysis should be interpreted as a risk assessment, rather than an accurate prediction of internal environment. Actual performance may vary depending on differences in occupant behaviour, as-built fabric performance, and final HVAC system details.

4. Software Inputs

4.1 Fabric Performance

The project Architect has provided indicative details of proposed fabric constructions. These have been used to estimate the thermal mass for modelling purposes. As design progresses, the thermal mass figures should be updated, as necessary.

Thermal Fabric Elements	LDA Galway Target U-Value & Thermal Mass	TGD Part L Max U Value iSBEMie Thermal Mass
External Wall	U = 0.18 W/m^{2}K Km = 118.2 Kj/m^{2}K	U = 0.21 W/m^{2}K Km = 129 kJ/m^2.K
Window & Doors (>50% Glazed Area)	U = 1.2 W/m^{2}K G = 0.40/LT = 0.71	U = 1.6 W/m^{2}K G = 0.68 /VLT = 0.71
Spandrel Panels & Solid Doors	U = 1.2 W/m^{2}K G = 0/LT = 0	U = 1.6 W/m^{2}K Km = 4 kJ/m^2.K
Ground/ Exposed Floor	U = 0.15 W/m^{2}K Km = 82.41 Kj/m^{2}K	U = 0.21 W/m^{2}K Km = 36 kJ/m^2.K
Roof	U = 0.15 W/m^{2}K Km = 98.75 Kj/m^{2}K	U = 0.2 W/m^{2}K Km = 13.35 kJ/m^2.K
Compartmental Internal Partition to corridors etc.	U = 1.03 W/m^{2}K Km = 154.9 Kj/m^{2}K	-
Internal Stud Partition within apartments	U = 1.45 W/m^{2}K Km = 8.75 Kj/m^{2}K	-
Insulated Internal Partition to unheated zones/Amenity Spaces	U = 0.2 W/m^{2}K Km = 8.75 Kj/m^{2}K	-
Internal Ceiling/Floor	U = 0.94 W/m^{2}K Km = 89.41 Kj/m^{2}K	-
Insulated Internal Ceiling/Floor to Ground Floor Amenity Spaces/Plant	U = 0.2 W/m^{2}K Km = 8.75 Kj/m^{2}K	-
Notes: There is no maximum or minimum required U-Value for internal walls or floors outlined in TGD Part L Table 1. iSBEMie provides default values based on a generic construction type.		

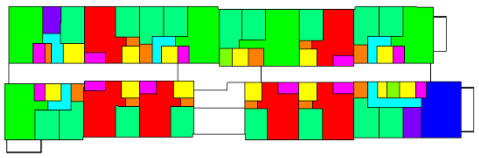
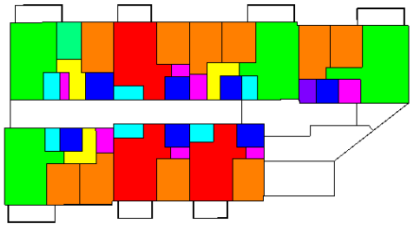
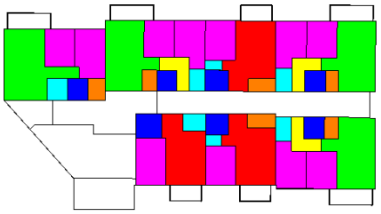
4.2 Air Tightness and Infiltration

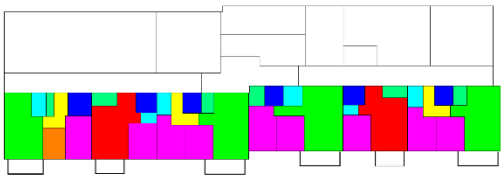
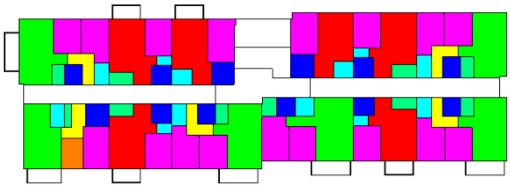
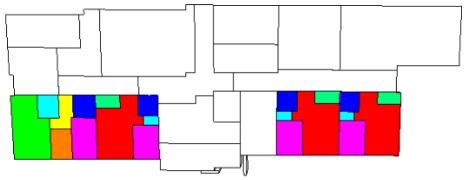
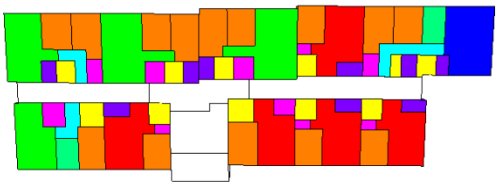
The target air permeability performance for the development is 3m^3 / hr / m^2, when tested for an internal to external pressure difference of 50 Pascals. For the purpose of the overheating assessment this equates to 0.15 ACH of infiltration.

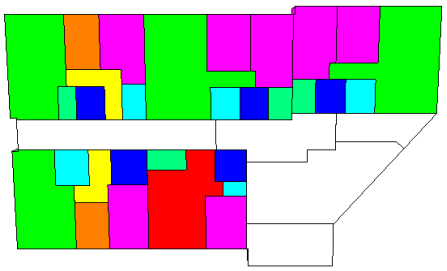
Air Tightness	Performance
Air Permeability	3m^3 / hr / m^2 @ 50 Pa

4.3 Room Thermal Templates

For this analysis, all apartments in the proposed development have been analysed. Typical model floorplans for each block are shown below to demonstrate which TM59 template has been assigned to each living space.

<table>
<tr><th colspan="3">Block A</th></tr>
<tr><td>Typical Lower Floor</td><td>  </td><td>Thermal Template
TM59 - 1 Bedroom - Living / Kitchen
TM59 - 2 Bedroom - Living / Kitchen
TM59 - 3 Bedroom - Living / Kitchen
TM59 - Bathroom
TM59 - Circulation - in flats
TM59 - Cupboards
TM59 - Cupboards with HIU
TM59 - Double Bedroom
TM59 - Single Bedroom
TM59 - Store</td></tr>
<tr><td>Typical Upper Floor</td><td>  </td><td>Thermal Template
TM59 - 1 Bedroom - Living / Kitchen
TM59 - 2 Bedroom - Living / Kitchen
TM59 - Bathroom
TM59 - Circulation - in flats
TM59 - Cupboards
TM59 - Cupboards with HIU
TM59 - Double Bedroom
TM59 - Single Bedroom
TM59 - Store</td></tr>
<tr><th colspan="3">Block B</th></tr>
<tr><td>Typical Lower Floor</td><td>  </td><td>Thermal Template
TM59 - 1 Bedroom - Living / Kitchen
TM59 - 2 Bedroom - Living / Kitchen
TM59 - 3 Bedroom - Living / Kitchen
TM59 - Bathroom
TM59 - Circulation - in flats
TM59 - Cupboards with HIU
TM59 - Double Bedroom
TM59 - Single Bedroom
TM59 - Store</td></tr>
<tr><td>Typical Upper Floor</td><td>  </td><td>Thermal Template
TM59 - 1 Bedroom - Living / Kitchen
TM59 - 2 Bedroom - Living / Kitchen
TM59 - Bathroom
TM59 - Circulation - in flats
TM59 - Cupboards with HIU
TM59 - Double Bedroom
TM59 - Store</td></tr>
</table>

Block C		
Ground Floor		
Typical Floor		
Block D		
Ground Floor		
Typical Lower Floor		

Typical Upper Floor		Thermal Template TM59 - 1 Bedroom - Living / Kitchen TM59 - 2 Bedroom - Living / Kitchen TM59 - Bathroom TM59 - Circulation - in flats TM59 - Cupboards with HIU TM59 - Double Bedroom TM59 - Single Bedroom TM59 - Store

4.4 HVAC Systems

For this analysis, the spaces are assumed to have no mechanical heating, cooling, or ventilation during the months of May through September. While the apartments will be installed with a mechanical ventilation unit, that will not be included in this study. TM59 requires that homes be modelled as 100% naturally ventilated unless they have restricted window access.

The nominal air speed is set to 0.10m/s as per the assumptions outlined in CIBSE TM59.

4.5 CIBSE TM59 Building Category

Per CIBSE TM59 requirements, the proposed building is considered to be Category II, as it is a new construction and is not intended primarily for vulnerable residents.

Building Category Modelled	Description
Category II – All Spaces	Normal expectation (for new buildings and renovations)

4.6 Internal Casual Heat Gains

In line with CIBSE TM59, all of the bedrooms and living rooms in the proposed blocks have been assigned internal heat gains according to their space type, shown in the table below.

CIBSE TM 59 Internal Heat Gains

Table 2 Occupancy and equipment gain descriptions

Unit/ room type	Occupancy	Equipment load
1-bedroom apartment: living room/kitchen	1 person from 9 am to 10 pm; room is unoccupied for the rest of the day	Peak load of 450 W from 6 pm to 8 pm 200 W from 8 pm to 10 pm 110 W from 9 am to 6 pm and from 10 pm to 12 pm Base load of 85 W for the rest of the day
2-bedroom apartment: living room/kitchen	2 people from 9 am to 10 pm; room is unoccupied for the rest of the day	Peak load of 450 W from 6 pm to 8 pm 200 W from 8 pm to 10 pm 110 W from 9 am to 6 pm and from 10 pm to 12 pm Base load of 85 W for the rest of the day
3-bedroom apartment: living room/kitchen	3 people from 9 am to 10 pm; room is unoccupied for the rest of the day	Peak load of 450 W from 6 pm to 8 pm 200W from 8 pm to 10 pm 110 W from 9 am to 6 pm and from 10 pm to 12 pm Base load of 85 W for the rest of the day
Double bedroom	2 people at 70% gains from 11 pm to 8 am 2 people at full gains from 8 am to 9 am and from 10 pm to 11 pm 1 person at full gains in the bedroom from 9 am to 10 pm	Peak load of 80 W from 8 am to 11 pm Base load of 10 W during the sleeping hours

5.2 Lighting

For the purposes of the assessment, lighting energy is assumed to be proportional to floor area, and lighting loads are measured in W/m². From 6 pm to 11 pm, 2 W/m² should be assumed as the default for an efficient new-build home. This assumes that good daylight levels are available (also noting that only May to September is assessed within CIBSE TM52).

Figure 1 Heat gain profile

Number of people	Description	Peak load (W) Sensible	Peak load (W) Latent	Period 00–01	01–02	02–03	03–04	04–05	05–06	06–07	07–08	08–09	09–10	10–11	11–12	12–13	13–14	14–15	15–16	16–17	17–18	18–19	19–20	20–21	21–22	22–23	23–24
				Hour ending 1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00	20.00	21.00	22.00	23.00	24.00
1	Single bedroom occupancy	75	55	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7
2	Double bedroom occupancy	150	110	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.7
2	Studio occupancy	150	110	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7
1	1-bedroom living/kitchen occupancy	75	55	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
1	1-bedroom living occupancy	75	55	0	0	0	0	0	0	0	0	0	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0	0
1	1-bedroom kitchen occupancy	75	55	0	0	0	0	0	0	0	0	0	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0	0
2	2-bedroom living/kitchen occupancy	150	110	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
2	2-bedroom living occupancy	150	110	0	0	0	0	0	0	0	0	0	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0	0
2	2-bedroom kitchen occupancy	150	110	0	0	0	0	0	0	0	0	0	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0	0
3	3-bedroom living/kitchen occupancy	225	165	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
3	3-bedroom living occupancy	225	165	0	0	0	0	0	0	0	0	0	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0	0
3	3-bedroom kitchen occupancy	225	165	0	0	0	0	0	0	0	0	0	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0	0
	Single bedroom equipment	80		0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.13
	Double bedroom equipment	80		0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.13
	Studio equipment	450		0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	1	1	0.44	0.44	0.24	0.24
	Living/kitchen equipment	450		0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	1	1	0.44	0.44	0.24	0.24
	Living equipment	150		0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	1	1	1	1	0.4	0.4
	Kitchen equipment	300		0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	1	1	0.17	0.17	0.17	0.17
	Lighting profile	2 (W/m2)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0

Gains applied to cupboards with Heat Interface Units are included as the default of 78.0 W

4.7 Internal Blinds

For this analysis, though internal blinds are proposed for the development, they were not required for compliance with the CIBSE TM59 criteria.

4.8 Communal Corridors

In line with CIBSE TM59, where communal heating systems are used, the associated corridors should also be assessed for overheating risks. Due to the proposal to serve the apartments coming from a centralised group heating system, an analysis has been completed on the corridors to assess the potential for overheating where heating pipework is running through the corridor ceiling voids.

Results have shown that where corridor doors are held open, and corridor external AOVs are open to 50% when the internal temperature exceeds 22°C, the percentage of hours each corridor is over 28°C is under the 3% threshold noted in CIBSE TM59.

Manchester 2020s Weather File – Corridors			
	#within 3% threshold	#Total	%within threshold
Block A – Corridors	25	25	100
Block B – Corridors	30	30	100
Block C – Corridors	18	18	100
Block D – Corridors	39	39	100

A detailed analysis will need to be undertaken during detailed design stage to ensure that any expected heat gains within the corridor spaces can be overcome by the window openings in the communal corridors as results suggest above.

It is recommended that pipework within communal corridors be insulated with high performing insulation to avoid excessive heat gains in the corridors.

5. Model Parameters

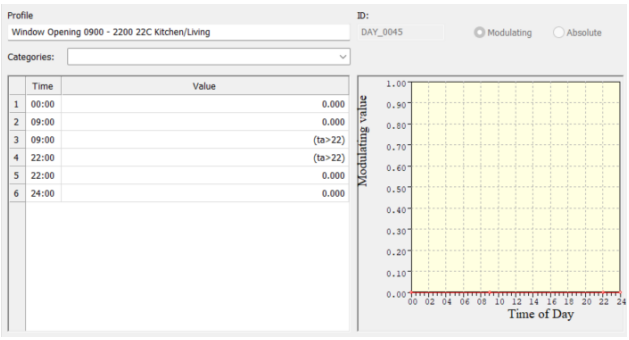
5.1 Natural Ventilation Openings

All spaces were assumed to be naturally ventilated with openable doors and windows as indicated by the architectural drawings. From discussions with the design team, it was confirmed that all windows in bedrooms and living/kitchen can be fully opened, if required, by the occupants, except on the ground floor, where window openings have been restricted to 15° angle for security reasons.

TM59 states that windows should be modelled as open if the room temperature exceed 22°C. If additional security and rain protection is accounted for in the design, then the opening hours can be extended throughout the night. Where security may be a risk, ie on the ground floor, windows have been modelled with a restrictor in place, in line with the below inputs.

Opening Type	Degree of Opening	Opening Schedule	Notes
Window Type 1: Kitchen/Living L01+	80° angle	9am - 10pm, if internal temperature exceeds 22ºC	Assumed occupants close all living room windows while sleeping
Window Type 2: Bedroom L01+	80° angle	24/7, if internal temperature exceeds 22ºC	-
Window Type 3: Corridor AOV Louvre	50% Free Area	24/7, if internal temperature exceeds 22ºC	-
Window Type 4: Small Kitchen/Living L01+	80° angle	9am - 10pm, if internal temperature exceeds 22ºC	Assumed occupants close all living room windows while sleeping
Window Type 5: Bedroom Ground	15° angle	24/7, if internal temperature exceeds 22ºC	-
Window Type 6: Kitchen/Living Ground	15° angle	9am - 10pm, if internal temperature exceeds 22ºC	Assumed occupants close all living room windows while sleeping
Window Type 7: Small Kitchen/Living Ground	15° angle	9am - 10pm, if internal temperature exceeds 22ºC	Assumed occupants close all living room windows while sleeping
Window Type 8: Corridor Windows	20° angle	24/7, if internal temperature exceeds 22ºC	-
Door 1: Internal Doors within apartments	90° angle	9am - 10pm	Assumed occupants close all doors while sleeping
Door 2: Glazed Balcony Door	90° angle	9am - 10pm, if internal temperature exceeds 22ºC	Assumed occupants close all doors while sleeping
Door 3: Internal communal corridor doors	90° angle	Open 24/7	Assumed to be held open with a hold open device to allow ventilation

Axiseng has assumed window opening profiles in the model in order to comply with TM 59 comfort requirements. Examples of the windows opening profiles are included below.

<table>
<tr>
<td> 
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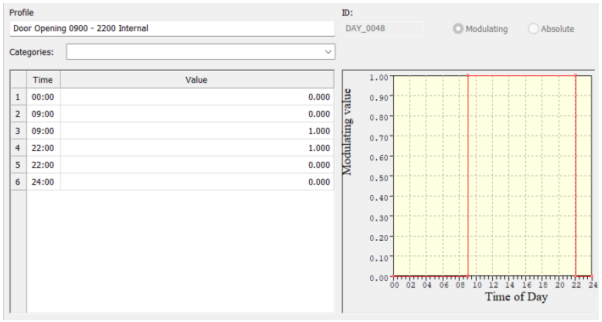
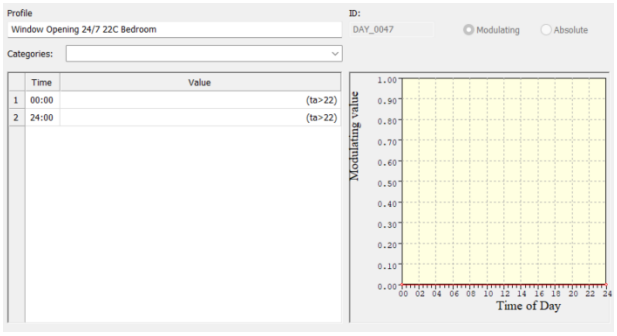
<td> 
</td>
</tr>
<tr>
<td>Living/Kitchen Openings</td>
<td>Internal Door Openings</td>
</tr>
<tr>
<td> 
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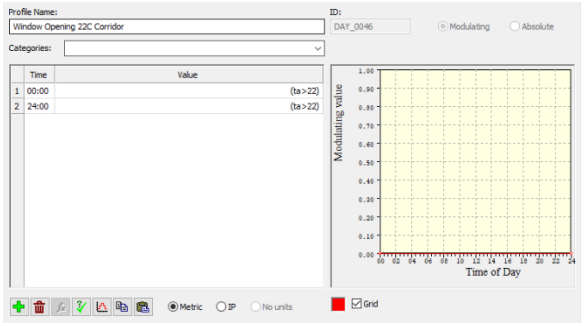
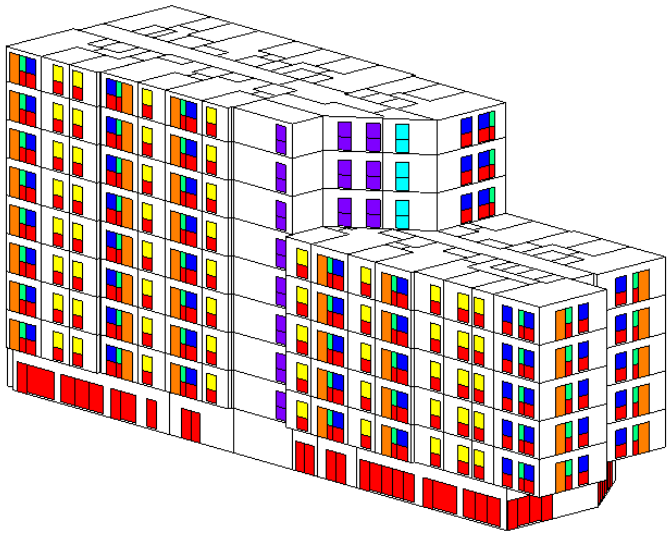
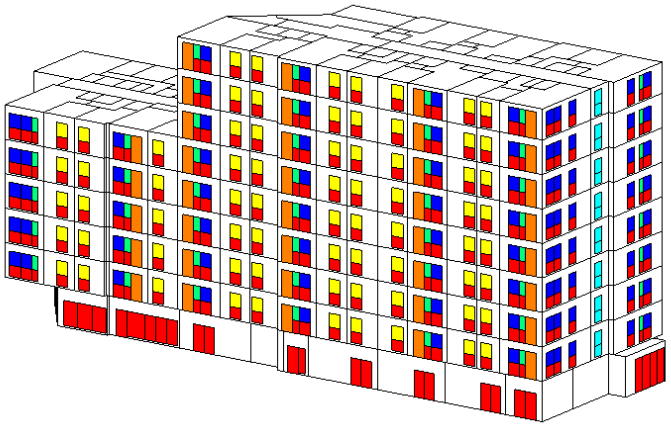
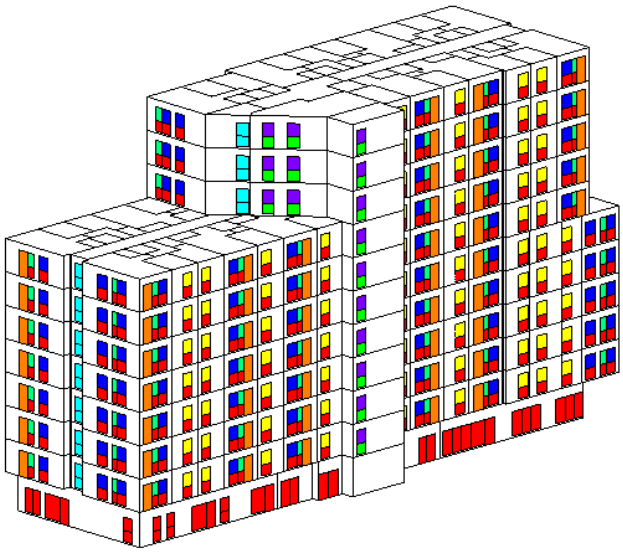
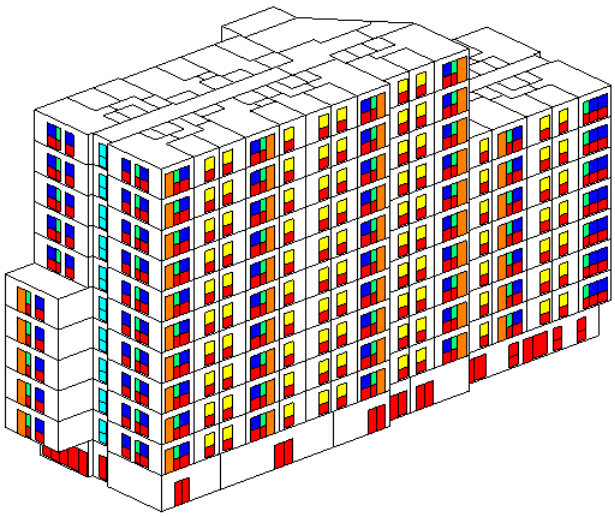
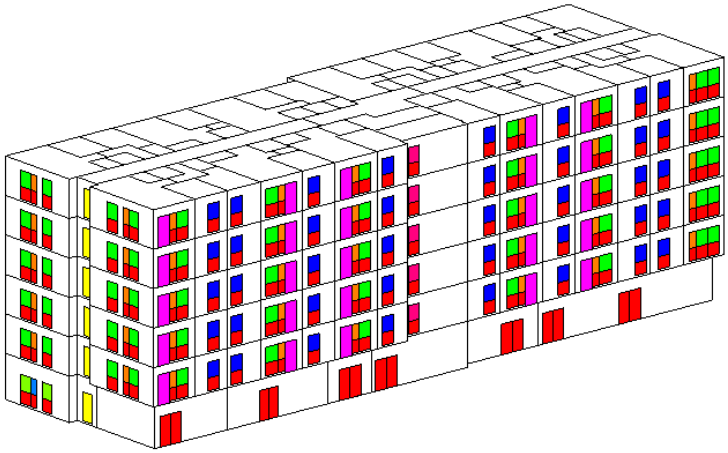
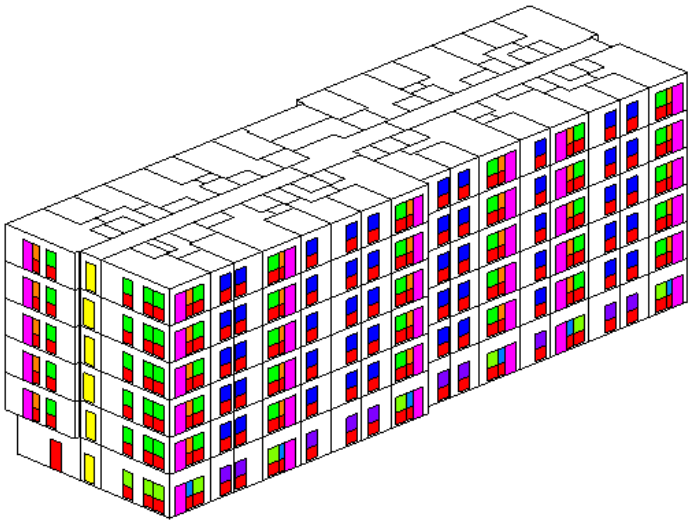
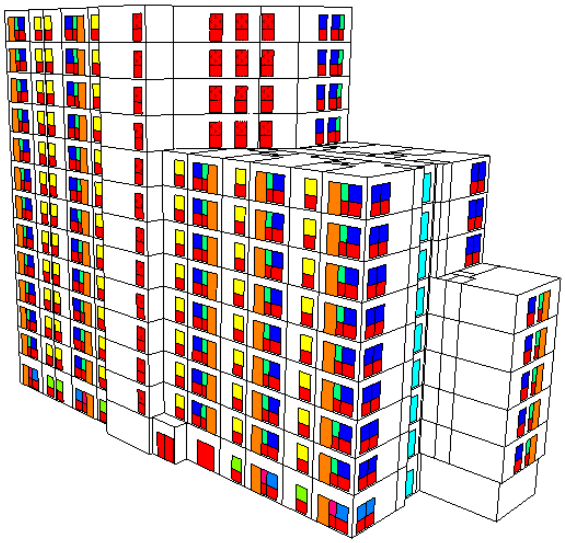
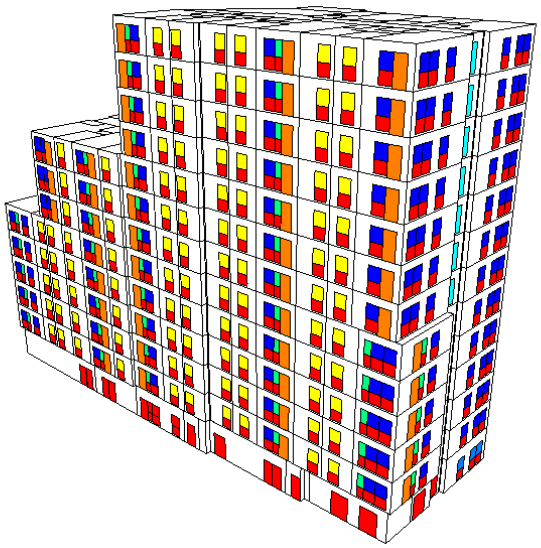
<td> 
</td>
</tr>
<tr>
<td>Bedroom Window Openings</td>
<td>Corridor AOV/Window Openings</td>
</tr>
</table>

The below table provides a visual representation of the window openings throughout the development.

Natural Ventilation Macroflo Opening Inputs	
Block A	
Legend	
Southeastern View	
Northwestern View	

Block B	
Legend	XTRN0000 (Always Closed) XTRN0001 (Always Closed) XTRN0002 (Window Type 1: Kitchen/Living) XTRN0003 (Window Type 2: Bedroom) XTRN0004 (Window Type 3: Corridor Louvre) XTRN0005 (Door 1: Internal Doors in Apartments) XTRN0006 (Door 2: Glazed Balcony Door) XTRN0007 (Window Type 4: Kitchen/Living Small Window) XTRN0008 (Door 3: Internal Doors in Communal Corridors) XTRN0012 (Window Type 8: Corridor Window)
Northern View	
Southern View	

Block C	
Legend	XTRN0000 (Always Closed) XTRN0002 (Window Type 1: Kitchen/Living) XTRN0011 (Window Type 2: Bedroom) XTRN0012 (Window Type 3: Corridor Louvre) XTRN0013 (Door 1: Internal Doors in Apartments) XTRN0014 (Door 2: Glazed Balcony Door) XTRN0015 (Window Type 4: Kitchen/Living Small Window) XTRN0016 (Door 3: Internal Doors in Communal Corridors) XTRN0017 (Window Type 5: Bedroom GF) XTRN0018 (Window Type 6: Kitchen/Living GF) XTRN0019 (Window Type 7: Kitchen/Living Small Window GF) XTRN0020 (Window Type 8: Corridor Window)
Northern View	
Southern View	

Block D	
Legend	XTRN0001 (Always Closed) XTRN0003 (Window Type 1: Kitchen/Living) XTRN0011 (Window Type 2: Bedroom) XTRN0012 (Window Type 3: Corridor Louvre) XTRN0013 (Door 1: Internal Doors in Apartments) XTRN0014 (Door 2: Glazed Balcony Door) XTRN0015 (Window Type 4: Kitchen/Living Small Window) XTRN0016 (Door 3: Internal Doors in Communal Corridors) XTRN0017 (Window Type 5: Bedroom GF) XTRN0018 (Window Type 6: Kitchen/Living GF) XTRN0019 (Window Type 7: Kitchen/Living Small Window GF) XTRN0020 (Window Type 8: Corridor Window)
Eastern View	
Western View	

5.2 Weather File – Project Climate Change Environment

Dynamic thermal simulation software packages currently provide the facility for building designs to be assessed under external climatic conditions specific to geographic location. CIBSE TM59 requires that buildings be evaluated using a Design Summer Year (DSY1) file for the 2020s and suggests also evaluating more extreme weather files. This is also a requirement for EU Taxonomy.

CIBSE TM 59 Guidance	(11) The weather file used for the methodology should be the DSY1 (design summer year) file most appropriate for the site location for the 2020s, high emissions, 50% percentile scenario; the guidance given in section 3.2 should be followed. The assessor must discuss with the client any need to assess overheating risk under heatwave or future climate change conditions using more extreme DSYs (i.e. DSY2 or DSY3) or future weather years. The same overheating tests described herein can be used.
EU Taxonomy	(b) for all other activities, the assessment is performed using the highest available resolution, state-of-the-art climate projections across the existing range of future scenarios[320] consistent with the expected lifetime of the activity, including, at least, 10 to 30 year climate projections scenarios for major investments.

CIBSE has developed a series of probabilistic weather files for 14 locations in the UK, which can be used to predict future warmer climate weather data. These files are limited to 14 locations in the UK, so the Manchester temperature profile was selected as it currently has the climate that is most like Dublin's. This selection was made according to precedence by SEAI.

6. Results

To comply with CIBSE TM59 all residential spaces in the development need to pass the following criteria:

- Criteria A - For living rooms, kitchens, and bedrooms: the number of hours where the difference between the operative temperature and maximum acceptable temperature is greater than or equal to one degree (K) shall not be more than 3 per cent of occupied hours during the summer months.
- Criteria B - For bedrooms only: to guarantee comfort during the sleeping hours the operative temperature in the bedroom from 10 pm to 7 am shall not exceed 26°C for more than 1% of annual hours (Note: 1% of the annual hours between 10 pm to 7 am is 32 hours)

For communal corridors, if an operative temperature of 28°C is exceeded for more than 3% of total annual hours, this should be flagged as a significant risk of overheating within the development.

6.1 Summary Results Table – Manchester 2020s Weather File

The following tables indicate the number of spaces passing CIBSE TM59's criteria. These results were calculated using the Manchester 2020s weather file. As can be seen, all spaces with window openings as detailed in Section 5 are passing the TM59 criteria using the Manchester 2020s weather file. Full results can be found in Appendices A and C.

Manchester 2020s Weather File			
	#Passing	#Total	%Passing
Block A – Bedrooms	128	128	100
Block A – Living/Kitchen	81	81	
Block B – Bedrooms	164	164	100
Block B – Living/Kitchen	105	105	
Block C – Bedrooms	100	100	100
Block C – Living/Kitchen	66	66	
Block D – Bedrooms	163	163	100
Block D – Living/Kitchen	104	104	

6.2 Summary Results Table – Manchester 2050s Weather File

CIBSE TM59 suggests that buildings should be evaluated using a Design Summer Year (DSY1) file for the 2020s and suggests also evaluating more extreme weather files where applicable. For EU Taxonomy the assessment should be performed using the highest available resolution, state of the art climate projections across the existing range of future scenarios consistent with the expected lifespan of the activity, including, at least, 10-to-30-year climate projections for major investments. This includes the Manchester 2050s results. Results for future scenarios are for information only and it is not required to be passing for compliance purposes.

The table below is for reference only. It summarises the number of spaces passing, based on the Manchester 2050 weather file. Full results can be found in Appendices B and D.

Manchester 2050s Weather File			
	#Passing	#Total	%Passing
Block A – Bedrooms	124	128	94
Block A – Living/Kitchen	73	81	
Block B – Bedrooms	164	164	100
Block B – Living/Kitchen	105	105	
Block C – Bedrooms	90	100	93
Block C – Living/Kitchen	65	66	
Block D – Bedrooms	158	163	98
Block D – Living/Kitchen	103	104	

6.3 Summary Results Table – Communal Corridors Manchester 2020s Weather File

In line with CIBSE TM59, where communal heating systems are used, the associated corridors should also be assessed for overheating risks. Due to one of the options to serve the apartments coming from a centralised group heating system, an analysis has been completed on the corridors to assess the potential for overheating where heating pipework is running through the corridor ceiling voids.

Results have shown that where corridor doors are held open, and corridor louvres are open to 50% free area when the internal temperature exceeds 22°C, the percentage of hours each corridor is over 28°C is under the 3% threshold noted in CIBSE TM59.

Manchester 2020s Weather File – Corridors			
	#within 3% threshold	#Total	%within threshold
Block A – Corridors	25	25	100
Block B – Corridors	30	30	100
Block C – Corridors	18	18	100
Block D – Corridors	39	39	100

A detailed analysis will need to be undertaken during detailed design stage to ensure that any expected heat gains within the corridor spaces can be overcome by the window openings in the communal corridors. Full results of this analysis can be found in Appendix E.

Appendix A – All Bedrooms TM59 Results Manchester 2020s

Block A

Room	Criteria A (% hours ΔT > 1)	Criteria B (% hours Top > 26C)	TM59 Criteria Met?
BA.01.U1._DBL BED	1.1	0.13%	Yes
BA.01.U10._DBL BED	0.8	0.13%	Yes
BA.01.U10._DBL BED	0.9	0.13%	Yes
BA.01.U10._SINGLE BED	1	0.09%	Yes
BA.01.U11._DBL BED	1.5	0.19%	Yes
BA.01.U12._DBL BED	1	0.16%	Yes
BA.01.U2._DBL BED	1.2	0.16%	Yes
BA.01.U3._DBL BED	0.7	0.13%	Yes
BA.01.U3._DBL BED	0.8	0.13%	Yes
BA.01.U4._DBL BED	0	0.09%	Yes
BA.01.U4._SINGLE BED	0.2	0.06%	Yes
BA.01.U5._DBL BED	0.1	0.13%	Yes
BA.01.U6._DBL BED	0	0.13%	Yes
BA.01.U6._DBL BED	0	0.13%	Yes
BA.01.U7._DBL BED	0	0.13%	Yes
BA.01.U7._DBL BED	0.1	0.13%	Yes
BA.01.U8._DBL BED	0.1	0.13%	Yes
BA.01.U9._DBL BED	0.1	0.13%	Yes
BA.01.U9._DBL BED	0.1	0.13%	Yes
BA.02.U1._DBL BED	1.1	0.13%	Yes
BA.02.U10._DBL BED	0.8	0.13%	Yes
BA.02.U10._DBL BED	0.9	0.13%	Yes
BA.02.U10._SINGLE BED	1	0.09%	Yes
BA.02.U11._DBL BED	1.6	0.22%	Yes
BA.02.U12._DBL BED	1	0.13%	Yes
BA.02.U2._DBL BED	1.3	0.19%	Yes
BA.02.U3._DBL BED	0.7	0.16%	Yes
BA.02.U3._DBL BED	0.9	0.13%	Yes
BA.02.U4._DBL BED	0	0.09%	Yes
BA.02.U4._SINGLE BED	0.2	0.06%	Yes
BA.02.U5._DBL BED	0.1	0.13%	Yes
BA.02.U6._DBL BED	0	0.13%	Yes
BA.02.U6._DBL BED	0.1	0.13%	Yes
BA.02.U7._DBL BED	0.1	0.13%	Yes
BA.02.U7._DBL BED	0.1	0.13%	Yes

BA.02.U8._DBL BED	0.2	0.13%	Yes
BA.02.U9._DBL BED	0.1	0.13%	Yes
BA.02.U9._DBL BED	0.1	0.13%	Yes
BA.03.U1._DBL BED	1.1	0.13%	Yes
BA.03.U10._DBL BED	0.8	0.13%	Yes
BA.03.U10._DBL BED	0.9	0.13%	Yes
BA.03.U10._SINGLE BED	1	0.09%	Yes
BA.03.U11._DBL BED	1.7	0.22%	Yes
BA.03.U12._DBL BED	1	0.13%	Yes
BA.03.U2._DBL BED	1.2	0.19%	Yes
BA.03.U3._DBL BED	0.7	0.16%	Yes
BA.03.U3._DBL BED	0.9	0.13%	Yes
BA.03.U4._DBL BED	0	0.09%	Yes
BA.03.U4._SINGLE BED	0.2	0.06%	Yes
BA.03.U5._DBL BED	0.1	0.13%	Yes
BA.03.U6._DBL BED	0	0.13%	Yes
BA.03.U6._DBL BED	0.1	0.13%	Yes
BA.03.U7._DBL BED	0.1	0.13%	Yes
BA.03.U7._DBL BED	0.1	0.13%	Yes
BA.03.U8._DBL BED	0.2	0.13%	Yes
BA.03.U9._DBL BED	0.1	0.13%	Yes
BA.03.U9._DBL BED	0.1	0.13%	Yes
BA.04.U1._DBL BED	1.1	0.13%	Yes
BA.04.U10._DBL BED	0.8	0.13%	Yes
BA.04.U10._DBL BED	0.8	0.13%	Yes
BA.04.U10._SINGLE BED	1	0.09%	Yes
BA.04.U11._DBL BED	1.7	0.22%	Yes
BA.04.U12._DBL BED	1	0.13%	Yes
BA.04.U2._DBL BED	1.1	0.16%	Yes
BA.04.U3._DBL BED	0.7	0.13%	Yes
BA.04.U3._DBL BED	0.9	0.13%	Yes
BA.04.U4._DBL BED	0	0.09%	Yes
BA.04.U4._SINGLE BED	0.3	0.09%	Yes
BA.04.U5._DBL BED	0.1	0.13%	Yes
BA.04.U6._DBL BED	0.1	0.13%	Yes
BA.04.U6._DBL BED	0.1	0.13%	Yes
BA.04.U7._DBL BED	0.1	0.13%	Yes
BA.04.U7._DBL BED	0.2	0.13%	Yes
BA.04.U8._DBL BED	0.2	0.13%	Yes
BA.04.U9._DBL BED	0.1	0.13%	Yes
BA.04.U9._DBL BED	0.1	0.13%	Yes

BA.05.U1._DBL BED	1.1	0.13%	Yes
BA.05.U10._DBL BED	0.7	0.13%	Yes
BA.05.U10._DBL BED	0.8	0.13%	Yes
BA.05.U10._SINGLE BED	0.9	0.09%	Yes
BA.05.U11._DBL BED	1.4	0.19%	Yes
BA.05.U12._DBL BED	1.1	0.13%	Yes
BA.05.U2._DBL BED	1.1	0.16%	Yes
BA.05.U3._DBL BED	0.7	0.13%	Yes
BA.05.U3._DBL BED	0.8	0.13%	Yes
BA.05.U4._DBL BED	0	0.09%	Yes
BA.05.U4._SINGLE BED	0.3	0.06%	Yes
BA.05.U5._DBL BED	0.1	0.13%	Yes
BA.05.U6._DBL BED	0.1	0.13%	Yes
BA.05.U6._DBL BED	0.1	0.13%	Yes
BA.05.U7._DBL BED	0.1	0.13%	Yes
BA.05.U7._DBL BED	0.1	0.13%	Yes
BA.05.U8._DBL BED	0.1	0.13%	Yes
BA.05.U9._DBL BED	0.1	0.13%	Yes
BA.05.U9._DBL BED	0.1	0.13%	Yes
BA.06.U1._DBL BED	1.1	0.13%	Yes
BA.06.U2._DBL BED	1.1	0.13%	Yes
BA.06.U3._DBL BED	0.7	0.13%	Yes
BA.06.U3._DBL BED	0.8	0.13%	Yes
BA.06.U4._DBL BED	0	0.09%	Yes
BA.06.U4._SINGLE BED	0.3	0.06%	Yes
BA.06.U5._DBL BED	0.1	0.13%	Yes
BA.06.U6._DBL BED	0.1	0.13%	Yes
BA.06.U6._DBL BED	0.1	0.13%	Yes
BA.06.U7._DBL BED	0.1	0.13%	Yes
BA.06.U7._DBL BED	0.2	0.13%	Yes
BA.07.U1._DBL BED	1.1	0.13%	Yes
BA.07.U2._DBL BED	1.1	0.13%	Yes
BA.07.U3._DBL BED	0.7	0.13%	Yes
BA.07.U3._DBL BED	0.8	0.13%	Yes
BA.07.U4._DBL BED	0.1	0.09%	Yes
BA.07.U4._SINGLE BED	0.3	0.06%	Yes
BA.07.U5._DBL BED	0.1	0.13%	Yes
BA.07.U6._DBL BED	0.1	0.13%	Yes
BA.07.U6._DBL BED	0.1	0.13%	Yes
BA.07.U7._DBL BED	0.1	0.13%	Yes
BA.07.U7._DBL BED	0.2	0.13%	Yes

BA.08.U1._DBL BED	1.1	0.13%	Yes
BA.08.U2._DBL BED	1.3	0.13%	Yes
BA.08.U3._DBL BED	0.8	0.13%	Yes
BA.08.U3._DBL BED	0.8	0.13%	Yes
BA.08.U4._DBL BED	0	0.06%	Yes
BA.08.U4._SINGLE BED	0.2	0.06%	Yes
BA.08.U5._DBL BED	0.1	0.13%	Yes
BA.08.U6._DBL BED	0	0.13%	Yes
BA.08.U6._DBL BED	0	0.13%	Yes
BA.08.U7._DBL BED	0.1	0.09%	Yes
BA.08.U7._DBL BED	0.2	0.13%	Yes

Block B

Room	Criteria A (% hours ΔT > 1)	Criteria B (% hours Top > 26C)	TM59 Criteria Met?
BB.01.U1._DBL BED	0.1	0.09%	Yes
BB.01.U10._DBL BED	0.4	0.13%	Yes
BB.01.U10._DBL BED	0.4	0.13%	Yes
BB.01.U10._SINGLE BED	0.7	0.09%	Yes
BB.01.U11._DBL BED	0.6	0.13%	Yes
BB.01.U12_DBL BED	0.1	0.09%	Yes
BB.01.U2._DBL BED	0.4	0.13%	Yes
BB.01.U3._DBL BED	0.2	0.13%	Yes
BB.01.U3._DBL BED	0.3	0.13%	Yes
BB.01.U4._DBL BED	0	0.09%	Yes
BB.01.U4._DBL BED	0	0.13%	Yes
BB.01.U5._DBL BED	0.1	0.13%	Yes
BB.01.U6._DBL BED	0.1	0.13%	Yes
BB.01.U6._DBL BED	0	0.13%	Yes
BB.01.U7._DBL BED	0	0.13%	Yes
BB.01.U7._DBL BED	0	0.13%	Yes
BB.01.U8._DBL BED	0.1	0.13%	Yes
BB.01.U9_DBL BED	0	0.13%	Yes
BB.01.U9_DBL BED	0.1	0.13%	Yes
BB.02.U1._DBL BED	0.2	0.13%	Yes
BB.02.U10._DBL BED	0.4	0.13%	Yes
BB.02.U10._DBL BED	0.4	0.13%	Yes
BB.02.U10._SINGLE BED	0.7	0.13%	Yes
BB.02.U11._DBL BED	0.7	0.16%	Yes
BB.02.U12_DBL BED	0.1	0.13%	Yes
BB.02.U2._DBL BED	0.5	0.13%	Yes
BB.02.U3._DBL BED	0.3	0.16%	Yes
BB.02.U3._DBL BED	0.4	0.13%	Yes
BB.02.U4._DBL BED	0.1	0.13%	Yes
BB.02.U4._DBL BED	0	0.13%	Yes
BB.02.U5._DBL BED	0.1	0.13%	Yes
BB.02.U6._DBL BED	0.1	0.13%	Yes
BB.02.U6._DBL BED	0	0.13%	Yes
BB.02.U7._DBL BED	0.1	0.13%	Yes
BB.02.U7._DBL BED	0	0.13%	Yes
BB.02.U8._DBL BED	0.2	0.13%	Yes

BB.02.U9_DBL BED	0	0.13%	Yes
BB.02.U9_DBL BED	0.1	0.13%	Yes
BB.03.U1._DBL BED	0.2	0.13%	Yes
BB.03.U10._DBL BED	0.4	0.13%	Yes
BB.03.U10._DBL BED	0.4	0.13%	Yes
BB.03.U10._SINGLE BED	0.7	0.13%	Yes
BB.03.U11._DBL BED	0.7	0.16%	Yes
BB.03.U12_DBL BED	0.1	0.13%	Yes
BB.03.U2._DBL BED	0.5	0.13%	Yes
BB.03.U3._DBL BED	0.3	0.16%	Yes
BB.03.U3._DBL BED	0.4	0.13%	Yes
BB.03.U4._DBL BED	0.1	0.13%	Yes
BB.03.U4._DBL BED	0.1	0.13%	Yes
BB.03.U5._DBL BED	0.3	0.13%	Yes
BB.03.U6._DBL BED	0.1	0.13%	Yes
BB.03.U6._DBL BED	0.1	0.13%	Yes
BB.03.U7._DBL BED	0.1	0.13%	Yes
BB.03.U7._DBL BED	0.1	0.16%	Yes
BB.03.U8._DBL BED	0.3	0.13%	Yes
BB.03.U9_DBL BED	0.1	0.13%	Yes
BB.03.U9_DBL BED	0.1	0.13%	Yes
BB.04.U1._DBL BED	0.2	0.13%	Yes
BB.04.U10._DBL BED	0.4	0.13%	Yes
BB.04.U10._DBL BED	0.4	0.13%	Yes
BB.04.U10._SINGLE BED	0.7	0.13%	Yes
BB.04.U11._DBL BED	0.6	0.13%	Yes
BB.04.U12_DBL BED	0.1	0.09%	Yes
BB.04.U2._DBL BED	0.5	0.13%	Yes
BB.04.U3._DBL BED	0.2	0.13%	Yes
BB.04.U3._DBL BED	0.4	0.13%	Yes
BB.04.U4._DBL BED	0.1	0.13%	Yes
BB.04.U4._DBL BED	0.1	0.13%	Yes
BB.04.U5._DBL BED	0.3	0.13%	Yes
BB.04.U6._DBL BED	0.2	0.13%	Yes
BB.04.U6._DBL BED	0.1	0.13%	Yes
BB.04.U7._DBL BED	0.1	0.13%	Yes
BB.04.U7._DBL BED	0.1	0.13%	Yes
BB.04.U8._DBL BED	0.3	0.13%	Yes
BB.04.U9_DBL BED	0.1	0.13%	Yes
BB.04.U9_DBL BED	0.1	0.13%	Yes
BB.05.U1._DBL BED	0.1	0.13%	Yes

BB.05.U10._DBL BED	0.1	0.13%	Yes
BB.05.U10._DBL BED	0.2	0.13%	Yes
BB.05.U10._SINGLE BED	0.4	0.13%	Yes
BB.05.U11._DBL BED	0.4	0.13%	Yes
BB.05.U12_DBL BED	0.1	0.09%	Yes
BB.05.U2._DBL BED	0.3	0.13%	Yes
BB.05.U3._DBL BED	0.2	0.13%	Yes
BB.05.U3._DBL BED	0.4	0.13%	Yes
BB.05.U4._DBL BED	0.2	0.13%	Yes
BB.05.U4._DBL BED	0.1	0.13%	Yes
BB.05.U5._DBL BED	0.3	0.13%	Yes
BB.05.U6._DBL BED	0.3	0.13%	Yes
BB.05.U6._DBL BED	0.1	0.13%	Yes
BB.05.U7._DBL BED	0.1	0.13%	Yes
BB.05.U7._DBL BED	0.1	0.13%	Yes
BB.05.U8._DBL BED	0.4	0.13%	Yes
BB.05.U9_DBL BED	0.1	0.13%	Yes
BB.05.U9_DBL BED	0.2	0.13%	Yes
BB.06.U1._DBL BED	0.1	0.13%	Yes
BB.06.U10_DBL BED	0.2	0.13%	Yes
BB.06.U10_DBL BED	0.2	0.13%	Yes
BB.06.U11._DBL BED	0.4	0.13%	Yes
BB.06.U12_DBL BED	0	0.09%	Yes
BB.06.U2._DBL BED	0.4	0.13%	Yes
BB.06.U3._DBL BED	0.2	0.13%	Yes
BB.06.U3._DBL BED	0.4	0.13%	Yes
BB.06.U4._DBL BED	0.1	0.13%	Yes
BB.06.U4._DBL BED	0.1	0.13%	Yes
BB.06.U5._DBL BED	0.3	0.13%	Yes
BB.06.U6._DBL BED	0.3	0.13%	Yes
BB.06.U6._DBL BED	0.1	0.13%	Yes
BB.06.U7._DBL BED	0.1	0.13%	Yes
BB.06.U7._DBL BED	0.1	0.13%	Yes
BB.06.U8._DBL BED	0.3	0.13%	Yes
BB.06.U9_DBL BED	0.1	0.13%	Yes
BB.06.U9_DBL BED	0.2	0.13%	Yes
BB.07.U1._DBL BED	0.1	0.09%	Yes
BB.07.U10_DBL BED	0.3	0.13%	Yes
BB.07.U10_DBL BED	0.1	0.13%	Yes
BB.07.U11._DBL BED	0.4	0.13%	Yes
BB.07.U12_DBL BED	0	0.06%	Yes

BB.07.U2._DBL BED	0.5	0.13%	Yes
BB.07.U3._DBL BED	0.5	0.13%	Yes
BB.07.U3._DBL BED	0.4	0.13%	Yes
BB.07.U4._DBL BED	0.1	0.13%	Yes
BB.07.U4._DBL BED	0.1	0.13%	Yes
BB.07.U5._DBL BED	0.2	0.13%	Yes
BB.07.U6._DBL BED	0.3	0.13%	Yes
BB.07.U6._DBL BED	0.1	0.13%	Yes
BB.07.U7._DBL BED	0.1	0.13%	Yes
BB.07.U7._DBL BED	0.1	0.13%	Yes
BB.07.U8._DBL BED	0.3	0.13%	Yes
BB.07.U9_DBL BED	0.1	0.13%	Yes
BB.07.U9_DBL BED	0.2	0.13%	Yes
BB.08.U1._DBL BED	0.2	0.09%	Yes
BB.08.U1._DBL BED	0.1	0.09%	Yes
BB.08.U2._DBL BED	0.1	0.13%	Yes
BB.08.U2._DBL BED	0.1	0.13%	Yes
BB.08.U3._DBL BED	0.3	0.13%	Yes
BB.08.U4_DBL BED	0.1	0.13%	Yes
BB.08.U4_DBL BED	0.2	0.13%	Yes
BB.08.U5_DBL BED	0.3	0.13%	Yes
BB.08.U5_DBL BED	0.2	0.13%	Yes
BB.08.U6._DBL BED	0.4	0.13%	Yes
BB.08.U7_DBL BED	0	0.03%	Yes
BB.09.U1._DBL BED	0.2	0.09%	Yes
BB.09.U1._DBL BED	0.1	0.09%	Yes
BB.09.U2._DBL BED	0.1	0.13%	Yes
BB.09.U2._DBL BED	0.1	0.13%	Yes
BB.09.U3._DBL BED	0.3	0.13%	Yes
BB.09.U4_DBL BED	0.1	0.13%	Yes
BB.09.U4_DBL BED	0.2	0.13%	Yes
BB.09.U5_DBL BED	0.3	0.13%	Yes
BB.09.U5_DBL BED	0.2	0.13%	Yes
BB.09.U6._DBL BED	0.4	0.13%	Yes
BB.09.U7_DBL BED	0	0.03%	Yes
BB.10.U1._DBL BED	0.2	0.09%	Yes
BB.10.U1._DBL BED	0.1	0.06%	Yes
BB.10.U2._DBL BED	0.1	0.13%	Yes
BB.10.U2._DBL BED	0.1	0.13%	Yes
BB.10.U3._DBL BED	0.2	0.13%	Yes
BB.10.U4_DBL BED	0.1	0.13%	Yes

BB.10.U4_DBL BED	0.1	0.13%	Yes
BB.10.U5_DBL BED	0.4	0.13%	Yes
BB.10.U5_DBL BED	0.3	0.13%	Yes
BB.10.U6._DBL BED	0.6	0.13%	Yes
BB.10.U7_DBL BED	0.1	0.06%	Yes

Block C

Room	Criteria A (% hours ΔT > 1)	Criteria B (% hours Top > 26C)	TM59 Criteria Met?
BC.00.U1._DBL BED	0.3	0.53%	Yes
BC.00.U1._DBL BED	0.2	0.66%	Yes
BC.00.U2._DBL BED	0.6	0.72%	Yes
BC.00.U3._DBL BED	0.5	0.63%	Yes
BC.00.U3._DBL BED	0.2	0.56%	Yes
BC.00.U4._DBL BED	0.3	0.63%	Yes
BC.00.U4._DBL BED	0.3	0.81%	Yes
BC.00.U5._DBL BED	0.6	0.72%	Yes
BC.00.U6._DBL BED	0.1	0.53%	Yes
BC.00.U6._SINGLE BED	0.8	0.38%	Yes
BC.01.U1._DBL BED	0.1	0.03%	Yes
BC.01.U10_DBL BED	0.4	0.09%	Yes
BC.01.U10_DBL BED	0.3	0.09%	Yes
BC.01.U11._DBL BED	0.2	0.13%	Yes
BC.01.U12._DBL BED	0	0.03%	Yes
BC.01.U2._DBL BED	0.2	0.13%	Yes
BC.01.U3_DBL BED	0.1	0.09%	Yes
BC.01.U3_DBL BED	0.1	0.09%	Yes
BC.01.U4._DBL BED	0.2	0.13%	Yes
BC.01.U4._DBL BED	0.2	0.13%	Yes
BC.01.U5._DBL BED	0.3	0.13%	Yes
BC.01.U6._DBL BED	0.3	0.13%	Yes
BC.01.U6._DBL BED	0.1	0.13%	Yes
BC.01.U7._DBL BED	0.1	0.13%	Yes
BC.01.U7._DBL BED	0.1	0.16%	Yes
BC.01.U8._DBL BED	0.3	0.16%	Yes
BC.01.U9._DBL BED	0.2	0.13%	Yes
BC.01.U9._SINGLE BED	0.4	0.13%	Yes
BC.02.U1._DBL BED	0.1	0.03%	Yes
BC.02.U10_DBL BED	0.4	0.09%	Yes
BC.02.U10_DBL BED	0.3	0.09%	Yes
BC.02.U11._DBL BED	0.2	0.13%	Yes
BC.02.U12._DBL BED	0	0.03%	Yes
BC.02.U2._DBL BED	0.2	0.13%	Yes
BC.02.U3_DBL BED	0.1	0.09%	Yes
BC.02.U3_DBL BED	0.2	0.09%	Yes
BC.02.U4._DBL BED	0.2	0.13%	Yes
BC.02.U4._DBL BED	0.2	0.13%	Yes
BC.02.U5._DBL BED	0.3	0.13%	Yes

BC.02.U6._DBL BED	0.3	0.13%	Yes
BC.02.U6._DBL BED	0.1	0.13%	Yes
BC.02.U7._DBL BED	0.1	0.13%	Yes
BC.02.U7._DBL BED	0.1	0.16%	Yes
BC.02.U8._DBL BED	0.3	0.13%	Yes
BC.02.U9._DBL BED	0.2	0.13%	Yes
BC.02.U9._SINGLE BED	0.4	0.09%	Yes
BC.03.U1._DBL BED	0.1	0.03%	Yes
BC.03.U10_DBL BED	0.4	0.09%	Yes
BC.03.U10_DBL BED	0.4	0.09%	Yes
BC.03.U11._DBL BED	0.2	0.13%	Yes
BC.03.U12._DBL BED	0	0.03%	Yes
BC.03.U2._DBL BED	0.2	0.13%	Yes
BC.03.U3_DBL BED	0.1	0.09%	Yes
BC.03.U3_DBL BED	0.2	0.09%	Yes
BC.03.U4._DBL BED	0.2	0.13%	Yes
BC.03.U4._DBL BED	0.2	0.13%	Yes
BC.03.U5._DBL BED	0.3	0.13%	Yes
BC.03.U6._DBL BED	0.3	0.13%	Yes
BC.03.U6._DBL BED	0.1	0.13%	Yes
BC.03.U7._DBL BED	0.1	0.13%	Yes
BC.03.U7._DBL BED	0.1	0.16%	Yes
BC.03.U8._DBL BED	0.3	0.13%	Yes
BC.03.U9._DBL BED	0.2	0.13%	Yes
BC.03.U9._SINGLE BED	0.4	0.09%	Yes
BC.04.U1._DBL BED	0.1	0.03%	Yes
BC.04.U10_DBL BED	0.4	0.09%	Yes
BC.04.U10_DBL BED	0.4	0.09%	Yes
BC.04.U11._DBL BED	0.3	0.13%	Yes
BC.04.U12._DBL BED	0	0.03%	Yes
BC.04.U2._DBL BED	0.4	0.13%	Yes
BC.04.U3_DBL BED	0.2	0.09%	Yes
BC.04.U3_DBL BED	0.3	0.09%	Yes
BC.04.U4._DBL BED	0.2	0.13%	Yes
BC.04.U4._DBL BED	0.2	0.13%	Yes
BC.04.U5._DBL BED	0.3	0.13%	Yes
BC.04.U6._DBL BED	0.3	0.13%	Yes
BC.04.U6._DBL BED	0.1	0.13%	Yes
BC.04.U7._DBL BED	0.1	0.13%	Yes
BC.04.U7._DBL BED	0.1	0.16%	Yes
BC.04.U8._DBL BED	0.3	0.13%	Yes
BC.04.U9._DBL BED	0.2	0.13%	Yes
BC.04.U9._SINGLE BED	0.4	0.09%	Yes

BC.05.U1._DBL BED	0.1	0.03%	Yes
BC.05.U10_DBL BED	0.4	0.09%	Yes
BC.05.U10_DBL BED	0.4	0.09%	Yes
BC.05.U11._DBL BED	0.5	0.13%	Yes
BC.05.U12._DBL BED	0.2	0.03%	Yes
BC.05.U2._DBL BED	0.4	0.13%	Yes
BC.05.U3_DBL BED	0.2	0.09%	Yes
BC.05.U3_DBL BED	0.4	0.09%	Yes
BC.05.U4._DBL BED	0.2	0.13%	Yes
BC.05.U4._DBL BED	0.1	0.13%	Yes
BC.05.U5._DBL BED	0.2	0.13%	Yes
BC.05.U6._DBL BED	0.1	0.13%	Yes
BC.05.U6._DBL BED	0.1	0.13%	Yes
BC.05.U7._DBL BED	0.1	0.13%	Yes
BC.05.U7._DBL BED	0.1	0.13%	Yes
BC.05.U8._DBL BED	0.2	0.13%	Yes
BC.05.U9._DBL BED	0.1	0.13%	Yes
BC.05.U9._SINGLE BED	0.4	0.09%	Yes

Block D

Room	Criteria A (% hours ΔT > 1)	Criteria B (% hours Top > 26C)	TM59 Criteria Met?
BD.00.U1._DBL BED	0.3	0.66%	Yes
BD.00.U2._DBL BED	0.4	0.56%	Yes
BD.00.U2._SINGLE BED	1	0.44%	Yes
BD.00.U3._DBL BED	0.7	0.75%	Yes
BD.00.U4._DBL BED	0.7	0.81%	Yes
BD.01.U1._DBL BED	0.1	0.13%	Yes
BD.01.U10._DBL BED	0	0.13%	Yes
BD.01.U2._DBL BED	0.2	0.13%	Yes
BD.01.U2._SINGLE BED	0.4	0.13%	Yes
BD.01.U3._DBL BED	0.5	0.09%	Yes
BD.01.U3._DBL BED	0.4	0.13%	Yes
BD.01.U4._DBL BED	0.4	0.13%	Yes
BD.01.U4._DBL BED	0.3	0.13%	Yes
BD.01.U5._DBL BED	0.7	0.16%	Yes
BD.01.U5._DBL BED	0.4	0.16%	Yes
BD.01.U6._DBL BED	0.5	0.16%	Yes
BD.01.U7._DBL BED	0.4	0.13%	Yes
BD.01.U7._DBL BED	0.4	0.09%	Yes
BD.01.U7._SINGLE BED	0.4	0.09%	Yes
BD.01.U8._DBL BED	0.3	0.13%	Yes
BD.01.U9._DBL BED	0.6	0.16%	Yes
BD.02.U1._DBL BED	0.1	0.13%	Yes
BD.02.U10._DBL BED	0	0.13%	Yes
BD.02.U2._DBL BED	0.2	0.13%	Yes
BD.02.U2._SINGLE BED	0.4	0.13%	Yes
BD.02.U3._DBL BED	0.5	0.13%	Yes
BD.02.U3._DBL BED	0.4	0.13%	Yes
BD.02.U4._DBL BED	0.4	0.13%	Yes
BD.02.U4._DBL BED	0.3	0.13%	Yes
BD.02.U5._DBL BED	0.6	0.13%	Yes
BD.02.U5._DBL BED	0.4	0.13%	Yes
BD.02.U6._DBL BED	0.5	0.16%	Yes
BD.02.U7._DBL BED	0.4	0.13%	Yes
BD.02.U7._DBL BED	0.4	0.13%	Yes
BD.02.U7._SINGLE BED	0.4	0.09%	Yes
BD.02.U8._DBL BED	0.3	0.13%	Yes
BD.02.U9._DBL BED	0.5	0.16%	Yes

BD.03.U1._DBL BED	0.1	0.13%	Yes
BD.03.U10._DBL BED	0	0.13%	Yes
BD.03.U2._DBL BED	0.2	0.13%	Yes
BD.03.U2._SINGLE BED	0.4	0.13%	Yes
BD.03.U3._DBL BED	0.5	0.13%	Yes
BD.03.U3._DBL BED	0.4	0.13%	Yes
BD.03.U4._DBL BED	0.4	0.13%	Yes
BD.03.U4._DBL BED	0.3	0.13%	Yes
BD.03.U5._DBL BED	0.6	0.13%	Yes
BD.03.U5._DBL BED	0.4	0.13%	Yes
BD.03.U6._DBL BED	0.5	0.16%	Yes
BD.03.U7._DBL BED	0.4	0.13%	Yes
BD.03.U7._DBL BED	0.4	0.13%	Yes
BD.03.U7._SINGLE BED	0.3	0.09%	Yes
BD.03.U8._DBL BED	0.3	0.13%	Yes
BD.03.U9._DBL BED	0.5	0.16%	Yes
BD.04.U1._DBL BED	0.1	0.13%	Yes
BD.04.U10._DBL BED	0	0.13%	Yes
BD.04.U2._DBL BED	0.2	0.13%	Yes
BD.04.U2._SINGLE BED	0.4	0.13%	Yes
BD.04.U3._DBL BED	0.5	0.09%	Yes
BD.04.U3._DBL BED	0.4	0.13%	Yes
BD.04.U4._DBL BED	0.4	0.13%	Yes
BD.04.U4._DBL BED	0.3	0.13%	Yes
BD.04.U5._DBL BED	0.6	0.13%	Yes
BD.04.U5._DBL BED	0.4	0.13%	Yes
BD.04.U6._DBL BED	0.5	0.13%	Yes
BD.04.U7._DBL BED	0.4	0.13%	Yes
BD.04.U7._DBL BED	0.3	0.09%	Yes
BD.04.U7._SINGLE BED	0.3	0.09%	Yes
BD.04.U8._DBL BED	0.3	0.13%	Yes
BD.04.U9._DBL BED	0.5	0.16%	Yes
BD.05.U1._DBL BED	0.1	0.13%	Yes
BD.05.U10._DBL BED	0	0.13%	Yes
BD.05.U2._DBL BED	0.2	0.13%	Yes
BD.05.U2._SINGLE BED	0.4	0.13%	Yes
BD.05.U3._DBL BED	0.4	0.09%	Yes
BD.05.U3._DBL BED	0.4	0.13%	Yes
BD.05.U4._DBL BED	0.4	0.13%	Yes
BD.05.U4._DBL BED	0.3	0.13%	Yes
BD.05.U5._DBL BED	0.6	0.13%	Yes

BD.05.U5._DBL BED	0.4	0.13%	Yes
BD.05.U6._DBL BED	0.5	0.13%	Yes
BD.05.U7._DBL BED	0.4	0.13%	Yes
BD.05.U7._DBL BED	0.2	0.09%	Yes
BD.05.U7._SINGLE BED	0.2	0.09%	Yes
BD.05.U8._DBL BED	0.3	0.13%	Yes
BD.05.U9._DBL BED	0.5	0.13%	Yes
BD.06.U1._DBL BED	0.1	0.13%	Yes
BD.06.U10._DBL BED	0	0.09%	Yes
BD.06.U2._DBL BED	0.2	0.13%	Yes
BD.06.U2._SINGLE BED	0.4	0.13%	Yes
BD.06.U3._DBL BED	0.3	0.13%	Yes
BD.06.U3._SINGLE BED	0.3	0.13%	Yes
BD.06.U4._DBL BED	0.4	0.13%	Yes
BD.06.U4._DBL BED	0.3	0.13%	Yes
BD.06.U5._DBL BED	0.5	0.13%	Yes
BD.06.U5._DBL BED	0.3	0.13%	Yes
BD.06.U6._DBL BED	0.5	0.13%	Yes
BD.06.U7_DBL BED	0.5	0.09%	Yes
BD.06.U8._DBL BED	0.3	0.13%	Yes
BD.06.U9._DBL BED	0.4	0.13%	Yes
BD.07.U1._DBL BED	0.1	0.13%	Yes
BD.07.U10._DBL BED	0	0.09%	Yes
BD.07.U2._DBL BED	0.2	0.13%	Yes
BD.07.U2._SINGLE BED	0.4	0.13%	Yes
BD.07.U3._DBL BED	0.3	0.13%	Yes
BD.07.U3._SINGLE BED	0.3	0.13%	Yes
BD.07.U4._DBL BED	0.4	0.13%	Yes
BD.07.U4._DBL BED	0.3	0.13%	Yes
BD.07.U5._DBL BED	0.5	0.13%	Yes
BD.07.U5._DBL BED	0.3	0.13%	Yes
BD.07.U6._DBL BED	0.5	0.13%	Yes
BD.07.U7_DBL BED	0.6	0.09%	Yes
BD.07.U8._DBL BED	0.3	0.13%	Yes
BD.07.U9._DBL BED	0.4	0.13%	Yes
BD.08.U1._DBL BED	0.1	0.13%	Yes
BD.08.U10._DBL BED	0	0.03%	Yes
BD.08.U2._DBL BED	0.2	0.13%	Yes
BD.08.U2._SINGLE BED	0.4	0.09%	Yes
BD.08.U3._DBL BED	0.3	0.13%	Yes
BD.08.U3._SINGLE BED	0.3	0.13%	Yes

BD.08.U4._DBL BED	0.4	0.13%	Yes
BD.08.U4._DBL BED	0.3	0.13%	Yes
BD.08.U5._DBL BED	0.5	0.13%	Yes
BD.08.U5._DBL BED	0.3	0.13%	Yes
BD.08.U6._DBL BED	0.4	0.13%	Yes
BD.08.U7_DBL BED	0.4	0.09%	Yes
BD.08.U8._DBL BED	0.2	0.13%	Yes
BD.08.U9._DBL BED	0.4	0.13%	Yes
BD.09.U1._DBL BED	0.1	0.13%	Yes
BD.09.U2._DBL BED	0.2	0.13%	Yes
BD.09.U2._SINGLE BED	0.4	0.09%	Yes
BD.09.U3._DBL BED	0.3	0.13%	Yes
BD.09.U3._SINGLE BED	0.3	0.13%	Yes
BD.09.U4._DBL BED	0.4	0.13%	Yes
BD.09.U4._DBL BED	0.3	0.13%	Yes
BD.09.U5._DBL BED	0.5	0.09%	Yes
BD.09.U5._DBL BED	0.3	0.09%	Yes
BD.10.U1._DBL BED	0.1	0.13%	Yes
BD.10.U2._DBL BED	0.2	0.13%	Yes
BD.10.U2._SINGLE BED	0.4	0.09%	Yes
BD.10.U3._DBL BED	0.3	0.13%	Yes
BD.10.U3._SINGLE BED	0.3	0.09%	Yes
BD.10.U4._DBL BED	0.4	0.13%	Yes
BD.10.U4._DBL BED	0.3	0.13%	Yes
BD.10.U5._DBL BED	0.5	0.09%	Yes
BD.10.U5._DBL BED	0.4	0.09%	Yes
BD.11.U1._DBL BED	0.1	0.13%	Yes
BD.11.U2._DBL BED	0.2	0.13%	Yes
BD.11.U2._SINGLE BED	0.4	0.09%	Yes
BD.11.U3._DBL BED	0.4	0.13%	Yes
BD.11.U3._SINGLE BED	0.4	0.09%	Yes
BD.11.U4._DBL BED	0.4	0.13%	Yes
BD.11.U4._DBL BED	0.4	0.13%	Yes
BD.11.U5._DBL BED	0.5	0.09%	Yes
BD.11.U5._DBL BED	0.4	0.09%	Yes
BD.12.U1._DBL BED	0.1	0.13%	Yes
BD.12.U2._DBL BED	0.1	0.13%	Yes
BD.12.U2._SINGLE BED	0.3	0.09%	Yes
BD.12.U3._DBL BED	0.3	0.13%	Yes
BD.12.U3._SINGLE BED	0.5	0.09%	Yes
BD.12.U4._DBL BED	0.4	0.13%	Yes

BD.12.U4._DBL BED	0.5	0.13%	Yes
BD.12.U5._DBL BED	0.5	0.09%	Yes
BD.12.U5._DBL BED	0.3	0.06%	Yes

Appendix B – All Bedrooms TM59 Results Manchester 2050s for Information Only

Block A

Room	Criteria A (% hours ΔT > 1)	Criteria B (% hours Top > 26C)	TM59 Criteria Met?
BA.01.U1._DBL BED	2	0.79%	Yes
BA.01.U10._DBL BED	1.5	0.76%	Yes
BA.01.U10._DBL BED	1.8	0.70%	Yes
BA.01.U10._SINGLE BED	2	0.49%	Yes
BA.01.U11._DBL BED	2.5	0.92%	Yes
BA.01.U12._DBL BED	1.8	0.89%	Yes
BA.01.U2._DBL BED	2.3	0.85%	Yes
BA.01.U3._DBL BED	1.4	0.73%	Yes
BA.01.U3._DBL BED	1.6	0.70%	Yes
BA.01.U4._DBL BED	0.5	0.58%	Yes
BA.01.U4._SINGLE BED	0.6	0.46%	Yes
BA.01.U5._DBL BED	0.6	0.67%	Yes
BA.01.U6._DBL BED	0.4	0.67%	Yes
BA.01.U6._DBL BED	0.5	0.64%	Yes
BA.01.U7._DBL BED	0.5	0.67%	Yes
BA.01.U7._DBL BED	0.6	0.64%	Yes
BA.01.U8._DBL BED	0.7	0.73%	Yes
BA.01.U9._DBL BED	0.5	0.61%	Yes
BA.01.U9._DBL BED	0.6	0.61%	Yes
BA.02.U1._DBL BED	2.1	0.79%	Yes
BA.02.U10._DBL BED	1.7	0.82%	Yes
BA.02.U10._DBL BED	1.8	0.76%	Yes
BA.02.U10._SINGLE BED	2	0.61%	Yes
BA.02.U11._DBL BED	2.5	1.04%	No
BA.02.U12._DBL BED	1.6	0.79%	Yes
BA.02.U2._DBL BED	2.3	0.98%	Yes
BA.02.U3._DBL BED	1.4	0.85%	Yes
BA.02.U3._DBL BED	1.8	0.76%	Yes
BA.02.U4._DBL BED	0.5	0.58%	Yes
BA.02.U4._SINGLE BED	0.7	0.46%	Yes
BA.02.U5._DBL BED	0.6	0.73%	Yes
BA.02.U6._DBL BED	0.5	0.70%	Yes
BA.02.U6._DBL BED	0.5	0.67%	Yes
BA.02.U7._DBL BED	0.6	0.73%	Yes

BA.02.U7._DBL BED	0.7	0.67%	Yes
BA.02.U8._DBL BED	0.8	0.85%	Yes
BA.02.U9._DBL BED	0.6	0.67%	Yes
BA.02.U9._DBL BED	0.6	0.64%	Yes
BA.03.U1._DBL BED	2.1	0.79%	Yes
BA.03.U10._DBL BED	1.7	0.85%	Yes
BA.03.U10._DBL BED	1.8	0.76%	Yes
BA.03.U10._SINGLE BED	2	0.64%	Yes
BA.03.U11._DBL BED	2.6	1.04%	No
BA.03.U12._DBL BED	1.7	0.79%	Yes
BA.03.U2._DBL BED	2.2	0.98%	Yes
BA.03.U3._DBL BED	1.4	0.85%	Yes
BA.03.U3._DBL BED	1.8	0.76%	Yes
BA.03.U4._DBL BED	0.5	0.58%	Yes
BA.03.U4._SINGLE BED	0.7	0.46%	Yes
BA.03.U5._DBL BED	0.6	0.73%	Yes
BA.03.U6._DBL BED	0.5	0.73%	Yes
BA.03.U6._DBL BED	0.5	0.67%	Yes
BA.03.U7._DBL BED	0.6	0.73%	Yes
BA.03.U7._DBL BED	0.7	0.67%	Yes
BA.03.U8._DBL BED	0.8	0.85%	Yes
BA.03.U9._DBL BED	0.6	0.67%	Yes
BA.03.U9._DBL BED	0.6	0.67%	Yes
BA.04.U1._DBL BED	2	0.79%	Yes
BA.04.U10._DBL BED	1.7	0.82%	Yes
BA.04.U10._DBL BED	1.7	0.73%	Yes
BA.04.U10._SINGLE BED	2	0.61%	Yes
BA.04.U11._DBL BED	2.6	1.07%	No
BA.04.U12._DBL BED	2	0.79%	Yes
BA.04.U2._DBL BED	2.1	0.92%	Yes
BA.04.U3._DBL BED	1.4	0.82%	Yes
BA.04.U3._DBL BED	1.7	0.76%	Yes
BA.04.U4._DBL BED	0.5	0.58%	Yes
BA.04.U4._SINGLE BED	0.7	0.46%	Yes
BA.04.U5._DBL BED	0.7	0.73%	Yes
BA.04.U6._DBL BED	0.5	0.73%	Yes
BA.04.U6._DBL BED	0.5	0.67%	Yes
BA.04.U7._DBL BED	0.6	0.73%	Yes
BA.04.U7._DBL BED	0.7	0.67%	Yes
BA.04.U8._DBL BED	0.8	0.82%	Yes
BA.04.U9._DBL BED	0.6	0.67%	Yes

BA.04.U9._DBL BED	0.6	0.67%	Yes
BA.05.U1._DBL BED	1.9	0.76%	Yes
BA.05.U10._DBL BED	1.2	0.82%	Yes
BA.05.U10._DBL BED	1.5	0.73%	Yes
BA.05.U10._SINGLE BED	1.8	0.61%	Yes
BA.05.U11._DBL BED	2.5	1.07%	No
BA.05.U12._DBL BED	2.1	0.82%	Yes
BA.05.U2._DBL BED	2	0.92%	Yes
BA.05.U3._DBL BED	1.4	0.79%	Yes
BA.05.U3._DBL BED	1.7	0.73%	Yes
BA.05.U4._DBL BED	0.5	0.64%	Yes
BA.05.U4._SINGLE BED	0.7	0.46%	Yes
BA.05.U5._DBL BED	0.7	0.73%	Yes
BA.05.U6._DBL BED	0.5	0.73%	Yes
BA.05.U6._DBL BED	0.6	0.67%	Yes
BA.05.U7._DBL BED	0.6	0.73%	Yes
BA.05.U7._DBL BED	0.7	0.67%	Yes
BA.05.U8._DBL BED	0.7	0.82%	Yes
BA.05.U9._DBL BED	0.5	0.67%	Yes
BA.05.U9._DBL BED	0.6	0.67%	Yes
BA.06.U1._DBL BED	1.9	0.73%	Yes
BA.06.U2._DBL BED	2	0.92%	Yes
BA.06.U3._DBL BED	1.4	0.76%	Yes
BA.06.U3._DBL BED	1.7	0.73%	Yes
BA.06.U4._DBL BED	0.5	0.61%	Yes
BA.06.U4._SINGLE BED	0.7	0.46%	Yes
BA.06.U5._DBL BED	0.7	0.73%	Yes
BA.06.U6._DBL BED	0.5	0.73%	Yes
BA.06.U6._DBL BED	0.5	0.67%	Yes
BA.06.U7._DBL BED	0.6	0.67%	Yes
BA.06.U7._DBL BED	0.8	0.64%	Yes
BA.07.U1._DBL BED	1.9	0.73%	Yes
BA.07.U2._DBL BED	2.2	0.92%	Yes
BA.07.U3._DBL BED	1.5	0.76%	Yes
BA.07.U3._DBL BED	1.8	0.73%	Yes
BA.07.U4._DBL BED	0.5	0.58%	Yes
BA.07.U4._SINGLE BED	0.7	0.43%	Yes
BA.07.U5._DBL BED	0.7	0.73%	Yes
BA.07.U6._DBL BED	0.5	0.70%	Yes
BA.07.U6._DBL BED	0.5	0.67%	Yes
BA.07.U7._DBL BED	0.6	0.67%	Yes

BA.07.U7._DBL BED	0.8	0.64%	Yes
BA.08.U1._DBL BED	2	0.73%	Yes
BA.08.U2._DBL BED	2.3	0.95%	Yes
BA.08.U3._DBL BED	1.5	0.76%	Yes
BA.08.U3._DBL BED	1.7	0.73%	Yes
BA.08.U4._DBL BED	0.5	0.61%	Yes
BA.08.U4._SINGLE BED	0.7	0.43%	Yes
BA.08.U5._DBL BED	0.7	0.70%	Yes
BA.08.U6._DBL BED	0.4	0.70%	Yes
BA.08.U6._DBL BED	0.5	0.64%	Yes
BA.08.U7._DBL BED	0.6	0.64%	Yes
BA.08.U7._DBL BED	0.7	0.64%	Yes

Block B

Room	Criteria A (% hours ΔT > 1)	Criteria B (% hours Top > 26C)	TM59 Criteria Met?
BB.01.U1._DBL BED	0.6	0.64%	Yes
BB.01.U10._DBL BED	0.9	0.67%	Yes
BB.01.U10._DBL BED	0.8	0.67%	Yes
BB.01.U10._SINGLE BED	1.4	0.52%	Yes
BB.01.U11._DBL BED	1.3	0.73%	Yes
BB.01.U12_DBL BED	0.6	0.61%	Yes
BB.01.U2._DBL BED	1.1	0.70%	Yes
BB.01.U3._DBL BED	0.7	0.70%	Yes
BB.01.U3._DBL BED	0.8	0.67%	Yes
BB.01.U4._DBL BED	0.4	0.58%	Yes
BB.01.U4._DBL BED	0.3	0.61%	Yes
BB.01.U5._DBL BED	0.7	0.64%	Yes
BB.01.U6._DBL BED	0.7	0.64%	Yes
BB.01.U6._DBL BED	0.5	0.64%	Yes
BB.01.U7._DBL BED	0.5	0.64%	Yes
BB.01.U7._DBL BED	0.5	0.67%	Yes
BB.01.U8._DBL BED	0.8	0.73%	Yes
BB.01.U9_DBL BED	0.5	0.67%	Yes
BB.01.U9_DBL BED	0.6	0.64%	Yes
BB.02.U1._DBL BED	0.7	0.67%	Yes
BB.02.U10._DBL BED	1	0.73%	Yes
BB.02.U10._DBL BED	1	0.73%	Yes
BB.02.U10._SINGLE BED	1.4	0.64%	Yes
BB.02.U11._DBL BED	1.4	0.85%	Yes
BB.02.U12_DBL BED	0.6	0.64%	Yes
BB.02.U2._DBL BED	1.2	0.82%	Yes
BB.02.U3._DBL BED	0.9	0.73%	Yes
BB.02.U3._DBL BED	1	0.73%	Yes
BB.02.U4._DBL BED	0.7	0.70%	Yes
BB.02.U4._DBL BED	0.6	0.70%	Yes
BB.02.U5._DBL BED	0.8	0.82%	Yes
BB.02.U6._DBL BED	0.8	0.67%	Yes
BB.02.U6._DBL BED	0.6	0.67%	Yes
BB.02.U7._DBL BED	0.6	0.67%	Yes
BB.02.U7._DBL BED	0.6	0.73%	Yes
BB.02.U8._DBL BED	0.9	0.73%	Yes
BB.02.U9_DBL BED	0.6	0.70%	Yes

BB.02.U9_DBL BED	0.7	0.67%	Yes
BB.03.U1._DBL BED	0.7	0.67%	Yes
BB.03.U10._DBL BED	1	0.73%	Yes
BB.03.U10._DBL BED	0.9	0.73%	Yes
BB.03.U10._SINGLE BED	1.4	0.64%	Yes
BB.03.U11._DBL BED	1.3	0.85%	Yes
BB.03.U12_DBL BED	0.6	0.64%	Yes
BB.03.U2._DBL BED	1.2	0.85%	Yes
BB.03.U3._DBL BED	1	0.73%	Yes
BB.03.U3._DBL BED	1	0.73%	Yes
BB.03.U4._DBL BED	0.8	0.73%	Yes
BB.03.U4._DBL BED	0.7	0.79%	Yes
BB.03.U5._DBL BED	0.9	0.85%	Yes
BB.03.U6._DBL BED	0.8	0.67%	Yes
BB.03.U6._DBL BED	0.7	0.67%	Yes
BB.03.U7._DBL BED	0.7	0.67%	Yes
BB.03.U7._DBL BED	0.7	0.76%	Yes
BB.03.U8._DBL BED	1	0.82%	Yes
BB.03.U9_DBL BED	0.7	0.79%	Yes
BB.03.U9_DBL BED	0.8	0.70%	Yes
BB.04.U1._DBL BED	0.7	0.67%	Yes
BB.04.U10._DBL BED	1	0.73%	Yes
BB.04.U10._DBL BED	0.9	0.73%	Yes
BB.04.U10._SINGLE BED	1.4	0.64%	Yes
BB.04.U11._DBL BED	1.3	0.85%	Yes
BB.04.U12_DBL BED	0.6	0.64%	Yes
BB.04.U2._DBL BED	1.2	0.82%	Yes
BB.04.U3._DBL BED	0.9	0.73%	Yes
BB.04.U3._DBL BED	1	0.73%	Yes
BB.04.U4._DBL BED	0.8	0.70%	Yes
BB.04.U4._DBL BED	0.8	0.82%	Yes
BB.04.U5._DBL BED	1.1	0.85%	Yes
BB.04.U6._DBL BED	0.9	0.67%	Yes
BB.04.U6._DBL BED	0.7	0.67%	Yes
BB.04.U7._DBL BED	0.7	0.67%	Yes
BB.04.U7._DBL BED	0.7	0.76%	Yes
BB.04.U8._DBL BED	1	0.82%	Yes
BB.04.U9_DBL BED	0.7	0.79%	Yes
BB.04.U9_DBL BED	0.8	0.70%	Yes
BB.05.U1._DBL BED	0.7	0.67%	Yes
BB.05.U10._DBL BED	0.6	0.73%	Yes

BB.05.U10._DBL BED	0.7	0.73%	Yes
BB.05.U10._SINGLE BED	1.1	0.61%	Yes
BB.05.U11._DBL BED	1.1	0.76%	Yes
BB.05.U12_DBL BED	0.4	0.61%	Yes
BB.05.U2._DBL BED	1.1	0.76%	Yes
BB.05.U3._DBL BED	0.8	0.73%	Yes
BB.05.U3._DBL BED	1	0.73%	Yes
BB.05.U4._DBL BED	0.9	0.70%	Yes
BB.05.U4._DBL BED	0.8	0.82%	Yes
BB.05.U5._DBL BED	1.1	0.82%	Yes
BB.05.U6._DBL BED	0.9	0.67%	Yes
BB.05.U6._DBL BED	0.7	0.67%	Yes
BB.05.U7._DBL BED	0.8	0.67%	Yes
BB.05.U7._DBL BED	0.7	0.76%	Yes
BB.05.U8._DBL BED	1.1	0.79%	Yes
BB.05.U9_DBL BED	0.8	0.76%	Yes
BB.05.U9_DBL BED	0.9	0.70%	Yes
BB.06.U1._DBL BED	0.6	0.67%	Yes
BB.06.U10_DBL BED	0.8	0.73%	Yes
BB.06.U10_DBL BED	0.7	0.73%	Yes
BB.06.U11._DBL BED	1.1	0.76%	Yes
BB.06.U12_DBL BED	0.3	0.55%	Yes
BB.06.U2._DBL BED	1.1	0.76%	Yes
BB.06.U3._DBL BED	0.8	0.73%	Yes
BB.06.U3._DBL BED	1.1	0.73%	Yes
BB.06.U4._DBL BED	0.9	0.70%	Yes
BB.06.U4._DBL BED	0.8	0.73%	Yes
BB.06.U5._DBL BED	1.1	0.82%	Yes
BB.06.U6._DBL BED	0.9	0.67%	Yes
BB.06.U6._DBL BED	0.7	0.67%	Yes
BB.06.U7._DBL BED	0.8	0.67%	Yes
BB.06.U7._DBL BED	0.7	0.76%	Yes
BB.06.U8._DBL BED	1.1	0.76%	Yes
BB.06.U9_DBL BED	0.8	0.73%	Yes
BB.06.U9_DBL BED	0.9	0.67%	Yes
BB.07.U1._DBL BED	0.5	0.61%	Yes
BB.07.U10_DBL BED	0.8	0.73%	Yes
BB.07.U10_DBL BED	0.7	0.73%	Yes
BB.07.U11._DBL BED	1.1	0.76%	Yes
BB.07.U12_DBL BED	0.4	0.55%	Yes
BB.07.U2._DBL BED	1.1	0.76%	Yes

BB.07.U3._DBL BED	1.1	0.73%	Yes
BB.07.U3._DBL BED	1	0.73%	Yes
BB.07.U4._DBL BED	0.7	0.67%	Yes
BB.07.U4._DBL BED	0.7	0.73%	Yes
BB.07.U5._DBL BED	1	0.82%	Yes
BB.07.U6._DBL BED	0.9	0.67%	Yes
BB.07.U6._DBL BED	0.8	0.67%	Yes
BB.07.U7._DBL BED	0.8	0.67%	Yes
BB.07.U7._DBL BED	0.7	0.73%	Yes
BB.07.U8._DBL BED	1.1	0.76%	Yes
BB.07.U9_DBL BED	0.8	0.73%	Yes
BB.07.U9_DBL BED	0.9	0.67%	Yes
BB.08.U1._DBL BED	0.8	0.64%	Yes
BB.08.U1._DBL BED	0.7	0.64%	Yes
BB.08.U2._DBL BED	0.8	0.67%	Yes
BB.08.U2._DBL BED	0.7	0.73%	Yes
BB.08.U3._DBL BED	1.1	0.76%	Yes
BB.08.U4_DBL BED	0.7	0.70%	Yes
BB.08.U4_DBL BED	0.9	0.67%	Yes
BB.08.U5_DBL BED	0.8	0.73%	Yes
BB.08.U5_DBL BED	0.7	0.73%	Yes
BB.08.U6._DBL BED	1.1	0.76%	Yes
BB.08.U7_DBL BED	0.4	0.55%	Yes
BB.09.U1._DBL BED	0.8	0.58%	Yes
BB.09.U1._DBL BED	0.7	0.64%	Yes
BB.09.U2._DBL BED	0.8	0.67%	Yes
BB.09.U2._DBL BED	0.7	0.70%	Yes
BB.09.U3._DBL BED	1.1	0.76%	Yes
BB.09.U4_DBL BED	0.7	0.70%	Yes
BB.09.U4_DBL BED	0.9	0.67%	Yes
BB.09.U5_DBL BED	0.8	0.73%	Yes
BB.09.U5_DBL BED	0.7	0.73%	Yes
BB.09.U6._DBL BED	1.1	0.76%	Yes
BB.09.U7_DBL BED	0.4	0.55%	Yes
BB.10.U1._DBL BED	0.7	0.64%	Yes
BB.10.U1._DBL BED	0.6	0.64%	Yes
BB.10.U2._DBL BED	0.7	0.67%	Yes
BB.10.U2._DBL BED	0.7	0.70%	Yes
BB.10.U3._DBL BED	1	0.73%	Yes
BB.10.U4_DBL BED	0.7	0.70%	Yes
BB.10.U4_DBL BED	0.8	0.67%	Yes

BB.10.U5_DBL BED	1	0.73%	Yes
BB.10.U5_DBL BED	0.8	0.73%	Yes
BB.10.U6._DBL BED	1.3	0.76%	Yes
BB.10.U7_DBL BED	0.6	0.58%	Yes

Block C

Room	Criteria A (% hours ΔT > 1)	Criteria B (% hours Top > 26C)	TM59 Criteria Met?
BC.00.U1._DBL BED	1.1	1.68%	No
BC.00.U1._DBL BED	0.8	1.95%	No
BC.00.U2._DBL BED	1.4	2.05%	No
BC.00.U3._DBL BED	1.3	1.83%	No
BC.00.U3._DBL BED	0.8	1.83%	No
BC.00.U4._DBL BED	0.9	1.80%	No
BC.00.U4._DBL BED	0.9	2.17%	No
BC.00.U5._DBL BED	1.3	2.05%	No
BC.00.U6._DBL BED	1	1.68%	No
BC.00.U6._SINGLE BED	1.6	1.31%	No
BC.01.U1._DBL BED	0.3	0.49%	Yes
BC.01.U10_DBL BED	0.7	0.58%	Yes
BC.01.U10_DBL BED	0.7	0.64%	Yes
BC.01.U11._DBL BED	0.6	0.67%	Yes
BC.01.U12._DBL BED	0.1	0.40%	Yes
BC.01.U2._DBL BED	0.6	0.67%	Yes
BC.01.U3_DBL BED	0.4	0.61%	Yes
BC.01.U3_DBL BED	0.5	0.58%	Yes
BC.01.U4._DBL BED	0.8	0.67%	Yes
BC.01.U4._DBL BED	0.7	0.79%	Yes
BC.01.U5._DBL BED	1.1	0.89%	Yes
BC.01.U6._DBL BED	1.1	0.76%	Yes
BC.01.U6._DBL BED	0.8	0.76%	Yes
BC.01.U7._DBL BED	0.8	0.73%	Yes
BC.01.U7._DBL BED	0.8	0.85%	Yes
BC.01.U8._DBL BED	1.1	0.85%	Yes
BC.01.U9._DBL BED	0.7	0.67%	Yes
BC.01.U9._SINGLE BED	1.1	0.58%	Yes
BC.02.U1._DBL BED	0.3	0.49%	Yes
BC.02.U10_DBL BED	0.8	0.61%	Yes
BC.02.U10_DBL BED	0.7	0.67%	Yes
BC.02.U11._DBL BED	0.6	0.67%	Yes
BC.02.U12._DBL BED	0.1	0.43%	Yes
BC.02.U2._DBL BED	0.7	0.67%	Yes
BC.02.U3_DBL BED	0.5	0.67%	Yes
BC.02.U3_DBL BED	0.6	0.61%	Yes
BC.02.U4._DBL BED	0.8	0.67%	Yes

BC.02.U4._DBL BED	0.7	0.76%	Yes
BC.02.U5._DBL BED	1.1	0.85%	Yes
BC.02.U6._DBL BED	1	0.73%	Yes
BC.02.U6._DBL BED	0.7	0.73%	Yes
BC.02.U7._DBL BED	0.8	0.73%	Yes
BC.02.U7._DBL BED	0.8	0.85%	Yes
BC.02.U8._DBL BED	1.1	0.85%	Yes
BC.02.U9._DBL BED	0.7	0.67%	Yes
BC.02.U9._SINGLE BED	1.1	0.55%	Yes
BC.03.U1._DBL BED	0.3	0.49%	Yes
BC.03.U10_DBL BED	1	0.61%	Yes
BC.03.U10_DBL BED	0.9	0.67%	Yes
BC.03.U11._DBL BED	0.6	0.67%	Yes
BC.03.U12._DBL BED	0.1	0.46%	Yes
BC.03.U2._DBL BED	0.7	0.67%	Yes
BC.03.U3_DBL BED	0.5	0.67%	Yes
BC.03.U3_DBL BED	0.7	0.61%	Yes
BC.03.U4._DBL BED	0.8	0.67%	Yes
BC.03.U4._DBL BED	0.7	0.76%	Yes
BC.03.U5._DBL BED	1.1	0.85%	Yes
BC.03.U6._DBL BED	1	0.73%	Yes
BC.03.U6._DBL BED	0.7	0.73%	Yes
BC.03.U7._DBL BED	0.8	0.73%	Yes
BC.03.U7._DBL BED	0.8	0.85%	Yes
BC.03.U8._DBL BED	1.1	0.85%	Yes
BC.03.U9._DBL BED	0.7	0.67%	Yes
BC.03.U9._SINGLE BED	1.1	0.55%	Yes
BC.04.U1._DBL BED	0.3	0.49%	Yes
BC.04.U10_DBL BED	1	0.64%	Yes
BC.04.U10_DBL BED	0.9	0.67%	Yes
BC.04.U11._DBL BED	0.7	0.73%	Yes
BC.04.U12._DBL BED	0.1	0.49%	Yes
BC.04.U2._DBL BED	0.9	0.73%	Yes
BC.04.U3_DBL BED	0.7	0.67%	Yes
BC.04.U3_DBL BED	0.8	0.61%	Yes
BC.04.U4._DBL BED	0.8	0.67%	Yes
BC.04.U4._DBL BED	0.7	0.70%	Yes
BC.04.U5._DBL BED	1.1	0.85%	Yes
BC.04.U6._DBL BED	1.1	0.73%	Yes
BC.04.U6._DBL BED	0.7	0.67%	Yes
BC.04.U7._DBL BED	0.8	0.70%	Yes

BC.04.U7._DBL BED	0.8	0.79%	Yes
BC.04.U8._DBL BED	1.1	0.82%	Yes
BC.04.U9._DBL BED	0.7	0.67%	Yes
BC.04.U9._SINGLE BED	1.1	0.55%	Yes
BC.05.U1._DBL BED	0.4	0.52%	Yes
BC.05.U10_DBL BED	1	0.67%	Yes
BC.05.U10_DBL BED	0.9	0.67%	Yes
BC.05.U11._DBL BED	1	0.79%	Yes
BC.05.U12._DBL BED	0.4	0.52%	Yes
BC.05.U2._DBL BED	1.1	0.76%	Yes
BC.05.U3_DBL BED	0.8	0.70%	Yes
BC.05.U3_DBL BED	0.8	0.67%	Yes
BC.05.U4._DBL BED	0.7	0.67%	Yes
BC.05.U4._DBL BED	0.6	0.73%	Yes
BC.05.U5._DBL BED	1	0.89%	Yes
BC.05.U6._DBL BED	1	0.73%	Yes
BC.05.U6._DBL BED	0.6	0.70%	Yes
BC.05.U7._DBL BED	0.7	0.70%	Yes
BC.05.U7._DBL BED	0.7	0.82%	Yes
BC.05.U8._DBL BED	1	0.82%	Yes
BC.05.U9._DBL BED	0.6	0.67%	Yes
BC.05.U9._SINGLE BED	1	0.55%	Yes

Block D

Room	Criteria A (% hours ΔT > 1)	Criteria B (% hours Top > 26C)	TM59 Criteria Met?
BD.00.U1._DBL BED	0.8	1.95%	No
BD.00.U2._DBL BED	1.3	1.83%	No
BD.00.U2._SINGLE BED	2.2	1.53%	No
BD.00.U3._DBL BED	1.6	1.98%	No
BD.00.U4._DBL BED	1.7	2.05%	No
BD.01.U1._DBL BED	0.8	0.73%	Yes
BD.01.U10._DBL BED	0.5	0.70%	Yes
BD.01.U2._DBL BED	0.8	0.67%	Yes
BD.01.U2._SINGLE BED	1.3	0.64%	Yes
BD.01.U3._DBL BED	1.1	0.67%	Yes
BD.01.U3._DBL BED	1	0.76%	Yes
BD.01.U4._DBL BED	1	0.73%	Yes
BD.01.U4._DBL BED	1	0.73%	Yes
BD.01.U5._DBL BED	1.4	0.76%	Yes
BD.01.U5._DBL BED	1	0.73%	Yes
BD.01.U6._DBL BED	1.2	0.79%	Yes
BD.01.U7._DBL BED	1	0.73%	Yes
BD.01.U7._DBL BED	0.9	0.67%	Yes
BD.01.U7._SINGLE BED	1	0.49%	Yes
BD.01.U8._DBL BED	1.1	0.85%	Yes
BD.01.U9._DBL BED	1.3	0.89%	Yes
BD.02.U1._DBL BED	0.7	0.73%	Yes
BD.02.U10._DBL BED	0.5	0.73%	Yes
BD.02.U2._DBL BED	0.8	0.67%	Yes
BD.02.U2._SINGLE BED	1.2	0.61%	Yes
BD.02.U3._DBL BED	1.1	0.70%	Yes
BD.02.U3._DBL BED	1	0.76%	Yes
BD.02.U4._DBL BED	1	0.73%	Yes
BD.02.U4._DBL BED	1	0.73%	Yes
BD.02.U5._DBL BED	1.3	0.73%	Yes
BD.02.U5._DBL BED	1	0.73%	Yes
BD.02.U6._DBL BED	1.2	0.82%	Yes
BD.02.U7._DBL BED	1	0.73%	Yes
BD.02.U7._DBL BED	1	0.67%	Yes
BD.02.U7._SINGLE BED	1	0.49%	Yes
BD.02.U8._DBL BED	1.1	0.85%	Yes
BD.02.U9._DBL BED	1.3	0.89%	Yes

BD.03.U1._DBL BED	0.7	0.73%	Yes
BD.03.U10._DBL BED	0.5	0.73%	Yes
BD.03.U2._DBL BED	0.8	0.67%	Yes
BD.03.U2._SINGLE BED	1.2	0.61%	Yes
BD.03.U3._DBL BED	1.1	0.70%	Yes
BD.03.U3._DBL BED	1	0.76%	Yes
BD.03.U4._DBL BED	1	0.73%	Yes
BD.03.U4._DBL BED	1	0.73%	Yes
BD.03.U5._DBL BED	1.3	0.73%	Yes
BD.03.U5._DBL BED	1	0.73%	Yes
BD.03.U6._DBL BED	1.2	0.82%	Yes
BD.03.U7._DBL BED	1	0.73%	Yes
BD.03.U7._DBL BED	0.9	0.67%	Yes
BD.03.U7._SINGLE BED	0.9	0.49%	Yes
BD.03.U8._DBL BED	1.1	0.85%	Yes
BD.03.U9._DBL BED	1.3	0.89%	Yes
BD.04.U1._DBL BED	0.7	0.70%	Yes
BD.04.U10._DBL BED	0.5	0.64%	Yes
BD.04.U2._DBL BED	0.8	0.67%	Yes
BD.04.U2._SINGLE BED	1.2	0.58%	Yes
BD.04.U3._DBL BED	1.1	0.70%	Yes
BD.04.U3._DBL BED	0.8	0.76%	Yes
BD.04.U4._DBL BED	1	0.73%	Yes
BD.04.U4._DBL BED	1	0.73%	Yes
BD.04.U5._DBL BED	1.2	0.73%	Yes
BD.04.U5._DBL BED	1	0.73%	Yes
BD.04.U6._DBL BED	1.2	0.76%	Yes
BD.04.U7._DBL BED	1	0.73%	Yes
BD.04.U7._DBL BED	0.9	0.64%	Yes
BD.04.U7._SINGLE BED	0.9	0.49%	Yes
BD.04.U8._DBL BED	1.1	0.82%	Yes
BD.04.U9._DBL BED	1.3	0.89%	Yes
BD.05.U1._DBL BED	0.7	0.67%	Yes
BD.05.U10._DBL BED	0.5	0.64%	Yes
BD.05.U2._DBL BED	0.8	0.67%	Yes
BD.05.U2._SINGLE BED	1.2	0.52%	Yes
BD.05.U3._DBL BED	1	0.70%	Yes
BD.05.U3._DBL BED	0.9	0.70%	Yes
BD.05.U4._DBL BED	0.9	0.73%	Yes
BD.05.U4._DBL BED	1	0.73%	Yes
BD.05.U5._DBL BED	1.2	0.73%	Yes

BD.05.U5._DBL BED	1	0.73%	Yes
BD.05.U6._DBL BED	1.2	0.76%	Yes
BD.05.U7._DBL BED	0.9	0.73%	Yes
BD.05.U7._DBL BED	0.7	0.64%	Yes
BD.05.U7._SINGLE BED	0.7	0.49%	Yes
BD.05.U8._DBL BED	1	0.76%	Yes
BD.05.U9._DBL BED	1.3	0.89%	Yes
BD.06.U1._DBL BED	0.7	0.67%	Yes
BD.06.U10._DBL BED	0.5	0.64%	Yes
BD.06.U2._DBL BED	0.8	0.64%	Yes
BD.06.U2._SINGLE BED	1.2	0.52%	Yes
BD.06.U3._DBL BED	0.8	0.73%	Yes
BD.06.U3._SINGLE BED	1	0.52%	Yes
BD.06.U4._DBL BED	0.8	0.73%	Yes
BD.06.U4._DBL BED	1	0.73%	Yes
BD.06.U5._DBL BED	1.2	0.73%	Yes
BD.06.U5._DBL BED	1	0.73%	Yes
BD.06.U6._DBL BED	1.2	0.76%	Yes
BD.06.U7_DBL BED	1.2	0.58%	Yes
BD.06.U8._DBL BED	1	0.76%	Yes
BD.06.U9._DBL BED	1.3	0.89%	Yes
BD.07.U1._DBL BED	0.8	0.67%	Yes
BD.07.U10._DBL BED	0.5	0.64%	Yes
BD.07.U2._DBL BED	0.8	0.64%	Yes
BD.07.U2._SINGLE BED	1.1	0.52%	Yes
BD.07.U3._DBL BED	0.8	0.73%	Yes
BD.07.U3._SINGLE BED	1	0.52%	Yes
BD.07.U4._DBL BED	0.9	0.73%	Yes
BD.07.U4._DBL BED	1	0.73%	Yes
BD.07.U5._DBL BED	1.2	0.73%	Yes
BD.07.U5._DBL BED	0.9	0.73%	Yes
BD.07.U6._DBL BED	1.2	0.73%	Yes
BD.07.U7_DBL BED	1.3	0.61%	Yes
BD.07.U8._DBL BED	1	0.76%	Yes
BD.07.U9._DBL BED	1.3	0.85%	Yes
BD.08.U1._DBL BED	0.8	0.67%	Yes
BD.08.U10._DBL BED	0.4	0.61%	Yes
BD.08.U2._DBL BED	0.8	0.64%	Yes
BD.08.U2._SINGLE BED	1.1	0.52%	Yes
BD.08.U3._DBL BED	0.8	0.73%	Yes
BD.08.U3._SINGLE BED	1	0.52%	Yes

BD.08.U4._DBL BED	0.9	0.73%	Yes
BD.08.U4._DBL BED	1	0.73%	Yes
BD.08.U5._DBL BED	1.2	0.73%	Yes
BD.08.U5._DBL BED	0.9	0.73%	Yes
BD.08.U6._DBL BED	1.1	0.73%	Yes
BD.08.U7_DBL BED	1	0.64%	Yes
BD.08.U8._DBL BED	0.9	0.76%	Yes
BD.08.U9._DBL BED	1.1	0.85%	Yes
BD.09.U1._DBL BED	0.8	0.67%	Yes
BD.09.U2._DBL BED	0.7	0.64%	Yes
BD.09.U2._SINGLE BED	1.1	0.49%	Yes
BD.09.U3._DBL BED	0.8	0.73%	Yes
BD.09.U3._SINGLE BED	1	0.52%	Yes
BD.09.U4._DBL BED	0.8	0.73%	Yes
BD.09.U4._DBL BED	0.9	0.73%	Yes
BD.09.U5._DBL BED	1.1	0.67%	Yes
BD.09.U5._DBL BED	0.8	0.61%	Yes
BD.10.U1._DBL BED	0.8	0.67%	Yes
BD.10.U2._DBL BED	0.7	0.64%	Yes
BD.10.U2._SINGLE BED	1.1	0.46%	Yes
BD.10.U3._DBL BED	0.8	0.73%	Yes
BD.10.U3._SINGLE BED	1	0.52%	Yes
BD.10.U4._DBL BED	0.8	0.73%	Yes
BD.10.U4._DBL BED	0.9	0.73%	Yes
BD.10.U5._DBL BED	1.1	0.61%	Yes
BD.10.U5._DBL BED	0.8	0.61%	Yes
BD.11.U1._DBL BED	0.8	0.67%	Yes
BD.11.U2._DBL BED	0.7	0.64%	Yes
BD.11.U2._SINGLE BED	1.1	0.46%	Yes
BD.11.U3._DBL BED	0.9	0.73%	Yes
BD.11.U3._SINGLE BED	1	0.52%	Yes
BD.11.U4._DBL BED	1	0.73%	Yes
BD.11.U4._DBL BED	1	0.73%	Yes
BD.11.U5._DBL BED	1.1	0.61%	Yes
BD.11.U5._DBL BED	0.8	0.61%	Yes
BD.12.U1._DBL BED	0.7	0.67%	Yes
BD.12.U2._DBL BED	0.6	0.64%	Yes
BD.12.U2._SINGLE BED	1.1	0.49%	Yes
BD.12.U3._DBL BED	0.8	0.73%	Yes
BD.12.U3._SINGLE BED	1.1	0.52%	Yes
BD.12.U4._DBL BED	0.9	0.73%	Yes

BD.12.U4._DBL BED	1.2	0.73%	Yes
BD.12.U5._DBL BED	1	0.64%	Yes
BD.12.U5._DBL BED	0.8	0.61%	Yes

Appendix C – All Kitchen/Living Rooms TM59 Results Manchester 2020s

Block A

Room	Criteria A (% hours ΔT > 1)	TM59 Criteria Met?
BA.01.U4._2BED KITCHEN/LIVING	0.5	Yes
BA.01.U5._KITCHEN/LIVING	0.3	Yes
BA.01.U6._2BED KITCHEN/LIVING	0.2	Yes
BA.01.U7._2BED KITCHEN/LIVING	0.4	Yes
BA.01.U8._KITCHEN/LIVING	0.4	Yes
BA.01.U9._2BED KITCHEN/LIVING	0.4	Yes
BA.01.U10._3BED KITCHEN/LIVING	1.2	Yes
BA.01.U11._KITCHEN/LIVING	2	Yes
BA.01.U12._KITCHEN/LIVING	1.4	Yes
BA.01.U1._KITCHEN/LIVING	1.7	Yes
BA.01.U3._2BED KITCHEN/LIVING	0.8	Yes
BA.01.U2._KITCHEN/LIVING	1.4	Yes
BA.02.U4._2BED KITCHEN/LIVING	0.5	Yes
BA.02.U5._KITCHEN/LIVING	0.3	Yes
BA.02.U6._2BED KITCHEN/LIVING	0.3	Yes
BA.02.U7._2BED KITCHEN/LIVING	0.4	Yes
BA.02.U8._KITCHEN/LIVING	0.4	Yes
BA.02.U9._2BED KITCHEN/LIVING	0.5	Yes
BA.02.U10._3BED KITCHEN/LIVING	1.2	Yes
BA.02.U11._KITCHEN/LIVING	2.2	Yes
BA.02.U12._KITCHEN/LIVING	1.5	Yes
BA.02.U1._KITCHEN/LIVING	1.8	Yes
BA.02.U3._2BED KITCHEN/LIVING	0.9	Yes
BA.02.U2._KITCHEN/LIVING	1.5	Yes
BA.03.U4._2BED KITCHEN/LIVING	0.5	Yes
BA.03.U5._KITCHEN/LIVING	0.3	Yes
BA.03.U6._2BED KITCHEN/LIVING	0.3	Yes
BA.03.U7._2BED KITCHEN/LIVING	0.4	Yes
BA.03.U8._KITCHEN/LIVING	0.4	Yes
BA.03.U9._2BED KITCHEN/LIVING	0.5	Yes
BA.03.U10._3BED KITCHEN/LIVING	1.2	Yes
BA.03.U11._KITCHEN/LIVING	2.2	Yes
BA.03.U12._KITCHEN/LIVING	1.5	Yes
BA.03.U1._KITCHEN/LIVING	1.7	Yes
BA.03.U3._2BED KITCHEN/LIVING	0.9	Yes
BA.03.U2._KITCHEN/LIVING	1.6	Yes
BA.04.U4._2BED KITCHEN/LIVING	0.6	Yes
BA.04.U5._KITCHEN/LIVING	0.4	Yes

BA.04.U6._2BED KITCHEN/LIVING	0.3	Yes
BA.04.U7._2BED KITCHEN/LIVING	0.4	Yes
BA.04.U8._KITCHEN/LIVING	0.4	Yes
BA.04.U9._2BED KITCHEN/LIVING	0.5	Yes
BA.04.U10._3BED KITCHEN/LIVING	1.2	Yes
BA.04.U11._KITCHEN/LIVING	2.3	Yes
BA.04.U12._KITCHEN/LIVING	1.6	Yes
BA.04.U1._KITCHEN/LIVING	1.5	Yes
BA.04.U3._2BED KITCHEN/LIVING	0.8	Yes
BA.04.U2._KITCHEN/LIVING	1.4	Yes
BA.05.U4._2BED KITCHEN/LIVING	0.7	Yes
BA.05.U5._KITCHEN/LIVING	0.4	Yes
BA.05.U6._2BED KITCHEN/LIVING	0.3	Yes
BA.05.U7._2BED KITCHEN/LIVING	0.4	Yes
BA.05.U8._KITCHEN/LIVING	0.4	Yes
BA.05.U9._2BED KITCHEN/LIVING	0.6	Yes
BA.05.U10._3BED KITCHEN/LIVING	1.3	Yes
BA.05.U11._KITCHEN/LIVING	2.2	Yes
BA.05.U12._KITCHEN/LIVING	2.2	Yes
BA.05.U1._KITCHEN/LIVING	1.5	Yes
BA.05.U3._2BED KITCHEN/LIVING	0.8	Yes
BA.05.U2._KITCHEN/LIVING	1.3	Yes
BA.06.U4._2BED KITCHEN/LIVING	0.6	Yes
BA.06.U5._KITCHEN/LIVING	0.4	Yes
BA.06.U6._2BED KITCHEN/LIVING	0.3	Yes
BA.06.U7._2BED KITCHEN/LIVING	0.5	Yes
BA.06.U1._KITCHEN/LIVING	1.5	Yes
BA.06.U3._2BED KITCHEN/LIVING	0.8	Yes
BA.06.U2._KITCHEN/LIVING	1.3	Yes
BA.07.U4._2BED KITCHEN/LIVING	0.6	Yes
BA.07.U5._KITCHEN/LIVING	0.4	Yes
BA.07.U6._2BED KITCHEN/LIVING	0.3	Yes
BA.07.U7._2BED KITCHEN/LIVING	0.6	Yes
BA.07.U1._KITCHEN/LIVING	1.5	Yes
BA.07.U3._2BED KITCHEN/LIVING	0.8	Yes
BA.07.U2._KITCHEN/LIVING	1.5	Yes
BA.08.U4._2BED KITCHEN/LIVING	0.6	Yes
BA.08.U5._KITCHEN/LIVING	0.3	Yes
BA.08.U6._2BED KITCHEN/LIVING	0.3	Yes
BA.08.U7._2BED KITCHEN/LIVING	0.5	Yes
BA.08.U1._KITCHEN/LIVING	2.1	Yes
BA.08.U3._2BED KITCHEN/LIVING	1.6	Yes
BA.08.U2._KITCHEN/LIVING	2.1	Yes

Block B

Room	Criteria A (% hours ΔT > 1)	TM59 Criteria Met?
BB.01.U1._KITCHEN/LIVING	0.6	Yes
BB.01.U2._KITCHEN/LIVING	0.7	Yes
BB.01.U5._KITCHEN/LIVING	0.2	Yes
BB.01.U6._2BED KITCHEN/LIVING	0.3	Yes
BB.01.U8._KITCHEN/LIVING	0.3	Yes
BB.01.U9_2BED KITCHEN/LIVING	0.7	Yes
BB.01.U10._3BED KITCHEN/LIVING	1	Yes
BB.01.U11._KITCHEN/LIVING	0.8	Yes
BB.01.U12_KITCHEN/LIVING	1	Yes
BB.01.U3._2BED KITCHEN/LIVING	0.5	Yes
BB.01.U4._2BED KITCHEN/LIVING	0.3	Yes
BB.01.U7._2BED KITCHEN/LIVING	0.3	Yes
BB.02.U1._KITCHEN/LIVING	0.7	Yes
BB.02.U2._KITCHEN/LIVING	0.7	Yes
BB.02.U5._KITCHEN/LIVING	0.3	Yes
BB.02.U6._2BED KITCHEN/LIVING	0.3	Yes
BB.02.U8._KITCHEN/LIVING	0.4	Yes
BB.02.U9_2BED KITCHEN/LIVING	0.7	Yes
BB.02.U10._3BED KITCHEN/LIVING	1	Yes
BB.02.U11._KITCHEN/LIVING	0.9	Yes
BB.02.U12_KITCHEN/LIVING	1	Yes
BB.02.U3._2BED KITCHEN/LIVING	0.5	Yes
BB.02.U4._2BED KITCHEN/LIVING	0.4	Yes
BB.02.U7._2BED KITCHEN/LIVING	0.3	Yes
BB.03.U1._KITCHEN/LIVING	0.8	Yes
BB.03.U2._KITCHEN/LIVING	0.7	Yes
BB.03.U5._KITCHEN/LIVING	0.4	Yes
BB.03.U6._2BED KITCHEN/LIVING	0.3	Yes
BB.03.U8._KITCHEN/LIVING	0.4	Yes
BB.03.U9_2BED KITCHEN/LIVING	0.8	Yes
BB.03.U10._3BED KITCHEN/LIVING	1	Yes
BB.03.U11._KITCHEN/LIVING	0.9	Yes
BB.03.U12_KITCHEN/LIVING	1	Yes
BB.03.U3._2BED KITCHEN/LIVING	0.5	Yes
BB.03.U4._2BED KITCHEN/LIVING	0.5	Yes
BB.03.U7._2BED KITCHEN/LIVING	0.4	Yes
BB.04.U1._KITCHEN/LIVING	0.7	Yes
BB.04.U2._KITCHEN/LIVING	0.7	Yes
BB.04.U5._KITCHEN/LIVING	0.4	Yes

BB.04.U6._2BED KITCHEN/LIVING	0.4	Yes
BB.04.U8._KITCHEN/LIVING	0.4	Yes
BB.04.U9_2BED KITCHEN/LIVING	0.9	Yes
BB.04.U10._3BED KITCHEN/LIVING	1	Yes
BB.04.U11._KITCHEN/LIVING	0.9	Yes
BB.04.U12_KITCHEN/LIVING	1	Yes
BB.04.U3._2BED KITCHEN/LIVING	0.5	Yes
BB.04.U4._2BED KITCHEN/LIVING	0.6	Yes
BB.04.U7._2BED KITCHEN/LIVING	0.4	Yes
BB.05.U1._KITCHEN/LIVING	0.7	Yes
BB.05.U2._KITCHEN/LIVING	0.7	Yes
BB.05.U5._KITCHEN/LIVING	0.4	Yes
BB.05.U6._2BED KITCHEN/LIVING	0.4	Yes
BB.05.U8._KITCHEN/LIVING	0.4	Yes
BB.05.U9_2BED KITCHEN/LIVING	1.2	Yes
BB.05.U10._3BED KITCHEN/LIVING	1.4	Yes
BB.05.U11._KITCHEN/LIVING	0.7	Yes
BB.05.U12_KITCHEN/LIVING	0.9	Yes
BB.05.U3._2BED KITCHEN/LIVING	0.6	Yes
BB.05.U4._2BED KITCHEN/LIVING	0.6	Yes
BB.05.U7._2BED KITCHEN/LIVING	0.4	Yes
BB.06.U1._KITCHEN/LIVING	0.5	Yes
BB.06.U2._KITCHEN/LIVING	0.6	Yes
BB.06.U5._KITCHEN/LIVING	0.4	Yes
BB.06.U6._2BED KITCHEN/LIVING	0.4	Yes
BB.06.U8._KITCHEN/LIVING	0.4	Yes
BB.06.U9_2BED KITCHEN/LIVING	1.2	Yes
BB.06.U11._KITCHEN/LIVING	0.6	Yes
BB.06.U12_KITCHEN/LIVING	0.7	Yes
BB.06.U3._2BED KITCHEN/LIVING	0.6	Yes
BB.06.U4._2BED KITCHEN/LIVING	0.6	Yes
BB.06.U7._2BED KITCHEN/LIVING	0.4	Yes
BB.07.U1._KITCHEN/LIVING	0.6	Yes
BB.07.U2._KITCHEN/LIVING	0.7	Yes
BB.07.U5._KITCHEN/LIVING	0.4	Yes
BB.07.U6._2BED KITCHEN/LIVING	0.4	Yes
BB.07.U8._KITCHEN/LIVING	0.4	Yes
BB.07.U9_2BED KITCHEN/LIVING	1.2	Yes
BB.07.U11._KITCHEN/LIVING	0.7	Yes
BB.07.U12_KITCHEN/LIVING	0.7	Yes
BB.07.U3._2BED KITCHEN/LIVING	0.7	Yes
BB.07.U4._2BED KITCHEN/LIVING	0.5	Yes
BB.07.U7._2BED KITCHEN/LIVING	0.4	Yes

BB.06.U10_2BED KITCHEN/LIVING	1.2	Yes
BB.07.U10_2BED KITCHEN/LIVING	1.3	Yes
BB.08.U1._2BED KITCHEN/LIVING	0.4	Yes
BB.08.U3._KITCHEN/LIVING	0.4	Yes
BB.08.U4_2BED KITCHEN/LIVING	1.2	Yes
BB.08.U6._KITCHEN/LIVING	0.7	Yes
BB.08.U7_KITCHEN/LIVING	0.7	Yes
BB.08.U2._2BED KITCHEN/LIVING	0.4	Yes
BB.08.U5_2BED KITCHEN/LIVING	1.3	Yes
BB.09.U1._2BED KITCHEN/LIVING	0.4	Yes
BB.09.U3._KITCHEN/LIVING	0.4	Yes
BB.09.U4_2BED KITCHEN/LIVING	1.2	Yes
BB.09.U6._KITCHEN/LIVING	0.7	Yes
BB.09.U7_KITCHEN/LIVING	0.8	Yes
BB.09.U2._2BED KITCHEN/LIVING	0.4	Yes
BB.09.U5_2BED KITCHEN/LIVING	1.3	Yes
BB.10.U1._2BED KITCHEN/LIVING	0.3	Yes
BB.10.U3._KITCHEN/LIVING	0.4	Yes
BB.10.U4_2BED KITCHEN/LIVING	1.2	Yes
BB.10.U6._KITCHEN/LIVING	0.9	Yes
BB.10.U7_KITCHEN/LIVING	1	Yes
BB.10.U2._2BED KITCHEN/LIVING	0.4	Yes
BB.10.U5_2BED KITCHEN/LIVING	1.4	Yes

Block C

Room	Criteria A (% hours ΔT > 1)	TM59 Criteria Met?
BC.00.U1._2BED KITCHEN/LIVING	0.2	Yes
BC.00.U2._KITCHEN/LIVING	0.4	Yes
BC.00.U3._2BED KITCHEN/LIVING	0.3	Yes
BC.00.U4._2BED KITCHEN/LIVING	0.3	Yes
BC.00.U5._KITCHEN/LIVING	0.3	Yes
BC.00.U6._2BED KITCHEN/LIVING	1.7	Yes
BC.01.U4._2BED KITCHEN/LIVING	0.4	Yes
BC.01.U5._KITCHEN/LIVING	0.4	Yes
BC.01.U6._2BED KITCHEN/LIVING	0.4	Yes
BC.01.U7._2BED KITCHEN/LIVING	0.3	Yes
BC.01.U8._KITCHEN/LIVING	0.4	Yes
BC.01.U9._2BED KITCHEN/LIVING	1.5	Yes
BC.01.U1._KITCHEN/LIVING	0.6	Yes
BC.01.U2._KITCHEN/LIVING	0.4	Yes
BC.01.U3._2BED KITCHEN/LIVING	0.3	Yes
BC.01.U12._KITCHEN/LIVING	0.3	Yes
BC.01.U11._KITCHEN/LIVING	0.6	Yes
BC.01.U10._2BED KITCHEN/LIVING	0.6	Yes
BC.02.U4._2BED KITCHEN/LIVING	0.4	Yes
BC.02.U5._KITCHEN/LIVING	0.4	Yes
BC.02.U6._2BED KITCHEN/LIVING	0.4	Yes
BC.02.U7._2BED KITCHEN/LIVING	0.3	Yes
BC.02.U8._KITCHEN/LIVING	0.4	Yes
BC.02.U9._2BED KITCHEN/LIVING	1.5	Yes
BC.02.U1._KITCHEN/LIVING	0.6	Yes
BC.02.U2._KITCHEN/LIVING	0.4	Yes
BC.02.U3._2BED KITCHEN/LIVING	0.3	Yes
BC.02.U12._KITCHEN/LIVING	0.4	Yes
BC.02.U11._KITCHEN/LIVING	0.6	Yes
BC.02.U10._2BED KITCHEN/LIVING	0.7	Yes
BC.03.U4._2BED KITCHEN/LIVING	0.4	Yes
BC.03.U5._KITCHEN/LIVING	0.4	Yes
BC.03.U6._2BED KITCHEN/LIVING	0.4	Yes
BC.03.U7._2BED KITCHEN/LIVING	0.3	Yes
BC.03.U8._KITCHEN/LIVING	0.4	Yes
BC.03.U9._2BED KITCHEN/LIVING	1.5	Yes
BC.03.U1._KITCHEN/LIVING	0.6	Yes
BC.03.U2._KITCHEN/LIVING	0.4	Yes
BC.03.U3._2BED KITCHEN/LIVING	0.3	Yes

BC.03.U12._KITCHEN/LIVING	0.4	Yes
BC.03.U11._KITCHEN/LIVING	0.6	Yes
BC.03.U10._2BED KITCHEN/LIVING	0.8	Yes
BC.04.U4._2BED KITCHEN/LIVING	0.4	Yes
BC.04.U5._KITCHEN/LIVING	0.4	Yes
BC.04.U6._2BED KITCHEN/LIVING	0.4	Yes
BC.04.U7._2BED KITCHEN/LIVING	0.4	Yes
BC.04.U8._KITCHEN/LIVING	0.4	Yes
BC.04.U9._2BED KITCHEN/LIVING	1.5	Yes
BC.04.U1._KITCHEN/LIVING	0.6	Yes
BC.04.U2._KITCHEN/LIVING	0.6	Yes
BC.04.U3._2BED KITCHEN/LIVING	0.4	Yes
BC.04.U12._KITCHEN/LIVING	0.4	Yes
BC.04.U11._KITCHEN/LIVING	0.7	Yes
BC.04.U10._2BED KITCHEN/LIVING	0.9	Yes
BC.05.U4._2BED KITCHEN/LIVING	0.3	Yes
BC.05.U5._KITCHEN/LIVING	0.4	Yes
BC.05.U6._2BED KITCHEN/LIVING	0.3	Yes
BC.05.U7._2BED KITCHEN/LIVING	0.3	Yes
BC.05.U8._KITCHEN/LIVING	0.4	Yes
BC.05.U9._2BED KITCHEN/LIVING	1.4	Yes
BC.05.U1._KITCHEN/LIVING	0.8	Yes
BC.05.U2._KITCHEN/LIVING	0.8	Yes
BC.05.U3._2BED KITCHEN/LIVING	0.7	Yes
BC.05.U12._KITCHEN/LIVING	0.9	Yes
BC.05.U11._KITCHEN/LIVING	0.9	Yes
BC.05.U10._2BED KITCHEN/LIVING	1.4	Yes

Block D

Room	Criteria A (% hours ΔT > 1)	TM59 Criteria Met?
BD.01.U1._KITCHEN/LIVING	0.4	Yes
BD.01.U2._2BED KITCHEN/LIVING	1.5	Yes
BD.01.U3._2BED KITCHEN/LIVING	1	Yes
BD.01.U4._2BED KITCHEN/LIVING	0.7	Yes
BD.01.U5._2BED KITCHEN/LIVING	0.6	Yes
BD.01.U6._KITCHEN/LIVING	0.7	Yes
BD.01.U7._3BED KITCHEN/LIVING	0.7	Yes
BD.01.U8._KITCHEN/LIVING	0.6	Yes
BD.01.U9._KITCHEN/LIVING	0.5	Yes
BD.01.U10._KITCHEN/LIVING	0.6	Yes
BD.02.U1._KITCHEN/LIVING	0.4	Yes
BD.02.U2._2BED KITCHEN/LIVING	1.5	Yes
BD.02.U3._2BED KITCHEN/LIVING	1	Yes
BD.02.U4._2BED KITCHEN/LIVING	0.7	Yes
BD.02.U5._2BED KITCHEN/LIVING	0.6	Yes
BD.02.U6._KITCHEN/LIVING	0.7	Yes
BD.02.U7._3BED KITCHEN/LIVING	0.6	Yes
BD.02.U8._KITCHEN/LIVING	0.6	Yes
BD.02.U9._KITCHEN/LIVING	0.5	Yes
BD.02.U10._KITCHEN/LIVING	0.6	Yes
BD.03.U1._KITCHEN/LIVING	0.4	Yes
BD.03.U2._2BED KITCHEN/LIVING	1.5	Yes
BD.03.U3._2BED KITCHEN/LIVING	1	Yes
BD.03.U4._2BED KITCHEN/LIVING	0.7	Yes
BD.03.U5._2BED KITCHEN/LIVING	0.6	Yes
BD.03.U6._KITCHEN/LIVING	0.7	Yes
BD.03.U7._3BED KITCHEN/LIVING	0.6	Yes
BD.03.U8._KITCHEN/LIVING	0.6	Yes
BD.03.U9._KITCHEN/LIVING	0.5	Yes
BD.03.U10._KITCHEN/LIVING	0.6	Yes
BD.04.U1._KITCHEN/LIVING	0.4	Yes
BD.04.U2._2BED KITCHEN/LIVING	1.5	Yes
BD.04.U3._2BED KITCHEN/LIVING	1	Yes
BD.04.U4._2BED KITCHEN/LIVING	0.7	Yes
BD.04.U5._2BED KITCHEN/LIVING	0.6	Yes
BD.04.U6._KITCHEN/LIVING	0.7	Yes
BD.04.U7._3BED KITCHEN/LIVING	0.6	Yes
BD.04.U8._KITCHEN/LIVING	0.6	Yes
BD.04.U9._KITCHEN/LIVING	0.5	Yes

BD.04.U10._KITCHEN/LIVING	0.6	Yes
BD.05.U1._KITCHEN/LIVING	0.4	Yes
BD.05.U2._2BED KITCHEN/LIVING	1.5	Yes
BD.05.U3._2BED KITCHEN/LIVING	1.4	Yes
BD.05.U4._2BED KITCHEN/LIVING	0.6	Yes
BD.05.U5._2BED KITCHEN/LIVING	0.6	Yes
BD.05.U6._KITCHEN/LIVING	0.7	Yes
BD.05.U7._3BED KITCHEN/LIVING	0.5	Yes
BD.05.U8._KITCHEN/LIVING	0.6	Yes
BD.05.U9._KITCHEN/LIVING	0.5	Yes
BD.05.U10._KITCHEN/LIVING	0.6	Yes
BD.06.U1._KITCHEN/LIVING	0.4	Yes
BD.06.U2._2BED KITCHEN/LIVING	1.5	Yes
BD.06.U4._2BED KITCHEN/LIVING	0.6	Yes
BD.06.U5._2BED KITCHEN/LIVING	0.6	Yes
BD.06.U6._KITCHEN/LIVING	0.7	Yes
BD.06.U8._KITCHEN/LIVING	0.6	Yes
BD.06.U9._KITCHEN/LIVING	0.5	Yes
BD.06.U10._KITCHEN/LIVING	0.6	Yes
BD.06.U7_1BED KITCHEN/LIVING	0.6	Yes
BD.06.U3._2BED KITCHEN/LIVING	1.5	Yes
BD.07.U1._KITCHEN/LIVING	0.4	Yes
BD.07.U2._2BED KITCHEN/LIVING	1.5	Yes
BD.07.U4._2BED KITCHEN/LIVING	0.6	Yes
BD.07.U5._2BED KITCHEN/LIVING	0.6	Yes
BD.07.U6._KITCHEN/LIVING	0.7	Yes
BD.07.U8._KITCHEN/LIVING	0.6	Yes
BD.07.U9._KITCHEN/LIVING	0.5	Yes
BD.07.U10._KITCHEN/LIVING	0.6	Yes
BD.07.U7_1BED KITCHEN/LIVING	0.7	Yes
BD.07.U3._2BED KITCHEN/LIVING	1.4	Yes
BD.08.U1._KITCHEN/LIVING	0.4	Yes
BD.08.U2._2BED KITCHEN/LIVING	1.4	Yes
BD.08.U4._2BED KITCHEN/LIVING	0.6	Yes
BD.08.U5._2BED KITCHEN/LIVING	0.6	Yes
BD.08.U6._KITCHEN/LIVING	0.6	Yes
BD.08.U8._KITCHEN/LIVING	0.5	Yes
BD.08.U9._KITCHEN/LIVING	0.5	Yes
BD.08.U10._KITCHEN/LIVING	0.6	Yes
BD.08.U7_1BED KITCHEN/LIVING	0.7	Yes
BD.08.U3._2BED KITCHEN/LIVING	1.3	Yes
BD.09.U1._KITCHEN/LIVING	0.4	Yes
BD.09.U2._2BED KITCHEN/LIVING	1.3	Yes

BD.09.U4._2BED KITCHEN/LIVING	0.6	Yes
BD.09.U3._2BED KITCHEN/LIVING	1.3	Yes
BD.09.U5._2BED KITCHEN/LIVING	0.6	Yes
BD.10.U1._KITCHEN/LIVING	0.4	Yes
BD.10.U2._2BED KITCHEN/LIVING	1.3	Yes
BD.10.U4._2BED KITCHEN/LIVING	0.7	Yes
BD.10.U3._2BED KITCHEN/LIVING	1.3	Yes
BD.10.U5._2BED KITCHEN/LIVING	0.6	Yes
BD.11.U1._KITCHEN/LIVING	0.4	Yes
BD.11.U2._2BED KITCHEN/LIVING	1.3	Yes
BD.11.U4._2BED KITCHEN/LIVING	0.7	Yes
BD.11.U3._2BED KITCHEN/LIVING	1.2	Yes
BD.11.U5._2BED KITCHEN/LIVING	0.6	Yes
BD.12.U1._KITCHEN/LIVING	0.3	Yes
BD.12.U2._2BED KITCHEN/LIVING	1.2	Yes
BD.12.U4._2BED KITCHEN/LIVING	0.9	Yes
BD.12.U3._2BED KITCHEN/LIVING	1.2	Yes
BD.12.U5._2BED KITCHEN/LIVING	0.7	Yes
BD.00.U1._KITCHEN/LIVING	0.4	Yes
BD.00.U2._2BED KITCHEN/LIVING	2	Yes
BD.00.U3._KITCHEN/LIVING	0.6	Yes
BD.00.U4._KITCHEN/LIVING	0.6	Yes

Appendix D – All Kitchen/Living Rooms TM59 Results Manchester 2050s for Information Only

Block A

Room	Criteria A (% hours ΔT > 1)	TM59 Criteria Met?
BA.01.U1._KITCHEN/LIVING	2.9	Yes
BA.01.U10._3BED KITCHEN/LIVING	2.5	Yes
BA.01.U11._KITCHEN/LIVING	3.9	No
BA.01.U12._KITCHEN/LIVING	2.5	Yes
BA.01.U2._KITCHEN/LIVING	2.4	Yes
BA.01.U3._2BED KITCHEN/LIVING	1.9	Yes
BA.01.U4._2BED KITCHEN/LIVING	1.3	Yes
BA.01.U5._KITCHEN/LIVING	1.1	Yes
BA.01.U6._2BED KITCHEN/LIVING	0.9	Yes
BA.01.U7._2BED KITCHEN/LIVING	1.2	Yes
BA.01.U8._KITCHEN/LIVING	1.3	Yes
BA.01.U9._2BED KITCHEN/LIVING	1.5	Yes
BA.02.U1._KITCHEN/LIVING	2.9	Yes
BA.02.U10._3BED KITCHEN/LIVING	2.5	Yes
BA.02.U11._KITCHEN/LIVING	4.1	No
BA.02.U12._KITCHEN/LIVING	2.7	Yes
BA.02.U2._KITCHEN/LIVING	2.6	Yes
BA.02.U3._2BED KITCHEN/LIVING	1.9	Yes
BA.02.U4._2BED KITCHEN/LIVING	1.5	Yes
BA.02.U5._KITCHEN/LIVING	1.2	Yes
BA.02.U6._2BED KITCHEN/LIVING	1.2	Yes
BA.02.U7._2BED KITCHEN/LIVING	1.4	Yes
BA.02.U8._KITCHEN/LIVING	1.5	Yes
BA.02.U9._2BED KITCHEN/LIVING	1.5	Yes
BA.03.U1._KITCHEN/LIVING	2.8	Yes
BA.03.U10._3BED KITCHEN/LIVING	2.6	Yes
BA.03.U11._KITCHEN/LIVING	4.1	No
BA.03.U12._KITCHEN/LIVING	2.7	Yes
BA.03.U2._KITCHEN/LIVING	2.7	Yes
BA.03.U3._2BED KITCHEN/LIVING	2	Yes
BA.03.U4._2BED KITCHEN/LIVING	1.7	Yes
BA.03.U5._KITCHEN/LIVING	1.3	Yes
BA.03.U6._2BED KITCHEN/LIVING	1.2	Yes
BA.03.U7._2BED KITCHEN/LIVING	1.4	Yes

BA.03.U8._KITCHEN/LIVING	1.5	Yes
BA.03.U9._2BED KITCHEN/LIVING	1.6	Yes
BA.04.U1._KITCHEN/LIVING	2.6	Yes
BA.04.U10._3BED KITCHEN/LIVING	2.6	Yes
BA.04.U11._KITCHEN/LIVING	4.1	No
BA.04.U12._KITCHEN/LIVING	2.7	Yes
BA.04.U2._KITCHEN/LIVING	2.4	Yes
BA.04.U3._2BED KITCHEN/LIVING	2	Yes
BA.04.U4._2BED KITCHEN/LIVING	1.9	Yes
BA.04.U5._KITCHEN/LIVING	1.3	Yes
BA.04.U6._2BED KITCHEN/LIVING	1.2	Yes
BA.04.U7._2BED KITCHEN/LIVING	1.4	Yes
BA.04.U8._KITCHEN/LIVING	1.5	Yes
BA.04.U9._2BED KITCHEN/LIVING	1.6	Yes
BA.05.U1._KITCHEN/LIVING	2.5	Yes
BA.05.U10._3BED KITCHEN/LIVING	2.6	Yes
BA.05.U11._KITCHEN/LIVING	4.1	No
BA.05.U12._KITCHEN/LIVING	4.1	No
BA.05.U2._KITCHEN/LIVING	2.4	Yes
BA.05.U3._2BED KITCHEN/LIVING	2	Yes
BA.05.U4._2BED KITCHEN/LIVING	1.9	Yes
BA.05.U5._KITCHEN/LIVING	1.4	Yes
BA.05.U6._2BED KITCHEN/LIVING	1.2	Yes
BA.05.U7._2BED KITCHEN/LIVING	1.4	Yes
BA.05.U8._KITCHEN/LIVING	1.5	Yes
BA.05.U9._2BED KITCHEN/LIVING	1.7	Yes
BA.06.U1._KITCHEN/LIVING	2.5	Yes
BA.06.U2._KITCHEN/LIVING	2.5	Yes
BA.06.U3._2BED KITCHEN/LIVING	2	Yes
BA.06.U4._2BED KITCHEN/LIVING	1.8	Yes
BA.06.U5._KITCHEN/LIVING	1.3	Yes
BA.06.U6._2BED KITCHEN/LIVING	1.1	Yes
BA.06.U7._2BED KITCHEN/LIVING	1.8	Yes
BA.07.U1._KITCHEN/LIVING	2.6	Yes
BA.07.U2._KITCHEN/LIVING	2.6	Yes
BA.07.U3._2BED KITCHEN/LIVING	2	Yes
BA.07.U4._2BED KITCHEN/LIVING	1.9	Yes
BA.07.U5._KITCHEN/LIVING	1.3	Yes
BA.07.U6._2BED KITCHEN/LIVING	1.1	Yes
BA.07.U7._2BED KITCHEN/LIVING	1.8	Yes
BA.08.U1._KITCHEN/LIVING	3.8	No

BA.08.U2._KITCHEN/LIVING	3.8	No
BA.08.U3._2BED KITCHEN/LIVING	2.7	Yes
BA.08.U4._2BED KITCHEN/LIVING	1.9	Yes
BA.08.U5._KITCHEN/LIVING	1.2	Yes
BA.08.U6._2BED KITCHEN/LIVING	1	Yes
BA.08.U7._2BED KITCHEN/LIVING	1.7	Yes

Block B

Room	Criteria A (% hours ΔT > 1)	TM59 Criteria Met?
BB.01.U1._KITCHEN/LIVING	1.7	Yes
BB.01.U10._3BED KITCHEN/LIVING	2.2	Yes
BB.01.U11._KITCHEN/LIVING	1.8	Yes
BB.01.U12_KITCHEN/LIVING	2.1	Yes
BB.01.U2._KITCHEN/LIVING	1.5	Yes
BB.01.U3._2BED KITCHEN/LIVING	1.5	Yes
BB.01.U4._2BED KITCHEN/LIVING	1.3	Yes
BB.01.U5._KITCHEN/LIVING	1	Yes
BB.01.U6._2BED KITCHEN/LIVING	1	Yes
BB.01.U7._2BED KITCHEN/LIVING	1.2	Yes
BB.01.U8._KITCHEN/LIVING	1.3	Yes
BB.01.U9_2BED KITCHEN/LIVING	1.7	Yes
BB.02.U1._KITCHEN/LIVING	1.8	Yes
BB.02.U10._3BED KITCHEN/LIVING	2.3	Yes
BB.02.U11._KITCHEN/LIVING	2	Yes
BB.02.U12_KITCHEN/LIVING	2.2	Yes
BB.02.U2._KITCHEN/LIVING	1.8	Yes
BB.02.U3._2BED KITCHEN/LIVING	1.7	Yes
BB.02.U4._2BED KITCHEN/LIVING	1.6	Yes
BB.02.U5._KITCHEN/LIVING	1.3	Yes
BB.02.U6._2BED KITCHEN/LIVING	1.3	Yes
BB.02.U7._2BED KITCHEN/LIVING	1.4	Yes
BB.02.U8._KITCHEN/LIVING	1.5	Yes
BB.02.U9_2BED KITCHEN/LIVING	1.8	Yes
BB.03.U1._KITCHEN/LIVING	1.8	Yes
BB.03.U10._3BED KITCHEN/LIVING	2.3	Yes
BB.03.U11._KITCHEN/LIVING	2.1	Yes
BB.03.U12_KITCHEN/LIVING	2.2	Yes
BB.03.U2._KITCHEN/LIVING	1.8	Yes
BB.03.U3._2BED KITCHEN/LIVING	1.8	Yes
BB.03.U4._2BED KITCHEN/LIVING	1.7	Yes
BB.03.U5._KITCHEN/LIVING	1.5	Yes
BB.03.U6._2BED KITCHEN/LIVING	1.4	Yes
BB.03.U7._2BED KITCHEN/LIVING	1.4	Yes
BB.03.U8._KITCHEN/LIVING	1.6	Yes
BB.03.U9_2BED KITCHEN/LIVING	1.9	Yes
BB.04.U1._KITCHEN/LIVING	1.8	Yes

BB.04.U10._3BED KITCHEN/LIVING	2.3	Yes
BB.04.U11._KITCHEN/LIVING	2	Yes
BB.04.U12_KITCHEN/LIVING	2.2	Yes
BB.04.U2._KITCHEN/LIVING	1.8	Yes
BB.04.U3._2BED KITCHEN/LIVING	1.8	Yes
BB.04.U4._2BED KITCHEN/LIVING	1.7	Yes
BB.04.U5._KITCHEN/LIVING	1.6	Yes
BB.04.U6._2BED KITCHEN/LIVING	1.5	Yes
BB.04.U7._2BED KITCHEN/LIVING	1.5	Yes
BB.04.U8._KITCHEN/LIVING	1.6	Yes
BB.04.U9_2BED KITCHEN/LIVING	2	Yes
BB.05.U1._KITCHEN/LIVING	1.8	Yes
BB.05.U10._3BED KITCHEN/LIVING	2.9	Yes
BB.05.U11._KITCHEN/LIVING	1.8	Yes
BB.05.U12_KITCHEN/LIVING	1.9	Yes
BB.05.U2._KITCHEN/LIVING	1.7	Yes
BB.05.U3._2BED KITCHEN/LIVING	1.8	Yes
BB.05.U4._2BED KITCHEN/LIVING	1.7	Yes
BB.05.U5._KITCHEN/LIVING	1.6	Yes
BB.05.U6._2BED KITCHEN/LIVING	1.6	Yes
BB.05.U7._2BED KITCHEN/LIVING	1.6	Yes
BB.05.U8._KITCHEN/LIVING	1.6	Yes
BB.05.U9_2BED KITCHEN/LIVING	2.2	Yes
BB.06.U1._KITCHEN/LIVING	1.5	Yes
BB.06.U10_2BED KITCHEN/LIVING	2.8	Yes
BB.06.U11._KITCHEN/LIVING	1.7	Yes
BB.06.U12_KITCHEN/LIVING	1.7	Yes
BB.06.U2._KITCHEN/LIVING	1.7	Yes
BB.06.U3._2BED KITCHEN/LIVING	1.7	Yes
BB.06.U4._2BED KITCHEN/LIVING	1.7	Yes
BB.06.U5._KITCHEN/LIVING	1.6	Yes
BB.06.U6._2BED KITCHEN/LIVING	1.6	Yes
BB.06.U7._2BED KITCHEN/LIVING	1.6	Yes
BB.06.U8._KITCHEN/LIVING	1.6	Yes
BB.06.U9_2BED KITCHEN/LIVING	2.3	Yes
BB.07.U1._KITCHEN/LIVING	1.6	Yes
BB.07.U10_2BED KITCHEN/LIVING	2.8	Yes
BB.07.U11._KITCHEN/LIVING	1.8	Yes
BB.07.U12_KITCHEN/LIVING	1.7	Yes
BB.07.U2._KITCHEN/LIVING	1.8	Yes
BB.07.U3._2BED KITCHEN/LIVING	1.9	Yes

BB.07.U4._2BED KITCHEN/LIVING	1.7	Yes
BB.07.U5._KITCHEN/LIVING	1.7	Yes
BB.07.U6._2BED KITCHEN/LIVING	1.5	Yes
BB.07.U7._2BED KITCHEN/LIVING	1.5	Yes
BB.07.U8._KITCHEN/LIVING	1.6	Yes
BB.07.U9_2BED KITCHEN/LIVING	2.3	Yes
BB.08.U1._2BED KITCHEN/LIVING	1.4	Yes
BB.08.U2._2BED KITCHEN/LIVING	1.5	Yes
BB.08.U3._KITCHEN/LIVING	1.6	Yes
BB.08.U4_2BED KITCHEN/LIVING	2.3	Yes
BB.08.U5_2BED KITCHEN/LIVING	2.8	Yes
BB.08.U6._KITCHEN/LIVING	1.8	Yes
BB.08.U7_KITCHEN/LIVING	1.7	Yes
BB.09.U1._2BED KITCHEN/LIVING	1.4	Yes
BB.09.U2._2BED KITCHEN/LIVING	1.5	Yes
BB.09.U3._KITCHEN/LIVING	1.6	Yes
BB.09.U4_2BED KITCHEN/LIVING	2.3	Yes
BB.09.U5_2BED KITCHEN/LIVING	2.8	Yes
BB.09.U6._KITCHEN/LIVING	1.8	Yes
BB.09.U7_KITCHEN/LIVING	1.9	Yes
BB.10.U1._2BED KITCHEN/LIVING	1.4	Yes
BB.10.U2._2BED KITCHEN/LIVING	1.6	Yes
BB.10.U3._KITCHEN/LIVING	1.7	Yes
BB.10.U4_2BED KITCHEN/LIVING	2.3	Yes
BB.10.U5_2BED KITCHEN/LIVING	2.8	Yes
BB.10.U6._KITCHEN/LIVING	2	Yes
BB.10.U7_KITCHEN/LIVING	2.1	Yes

Block C

Room	Criteria A (% hours ΔT > 1)	TM59 Criteria Met?
BC.00.U1._2BED KITCHEN/LIVING	1.4	Yes
BC.00.U2._KITCHEN/LIVING	1.8	Yes
BC.00.U3._2BED KITCHEN/LIVING	1.6	Yes
BC.00.U4._2BED KITCHEN/LIVING	1.2	Yes
BC.00.U5._KITCHEN/LIVING	1.7	Yes
BC.00.U6._2BED KITCHEN/LIVING	3.1	No
BC.01.U1._KITCHEN/LIVING	1.2	Yes
BC.01.U10._2BED KITCHEN/LIVING	1.6	Yes
BC.01.U11._KITCHEN/LIVING	1.4	Yes
BC.01.U12._KITCHEN/LIVING	1	Yes
BC.01.U2._KITCHEN/LIVING	1.1	Yes
BC.01.U3._2BED KITCHEN/LIVING	1.2	Yes
BC.01.U4._2BED KITCHEN/LIVING	1.4	Yes
BC.01.U5._KITCHEN/LIVING	1.6	Yes
BC.01.U6._2BED KITCHEN/LIVING	1.5	Yes
BC.01.U7._2BED KITCHEN/LIVING	1.4	Yes
BC.01.U8._KITCHEN/LIVING	1.5	Yes
BC.01.U9._2BED KITCHEN/LIVING	2.4	Yes
BC.02.U1._KITCHEN/LIVING	1.4	Yes
BC.02.U10._2BED KITCHEN/LIVING	1.8	Yes
BC.02.U11._KITCHEN/LIVING	1.4	Yes
BC.02.U12._KITCHEN/LIVING	1	Yes
BC.02.U2._KITCHEN/LIVING	1.3	Yes
BC.02.U3._2BED KITCHEN/LIVING	1.2	Yes
BC.02.U4._2BED KITCHEN/LIVING	1.4	Yes
BC.02.U5._KITCHEN/LIVING	1.6	Yes
BC.02.U6._2BED KITCHEN/LIVING	1.5	Yes
BC.02.U7._2BED KITCHEN/LIVING	1.4	Yes
BC.02.U8._KITCHEN/LIVING	1.5	Yes
BC.02.U9._2BED KITCHEN/LIVING	2.4	Yes
BC.03.U1._KITCHEN/LIVING	1.4	Yes
BC.03.U10._2BED KITCHEN/LIVING	1.9	Yes
BC.03.U11._KITCHEN/LIVING	1.4	Yes
BC.03.U12._KITCHEN/LIVING	1	Yes
BC.03.U2._KITCHEN/LIVING	1.3	Yes
BC.03.U3._2BED KITCHEN/LIVING	1.3	Yes
BC.03.U4._2BED KITCHEN/LIVING	1.4	Yes

BC.03.U5._KITCHEN/LIVING	1.6	Yes
BC.03.U6._2BED KITCHEN/LIVING	1.5	Yes
BC.03.U7._2BED KITCHEN/LIVING	1.4	Yes
BC.03.U8._KITCHEN/LIVING	1.5	Yes
BC.03.U9._2BED KITCHEN/LIVING	2.5	Yes
BC.04.U1._KITCHEN/LIVING	1.4	Yes
BC.04.U10._2BED KITCHEN/LIVING	2.2	Yes
BC.04.U11._KITCHEN/LIVING	1.5	Yes
BC.04.U12._KITCHEN/LIVING	1.4	Yes
BC.04.U2._KITCHEN/LIVING	1.4	Yes
BC.04.U3._2BED KITCHEN/LIVING	1.4	Yes
BC.04.U4._2BED KITCHEN/LIVING	1.4	Yes
BC.04.U5._KITCHEN/LIVING	1.6	Yes
BC.04.U6._2BED KITCHEN/LIVING	1.5	Yes
BC.04.U7._2BED KITCHEN/LIVING	1.4	Yes
BC.04.U8._KITCHEN/LIVING	1.5	Yes
BC.04.U9._2BED KITCHEN/LIVING	2.5	Yes
BC.05.U1._KITCHEN/LIVING	1.8	Yes
BC.05.U10._2BED KITCHEN/LIVING	2.7	Yes
BC.05.U11._KITCHEN/LIVING	1.8	Yes
BC.05.U12._KITCHEN/LIVING	1.9	Yes
BC.05.U2._KITCHEN/LIVING	1.8	Yes
BC.05.U3._2BED KITCHEN/LIVING	1.9	Yes
BC.05.U4._2BED KITCHEN/LIVING	1.3	Yes
BC.05.U5._KITCHEN/LIVING	1.7	Yes
BC.05.U6._2BED KITCHEN/LIVING	1.7	Yes
BC.05.U7._2BED KITCHEN/LIVING	1.5	Yes
BC.05.U8._KITCHEN/LIVING	1.7	Yes
BC.05.U9._2BED KITCHEN/LIVING	2.5	Yes

Block D

Room	Criteria A (% hours ΔT > 1)	TM59 Criteria Met?
BD.00.U1._KITCHEN/LIVING	1.7	Yes
BD.00.U2._2BED KITCHEN/LIVING	3.7	No
BD.00.U3._KITCHEN/LIVING	2	Yes
BD.00.U4._KITCHEN/LIVING	2	Yes
BD.01.U1._KITCHEN/LIVING	1.6	Yes
BD.01.U10._KITCHEN/LIVING	1.9	Yes
BD.01.U2._2BED KITCHEN/LIVING	2.8	Yes
BD.01.U3._2BED KITCHEN/LIVING	2.5	Yes
BD.01.U4._2BED KITCHEN/LIVING	1.8	Yes
BD.01.U5._2BED KITCHEN/LIVING	1.6	Yes
BD.01.U6._KITCHEN/LIVING	1.8	Yes
BD.01.U7._3BED KITCHEN/LIVING	1.8	Yes
BD.01.U8._KITCHEN/LIVING	1.7	Yes
BD.01.U9._KITCHEN/LIVING	1.9	Yes
BD.02.U1._KITCHEN/LIVING	1.6	Yes
BD.02.U10._KITCHEN/LIVING	1.9	Yes
BD.02.U2._2BED KITCHEN/LIVING	2.7	Yes
BD.02.U3._2BED KITCHEN/LIVING	2.5	Yes
BD.02.U4._2BED KITCHEN/LIVING	1.8	Yes
BD.02.U5._2BED KITCHEN/LIVING	1.6	Yes
BD.02.U6._KITCHEN/LIVING	1.7	Yes
BD.02.U7._3BED KITCHEN/LIVING	1.8	Yes
BD.02.U8._KITCHEN/LIVING	1.7	Yes
BD.02.U9._KITCHEN/LIVING	1.9	Yes
BD.03.U1._KITCHEN/LIVING	1.6	Yes
BD.03.U10._KITCHEN/LIVING	2	Yes
BD.03.U2._2BED KITCHEN/LIVING	2.7	Yes
BD.03.U3._2BED KITCHEN/LIVING	2.5	Yes
BD.03.U4._2BED KITCHEN/LIVING	1.7	Yes
BD.03.U5._2BED KITCHEN/LIVING	1.5	Yes
BD.03.U6._KITCHEN/LIVING	1.7	Yes
BD.03.U7._3BED KITCHEN/LIVING	1.7	Yes
BD.03.U8._KITCHEN/LIVING	1.7	Yes
BD.03.U9._KITCHEN/LIVING	1.9	Yes
BD.04.U1._KITCHEN/LIVING	1.5	Yes
BD.04.U10._KITCHEN/LIVING	1.9	Yes
BD.04.U2._2BED KITCHEN/LIVING	2.6	Yes

BD.04.U3._2BED KITCHEN/LIVING	2.5	Yes
BD.04.U4._2BED KITCHEN/LIVING	1.7	Yes
BD.04.U5._2BED KITCHEN/LIVING	1.5	Yes
BD.04.U6._KITCHEN/LIVING	1.7	Yes
BD.04.U7._3BED KITCHEN/LIVING	1.7	Yes
BD.04.U8._KITCHEN/LIVING	1.7	Yes
BD.04.U9._KITCHEN/LIVING	1.9	Yes
BD.05.U1._KITCHEN/LIVING	1.5	Yes
BD.05.U10._KITCHEN/LIVING	1.9	Yes
BD.05.U2._2BED KITCHEN/LIVING	2.5	Yes
BD.05.U3._2BED KITCHEN/LIVING	2.9	Yes
BD.05.U4._2BED KITCHEN/LIVING	1.7	Yes
BD.05.U5._2BED KITCHEN/LIVING	1.5	Yes
BD.05.U6._KITCHEN/LIVING	1.7	Yes
BD.05.U7._3BED KITCHEN/LIVING	1.5	Yes
BD.05.U8._KITCHEN/LIVING	1.7	Yes
BD.05.U9._KITCHEN/LIVING	1.9	Yes
BD.06.U1._KITCHEN/LIVING	1.5	Yes
BD.06.U10._KITCHEN/LIVING	1.8	Yes
BD.06.U2._2BED KITCHEN/LIVING	2.5	Yes
BD.06.U3._2BED KITCHEN/LIVING	2.9	Yes
BD.06.U4._2BED KITCHEN/LIVING	1.6	Yes
BD.06.U5._2BED KITCHEN/LIVING	1.5	Yes
BD.06.U6._KITCHEN/LIVING	1.7	Yes
BD.06.U7_1BED KITCHEN/LIVING	1.7	Yes
BD.06.U8._KITCHEN/LIVING	1.7	Yes
BD.06.U9._KITCHEN/LIVING	1.9	Yes
BD.07.U1._KITCHEN/LIVING	1.5	Yes
BD.07.U10._KITCHEN/LIVING	2	Yes
BD.07.U2._2BED KITCHEN/LIVING	2.5	Yes
BD.07.U3._2BED KITCHEN/LIVING	2.7	Yes
BD.07.U4._2BED KITCHEN/LIVING	1.6	Yes
BD.07.U5._2BED KITCHEN/LIVING	1.5	Yes
BD.07.U6._KITCHEN/LIVING	1.7	Yes
BD.07.U7_1BED KITCHEN/LIVING	1.8	Yes
BD.07.U8._KITCHEN/LIVING	1.7	Yes
BD.07.U9._KITCHEN/LIVING	1.9	Yes
BD.08.U1._KITCHEN/LIVING	1.5	Yes
BD.08.U10._KITCHEN/LIVING	2	Yes
BD.08.U2._2BED KITCHEN/LIVING	2.5	Yes
BD.08.U3._2BED KITCHEN/LIVING	2.7	Yes

BD.08.U4._2BED KITCHEN/LIVING	1.6	Yes
BD.08.U5._2BED KITCHEN/LIVING	1.5	Yes
BD.08.U6._KITCHEN/LIVING	1.7	Yes
BD.08.U7_1BED KITCHEN/LIVING	1.9	Yes
BD.08.U8._KITCHEN/LIVING	1.6	Yes
BD.08.U9._KITCHEN/LIVING	2	Yes
BD.09.U1._KITCHEN/LIVING	1.5	Yes
BD.09.U2._2BED KITCHEN/LIVING	2.5	Yes
BD.09.U3._2BED KITCHEN/LIVING	2.7	Yes
BD.09.U4._2BED KITCHEN/LIVING	1.7	Yes
BD.09.U5._2BED KITCHEN/LIVING	1.7	Yes
BD.10.U1._KITCHEN/LIVING	1.5	Yes
BD.10.U2._2BED KITCHEN/LIVING	2.5	Yes
BD.10.U3._2BED KITCHEN/LIVING	2.7	Yes
BD.10.U4._2BED KITCHEN/LIVING	1.8	Yes
BD.10.U5._2BED KITCHEN/LIVING	1.7	Yes
BD.11.U1._KITCHEN/LIVING	1.5	Yes
BD.11.U2._2BED KITCHEN/LIVING	2.5	Yes
BD.11.U3._2BED KITCHEN/LIVING	2.7	Yes
BD.11.U4._2BED KITCHEN/LIVING	1.9	Yes
BD.11.U5._2BED KITCHEN/LIVING	1.7	Yes
BD.12.U1._KITCHEN/LIVING	1.6	Yes
BD.12.U2._2BED KITCHEN/LIVING	2.4	Yes
BD.12.U3._2BED KITCHEN/LIVING	2.7	Yes
BD.12.U4._2BED KITCHEN/LIVING	2	Yes
BD.12.U5._2BED KITCHEN/LIVING	1.9	Yes

Appendix E – Corridor Results Manchester 2020s

Block A

Room	% hours Operative Temp > 28°C	Significant Risk of Overheating?
BA.01.Circulation Mid	0.0	No
BA.01.Circulation S	0.0	No
BA.01.Circulation N	0.0	No
BA.02.Circulation Mid	0.0	No
BA.02.Circulation S	0.1	No
BA.02.Circulation N	0.0	No
BA.03.Circulation Mid	0.0	No
BA.03.Circulation S	0.1	No
BA.03.Circulation N	0.0	No
BA.04.Circulation Mid	0.0	No
BA.04.Circulation S	0.1	No
BA.04.Circulation N	0.0	No
BA.05.Circulation Mid	0.0	No
BA.05.Circulation S	0.1	No
BA.05.Circulation N	0.0	No
BA.06.Circulation Mid	0.0	No
BA.06.Circulation N	0.0	No
BA.06.Circulation S	0.3	No
BA.07.Circulation Mid	0.0	No
BA.07.Circulation N	0.0	No
BA.07.Circulation S	0.3	No
BA.08.Circulation Mid	0.0	No
BA.08.Circulation N	0.0	No
BA.08.Circulation S	0.3	No

Block B

Room	% hours Operative Temp > 28°C	Significant Risk of Overheating?
BB.01.Circulation N	0	No
BB.01.Circulation S	0	No
BB.01.Circulation Mid	0	No
BB.02.Circulation N	0	No
BB.02.Circulation S	0	No
BB.02.Circulation Mid	0	No
BB.03.Circulation N	0	No
BB.03.Circulation S	0	No
BB.03.Circulation Mid	0	No
BB.04.Circulation N	0	No
BB.04.Circulation S	0	No
BB.04.Circulation Mid	0	No
BB.05.Circulation N	0	No
BB.05.Circulation S	0	No
BB.05.Circulation Mid	0	No
BB.06.Circulation N	0	No
BB.06.Circulation S	0.1	No
BB.06.Circulation Mid	0	No
BB.07.Circulation N	0	No
BB.07.Circulation S	0.1	No
BB.07.Circulation Mid	0	No
BB.08.Circulation S	0.1	No
BB.08.Circulation Mid	0	No
BB.08.Circulation N	0	No
BB.09.Circulation S	0.1	No
BB.09.Circulation Mid	0	No
BB.09.Circulation N	0	No
BB.10.Circulation S	0	No
BB.10.Circulation Mid	0	No
BB.10.Circulation N	0	No

Block C

Room	% hours Operative Temp > 28°C	Significant Risk of Overheating?
BC.00.Circulation S	0	No
BC.00.Circulation Mid	0	No
BC.00.Circulation N	0	No
BC.01.Circulation S	0	No
BC.01.Circulation Mid	0	No
BC.01.Circulation N	0	No
BC.02.Circulation S	0	No
BC.02.Circulation Mid	0	No
BC.02.Circulation N	0	No
BC.03.Circulation S	0	No
BC.03.Circulation Mid	0	No
BC.03.Circulation N	0	No
BC.04.Circulation S	0	No
BC.04.Circulation Mid	0	No
BC.04.Circulation N	0	No
BC.05.Circulation S	0	No
BC.05.Circulation Mid	0	No
BC.05.Circulation N	0	No

Block D

Room	% hours Operative Temp > 28°C	Significant Risk of Overheating?
BD.01.Circulation S	0	No
BD.01.Circulation Mid	0	No
BD.01.Circulation N	0	No
BD.02.Circulation S	0	No
BD.02.Circulation Mid	0	No
BD.02.Circulation N	0	No
BD.03.Circulation S	0	No
BD.03.Circulation Mid	0	No
BD.03.Circulation N	0	No
BD.04.Circulation S	0	No
BD.04.Circulation Mid	0	No
BD.04.Circulation N	0	No
BD.05.Circulation S	0	No
BD.05.Circulation Mid	0	No
BD.05.Circulation N	0	No
BD.06.Circulation S	0	No
BD.06.Circulation Mid	0	No
BD.06.Circulation N	0	No
BD.07.Circulation S	0	No
BD.07.Circulation Mid	0	No
BD.07.Circulation N	0	No
BD.08.Circulation S	0	No
BD.08.Circulation Mid	0	No
BD.08.Circulation N	0	No
BD.09.Circulation S	0	No
BD.09.Circulation Mid	0	No
BD.09.Circulation N	0	No
BD.10.Circulation S	0	No
BD.10.Circulation Mid	0	No
BD.10.Circulation N	0	No
BD.11.Circulation S	0	No
BD.11.Circulation Mid	0	No
BD.11.Circulation N	0	No
BD.12.Circulation S	0	No
BD.12.Circulation Mid	0	No
BD.12.Circulation N	0	No
BD.00.Circulation N	0	No
BD.00.Circulation Mid	0	No
BD.00.Circulation S	0	No