

Haringey Civic Centre

Thermal Comfort Report

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Glossary

Term	Definition
DSY	Design Summer Year – a weather file representing a warm summer published by CIBSE that is used for assessing overheating risk in buildings
TRY	Test Reference Year – a weather file representing an average year published by CIBSE that is used for assessing the response of a building to typical weather conditions
MEP	Mechanical, Electrical & Plumbing

1 Executive Summary

The purpose of this document is to assess thermal comfort for the Haringey Civic Centre and Annexe building based on the RIBA Stage 3 design, in accordance with BREEAM credit Hea04 -Thermal modelling. The study has also been conducted in accordance with BREEAM credit Hea04 - Design for Future Thermal Comfort.

The results presented here demonstrate that the design is compliant with the BREEAM Hea04 Thermal Modelling and Design for Future Thermal Comfort credit criteria.

2 Introduction

The purpose of this document is to assess thermal comfort for the Haringey Civic Centre and Annexe extension based on the RIBA Stage 3 design, in accordance with BREEAM credit Hea04 -Thermal modelling. The study has also been conducted in accordance with BREEAM credit Hea04 - Design for future thermal comfort.

2.1 BREEAM Hea04 - Thermal Modelling Credit Criteria

The BREEAM credit criteria for Hea04 - Thermal Modelling are set out below:

One credit – Thermal modelling

1. Thermal modelling has been carried out using software in accordance with CIBSE AM11 Building Energy and Environmental Modelling.
2. The software used to carry out the simulation at the detailed design stage provides full dynamic thermal analysis. For smaller and more basic building designs with less complex heating or cooling systems, an alternative less complex means of analysis may be appropriate (such methodologies must still be in accordance with CIBSE AM11).
3. The modelling demonstrates that:
 - a. For air conditioned buildings, summer and winter operative temperature ranges in occupied spaces are in accordance with the criteria set out in CIBSE Guide A Environmental design, Table 1.5; or other appropriate industry standard (where this sets a higher or more appropriate requirement/level for the building type),
 - b. For naturally ventilated/free running buildings:
 - i. Winter operative temperature ranges in occupied spaces are in accordance with the criteria set out in CIBSE Guide A Environmental design, Table 1.5; or other appropriate industry standard (where this sets a higher or more appropriate requirement/level for the building type),
 - ii. The building is designed to limit the risk of overheating, in accordance with the adaptive comfort methodology outlined in CIBSE TM52: The limits of thermal comfort: avoiding overheating in European buildings.
4. For air-conditioned buildings, the PMV (predicted mean vote) and PPD (predicted percentage of dissatisfied) indices based on the above modelling are reported via the BREEAM assessment scoring and reporting tool.

BREEAM Hea04 – Design for Future Thermal Comfort

The BREEAM credit criteria for Hea04 - Design for Future Thermal Comfort are set out below:

One credit – Design for future thermal comfort

5. Criteria 1 to 4 are achieved.
6. The thermal modelling demonstrates that the relevant requirements set out in criterion 3 are achieved for a projected climate change environment (see Hea 04 Thermal comfort).
7. Where thermal comfort criteria are not met for the projected climate change environment, the project team demonstrates how the building has been adapted or designed to be easily adapted in future using passive design solutions in order to subsequently meet the requirements under criterion 6.
8. For air-conditioned buildings, the PMV and PPD indices based on the above modelling are reported via the BREEAM assessment scoring and reporting tool.

3 Methodology & Assumptions

3.1 Methodology

A dynamic thermal model of the buildings has been generated in IES Virtual Environment 2022 in accordance with CIBSE AM11. The model has been developed based on the Stage 3 architectural and engineering design proposals.

The model has been attributed with the proposed building envelope performance and the internal environmental design criteria. Ventilation flowrates have been aligned with the design proposals, and the capacity of heating and cooling emitters in each space have been capped at their design outputs in the thermal model. The building was then simulated against current and future weather sets, and the predicted internal operative temperatures in each room were checked for compliance with the criteria set out in CIBSE Guide A Environmental design, Table 1.5.

3.2 Key assumptions

Key assumptions used in the model were as follows:

3.2.1 Architectural Model

The thermal model was developed based on the frozen architectural drawings provided by Hawkins and Brown on January 10th, 2023.

3.2.2 Building Envelope Performance

Refer to the energy statement.

Infiltration for the building overall has been set at the design value of 0.25ACH for both the existing Civic Centre and the Annexe extension.

3.2.3 MEP Systems

The principal MEP systems in the building that serve occupied spaces are fan coil units, perimeter trench heaters, and radiators. For the purposes of attributing the thermal model, radiant fractions for these principal systems were estimated as follows:

Table 3—1 Heating and cooling system radiant fractions

	Heating Radiant Fraction	Cooling Radiant Fraction
Trench Heater	0	0
Fan Coil Unit System	0	0
Radiators	0.2	0

Internal spaces such as stair cores and circulation spaces are naturally ventilated. However, all occupied spaces are mechanically ventilated except for the Entrance Lobby space in the existing Civic Centre. In accordance with BREEAM Hea04, TM52 overheating assessments were conducted for this naturally ventilated space.

3.2.4 External Environmental Design Criteria

The MEP systems were sized based on the external design criteria defined in the MEP & Building Physics Report HCC-BHE-XX-XX-RP-M-000002.

3.2.5 Internal Environmental Design Criteria

The MEP systems were sized based on the internal design criteria defined in the MEP & Building Physics Report HCC-BHE-XX-XX-RP-M-000002. Space air temperature set points and internal heat gains were applied in line with this document.

Different profiles have been applied to the internal heat gains of the building. The regular hours of operation are 08:00 to 18:00 during the week with reduced occupancy during the weekend. As such internal heat gains such as lighting in open plan office spaces are maintained throughout the building’s hours of operation. Internal heats in rooms with variable usage have been adjusted accordingly. This includes internal heat gains such as lighting in the Civic Chamber and occupancy in meeting rooms.

3.2.6 Plant Scheduling & Building Setback

For modelling purposes, the heating and cooling plant is scheduled to enable at 06:30 to bring the spaces to their target setpoints ahead of the occupied period at 08:00 (noting that in the real-world situation the BMS will optimise start up). The plant switches to setback mode at 18:30. Setback temperatures of 16°C and 28°C have been defined in the model for heating and cooling respectively.

3.2.7 Simulation Weather Data

The thermal model was simulated using the following weather files:

3.2.7.1 BREEAM Hea04 - Thermal Modelling

Summertime comfort was assessed using the current CIBSE London Weather Station DSY1.

Winter comfort was assessed against the winter external design condition as defined in the MEP & Building Physics Report HCC-BHE-XX-XX-RP-M-000002 (which is -3°C dry bulb). For this a simulation weather file with a flat external -3°C dry bulb and zero solar radiation was generated, replicating the steady state external design condition. This allowed thermal comfort to be assessed at the project external design condition using the dynamic thermal model.

3.2.7.2 BREEAM Hea04 – Design for future thermal comfort

The building has also been assessed for thermal comfort in a future climate scenario, focussing specifically on summertime comfort in extreme hot weather conditions. In line with the requirements of BREEAM Hea04, the following future weather files have been used in the modelling:

- CIBSE London Weather Station DSY1, 2050, high emissions scenario, 50th percentile
- CIBSE London Weather Station DSY2, 2080, high emissions scenario, 50th percentile

4 Thermal Comfort Criteria

For mechanically cooled buildings, such as the Haringey Civic Centre and Annexe, BREEAM Hea04 requires summer and winter operative temperature ranges in occupied spaces to be in accordance with the criteria set out in CIBSE Guide A Environmental design, Table 1.5. An occupied space is defined by BREEAM as “a room or space within the assessed building that is likely to be occupied for 30 minutes or more by a building user”.

The table below shows the occupied space typologies, the assumed project space type mapping to CIBSE Guide A Environmental design Table 1.5, and the associated operative temperature ranges prescribed.

Table 4—1 Operative temperature targets for each project space types

Space Type	CIBSE Guide A 2015, Table 1.5: Building/room type	Project winter operative temperatures (°C)	Project summer operative temperatures (°C)
Civic Chamber	Offices: board room, large conference room	21-23	22-25
Collaboration Spaces	Offices: general, small conference room, executive office	21-23	22-25
Meeting Room	Offices: general, small conference room, executive office	21-23	22-25
Office	Offices: general, small conference room, executive office	21-23	22-25
Open Plan Office	Offices: open plan	21-23	22-25
Entrance Lobby	General building areas: entrance halls/lobbies	19-21	21-25

5 Results

The results of the thermal comfort study for winter and summer based on current and future climate projection are provided in Appendix A. Operative temperatures have been rounded to the nearest degree. All rooms are shown to comply with the targets set out in CIBSE Guide A, Table 1.5 as required under BREEAM Hea04.

6 Conclusions

Thermal comfort for the Haringey Civic Centre and Annexe building has been assessed based on the RIBA Stage 3 design, in accordance with BREEAM credit Hea04 -Thermal modelling and BREEAM credit Hea04 - Design for future thermal comfort.

The results presented here demonstrate that the design is compliant with the BREEAM Hea04 Thermal Modelling and Design for Future Thermal Comfort credit criteria.

Appendix A Thermal comfort modelling results

Existing Civic Centre							
Naturally Ventilated Spaces							
Space Name	Space Type	Winter condition			TM52 Assessment Results		
		CIBSE Guide A, Table 1.5 - Customary winter operative temperatures (°C)	-3°C external dry bulb temperature		Current - London_DSY1.epw	Future climate projection - London_DSY2_2020High50_.epw	Future climate projection - London_DSY3_2020High50_.epw
			Modelled winter minimum operative temperature (°C)	Compliant?	Compliant?	Compliant?	Compliant?
00 - Entrance Lobby/Reception 02	Entrance Lobby	19-21	21	TRUE	TRUE	TRUE	TRUE
00 - Entrance Lobby/Reception 03	Entrance Lobby	19-21	21	TRUE	TRUE	TRUE	TRUE

Existing Civic Centre											
Mechanically Ventilated Spaces											
Space Name	Space Type	Winter condition			Summer condition						
		CIBSE Guide A, Table 1.5 - Customary winter operative temperatures (°C)	-3°C external dry bulb temperature		CIBSE Guide A, Table 1.5 - Customary summer operative temperatures (°C)	Current - London_DSY1.epw		Future climate projection - London_DSY2_2020High50_.epw		Future climate projection - London_DSY3_2020High50_.epw	
			Modelled winter minimum operative temperature (°C)	Compliant?		Modelled summer maximum operative temperature (°C)	Compliant?	Modelled summer maximum operative temperature (°C)	Compliant?	Modelled summer maximum operative temperature (°C)	Compliant?
00 - Changing Places Space	Entrance Lobby	19-21	21	TRUE	21-25	24	TRUE	24	TRUE	24	TRUE
00 - Civic Bridge Welcome Area/Circulation	Entrance Lobby	19-21	21	TRUE	21-25	24	TRUE	24	TRUE	24	TRUE
00 - Flexible Meeting/Event Space	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
00 - Meeting Room 01	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
00 - Meeting Room 02	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
00 - Meeting Room 03	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
00 - Meeting Room 04	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
00 - Meeting Room 05	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
00 - Meeting Room 06	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
00 - Meeting Room 07	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
00 - Open Office 01	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
00 - Open Office 02	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
00 - Room	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
00 - Study Room	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
00 - Wellbeing & Reflection	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Civic Chamber 01	Civic Chamber	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Committee 01	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE

Existing Civic Centre											
Mechanically Ventilated Spaces											
Space Name	Space Type	Winter condition			Summer condition						
		CIBSE Guide A, Table 1.5 - Customary winter operative temperatures (°C)	-3°C external dry bulb temperature		CIBSE Guide A, Table 1.5 - Customary summer operative temperatures (°C)	Current - London_DSY1.epw		Future climate projection - London_DSY2_2020High50_epw		Future climate projection - London_DSY3_2020High50_epw	
			Modelled winter minimum operative temperature (°C)	Compliant?		Modelled summer maximum operative temperature (°C)	Compliant?	Modelled summer maximum operative temperature (°C)	Compliant?	Modelled summer maximum operative temperature (°C)	Compliant?
01 - Committee 02	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Committee 03	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Comms Room	Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Mayor Robing	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Mayor's Aid & Wating Area	Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Meeting 01	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Meeting 02	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Meeting 03	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Meeting Room	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Open Office 01	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Open Office 02	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Open Office 03	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Open Office 03	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Open Office 04	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Opposition Leader's Office	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Parlour	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Study Room 01	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Study Room 02	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
02 - Civic Auditorium	Civic Chamber	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
02 - Civic Seating	Civic Chamber	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
02 - Meeting Room 01	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
02 - Meeting Room 02	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
02 - Open Office 01	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
02 - Open Office 02	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
02 - Open Office 03	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
02 - Open Office 04	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
02 - Study Room 01	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
02 - Study Room 02	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
02 - Study Room	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
03 - Booth	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
03 - MASH	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
03 - Open Office 01	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
03 - Open Office 02	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
03 - Open Office 03	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE

New Annexe Extension											
Mechanically Ventilated Spaces											
Space Name	Space Type	Winter condition			Summer condition						
		CIBSE Guide A, Table 1.5 - Customary winter operative temperatures (°C)	-3°C external dry bulb temperature		CIBSE Guide A, Table 1.5 - Customary summer operative temperatures (°C)	Current - London_DSY1.epw		Future climate projection - London_DSY2_2020High50_epw		Future climate projection - London_DSY3_2020High50_epw	
			Modelled winter minimum operative temperature (°C)	Compliant?		Modelled summer maximum operative temperature (°C)	Compliant?	Modelled summer maximum operative temperature (°C)	Compliant?	Modelled summer maximum operative temperature (°C)	Compliant?
00 - IT/tech store	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
00 - Meeting Room 01	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
00 - Meeting Room 02	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
00 - Meeting Room 03	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
00 - Meeting Room Wing W01	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
00 - Meeting Room Wing 01	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
00 - Office 01	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
00 - Office perimeter E03	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
00 - Office perimeter E01	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
00 - Office perimeter E02	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
00 - Office perimeter N01	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
00 - Office Perimeter S01	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
00 - Office Wing	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
00 - Study Room	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Booth 01	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Booth 02	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Furniture Storage	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Meeting Room 01	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Meeting Room 02	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Meeting Room 03	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Meeting Room 04	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Meeting Room Wing 01	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Meeting Room Wing 02	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Meeting Room Wing 03	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Meeting Room Wing 04	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Meeting Room Wing 05	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Meeting Room Wing 06	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Meeting Room Wing 07	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Meeting Room Wing 08	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Office Central 01	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Office Central 02	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Office perimeter E01	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Office perimeter N01	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Office perimeter S01	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Office perimeter S02	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Office perimeter W01	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
01 - Study Room 01	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE

New Annexe Extension											
Mechanically Ventilated Spaces											
Space Name	Space Type	Winter condition			Summer condition						
		CIBSE Guide A, Table 1.5 - Customary winter operative temperatures (°C)	-3°C external dry bulb temperature		CIBSE Guide A, Table 1.5 - Customary summer operative temperatures (°C)	Current - London_DSY1.epw		Future climate projection - London_DSY2_2020High50_epw		Future climate projection - London_DSY3_2020High50_epw	
			Modelled winter minimum operative temperature (°C)	Compliant?		Modelled summer maximum operative temperature (°C)	Compliant?	Modelled summer maximum operative temperature (°C)	Compliant?	Modelled summer maximum operative temperature (°C)	Compliant?
01 - Study Room 02	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
02 - Booth 01	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
02 - Booth 02	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
02 - Meeting Room 01	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
02 - Meeting Room 02	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
02 - Meeting Room 04	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
02 - Meeting Room 05	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
02 - Office central 01	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
02 - Office central 02	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
02 - Office perimeter E01	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
02 - Office perimeter N01	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
02 - Office perimeter S01	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
02 - Office perimeter W01	Open Plan Office	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
02 - Study Room 01	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE
02 - Study Room 02	Meeting Room	21-23	21	TRUE	22-25	24	TRUE	24	TRUE	24	TRUE

Future Summer Climate Projection:

Existing Civic Centre			
Naturally Ventilated Spaces			
Space Name	Space Type	TM52 Assessment Results	
		Future climate projection - London_DSY1_2050High50_.epw	Future climate projection - London_DSY1_2080High50_.epw
		Compliant?	Compliant?
00 - Entrance Lobby/Reception 02	Entrance Lobby	TRUE	TRUE
00 - Entrance Lobby/Reception 03	Entrance Lobby	TRUE	TRUE

Existing Civic Centre						
Mechanically Ventilated Spaces						
Space Name	Space Type	Summer condition				
		CIBSE Guide A, Table 1.5 - Customary summer operative temperatures (°C)	Future climate projection - London_DSY1_2050High50_.epw		Future climate projection - London_DSY1_2080High50_.epw	
			Modelled summer maximum operative temperature (°C)	Compliant?	Modelled summer maximum operative temperature (°C)	Compliant?
00 - Changing Places Space	Entrance Lobby	21-25	24	TRUE	24	TRUE
00 - Civic Bridge Welcome Area/Circulation	Entrance Lobby	21-25	24	TRUE	24	TRUE
00 - Flexible Meeting/Event Space	Meeting Room	22-25	24	TRUE	24	TRUE
00 - Meeting Room 01	Meeting Room	22-25	24	TRUE	24	TRUE
00 - Meeting Room 02	Meeting Room	22-25	24	TRUE	24	TRUE
00 - Meeting Room 03	Meeting Room	22-25	24	TRUE	24	TRUE
00 - Meeting Room 04	Meeting Room	22-25	24	TRUE	24	TRUE
00 - Meeting Room 05	Meeting Room	22-25	24	TRUE	24	TRUE
00 - Meeting Room 06	Meeting Room	22-25	24	TRUE	24	TRUE
00 - Meeting Room 07	Meeting Room	22-25	24	TRUE	24	TRUE
00 - Open Office 01	Open Plan Office	22-25	24	TRUE	24	TRUE
00 - Open Office 02	Open Plan Office	22-25	24	TRUE	24	TRUE
00 - Room	Meeting Room	22-25	24	TRUE	24	TRUE
00 - Study Room	Meeting Room	22-25	24	TRUE	24	TRUE
00 - Wellbeing & Reflection	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Civic Chamber 01	Civic Chamber	22-25	24	TRUE	24	TRUE
01 - Committee 01	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Committee 02	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Committee 03	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Comms Room	Office	22-25	24	TRUE	24	TRUE
01 - Mayor Robing	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Mayor's Aid & Wating Area	Office	22-25	24	TRUE	24	TRUE
01 - Meeting 01	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Meeting 02	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Meeting 03	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Meeting Room	Meeting Room	22-25	24	TRUE	24	TRUE

Existing Civic Centre						
Mechanically Ventilated Spaces						
Space Name	Space Type	Summer condition				
		CIBSE Guide A, Table 1.5 - Customary summer operative temperatures (°C)	Future climate projection - London_DSY1_2050High50_.epw		Future climate projection - London_DSY1_2080High50_.epw	
			Modelled summer maximum operative temperature (°C)	Compliant?	Modelled summer maximum operative temperature (°C)	Compliant?
01 - Open Office 01	Open Plan Office	22-25	24	TRUE	24	TRUE
01 - Open Office 02	Open Plan Office	22-25	24	TRUE	24	TRUE
01 - Open Office 03	Open Plan Office	22-25	24	TRUE	24	TRUE
01 - Open Office 03	Open Plan Office	22-25	24	TRUE	24	TRUE
01 - Open Office 04	Open Plan Office	22-25	24	TRUE	24	TRUE
01 - Opposition Leader's Office	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Parlour	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Study Room 01	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Study Room 02	Meeting Room	22-25	24	TRUE	24	TRUE
02 - Civic Auditorium	Civic Chamber	22-25	24	TRUE	24	TRUE
02 - Civic Seating	Civic Chamber	22-25	24	TRUE	24	TRUE
02 - Meeting Room 01	Meeting Room	22-25	24	TRUE	24	TRUE
02 - Meeting Room 02	Meeting Room	22-25	24	TRUE	24	TRUE
02 - Open Office 01	Open Plan Office	22-25	24	TRUE	24	TRUE
02 - Open Office 02	Open Plan Office	22-25	24	TRUE	24	TRUE
02 - Open Office 03	Open Plan Office	22-25	24	TRUE	24	TRUE
02 - Open Office 04	Open Plan Office	22-25	24	TRUE	24	TRUE
02 - Study Room 01	Open Plan Office	22-25	24	TRUE	24	TRUE
02 - Study Room 02	Meeting Room	22-25	24	TRUE	24	TRUE
02 - Study Room	Meeting Room	22-25	24	TRUE	24	TRUE
03 - Booth	Meeting Room	22-25	24	TRUE	24	TRUE
03 - MASH	Meeting Room	22-25	24	TRUE	24	TRUE
03 - Open Office 01	Open Plan Office	22-25	24	TRUE	24	TRUE
03 - Open Office 02	Open Plan Office	22-25	24	TRUE	24	TRUE
03 - Open Office 03	Open Plan Office	22-25	24	TRUE	24	TRUE

New Annexe Extension						
Mechanically Ventilated Spaces						
Space Name	Space Type	Summer condition				
		CIBSE Guide A, Table 1.5 - Customary summer operative temperatures (°C)	Future climate projection - London_DSY1_2050High50_.epw		Future climate projection - London_DSY1_2080High50_.epw	
			Modelled summer maximum operative temperature (°C)	Compliant?	Modelled summer maximum operative temperature (°C)	Compliant?
00 - IT/tech store	Meeting Room	21-25	24	TRUE	24	TRUE
00 - Meeting Room 01	Meeting Room	21-25	24	TRUE	24	TRUE
00 - Meeting Room 02	Meeting Room	22-25	24	TRUE	24	TRUE
00 - Meeting Room 03	Meeting Room	22-25	24	TRUE	24	TRUE
00 - Meeting Room Wing W01	Meeting Room	22-25	24	TRUE	24	TRUE
00 - Meeting Room Wing 01	Meeting Room	22-25	24	TRUE	24	TRUE
00 - Office 01	Open Plan Office	22-25	24	TRUE	24	TRUE
00 - Office perimeter E03	Open Plan Office	22-25	24	TRUE	24	TRUE
00 - Office perimeter E01	Open Plan Office	22-25	24	TRUE	24	TRUE
00 - Office perimeter E02	Open Plan Office	22-25	24	TRUE	24	TRUE
00 - Office perimeter N01	Open Plan Office	22-25	24	TRUE	24	TRUE
00 - Office Perimeter S01	Open Plan Office	22-25	24	TRUE	24	TRUE
00 - Office Wing	Open Plan Office	22-25	24	TRUE	24	TRUE
00 - Study Room	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Booth 01	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Booth 02	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Furniture Storage	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Meeting Room 01	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Meeting Room 02	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Meeting Room 03	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Meeting Room 04	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Meeting Room Wing 01	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Meeting Room Wing 02	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Meeting Room Wing 03	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Meeting Room Wing 04	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Meeting Room Wing 05	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Meeting Room Wing 06	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Meeting Room Wing 07	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Meeting Room Wing 08	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Office Central 01	Open Plan Office	22-25	24	TRUE	24	TRUE
01 - Office Central 02	Open Plan Office	22-25	24	TRUE	24	TRUE
01 - Office perimeter E01	Open Plan Office	22-25	24	TRUE	24	TRUE
01 - Office perimeter N01	Open Plan Office	22-25	24	TRUE	24	TRUE
01 - Office perimeter S01	Open Plan Office	22-25	24	TRUE	24	TRUE
01 - Office perimeter S02	Open Plan Office	22-25	24	TRUE	24	TRUE
01 - Office perimeter W01	Open Plan Office	22-25	24	TRUE	24	TRUE
01 - Study Room 01	Meeting Room	22-25	24	TRUE	24	TRUE
01 - Study Room 02	Meeting Room	22-25	24	TRUE	24	TRUE
02 - Booth 01	Meeting Room	22-25	24	TRUE	24	TRUE

New Annexe Extension						
Mechanically Ventilated Spaces						
Space Name	Space Type	Summer condition				
		CIBSE Guide A, Table 1.5 - Customary summer operative temperatures (°C)	Future climate projection - London_DSY1_2050High50_.epw		Future climate projection - London_DSY1_2080High50_.epw	
			Modelled summer maximum operative temperature (°C)	Compliant?	Modelled summer maximum operative temperature (°C)	Compliant?
02 - Booth 02	Meeting Room	22-25	24	TRUE	24	TRUE
02 - Meeting Room 01	Meeting Room	22-25	24	TRUE	24	TRUE
02 - Meeting Room 02	Meeting Room	22-25	24	TRUE	24	TRUE
02 - Meeting Room 04	Meeting Room	22-25	24	TRUE	24	TRUE
02 - Meeting Room 05	Meeting Room	22-25	24	TRUE	24	TRUE
02 - Office central 01	Open Plan Office	22-25	24	TRUE	24	TRUE
02 - Office central 02	Open Plan Office	22-25	24	TRUE	24	TRUE
02 - Office perimeter E01	Open Plan Office	22-25	24	TRUE	24	TRUE
02 - Office perimeter N01	Open Plan Office	22-25	24	TRUE	24	TRUE
02 - Office perimeter S01	Open Plan Office	22-25	24	TRUE	24	TRUE
02 - Office perimeter W01	Open Plan Office	22-25	24	TRUE	24	TRUE
02 - Study Room 01	Meeting Room	22-25	24	TRUE	24	TRUE
02 - Study Room 02	Meeting Room	22-25	24	TRUE	24	TRUE

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